

BEA

VERSION 6.0

WebLogic® Server



BEA WEBLOGIC SERVER™ THE #1 WEB AND WIRELESS APPLICATION SERVER, DELIVERS SCALABILITY, FLEXIBILITY, AND RELIABILITY TO POWER THE WORLD'S MOST SOPHISTICATED E-BUSINESS APPLICATIONS.

Overview

Whether supporting a variety of client devices, hosting complex and transactional business logic, or integrating with heterogeneous back-end systems, WebLogic Server delivers the performance, scalability, and high availability required to host mission-critical e-business applications.

Product Details

WebLogic Server provides all of the essential capabilities for powering the most demanding e-business applications, including:

Rapid Development: Speed up time-to-market by leveraging the Java 2 Enterprise Edition (J2EE) platform. These certified open standards, combined with a broad range of integrated development tools, simplify development, leverage existing skills, and get applications deployed quickly.

Broad Client Support: WebLogic Server is designed to host sophisticated e-business applications that support a wide variety of Web browsers, wireless devices, and programmatic clients.

High Performance and Scalability: Built on a highly-scalable, clustered architecture, WebLogic Server delivers load balancing, connection pooling, results caching, and optimized Web server, operating system, virtual machine, and database communications.

High Availability: By leveraging the most battle-tested platform on the market, enterprises can deploy mission critical, e-business applications to WebLogic Server with confidence. Renown for high-end, mission-critical deployments, WebLogic Server delivers automatic failover at both the Web and business logic tiers.

Broad Deployment Options: WebLogic Server features tight integration with the leading databases, operating systems, Web servers, Web browsers, and mobile devices.

Enterprise Integration Options: Whether it is connecting to existing enterprise resources, doing high performance messaging within the enterprise (application integration) or over the Internet (Business-to-Business), WebLogic Server can manage content, business logic, and transactions from the data center to the client.



FIGURE 1: Three-Tiered Architecture

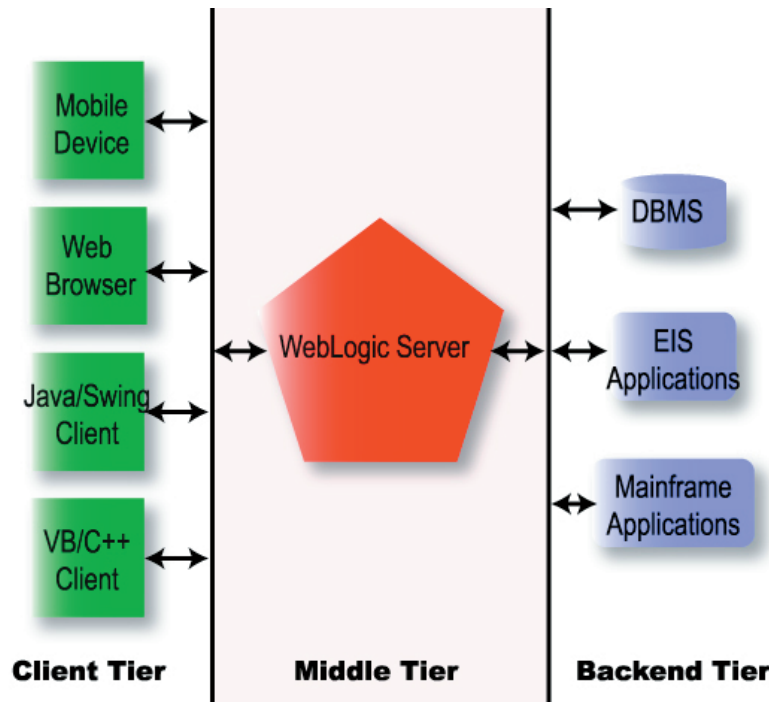


Figure 1 illustrates the three tiers of the WebLogic Server architecture.

WebLogic Server in the Enterprise Application Architecture

WebLogic Server provides the foundation for e-business applications. Hosting the presentation, business logic and information access services, WebLogic Server provides all of the underlying infrastructure required for high scalability and mission critical applications.

WebLogic Server supports a broad variety of clients, including Web browsers, wireless devices and programmatic clients. On the server, WebLogic Server supports the leading Unix, NT, and mainframe operating systems, and on the back-end, WebLogic Server integrates with relational databases, messages queues, and legacy systems.

Web Server

WebLogic Server includes a high-performance Web server for hosting static content and dynamic J2EE Web applications from with the application server. J2EE Web applications are a collection of HTML/XML pages, Java Server Pages, Servlets, Java classes,

applets, images, multimedia files, and other file types. The WebLogic Web server delivers the highest levels of performance and availability by fully leveraging page caching, load balancing, session state management and application server integration, all easily managed through the WebLogic Management Console. WebLogic Server can also integrate with legacy Apache, Microsoft IIS, or Netscape Web servers via native plug-ins for caching, load balancing, and failover capabilities.

BEA WebLogic E-Business Platform™ Services

WebLogic Server implements the J2EE platform specification that includes Servlets, Java Server Pages (JSP), Enterprise JavaBeans (EJB), Java Messaging Services (JMS), and other platform services. J2EE services provide access to standard network protocols, database systems, and messaging systems. When developing WebLogic Server applications, developers create and assemble components using these services and APIs.

Web components provide the presentation logic for browser-based or wireless applications, while EJB components encapsulate business objects and

FIGURE 2: Middle Tier

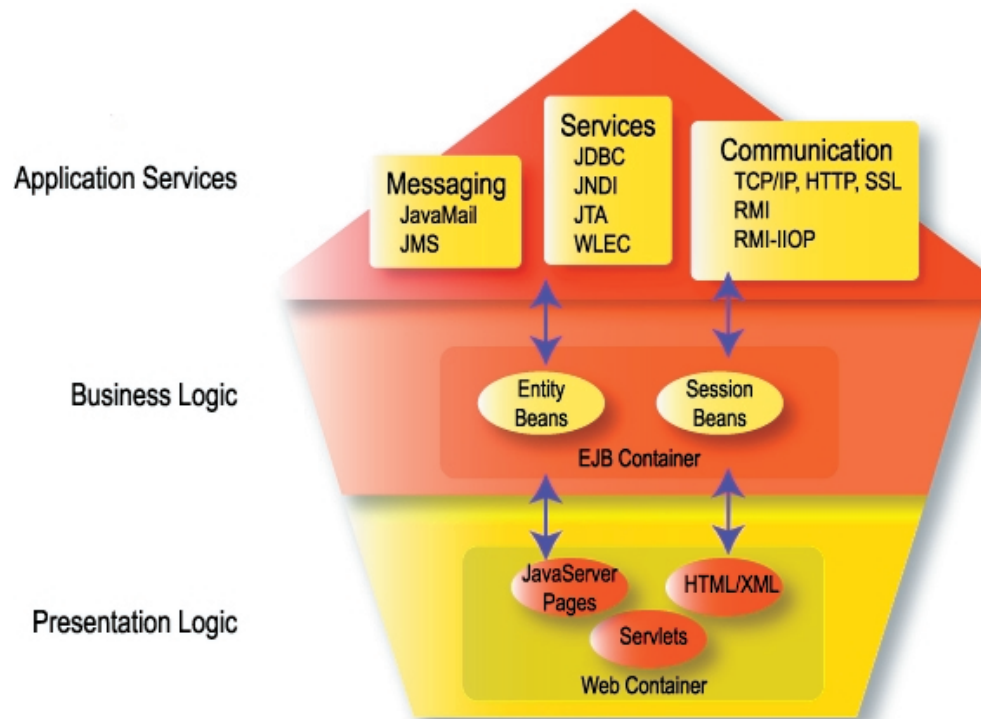


Figure 2 illustrates WebLogic Server component containers and application services.

processes. Web or wireless applications and EJBs are built on top of J2EE application services, such as Java Database Connection (JDBC), JMS, and Java Transaction API (JTA). Components execute in either the WebLogic Web container or EJB container. Containers provide the lifecycle support and services defined by the J2EE specifications, so developers do not have to be concerned with many of the details of transactions, security, database connectivity, and other underlying system infrastructure.

Enterprise Messaging Technologies

The Internet is defined by distributed, loosely coupled computing systems. Whether it's a customer placing a bid or businesses communicating with other businesses, there is a constant flow of data and events passing between applications. To accomplish this interchange, systems need a highly reliable means for communicating between asynchronous, heterogeneous resources. WebLogic Server delivers a powerful, flexible, and tightly integrated messaging platform based on Java Messaging Service (JMS) to serve as the backbone for enterprise messaging systems.

WebLogic JMS's power comes from its integration with WebLogic Clustering, and ability to do database, file, or in-memory persistence. Its flexibility gives developers the option to do publish/subscribe or point-to-point messaging. WebLogic JMS also supports either Multicast or TCP/IP transport protocols. And, because it's integrated with the core platform services, WebLogic JMS can directly access all of the EJB services needed to fully leverage a message-based architecture from a single, manageable platform.

System Management and Monitoring

Now more than ever, companies are deploying e-business systems that must function 100 percent of the time. When a system is down, opportunities are lost. To maintain these systems, administrators need the proper tools to start and stop servers, balance load or connection pools, select and monitor the configuration of resources, detect and correct problems, monitor and evaluate system performance, and deploy Web applications, Enterprise JavaBeans (EJBs), or other resources.

FIGURE 3: Administration Console

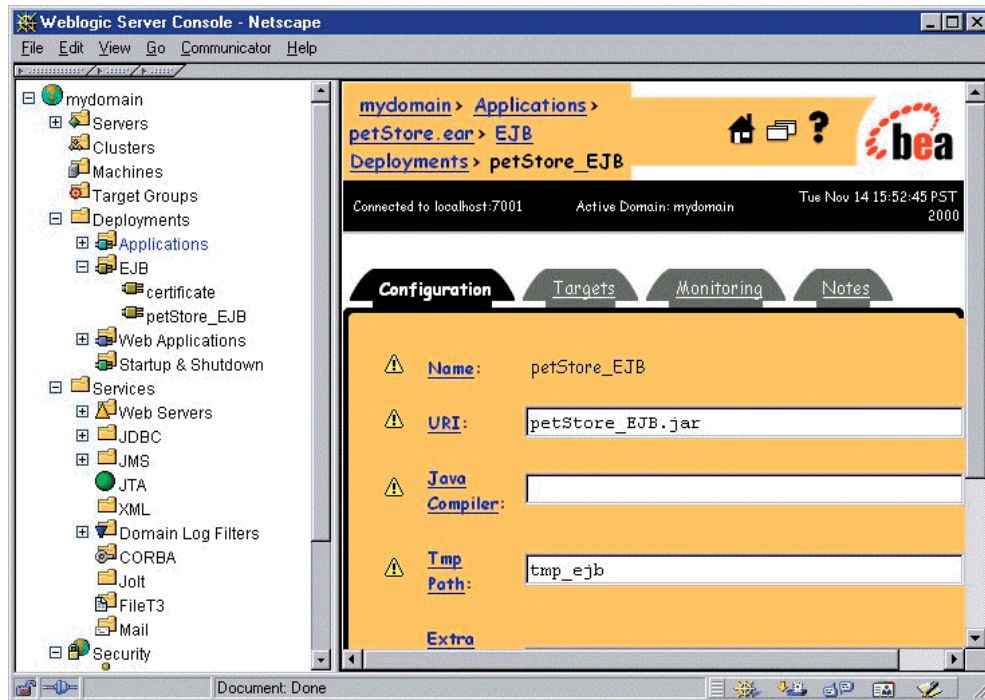


Figure 3 displays the Administration Console user interface.

WebLogic Server comes with a powerful, Web-based Management Console to provide administrators the tools they need to deploy, configure, and monitor their applications. The Administration Console is your window into the WebLogic Administration Service. The Administration Service, an implementation of Sun's Java Management Extension (JMX) standard, provides the facilities for managing WebLogic resources. Through the Administration Console, you can configure attributes of resources, deploy applications or components, monitor resource usage (such as server load or Java Virtual Machine memory usage or database connection pool load), view log messages, shutdown servers, or perform other management actions.

Cluster Architecture

A WebLogic Server Cluster is a group of WebLogic Servers that work together to provide a powerful and reliable application platform. While a clustered application appears to its clients as a single server, it is in fact a group of servers acting as one. Clusters provide two key features above a single server: scalability and availability. BEA WebLogic Server

Clusters are designed to deliver scalability and high-availability to J2EE applications in a manner that is completely transparent to application developers.

Scalability The capacity of a cluster is not limited to a single WebLogic Server on a single piece of hardware. New instances of WebLogic Server can be added to a cluster dynamically to increase capacity as dictated by your business requirements.

Availability A cluster uses the redundancy of multiple servers to insulate clients from system failures. The same service can be provided on multiple servers in the cluster. If one server fails, another can take over. The ability to failover from a failed server to a functioning server increases the availability of the application to clients.

A BEA WebLogic Cluster consists of a number of WebLogic Servers deployed on a network, coordinated with a combination of Domain Name Service (DNS), Java Naming and Directory Interface (JNDI) naming tree replication, in-memory session data replication, and WebLogic Remote Method Invocation (RMI) clustering enhancements.

FIGURE 4: BEA WebLogic Server Clustering

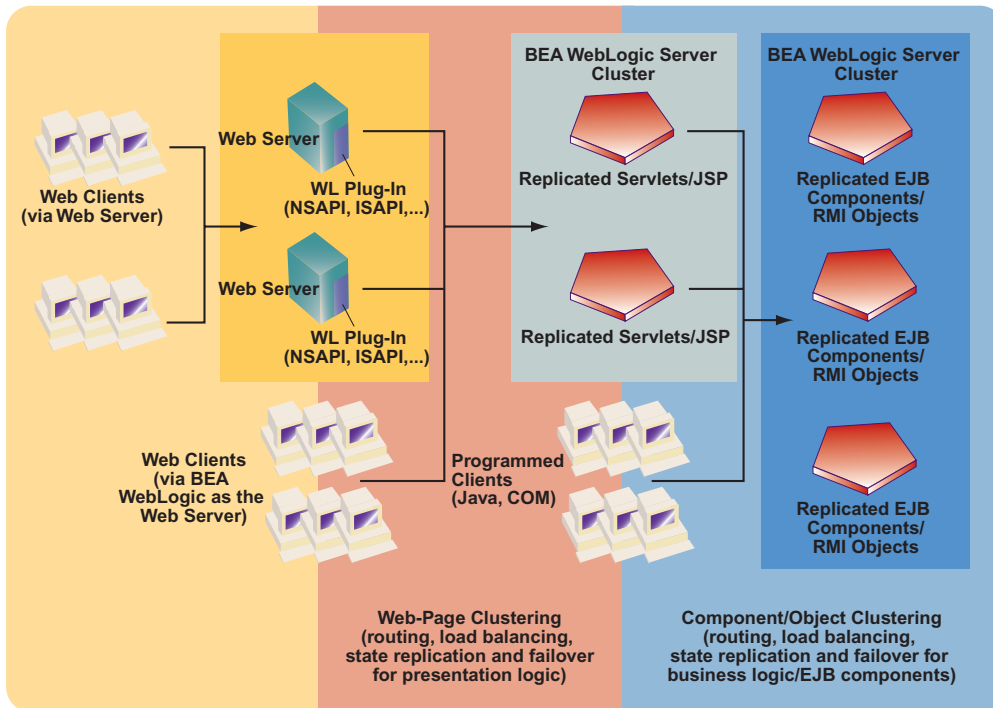


Figure 4 shows how BEA WebLogic Server delivers the utmost in scalability and high availability with its advanced clustering architecture.

Security

WebLogic Server provides a comprehensive security architecture encompassing access control, cryptography-based privacy, and user authentication. User- and Group-level Access Control Lists (ACLs), Realms, Secure Sockets Layer (SSL), and digital certificates are all standards-based security measures used in WebLogic Server. When used together, these security

features can track who has access to each service. A developer can restrict access to some WebLogic services through application logic at design time and the system administrator can also define how services are accessed at deployment. Additionally, WebLogic Server can operate independently from other security services or be incorporated into a single-sign-on solution by accessing existing security information stores.

FEATURE	BENEFIT
PRESENTATION SERVICES > Built-in Web Server > Apache, Microsoft IIS, and Netscape Integration > Servlet and JSP Engine > Advanced Web caching	A self-contained platform for serving static and dynamic content to wireless and Web applications that leverage high-speed page caching for increased performance and scalability.
WEB SERVER CLUSTERING > Load balancing > Advanced failover with Servlet state caching > Dynamic discovery of Web services	Achieve Web server scalability and high availability by deploying a cluster of servers. Additional in-memory replication provides high performance failover for enhanced availability.
BUSINESS LOGIC SERVICES > EJB container > Distributed transaction management with Two-Phase Commit	Enterprise JavaBeans servers reduce the complexity of developing middleware by providing automatic support for middleware services, such as transactions, security, database connectivity, and more.
BUSINESS LOGIC CLUSTERING > Load balancing > Advanced failover with replicated naming, smart stubs, and in-memory EJB state caching	Achieve application-level scalability and high availability by deploying a cluster of servers. Additional in-memory replication provides high performance failover of business logic for enhanced availability.
DATABASE CLUSTERING > JDBC Multipools	Increase high availability and scalability with advanced database clustering services.
ENTERPRISE MESSAGING PLATFORM > Clustered JMS > JavaMail	Integrated messaging provides a reliable, flexible service for the asynchronous exchange of business data and events throughout an enterprise. The enterprise messaging platform handles highly scalable message generation and processing for either point-to-point or publish/subscribe architectures.
CERTIFIED J2EE COMPLIANCE > EJB 1.1 and 2.0, JDBC 2.0, JSP 1.1, Servlet 2.2, JTA 1.01, JMS 1.0.2, JNDI 1.2, Java RMI 1.0, RMI/IIOP 1.0, JAAS 1.0, JMX 1.0, JavaMail 1.1	Protect your investment by programming to the industry standard J2EE platform. Certification assures enterprises and developers alike that APIs and development features will work in a uniform way.
OTHER LEADING INTERNET TECHNOLOGIES > HTTP 1.1, SSLv3, LDAPv2, X.509v2	Integrated with standard Internet protocols.
INFORMATION ACCESS SERVICES > JDBC Support/Drivers > Naming and Directory Services > XML	Integrate with back-end systems and other computing systems.
INTEGRATED DEVELOPMENT TOOLS > Tightly integrated with all leading development tools, such as WebGain Studio, Visual Age for Java, and JBuilder.	Rapid development with industry leading graphical development tool of choice.
ENTERPRISE MANAGEMENT > Web Based Management Console > Java Management Extensions (JMX) > SNMP	Provide developers and administrators with Web-based, granular configuration and monitoring tools, or integration with leading management frameworks.
INTEGRATED SECURITY > Flexible Authentication and Authorization > Integrated Security and Firewall Support > Integrated Logging	WebLogic Server secures networked applications with optional encryption, authentication, and authorization based on Secure Sockets Layer (SSL), X.509 digital certificates, and ACLs. All WebLogic Server services are securely available through firewalls via tunneling through HTTP or HTTPS.

Additional Products in the BEA WebLogic E-Business Platform™

The BEA WebLogic E-Business Platform provides the essential infrastructure for building an integrated e-business that can reliably service customers, scale to handle unpredictable levels of growth across the entire

chain of commerce, personalize services for customers to capture their loyalty, collaborate flexibly with partners, suppliers, and customers, and adapt nimbly to an increasing rate of change. WebLogic Server plays an integral role in this platform by powering these e-business applications, and managing all of the underlying complexities of this integrated infrastructure.

PRODUCTS	PRODUCT DESCRIPTIONS
BEA WebLogic Personalization Server™	BEA WebLogic Personalization Server™ enables management of customer relationships with easy-to-use business controls that allow dynamic definitions of application behavior and the delivery of tailored content. It employs winning e-business initiatives with in-the-box personalized content management, pre-integrated e-analytics, and e-marketing systems.
BEA WebLogic Commerce Server™	BEA WebLogic Commerce Server™ is a complete commerce solution that can be easily customized to rapidly deploy adaptable and personalized e-commerce applications that create a sustainable competitive advantage and accelerate response time to changing market conditions.
BEA WebLogic Java Adapter for Mainframe BEA eLink Integration Server,™ BEA eLink™ Application Adapters	BEA WebLogic Java Adapter for Mainframe facilitates access to IBM CICS and IMS mainframe applications from Java applications running on BEA WebLogic Server. BEA WebLogic Server also helps e-businesses leverage legacy applications through interoperability with the BEA eLink Integration Server™, eLink™ application adapters, and application adapter services packages.
BEA WebLogic Process Integrator™	BEA WebLogic Process Integrator™ is a powerful J2EE, EJB, and XML-based business process and workflow engine for BEA WebLogic application servers that automates workflow and supports business-to-business processes and application assembly.
BEA WebLogic Collaborate™	BEA WebLogic Collaborate™ is an open, standards-based business-to-business platform for the rapid creation, management, and integration of online trading exchanges, supply chains, and collaborative commerce initiatives.

About BEA

BEA Systems, Inc. is one of the world's leading e-business infrastructure software companies, with over 8,000 customers around the world including the majority of the *Fortune* Global 500. BEA and its WebLogic® brand are among the most trusted names in e-business. Businesses built on the award-winning BEA WebLogic E-Business Platform™ are reliable, highly scalable, and poised to bring new services to market quickly. BEA's e-business platform is the *de facto* standard for over 1,200 systems integrators, independent software vendors (ISVs), and application service providers (ASPs) to provide complete solutions that fast-track and future-proof e-businesses for high growth and profitability. Headquartered in San Jose, Calif., BEA has 89 offices in 30 countries and is on the Web at www.bea.com.



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Platforms Supported

BEA WebLogic Server is available on the following operating systems:

Compaq Alpha with Tru64 UNIX

Compaq OpenVMS

Hewlett-Packard HP/9000 with HP-UX 10.20

Hewlett-Packard HP/9000 with HP-UX 11.0

IBM AS/400e with OS/400 V4R3

IBM AS/400e with OS/400 V4R4/V4R5

IBM DYNIX/ptx

IBM S/390 with OS/390 V2R6

Bull/IBM RS/6000 with AIX 4.2

Bull/IBM RS/6000 with AIX 4.3

Intel Pentium with Windows 2000

Intel Pentium with Windows NT 4.0

Intel Pentium with Windows 98

Intel Pentium with Red Hat Linux

SCO UnixWare

Siemens MIPS with Reliant UNIX 5.44C

Silicon Graphics with IRIX

Sun Microsystems SPARC with Solaris

Resources

Download a free evaluation of BEA WebLogic Server at:
<http://commerce.bea.com/>.

For high-level product overview, see the BEA WebLogic Server Product Brief at:
www.bea.com/products/weblogic/server/index.shtml.

For information about the BEA WebLogic E-Business Platform, view:
www.bea.com/about/platform.shtml.

For customer success stories, see the BEA Web site's Customers page:
www.bea.com/customers/index.shtml.

For information about BEA professional services, see the BEA Web site's Services page:
www.bea.com/service/index.shtml.

For information about BEA e-commerce solution partners, see the BEA Web site's Partners page:
www.bea.com/partners/BuiltOnBEA/index.shtml.

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