

# ORACLE WEBLOGIC SERVER

## KEY FEATURES AND BENEFITS

### ORACLE WEBLOGIC SUITE

- Scale-out for data intensive applications with Coherence Enterprise Edition, the industry's leading in-memory data grid
- Predictable performance: Java SE with JRockit Real Time
- Active GridLink for RAC – High Availability with Oracle Database

### ORACLE WEBLOGIC SERVER ENTERPRISE EDITION

- High performance clustering and failover capabilities
- JRockit Mission Control with JRockit Flight Recorder delivers low-overhead Java application monitoring and diagnostics
- Enterprise Messaging -high performance JMS messaging
- Oracle Virtual Assembly Builder reduces time to configure and deploy applications in virtualized environments

### ORACLE WEBLOGIC SERVER STANDARD EDITION

- Java EE 6 Support
- Java SE 6 and 7 Support
- Includes two world leading JVMs – Hotspot and JRockit
- Best of class developer experience
- Server tools integration with New Maven support
- Classloader analysis tool to detect/resolve class conflicts
- Eclipse plug-ins via Oracle Enterprise Pack for Eclipse
- Oracle JDeveloper IDE
- Oracle NetBeans IDE
- Open source support for Spring Framework
- Available as a ZIP distribution for fast download, unzip and go experience
- FastSwap iterative development
- Comprehensive, easy-to-use administration console
- Oracle TopLink ORM persistence
- Oracle Application Development Framework
- Oracle Platform Security Services
- Industry-leading performance

*Oracle WebLogic Server is the application server of choice for modern data centers building cloud infrastructures. It's built on standards-based technology offerings, Oracle cloud application foundation, delivering the most complete platform with the highest performance and enterprise scalability. Oracle WebLogic Server takes full advantage of the latest hardware architectures including 64-bit addressable memory, multi-core computing systems and high-speed networks. Oracle WebLogic Server provides full support for the latest Java EE specification, Java EE 6, and is available in three editions with increasing functionality.*

*Oracle WebLogic Suite provides the essential foundation for building and deploying modern cloud infrastructure. It provides an infrastructure that is optimized for high performance and a reduced hardware footprint, enabling elasticity to easily expand and contract demand for large scale shared infrastructures. The suite includes Oracle WebLogic Server Enterprise Edition, Oracle Coherence Enterprise Edition, Java SE Suite and Active GridLink for RAC and is the foundation for Oracle Fusion Middleware, Oracle Fusion Applications and Oracle Exalogic Elastic Cloud offerings that form the basis for customers to deploy modern cloud infrastructure.*

*Oracle WebLogic Server Enterprise Edition includes all the features and benefits of Oracle WebLogic Server Standard Edition, Java SE Advanced and Oracle Virtual Assembly Builder. The core WebLogic Server includes proven clustering technology and sophisticated diagnostic tooling. With Oracle WebLogic Server Enterprise Edition, IT teams can consolidate and standardize applications and services onto a pool of highly performant, available, reliable, scalable, and easy-to-manage instances of Oracle WebLogic Server to gain more agility, efficiency, and business alignment.*

*Oracle WebLogic Server Standard Edition includes Oracle TopLink and Application Development Frameworks, Oracle Web Tier and the core WebLogic Server. Oracle WebLogic Server Standard Edition provides a manageable runtime platform with reliability, availability, scalability, and industry-leading performance.*

## Oracle WebLogic Suite

Oracle WebLogic Suite uniquely combines several compelling high availability and scale out capabilities with the industry's best application server to meet the needs of modern enterprises. Oracle WebLogic Suite forms the basis of Oracle's Cloud Application and is the cornerstone for Oracle Fusion Middleware offerings. It provides the best Java foundation for Oracle infrastructure and applications, enabling enterprises to outperform their competitors while minimizing operational costs. Whether enterprises need scale-out IT systems to meet increasing customer demands or just greater efficiency, Oracle WebLogic Suite is engineered to adapt to ever-changing business conditions.

- **Runtime predictability – Oracle Java SE Suite**

The Java runtime environment for Oracle WebLogic Suite is provided by Oracle Java SE Suite, providing access to the world's two leading JVMs - HotSpot and Oracle JRockit –offering you the choice of the right tool for your performance needs and profile. Java SE Suite enables predictability and lower latency for mission-critical applications that require the highest levels of performance. Within Java SE Suite, Oracle JRockit Real Time uses deterministic garbage collection to reduce pause times to a consistent, predictable level.

- **Linear Scalability – Coherence**

Oracle Coherence Enterprise Edition delivers an in-memory data grid that pools and shares memory across multiple systems. This data grid creates a single large virtual memory space enabling applications to scale linearly while significantly improving performance and reliability. Coherence operations and administration are seamlessly integrated with WebLogic Server. Coherence is installable as part of WebLogic Server, and is managed and configured using WebLogic Server administration tools. Users can configure, start and stop, and monitor Coherence clusters from the WebLogic Server console, or from the WebLogic Scripting Tool (WLST). WebLogic Server and Coherence runtime integration includes Coherence\*Web for WebLogic Server session state management, programming model integration with annotations, and WebLogic JNDI integration with Coherence caches.

- **QoS with High Availability – Active GridLink for RAC**

Oracle Active GridLink for Oracle Real Application Clusters (RAC) provides a highly optimized integration between Oracle WebLogic Data Sources and Oracle RAC. Active GridLink for RAC leverages Oracle Universal Connection Pooling (UCP) and Oracle Notification Service (ONS) technologies to deliver multiple benefits for WebLogic Server users. Using a single data source to connect to RAC clusters simplifies WebLogic Server configuration, and improves manageability by isolating WebLogic Server from RAC configuration changes. Runtime Connection Load Balancing of database requests provides increased application performance and scalability. Fast Connection Failover enables immediate detection of RAC node failures, speeding failover to remaining nodes and improving system availability. Together with transaction affinity, Web session affinity and other features, Active GridLink for RAC delivers the best application server integration with a world's premier database technology.

## Oracle WebLogic Server Enterprise Edition

When your business cannot afford to have applications fail or have services become unexpectedly inaccessible, Oracle WebLogic Server Enterprise Edition provides organizations with high availability and superior monitoring and management capabilities to help IT infrastructure keep running even as load on the system increases. Oracle WebLogic Server Enterprise Edition helps to ensure superior application performance and provides unmatched deep diagnostics capabilities that can be used on production systems without affecting runtime performance. Oracle WebLogic Server Enterprise Edition is engineered to support modern data centers with maximum uptime at minimum cost.

- **Enterprise Messaging**

Reliable messaging between systems is critical for applications and modern data centers. Oracle WebLogic Server's enterprise class messaging builds on the Java Message Service (JMS) standard to include high performance and reliability as well as connectivity to non-Java clients such as C, C# and .NET. Advanced features include automatic migration of JMS-related services from a failing server to a healthy server, reliable messaging via store-and-forward, and unsurpassed performance when persisting messages to disk. Further, JMS now interacts with Oracle's database-integrated messaging via Oracle Streams Advanced Queuing (AQ). When coupled with Oracle RAC, Oracle AQ offers even higher levels of messaging performance.

- Superior Manageability, Monitoring and Management**

Simplifying new application and service development is only half the equation. You must be able to deploy and run them in a highly reliable and manageable environment. Human errors made by operations staff when making changes to running servers can cause significant damage to customer loyalty and revenue.

WebLogic Server Enterprise Edition provides built-in management, diagnostic and automation tools to increase operational efficiency for complete lifecycle management support – from development to test to production.

- Oracle WebLogic Server Administration Console:** Provides the starting point for essential operations, administration, automation and management. It enables access to all the functions of Oracle WebLogic Server and includes built-in intelligence to help prevent human configuration errors. For those who need automation, Oracle WLST enables command-line and scriptable control over Oracle WebLogic Server. JRockit Mission Control (JRMIC) delivers JVM diagnostics for JRockit including memory, thread, and latency analysis via an intuitive Eclipse-based GUI. It includes JRockit Flight Recorder (JFR), a powerful tool for post-incident analysis that allows the capture of events in a circular buffer that can be persisted to disk and analyzed using JRMIC GUI.

The screenshot shows the Oracle WebLogic Server Administration Console interface. The main content area is titled "Summary of Deployments" and contains a table of deployed applications and modules. The table has columns for Name, State, Health, Type, and Deployment Order. The first row shows "ConferenceOfLanner" with a state of "Active" and a health of "OK". Below it, several EJB modules are listed, including "ConferenceBean", "DevResourceCreator", "MemoryLoadSessionBean", "MyScheduleBean", "RegistrationBean", "SessionSessionBean", and "SpeakerSessionBean". The table also includes "Web Services" and "None to display".

Name	State	Health	Type	Deployment Order
ConferenceOfLanner	Active	OK	Web Application	100
ConferenceBean			EJB	
DevResourceCreator			EJB	
MemoryLoadSessionBean			EJB	
MyScheduleBean			EJB	
RegistrationBean			EJB	
SessionSessionBean			EJB	
SpeakerSessionBean			EJB	
Web Services				
None to display				

**Figure 1. Oracle WebLogic Server Administration Console**

- WebLogic Server Management Pack Enterprise Edition** (Available separately and as an add-on to Oracle WebLogic Suite): This pack includes functionality around business transaction management, performance diagnostics, and lifecycle management, provisioning and patching to provide business driven application management tailored for the WebLogic technology stacks.

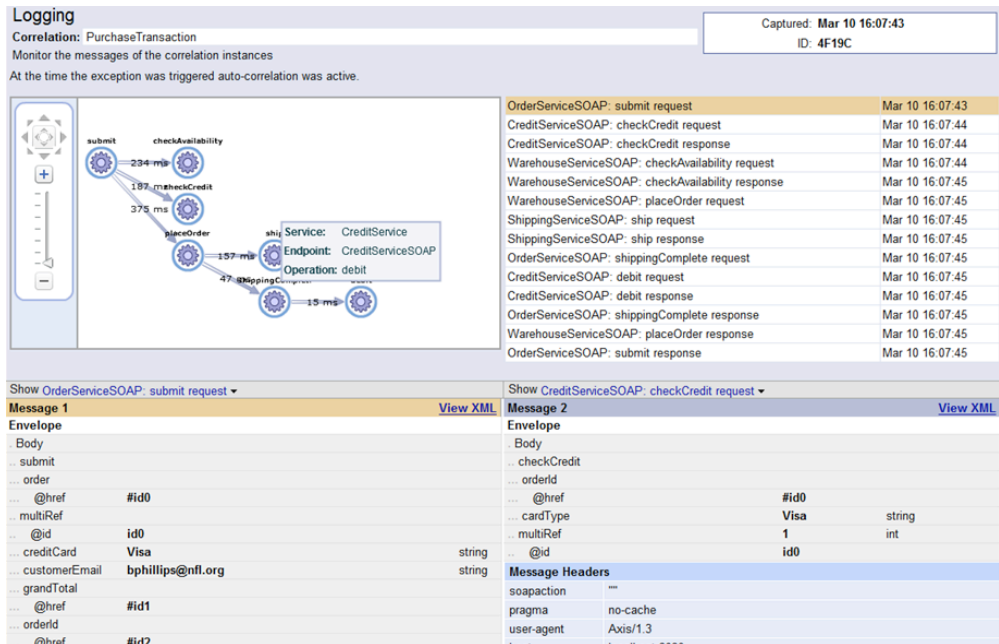


Figure 2. End-to-end transaction monitoring

- **Enterprise Scalability and Clustering**

Easy configuration changes, production redeployment, and rolling upgrades are just a few of the capabilities that help keep systems available even while making changes. Sophisticated yet easily managed is another hallmark of Oracle WebLogic Server Enterprise Edition. Clustering instances of Oracle WebLogic Server together enables many capabilities that kick in when a server abruptly goes offline. Features such as whole-server migration, automatic service migration, and the transaction recovery service are invoked when server health degenerates. Built-in software load balancing, server self-monitoring, and overload protection help avoid failure altogether. WebLogic Server also simplifies the configuration of multi-site deployments to support Disaster Recovery requirements.

- **Oracle Virtual Assembly Builder**

This new and unique offering delivers application-aware virtualization by packaging software components into collections of virtual appliances called assemblies which are typically deployed onto a pool of virtualized hardware resources to ensure high levels of hardware utilization and efficiency. The ability to easily replicate assemblies in production, even allowing for variations of the assembly without adding complexity reduces risk of configuration errors as assemblies are moved between development, test and production environments. This model enables high levels of standardization and consistency across application infrastructures, allowing for simplified and rapid provisioning of multi-tier applications to virtualized environments.

- **Maximum Performance**

Maximizing service levels means providing reliable data and high performance no matter the amount of simultaneous transactions or users. Oracle WebLogic Server is a blazing fast enterprise application server enabling businesses to get even more out of their infrastructure. WebLogic Server includes Oracle RAC Integration for higher performance and simplified management and Oracle Traffic Director, delivered on Exalogic Elastic Cloud, for higher throughput performance. In addition, WebLogic Server has again set new world records in the industry standard SpecJEnterprise 2010 benchmark for Java EE application server performance.

### Oracle WebLogic Server Standard Edition

Oracle WebLogic Server Standard Edition provides developers with the tools and technologies to write enterprise applications and services quickly. In production, Oracle WebLogic Server Standard Edition provides operations teams with the administration capabilities to keep enterprise applications and services up and running.

- **Agility**

Being responsive to change requires agility. Oracle WebLogic Server Standard Edition allows organizations to download and install components needed to get productive quickly. Overall product acquisition and installation has never been

easier; the download experience is fast and flexible and the installation options are tailor-made to match an organization's unique environment.

- **Latest Standards Support with Java EE 6**

WebLogic Server provides full support for the latest Java EE specification, Java EE 6. This enables WebLogic Server to offer all of the developer productivity, ease-of-use and general advances this latest specification has to offer on top of the world class WebLogic Server product. With leading development and production features, WebLogic Server is the best platform for Java EE applications.

- **Simplified Development**

- **Java EE 6**

WebLogic Server is fully Java EE 6 compatible with JSF 2.0, Servlet 3.0, EJB 3.1, JPA 2.0, CDI 1.0, JAX-RS 1.1, Bean Validation 1.0 and more. It uses the EclipseLink JPA reference implementation – built and donated to open-source by Oracle as well as others such as the Jersey 1.1 reference implementation, also built by Oracle.

- **TopLink**

TopLink is a comprehensive Java persistence framework offering Object-Relation Mapping with the Java Persistence API (JPA), Object-XML Binding with JAXB and SDO, and Database Web Services (DBWS) for access to relational data via JAX-WS. TopLink includes the open source EclipseLink project (the JPA and SDO reference implementation) which provides core persistence services along with TopLink Grid which supports the scaling out of JPA applications into large clusters through integration with Oracle Coherence.

- **Application Development Framework (ADF)**

Oracle ADF is an end-to-end development framework, built on top of the Enterprise Java platform, offering unparalleled productivity to application developers. The framework provides integrated infrastructure solutions for the various Model-View-Controller (MVC) layers of the application and an easy way to develop on top of them. Oracle ADF focuses on delivering rich Web user experience as well as mobile and desktop interfaces with easy integration to databases and Service Oriented Architecture (SOA) services.

- **JDeveloper, Oracle Enterprise Pack for Eclipse (OEPE) and NetBeans**

Oracle WebLogic Server provides support for both open source development offerings and commercial code. Developers can choose the completeness of Oracle JDeveloper Integrated Development Environment (IDE) that spans Oracle Fusion Middleware, Eclipse-based tooling with Oracle supported plugins or NetBeans. Eclipse and NetBeans offer popular choices built in open source for highly productive Java EE development.

- **Maven integration**

WebLogic Server provides a Maven plugin that allows it to be fully integrated into a Maven managed development and testing environment; performing software installation, creating and configuring domains, starting and stopping server processes, and performing application deployment operations. Binding the goals from the WebLogic Server Plugin into a Maven project lifecycle allows both simple and complex execution sequences to be automatically performed, making it ideal for use in Continuous Integration testing arrangements.

- **Spring Support**

WebLogic Server supports the development and deployment of Spring applications and delivers simplified configuration with Spring pre-configured beans. It has been upgraded to support Spring 3.0. Developers can leverage WebLogic Server features in Spring applications such as Datasources, JMS, Work Managers, Clustering, Transactions, and Monitoring and Management.

- **Classloader Analysis Tool**

Classloader Analysis Tool (CAT) in WebLogic Server helps identify and resolve hard to diagnose class and library conflicts quickly. CAT cracks open the classloader blackbox, displays classloaders' hierarchies and sources, allows you to search for a class/resource on a classloader, and view class definitions,

and interfaces. It helps analyze classpath conflicts and generates corresponding filtering classloader configuration.

- **Enhanced Manageability**

Oracle WebLogic Server Standard Edition continues its relentless pursuit of uptime. Its administration console includes features such as a change center to help prevent inadvertent errors, as well as the ability to auto-record domain configuration changes in the console for playback with a single command via Oracle WebLogic Server's scripting tool. This enables you to cut down potential errors when working on repetitive procedures. Operations teams will also appreciate improvements to Oracle WebLogic Server Standard Edition's diagnostic framework (WebLogic Diagnostic Framework - WLDF) and corresponding administration console extension that displays diagnostic information surfaced from running servers. The administration console also includes an extension that supports applications written in the Spring Framework. Administration console look and feel customizations can be easily applied. In addition, WLST provides automation by enabling command-line and scriptable control over Oracle WebLogic Server.

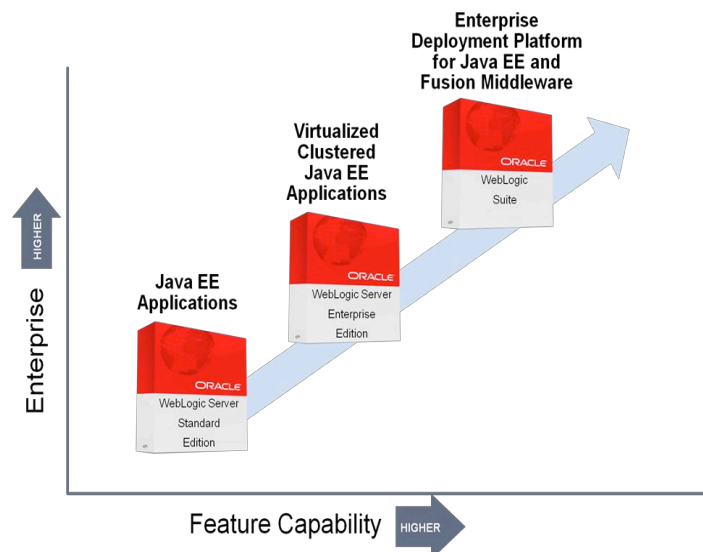
### Oracle WebLogic Server – Foundation for Oracle Fusion Middleware and Fusion Applications

Oracle WebLogic Server and Oracle Cloud Application Foundation, provide the underpinnings for Fusion Middleware and Fusion Applications. Oracle delivers common and seamless install, upgrade, patching, provisioning, and management capabilities across all the components of the Fusion Middleware and Fusion Applications, providing significant value for customers who want to standardize not only on a cloud infrastructure but also extend it to the rest of Fusion Middleware and Fusion Applications.

Oracle WebLogic Server is optimized for Oracle Exalogic Elastic Cloud in the areas of Infiniband protocols such as Socket Direct Protocol for JDBC, HTTP and state replication; optimizations for the hardware form factor including thread management and Oracle RAC integration with Active GridLink for RAC.

### Summary

Oracle WebLogic Server delivers mission critical Java Infrastructure for enterprise applications, and is the strategic application server for Fusion Middleware and Fusion Applications. It is the foundation for Exalogic hardware/software engineered systems solution and Oracle's overall Cloud Application Foundation. It is available in three editions with increasing functionality as below.



Oracle WebLogic Server is the Java application server for building cloud infrastructure; a flexible IT approach that leverages pooling, sharing, and automated adjustment of resources at the application infrastructure level, resulting in efficiency gains and superior performance and scalability. Other Oracle Fusion Middleware offerings come together to form a complete and integrated set of capabilities to meet various business scenarios.

#### RELATED PRODUCTS

Extend Oracle WebLogic Suite with the following:

- Oracle WebLogic Server Management Pack Enterprise Edition<sup>1</sup>
- Oracle SOA Suite
- Oracle BPM Suite
- Oracle WebCenter Suite

## Supported Platforms

For specific supported platforms and configuration detail, refer to the following documentation hub: [oracle.com/technology/documentation/index.html](http://oracle.com/technology/documentation/index.html).

See table 1 for a platform summary.

Supported Platforms	
Software	
Operating system (32-bit and 64-bit supported)	<ul style="list-style-type: none"> <li>• AIX</li> <li>• HP-UX</li> <li>• Linux</li> <li>• Solaris</li> <li>• Windows</li> </ul>
Databases	<ul style="list-style-type: none"> <li>• Oracle (and Oracle Real Application Clusters)</li> <li>• IBM DB2</li> <li>• Microsoft SQL Server</li> <li>• MySQL</li> <li>• Sybase</li> </ul>
Web Servers	<ul style="list-style-type: none"> <li>• Apache</li> <li>• Microsoft IIS</li> <li>• Oracle HTTP Server</li> <li>• Oracle iPlanet Web Server</li> </ul>
Java	<ul style="list-style-type: none"> <li>• Java EE 6</li> <li>• Java EE 5</li> <li>• Java Platform, Standard Edition 7</li> <li>• Java Platform Standard Edition 6</li> </ul>

**Table 1: WebLogic Server Platform Support Summary**

## Contact Us

For more information about Oracle WebLogic Server, please visit [oracle.com](http://oracle.com) or call +1.800.ORACLE1 to speak to an Oracle representative.



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