

# IBM WebSphere Application Server Family

*Providing the right application foundation to meet your business needs*



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## Highlights

- Deliver responsive and available applications your customers can trust for the least cost
  - Remove complexity, reduce costs by increasing developer productivity and centralizing management
  - Enable natural ways to access business applications without time, location or device constraints
  - Get the right solution for specific business needs through a family of application foundations
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IBM believes it is time to build a smarter planet because the world is more instrumented, interconnected and intelligent than ever before. To take advantage of the new opportunities that a smarter planet presents, organizations need to be agile while optimizing their costs. One way to achieve agility and cost optimization is to take a close look at your business applications and the infrastructure that supports them. Companies need an application infrastructure that drives efficiencies, is secure and is just as dynamic as today's business climate. The IBM WebSphere® Application Server Family was designed from the ground up to enable company IT operations and development to increase business agility and optimize costs through the efficient delivery of innovative, high-performing business applications.

To help ensure your applications can keep up with the demands of your business, regardless of the situation, the WebSphere Application Server Family provides a choice of foundations for building, deploying and managing all types of applications. From business-critical and key enterprise-wide applications to the smallest departmental-level applications, IBM provides the right-size foundation to balance key considerations such as security, scalability and manageability with cost and simplicity in homogenous or, especially, mixed environments.



WebSphere Application Server V7 expands on previous versions by delivering complete Java™ EE 5 support and certification, Web services enhancements, Enterprise JavaBeans™ (EJB) 3.0 support, a range of features that can help improve efficiency for both developers and operations teams, and even higher levels of performance. New management and administration features deliver application control and efficiency through runtime provisioning and flexible management. Developer-focused features simplify the development environment, increase developer productivity and help developers create innovative applications using the latest open standards and programming models. Built on the industry-leading performance of past versions, WebSphere Application Server V7 further enhances performance while driving down costs by increasing data center efficiency through workload consolidation. Security enhancements strengthen your ability to protect customer data.

### **Drive customer satisfaction with highly effective performance.**

With WebSphere Application Server V7 you can deliver responsive and available applications your customers can trust by leveraging its highly effective performance. You can reduce cost associated with slow application response time through built-in scalability and workload distribution. Costs can further be reduced by up to 30 percent by leveraging the high performance to consolidate workloads onto fewer servers. Flexible and granular security control helps you protect customer data.

### **Reduce cost through efficient development and management.**

With WebSphere Application Server V7 you can remove complexity and reduce costs by increasing developer productivity and centralizing management. Support for Web 2.0, Session Initiation Protocol (SIP), Service Component Architecture (SCA), Service Data Objects (SDO), Communications Enabled Applications (CEA), XML, Java Persistence API (JPA), OSGi Applications and dynamic scripting is provided, often with implementation examples that help developers easily take advantage of the latest standards and programming models. Developer productivity is further enhanced with integrated tools and backwards compatibility that eliminate recoding of existing Java applications. Finally, new centralized management capabilities let you view and monitor multiple locations to reduce costs and streamline IT operations.

### **Reach customers in new ways with innovative applications.**

With WebSphere Application Server V7 you can offer your customers new and natural ways to access business applications without constraint of time, location or device type. You can modernize applications while reducing cost by reusing existing home-grown, packaged and legacy applications and extending them to the Web. You can stay competitive by easily providing rich user experiences to customers and partners on the Web with online chat, click-to-call and innovative cobrowsing capabilities. And real time business access can be enabled through mobile and wireless devices, which can help improve your customer support experience for users of your applications.

## WebSphere Application Server Feature Packs

### Feature packs

**Communications Enabled Applications** - helps you deliver interactive applications combining phone, VOIP, and other communication services through an innovative programming model without requiring expertise in communications technologies such as Session Initiation Protocol (SIP).

**Dynamic Scripting** - helps you quickly deliver situational and departmental applications by leveraging dynamic scripting languages such as PHP and Groovy; based on WebSphere sMash.

**OSGI Applications and Java Persistence API 2.0** - enables a simplified application framework that increases development and operational productivity through the standards-based modularity, dynamism and versioning as well as data persistence.

**Service Component Architecture** - provides a simple, yet powerful programming model for constructing applications based on Service-Oriented Architecture (SOA), helping to improve composite application development and management and streamline reuse across multiple applications.

**Web 2.0** - helps you deliver dynamic and interactive user experiences for Web applications by enabling Ajax-based applications and mashups.

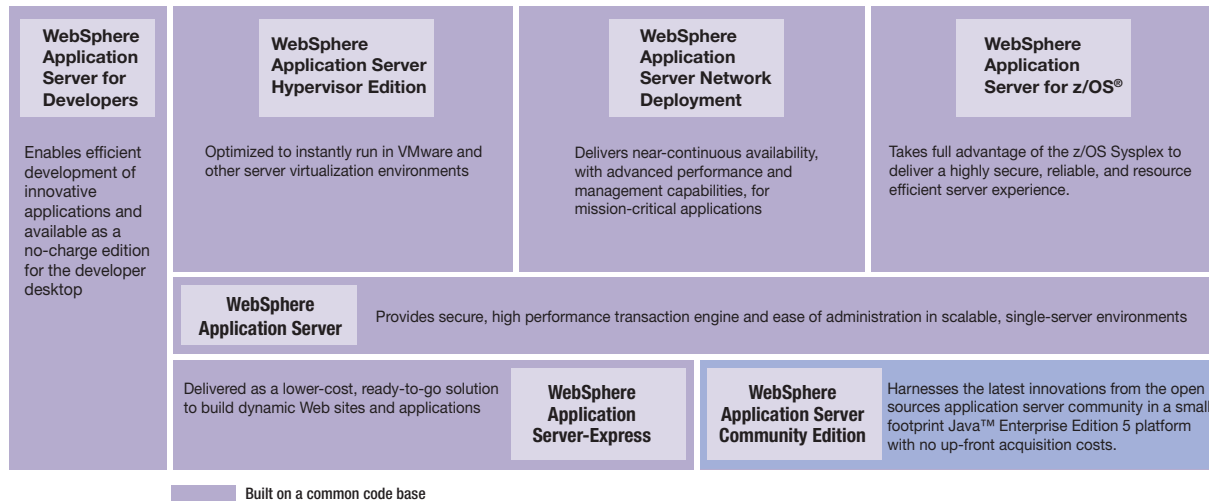
**XML** - delivers the latest XML standards while simplifying the development and increasing the reliability and performance of applications that use XML-based data.

### WebSphere Application Server Feature Packs

## Extend your value with WebSphere Application Server Feature Packs

Building on the solid foundation of WebSphere Application Server, Feature Packs are also available so you can access the latest technologies to efficiently develop innovative, high performing applications all while avoiding costly and time-consuming upgrades to the application server. Feature Packs give you the option to add new capabilities to an existing version of WebSphere Application Server without disrupting business operations.

Feature Packs give you more for your applications, like access to the latest standards and programming models—all at no additional charge for existing WebSphere Application Server V 7 customers. For more details on and the latest information on new and updated feature packs and downloads, go to [ibm.com/websphere/featurepacks](http://ibm.com/websphere/featurepacks).



WebSphere Application Family Portfolio

## WebSphere Application Server configurations

WebSphere Application Server V7 supports the broadest range of platforms in the industry, helping provide assurance that your applications can be built to run on the platform that makes sense for your business.

Regardless of the situation, the IBM WebSphere Application Server Family provides a choice of foundations for building, deploying and managing all types of applications. From business-critical and key enterprise-wide applications to the smallest departmental-level applications, IBM provides the right-size foundation to balance key considerations such as security, scalability and manageability with cost and simplicity in homogenous or mixed environments.

Table 1 describes the key features and functions of each WebSphere Application Server configuration, so that you can choose the configuration that best fits your current business strategy—and so that you can be prepared to grow your solution as your needs evolve. For the latest comparison information, visit [ibm.com/websphere/was/compare](http://ibm.com/websphere/was/compare).

	<b>WebSphere Application Server Community Edition V 2.1</b>	<b>WebSphere Application Server Express, V 7</b>	<b>WebSphere Application Server, V 7</b>	<b>WebSphere Application Server Network Deployment, V 7</b>	<b>WebSphere Application Server Hypervisor Edition, V 7</b>	<b>WebSphere Application Server for z/OS®, V 7</b>
<b>Optimized for:</b>	Developers or businesses with deep Java skills that need quick access to open source technology to accelerate deployment of low-complexity projects with low transaction volumes	Small and midsize businesses that need an easy, lower-cost, ready-to-go solution to build, run and manage simple, dynamic Web sites and applications	Medium to large businesses that need to build, run and manage a scalable, single-server deployment environment	Enterprises that need advanced management, automated performance optimization and near-continuous availability for their mission-critical applications	Enterprises that need advanced management, automated performance optimization and near-continuous availability for their mission-critical applications optimized to instantly run in VMware and other server virtualization environments	Enterprises that require z/OS qualities of service to achieve optimized performance and continuous availability for their mission-critical applications
Runtime provisioning	●	●	●	●	●	●
Production-use database	●					
Integration with IBM Rational® Application Developer assembly and deploy module for WebSphere, built on Eclipse	●	●	●	●	●	●
Full Java EE 5 support	●	●	●	●	●	●
Enterprise Java Beans 3.0	●	●	●	●	●	●
WebSphere Application Server Feature Packs	●	●	●	●	●	●

	WebSphere Application Server Community Edition V 2.1	WebSphere Application Server Express, V 7	WebSphere Application Server, V 7	WebSphere Application Server Network Deployment, V 7	WebSphere Application Server Hypervisor Edition, V 7	WebSphere Application Server for z/OS®, V 7
Large-scale transaction support				●	●	●
Rapid Java development and deployment kit (JDK™) 6.0, Java Platform, Standard Edition 6 (Java SE 6.0)		●	●	●	●	●
24x7 product support	Available for fee	●	●	●	●	●
Advanced security		●	●	●	●	●
Broad operating-system support and database connectivity	●	●	●	●	●	● <sup>1</sup>
Dynamic caching				●	●	●
Simple failover	●	●	●	●	●	●
New administrative agent, to reduce overhead of administration		●	●	●	●	●
New job manager, to enable scalable remote administration				●	●	●
Advanced clustering	●			●	●	●
Workload management within a server: integrated with z/OS Workload Manager						●
Reporting and chargeback: granular reporting on resource consumption						●
Optimized to instantly run in VMware and other virtualization environments					●	
Open source-based	●					

**Key:** ● = fully supported, ● = partially supported, blank = not supported

*Table 1:* Key features and functions of IBM WebSphere Application Server configurations

	WebSphere Application Server Community Edition, Version 2.1	WebSphere Application Server Express, Version 7	WebSphere Application Server, Version 7	WebSphere Application Server Network Deployment, Version 7	WebSphere Application Server Hypervisor Edition, Version 7	WebSphere Application Server for z/OS, Version 7
Java programming model						
Full Java EE, Version 5.0 support and EJB 3.0	●	●	●	●	●	●
Java SE, Version 5	●	●	●	●	●	●
Java SE, Version 6	◐	●	●	●	●	●
Java Persistence API (JPA)	●	●	●	●	●	●
Session Initiation Protocol (SIP)		●	●	●	●	◐
JAX-WS 2.1	● Support for JAX-WS 2.0	●	●	●	●	●
JAXB 2.1	● Support for JAXB 2.0s	●	●	●	●	●
StAX 1.0	●	●	●	●	●	●
JSR 109 1.2	●	●	●	●	●	●
Portlet specification 2.0, Java Specification Requests (JSRs) 286		●	●	●	●	●
SAAJ 1.3 for enhancements in support of SOAP 1.2	●	●	●	●	●	●
Web 2.0 highlights						
Web 2.0 to SOA connectivity	●	●	●	●	●	●
AJAX Messaging	●	●	●	●	●	●
AJAX Development Toolkit	◐	●	●	●		● <sup>2</sup>

**Key:** ● = fully supported, ◐ = partially supported, blank = not supported

*Table 2.* Specific features and functions of IBM WebSphere Application Server configurations

Note: Web 2.0 support is provided by the WebSphere Application Feature Pack for Web 2.0, an optional product extension for WebSphere Application Server V 7.0.

	WebSphere Application Server Community Edition, Version 2.1	WebSphere Application Server Express, Version 7	WebSphere Application Server, Version 7	WebSphere Application Server Network Deployment, Version 7	WebSphere Application Server Hypervisor Edition, Version 7	WebSphere Application Server for z/OS, Version 7
Web services support highlights						
OASIS WS-Reliable Messaging		●	●	●	●	●
OASIS WS-Secure Conversation		●	●	●	●	●
OASIS WS-Trust		●	●	●	●	●
OASIS WS-Transaction		●	●	●	●	●
OASIS WS-Security Policy		●	●	●	●	●
OASIS Kerberos Token Profile		●	●	●	●	●
W3C WS-Policy		●	●	●	●	●
W3C WS-Addressing Metadata		●	●	●	●	●
W3C SOAP 1.2		●	●	●	●	●
W3C MTOM and XOP		●	●	●	●	●
WS-Metadata Exchange		●	●	●	●	●
Interoperability with vendors such as Microsoft®		●	●	●	●	●

**Key:** ● = fully supported, ◐ = partially supported, blank = not supported

Table 3: Web services support highlights



	<b>WebSphere Application Server Community Edition, Version 2.1</b>	<b>WebSphere Application Server Express, Version 7</b>	<b>WebSphere Application Server, Version 7</b>	<b>WebSphere Application Server Network Deployment, Version 7</b>	<b>WebSphere Application Server Hypervisor Edition, Version 7</b>	<b>WebSphere Application Server for z/OS, Version 7</b>
Application development and management						
Integrated development tool—Rational Application Developer for WebSphere (separately priced), trial included	①	●	●	●	● <sup>3</sup>	●
Rational Application Developer, integrated with Rational Software Architect for WebSphere	●	●	●	●	● <sup>3</sup>	●
Rational Application Developer: assembly and deploy function		●	●	●	● <sup>3</sup>	●
WebSphere business-level applications, expanding the notion of “application” beyond Java EE 5		●	●	●	● <sup>3</sup>	●
Advanced security						
WebSphere secure proxy				●	●	●
WebSphere security domains		●	●	●	●	●
New security auditing		●	●	●	●	●
Kerberos authentication and single sign-on		●	●	●	●	●
Security Assertion Markup Language (SAML) token support		●	●	●	●	●

	WebSphere Application Server Community Edition, Version 2.1	WebSphere Application Server Express, Version 7	WebSphere Application Server, Version 7	WebSphere Application Server Network Deployment, Version 7	WebSphere Application Server Hypervisor Edition, Version 7	WebSphere Application Server for z/OS, Version 7
Common Criteria Assurance Level 4 certification		●	●	●	●	●
Leveraging the z/OS security environment without affecting the application interface						●
Platform support						
Microsoft Windows®, Linux®, IBM AIX® and Sun Solaris™	●	●	●	●		
HP-UNIX®		●	●	●		
IBM i		●*	●	●		
Linux on IBM System z®	●		●	●	●	
64-bit addressing	◐		●	●		●
Servers requiring more than 240 processor value units (PVUs)	●		●	●	●	●
z/OS and z/OS sysplex						●

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*Table 4:* Application development and management highlights

	WebSphere Application Server Community Edition, Version 2.1	WebSphere Application Server Express, Version 7	WebSphere Application Server, Version 7	WebSphere Application Server Network Deployment, Version 7	WebSphere Application Server Hypervisor Edition, Version 7	WebSphere Application Server for z/OS, Version 7
Performance support						
Enhanced performance features, including edge-of-network services				●	●	●
Administration and workload management						
Flexible management		●	●	●	●	●
New runtime provisioning service	◐	●	●	●	●	●
Migration support						
Migration documentation	●	●	●	●	●	●
Migration tools and assistance	◐	●	●	●	●	●
Open source support						
Built on Apache Geronimo kernel	●					
IBM HTTP Server for WebSphere (powered by Apache)	●	●	●	●	●	●
Upgrade path						
Any WebSphere Application Server configuration, based on J2EE™ compatibility	●	●	●	●	●	●

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*Table 5:* Performance support highlights

## For more information

To learn more about the IBM WebSphere Application Server Family, access downloads and further information, please contact your IBM marketing representative or IBM Business Partner, or visit the following Web sites:

- [ibm.com/software/websphere/appserv](http://ibm.com/software/websphere/appserv)
- [ibm.com/websphere/wasfamily](http://ibm.com/websphere/wasfamily)

Additionally, financing solutions from IBM Global Financing can enable effective cash management, protection from technology obsolescence, improved total cost of ownership and return on investment. Also, our Global Asset Recovery Services help address environmental concerns with new, more energy-efficient solutions. For more information on IBM Global Financing, visit: [ibm.com/financing](http://ibm.com/financing)



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\* Available as part of IBM i® Web Enablement package, 5722-WE2

<sup>1</sup> z/OS is the only operating system supported.

<sup>2</sup> AJAX Development Toolkit can be used to produce applications for WebSphere Application Server for z/OS, but it does not run on z/OS.

<sup>3</sup> Available in second quarter, 2010



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