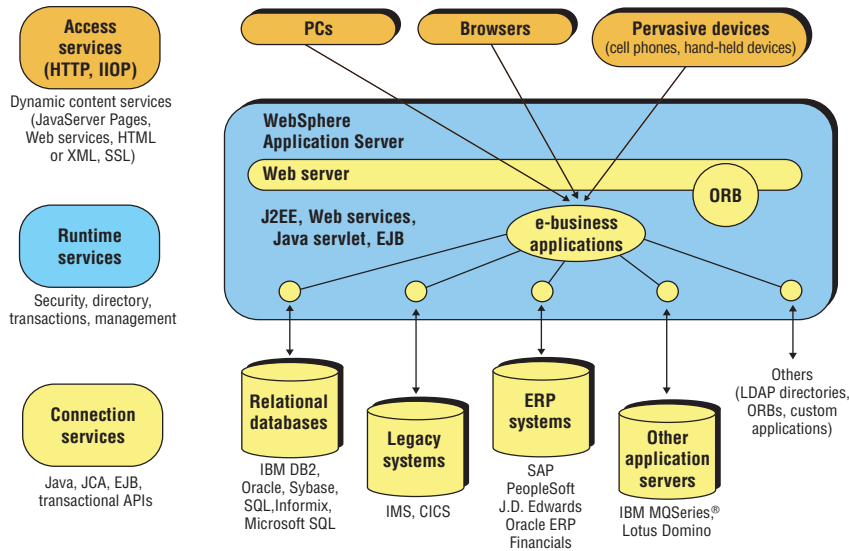


# IBM WebSphere Application Server Version 4.0, Advanced Edition



IBM WebSphere® Application Server Version 4.0, Advanced Edition is a comprehensive, Java™ technology-based Web application server providing integrated support for key Web services open standards and full Java 2 platform Enterprise Edition (J2EE), Version 1.2.1 compatibility. As the foundation of the WebSphere software platform, WebSphere Application Server provides the core software to deploy, integrate and manage e-business applications.

WebSphere Application Server Version 4, Advanced Edition is the core WebSphere Application Server product that fits most enterprise usage scenarios.

## Highlights

- **Deploys enterprise Web services for dynamic e-business through integrated support for key Web services open standards**
- **Provides full J2EE, Version 1.2.1 compatibility with a rich set of enterprise Java open-standards implementations**
- **Offers superior connectivity through an implementation of the J2EE Connector Architecture**
- **Provides flexibility through broad cross-platform support and a choice of configurations**
- **Helps reduce the time and associated cost of developing and deploying e-business applications**
- **Supports high-performance, scalable transactional environments**
- **Provides comprehensive Web site content and usage analyzers, including reporting tools for system and application problem determination**

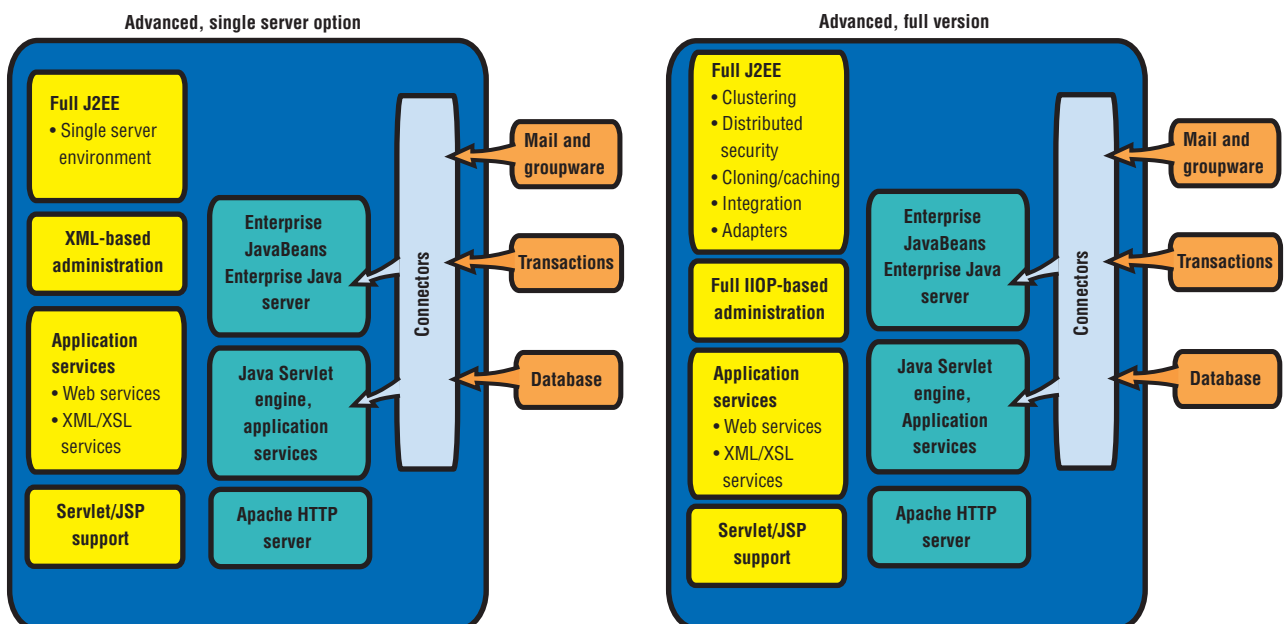
## A powerful foundation for flexible deployment of e-business applications

WebSphere Application Server Version 4.0, Advanced Edition provides necessary database and back-end integration, security and performance capabilities, such as workload management and clustering, to support critical e-business applications. These applications include commerce, self-service and supply chain integration solutions. WebSphere Application Server Version 4.0, Advanced Edition enables companies to build, run and manage e-business applications incorporating the latest J2EE and Web services technologies. It helps them build highly transactional, manageable, available and scalable applications that offer distributed security-rich function and remote administration. WebSphere Application Server

Version 4.0, Advanced Edition is a fully customizable, multiserver administration configuration aimed at professional Java application developers who require J2EE and Web services functionality. It is the core WebSphere Application Server product and it fits most enterprise usage scenarios.

WebSphere Application Server Version 4.0, Advanced Edition is available in two additional configuration options that meet different business needs. These specialized configuration options offer businesses the flexibility to respond to the changing marketplace without migrating to a different technology base:

*The single server configuration, IBM WebSphere Application Server Version 4.0, Advanced Single Server Edition, provides J2EE and Web services in a single runtime process. This configuration appeals to businesses that need to build standalone or departmental applications that are transaction- or message-oriented. They want applications that don't require failure bypass, workload distribution or remote administration. Ideal for a single department, this configuration installs quickly and easily with no database prerequisites. It features a browser-based administrative console to enable easy installation and management of single-server usage scenarios, including development, staging and standalone department solutions. It is limited to a single machine and cannot be used on separate servers beyond the single machine.*



WebSphere Application Server provides a choice of configurations for its high-performance Web services-enabled J2EE deployment platform.

*The developer configuration, IBM WebSphere Application Server Version 4.0, Advanced Developer Edition*, extends the WebSphere Application Server family with a low-priced configuration to meet the needs of individual e-business application developers who need an easy-to-use environment for building and testing new applications. It appeals to developers who want a friendly and powerful testing environment, especially one that is seamlessly integrated with IBM tooling. WebSphere Application Server Version 4.0, Advanced Developer Edition is functionally equivalent to WebSphere Application Server Version 4.0, Advanced Single Server Edition, except that its license agreement excludes production usage. It can be used without modifications, as these two configurations are functionally equivalent. It can be used only for internal evaluation and for development, demonstration and testing of applications. Although it cannot be used for production purposes, applications developed with WebSphere Application Server Version 4.0, Advanced Developer Edition can be deployed with WebSphere Application Server Version 4.0, Advanced Single Server Edition. WebSphere Application Server Version 4.0, Advanced Developer Edition is available for order

with software maintenance, including subscription and support, through Passport Advantage. It is also available at no charge for download with six-months' usage and 60-day online support.

**Rich, open application deployment environment**

With its focus on performance, scaling and security, IBM WebSphere Application Server Version 4.0, Advanced Edition provides a strong cross-platform, Java technology-based Web application platform. It includes Java servlets and JavaBeans, JavaServer Pages (JSP) and Enterprise JavaBeans (EJB) components that support deployment of e-business applications for transactions, enterprise system access, connectivity and Web services.

WebSphere Application Server Version 4.0, Advanced Edition, supports Microsoft® Windows NT®, Windows® 2000, IBM AIX®, IBM OS/400®, Sun Solaris, HP-UX and Linux® operating environments. The following features are included in WebSphere Application Server Version 4.0, Advanced Edition:

- *Integrated support for key Web services open standards, such as Simple Object Access Protocol (SOAP), Universal Description, Discovery and Integration (UDDI) and Web Services Description Language (WSDL), for the deployment of enterprise Web services solutions for dynamic e-business*
- *Full J2EE, Version 1.2.1 compatibility with early support for many of the features specified in J2EE, Version 1.3 that can enable powerful interoperability between Web services and J2EE applications. It can also offer key solutions for collaboration, business-to-business, portal serving, content management, commerce and pervasive computing*
- *Superior connectivity provided by a preview implementation of J2EE Connector Architecture (JCA) that can enable integration with IBM CICS®, IBM IMS™ and IBM WebSphere Host On-Demand applications. This connectivity can also enable some offerings from SAP, PeopleSoft, Oracle ERP Financials and J.D. Edwards, through a corresponding set of IBM application adapters*
- *Increased integration with Tivoli® SecureWay® Policy Director and pluggable user registries for enhanced security*

## Dynamic e-business

Based on Web services—processes and standards for developing and sharing applications across different systems environments—dynamic e-business provides businesses with a flexible software platform, the foundation you need to compete in global markets. Extend your applications to support business processes across enterprises. And establish dynamic and valuable electronic relationships with suppliers, trading partners and customers across the Web.

With a variety of easy-to-use features, WebSphere Application Server Version 4.0, Advanced Edition helps you design, build and deploy dynamic e-business applications including:

- *Web standards—UDDI, WSDL and SOAP. These Web standards collectively can enable applications to be listed in a directory, extend information to other applications about sharing information and data and about how to communicate across diverse systems environments over the Internet.*
  - *Enterprise JavaBeans technology and open standards. Comprehensive support for Enterprise JavaBeans technology and open standards provides a leading-edge foundation for enabling e-business and services.*
  - *XML Document Structure Services. Support for Extensible Markup Language (XML) Document Structure Services can enable e-business applications that interchange data with XML to parse, generate, manipulate and validate content based on XML and apply Extensible Style Language (XSL).*
  - *Security controls and application access protection. Secure access control lists can be established with more granularity than in the past. In addition to setting up security at user and group levels, controls and policies can be established for specific calls or methods within the applications themselves, utilizing third-party authentication techniques. This can provide much greater depth of control and protection within the server deployment environments.*
  - *Support for user registries based on Lightweight Directory Access Protocol (LDAP). LDAP is an open, vendor-neutral standard that provides an extendable architecture for centralized storage and management of information. LDAP-based directories provide the management capability and security-rich function you want to help ensure that your information is accessible but still protected.*
- WebSphere Application Server Version 4.0, Advanced Edition includes the IBM SecureWay Directory Server and the LDAP client interface to other directories. Also, WebSphere Application Server Version 4.0, Advanced Edition can provide support for local operating systems security and for pluggable user registries.*
- *Support for the major HTTP servers. WebSphere Application Server Version 4.0, Advanced Edition includes an IBM HTTP server powered by Apache. It also includes support for other major Web servers, with security and management enhancements.*
  - *Support for major industry-standard tools and industry-leading integration with IBM tools. WebSphere Application Server Version 4.0, Advanced Edition can provide support for the use and reuse of industry-standard tools to help reduce the cost of deploying applications on all WebSphere software-compliant platforms.*

## Transaction management

WebSphere Application Server Version 4.0, Advanced Edition provides deployment and management capabilities for Java applications and EJB components that can enable powerful interactions with enterprise databases, transaction processing systems and other applications. Benefiting from IBM technical innovation,

product leadership and extensive experience in enterprise transaction processing, WebSphere Application Server Version 4.0, Advanced Edition can allow robust, managed e-business transactions that can help businesses connect to customers.

WebSphere Application Server Version 4.0, Advanced Edition offers additional features to support transaction management including:

- *Support for comprehensive Java and EJB components*
- *Support for bean-managed and container-managed persistence storage, with EJB and container services*
- *Enhanced support for protocol and application program interface (API)*

With WebSphere Application Server Version 4.0, Advanced Edition improved transaction management, you can intelligently deploy and execute across multiple applications and components, optimizing object management and performance. WebSphere Application Server Version 4.0, Advanced Edition can improve performance and scalability across your deployment environment by including workload management and load balancing, clustering, cloning and pooling support. The EJB server provides container deployment services for servlets and EJB and JSP

components. WebSphere Application Server Version 4.0, Advanced Edition provides distributed transaction support spanning IBM DB2® (including IBM DB2 for OS/390®); Microsoft SQL Server; IBM Encina®; CICS TX, Version 2.1 (through CICS session EJB components); IBM WebSphere Application Server Version 4.0 for z/OS™ and OS/390; and Oracle, Sybase and IBM Informix® relational databases.

### **Performance and scalability**

WebSphere Application Server Version 4.0, Advanced Edition can provide extensive performance scaling, security-rich function and control for your advanced e-business applications. New performance-tuning wizards are included along with improved resource and log analyzers to help optimize your transactional Web sites. A new Java Naming and Directory Interface (JNDI) cache that sorts name server requests on behalf of Web applications deployed in WebSphere Application Server is also provided. For applications requiring many name server calls, speed can increase up to two to three times. WebSphere Application Server Version 4.0, Advanced Edition provides a high-scale and high-performance deployment environment with enhancements to the connection pooling algorithms and support for dynamic reloading of EJB components.

### **WebSphere software platform: building on a firm foundation**

IBM WebSphere Application Server, Advanced Edition is part of the IBM WebSphere software platform—a comprehensive set of integrated, award-winning e-business solutions. No matter where you are in the e-business cycle, the WebSphere software platform can allow you to grow—at the speed the market demands. Building on this robust platform, you can connect diverse IT environments to maximize your current investments and leverage existing skills. Deliver your core business applications to the Web using industry standards like Java technology and XML. And create next-generation applications that differentiate you from the competition. Advance to a powerful platform for integrated e-business—the WebSphere software platform.

### **For more information**

To learn more about IBM WebSphere Application Server Version 4.0, visit: [ibm.com/software/webservers/appserv/](http://ibm.com/software/webservers/appserv/)

To learn more about how the IBM WebSphere software platform can help you succeed in e-business, contact your IBM representative, IBM Business Partner or visit:

[ibm.com/websphere](http://ibm.com/websphere)

To order IBM WebSphere Application Server, Advanced Edition, contact your IBM representative or IBM Business Partner, or call 1 800 IBM-CALL. Or visit the Shop IBM Web site:

[ibm.com/shop](http://ibm.com/shop)

## IBM WebSphere Application Server Version 4.0, Advanced Edition configuration comparison

IBM WebSphere Application Server Version 4.0, Advanced Edition provides a choice of configurations of its high-performance Web services-enabled J2EE deployment platform.

	WebSphere Application Server Version 4.0, Advanced Single Server Edition	WebSphere Application Server Version 4.0, Advanced Edition
	WebSphere Application Server Version 4.0, Advanced Developer Edition	
Full J2EE 1.2 compatibility with partial J2EE 1.3 support	X	X
Web services support (SOAP, XML, UDDI, WSDL)	X	X
Connection management and pooling	X	X
XML parsing	X	X
Apache-based Web server	X	X
Browser-based administration	X	
Firewall support	X	X
Java technology (such as EJB, Java Message Service (JMS), servlet)	X	X
JMS-XA support	X	X
WebSphere tools integration	X	X
Integration with WebSphere offerings	X	X
Integration with Enterprise Services	X	X
Lotus® Domino™ interoperability	X	X
Directory services (LDAP)		X
Application-level workload management		X
Clustering for higher scale		X
Local/remote cloning for fault tolerance		X
Additional caching for faster transactions		X
Distributed security function with LDAP support		X
Full remote administration		X
Support for Microsoft SQL server		X
Sybase, Informix CMP support		X
JCA Implementation for J2EE connectors		X

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## IBM WebSphere Application Server Version 4.0, Advanced Edition at a glance

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### Hardware requirements

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#### Windows NT and Windows 2000 operating environments

- An Intel® technology-based PC running Windows NT Server, Version 4.0, Service Pack 6a or higher, or Windows 2000 Server or Advanced Server Service Pack 2
  - Intel Pentium® processor at 500MHz or faster
  - CD-ROM drive
  - Minimum of 180MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB memory, 512MB recommended
  - Support for a communication adapter
- 

#### AIX operating environment

- IBM RS/6000® or RS/6000 SP™ running AIX, Version 4.3.3.7 with APAR IY 19277, Version 4.3.3.8 with APAR IY 19277 or Version 5.1
  - 604e RS/6000 workstation at 375MHz or faster
  - CD-ROM drive
  - Minimum of 200MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB memory, 512MB recommended
  - Support for an appropriate network interface
- 

#### Sun Solaris operating environment

- A workstation running Solaris Version 7 or Version 8 at a maintenance level of October 2000 or higher
  - Sparc workstation at 440MHz or faster
  - CD-ROM drive
  - Minimum of 220MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB memory, 512MB recommended
  - Support for TCP/IP and an adapter
- 

#### HP-UX operating environment

- HP 9000 running HP-UX 11.0
  - CD-ROM drive
  - Minimum of 250MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB memory, 512MB recommended
  - Support for an appropriate network interface
- 

#### Linux operating environment

- Red Hat 7.1 or SuSE 7.1 Linux, based on kernel 2.4
  - Intel x86 processor at 500MHz or faster
  - CD-ROM drive
  - Minimum of 220MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB, 512MB recommended
  - Support for TCP/IP and an adapter
- 

#### Linux on IBM @server zSeries operating environment

- zSeries™ server running Linux distribution SuSE 7.0, based on kernel 2.2.16 or TurboLinux server 6.5, based on kernel 2.2
  - CD-ROM drive
  - Minimum of 150MB available disk space for installation
  - Minimum of 256MB, 512MB recommended
  - Support for TCP/IP and an adapter
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**Hardware requirements (continued)**

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**IBM @server iSeries system**

Systems hosting applications using enterprise beans:

- AS/400™ server 170 with processor feature 2385
- AS/400 server 720 with processor feature 2062
- iSeries™ server 270 with processor feature 2252
- iSeries server 820 with processor feature 2396
- Minimum of 1GB recommended

Systems hosting applications using servlets and JavaServer Pages components only:

- AS/400 server 170 with processor feature 2385 or feature 2292
- AS/400 server 720 with processor feature 2062 or feature 2061
- iSeries server 270 with processor feature 2252 or feature 2250
- iSeries server 820 with processor feature 2396 or feature 2395
- Minimum of 512MB recommended

For either system:

- CD-ROM drive
- \*BASE (client application development software only): minimum of 500MB available disk space for installation
- Minimum of 500MB available disk space for installation
- Support for TCP/IP and an adapter

**Workstation hardware requirements (for iSeries systems only)**

*For Windows NT or Windows 2000 operating environment*

- An Intel technology-based PC running Windows NT Server, Version 4.0, Service Pack 1 or Windows 2000 Server Service Pack 1
- CD-ROM drive
- Minimum of 40MB available disk space for installation
- Minimum of 96MB memory
- Support for a communication adapter

*For AIX operating environment*

- IBM RS/6000 or RS/6000 SP running AIX, Version 4.3.3.7 or later
- CD-ROM drive
- Minimum of 40MB available disk space for installation
- Minimum of 96MB memory
- Support for an appropriate network interface

*For Sun Solaris operating environment*

- A workstation running Solaris Version 7 or Version 8 at a maintenance level
- CD-ROM drive
- Minimum of 40MB available disk space for installation
- Minimum of 96MB memory
- Support for an appropriate network interface

*For HP-UX operating environment*

- HP workstation running HP-UX 11.0, or later
- CD-ROM drive
- Minimum of 40MB available disk space for installation
- Minimum of 96MB memory
- Support for an appropriate network interface

*For Linux operating environment*

- Red Hat 7.1 or SuSE 7.1 Linux
- Sparc processor at 500MHz or faster
- CD-ROM drive
- Minimum of 40MB available disk space for installation (including the Software Developer Kit)
- Minimum of 96MB
- Support for TCP/IP and an adapter

*For updates to previous requirements, visit [ibm.com/software/webservers/appserv/doc/latest/prereq.html](http://ibm.com/software/webservers/appserv/doc/latest/prereq.html).*

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## IBM WebSphere Application Server Version 4.0, Advanced Edition at a glance (continued)

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### Software requirements

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#### Windows NT operating environment

- Windows NT Server 4.0, Service Pack 6a or higher
  - Netscape Navigator, Version 4.7.3 or Microsoft Internet Explorer 5.5 Service Pack 1
  - Web browser that supports HTML 4 and CSS
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#### Windows 2000 operating environment

- Windows 2000 or Advanced Server Service Pack 2
  - Netscape Navigator, Version 4.7.3 or Microsoft Internet Explorer 5.5 Service Pack 1
  - Web browser that supports HTML 4 and CSS
- 

#### AIX operating environment

- AIX, Version 4.3.3.7, Version 4.3.3.8 (5765-C34) at APAR level IY19277 or Version 5.1 (5765-E61)
  - Netscape Navigator, Version 4.7.3 or Version 4.7.6i
  - Web browser that supports HTML 4 and CSS
- 

#### Sun Solaris operating environment

- Solaris, Version 7 or Version 8 at a maintenance level of October 2000 or higher
  - Netscape Navigator, Version 4.7.3
  - Web browser that supports HTML 4 and CSS
- 

#### HP-UX operating environment

- HP-UX, Version 11.0 (with maintenance levels listed at [support.openview.hp.com/cpe/patches/](http://support.openview.hp.com/cpe/patches/) and European support listed at [software.hp.com/products/EURO/](http://software.hp.com/products/EURO/))
  - Netscape Navigator, Version 4.7.3
  - Web browser that supports HTML 4 and CSS
- 

#### Linux operating environment

- Linux Red Hat, Version 7.1 or Linux SuSE, Version 7.1, based on kernel 2.4
  - Netscape Navigator, Version 4.7.6
  - Web browser that supports HTML 4 and CSS
- 

#### Linux on zSeries operating environment

- Linux distribution SuSE, Version 7.0, based on kernel 2.2.16 or TurboLinux Server 6.5, based on kernel 2.2
  - Netscape Navigator, Version 4.0.7 or higher, or Microsoft Internet Explorer, Version 5.0 or later
  - TCP/IP and network interface support
  - zSeries Developer Kit for Linux, Java 2 Technology Edition
  - DB2, Version 7.2 FixPak 4
  - Web browser that supports HTML 4 and CSS
  - GNU Standard C++ Library (libstdc) level 2.9.0
  - KDE/kwm window manager
- 

#### IBM iSeries system

- OS/400, Version 4 Release 5 or later
  - JDK 1.3 provided through the iSeries Developer Kit for Java (5769-JV1 for Version 4 Release 5, or 5722-JV1 for Version 5 Release 1)
  - OS/400 HostServers (5769-SS1 Option 12 or 5722-SS1 Option 12 for Version 5 Release 1) for remote installation (installing to your AS/400 system from the CD-ROM of another workstation)
  - OS/400 QShell Interpreter (5769-SS1 Option 30 for Version 4 Release 5, or 5722-SS1 Option 30 for Version 5 Release 1) for local installation from the CD-ROM
  - OS/400 TCP/IP Connectivity Utilities/400 (5769-TC1, for Version 4 Release 5, or 5722-TC1 for Version 5 Release 1) for remote installation (installing to your AS/400 system from the CD-ROM of another workstation)
  - IBM Cryptographic Access provider (Crypto Access Provider 56-bit for iSeries (5769-AC2, 5722-AC2 for Version 5 Release 1) or Crypto Access Provider 128-bit (5769-AC3, 5722-AC3 for Version 5 Release 1)) for secure sockets layer (SSL)
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## IBM WebSphere Application Server Version 4.0, Advanced Edition at a glance (continued)

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### Software requirements (continued)

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#### IBM iSeries system (continued)

- Digital Certificate Manager (5769-SS1, or 5722-SS1 for Version 5 Release 1) Option 34 for handling digital server certificates used by SSL
- DB2® Universal Database™ for AS/400 must be configured to work with WebSphere Application Server Version 4.0, for AS/400 to run WebSphere Application Server Version 4.0, Advanced Edition for eServer iSeries.
- DB2 Query Manager and SQL Development Kit for AS/400 (5769-ST1 for Version 4 Release 5, or 5722-ST1 for Version 5 Release 1) is an optional requirement for developing client applications.

*Note: If you need advanced schema mapping to database tables in container-managed persistent entity beans, you also need IBM VisualAge® for Java, Enterprise Edition 3.5. For updates to previous requirements, visit [ibm.com/software/webservers/appserv/doc/latest/prereq.html](http://ibm.com/software/webservers/appserv/doc/latest/prereq.html).*

#### Workstation software requirements (for iSeries systems only)

##### *For Windows NT operating environment*

- Windows NT Server 4.0, Service Pack 6a or higher
- Java 2 Software Developer Kit, Version 1.3
- Web browser that supports HTML 4 and CSS

##### *For Windows 2000 operating environment*

- Windows 2000 or Advanced Server Service Pack 1
- Java 2 Software Developer Kit, Version 1.3
- Web browser that supports HTML 4 and CSS

##### *For AIX operating environment*

- AIX, Version 4.3.3.7 (5765-C34)
- Java 2 Software Developer Kit, Version 1.3
- Web browser that supports HTML 4 and CSS

##### *For Sun Solaris operating environment*

- Solaris, Version 7 or Version 8 at the latest available maintenance level
- Java 2 Software Developer Kit, Version 1.3
- Web browser that supports HTML 4 and CSS

##### *For HP-UX operating environment*

- HP-UX, Version 11.0 (with maintenance levels of April 2000 or later)
- Java 2 Software Developer Kit, Version 1.3
- Web browser that supports HTML 4 and CSS

##### *For Linux operating environment*

- Linux Red Hat, Version 7.1 or Linux SuSe, Version 7.1
- Netscape Navigator, Version 4.7.3 or Microsoft Internet Explorer 5.5 Service Pack 1
- Web browser that supports HTML 4 and CSS

*Note: TCP/IP must be installed and running on your workstation. If you need advanced data mapping to database tables in container-managed persistent entity beans, you also need VisualAge for Java, Enterprise Edition 4.0.*

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#### Supported HTTP servers

- Apache Server, Version 1.3.20 for AIX, Solaris, Windows NT, Windows 2000 and HP-UX operating environments
- iPlanet Web Server Enterprise Edition 4.1 Service Pack 7 for AIX, Solaris, Windows NT, Windows 2000 and HP-UX
- Microsoft Internet Information Server, Version 4.0 for Windows NT
- Microsoft Internet Information Server, Version 5.0 for Windows 2000
- Lotus Domino Application Server, Release 5.0.5 and Release 5.0.6 for AIX, Solaris, Windows NT and HP-UX
- IBM HTTP Server, Version 1.3.19 for AIX, Solaris, Windows NT, Windows 2000, Linux and HP-UX
- IBM HTTP Server, Version 1.3.19.1 for Linux on zSeries

*For updates to previous requirements, visit [ibm.com/software/webservers/appserv/doc/latest/prereq.html](http://ibm.com/software/webservers/appserv/doc/latest/prereq.html).*

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## IBM WebSphere Application Server Version 4.0, Advanced Single Server Edition at a glance

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### Hardware requirements

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#### Windows NT and Windows 2000 operating environments

- An Intel technology-based PC running Windows NT Server, Version 4.0, Service Pack 6a or higher, or Windows 2000 Server or Advanced Server Service Pack 1
  - Intel Pentium processor at 500MHz or faster
  - CD-ROM drive
  - Minimum of 180MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB memory, 512MB recommended
  - Support for a communication adapter
- 

#### AIX operating environment

- IBM RS/6000 or RS/6000 SP running AIX, Version 4.3.3.7
  - 604e RS/6000 workstation at 375MHz or faster
  - CD-ROM drive
  - Minimum of 200MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB memory, 512MB recommended
  - Support for an appropriate network interface
- 

#### Sun Solaris operating environment

- A workstation running Solaris Version 7 or Version 8 at a maintenance level of October 2000 or higher
  - Sparc workstation at 440MHz or faster
  - CD-ROM drive
  - Minimum of 220MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB memory, 512MB recommended
  - Support for TCP/IP and an adapter
- 

#### HP-UX operating environment

- HP 9000 running HP-UX 11.0
  - CD-ROM drive
  - Minimum of 240MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB memory, 512MB recommended
  - Support for an appropriate network interface
- 

#### Linux operating environment

- Red Hat 7.1 or SuSE Linux 7.1
  - Intel Pentium processor at 500MHz or faster
  - CD-ROM drive
  - Minimum of 220MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB, 512MB recommended
  - Support for TCP/IP and an adapter
-

**Hardware requirements (continued)**

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**IBM iSeries system**

Systems hosting applications using enterprise beans:

- AS/400 server 170 with processor feature 2385
- AS/400 server 720 with processor feature 2062
- iSeries server 270 with processor feature 2252
- iSeries server 820 with processor feature 2396
- Minimum of 1GB recommended

Systems hosting applications using servlets and JavaServer Pages components only:

- AS/400 server 170 with processor feature 2385 or feature 2292
- AS/400 server 720 with processor feature 2062 or feature 2061
- iSeries server 270 with processor feature 2252 or feature 2250
- iSeries server 820 with processor feature 2396 or feature 2395
- Minimum of 512MB recommended
- Support for TCP/IP and an adapter

For either system:

- CD-ROM drive
- \*BASE (client application development software only): minimum of 500MB available disk space for installation
- Minimum of 500MB available disk space for installation
- Support for TCP/IP and an adapter

**Workstation hardware requirements (for iSeries systems only)**

*For Windows NT or Windows 2000 operating environment*

- An Intel technology-based PC running Windows NT Server, Version 4.0, Service Pack 1 or Windows 2000 Server Service Pack 1
- CD-ROM drive
- Minimum of 40MB available disk space for installation
- Minimum of 96MB memory
- Support for a communication adapter

*For AIX operating environment*

- IBM RS/6000 or RS/6000 SP running AIX, Version 4.3.3.7 or later
- CD-ROM drive
- Minimum of 40MB available disk space for installation
- Minimum of 96MB memory
- Support for an appropriate network interface

*For Sun Solaris operating environment*

- A workstation running Solaris Version 7 or Version 8 at the latest maintenance level
- CD-ROM drive
- Minimum of 40MB available disk space for installation
- Minimum of 96MB memory
- Support for an appropriate network interface

*For HP-UX operating environment*

- HP workstation running HP-UX 11.0, or later
- CD-ROM drive
- Minimum of 40MB available disk space for installation
- Minimum of 96MB memory
- Support for an appropriate network interface

*For Linux operating environment*

- Red Hat 7.1 or SuSE 7.1 Linux
- Sparc processor at 500MHz or faster
- CD-ROM drive
- Minimum of 40MB available disk space for installation (including the Software Developer Kit)
- Minimum of 96MB
- Support for TCP/IP and an adapter

*For updates to previous requirements, visit [ibm.com/software/webservers/appserv/doc/latest/prereq.html](http://ibm.com/software/webservers/appserv/doc/latest/prereq.html).*

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## IBM WebSphere Application Server Version 4.0, Advanced Single Server Edition at a glance (continued)

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### Software requirements

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#### Windows NT operating environment

- Windows NT Server 4.0, Service Pack 6a or higher
  - Netscape Navigator, Version 4.7.3
  - Web browser that supports HTML 4 and CSS
- 

#### Windows 2000 operating environment

- Windows 2000 or Advanced Server Service Pack 1
  - Netscape Navigator, Version 4.7.3
  - Web browser that supports HTML 4 and CSS
- 

#### AIX operating environment

- AIX, Version 4.3.3.7 (5765-C34)
  - Netscape Navigator, Version 4.7.3
  - Web browser that supports HTML 4 and CSS
- 

#### Sun Solaris operating environment

- Solaris, Version 7 or Version 8 at a maintenance level of October 2000 or higher
  - Netscape Navigator, Version 4.7.3
  - Web browser that supports HTML 4 and CSS
- 

#### HP-UX operating environment

- HP-UX, Version 11.0 (with maintenance levels listed at [support.openview.hp.com/cpe/patches/](http://support.openview.hp.com/cpe/patches/) and European support listed at [software.hp.com/products/EURO/](http://software.hp.com/products/EURO/))
  - Netscape Navigator, Version 4.7.3
  - Web browser that supports HTML 4 and CSS
- 

#### Linux operating environment

- Linux Red Hat, Version 7.1 or Linux SuSe, Version 7.1
  - Netscape Navigator, Version 4.7.6
  - Web browser that supports HTML 4 and CSS
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#### IBM iSeries system

- OS/400, Version 4 Release 5 or later
- JDK 1.3 provided through the iSeries Developer Kit for Java (5769-JV1 for Version 4 Release 5, or 5722-JV1 for Version 5 Release 1)
- OS/400 HostServers (5769-SS1 Option 12 or 5722-SS1 Option 12 for Version 5 Release 1) for remote installation (installing to your AS/400 system from the CD-ROM of another workstation)
- OS/400 QShell Interpreter (5769-SS1 Option 30 for Version 4 Release 5, or 5722-SS1 Option 30 for Version 5 Release 1) for local installation from the CD-ROM
- OS/400 TCP/IP Connectivity Utilities/400 (5769-TC1, for Version 4 Release 5, or 5722-TC1 for Version 5 Release 1) for remote installation (installing to your AS/400 system from the CD-ROM of another workstation)
- IBM Cryptographic Access provider (Crypto Access Provider 56-bit for iSeries (5769-AC2, 5722-AC2 for Version 5 Release 1) or Crypto Access Provider 128-bit (5769-AC3, 5722-AC3 for Version 5 Release 1)) for secure sockets layer (SSL)
- Digital Certificate Manager (5769-SS1, or 5722-SS1 for Version 5 Release 1) Option 34 for handling digital server certificates used by SSL
- DB2 Universal Database for AS/400 must be configured to work with WebSphere Application Server Version 4.0, for AS/400 to run WebSphere Application Server Version 4.0, Advanced Edition for eServer iSeries.
- DB2 Query Manager and SQL Development Kit for AS/400 (5769-ST1 for Version 4 Release 5, or 5722-ST1 for V5R1) is an optional requirement for developing client applications.

*Note: If you need advanced schema mapping to database tables in container-managed persistent entity beans, you also need VisualAge for Java, Enterprise Edition 3.5. For updates to previous requirements, visit [ibm.com/software/webservers/appserv/doc/latest/prereq.html](http://ibm.com/software/webservers/appserv/doc/latest/prereq.html).*

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**IBM iSeries system (continued)****Workstation software requirements***For Windows NT operating environment*

- Windows NT Server 4.0, Service Pack 6a or higher
- Java 2 Software Developer Kit, Version 1.3
- Web browser that supports HTML 4 and CSS

*For Windows 2000 operating environment*

- Windows 2000 or Advanced Server Service Pack 1
- Java 2 Software Developer Kit, Version 1.3
- Web browser that supports HTML 4 and CSS

*For AIX operating environment*

- AIX, Version 4.3.3.7 (5765-C34)
- Java 2 Software Developer Kit, Version 1.3
- Web browser that supports HTML 4 and CSS

*For Sun Solaris operating environment*

- Solaris, Version 7 or Version 8 at the latest available maintenance level
- Java 2 Software Developer Kit, Version 1.3
- Web browser that supports HTML 4 and CSS

*For HP-UX operating environment*

- HP-UX, Version 11.0 (with maintenance levels of April 2000 or later)
- Java 2 Software Developer Kit, Version 1.3
- Web browser that supports HTML 4 and CSS

*For Linux operating environment*

- Linux Red Hat, Version 7.1 or Linux SuSe, Version 7.1
- Netscape Navigator, Version 4.7.3 or Microsoft Internet Explorer 5.5 Service Pack 1
- Web browser that supports HTML 4 and CSS

*Note: TCP/IP must be installed and running on your workstation. If you need advanced data mapping to database tables in container-managed persistent entity beans, you also need VisualAge for Java, Enterprise Edition 4.0.*

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**Supported HTTP servers**

- Apache Server, Version 1.3.19, or higher, for AIX, Solaris, Windows NT, Windows 2000, Linux and HP-UX operating environments
- iPlanet Web Server Enterprise Edition 4.1 Service Pack 7 for AIX, Solaris, Windows NT, Windows 2000 and HP-UX
- Microsoft Internet Information Server, Version 4.0 for Windows NT
- Microsoft Internet Information Server, Version 5.0 for Windows 2000
- Lotus Domino Application Server, Release 5.0.5 and Release 5.0.6 for AIX, Solaris, Windows NT, Linux and HP-UX
- IBM HTTP Server, Version 1.3.19 for AIX, Solaris, Windows NT, Windows 2000, Linux and HP-UX

*For updates to previous requirements, visit [ibm.com/software/webservers/appserv/doc/latest/prereq.html](http://ibm.com/software/webservers/appserv/doc/latest/prereq.html).*

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## IBM WebSphere Application Server Version 4.0, Advanced Developer Edition at a glance

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### Hardware requirements

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#### Windows NT and Windows 2000 operating environments

- An Intel technology-based PC running Windows NT Server, Version 4.0, Service Pack 6a or higher, or Windows 2000 Server or Advanced Server Service Pack 1 or higher
  - Intel Pentium processor at 500MHz or faster
  - CD-ROM drive
  - Minimum of 180MB available disk space for installation (including the Software Developer Kit)
  - Minimum of 384MB memory, 512MB recommended
  - Support for a communication adapter
- 

#### Linux operating environment

- Red Hat 7.1 or SuSE Linux 7.1 based on kernel 2.4
- Intel Pentium processor at 500MHz or faster
- CD-ROM drive
- Minimum of 220MB available disk space for installation (including the Software Developer Kit)
- Minimum of 384MB, 512MB recommended
- Support for TCP/IP and an adapter

*Note: The no-charge downloadable version of IBM WebSphere Application Server Version 4.0, Advanced Developer Edition does not support SuSE Linux. For updates to previous requirements, visit [ibm.com/software/webservers/appserv/doc/latest/prereq.html](http://ibm.com/software/webservers/appserv/doc/latest/prereq.html).*

### Software requirements

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#### Windows NT operating environment

- Windows NT Server 4.0, Service Pack 6a or higher
  - Netscape Navigator, Version 4.7.3
  - Web browser that supports HTML 4 and CSS
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#### Windows 2000 operating environment

- Windows 2000 or Advanced Server Service Pack 1
  - Netscape Navigator, Version 4.7.3
  - Web browser that supports HTML 4 and CSS
- 

#### Linux operating environment

- Linux Red Hat, Version 7.1 or Linux SuSe, Version 7.1, based on kernel 2.4
- Netscape Navigator, Version 4.7.6
- Web browser that supports HTML 4 and CSS

*Note: The no-charge downloadable version of IBM WebSphere Application Server Version 4.0, Advanced Developer Edition does not support SuSE Linux. For updates to previous requirements, visit [ibm.com/software/webservers/appserv/doc/latest/prereq.html](http://ibm.com/software/webservers/appserv/doc/latest/prereq.html).*

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