

Oracle® Fusion Middleware

Installation Planning Guide

11g Release 1 (11.1.1)

B32474-03

January 2010

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

Primary Author: Kevin Hwang

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
Intended Audience.....	
Documentation Accessibility	
Related Documents	
Conventions	
1 Installation Overview	
1.1 Special Instructions for Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) Users	1-1
1.2 System Requirements, Prerequisites and Certification	
1.3 Oracle Fusion Middleware Concepts for All Users	1-2
1.3.1 Oracle Fusion Middleware Components	1-2
1.3.2 Oracle Fusion Middleware Environment.....	
Oracle WebLogic Server Domain	
System Components.....	1-4
1.3.2.3 Administration Servers.....	1-4
1.3.2.4 Managed Servers and Clusters	1-4
1.3.2.5 Node Manager	
1.3.2.6 WebLogic Scripting Tool (WLST)	
1.3.2.7	1-5
1.4	1-6
1.4.1 Middleware Home and Oracle WebLogic Home Directories.....	
Oracle Home and Oracle Common Home Directory	
Creating the Product Oracle Home.....	
Creating the Oracle Common Home	
Checking Port Numbers Across Multiple Oracle Homes.....	
WebLogic Domain	
Multiple Products with Multiple WebLogic Domains.....	1-8
1.4.4.1 Notes for Creating Multiple Domains	1-8
1.4.4.2 For More Information...	1-9
1.4.5 Extending a Domain.....	
Oracle Instance and WebLogic Domain.....	1-10
1.4.7	1-10
1.5	1-11

2 Oracle Fusion Middleware Products

(11.1.1.2.0).....	
Oracle WebLogic Server 11 R1 (10.3.2).....	
Oracle Enterprise Content Management Suite 11 (11.1.1.2.1).....	
Oracle Information Rights Management Desktop 11 (11.1.1.1.0).....	
Oracle SOA Suite 11 (11.1.1.2.0).....	
Oracle WebCenter 11 (11.1.1.2.0).....	
Oracle Identity Management 11 (11.1.1.2.0).....	
Oracle Portal, Forms, Reports and Discoverer 11 (11.1.1.2.0).....	
Oracle Fusion Middleware Web Tier Utilities 11 (11.1.1.2.0).....	
Oracle Fusion Middleware Companion DVD 11 (11.1.1.2.0).....	
Oracle Complex Event Processing 11 (11.1.1.2.0).....	
Oracle Business Intelligence Publisher 10 (10.1.3.4.1).....	
Oracle Business Process Analysis Suite 11 (11.1.1.2.0).....	
Oracle Access Manager 10 Core Components (10.1.4.3.0).....	
Oracle Access Manager 10 Webgates (10.1.4.3.0) CD.....	
Oracle Access Manager 10 NLS Packages (10.1.4.3.0) CD.....	
Oracle Secure Enterprise Search (10.1.8.4).....	
Oracle JDeveloper 11 and Oracle Application Development Framework (ADF) 11 (11.1.1.2.0)	
Oracle Application Development Runtime 11 (11.1.1.2.0).....	
Oracle Fusion Middleware Adapters and Connectors 11 (11.1.1.2.0).....	
Oracle WebLogic Operations Control CD.....	
Oracle Clusterware 11 (11.1.1.1.0) - Linux Only.....	
Oracle Fusion Middleware 11 Documentation Library.....	

Index

Preface

Oracle Fusion Middleware Installation Planning Guide

Intended Audience

installed. Users on UNIX systems who are installing Oracle Fusion Middleware need
root

Documentation Accessibility

<http://www.oracle.com/accessibility/>

Accessibility of Code Examples in Documentation

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

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

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

<http://www.fcc.gov/cgb/consumerfacts/trs.html>

<http://www.fcc.gov/cgb/dro/trsphonebk.html>

Related Documents

For additional information, see the following manuals:

- *Oracle Fusion Middleware Repository Creation Utility User's Guide*
- Oracle Fusion Middleware Installation Guide for Oracle Enterprise Content Management Suite*
- Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server*
- Oracle Fusion Middleware Installation Guide for Oracle SOA Suite*
- Oracle Fusion Middleware Installation Guide for Oracle WebCenter*
- Oracle Fusion Middleware Installation Guide for Oracle Identity Management*
- Oracle Fusion Middleware Installation Guide for Oracle Portal, Forms, Reports and Discoverer*
- Oracle Fusion Middleware Installation Guide for Oracle Web Tier*
- Oracle Application Server Administrator's Guide*
- Oracle Fusion Middleware Concepts*
- Oracle Fusion Middleware High Availability Guide*

Conventions

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.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Installation Overview

Section 1.2, "System Requirements, Prerequisites and Certification"

Section 1.3, "Oracle Fusion Middleware Concepts for All Users"

Section 1.4, "Oracle Fusion Middleware Directory Structure and Concepts"

Section 1.5, "Oracle Fusion Middleware Documentation Roadmap"

1.1 Special Instructions for Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) Users

Assistant to Migrate from 11.1.1.1.0 to 11.1.1.2.0

Upgrade Planning Guide

Oracle Fusion Middleware

1.2 System Requirements, Prerequisites and Certification

http://www.oracle.com/technology/software/products/ias/files/fusion_requirements.htm

systems, databases, JDKs, and third-party products:

http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html

1.3 Oracle Fusion Middleware Concepts for All Users

This section describes several important Oracle Fusion Middleware concepts. You should be familiar with these concepts before proceeding with an installation.

1.3.1 Oracle Fusion Middleware Components

-
-
-
-
-
-
-
-
-

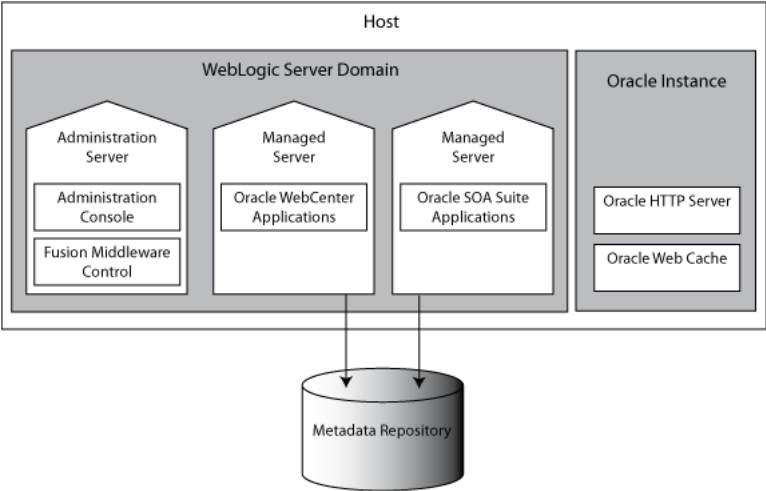
1.3.2 Oracle Fusion Middleware Environment

Figure 1-1):

One Oracle WebLogic Server domain, which contains one Administration Server and one or more Managed Servers. See Section 1.3.2.1, "Oracle WebLogic Server Domain".

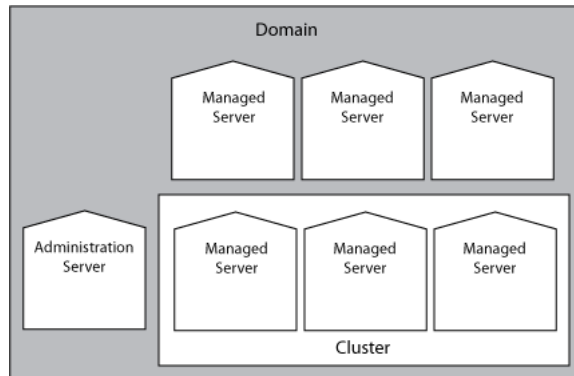
If you installed system components, they are configured in an Oracle Instance. See Section 1.3.2.2, "System Components".

Figure 1-1 Oracle Fusion Middleware Environment



1.3.2.1 Oracle WebLogic Server Domain

Figure 1–2 Oracle WebLogic Server Domain



1.3.2.2 System Components

1.3.2.3 Administration Servers

of the entire domain. It maintains the domain's configuration documents and distributes changes in the configuration documents to Managed Servers. You can also use the Administration Server as a central location from which to monitor all resources in a domain.

Each Oracle WebLogic Server domain must have one server instance that acts as the Administration Server.

To interact with the Administration Server, you can use the Oracle WebLogic Server Administration Console, Oracle WebLogic Scripting Tool (WLST), or create your own JMX client. In addition, you can use Oracle Enterprise Manager Fusion Middleware Control for some tasks.

Fusion Middleware Control and the WebLogic Administration Console run in the Administration Server. Fusion Middleware Control is a Web-based administration console used to manage Oracle Fusion Middleware, including components such as Oracle HTTP Server, Oracle SOA Suite and Oracle WebCenter, Oracle Portal, Forms, Reports, and Discoverer, and the Oracle Identity Management components. Oracle WebLogic Server Administration Console is the Web-based administration console used to manage the resources in an Oracle WebLogic Server domain, including the administration server and managed servers in the domain.

1.3.2.4 Managed Servers and Clusters

1.3.2.5 Node Manager

*Oracle Fusion Middleware Node
Manager Administrator's Guide for Oracle WebLogic Server*

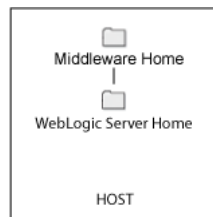
1.3.2.6 WebLogic Scripting Tool (WLST)

1.3.2.7 Templates

1.4 Oracle Fusion Middleware Directory Structure and Concepts

1.4.1 Middleware Home and Oracle WebLogic Home Directories

Figure 1–3 Directory Structure after an Oracle WebLogic Server Installation



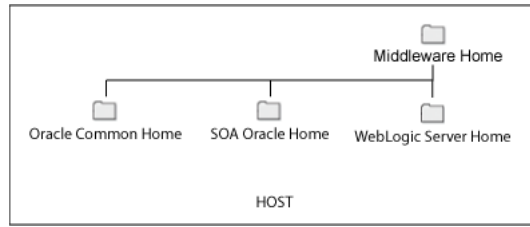
1.4.2 Oracle Home and Oracle Common Home Directory

The product's software binaries will be installed into the product Oracle home; no runtime process can write to this directory.

The Oracle Common home contains the binary and library files required for the Oracle Enterprise Manager Fusion Middleware Control and Java Required Files (JRF). There can be only one Oracle Common home within each Middleware home.

Both the product Oracle home (in the example shown in Figure 1–4, the SOA Oracle home) and Oracle Common home directories must reside inside an existing Middleware home directory:

Figure 1–4 Directory Structure with Oracle Home Directories



1.4.2.1 Creating the Product Oracle Home

1.4.2.2 Creating the Oracle Common Home

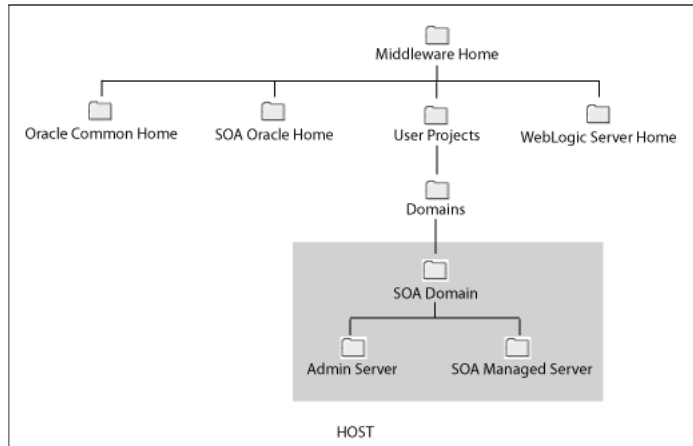
`oracle_common`

1.4.2.3 Checking Port Numbers Across Multiple Oracle Homes

Specify Ports using Configuration file

The User Projects directory is created when you create or configure a domain (in this case, a SOA domain). By default, new domains are created inside the Domains folder, but you can choose to create these elsewhere if you want.

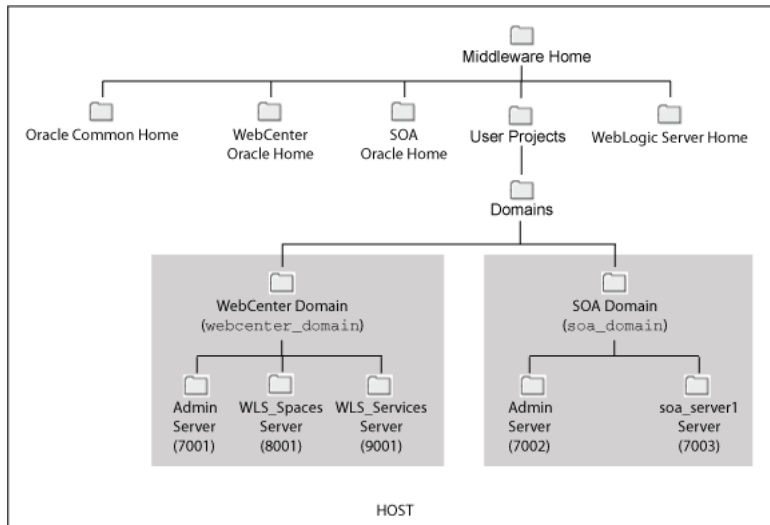
Figure 1–5 Directory Structure after an WebLogic Domain is Created



1.4.4 Multiple Products with Multiple WebLogic Domains

Figure 1–6:

Figure 1–6 Directory Structure with Multiple Oracle Fusion Middleware Products



1.4.4.1 Notes for Creating Multiple Domains

Administration Server

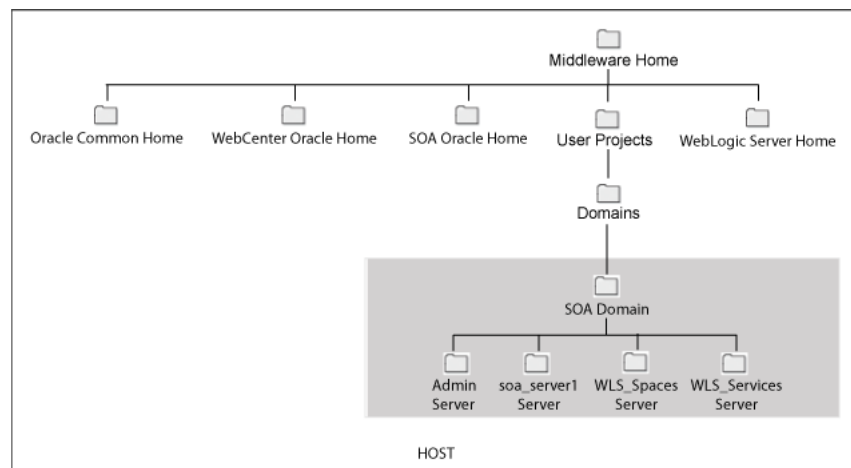
and Machines

Managed Servers, Clusters

1.4.4.2 For More Information...

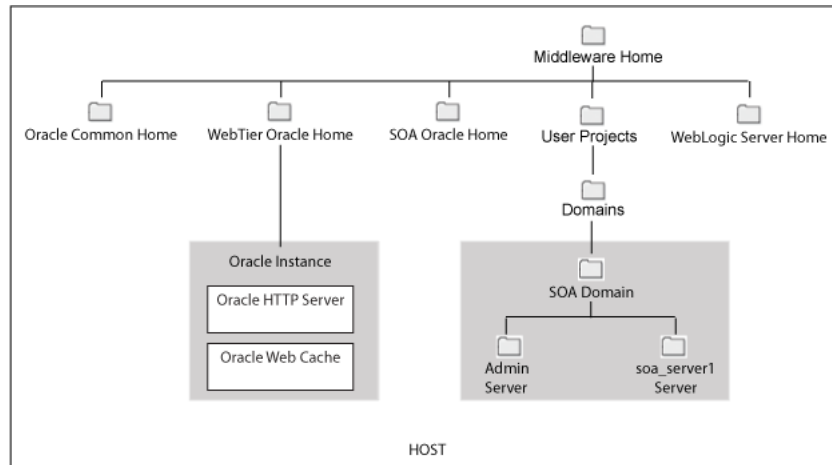
1.4.5 Extending a Domain

Figure 1–7 Directory Structure with Multiple Oracle Fusion Middleware Products in a Single Domain



1.4.6 Oracle Instance and WebLogic Domain

Figure 1–8 Directory Structure with an Oracle Instance and a WebLogic Domain



1.4.7 Oracle Metadata Repository

Note:

1.5 Oracle Fusion Middleware Documentation Roadmap

1.

a.

b.

2.

3.

4.

5.

- a. *Oracle Fusion Middleware Quick Installation Guide for Oracle WebCenter*
Oracle Fusion Middleware Installation Guide for Oracle WebCenter

Oracle

Fusion Middleware Creating Domains Using the Configuration Wizard

8

Oracle Fusion Middleware Enterprise Deployment Guide for Oracle SOA Suite
Oracle Fusion Middleware Enterprise Deployment Guide for Oracle WebCenter

- c. *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Identity Management*

7.

Oracle Fusion Middleware High Availability Guide

8.

- a.** *Oracle Fusion Middleware 2 Day Administration Guide*
- b.** *Oracle Fusion Middleware Administrator's Guide*

Oracle Fusion Middleware Products

RCU is available only on Linux and Windows platforms. Use the Linux RCU to create schemas on supported UNIX databases and Windows RCU to create schemas on supported Windows databases.

2.2 Oracle WebLogic Server 11 R1 (10.3.2)

2.3 Oracle Enterprise Content Management Suite 11 (11.1.1.2.1)

Oracle Imaging and Process Management (Oracle I/PM)

Oracle I/PM is an integrated framework of client software modules with a customizable user interface for managing documents from image capture to archiving. Client modules can be integrated within this framework to provide a single user interface, including third-party information systems, imaging, workflow process, and enterprise content management.

Oracle Information Rights Management (Oracle IRM)

Oracle IRM secures and tracks sensitive digital information everywhere it is stored and used. The installation of Oracle IRM Desktop agent software is required on every end user device on which sealed information is created or used.

This is the server component only; the desktop component for Oracle IRM is available on the Oracle Information Rights Management Desktop 11g (11.1.1.1.0) DVD.

For more information about Oracle Enterprise Content Management Suite, refer to:

for simple installation using basic topologies. Instructions for creating the necessary schemas with RCU and installing Oracle WebLogic Server are also provided.

for high availability scenarios.

2.4 Oracle Information Rights Management Desktop 11 (11.1.1.1.0)

2.5 Oracle SOA Suite 11 (11.1.1.2.0)

Middleware Application Guard, OFM Load Balancer.

Oracle SOA Infrastructure - Oracle BPEL Process Manager, Oracle Human Workflow, Oracle Mediator, Oracle Web Services Manager Agent, Oracle B2B Server, Oracle BAM Adapter, Oracle Business Rules, Oracle JCA Adapters included - Database, Files, FTP, JMS, AQ, MQ Series, Oracle Applications

Oracle Business Activity Monitor - Oracle BAM Server and Oracle BAM Report Server

Oracle Messaging Enabler and drivers

Oracle Fusion Middleware Upgrade Assistant

Oracle Remote Diagnostic Agent

Oracle Configuration Manager

Oracle SOA Suite enables services to be created, managed, and orchestrated into SOA composite applications. Composites enable you to easily assemble multiple technology components into one SOA composite application. Oracle SOA Suite plugs into heterogeneous IT infrastructures and enables enterprises to incrementally adopt SOA.

For more information about Oracle SOA Suite, refer to:

for instructions on
how to create the necessary schemas for Oracle SOA Suite.

for
instructions on installing Oracle WebLogic Server, which is also required before you install Oracle SOA Suite.

2.6 Oracle WebCenter 11 (11.1.1.2.0)

2.7 Oracle Identity Management 11 (11.1.1.2.0)

2.8 Oracle Portal, Forms, Reports and Discoverer 11 (11.1.1.2.0)

2.9 Oracle Fusion Middleware Web Tier Utilities 11 (11.1.1.2.0)

2.10 Oracle Fusion Middleware Companion DVD 11 (11.1.1.2.0)

2.11 Oracle Complex Event Processing 11 (11.1.1.2.0)

2.12 Oracle Business Intelligence Publisher 10 (10.1.3.4.1)

2.13 Oracle Business Process Analysis Suite 11 (11.1.1.2.0)

2.14 Oracle Access Manager 10 Core Components (10.1.4.3.0)

2.15 Oracle Access Manager 10 Webgates (10.1.4.3.0) CD

2.16 Oracle Access Manager 10 NLS Packages (10.1.4.3.0) CD

2.17 Oracle Secure Enterprise Search (10.1.8.4)

2.18 Oracle JDeveloper 11 and Oracle Application Development Framework (ADF) 11 (11.1.1.2.0)

Guide for Oracle JDeveloper

2.19 Oracle Application Development Runtime 11 (11.1.1.2.0)

2.20 Oracle Fusion Middleware Adapters and Connectors 11 (11.1.1.2.0)

2.21 Oracle WebLogic Operations Control CD

(11.1.1.1.0) - Linux Only

2.23 Oracle Fusion Middleware 11 Documentation Library

Index

A

Administration Console, 1-4
Administration Server, 1-4

C

certification for Oracle Fusion Middleware, 1-2
clustered and non-clustered managed servers
 comparing, 1-5
clusters, 1-5
Companion DVD, 2-7
conventions
 for documentation, viii
creating a domain, 1-7
creating a metadata repository, 1-10
creating the Oracle product home directory, 1-7

D

documentation accessibility, vii
documentation conventions, viii
documentation library, 2-11
documentation roadmap, 1-11

E

1-9

J

java components, 1-2

managed servers, 1-4
MDS repository, 1-10
metadata repository, 1-10
 creating with RCU, 1-10
 MDS repository, 1-10

N

O

Oracle Access Manager (OAM) Core
 Components, 2-8
Oracle Access Manager NLS Packages, 2-8
Oracle Access Manager Webgates, 2-8
Oracle Application Development Runtime, 2-9
Oracle Business Intelligence Publisher, 2-7
Oracle Business Process Analysis (BPA) Suite, 2-8
Oracle Clusterware, 2-11
Oracle Common home directory, 1-6
 creating, 1-7
Oracle Complex Event Processing (CEP), 2-7
Oracle Enterprise Content Management Suite, 2-2
Oracle Fusion Middleware, vii
 CDs and DVDs, 2-1
 certification, 1-2
 components, 1-2
 concepts, 1-2
 directory structure concepts, 1-6
 documentation roadmap, 1-11
 environment, 1-2
 java components, 1-2
 overview, 1-1
 products, 2-1
 system components, 1-2
 system requirements, 1-2
Oracle Fusion Middleware Adapters and
 Connectors, 2-10
Oracle Fusion Middleware Companion DVD, 2-7
Oracle Fusion Middleware products
 Companion DVD, 2-7
 documentation library, 2-11
 Oracle Access Manager (OAM) Core
 Components, 2-8
 Oracle Access Manager NLS Packages, 2-8
 Oracle Access Manager Webgates, 2-8
 Oracle Adapters and Connectors, 2-10
 Oracle Application Development Runtime, 2-9
 Oracle Business Intelligence Publisher, 2-7
 Oracle Business Process Analysis (BPA) Suite, 2-8
 Oracle Clusterware, 2-11
 Oracle Complex Event Processing (CEP), 2-7
 Oracle Enterprise Content Management Suite, 2-2
 Oracle Identity Management, 2-4
 Oracle JDeveloper and Oracle Application

- Development Framework (ADF), 2-9
- Oracle Portal, Forms, Reports and Discoverer, 2-5
- Oracle Secure Enterprise Search (SES), 2-9
- Oracle SOA Suite, 2-3
- Oracle Web Tier, 2-6
- Oracle WebCenter, 2-4
- Oracle WebLogic Server, 2-2
- Repository Creation Utility (RCU), 2-2
- Oracle home directory, 1-6
 - creating, 1-7
- Oracle Identity Management, 2-4
- Oracle Instance directory, 1-4
- Oracle Instance in a WebLogic Domain, 1-10
- Oracle JDeveloper and Oracle Application Development Framework (ADF), 2-9
- Oracle Metadata Repository
 - See metadata repository
- Oracle Portal, Forms, Reports and Discoverer, 2-5
- Oracle Secure Enterprise Search (SES), 2-9
- Oracle SOA Suite, 2-3
- Oracle Web Tier, 2-6
- Oracle WebCenter, 2-4
- Oracle WebLogic Scripting Tool (WLST), 1-4
- Oracle WebLogic Server, 2-2
- Oracle WebLogic Server Administration
 - Console, 1-4
- Oracle WebLogic Server domain
 - See WebLogic Domain
- oracle_common directory, 1-7
- overview of Oracle Fusion Middleware, 1-1

port numbers

- across multiple Oracle homes, 1-7

R

related documents, viii

- Repository Creation Utility (RCU), 1-10, 2-2
 - access, vii

S

W
