Oracle WebLogic Server is the #1 application server for developing and deploying applications across conventional and cloud environments. It provides a mission critical cloud platform for applications requiring performance, scalability and reliability. Integrated, native management tools simplify operations and reduce management costs. Developers can leverage modern development tooling and server features for application innovation. Oracle WebLogic Server is available in three editions with increasing functionality.


Oracle WebLogic Server Enterprise Edition includes all Oracle WebLogic Server Standard Edition features, plus Oracle WebLogic Server clustering and Java SE Advanced. Proven clustering technology enables scaling of applications with high availability. Java SE Advanced includes Java Mission Control and Java Flight Recorder for diagnosing problems in development and production. JMS clustering features such as Whole Server Migration and Automatic Service Migration support reliable enterprise messaging.

Oracle WebLogic Suite

Oracle WebLogic Suite is the flagship Oracle WebLogic Server edition. It includes all of the capabilities of Oracle WebLogic Server, the industry’s #1 application server, and all of the features of Oracle WebLogic Server Enterprise Edition, and adds unique performance, availability, scalability and manageability capabilities to meet the needs of modern enterprises. Oracle WebLogic Suite enables enterprises to outperform their competitors while minimizing operational costs, and will scale to adapt to changing business conditions and application requirements.

- Linear Scalability – Oracle Coherence Enterprise Edition
  Oracle Coherence Enterprise Edition delivers an in-memory data grid that enables applications to scale linearly and improve performance and reliability. Oracle WebLogic Suite includes Oracle Coherence Enterprise Edition and integration between Oracle WebLogic Server and Oracle Coherence to simplify use of Oracle Coherence capabilities. Integrated installation and maintenance simplify product provisioning. Developers can use Oracle Coherence APIs, or can use features such as Coherence*Web HTTP session management, or TopLink Grid to leverage Oracle Coherence functionality with no application programming.

In Oracle WebLogic Server 12c, we have provided additional integration with Managed Coherence Servers. This feature enables administrators to use the WebLogic Management Framework, including the WebLogic Console, Enterprise Manager, and WebLogic Scripting Tool (WLST) for Oracle Coherence configuration, lifecycle management, application deployment, and monitoring. Managed Coherence Servers provides a unified, efficient management infrastructure for managing Oracle WebLogic Server and Oracle Coherence together.

Oracle WebLogic Server and Oracle Coherence offer superior capabilities as standalone products - no other application infrastructure provides the same combined, integrated capabilities as offered in Oracle WebLogic Suite.

- High Availability – Active GridLink for RAC
  Active GridLink for Oracle Real Application Clusters (RAC) integrates
Oracle WebLogic Server 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. Configuring a single data source to connect to RAC clusters simplifies initial Oracle WebLogic Server configuration, and improves ongoing manageability by isolating Oracle WebLogic Server from RAC configuration changes. Runtime Connection Load Balancing of database requests provides increased application performance and scalability. Transaction affinity ensures transactional requests are processed with maximum performance and reliability. Fast Connection Failover speeds detection of RAC node failures, and failover to remaining nodes, for continuous connectivity and improved system availability.

Figure 2: Active GridLink for RAC Load Balancing, XA Affinity and Failover

In Oracle WebLogic Server 12c, Active GridLink for RAC now supports advanced features of Oracle Database 12c such as Global Data Services. Together with transaction affinity, Web session affinity and other features, Active GridLink for RAC delivers the best application server integration with the world’s premier database technology.

- **Runtime predictability – Oracle Java SE Suite**
  Oracle Java SE Suite provides the Java runtime environment for Oracle WebLogic Suite, including access to the world’s two leading JVMs – Oracle JDK and Oracle JRockit - offering you the choice of the right tool for your performance needs and profile. Java SE Suite advanced garbage collection technology reduces pause times and enables lowers latency for mission-critical applications that require performance and predictability.

**Oracle WebLogic Server Enterprise Edition**

When your business cannot afford to have applications fail or have services become inaccessible, Oracle WebLogic Server Enterprise Edition provides organizations with high availability and superior monitoring and management capabilities to keep IT infrastructure running even as load on the system increases. Oracle WebLogic Server Enterprise Edition helps to ensure superior application performance and provides 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. It includes all of Oracle WebLogic Server Standard Edition, plus the following features.

- **Enterprise Scalability and Clustering**
  Easy configuration changes, production redeployment, and rolling upgrades are just a few of the capabilities that help maintain system availability. Cluster-wide configuration management and application deployment simplify management of clustered environments. Web Server plug-ins provide connectivity from Web Servers to Oracle WebLogic Server clusters, with dynamic load balancing across servers in the cluster. Server self-monitoring, and overload protection help avoid server failures. Session failover, whole-server migration, automatic service migration, and transaction recovery services maintain cluster availability when individual servers become unavailable. Oracle WebLogic Server also simplifies the
configuration of multi-site deployments for Disaster Recovery needs.

In Oracle WebLogic Server 12c, Dynamic Clusters provide a new option for cluster configuration, simplifying both initial cluster configuration, and enabling elastic scaling of clusters to meet changing requirements of cloud applications and environments.

![Dynamic Clusters – Elastic Scaling for Cloud Environments](image)

- **Enterprise Messaging**
  Reliable messaging between systems is critical for applications and modern data centers. Oracle WebLogic Server Java Message Service (JMS) provides an enterprise-class messaging engine built into the application server for simplified application development and infrastructure management. Oracle WebLogic Server builds on the JMS standard to include high performance, reliability and flexible scaling. JMS automatic service migration and whole server migration provide failover and high availability in configured JMS clusters, complementing other advanced features like reliable messaging and integration with Oracle Streams Advanced Queuing (AQ). In Oracle WebLogic Server 12c, elastic JMS simplifies configuration of JMS clusters and enables JMS inclusion in dynamic clusters for seamless scaling of JMS configurations and applications.

- **Java Mission Control and Java Flight Recorder**
  Java Mission Control and Java Flight Recorder are unique JVM capabilities that included in Java SE Advanced and in Oracle WebLogic Server Enterprise Edition. Java Flight Recorder is a powerful tool that captures JVM events in a circular buffer that can be persisted to disk for post-incident analysis. Java Mission Control is an intuitive Eclipse-based GUI for analyzing Java Flight Recorder data. The WebLogic Diagnostic Framework is integrated with Java Mission Control and Java Flight Recorder to enable combined WebLogic Diagnostic Framework and JVM event analysis.

**Oracle WebLogic Server Standard Edition**
Oracle WebLogic Server Standard Edition provides developers with the tools and technologies for building enterprise applications quickly. In production, Oracle WebLogic Server Standard Edition delivers high performance the administration capabilities to keep enterprise applications and services up and running.

- **Simplified Development**
  - Oracle WebLogic Server 12c 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. Oracle WebLogic Server 11g supports Java EE 5.

- Oracle WebLogic Server Standard Edition includes Oracle Java SE support. Oracle WebLogic Server 11g and 12c are certified with Java SE 7, including new developer features. See Oracle certification matrices for Java SE 6 certification information.

- Oracle WebLogic Server is available as a lightweight zip distribution for fast download times and developer ease of use. Applications developed with the zip distribution can be deployed in production on installations created with Oracle Universal Installer (OUI) technology.

- TopLink is a comprehensive Java persistence framework offering Object-Relational Mapping with the Java Persistence API (JPA), Object-XML Binding with JAXB and SDO. TopLink includes the open source EclipseLink project (the JPA and SDO reference implementation) that provides core persistence services, along with TopLink Grid and other value-added product features.

- Oracle Enterprise Pack for Eclipse, JDeveloper and NetBeans provide a choice of open source and commercial IDE offerings. Developers can choose the completeness of the Oracle JDeveloper IDE that spans Oracle Fusion Middleware, Oracle Eclipse-based tooling with Oracle supported plug-ins, or NetBeans. Eclipse and NetBeans offer popular choices built in open source for highly productive Java EE development.

- Oracle WebLogic Server provides Maven plug-ins, POMs and archetypes that integrate Oracle WebLogic Server with Maven repositories and build environments. Binding the goals from the Oracle WebLogic Server plug-ins into a Maven project lifecycle allows both simple and complex execution sequences to be automatically performed in Continuous Integration build environments.

- HTML5 support added in Oracle WebLogic Server 12c enables the development of rich, interactive applications between standard HTML5 clients and applications hosted on Oracle WebLogic Server. New features include support for the WebSocket protocol, and TopLink Data Services for generating RESTful interfaces to JPA applications and enterprise data sources declaratively, with no additional programming required.

The Classloader Analysis Tool (CAT) simplifies the use of open source technologies in Oracle WebLogic Server applications. It helps identify and resolve class and library conflicts quickly. CAT displays classloader hierarchies and sources, allowing 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 configurations.

- Oracle Application Development Framework (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.

- Oracle 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 3.1. Spring developers can leverage Oracle WebLogic Server features such as Datasources, JMS, Work Managers, Clustering, Transactions, and Monitoring and Management.

- **Industry-leading performance**

Oracle WebLogic Server delivers industry-leading performance for applications, both in terms of application response time and application throughput. Optimizations in specific containers, such as JMS, provide high levels of message capacity and throughput. Thread management innovations such as Work Managers deliver self-tuning server capabilities for optimal performance across containers and applications. Optimized protocols enable high-performance communications across server instances. Integration with Web Server and Database technologies provide for maximum performance of multi-tier environments.

These performance benefits have been proven not only in customer environments, but also in industry standard benchmarks. Oracle WebLogic Server 12c currently holds the world record result of 57,422.17 SPECjEnterprise2010 EjOPS².

High performance means that IT users can deliver high levels of service to business users with fewer server instances and resources to manage, at lower cost.

- **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 adversely impact customer loyalty and revenue. Oracle WebLogic Server Standard Edition provides built-in management, diagnostic and automation tools to increase operational efficiency for complete lifecycle management support – from development to test to production.

- The WebLogic Management Framework includes the administration server, its communication with managed servers, lifecycle management via the Node Manager, and the WebLogic

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² SPEC and the benchmark name SPECjEnterprise are registered trademarks of the Standard Performance Evaluation Corporation. Results from www.spec.org as of 06/28/2013. Oracle WebLogic Server 12c (12.1.1) on SPARC T5-8, 57,422.17 SPECjEnterprise2010 EjOPS.
Administration Console. The 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. The WebLogic Scripting Tool enables command-line and scriptable control over Oracle WebLogic Server. The WebLogic Diagnostic Framework enables users to instrument applications for monitoring and diagnostic purposes.

- Oracle Fusion Middleware Control provides an integrated console for managing all of the Oracle Fusion Middleware product line, within a single Oracle WebLogic Server domain. Enhanced monitoring and configuration management capabilities are available for Oracle WebLogic Server 12c. Oracle Fusion Middleware Control also leverages the WebLogic Management Framework to manage Oracle HTTP Server 12c instances.

- Oracle WebLogic Server Management Pack Enterprise Edition is available as an add-on to all Oracle WebLogic Server editions. It enables Oracle WebLogic Server management via Oracle Enterprise Manager. It includes rich functionality, such as business transaction management, performance diagnostics, lifecycle management, and provisioning and patching, for managing multi-domain environments.

- **Oracle Web Tier Integration**

  Oracle WebLogic Server Standard Edition includes Oracle Web Tier technologies to provide seamless integration across Web Servers and the application server tier. Oracle Web Tier includes Oracle HTTP Server, Oracle iPlanet, and Web Server plug-ins for Apache and Microsoft IIS.

- **Oracle Database 12c Integration**

  All Oracle WebLogic Server editions support diverse database technologies and products. In Oracle WebLogic Server 12c we have added new capabilities to integrate with and leverage new Oracle Database 12c features. Application Continuity provides continuous application services, even when database connections are lost. Multi-tenancy support enables multi-tenant applications to dynamically switch between pluggable databases hosted within a single multi-tenant container database. Integration with Database Resident Connection Pools improves the scalability of cloud application environments sharing a pool of database connections. Global Data Services support enables transparent failover to database services that have been migrated across global, multi-site database cloud environments (available with Active GridLink for RAC only).

Figure 5: Oracle WebLogic Server 12c and Oracle Database 12c Integration
Oracle WebLogic Server – Foundation for Oracle Fusion Middleware and Fusion Applications

Oracle WebLogic Server and Oracle Cloud Application Foundation provide the core platform for Oracle Fusion Middleware and Oracle Fusion Applications. Oracle delivers common installation, 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 Oracle Fusion Middleware and Oracle Fusion Applications.

Oracle WebLogic Server also includes optimizations for Oracle Exalogic Elastic Cloud systems by leveraging Oracle Exalogic Elastic Cloud technologies such as Infiniband networking and Socket Direct Protocol for server-server communications, HTTP session state replication, JDBC access to Oracle Exadata-based databases, and optimized server failure detection for server and service migration. Optimizations for the underlying hardware system include thread management optimizations and JMS message compression. Finally, Exalogic Elastic Cloud systems also include license rights to Active GridLink for RAC and Oracle Traffic Director.

Summary

Oracle WebLogic Server delivers a mission critical cloud platform for Java applications, enables efficient management of cloud environments, and provides a modern development platform for building innovative applications. It is the cornerstone for Oracle’s Cloud Application Foundation, Oracle Exalogic Elastic Cloud engineered systems, Oracle Fusion Middleware and Oracle Fusion Applications. No other application server in the industry has the same breadth of capabilities and strategic vendor commitment. Build your next generation of applications on Oracle WebLogic Server!
Oracle WebLogic Server is the #1 application server for developing and deploying applications across conventional and cloud environments. 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:
- Oracle WebLogic Coherence Grid Edition Option
- Oracle BPEL Process Manager Option
- Oracle Service Bus
- Oracle SOA Suite
- Oracle Unified Business Process Management Suite

Extend Oracle WebLogic Server Enterprise Edition with:
- Oracle WebCenter Portal

Extend Oracle WebLogic Server Standard Edition with:
- Oracle WebLogic Server Management Pack
- Cloud Management Pack for Oracle Fusion Middleware

## Supported Platforms

For supported platforms and configuration detail, refer to the following: oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html

See table 1 for a platform summary.

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<td>Oracle (and Oracle Real Application Clusters)</td>
<td>Apache, Microsoft IIS, Oracle HTTP Server, Oracle iPlanet Web Server</td>
<td>Java EE 6 in Oracle WebLogic Server 12c, Java EE 5 in Oracle WebLogic Server 11g, Java SE 6 and SE 7 - see supported configurations detail</td>
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**Table 1: Oracle WebLogic Server Platform Support Summary**

## Contact Us

For more information about Oracle WebLogic Server, please visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.