Oracle WebLogic Server is the #1 application server for developing and deploying applications across cloud environments, engineered systems, and conventional systems. Oracle WebLogic Server offers application developers modern development tooling and advanced APIs for application innovation. It provides a mission critical cloud platform for applications requiring high performance, scalability and reliability. Powerful, integrated management tools simplify operations and reduce management costs. Finally, Oracle WebLogic Server provides the foundation for the Oracle Fusion Middleware portfolio of products. Oracle WebLogic Server is available in three editions with increasing functionality.


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 WebLogic Suite includes Oracle Coherence Enterprise Edition, an in-memory data grid that enables applications to improve performance, scalability and reliability. Developers can use Oracle Coherence APIs, JCache or Memcached APIs, or can use features such as Coherence*Web HTTP session management to leverage Oracle Coherence functionality with no application programming.

Oracle WebLogic Server 12c now enables the management of Coherence clusters using the WebLogic Management Framework, and tools such as the WebLogic Console and WebLogic Scripting Tool (WLST). This feature, called 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 Oracle WebLogic Suite.

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

Active GridLink for Oracle Real Application Clusters (RAC) integrates Oracle WebLogic Server and Oracle RAC. “GridLink” data sources connect to RAC clusters and simplify Oracle WebLogic Server management by isolating Oracle WebLogic Server configurations from RAC configuration changes. Runtime Connection Load Balancing increases application performance and scalability. Transaction affinity ensures transactions 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.
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. 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 ensures superior application performance and provides deep diagnostic capabilities for production systems. 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**
  Dynamic configuration changes, production redeployment, and rolling upgrades are just a few of the capabilities that help maintain system availability. Cluster-wide management and 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.

**Figure 3: Dynamic Clusters – Elastic Scaling for Cloud Environments**

- **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. In Oracle WebLogic Server 12c, elastic JMS simplifies configuration of JMS clusters and enables JMS inclusion in dynamic clusters for simplified scaling, with whole server migration for high availability.

- **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 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 Flight Recorder to enable combined Oracle WebLogic Server 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 and administration capabilities to keep enterprise applications and services up and running.

- **Simplified Development**

  - Oracle WebLogic Server 12c is fully Java EE 6 compatible and includes selected Java EE 7 APIs – JAX-RS 2.0, Java API for JSON Processing, Java API for WebSocket, and JPA 2.1. 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. Free developer licenses are provided to enable desktop application development.

  - Oracle TopLink is a Java persistence framework based on the open source EclipseLink project. It offers standards-based JPA, JAXB and SDO support, along with TopLink Grid, TopLink Data Services 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.

  - Support for rich client applications added in Oracle WebLogic Server 12c enables the development of interactive applications between HTML5 clients or native mobile applications, and applications hosted on Oracle WebLogic Server. New features include support for JAX-RS 2.0, JSON processing, WebSocket, WebSocket emulation, Server-Sent Events and TopLink Data Services.

- **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.**

- **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 development.**
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 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, 3.1 and 4.0. 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 application performance. 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. 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.

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 EjOPS\(^1\).

- **Superior Manageability, Monitoring and Management**
  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, lifecycle management via the Node Manager, and the WebLogic Administration Console. The console provides a Web interface for all Oracle WebLogic Server management functionality. 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. RESTful APIs for management provide monitoring, lifecycle management, deployment and datasource configuration support.

  - 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 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

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\(^1\) 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.
Continuity provides continuous application services, even when database connections are lost. Multitenancy support enables multitenant applications to dynamically switch between pluggable databases hosted within a single multitenant 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).

![Diagram of WebLogic Server](image)

**Figure 5:** Oracle WebLogic Server 12c and Oracle Database 12c Integration

**Deployment Options**
Oracle WebLogic Server is unique in the number of delivery platforms that are offered to users. First, users can deploy Oracle WebLogic Server on conventional on-premise systems. The Enterprise Manager Cloud Management Pack enables support for self-service private cloud provisioning and management. Second, users can deploy on Engineered Systems such as Oracle Exalogic Elastic Cloud, Oracle SPARC SuperCluster, and Oracle Database Appliance systems. Oracle WebLogic Server contains multiple optimizations for performance, high availability and manageability on Exalogic and SuperCluster systems. Finally, users can deploy Oracle WebLogic Server in public cloud environments, such as the Oracle Cloud, and other third-party cloud offerings. Applications are fully compatible across these environments.

**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, application development, management, performance, availability and database integration capabilities across all the components of Oracle Fusion Middleware and Fusion Applications, with multiple deployment platform options, providing significant value for customers who not only want to standardize not only on an industry-leading application infrastructure, but also want to leverage it across Oracle Fusion Middleware and Oracle Fusion Applications.

**Summary**
Oracle WebLogic Server provides a modern development platform for building innovative applications, delivers a runtime platform with unique performance and availability capabilities, and offers rich management tooling for efficient and low cost operations. It offers flexible choice of deployment options across cloud environments, engineered systems, and conventional systems. 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!
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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<tr>
<td>Java</td>
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<tr>
<td>• Java EE 6, plus selected Java EE7 APIs in Oracle WebLogic Server 12c</td>
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<td>• Java EE 5 in Oracle WebLogic Server 11g</td>
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<td>• Java SE 6 and 7 - see detailed support matrix</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.

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