

Oracle Application Express: Administration

Student Guide

D56361GC10

Edition 1.0

June 2011

D73408

ORACLE®

Author

Salome Clement

**Technical Contributors
and Reviewers**

Veerabhadra Rao Putrevu

Manish Pawar

Chaitanya Koratamaddi

Terri Jennings

Marcie Young

Klaus Husermann

Joel Kallman

Wayne Abbott

James Spiller

Iloon Ellen

Jason Straub

Matthew Gregory

Editors

Malavika Jinka

Smita Kommini

Raj Kumar

Graphic Designer

Rajiv Chandrabhanu

Publishers

Revathi Ramamoorthy

Srividya Rameshkumar

Copyright © 2011, Oracle and/or its affiliates. All rights reserved.

Disclaimer

This document contains proprietary information 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 where your use constitutes "fair use" under copyright 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.

Restricted Rights Notice

If this documentation is delivered to the United States Government or anyone using the documentation on behalf of the United States 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

Preface

1 Course Overview

- Course Objectives 1-2
- Suggested Schedule 1-3
- Course Environment 1-4
- Accessing the labs Directory 1-5

2 Introduction

- Objectives 2-2
- Agenda 2-3
- Pre-Quiz 2-4
- What Is Oracle Application Express? 2-6
- Applications Developed Using APEX 2-7
- Key Features 2-8
- History 2-9
- Architecture 2-10
- Functions of APEX Engine 2-11
- Web Server Options 2-12
- Deployment Options 2-14
- Quiz 2-15
- Agenda 2-16
- What Is a Workspace? 2-17
- What Is the Internal Workspace? 2-18
- Types of APEX Roles 2-19
- APEX Development Interface Components 2-21
- Quiz 2-22
- Agenda 2-23
- Database and Database Instance 2-24
- Accessing the Enterprise Manager Console 2-25
- Starting and Stopping an Instance 2-26
- Using the Terminal Window 2-27
- Summary 2-28
- Practice 2 Overview: Introduction 2-29

3 Installing Oracle Application Express

Objectives 3-2

Agenda 3-3

Types of Installations 3-4

Installation Steps 3-5

Quiz 3-6

Agenda 3-7

Deciding Which Web Server to Use 3-8

Verifying Database Requirements 3-9

Verifying Browser Requirements 3-11

Verifying Disk Space Requirements 3-12

Verifying Oracle XDB Requirement 3-13

Verifying Oracle Text Requirement 3-14

Verifying PL/SQL Web Toolkit Requirement 3-15

Creating a Backup 3-16

Quiz 3-17

Agenda 3-18

Setting the Environment 3-19

Installing Full Development Environment 3-20

Installing Run-Time Environment 3-21

Reviewing the Installation Log 3-22

Verifying Installation Validity 3-23

Quiz 3-24

Agenda 3-25

Reviewing the Created Database Accounts 3-26

Setting Password for Admin User 3-27

Configuring the APEX_PUBLIC_USER 3-28

Enabling Network Services Process 3-29

Granting Connect Privileges to APEX_040000 3-32

Granting APEX_040000 Permission to Use Oracle Text URL Datastore 3-33

Managing JOB_QUEUE_PROCESSES 3-34

Quiz 3-35

Summary 3-36

Practice 3 Overview: Installing APEX 3-37

4 Installing and Configuring Oracle APEX Listener

Objectives 4-2

Agenda 4-3

What Is Oracle APEX Listener? 4-4

Architecture 4-5

Installation Requirements 4-6

- Supported Application Servers 4-7
- Oracle WebLogic Server 4-8
- WebLogic Server Users and Roles Required for APEX Listener 4-9
- Installation Steps 4-10
- Quiz 4-11
- Agenda 4-12
- Creating a WAR File for Application Express Images 4-13
- Logging In to WebLogic Server Administration Console 4-15
- Deploying WAR Files 4-16
- Creating Administrator and Manager Users 4-18
- Creating Admin and Manager Roles 4-20
- Installing APEX Listener In Stand-Alone Mode 4-21
- Quiz 4-23
- Agenda 4-24
- APEX Listener Administration URLs 4-25
- APEX Listener Administration Interface 4-26
- Creating a Database Connection 4-27
- Troubleshooting: Images Not Appearing 4-29
- Quiz 4-30
- Agenda 4-31
- Updating Configuration Information 4-32
- Specifying Security for Procedures 4-33
- Caching File-Based Content 4-35
- Specifying Pre- and Post-Processing Procedures 4-36
- Viewing Status Information 4-37
- Viewing Options in the Miscellaneous Tab 4-38
- Saving the Configuration 4-39
- Quiz 4-40
- Summary 4-41
- Practice 4 Overview: Installing and Configuring APEX Listener 4-42

5 Creating Workspaces

- Objectives 5-2
- Agenda 5-3
- Two Types of Administrators: A Recap 5-4
- Logging In to Administration Services 5-5
- Instance Administration Page 5-6
- Manage Workspaces Page 5-7
- Quiz 5-8
- Agenda 5-9
- Provisioning Modes 5-10

Setting the Provisioning Mode	5-11
Accessing the Create Workspace Wizard	5-12
Creating a Workspace Manually	5-13
Requesting a Workspace	5-14
Quiz	5-15
Agenda	5-16
Accessing the Manage Developers and Users Page	5-17
Creating a User	5-18
Setting Account Privileges	5-19
Editing/Deleting a User	5-20
Quiz	5-21
Agenda	5-22
Viewing Schemas Assigned to a Workspace	5-23
Adding Existing Schemas to a Workspace	5-24
Creating a New Schema for a Workspace	5-25
Editing Schema Assignments	5-26
Quiz	5-27
Agenda	5-28
Viewing Existing Workspaces	5-29
Viewing Database Privileges	5-30
Managing Component Availability	5-31
Deleting a Workspace	5-32
Locking a Workspace	5-33
Summary	5-35
Practice 5 Overview: Creating Workspaces, Users, and Schemas	5-36

6 Configuring Administration Services

Objectives	6-2
Agenda	6-3
Accessing Email Configuration	6-4
Email Configuration Options	6-5
Configuring Report Printing	6-6
Configuring Storage Options	6-7
Configuring Workspace Size Options	6-8
Configuring Workspace Purge Settings	6-9
Quiz	6-11
Agenda	6-12
Accessing the Security Page	6-13
Setting Security Options	6-14
Specifying HTTPS Requirement	6-15
Setting Session Timeout	6-16

Defining Login Control Settings 6-17
Setting Workspace Password Policy 6-18
Setting Instance Administrator Password Policy 6-19
Creating Authorized URLs 6-20
Quiz 6-21
Agenda 6-22
Accessing the Feature Configuration Page 6-23
Configuring Application Development Features 6-24
Configuring SQL Workshop Features 6-25
Enabling Database Monitoring 6-26
Quiz 6-27
Summary 6-28
Practice 6 Overview: Configuring Administration Services 6-29

7 Administering a Workspace

Objectives 7-2
Lesson Agenda 7-3
Accessing the Workspace Administration Page 7-4
Access to Administrative Tasks 7-5
Viewing Product Information 7-6
Lesson Agenda 7-7
Manage Services Overview 7-8
Creating a Service Request 7-9
Setting Workspace Preferences 7-10
Creating Announcements 7-11
Viewing Workspace Utilization Reports 7-12
Lesson Agenda 7-13
Creating Workspace Users 7-14
Setting User Privileges 7-15
Creating Multiple Users 7-16
Editing User Details 7-17
Deleting Multiple Users 7-18
Creating a User Group 7-19
Assigning a User to a Group 7-20
Lesson Agenda 7-21
Monitoring Real Time Activity 7-22
Viewing an Activity Report 7-23
Monitoring Archived Activity 7-24
Quiz 7-25
Lesson Agenda 7-26
Viewing the Workspace Dashboard 7-27

Viewing the Users Dashboard 7-28
Viewing the Database Dashboard 7-29
About Other Dashboards 7-30
Quiz 7-31
Summary 7-32
Practice 7: Overview Administering a Workspace 7-33

8 Administrating an APEX Instance

Objectives 8-2
Agenda 8-3
Types of Requests 8-4
Viewing Requests from the Administration Home Page 8-5
Viewing Requests from the Manage Requests Page 8-6
Editing Workspace Requests 8-7
Approving Workspace Requests 8-8
Changing Workspace Requests Status 8-9
Deleting Workspace Requests 8-10
Approving/Declining Change Requests 8-11
Quiz 8-12
Agenda 8-13
What Is Session State? 8-14
Viewing Session State Statistics 8-16
Viewing Session State Detail 8-17
Purging Session State 8-18
Quiz 8-19
Agenda 8-20
Exporting a Workspace 8-21
Importing a Workspace 8-22
Agenda 8-23
What Is a Public Theme? 8-24
Creating a Public Theme 8-25
Deleting/Editing a Public Theme 8-26
Quiz 8-27
Agenda 8-28
Viewing Real-Time Reports 8-29
Viewing Archived Activity 8-30
Viewing Dashboards 8-31
Quiz 8-32
Agenda 8-33
Creating a Login Message 8-34
Creating a System Message 8-35

Creating a Site-Specific Tasks List 8-36
Quiz 8-37
Summary 8-38
Practice 8 Overview: Administrating an APEX Instance 8-39

9 Using the APEX_INSTANCE_ADMIN API

Objectives 9-2
About the APEX_INSTANCE_ADMIN API 9-3
Agenda 9-4
Creating Workspaces 9-5
Deleting Workspaces 9-6
Agenda 9-7
Viewing Schemas Assigned to a Workspace 9-8
Adding a Schema to a Workspace 9-9
Removing a Schema from a Workspace 9-10
Agenda 9-11
Retrieving/Setting Parameters 9-12
Viewing Email Settings 9-13
Configuring Email 9-14
Viewing Report Printing Settings 9-15
Configuring Report Printing 9-16
Reversing HTTPS Requirement 9-17
Enabling Administrator Login 9-18
Quiz 9-19
Summary 9-23
Practice 9 Overview: Using the APEX_INSTANCE_ADMIN API 9-24

10 Key APEX Administration Tasks

Objectives 10-2
Agenda 10-3
Handling New Workspace Requests with New Schema 10-4
Handling New Workspace Requests with Existing Schema 10-5
Handling Additional Schema Requests 10-6
Handling Additional Storage Requests 10-7
Handling Terminate Service Requests 10-8
Handling Unlock Account Requests 10-9
Handling Reset Password Requests 10-10
Handling Invalid Credentials Errors 10-11
Quiz 10-12
Agenda 10-13
Monitoring Performance 10-14
Monitoring Long-Running Jobs 10-15

Detecting Database Lock Conflicts 10-16
Monitoring Hot Tables 10-17
Reviewing SGA Utilization 10-18
Implementing SGA Pinning of Database Objects 10-19
Monitoring Application Server Performance 10-20
Quiz 10-21
Agenda 10-22
Reviewing the Database Alert Log 10-23
Reviewing the Web Server Log 10-24
Summary 10-25
Practice 10 Overview: Key APEX Administration Tasks 10-26

A Upgrading and Applying Patches

Objectives A-2
Agenda A-3
How Does Upgrade Differ from Installation: Steps to Perform A-4
How Does Upgrade Differ from Installation: Process A-5
Identifying the Existing Installation A-6
Downloading and Extracting the Upgrade File A-7
Preventing Access to Existing APEX A-8
Backing Up the Database A-9
Upgrading the Existing APEX Installation A-10
Accessing APEX A-11
Post-Installation Tasks A-12
Agenda A-13
What Is a Patch Release? A-14
Pre-Installation Steps A-15
Installing the Patch Release A-16
Post-Installation Steps A-17
Agenda A-18
Redeploying the Application A-19
Quiz A-20
Summary A-21

B Additional Resources

Application Express OTN Page B-2
Oracle Learning Library B-4
Documentation and Tutorials B-5
Online Help B-6
Learn More... B-7
Oracle University Courses B-8