

## Contents

### 1 Introduction

- Course Goals 1-2
- Objectives 1-3
- What Is Enterprise Manager Cloud Control 13c? 1-4
- Why Do I Need Enterprise Manager Cloud Control 13c? 1-5
- Who Can Use Enterprise Manager Cloud Control? 1-6
- Enterprise Manager Cloud Control 13c Features 1-7
- Single Pane of Glass for Enterprise Management 1-9
- Course Schedule 1-10
- Classroom Setup 1-11
- Summary 1-12
- Practice 1-1 Overview: Checking the Virtual Environment 1-13
- Practice 1-2 Overview: Getting to Know Your Oracle Software Classroom Environment 1-14

### 2 Cloud Control Core Concepts

- Objectives 2-2
- Cloud Control Components 2-3
- Cloud Management: Hybrid Cloud 2-5
- Communication Between Components 2-6
- Oracle Management Service 2-8
- Discovery: What Is Host Discovery? 2-10
- Manual Discovery: How Do Hosts Become Managed Hosts? 2-11
- What Is Target Discovery? 2-12
- How Do Targets Become Managed Targets? 2-13
- Examples of Managed Target Types 2-14
- Oracle Management Repository 2-15
- Software Library 2-16
- EM Command-Line Interface 2-17
- Monitoring: Key Functionality 2-18
- Other Monitoring and Management Functionality 2-19
- Security: Overview 2-20
- Summary 2-21
- Practice 2-1 Overview: Accessing Enterprise Manager Cloud Control 2-22

Practice 2-2 Overview: Monitoring and Managing Cloud Control 2-23

Practice 2-3 Overview: Monitoring the Cloud Control Host 2-24

### **3 Organizing Targets**

Objectives 3-2

Organizing Targets into Groups 3-3

Why Use Groups? 3-4

Understanding Properties of Targets 3-5

Cloud Control Group Types 3-6

Which Groups Should I Use? 3-7

Designing Target Groupings 3-8

Working with Dynamic Groups 3-9

Working with Administration Groups: Overview 3-10

Comparing Group Characteristics 3-12

Populating Groups: Best Practices 3-13

Quiz 3-14

Summary 3-16

Practice 3-1 Overview: Organizing Your Targets: Administrative Groups 3-17

Practice 3-2 Overview: Organizing Your Targets: Non-Privilege-Propagating  
Groups 3-18

Practice 3-3 Overview: Discovering Additional Targets 3-19

### **4 Oracle Cloud in Your IT Ecosystem**

Objectives 4-2

Oracle Cloud as Part of Your IT Ecosystem 4-3

Tools for Monitoring and Managing Oracle Cloud Services 4-4

Why Use Cloud Control to Manage Oracle Cloud Services? 4-5

How Cloud Control Monitors and Manages Oracle Cloud Services 4-6

How to Get Past the Firewalls That Protect You 4-7

The Hybrid Cloud Agent: An Elegant Solution 4-8

Under the Covers of the Hybrid Cloud Agent 4-9

What the Hybrid Cloud Agent Enables 4-10

Summary 4-11

### **5 Cloud Control Access**

Objectives 5-2

Designing Cloud Control Access 5-3

How Authentication Works in Cloud Control 5-4

Cloud Control Administrators 5-5

Cloud Control Authentication Options 5-6

How Authorization Works in Cloud Control 5-7

- Privileges 5-8
- Roles 5-9
- Private Roles Versus System Roles 5-10
- Who Can Create Roles? 5-11
- Privileges and Roles: Best Practices 5-12
- Cloud Control Initial Access: Best Practices 5-13
- Managing Securely with Credentials 5-14
- Target Authentication 5-15
- Target Access Using Credentials 5-16
- Preferred Credentials 5-18
- Global Preferred Credentials 5-19
- Correlating Administrators, Roles, and Groups 5-20
- Correlating Administrators and Target Credentials 5-21
- Quiz 5-23
- Summary 5-25
- Practice 5-1 Overview: Creating Roles and Administrators 5-26
- Practice 5-2 Overview: Creating Named and Default Credentials 5-27
- Practice 5-3 Overview: Performing DBA Role Tasks: View Host Targets, Set Backup and Recovery Parameters, and Back Up a Tablespace 5-28
- Practice 5-4 Overview: Performing Tasks as a Junior DBA Administrator: View Targets and Privileges 5-29

## **6 Monitoring**

- Objectives 6-2
- Cloud Control Monitoring: Overview 6-3
- Enterprise Monitoring with Cloud Control 6-4
- Always-On Monitoring 6-5
- Defining Monitoring Standards 6-6
- Using Administration Groups for Monitoring 6-7
- Concept: Metrics and Metric Thresholds 6-8
- Customizing Metric Settings 6-9
- Concept: Monitoring Templates and Template Collections 6-11
- Using Monitoring Templates and Template Collections 6-12
- Example of Template Modifications 6-14
- Keeping Targets and Templates Synchronized 6-15
- Administration Groups and Template Tasks Prerequisite Privileges 6-16
- Extending Your Monitoring Scope 6-17
- Developing and Deploying Metric Extensions 6-18
- Securely Dividing Metric Extension Tasks 6-19
- Quiz 6-20
- Summary 6-22

Practice 6-1 Overview: Reviewing the Oracle-Provided Monitoring Templates 6-23

Practice 6-2 Overview: Creating a Monitoring Template 6-24

Practice 6-3 Overview: Applying a Monitoring Template Using a Template  
Collection 6-25

## **7 Managing Events and Incidents**

Objectives 7-2

Goals of Incident Management 7-3

Understanding Events 7-4

Understanding Incidents 7-5

Distinguishing Between Incidents and Events 7-6

Example: Incident with One Event 7-7

Example: Incident with Multiple Events 7-8

Understanding Problems 7-9

Monitoring Oracle Software Problems 7-10

Example: ADR Incidents and Cloud Control Problems 7-11

Enterprise View of Incident Manager 7-12

Performing Incident Lifecycle Operations 7-13

Who Can Use Incident Manager? 7-14

Quiz 7-15

Summary 7-17

Practice 7-1 Overview: Preparing an Incident 7-18

Practice 7-2 Overview: Finding and Resolving an Incident 7-19

## **8 Responding to Events, Incidents, and Problems**

Objectives 8-2

Why Do You Need Incident Rules? 8-3

What Is an Incident Rule? 8-4

Defining Rules 8-5

Rule Sets 8-6

Setup of Notifications 8-7

Prioritization of Rules and Notifications 8-8

Best Practices for Using Incident Rule Sets 8-9

Rule Set: Example 8-10

Corrective Actions 8-11

Defining and Using Corrective Actions 8-12

Using Blackouts 8-13

Using Notification Blackouts 8-14

Quiz 8-15

Summary 8-17

Practice 8-1 Overview: Creating a Corrective Action 8-18

Practice 8-2 Overview: Creating a Rule Set 8-19

Practice 8-3 Overview: Observing How a Rule Set Is Applied 8-20

## **9 Using the Job System**

Objectives 9-2

What Is a Job? 9-3

How Do Jobs Work in Cloud Control? 9-4

Job Elements 9-5

Job Executions and Job Runs 9-6

Defining Jobs 9-7

Using Predefined Jobs 9-8

Job System Chef-Solo Support 9-9

Job Interfaces in Cloud Control 9-10

Creating Jobs 9-11

Creating a Multitask Job 9-12

Details of a Multitask Job 9-13

Reviewing Job Execution Results 9-14

Performing Job Operations 9-16

Jobs and Groups 9-18

Job Events 9-19

Jobs Privileges 9-20

Enterprise Level: Monitoring Jobs and Job System Status 9-21

Quiz 9-22

Summary 9-24

Practice 9-1 Overview: Creating and Executing a Simple SQL Job 9-25

Practice 9-2 Overview: Creating and Executing OS Jobs on Multiple Targets 9-26

Practice 9-3 Overview: Creating a Multitask Job (Optional) 9-27

## **10 Managing Systems and Services**

Objectives 10-2

Systems and Services 10-3

Example: System and Service 10-4

Creating a Generic System 10-5

Using the System Home Page 10-6

Other System Views 10-7

Defining Services 10-8

Understanding Service Types 10-9

Defining the Availability of a Generic Service 10-10

Defining a Service Test 10-11

Using Beacons 10-12

Defining a Web Transaction Service Test 10-13

- Defining Service Performance 10-14
- Defining and Monitoring Usage Metrics 10-15
- Viewing Additional Service Information 10-16
- Defining Service Level Rules 10-17
- Specifying Service Level Rule Elements 10-18
- Using Root Cause Analysis (RCA) 10-19
- Creating a Generic Service: Sample Wizard 10-20
- Viewing the Service Topology 10-21
- Example: Implementing Systems and Services 10-22
- Quiz 10-23
- Summary 10-25
- Practice 10-1 Overview: Reviewing Existing Systems and Services 10-26
- Practice 10-2 Overview: Creating a System 10-27
- Practice 10-3 Overview: Creating a Generic Service 10-28
- Practice 10-4 Overview: Monitoring the Availability of a Web Application 10-29
- Practice 10-5 Overview: Creating and Testing a Web Transaction 10-30

## **11 Patching and Provisioning**

- Objectives 11-2
- Software Lifecycle Management 11-3
- Software Lifecycle Management Requirements 11-4
- Configuring the Software Library: Review 11-6
- Provisioning Elements 11-7
- Provisioning Specific Roles and Privileges 11-8
- Bare Metal or OS Provisioning 11-9
- Database Software Provisioning Workflow 11-10
- Deployment Procedures for Provisioning and Patching Automation 11-11
- Deployment Procedures: Properties 11-12
- Deployment Procedures: Phases and Steps 11-13
- Examples of Customized Deployment Procedures 11-15
- Software Patching 11-17
- Patching Workflow 11-18
- Software Patching Modes 11-20
- Out-of-Place Patching 11-21
- Patching Rollout Cycles Using Templates 11-22
- Oracle Database Software Upgrades 11-23
- Oracle Database Software Upgrades: Using Breakpoints 11-24
- Quiz 11-25
- Summary 11-27
- Practice 11-1 Overview: Preparing for Offline Patching 11-28
- Practice 11-2 Overview: Patching Offline 11-29

## **12 Managing Configurations**

Objectives 12-2

What Is Configuration Management? 12-3

Configuration Management 12-4

Examples of Configuration Information 12-5

Comparing Configurations 12-6

Searching the Enterprise Configuration 12-7

Types of Enterprise Configuration Searches 12-8

Drift and Consistency Management 12-9

Change Activity Planner 12-10

Quiz 12-11

Summary 12-13

Practice 12-1 Overview: Viewing Configuration Details 12-14

Practice 12-2 Overview: Viewing Configuration History and Topology 12-15

Practice 12-3 Overview: Comparing Configurations and Managing Drift 12-16

Practice 12-4 Overview: Searching Configurations 12-17

## **13 Managing Compliance**

Objectives 13-2

Compliance: Overview 13-3

Understanding Compliance Management 13-4

Understanding Compliance Standards 13-5

Understanding Compliance Standard Rules 13-6

Implementing Compliance Management 13-7

Understanding Compliance Measurement 13-9

Score and Its Factors 13-10

Accessing the Compliance Library 13-11

Associating Targets to Compliance Standards 13-12

Investigating Compliance Violations 13-13

Viewing Compliance Evaluation Results 13-14

Viewing Compliance Scores 13-15

Viewing Out-of-the-Box Compliance Reports: Dashboard 13-16

Quiz 13-17

Summary 13-19

Practice 13-1 Overview: Reviewing Predefined Compliance Objects 13-20

Practice 13-2 Overview: Using Compliance Standards 13-21

## **14 Using the Cloud Control Reporting Framework**

Objectives 14-2

Introduction to BI Publisher 14-3

BI Publisher Configuration with Enterprise Manager 14-4

|   |       |
|---|-------|
| BI Publisher Access   | 14-5  |
| Reporting on Targets  | 14-6  |
| BI Publisher Elements   | 14-7  |
| Report Definitions  | 14-8  |
| Running and Scheduling Reports: Workflows                             | 14-9  |
| Creating Custom Reports: Workflow                                     | 14-10 |
| Scheduling Reports  | 14-11 |
| Reports Output Options  | 14-12 |
| Oracle-Provided Reports   | 14-13 |
| Quiz  | 14-14 |
| Summary   | 14-16 |
| Practice 14-1 Overview: Reviewing and Running Oracle-Provided Reports | 14-17 |
| Practice 14-2 Overview: Editing a Report with BI Publisher            | 14-18 |
| Practice 14-3 Overview: Scheduling a Report with BI Publisher         | 14-19 |