

# **Oracle WebCenter Spaces 11g: Administration**

**Volume I • Student Guide**

D58273GC10

Edition 1.0

June 2010

D67713

**ORACLE®**

## **Authors**

Gary Barg  
Mary Peek  
Kenny Somerville

## **Technical Contributors**

Soy Joseph  
Vishal Parashar  
Ravi Baranwal  
Chitharanjan Billa  
Chirag K Patel  
Peter Moskovits  
Paul Encarnation  
Martha Cano Amaya

## **Reviewers**

Soy Joseph  
Christina Kolotouros  
Ravi Baranwal  
Ellen Gravina  
István Kiss

## **Editors**

Malavika Jinka  
Daniel Milne

## **Graphic Designer**

Priya Saxena

## **Publishers**

Sujatha Nagendra  
Veena Narasimhan

**Copyright © 2010, Oracle and/or its affiliates. All rights reserved.**

### **Disclaimer**

This document contains proprietary information, is provided under a license agreement containing restrictions on use and disclosure, and is protected by copyright and other intellectual property laws. You may copy and print this document solely for your own use in an Oracle training course. The document may not be modified or altered in any way. Except as expressly permitted in your license agreement or allowed by law, you may not use, share, download, upload, copy, print, display, perform, reproduce, publish, license, post, transmit, or distribute this document in whole or in part without the express authorization of Oracle.

The information contained in this document is subject to change without notice. If you find any problems in the document, please report them in writing to: Oracle University, 500 Oracle Parkway, Redwood Shores, California 94065 USA. This document is not warranted to be error-free.

### **Sun Microsystems, Inc. Disclaimer**

This training manual may include references to materials, offerings, or products that were previously offered by Sun Microsystems, Inc. Certain materials, offerings, services, or products may no longer be offered or provided. Oracle and its affiliates cannot be held responsible for any such references should they appear in the text provided.

### **Restricted Rights Notice**

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

#### **U.S. GOVERNMENT RIGHTS**

The U.S. Government's rights to use, modify, reproduce, release, perform, display, or disclose these training materials are restricted by the terms of the applicable Oracle license agreement and/or the applicable U.S. Government contract.

### **Trademark Notice**

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

# Contents

## **I Course Introduction**

- Objectives 1-2
- Target Audience 1-3
- Course Prerequisites 1-4
- Course Objectives 1-5
- Introductions 1-6
- Course Schedule 1-7
- Additional Course Materials 1-8
- Course Practices 1-9
- Classroom Guidelines 1-10
- For More Information 1-11
- Related Training 1-12
- Summary 1-13

## **1 Getting Started with WebCenter Spaces Administration**

- Objectives 1-2
- Lesson Agenda 1-3
- Oracle Fusion Middleware 1-4
- WebCenter Spaces 1-6
- WebCenter Social Services 1-7
- Lesson Agenda 1-9
- WebCenter Architecture 1-10
- High-Level Architecture 1-12
- Identity Management 1-14
- LDAP Repositories 1-15
- WebCenter Social Services 1-16
- Quiz 1-17
- Lesson Agenda 1-18
- Fusion Middleware Administrator 1-19
- WebCenter Spaces Administrator 1-21
- Quiz 1-23
- Lesson Agenda 1-24
- WebCenter Spaces Administration Pages 1-25
- Oracle Fusion Middleware Management 1-27
- Fusion Middleware Components 1-28

Managing Fusion Middleware Components 1-29  
Oracle Enterprise Manager Fusion Middleware Control 1-30  
Fusion Middleware Control: Introduction 1-31  
Fusion Middleware Control: Additional Capabilities 1-33  
Quiz 1-34  
WebLogic Server: Review of Concepts 1-35  
Server 1-36  
Machine 1-37  
Domain 1-38  
Administration Server 1-39  
Node Manager 1-41  
WebLogic Scripting Tool (WLST) 1-42  
Summary 1-43

## **2 Installing and Configuring WebCenter Spaces**

Objectives 2-2  
Lesson Agenda 2-3  
WebCenter Installation Requirements 2-4  
Planning Your Installation 2-5  
Standard Single-Node Logical Installation 2-6  
WebCenter Spaces Database Schemas 2-7  
Oracle Universal Content Management (UCM) 2-8  
WebCenter Spaces Directory Structure 2-9  
Installing WebCenter 2-10  
Quiz 2-11  
Lesson Agenda 2-12  
Installing Oracle WebLogic Server 2-13  
Selecting the JDK 2-14  
Selecting the Product Directory 2-15  
Lesson Agenda 2-16  
Required Schemas for WebCenter 2-17  
Running RCU 2-18  
Specifying Database Connection Details 2-19  
Selecting Components 2-20  
RCU Summary 2-21  
Quiz 2-22  
Lesson Agenda 2-23  
Installing Oracle WebCenter 2-24  
Starting the WebCenter Installer 2-25  
Specifying the WebCenter Installation Location 2-26  
Installing and Configuring Oracle Universal Content Management (UCM) 2-27

WebCenter Installation Summary	2-28
Quiz	2-29
Lesson Agenda	2-30
Running the Fusion Middleware Configuration Wizard	2-31
Starting the Fusion Middleware Configuration Wizard	2-32
Selecting the Domain Source	2-33
Providing the Domain Name and Location and Administrator's Credentials	2-34
Configuring Server Start Mode and JDK	2-35
Configuring JDBC Component Schema	2-36
Configuring Administration and Managed Servers	2-37
Optional: Creating Clusters and Assigning Servers to Clusters	2-38
Creating Machines and Assigning Servers to Machines	2-39
Starting WebLogic Servers and Verifying the Installation	2-40
Starting WebLogic Administration Server	2-41
Starting Administration Server by Using <code>startWebLogic.sh</code>	2-42
Starting WebLogic Managed Servers	2-43
Starting Node Manager	2-44
Accessing the Administration Console	2-45
Starting Managed Servers by Using the Administration Console	2-46
Verifying the Installation	2-47
Quiz	2-48
Lesson Agenda	2-49
WebCenter Installation Log Files	2-50
Configuration Log Files	2-51
General WebCenter Installation Troubleshooting Tips	2-52
Summary	2-53
Practice 2-1 and 2-2 Overview: Verifying the Installation and Configuring WebCenter Spaces	2-54

### **3 Working with Users and Security**

Objectives	3-2
Lesson Agenda	3-3
WebCenter Spaces Security Overview	3-4
WebCenter Spaces Security Levels	3-5
Roles and Permissions	3-6
How Roles Grant Permissions to a User	3-7
Identity Store: Users and Enterprise Roles	3-8
Policy Store: Users and Application Roles	3-9
Security Roles	3-10
Default and Custom Application Roles	3-11
Granting an Application Role	3-12

- Application Roles in Fusion Middleware Control 3-13
- Editing Application Roles 3-14
- Spaces-User and Public-User 3-15
- Public Access to Spaces 3-16
- Granting Public Access to a Page 3-17
- Set Page Permissions to Permit Public Access 3-18
- Accessing a Public Page 3-19
- Login Pages 3-20
- Users and Policy Grants 3-21
- Quiz 3-22
- Lesson Agenda 3-23
- Managing Users 3-24
- Using WLS Admin Console to Manage Users 3-25
- WLS Admin Console: Create User 3-27
- User Attributes 3-28
- Working with Groups in WLS Admin Console 3-29
- Creating a Group 3-30
- Adding a User to a Group 3-31
- Using Other Tools to Manage Embedded LDAP 3-32
- Setting the Admin Password for the Embedded LDAP 3-33
- Using Command-Line LDAP Tools 3-34
- ldif files 3-35
- ldapsearch 3-36
- ldapadd 3-37
- Self-Registration 3-39
- Self-Registration Page 3-40
- Successful Registration 3-41
- Allowing Self-Registration 3-42
- Quiz 3-43
- Lesson Agenda 3-44
- Personal and Group Spaces 3-45
- Application Roles 3-46
- Viewing a Personal Space 3-47
- Without Application View Permission 3-48
- With Application View Permission 3-49
- Page Access in Personal Space 3-50
- Default Personal Page Permissions 3-51
- Page Permissions 3-53
- Combining Permissions 3-54
- Page Access From Administration 3-55

The Configure Application Permission 3-56  
The Application Manage Permission 3-57  
Page Access From Administration 3-58  
Administrator Page Access: Pages Permissions 3-60  
Quiz 3-62  
Practice 3-1 and 3-2 Overview: Working with Users and Personal Space  
Security 3-63  
Lesson Agenda 3-64  
Group Spaces Permissions 3-65  
Group Space Roles 3-66  
Group Space Access 3-67  
Group Space Services Permissions 3-69  
Set Page Access 3-70  
Group Space Services and Custom Page Access 3-71  
Group Space Services No Custom Page Access 3-72  
Group Space Services + Custom Page Access 3-73  
Quiz 3-75  
Summary 3-76  
Practice 3-3 Overview: Working with Group Space Security 3-77

#### **4 Configuring WebCenter Services for WebCenter Spaces**

Objectives 4-2  
Lesson Agenda 4-3  
WebCenter Services 4-4  
WebCenter Services Configuration 4-5  
Lesson Agenda 4-6  
Setting Up Discussions 4-7  
Secured Connection 4-8  
Setting Up Discussions 4-9  
Create Keystores for WebCenter and Discussions 4-10  
Create a Keystore by Generating a New Keypair 4-11  
Create a Keystore with a Certificated Public Key 4-12  
Set Up the Discussions Server to Use the `owc_discussions.jks` Keystore 4-13  
Create a Jar File Containing `keystore.properties` 4-14  
Set Up Discussions to Use `keystore.properties` 4-15  
Set Discussions Server System Property 4-16  
Open WebCenter Service Configuration in Fusion Middleware Control 4-17  
Use Fusion Middleware Control to Set Up the Discussions Service 4-18  
Change Discussions Server Administrator 4-20  
Admin Console: Global Permissions 4-21

Discussions Server Admins/Moderators Permissions Summary 4-22  
Grant New Permissions 4-23  
Permissions Updated Successfully 4-24  
Quiz 4-25  
Lesson Agenda 4-26  
Setting Up Content Repository 4-27  
Steps: Setting Up Content Repository 4-28  
Documents Setup: `jps-config.xml` 4-29  
Set `SocketHostAddressSecurityFilter` in `config.cfg` 4-30  
Run `credtool` 4-31  
Open WebCenter Service Configuration in Fusion Middleware Control 4-32  
Set Up the Content Repository Service 4-33  
Start Content Server 4-34  
Checking the Content Server Log 4-35  
Accessing Content Server Outside of Spaces 4-36  
Configuring WebTier for Content Server 4-37  
Logging In to Content Server 4-38  
Check the JPS Setup in Content Server 4-39  
Looking at Content in Content Server 4-40  
Content Server Admin 4-41  
Quiz 4-42  
Lesson Agenda 4-43  
Using WLST for Administration 4-44  
Using WLST Simple Example 4-45  
Summary 4-47  
Practice 4-1, 4-2, and 4-3 Overview: Configuring WebCenter Services for  
WebCenter Spaces 4-48

## **5 Managing Pages**

Objectives 5-2  
Lesson Agenda 5-3  
Review: WebCenter Spaces Page Types 5-4  
Page Access Security 5-5  
Page Access Security: Individual Users 5-6  
Page Access Security: Administrator 5-7  
Lesson Agenda 5-8  
Working with Personal Pages 5-9  
Setting Personal Page Defaults 5-10  
Example: Setting Personal Page Defaults 5-12  
Practice 5-1 Overview: Working with Personal Page Defaults 5-13



Managing Personal Pages 5-14  
Managing Personal Pages: Granting User Access to a Page 5-16  
Managing Personal Pages: Example 5-17  
Enable/Disable Personal Pages 5-18  
Disabling Personal Spaces 5-19  
Personal Spaces Disabled 5-20  
Quiz 5-21  
Lesson Agenda 5-23  
Business Role Pages 5-24  
Create a Business Role Page 5-25  
Add Content 5-26  
Grant Access to the Page 5-27  
The List of Business Role Pages 5-29  
Personal Space Welcome Page 5-30  
Quiz 5-31  
Lesson Agenda 5-32  
Public Pages: Overview 5-33  
WebCenter Spaces Welcome Page 5-34  
WebCenter Spaces Login Page 5-35  
Self-Registration Page 5-36  
Customizing the Login and Self-Registration Pages 5-37  
Customizing the Login Page: Example 5-38  
Making Personal Space and Group Space Pages Public 5-39  
Disabling Public Access 5-40  
Granting Public Access to a Personal Page 5-41  
Granting Public Access to a Personal Page: Steps 5-42  
Granting Public Access to Many Personal Pages 5-43  
Quiz 5-44  
Summary 5-45  
Practice 5-2 Overview: Working with Personal Page Security 5-46  
Practice 5-3 Overview: Working with Business Role Pages 5-47

## **6 Customizing WebCenter Spaces**

Objectives 6-2  
Lesson Agenda 6-3  
Extending WebCenter Spaces Content 6-4  
Customizing the Look and Feel of WebCenter Spaces 6-5  
Out-of-the-Box Skins 6-6  
Setting the Default Application Skin 6-7  
Naming Your WebCenter Spaces Application 6-8  
Changing the WebCenter Spaces Logo 6-10

Customizing the Page Footer 6-12  
Customizing the Sidebar 6-14  
Customizing the Applications Pane 6-16  
Renaming the Personal Space Tab 6-18  
Quiz 6-19  
Practice 6-1 Overview: Customizing WebCenter Spaces Look and Feel 6-20  
Lesson Agenda 6-21  
Customizing the Online Help Link 6-22  
Lesson Agenda 6-24  
Default Login Page 6-25  
Customizing the Login Page 6-26  
Adding Text to the Login Page 6-27  
Customized Login Page 6-28  
Quiz 6-29  
Practice 6-2 Overview: Customizing the Login Page 6-30  
Lesson Agenda 6-31  
Support for Extending WebCenter Spaces 6-32  
Creating and Deploying Your Own Skins 6-33  
Personal Space and Group Space Catalogs 6-34  
Customizing the Catalogs and Deploying New Task Flows 6-35  
Hiding Disabled WebCenter Services 6-36  
Customizing the Welcome Page 6-37  
Adding New Page Styles 6-38  
Customizing and Creating Application Templates 6-39  
Quiz 6-40  
Lesson Agenda 6-41  
Development-to-Deployment Life Cycle 6-42  
Stopping and Starting the WebCenter Spaces Managed Server 6-43  
Editing `setDomainEnv` to Use the Customized Deployment 6-44  
Deploying a Customized WebCenter Spaces WAR 6-45  
Redeploying the WebCenter Spaces Application 6-46  
Quiz 6-47  
Summary 6-48

## **7 Working with External Applications and Portlet Producers**

Objectives 7-2  
Lesson Agenda 7-3  
Accessing External Web Applications Through WebCenter Spaces 7-4  
Supporting Single Sign-On for WebCenter Spaces Users 7-5  
Single Sign-On Example 1 7-6  
Single Sign-On Example 2 7-7

Public Credentials Example 7-8  
Accessing an External Application for the First Time 7-9  
Exposing External Applications Through WebCenter Spaces 7-10  
Gathering Registration Information 7-11  
Registering External Applications by Using Fusion Middleware Control 7-13  
Login and Authentication Details 7-14  
Enabling Shared or Public Credentials 7-15  
Registering External Applications by Using WLST 7-16  
Deleting External Application Connections 7-17  
Quiz 7-18  
Practice 7-1 Overview: Registering an External Application 7-19  
Lesson Agenda 7-20  
Making External Applications Available to Users 7-21  
Adding External Applications to the Applications Pane 7-22  
Editing Application Link Properties 7-23  
Customizing the Applications Pane 7-24  
Removing or Hiding Links from the Applications Pane 7-25  
Quiz 7-26  
Practice 7-2 Overview: Providing Access to External Applications 7-27  
Lesson Agenda 7-28  
Accessing Portlets from WebCenter Spaces 7-29  
Portlet Standards 7-30  
Portlet Communication 7-31  
Portlet Types 7-32  
Consuming Portlets in WebCenter Spaces 7-33  
Deploying Portlet Producer Applications 7-34  
Registering Portlet Producers 7-35  
Portlet Producer URLs 7-36  
Registering a WSRP Producer by Using Fusion Middleware Control 7-37  
Advanced WSRP Producer Configuration 7-38  
Securing WSRP Portlet Producers 7-39  
Testing WSRP Producer Connections 7-40  
Registering an Oracle PDK-Java Producer by Using Fusion Middleware  
Control 7-41  
Registering Producers by Using WLST 7-42  
Refreshing Portlet Producers 7-43  
Deregistering Portlet Producers 7-44  
Quiz 7-45  
Practice 7-3 Overview: Registering a Portlet Producer 7-46  
Summary 7-47

## **8 Managing Group Spaces**

- Objectives 8-2
- Lesson Agenda 8-3
- Review: Group Space 8-4
- Group Space Security Key Concepts 8-5
- Group Spaces Permission Management Pages 8-6
- Group Space List for the Administrator 8-8
- Group Space Template List for the Administrator 8-9
- Group Space List for the Moderator 8-10
- Managing an Individual Group Space 8-11
- Lesson Agenda 8-12
- Group Space Security Model: Review 8-13
- Managing Group Space Security: Group Spaces 8-14
- Managing Group Space Security: Group Space Access 8-16
- Managing Group Space Security: Scenario 8-17
- Managing Group Space Security: Group Space Services 8-18
- Group Space Services Permission Block: View 8-19
- Group Space Services Permission Block: Contribute 8-20
- Group Space Services Permission Block: Design 8-21
- Group Space Services Permission Block: Full Access 8-22
- Managing Group Space Security: Group Space Templates 8-23
- Practice 8-1: Working with Group Space Security: The Basics 8-24
- Practice 8-2: Working with Group Space Security: Group Space Services 8-25
- Lesson Agenda 8-26
- Removing a Group Space 8-27
- State: Offline 8-28
- Taking a Group Space Offline 8-29
- Group Space Unavailable 8-30
- Status: Closed 8-31
- Closing a Group Space 8-32
- Group Space Unavailable 8-33
- Lesson Agenda 8-34
- Exporting and Importing Group Spaces 8-35
- Export File 8-36
- Exporting a Group Space 8-37
- Importing a Group Space 8-39
- Exporting and Importing Group Space Templates 8-40
- Export File 8-41
- Exporting a Group Space Template 8-42
- Importing a Group Space Template 8-43

Migrating an Entire Group Space 8-44  
Practice 8-3: Importing and Exporting a Group Space 8-45  
Summary 8-46

## **9 Configuring WebCenter Spaces and Services to Use an External LDAP Store**

Objectives 9-2

Lesson Agenda 9-3

Configuring WebCenter Spaces for an Enterprise Environment 9-4

The Default Embedded LDAP Server 9-5

Replacing the Default LDAP Server 9-6

Oracle Internet Directory Architecture 9-7

Oracle Internet Directory Communication 9-8

Oracle Directory Services Manager (ODSM) 9-9

Steps for Configuring WebCenter Spaces to Use OID 9-10

1: Starting the OID Instance with opmnctl 9-11

2: Backing Up the Configuration Files 9-12

3: Starting the WebCenter Spaces Administration Server 9-13

4: Creating a New Authentication Provider for OID 9-14

5: Editing the `jps-config.xml` File 9-16

6: Reordering the Authentication Providers 9-17

7: Restarting the WebCenter Spaces WebLogic Servers 9-19

Finding the Administrator Accounts 9-20

Locating the Administrator Accounts 9-21

Migrating Users from Embedded LDAP to OID 9-22

Tuning the Identity Store for Performance 9-23

Quiz 9-24

Practice 9-1 Overview: Configuring WebCenter Spaces to Use OID 9-25

Lesson Agenda 9-26

Configuring the Documents Service to Use OID 9-27

Steps to Configure the Documents Service for OID 9-28

1: Shutting Down the Content Servers 9-29

2: Editing the Content Server `jps-config.xml` 9-30

3: Running the Script to Set Up the OID Credentials 9-32

4: Starting the Content Servers 9-33

Quiz 9-34

Practice 9-2 Overview: Configuring the Documents Service to Use OID 9-35

Lesson Agenda 9-36

Configuring the Discussions Service to Use OID 9-37

Steps to Configure the Discussions Service for OID 9-38

1: Creating a New Group for the Discussions Administrator 9-39

2: Assigning the Discussions Group/User System Admin Permission 9-40

3: Setting the Discussions Administrator 9-41  
4: Restarting the WebCenter Services Managed Server 9-42  
Practice 9-3 Overview: Configuring the Discussions Service to Use OID 9-43  
Quiz 9-44  
Summary 9-45

## **10 Monitoring WebCenter Spaces**

Objectives 10-2  
Lesson Agenda 10-3  
Tools Available to Monitor WebCenter Spaces 10-4  
Monitoring with Fusion Middleware Control 10-5  
Displaying Fusion Middleware Control 10-6  
Monitoring with WebLogic Server Administration Console 10-7  
Displaying WebLogic Server Administration Console 10-8  
Monitoring with the Oracle WebLogic Scripting Tool (WLST) 10-9  
Using WLST from the Command Line 10-10  
Quiz 10-11  
Lesson Agenda 10-12  
Using WebCenter Performance Metrics 10-13  
WebCenter Spaces Home Page 10-14  
WebCenter Spaces Metrics 10-15  
Service Metrics: Services Summary 10-16  
Service Metrics: Service Details 10-18  
Group Space Metrics 10-19  
Performance Summary Metrics 10-20  
Monitoring WebLogic Server Performance 10-22  
Monitoring Deployed Applications 10-23  
Quiz 10-24  
Lesson Agenda 10-25  
Monitoring with WebLogic Server Administration Console 10-26  
Top Tuning Recommendations for WebLogic Server 10-27  
Lesson Agenda 10-28  
Troubleshooting 10-29  
WebCenter Log Files 10-30  
Viewing WebCenter Spaces Log Messages 10-31  
Searching Log Files 10-32  
Searching Log Files by Using WLST 10-33  
Configuring Log Levels 10-34  
Log Message Types and Levels 10-35  
Editing Log File Configurations 10-37  
Identifying Problems by Viewing Metrics 10-38

Identifying Services That Are Taking Too Long	10-39
Troubleshooting When a Service Is Down	10-40
Troubleshooting When a Metric Is Out of Bounds	10-41
Troubleshooting Example	10-42
Resolving a Common Problem	10-43
Other Troubleshooting Tools	10-44
Troubleshooting with WebLogic Server Administration Console	10-45
Using Remote Diagnostic Agent (RDA)	10-47
Troubleshooting Java Applications	10-48
Quiz	10-49
Summary	10-50
Practice 10-1 and 10-2 Overview: Monitoring and Troubleshooting WebCenter Spaces	10-51

## **Appendix A: Using the Repository Creation Utility (RCU)**

### **Appendix B: WebCenter Spaces Administration Tools**

WebCenter Spaces Administration Tools	B-2
Fusion Middleware Control Details	B-3
Domain Home Page	B-4
Monitoring Servers on the Server Home Page	B-5
Monitoring Deployments on the Domain Home Page	B-6
WebLogic Server Details	B-7
WebLogic Server Administration Console Home Page	B-8
Servers Detail	B-9
Managed Server Detail	B-10
Deployments Detail	B-11
Security Realms Detail	B-12
Using WLST	B-13
Getting Started with <code>opmnctl</code>	B-14
Manage a Process with <code>opmnctl</code>	B-15

### **Appendix C: Restoring Practices**

