

Oracle® Fusion Middleware

Information Roadmap for Oracle WebLogic Server

11g Release 1 (10.3.1)

E14529-01

May 2009

This document provides a collection of cross-references to WebLogic Server documentation topics and information resources.

Copyright © 2007, 2009, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications which may create a risk of personal injury. If you use this software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of this software. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software in dangerous applications.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

This software and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

Contents

Preface	vii
Documentation Accessibility	vii
Conventions	vii
1 WebLogic Server Documentation Quick Reference	
2 Getting Started With WebLogic Server	
2.1 Get Started.....	2-1
2.2 Learn About WebLogic Server.....	2-1
3 WebLogic Server Compatibility	
3.1 Java EE 5 Compatibility	3-1
3.2 Generated Classes Compatibility	3-1
3.3 Compatibility Within a Domain	3-1
3.4 Persistent Data Compatibility	3-1
3.5 API Compatibility.....	3-2
3.6 Protocol Compatibility.....	3-2
3.7 JMX Compatibility	3-2
4 Fast Track Deployment and Administrator Guide	
4.1 Java EE Deployment.....	4-1
4.1.1 What's Going On?.....	4-1
4.1.2 Additional Resources	4-1
4.2 System Administrator Tools.....	4-2
4.3 JSP/HTML Deployment	4-2
4.3.1 What's Going On?.....	4-2
4.3.2 Additional Resources	4-2
5 Sample Application and Code Examples	
5.1 API Examples	5-1
5.2 Avitek Medical Records.....	5-2
5.3 PointBase Licensing Restriction.....	5-2

6	Enterprise JavaBeans	
6.1	Get Started.....	6-1
6.2	Programming.....	6-1
6.3	Simple EJB 3.0 Examples.....	6-1
6.4	Reference	6-1
7	Custom Management Utilities	
7.1	Management Utilities	7-1
7.2	Administration Console Extensions.....	7-1
8	Database Connectivity (JDBC)	
8.1	Get Started.....	8-1
8.2	Configuration	8-1
8.3	Managing JDBC.....	8-1
8.4	Programming.....	8-1
8.5	Type 4 JDBC Drivers	8-1
8.6	Other JDBC Drivers	8-2
9	Deploying Applications	
9.1	Learn About Deployment.....	9-1
9.2	Package Applications	9-1
9.3	Tools.....	9-1
9.4	Advanced Topics.....	9-1
10	Developing Applications	
10.1	Develop WebLogic Server Applications.....	10-1
10.2	Set Up Your Development Environment	10-1
10.3	Design Your Application	10-1
10.4	Build Your Application	10-1
10.5	Tools.....	10-2
10.6	Move Your Application to a Production Environment.....	10-2
10.7	Application Examples	10-2
10.8	Java EE API Programming Guides.....	10-2
10.9	Javadoc and API References.....	10-3
10.10	General Reference	10-3
10.11	WebLogic Deployment Descriptors	10-3
10.12	Configuration Schema Reference	10-3
11	Kodo Development	
11.1	Get Started.....	11-1
11.2	Programming.....	11-1
11.3	Reference	11-1

12	Messaging	
12.1	Learn About WebLogic JMS.....	12-1
12.2	New Features.....	12-1
12.3	Programming WebLogic Messaging.....	12-1
12.4	Configure WebLogic Messaging.....	12-1
12.5	Use the Administration Console to Configure WebLogic Messaging.....	12-2
12.6	Performance and Tuning.....	12-2
12.7	Reference.....	12-2
13	WebLogic Server Reference	
13.1	Programming.....	13-1
13.2	System Administration.....	13-1
13.3	Programming Administration Console Extensions.....	13-1
14	Security	
14.1	Learn About Security and WebLogic Server.....	14-1
14.2	Security Providers.....	14-1
14.3	Secure WebLogic Server.....	14-1
14.4	Application Programming for Security.....	14-2
14.5	Best Practices.....	14-2
14.6	Reference.....	14-2
15	System Administration	
15.1	Learn About WebLogic Server System Administration.....	15-1
15.2	Install or Upgrade WebLogic Server.....	15-1
15.3	Configure a Server Environment.....	15-1
15.4	Learn About Server Startup and Shutdown.....	15-2
15.5	Start or Stop a WebLogic Server Instance.....	15-2
15.6	Configure Security.....	15-2
15.7	Manage Server and Network Communications.....	15-2
15.8	Configure System Resources.....	15-2
15.9	Configure and Deploy Applications.....	15-2
15.10	Monitor Your Domain.....	15-3
15.11	Configure Server Environments for High Availability.....	15-3
15.12	Troubleshoot.....	15-3
15.13	Reference.....	15-3
16	Web Services	
16.1	Learn About WebLogic Web Services.....	16-1
16.2	Get Started Using JAX-WS.....	16-1
16.3	Advanced Features of JAX-WS.....	16-1
16.4	Get Started Using JAX-RPC.....	16-2
16.5	Advanced Features of JAX-RPC.....	16-2
16.6	Code Examples.....	16-2
16.7	Security.....	16-2

16.8	System Administration	16-2
16.9	References	16-3
16.10	Development Resources and Newsgroups	16-3

17 WebLogic Tuxedo Connector

17.1	Get Started.....	17-1
17.2	System Administration	17-1
17.3	Migration.....	17-1
17.4	Tuning.....	17-1
17.5	Programming.....	17-1

Preface

This preface describes the document accessibility features and conventions used in this guide—*Information Roadmap for Oracle WebLogic Server*.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible to all users, including users that are disabled. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>.

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

Deaf/Hard of Hearing Access to Oracle Support Services

To reach Oracle Support Services, use a telecommunications relay service (TRS) to call Oracle Support at 1.800.223.1711. An Oracle Support Services engineer will handle technical issues and provide customer support according to the Oracle service request process. Information about TRS is available at <http://www.fcc.gov/cgb/consumerfacts/trs.html>, and a list of phone numbers is available at <http://www.fcc.gov/cgb/dro/trsphonebk.html>.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

WebLogic Server Documentation Quick Reference

The following table provides a quick reference to WebLogic Server documentation topics and information resources.

Table 1–1 *WebLogic Server Documentation Topics*

Information Categories and Topics	Information Categories and Topics
Getting Started With WebLogic Server <ul style="list-style-type: none"> ■ Section 2.1, "Get Started" ■ Section 2.2, "Learn About WebLogic Server" ■ WebLogic Server Compatibility ■ Fast Track Deployment and Administrator Guide ■ Sample Application and Code Examples 	Security <ul style="list-style-type: none"> ■ Section 14.1, "Learn About Security and WebLogic Server" ■ Section 14.2, "Security Providers" ■ Section 14.3, "Secure WebLogic Server" ■ Section 14.4, "Application Programming for Security" ■ Section 14.5, "Best Practices" ■ Section 14.6, "Reference"
System Administration <ul style="list-style-type: none"> ■ Section 15.1, "Learn About WebLogic Server System Administration" ■ Section 15.2, "Install or Upgrade WebLogic Server" ■ Section 15.3, "Configure a Server Environment" ■ Section 15.4, "Learn About Server Startup and Shutdown" ■ Section 15.5, "Start or Stop a WebLogic Server Instance" ■ Section 15.6, "Configure Security" ■ Section 15.7, "Manage Server and Network Communications" ■ Section 15.8, "Configure System Resources" ■ Section 15.9, "Configure and Deploy Applications" ■ Section 15.10, "Monitor Your Domain" ■ Section 15.11, "Configure Server Environments for High Availability" ■ Section 15.12, "Troubleshoot" ■ Section 15.13, "Reference" 	Developing Applications <ul style="list-style-type: none"> ■ Section 10.1, "Develop WebLogic Server Applications" ■ Section 10.2, "Set Up Your Development Environment" ■ Section 10.3, "Design Your Application" ■ Section 10.4, "Build Your Application" ■ Section 10.5, "Tools" ■ Section 10.6, "Move Your Application to a Production Environment" ■ Section 10.7, "Application Examples" ■ Section 10.8, "Java EE API Programming Guides" ■ Section 10.9, "Javadoc and API References" ■ Section 10.10, "General Reference" ■ Section 10.11, "WebLogic Deployment Descriptors" ■ Section 10.12, "Configuration Schema Reference"

Table 1–1 (Cont.) WebLogic Server Documentation Topics

Information Categories and Topics	Information Categories and Topics
<p>Deploying Applications</p> <ul style="list-style-type: none"> ■ Section 9.1, "Learn About Deployment" ■ Section 9.2, "Package Applications" ■ Section 9.3, "Tools" ■ Section 9.4, "Advanced Topics" <p>Reference</p> <ul style="list-style-type: none"> ■ Section 13.1, "Programming" ■ Section 13.2, "System Administration" ■ Section 13.3, "Programming Administration Console Extensions" <p>Messaging</p> <ul style="list-style-type: none"> ■ Section 12.1, "Learn About WebLogic JMS" ■ Section 12.2, "New Features" ■ Section 12.3, "Programming WebLogic Messaging" ■ Section 12.4, "Configure WebLogic Messaging" ■ Section 12.5, "Use the Administration Console to Configure WebLogic Messaging" ■ Section 12.6, "Performance and Tuning" ■ Section 12.7, "Reference" <p>Custom Management Utilities</p> <ul style="list-style-type: none"> ■ Section 7.1, "Management Utilities" ■ Section 7.2, "Administration Console Extensions" <p>WebLogic Tuxedo Connector</p> <ul style="list-style-type: none"> ■ Section 17.1, "Get Started" ■ Section 17.2, "System Administration" ■ Section 17.3, "Migration" ■ Section 17.4, "Tuning" ■ Section 17.5, "Programming" 	<p>Enterprise JavaBeans</p> <ul style="list-style-type: none"> ■ Section 6.1, "Get Started" ■ Section 6.2, "Programming" ■ Section 6.3, "Simple EJB 3.0 Examples" ■ Section 6.4, "Reference" <p>Database Connectivity (JDBC)</p> <ul style="list-style-type: none"> ■ Section 8.1, "Get Started" ■ Section 8.2, "Configuration" ■ Section 8.3, "Managing JDBC" ■ Section 8.4, "Programming" ■ Section 8.5, "Type 4 JDBC Drivers" ■ Section 8.6, "Other JDBC Drivers" <p>Web Services</p> <ul style="list-style-type: none"> ■ Section 16.1, "Learn About WebLogic Web Services" ■ Section 16.2, "Get Started Using JAX-WS" ■ Section 16.3, "Advanced Features of JAX-WS" ■ Section 16.4, "Get Started Using JAX-RPC" ■ Section 16.5, "Advanced Features of JAX-RPC" ■ Section 16.6, "Code Examples" ■ Section 16.7, "Security" ■ Section 16.8, "System Administration" ■ Section 16.9, "References" ■ Section 16.10, "Development Resources and Newsgroups" <p>Kodo Development</p> <ul style="list-style-type: none"> ■ Section 11.1, "Get Started" ■ Section 11.2, "Programming" ■ Section 11.3, "Reference" ■ See also, Developer's Guide for Oracle TopLink

Getting Started With WebLogic Server

These documents help you learn about and get started using WebLogic Server.

2.1 Get Started

- Getting Started With Installation
- Starting and Stopping Servers: Quick Reference
- Creating WebLogic Domains Using the Configuration Wizard
- [Section 3, "WebLogic Server Compatibility"](#)
- [Section 4, "Fast Track Deployment and Administrator Guide"](#)
- Top Tuning Recommendations for Oracle WebLogic Server
- WebLogic Server Administration Console Help

2.2 Learn About WebLogic Server

- Introduction to WebLogic Server
- Understanding Oracle WebLogic Server Domains
- Developing Applications for Oracle WebLogic Server
- Overview of WebLogic Server Application Development
- Overview of WebLogic Server System Administration
- Overview of the Administration Console

WebLogic Server Compatibility

Oracle attempts to support binary and source-level compatibility between the current version of WebLogic Server and all versions as far back as 8.1 in the areas of persistent data, generated classes, and API compatibility. In some cases, it is impossible to avoid incompatibilities. Where incompatibilities arise, they are fully documented in *Oracle Fusion Middleware Upgrade Guide for Oracle WebLogic Server*.

3.1 Java EE 5 Compatibility

WebLogic Server 10.3.1 is JEE5 compatible. This compatibility allows a Java EE 5 compliant application to be developed on one operating system platform, and deployed for production on another, without requiring Java EE 5 application code changes. Oracle ensures this compatibility of Java EE 5 application portability within a WebLogic Server release level.

3.2 Generated Classes Compatibility

With one exception, upgrading to WebLogic Server 10.3.1 does not require you to recompile applications in order to create new generated classes.

The current version of the EJBGen utility recognizes only JDK 5.0 metadata annotation-style EJBGen tags and not the old Javadoc-style tags. This means that source files that use the Javadoc-style tags must be upgraded to use the equivalent annotation, and then recompiled using the updated version of EJBGen.

3.3 Compatibility Within a Domain

- All WebLogic Server instances within the same Administrative domain must be at the same major and minor version. You cannot mix server versions within a domain.
- Servers within an Administrative domain can be at different Service Pack levels as long as the Administration Server is at the same Service Pack level or higher than its Managed Servers.
- All servers within a cluster must be at the same Service Pack level.

3.4 Persistent Data Compatibility

When moving from WebLogic Server 8.1 to 10.3, there are changes required to configuration files. Upgrade tooling in WebLogic Server versions 9.0 and later automatically convert the configuration files for you.

3.5 API Compatibility

WebLogic Server 8.1, 9.x, 10.0 and 10.3 applications deployed on WebLogic Server 10.3.1 will function without modification. Exceptions to this rule include cases where API behavior was changed in order to conform to a specification or to fix incorrect behavior. In certain circumstances, a correction may cause your application to behave differently.

3.6 Protocol Compatibility

Interoperability between WebLogic Server 10.3.1 and WebLogic Server 7.0, 8.1, 9.x, 10.0 and 10.3 is supported in the following scenarios:

- A WebLogic Server 8.1, 9.x, 10.0 or 10.3 client can invoke RMI-based applications hosted on a WebLogic Server 10.3.1 server using IIOP, T3, T3S, HTTP, and HTTPS. JMS applications can be invoked using T3, T3S, HTTP, and HTTPS.
- A WebLogic Server 10.3.1 client can invoke RMI-based applications hosted on a WebLogic Server 8.1, 9.x, 10.0 or 10.3 server using IIOP, T3, T3S, HTTP, and HTTPS. JMS applications can be invoked using T3, T3S, HTTP, and HTTPS.
- A WebLogic Server 10.3.1 Web server plug-in can proxy to the latest service pack release of a 8.1, 9.x, 10.0 or 10.3 server.

Interoperability between WebLogic Server 7.0 and WebLogic Server 10.3.1 is supported in the following scenarios. You will need the WebLogic Server 7.0 patch that is associated with CR295275 for this interoperability to work. This patch is applicable to WLS 7.0 SP6 and WLS 7.0 SP7. You can request this patch by contacting Oracle support and requesting the patch associated with CR295275. Additionally, for RMI/IIOP interoperability support, start the WLS 7.0 client using the following flag:

```
-Dweblogic.system.iiop.enableClient=true
```

- A WebLogic Server 7.0 client can invoke RMI-based applications hosted on a WebLogic Server 10.3.1 server using T3, T3S, HTTP, and HTTPS. JMS applications can be invoked using T3, T3S, HTTP, and HTTPS.
- A WebLogic Server 10.3.1 client can invoke RMI-based applications hosted on a WebLogic Server 7.0 server using T3, T3S, HTTP, and HTTPS. JMS applications can be invoked using T3, T3S, HTTP, and HTTPS.
- A WebLogic Server 10.3.1 Web server plug-in can proxy to the latest service pack release of a 7.0 server.

3.7 JMX Compatibility

See "JMX 1.2 Implementation" in WebLogic Server 10.3.1 Compatibility with Previous Releases.

Fast Track Deployment and Administrator Guide

This document provides basic instructions for quickly deploying Java EE applications and modules, and JSP and HTML files. It also provides pointers to tools for system administrators. The deployment procedures on this page are recommended for use in development environments only; the procedures are not recommended for use in production environments. For additional information on developing and deploying applications on WebLogic Server, see *Oracle Fusion Middleware Developing Applications for Oracle WebLogic Server* and *Oracle Fusion Middleware Deploying Applications to Oracle WebLogic Server*.

Complete the *Oracle WebLogic Server Installation Guide* before using these Fast Track procedures.

4.1 Java EE Deployment

To deploy a Java EE application or module:

1. Make sure that the Java EE application or module does not require additional resources such as named JDBC data sources or JMS queues. If the application requires external resources, you must configure them in the target WebLogic Server domain before deploying the application.
2. Copy the archive file or exploded archive directory for the Java EE application or module into the `/autodeploy` directory of the examples server domain directory, `WL_HOME/samples/domains/wl_server/autodeploy`.
3. Start the Examples WebLogic Server instance. In Windows, you can use the Start Menu shortcut: **Start Examples Server**.
4. Access the application using either a Java client or the configured URI for the application.

4.1.1 What's Going On?

When running in development mode, WebLogic Server automatically deploys applications copied into the `/autodeploy` subdirectory of the domain directory. Auto-deployment is a simple and quick method of deploying an application for testing or evaluation. See Auto-Deployment.

4.1.2 Additional Resources

- *Oracle Fusion Middleware Deploying Applications to Oracle WebLogic Server*
- *Oracle Fusion Middleware Developing Applications for Oracle WebLogic Server*

4.2 System Administrator Tools

System Administrators can use the following tools to get started:

- Administration Console

The Administration Console is a browser-based Web application that allows you to configure and monitor your WebLogic Server domain, server instances, and running applications and their associated resources. You can also use the Administration Console to create new server instances and clusters and tune application descriptors. More information.

After you log into the Console using the credentials you provided during installation, click the **Help** button or **How do I ...?** links for additional information.

- Configuration Wizard

Use the WebLogic Server Configuration Wizard to create new domains, and to create templates for automating domain configuration. More information.

4.3 JSP/HTML Deployment

To deploy a simple JSP or HTML file:

1. Make sure your JSP file does not reference a tag library or other external resources -- such resources require additional deployment steps that are beyond the scope of these Fast Track procedures. HTML files do not have this restriction.
2. Copy your JSP or HTML file into the `WL_HOME/samples/server/examples/build/mainWebApp` directory.
3. Start the Examples WebLogic Server instance. In Windows, you can use the Start Menu shortcut: **Start Examples Server**.
4. In a Web browser, request the JSP or HTML file using the following URL:

```
http://localhost:port/myFile
```

where:

`localhost` is the host name of the machine running WebLogic Server.

`port` is the port number where WebLogic Server is listening for requests (7001 by default).

`myFile` is the full name, including the `.jsp` or `.html` extension, of the JSP or HTML file you copied in step 2.

4.3.1 What's Going On?

The JSP or HTML file has been automatically deployed from a directory preconfigured to target the Examples Server. `mainWebApp` is deployed by default and you can place your own JSP and HTML files into the `mainWebApp` exploded directory in order to quickly view or test them.

4.3.2 Additional Resources

- *Oracle Fusion Middleware Deploying Applications to Oracle WebLogic Server*
- *Oracle Fusion Middleware Developing Applications for Oracle WebLogic Server*

Sample Application and Code Examples

Through a custom installation and selecting to install the Server Examples, you have access to code examples and sample applications that offer several approaches to learning about and working with WebLogic Server.

5.1 API Examples

WebLogic Server optionally installs API code examples in `WL_HOME\samples\server\examples\src\examples`, where `WL_HOME` is the top-level directory of your WebLogic Server installation, and makes them available from the Start menu. On Linux and other platforms the Examples Server can be started from the `WL_HOME/samples/domains/wl_server` directory.

The default administration username and password for the Examples domain is `weblogic/welcome1`.

Note: If you change the password of the user `weblogic`, WebLogic Server may fail to boot. For more information and workarounds, see "Limitation Regarding User `weblogic`" in *Oracle Fusion Middleware Managing Server Startup and Shutdown for Oracle WebLogic Server*.

The examples are grouped in the following categories; the directory that contains the examples of a particular category is in parentheses:

- Database Connectivity (jdbc): Use `DataSources`, `MultiDataSources`, and `Rowsets`.
- EJB (ejb): Create stateless, stateful, entity, and message-driven EJBs, and more.
- Internationalization (i18n): Internationalize an application using simple message catalogs.
- Messaging (jms): Use JMS topics, queues, and message-driven beans.
- Resource Adapter (resadapter): Use an entity EJB to interact with a Java EE Connector resource adapter.
- Security (security): Configure authentication, authorization, and SSL.
- Transactions (jta): Use JTA to perform distributed transactions using the two phase commit protocol across two XA resources.
- Web Application (webapp): Create simple servlets and JSPs, use the HTTP Publish-Subscribe server, and more.
- Web Services (webservices): Create a variety of Web Services using JWS annotations.

- XML (xml): Use the StAX API and XMLBeans.
- Cluster (cluster): Cluster an EJB and use HTTP session state replication.
- WebLogic Scripting Tool (wlst): Use the WebLogic Scripting Tool (WLST) to configure and manage a running WebLogic Administration Server.
- Split Development (splitdir): Use the WebLogic split development directory structure to build, package, and deploy Enterprise Applications.

5.2 Avitek Medical Records

Avitek Medical Records (or "MedRec") is a comprehensive educational sample application that demonstrates WebLogic Server and Java EE features, as well as best practices. If you select to install the Server Examples, Avitek Medical Records is available from the Start menu on Windows machines. On Linux and other platforms it can be started from the `WL_HOME/samples/domains/medrec` directory, where `WL_HOME` is the top-level installation directory for WebLogic Server.

In this release, a new sample application, MedRec (Spring) demonstrates Spring application development practices.

The default administration username and password for the Medical Records domain is `weblogic/welcome1`.

5.3 PointBase Licensing Restriction

PointBase Server is an all-Java DBMS product included in the WebLogic Server distribution that is intended solely to support WebLogic Server evaluation, either in the form of custom trial applications or through packaged sample applications provided with WebLogic Server. Documentation is located in the `WL_HOME/common/eval/pointbase/docs/` directory. Non-evaluation development and/or production use of the PointBase Server requires a separate license that can be obtained by the end user directly from PointBase at <http://www.pointbase.com>.

Enterprise JavaBeans

These documents help you learn about and get started using Enterprise JavaBeans (EJB) 3.0 for Oracle WebLogic Server.

6.1 Get Started

- Understanding Enterprise JavaBeans 3.0
- WebLogic Server Value-Added EJB 3.0 Features

6.2 Programming

- Overview of the EJB 3.0 Development Process
- Programming the Bean File: Requirements and Changes From 2.X
- Programming the Bean File: Typical Steps
- Injecting Resource Dependency into a Variable or Setter Method
- Invoking a 3.0 Entity
- Specifying Interceptors for Business Methods or Life Cycle Callback Events
- Using Kodo With WebLogic Server

6.3 Simple EJB 3.0 Examples

- Stateless Session
- Stateful Session
- Interceptor Class
- Invoking an Entity

6.4 Reference

- EJB 3.0 Metadata Annotation Reference (Session and Message-Driven Beans Only)
- EJB 3.0 Persistence Configuration Schema Reference
- Java Persistence API (From Kodo Documentation)
- EJB 3.0 API Reference (Javadoc, from Sun Developer Network)
- Enterprise JavaBeans 3.0 Specification (JSR-220)
- Programming Enterprise JavaBeans (Version 2.X)

- Enterprise JavaBeans Technology (Sun Developer Network Web Site)

Custom Management Utilities

These documents describe how to create Java management utilities and Administration Console extensions for WebLogic Server.

7.1 Management Utilities

- Developing Custom Management Utilities with JMX
- Developing Manageable Applications with JMX
- Programming WebLogic Deployment

7.2 Administration Console Extensions

- Administration Console API Reference
- Console Extension JSP Tag Library Reference

Database Connectivity (JDBC)

These documents provide information about WebLogic JDBC resources and drivers.

8.1 Get Started

- Overview of JDBC
- What's New in WebLogic JDBC

8.2 Configuration

- Understanding JDBC Resources in WebLogic Server
- Using WebLogic Server with Oracle RAC

8.3 Managing JDBC

- Managing Data Sources
- Monitoring Data Sources

8.4 Programming

- Basic JDBC Programming
- Advanced JDBC Programming
- RowSets
- JDBC Modules

8.5 Type 4 JDBC Drivers

- Overview
- DB2
- Informix
- Microsoft SQL Server
- Oracle
- Sybase

8.6 Other JDBC Drivers

- Overview of Third-Party JDBC Drivers
- PointBase Server

PointBase Server is an all-Java DBMS product included in the WebLogic Server distribution that is intended solely to support WebLogic Server evaluation, either in the form of custom trial applications or through packaged sample applications provided with WebLogic Server. Documentation is located in the *WL_HOME/common/eval/pointbase/docs/* directory. Non-evaluation development and/or production use of the PointBase Server requires a separate license that can be obtained by the end user directly from PointBase at <http://www.pointbase.com>.

Deploying Applications

These documents help you learn about packaging and deploying applications.

9.1 Learn About Deployment

- Overview of WebLogic Server deployment
- Perform common deployment tasks

9.2 Package Applications

- Archive file and exploded archive deployments
- Use the wlpkg Ant task

9.3 Tools

- weblogic.Deployer Utility
- wldeploy Ant Task

9.4 Advanced Topics

- Configure applications for deployment
- Redeploy a production application
- Distribute an application
- Use deployment staging modes
- Change the deployment order
- Take an application offline
- Programming WebLogic Deployment

Developing Applications

These documents describe designing and developing WebLogic Server applications and provide programming guides and reference information.

10.1 Develop WebLogic Server Applications

- Overview of WebLogic Server Application Development
- Introduction to WebLogic Server

10.2 Set Up Your Development Environment

- Start and stop WebLogic Server
- Use the "split development directory" to develop your applications

10.3 Design Your Application

- Use shared Java EE libraries and optional packages to share code among deployed applications
- Programming JSF and JSTL applications
- Use life cycle listeners
- Use the HTTP Publish-Subscribe Server
- Add WebLogic Server security features
- Internationalize or localize your application
- Use threads in WebLogic Server
- Use logging in your application
- Write a client application
- Design a manageable applications

10.4 Build Your Application

- Develop applications with WebLogic Server
- Deploy your "split development directory" application on WebLogic Server
- Use Ant tasks to compile Java code

10.5 Tools

- Ant
- Administration Console
- Command Reference
- Configuration Wizard
- EJBGen
- Template Builder
- WebLogic Scripting Tool (WLST)

10.6 Move Your Application to a Production Environment

- Prepare your application or module for deployment
- Configure your application for production deployment
- Update your deployed application (Production Redeployment)

10.7 Application Examples

- [Section 5.1, "API Examples"](#)
Short examples demonstrating Java EE and WebLogic Server APIs.
- [Section 5.2, "Avitek Medical Records"](#)
A complete and functional Java EE application including source code.
- MedRec (Spring)
A sample application that demonstrates Spring application development practices.

10.8 Java EE API Programming Guides

- Developing Custom Management Utilities with JMX
- Developing Manageable Applications with JMX
- Developing Security Providers for WebLogic Server
- Developing Spring-Based Application
- Developer's Guide for Oracle TopLink
- Developing Web Applications, Servlets, and JSPs for WebLogic Server
- Monitoring and Managing with the Java EE Management APIs
- Programming WebLogic Enterprise JavaBeans (EJBs)
- Programming WebLogic JDBC
- Programming WebLogic JMS
- Programming WebLogic JNDI
- Programming WebLogic JTA
- Programming WebLogic Resource Adapters
- Programming WebLogic RMI

- Programming WebLogic XML
- Programming Stand-alone Clients
- Programming WebLogic Deployment
- Programming WebLogic jCOM
- Programming WebLogic JSP Tag Extensions
- Programming WebLogic Security
- Programming WebLogic Web Services for WebLogic Server
- Timer and Work Manager API (CommonJ) Programmer's Guide
- Using WebLogic Logging Services for Application Logging
- Using Clusters
- WebLogic Tuxedo Connector Programmer's Guide

10.9 Javadoc and API References

- Java Platform, Enterprise Edition (Java EE) Version 5.0
- Java 2 SDK, Standard Edition Documentation, Version 6.0
- WebLogic JMS C API Reference
- WebLogic Server Javadocs
- Microsoft .NET Messaging API for Oracle WebLogic Server

10.10 General Reference

- WebLogic JSP cache, process, and repeat tags
- WebLogic JSP form validation tags
- WebLogic Server Command Reference
- WebLogic Server MBean Reference
- WebLogic Server Message Catalog

10.11 WebLogic Deployment Descriptors

- Client Applications (`weblogic-appclient.xml`)
- EJBs (`weblogic-ejb-jar.xml`, `weblogic-cmp-jar.xml`)
- Enterprise Applications (`application.xml`, `weblogic-application.xml`)
- Resource Adapters (`weblogic-ra.xml`)
- Web Applications (`weblogic.xml`)
- Web Services (`weblogic-webservices.xml`)
- XML schemas for WebLogic deployment descriptors

10.12 Configuration Schema Reference

- Diagnostic Framework Schema

- Domain Configuration Schema
- Domain Security Schema

Kodo Development

Kodo is Oracle's implementation of the Sun's Java Persistence API (JPA) and Java Data Objects (JDO) specifications for the transparent persistence of Java objects. The following documents help you develop, configure, and deploy Kodo applications.

Note: Oracle Kodo JPA/JDO is deprecated in this release. Customers are encouraged to consider using Oracle TopLink. For more information, see Oracle Fusion Middleware Developer's Guide for Oracle TopLink.

11.1 Get Started

- Introduction to Kodo
- Frequently Asked Questions
- JPA and JDO Examples
- JPA and JDO Tutorials

11.2 Programming

- Kodo Developer's Guide for JPA/JDO (top-level TOC)
- Java Persistence API (JPA) Programming
- Java Data Objects (JDO) Programming

11.3 Reference

- Kodo API Reference (Javadoc)
- JDO API Reference (Javadoc)
- OpenJPA API Reference (Javadoc)
- Persistence API Reference (Javadoc)
- Kodo Developer's Guide for JPA/JDO
- List of Kodo Development and Runtime Libraries
- Common Database Errors
- Additional JPA Resources
- Additional JDO Resource

These documents describe WebLogic Server messaging.

12.1 Learn About WebLogic JMS

- Overview of JMS Programming
- Develop a Basic JMS Application
- Overview of JMS Resource Configuration
- Value-Added WebLogic Server JMS Features
- Integrating Remote JMS Providers
- WebLogic Server API Examples

12.2 New Features

- Interoperating with Oracle Advanced Queueing
- Roadmap for Configuring Automatic Migration of JMS-related Services
- Using the WebLogic JMS Client for Microsoft .NET

12.3 Programming WebLogic Messaging

- Program WebLogic JMS
- Design Message-Driven Beans
- Use the WebLogic JMS Thin Client
- Use the WebLogic JMS Store-and-Forward Client
- Use the WebLogic JMS C API
- Programming WebLogic JMS .NET Client Applications

12.4 Configure WebLogic Messaging

- Configure and Manage WebLogic JMS
- Configure and Manage WebLogic Store-and-Forward
- Configure and Manage the WebLogic Messaging Bridge
- Use the WebLogic Persistent Store

12.5 Use the Administration Console to Configure WebLogic Messaging

- JMS Servers
- JMS System Modules and Resources
- Store-and-Forward for JMS Messages
- Messaging Bridge
- WebLogic Persistent Store

12.6 Performance and Tuning

- Tuning WebLogic JMS
- Tuning WebLogic JMS Store-and-Forward
- Tuning WebLogic Messaging Bridge
- Tuning Message-Driven Beans
- Tuning the WebLogic Persistent Store
- Tuning Logging Last Resource

12.7 Reference

- Javadoc for WebLogic JMS Extensions
- MBean Reference
- JMS Schema
- Java Message Service Specification
- WebLogic JMS C API Reference
- WebLogic Messaging API Reference for .NET Clients
- Oracle Streams Advanced Queuing User's Guide

WebLogic Server Reference

These documents provide WebLogic Server reference information and resources.

13.1 Programming

- Java Platform, Enterprise Edition 5 Documentation
- Java SE 6 Documentation
- Javadocs for WebLogic classes
- WebLogic JMS C API Reference
- WebLogic Messaging API Reference for .NET Clients
- WebLogic Server MBean Reference
- XML schemas for WebLogic deployment descriptors

13.2 System Administration

- SNMP MIB ANS1 File
- WebLogic Server Command Reference
- WebLogic Server Message Catalogs

13.3 Programming Administration Console Extensions

- Administration Console Extension API
- JSP Tag Library for Extending the WebLogic Server Administration Console

These documents help you learn about and manage WebLogic Server security.

14.1 Learn About Security and WebLogic Server

- Understand WebLogic Security
- Overview of the WebLogic Security Service
- Security Fundamentals
- Security Realms
- WebLogic Security Service Architecture
- Terminology
- Introduction to Programming WebLogic Security

14.2 Security Providers

- Developing Security Providers for WebLogic Server

14.3 Secure WebLogic Server

- Overview of security management
- Customize the default security configuration
- Configure WebLogic Security Providers
- Migrate security data
- Manage the embedded LDAP server
- Manage the RDBMS security store
- Configure identity and trust
- Configure SSL
- Configure security for a WebLogic domain
- Use compatibility security
- Secure Weblogic Resources Using Roles and Policies

14.4 Application Programming for Security

- Program WebLogic Security
- Configure resource adapter security
- WebLogic Web Services: Security

14.5 Best Practices

- Secure a production environment
- Explore security options for cluster architectures

14.6 Reference

- Administration Console Help
- Javadocs for WebLogic Server classes
- Javadocs for SAML 2.0 Security Providers and MBean Interfaces
- Terminology
- OASIS XACML Schema Reference

System Administration

These documents help you learn about and provide resources for WebLogic Server system administration topics and tasks.

15.1 Learn About WebLogic Server System Administration

- Overview of System Administration
- Understand WebLogic Server domains
- Understand WebLogic Server clusters
- Understand WebLogic Security
- Overview of the Administration Console
- Create custom management utilities
- WebLogic Server Performance and Tuning

15.2 Install or Upgrade WebLogic Server

- Install WebLogic Server
- Create WebLogic Server domains using the Configuration Wizard
- Supported Configurations
- What's New in Oracle WebLogic Server
- Release Notes for Microsoft Windows
- Release Notes for Linux x86
- Compatibility Statement
- Upgrade Guide

15.3 Configure a Server Environment

- Use system administration tools
- Manage configuration changes
- Use the Administration Console
- Use the WebLogic Scripting Tool (WLST)
- Create templates using the Domain Template Builder

15.4 Learn About Server Startup and Shutdown

- Overview of Starting and Stopping Servers
- Understanding the Life Cycle of WebLogic Server Instances
- Server Startup Command-Line Reference
- Quick Reference for starting and stopping servers

15.5 Start or Stop a WebLogic Server Instance

- Use shell scripts
- Use the Administration Console
- Use the WebLogic Scripting Tool (WLST)
- Use Node Manager to control remote servers
- Use the Quick Reference

15.6 Configure Security

- Security topics
- Secure a production environment
- Secure WebLogic Resources

15.7 Manage Server and Network Communications

- Configure network resources
- Configure Web Server Functionality
- Use Web Server plug-ins

15.8 Configure System Resources

- Configure database connectivity topics
- Configure messaging topics
- Configure WebLogic transactions
- Configure the Weblogic Tuxedo Connector topics
- Migrate WebLogic Enterprise Connectivity (WLEC) applications to WTC
- Configure the persistent store

15.9 Configure and Deploy Applications

- Deploy applications topics
- Configure Web applications
- Configure XML resources
- Configure resource adapters
- Configure Web Services topics

15.10 Monitor Your Domain

- Configure and Use the WebLogic Diagnostics Framework
- Configure SNMP
- Configure log files and filter log messages
- Monitoring and Managing with the Java EE Management APIs
- Use the WebLogic Diagnostic Framework Console Extension

15.11 Configure Server Environments for High Availability

- Understand cluster architectures
- Set up WebLogic Server clusters
- Use session replication across clusters
- Use Work Managers to prioritize application execution
- Avoid and manage overload
- Use the persistent store

15.12 Troubleshoot

- View the Error Message Catalog
- WebLogic Server Performance and Tuning
- Troubleshoot common problems with clustering
- Troubleshoot common problems with Node Manager

15.13 Reference

- Accessibility Notes for the WebLogic Server Administration Console
- Command Reference
- SNMP MIB ANS1 File
- WLST Command and Variable Reference
- WebLogic Server MBean Reference
- Diagnostic Framework Schema
- Domain Configuration Schema
- Domain Security Schema

These documents help you learn about and use WebLogic Server Web Services.

16.1 Learn About WebLogic Web Services

- What's New?
- What are Web Services?
- Anatomy of a WebLogic Web Service
- How do I choose between JAX-WS and JAX-RPC?
- Roadmap for implementing WebLogic Web Services
- Samples and related information
- Web Service standards

16.2 Get Started Using JAX-WS

- Start from Java
- Start from WSDL
- Program the JWS file
- Use JAXB for data binding
- Invoke a Web Service
- Migrate from JAX-RPC

16.3 Advanced Features of JAX-WS

- Invoke Web Services using asynchronous request-response
- Publish a Web Service endpoint
- Use callbacks
- Optimize binary data transmission using MTOM/XOP
- Create a dynamic proxy class
- Use XML catalog
- Create SOAP message handlers
- Programming RESTful Web Services

- Publish and find Web Services using UDDI

16.4 Get Started Using JAX-RPC

- Start from Java
- Start from WSDL
- Program the JWS file
- Understanding data binding
- Invoke a Web Service
- Migrate to JAX-WS

16.5 Advanced Features of JAX-RPC

- Invoke Web Services using asynchronous request-response
- Use reliable Web Services messaging
- Create conversational Web Services
- Use callbacks
- Create buffered Web Services
- Use JMS transport as connection protocol
- Create SOAP message handlers
- Publish and find Web Services using UDDI

16.6 Code Examples

- Code examples using JAX-WS
- Code examples using JAX-RPC

Web Services code examples, if installed, are located in the `WL_HOME/samples` directory of your WebLogic Server installation and are available from the Start menu. See Sample Application and Code Examples.

16.7 Security

- Message-level: digital signatures and encryption
- Transport-level: SSL
- Access control: user access and authentication

16.8 System Administration

- Overview of Administering WebLogic Web Services
- Use the Administration Console
- Use the WebLogic Scripting Tool (WLST)
- Use WebLogic Ant tasks
- Use the Java Management Extensions (JMX)

- Use the Java EE Deployment API

16.9 References

- Standards Supported by WebLogic Web Services
- Web Services Ant Task Reference
- JWS Annotations Reference
- Reliable Messaging WS-Policy Assertions Reference
- Security WS-Policy Assertions Reference
- WebLogic Server Javadocs

16.10 Development Resources and Newsgroups

- Java Technology and Web Services (Sun Developer Network Site)

WebLogic Tuxedo Connector

The WebLogic Tuxedo Connector provides interoperability between WebLogic Server applications and Tuxedo services. These documents help you learn about configuring and administering the Oracle WebLogic Tuxedo Connector.

17.1 Get Started

- Introduction to WebLogic Tuxedo Connector
- Introduction to WebLogic Tuxedo Connector Programming
- Weblogic Tuxedo Connector Quick Start Guide
- Where to Find WebLogic Tuxedo Connector Samples

17.2 System Administration

- Configuring WebLogic Tuxedo Connector
- WebLogic Tuxedo Connector Administration
- Controlling WebLogic Tuxedo Connector Connections and Services
- Administration of CORBA Applications
- How to Manage WebLogic Tuxedo Connector in a Clustered Environment
- How to Configure the Tuxedo Queuing Bridge
- Connecting WebLogic Integration and Tuxedo Applications
- Troubleshooting The WebLogic Tuxedo Connector

17.3 Migration

- WLEC to WebLogic Tuxedo Connector Migration Guide

17.4 Tuning

- Tuning WebLogic Tuxedo Connector

17.5 Programming

- Developing WebLogic Tuxedo Connector Client EJBs
- Developing WebLogic Tuxedo Connector Service EJBs

- Using WebLogic Tuxedo Connector for RMI/IIOP and CORBA Interoperability
- WebLogic Tuxedo Connector JATMI Transactions
- WebLogic Tuxedo Connector JATMI Conversations
- Using FML with WebLogic Tuxedo Connector
- WebLogic Tuxedo Connector JATMI VIEWS
- How to Create a Custom AppKey Plug-in
- Application Error Management