

# ORACLE WEBLOGIC SERVER

## KEY FEATURES AND BENEFITS

### ORACLE WEBLOGIC SERVER STANDARD EDITION

- Java EE 8 Support
- Java SE 8 and 11 support
- GraalVM EE Support
- On-premises and cloud native deployments
- Choice of IDEs, development, management tools
- Performance, reliability, manageability
- Oracle Web Tier

### ORACLE WEBLOGIC SERVER ENTERPRISE EDITION

- Oracle WebLogic Server Standard Edition, plus...
- Java SE Advanced
- Clusters for high performance and high availability
- Dynamic Clusters for elastic scaling

### ORACLE WEBLOGIC SUITE

- Oracle WebLogic Server Enterprise Edition, plus...
- Oracle Coherence Enterprise Edition
- Active GridLink for RAC
- iAS Enterprise Edition

### CLOUD NATIVE KUBERNETES DEPLOYMENTS

- Dockerfiles
- Docker Images
- Kubernetes tools
  - Operator
  - Deploy Tooling
  - Monitoring Exporter
  - Image Tool
  - Logging Exporter

### ORACLE WEBLOGIC SERVER FOR ORACLE CLOUD INFRASTRUCTURE

- Simplified provisioning to Oracle Cloud
- Full compatibility with on-premises deployments
- Universal Credits and BYOL pricing models
- Multiple Editions
  - Enterprise Edition (UCM)
  - Suite (UCM)
  - Standard Edition (BYOL)
  - Enterprise Edition (BYOL)
  - Suite (BYOL)

*Oracle WebLogic Server is the #1 Java application server, offering standards-based APIs and tooling for application innovation on a proven mission critical runtime. Oracle WebLogic Server applications may be deployed on physical systems, VMs or cloud native Kubernetes environments hosted on-premises or in public clouds. Oracle WebLogic Server is integrated with Oracle's full product and cloud service portfolio, and is available in multiple editions.*

*Oracle WebLogic Server Standard Edition combines full Java EE 8 support and high performance, reliability and manageability features. Java SE support is included. A range of IDEs and CI/CD, testing, monitoring, and diagnostic tools are available to support application development and management.*

*Oracle WebLogic Server Enterprise Edition includes all Standard Edition features, plus clustering and integrated Java SE Advanced features. Configured clusters provide high performance and high availability with advanced messaging and transaction management support. Dynamic clusters add simplified configuration and automated, policy-based elastic scaling.*

*Oracle WebLogic Suite is an application infrastructure that spans web server, application server, and data grid technology tiers. It includes all of Oracle WebLogic Server Enterprise Edition plus Oracle Coherence Enterprise Edition for performance and scalability, Active GridLink for RAC for connectivity with Oracle Database RAC, and all of iAS Enterprise Edition.*

*Oracle provides Dockerfiles and Docker images, and supports Kubernetes tools, including the Oracle WebLogic Server Operator, Deploy Tooling, Monitoring Exporter, Image Tool, and Logging Exporter, for cloud native Kubernetes deployments, with all Oracle WebLogic Server editions.*

*Oracle WebLogic Server for Oracle Cloud Infrastructure simplifies provisioning configurations on Oracle Cloud, with full compatibility with on-premises deployments. Multiple editions are available from the Oracle Cloud Marketplace via Universal Credits (UCM) and Bring Your Own License (BYOL) pricing models.*

### 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, reliability and administration capabilities to keep enterprise applications and services up and running.

- **Simplified Development**
  - Oracle WebLogic Server 14.1.1 is fully Java Enterprise Edition 8 compatible and is certified with Java SE 8 and Java SE 11, supporting the latest developer innovations. Oracle Java SE Support is included in WebLogic Server Standard Edition.
  - Quick Installers provide a lightweight distribution for developer ease of use.
  - Slim installers provide a lightweight option for deploying in Docker containers when the WebLogic Administration console is not required.
  - Developers can use Eclipse, IntelliJ and other popular IDEs for Java EE development.
  - Maven plug-ins integrate Oracle WebLogic Server with public and private Maven repositories, and continuous integration environments based on Jenkins and other tools.
  - Oracle Application Development Framework (ADF) is an end-to-end MVC development framework, built on top of Java EE, and is available with Oracle WebLogic Server Standard Edition through version 12.2.1.4.
- **Industry-leading performance and reliability**

Oracle WebLogic Server delivers industry-leading performance, making it possible to meet service levels with fewer servers and resources to manage, at lower cost. Performance optimizations and self-tuning capabilities deliver high performance across diverse applications, and in industry standard benchmarks. Oracle WebLogic Server currently holds the world record result of 57,422.17 SPECjEnterprise2010 EjOPS<sup>1</sup> with many other results published. Use of GraalVM Enterprise Edition is supported for improved performance relative to that achievable on the Oracle JDK or other JDKs. Features such as dynamic configuration and automatic restart of failed servers enable reliability for deployed applications.
- **Superior Manageability, Monitoring and Management**

Oracle WebLogic Server Standard Edition provides built-in management, diagnostic and automation tools to increase management and operational efficiency, with a choice of interfaces to address diverse management requirements. The WebLogic Administration Console provides a Web interface for all Oracle WebLogic Server management functionality. The WebLogic Scripting Tool enables command-line and script-based management, with the WebLogic Deploy Tooling providing a declarative approach to configuration. The WebLogic Diagnostic Framework enables users to instrument applications for monitoring and diagnostic purposes, and to drive rules-based management automation. REST management APIs enable HTTP-based access to all monitoring and management functionality for on-premises and cloud deployments. Kubernetes tools provide additional support for managing applications in cloud native Kubernetes environments.
- **Oracle Web Tier Integration**

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

### Oracle WebLogic Server Enterprise Edition

Oracle WebLogic Server Enterprise Edition includes all of Oracle WebLogic Server Standard Edition, with improved application performance and availability features, and deep diagnostic capabilities for production systems.

- **Enterprise Scalability and Clustering**

Clustering simplifies scaling of applications with high availability and reliability. Cluster-wide management and deployment simplify management of clustered environments. Session failover, whole server migration and automatic service migration for messaging and transaction services, and rolling upgrades are just a few of

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<sup>1</sup> SPEC and the benchmark name SPECjEnterprise are registered trademarks of the Standard Performance Evaluation Corporation. Results from [www.spec.org](http://www.spec.org) as of Oct. 18, 2015. Oracle WebLogic Server 12c (12.1.1) on SPARC T5-8, 57,422.17 SPECjEnterprise2010 EjOPS.

the clustering capabilities that help maintain system availability.

Automated, rules-based elastic scaling of dynamic clusters can be used to automatically adapt to changing application requirements. Oracle Web Tier components automatically recognize cluster configuration changes and adapt load balancing and session failover accordingly.

- **Java Mission Control and Java Flight Recorder**

Java Mission Control and Java Flight Recorder are included in Java SE Advanced and in Oracle WebLogic Server Enterprise Edition. They enable users to record JVM events in an in-memory buffer that can be persisted for post-incident analysis. The WebLogic Diagnostic Framework integrates with Java Flight Recorder to enable combined Oracle WebLogic Server and JVM event analysis.

### Oracle WebLogic Suite

Oracle WebLogic Suite includes all of Oracle WebLogic Server Enterprise Edition, and adds unique performance, availability, scalability and manageability capabilities to meet the most demanding enterprise 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, JCache or Memcached APIs for access cache data and data grid programming. Coherence\*Web HTTP session management leverages Oracle Coherence functionality via configuration only.

Oracle WebLogic Server 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.

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

Active GridLink for Oracle Real Application Clusters (RAC) integrates Oracle WebLogic Server and Oracle RAC. GridLink data sources simplify management by connecting to RAC clusters while 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.

- **Oracle Internet Application Server (iAS) Enterprise Edition**

Oracle WebLogic Server includes all entitlements of Oracle iAS Enterprise Edition, permitting Oracle iAS Enterprise Editions licensees who are migrating to Oracle WebLogic Suite licenses and functionality to ensure full inclusion of all of their existing entitlements when they perform the license migration.

### Cloud Native Kubernetes Deployments

Oracle WebLogic Server is certified to run on Docker and CRI-O containers, and Oracle provides Dockerfiles and Docker images to help users get started using Oracle WebLogic Server in containers. For customers using Kubernetes for orchestration of container-based deployments, a number of Oracle WebLogic Server tools are available in open source for simplifying management of Oracle WebLogic Server deployments in Kubernetes.

- **Oracle WebLogic Server Kubernetes Operator**

The Operator supports the creation of the Kubernetes resources required by Oracle WebLogic Server configurations, and simplifies lifecycle management operations such as starting, stopping and patching servers, and deploying and redeploying applications.

- **Oracle WebLogic Server Deploy Tooling**

The Deploy Tooling provides a declarative approach to configuration and deployment, and enables introspection of existing configurations for migration of those configurations to Kubernetes.

- **Oracle WebLogic Server Image Tool**

The Image Tool supports the automation of ongoing Docker image updates, including application of Oracle JDK and Oracle WebLogic Server patches, and application updates.

- **Oracle WebLogic Server Monitoring Exporter**

The Monitoring Exporter collects standard Oracle WebLogic Server runtime metrics, and exports them in a format for use by Kubernetes monitoring tools such as Prometheus and Grafana.

- **Oracle WebLogic Server Logging Exporter**

The Logging Exporter enables WebLogic Server logs to be integrated into Elastic Stack, the logging framework commonly used in Kubernetes deployments.

### **Oracle WebLogic Server for Oracle Cloud Infrastructure**

The preferred solution for deployment to Oracle Cloud is Oracle WebLogic Server for Oracle Cloud Infrastructure. Listings in the Oracle Cloud Marketplace enable you to rapidly provision Oracle WebLogic Server configurations using either Oracle's Universal Credits (UCM) or Bring Your Own License (BYOL) pricing models, with full compatibility with on-premises deployments. Oracle WebLogic Server for Oracle Cloud Infrastructure enables you to run Oracle WebLogic Server in Oracle Cloud, paying only for what you use, and easily develop, deploy and manage Oracle WebLogic Server applications. The following listings are available in the Oracle Cloud Marketplace. See Oracle Cloud documentation for detailed information:

- Oracle WebLogic Server Enterprise Edition for Oracle Cloud Infrastructure (UCM)
- Oracle WebLogic Suite for Oracle Cloud Infrastructure (UCM)
- Oracle WebLogic Server Standard Edition for Oracle Cloud Infrastructure (BYOL)
- Oracle WebLogic Server Enterprise Edition for Oracle Cloud Infrastructure (BYOL)
- Oracle WebLogic Suite for Oracle Cloud Infrastructure (BYOL)

### **Oracle Private Cloud Appliance**

Oracle WebLogic Server is fully supported on Oracle Private Cloud Appliance systems, including VM-based deployments, and cloud native Kubernetes deployments leveraging the Oracle Linux Cloud Native Environment.

### **Oracle Database Integration**

All Oracle WebLogic Server editions support multiple database products. In addition, Oracle WebLogic Server implements specific Oracle Database integration features. Oracle Database drivers are included to simplify configuration and connectivity to Oracle Database instances. Database credentials used in Oracle WebLogic Server configurations can be encrypted for additional security. Application Continuity provides continuous application services, even when database connections are lost. Support for Oracle Database Edition-Based Redefinition (EBR) enables coordination of application updates with required updates to database schema used by applications. Diagnostic tools spanning application server and database tiers are available through Oracle Enterprise Manager. Active GridLink for RAC (see above) enables integration with Oracle RAC for improved performance, availability and manageability. Configuration guidance is provided for combined Oracle WebLogic Server and Oracle Database multi data center deployments. Finally, Oracle WebLogic Server is certified for use with Oracle Cloud database services, such as the Oracle Database Cloud Service, Oracle Autonomous Transaction Processing, Oracle Database Exadata Cloud Service and Oracle Databases Exadata Cloud at Customer.

### **Oracle Enterprise Manager**

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

### **Foundation for Oracle Fusion Middleware, Oracle Applications, and the Oracle Cloud Platform**

Oracle WebLogic Server provides the core runtime for Oracle Fusion Middleware, Oracle Applications, and many of the PaaS and SaaS services available in the Oracle Cloud. Common provisioning, application development, management, and integration capabilities across these offerings deliver flexible integration between custom applications developed on Oracle WebLogic Server, and Oracle's middleware, application and cloud services portfolio.

### **Summary**

Oracle WebLogic Server provides a modern development platform for building applications, a runtime platform for high performance and availability, and rich management tooling for efficient and low cost operations. It offers flexible choice of deployment options on physical systems, VMs or cloud native Kubernetes environments hosted on-premises or in public clouds. It is a critical foundation technology for Oracle's middleware, applications and cloud services offerings. 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!

**RELATED PRODUCTS**

Many Oracle Applications and Cloud Services run on Oracle WebLogic Server. See the applicable Application and Cloud Services documentation for details.

Oracle Fusion Middleware works with Oracle WebLogic Server to form an integrated set of capabilities for diverse business requirements.

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
- Oracle WebCenter Real-Time Collaboration

Extend Oracle WebLogic Server Standard Edition, Enterprise Edition, and WebLogic Suite with:

- Oracle WebLogic Server Management Pack Enterprise Edition

**Supported Platforms**

For supported platforms and configuration detail, refer to the following:  
[oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html](http://oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html)  
 See Table 1 for a platform summary.

Supported Platforms	
Software	
Operating systems	<ul style="list-style-type: none"> <li>• AIX</li> <li>• HP-UX</li> <li>• Linux (including Docker and Kubernetes Support)</li> <li>• Mac OS X (development)</li> <li>• Solaris</li> <li>• Windows</li> </ul>
Databases	<ul style="list-style-type: none"> <li>• Oracle Database (and Oracle Database RAC)</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> </ul>
Java EE, Java SE and GraalVM EE	<ul style="list-style-type: none"> <li>• Oracle WebLogic Server 14.1.1                             <ul style="list-style-type: none"> <li>▪ Java EE 8, Java SE 8 and 11, GraalVM EE 19.3</li> </ul> </li> <li>• See documentation for prior WebLogic versions</li> </ul>
Clouds	<ul style="list-style-type: none"> <li>• Oracle Cloud</li> <li>• Oracle Private Cloud Appliance</li> <li>• Oracle Authorized Cloud Environments</li> </ul>

**Table 1: Oracle 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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