

OD12c-RACGIDW: Oracle Database 12c: RAC and Grid Infra Deployment Workshop Ed 1

Course Code: OD12c-RACGIDW

Duration: 4 days

Instructor-led Training (ILT) | Virtual Instructor-led Training (VILT)

OVERVIEW

The Oracle Database 12c: RAC and Grid Infra Deployment Workshop Ed 1 training course will give you a detailed overview of configuring, administering and using important features of Oracle Database 12c RAC and Grid Infrastructure. Additionally, you will also be given a basic overview of the Oracle Database Exadata Cloud Service.

SKILLS COVERED

- Implementing Oracle Database In-Memory on an existing Oracle RAC database
- Configuring & using Global Data Services
- Upgrading the current database to use Oracle ASM Filter Driver
- Migration from standard ASM to Flex ASM
- Perform a database rolling upgrade
- Fundamentals of the Oracle Database Exadata Cloud Service

WHO SHOULD ATTEND?

- Architects
- Database Administrators

PREREQUISITES

- Oracle Database 11g: Data Guard Administration Release 2
- Oracle Database 11g: RAC Administration Release 2

- Oracle Grid Infrastructure 11g: Manage Clusterware and ASM - Release 2
- Oracle Database 12c: High Availability New Features

MODULES**Module 1: Rolling Database Upgrade Using Transient Logical Standby**

Objectives 1-2

Rolling Upgrade: Introduction 1-3

Rolling Upgrade and Oracle RAC 1-4

Rolling Database Upgrade with Logical Standby Database 1-5

Rolling Database Upgrade with Transient Logical Standby Database 1-6

physru.sh Script 1-7

Rolling Database Upgrade with Transient Logical Standby Database: Benefits and

Challenges 1-8

Other Upgrade Options 1-10

Quiz 1-13

Summary 1-15

Practice 1 Overview: Database Rolling Upgrade Using Transient Logical

Standby 1-16

Module 2: ASM Filter Driver

Objectives 2-2

ASM Filter Driver: Introduction 2-3

Configuring ASM Filter Driver 2-5

Labeling Disks for ASM Filter Driver 2-6

Migrating from ASMLib to ASMFD 2-7

Unlabeling Disks and Deconfiguring ASMFD 2-8

Quiz 2-9

Summary 2-10

Practice 2 Overview: Configuring and Using ASM Filter Driver 2-11

Module 3: Flex ASM

Objectives 3-2

Flex ASM: Overview 3-3

Flex ASM Instance Changes 3-4

ASM Network 3-5
ASM Listeners 3-6
ADVM Proxy 3-7
Configuring Flex ASM on a Standard Cluster 3-8
Configuring Flex ASM on a Flex Cluster 3-9
Managing Flex ASM Instances 3-10
Stopping, Starting, and Relocating Flex ASM Instances 3-11
Setting the Number of Flex ASM Instances 3-12
Monitoring Flex ASM Connections 3-13
Relocating an ASM Client 3-14
Flex ASM Deployment: Example 3-15
Flex ASM and Flex Clusters 3-17
Quiz 3-18
Summary 3-21
Practice 3 Overview: Converting to Flex ASM and using Flex ASM 3-22

Module 4: Policy-Based Cluster Management, Policy-Managed Database, and Oracle Multitenant Architecture

Objectives 4-2
Policy-Based Cluster Management Enhancements: Overview 4-3
Server Categorization 4-4
Administering Server Categorization: Server Attributes 4-5
Administering Server Categorization: Server Categories 4-6
Administering Server Categorization: Server Pools 4-8
Policy Set: Overview 4-9
Policy-Based Cluster Management: Configuration Methods 4-11
Viewing the Policy Set 4-12
Configuring a User-Defined Policy Set: Method 1 4-13
Configuring a User-Defined Policy Set: Method 2 4-14
Modifying a User-Defined Policy Set 4-15
Activating a User-Defined Policy 4-16
Policy-Managed Databases Versus Administrator-Managed Databases 4-17
Policy-Managed Database: Example 4-18
Policy-Managed Databases and Policy-Based

Cluster Management 4-19
Converting to a Policy-Managed Database 4-20
Creating a New Policy-Managed Database 4-21
Policy-Managed Databases and Policy-Based Cluster Management with Oracle Multitenant 4-22
Quiz 4-23
Summary 4-27
Practice 4 Overview: Using Policy-Based Cluster Management with Oracle RAC 4-28

Module 5: Flex Clusters

Objectives 5-2
Flex Clusters: Overview 5-3
Flex Cluster Architecture 5-4
Flex Cluster Scalability 5-5
Leaf Node Characteristics 5-6
Grid Naming Service and Flex Clusters 5-7
Cluster Mode: Overview 5-8
Configuring the Cluster Mode 5-9
Configuring the Node Role 5-10
Configuring the Hub Size 5-11
Configuring Miss Count for Leaf Nodes 5-12
Configuring a Flex Cluster with OUI: Selecting the Cluster Type 5-13
Configuring a Flex Cluster with OUI: Configuring GNS 5-14
Configuring a Flex Cluster with OUI: Selecting the Node Type 5-15
Flex Clusters and Node Failure 5-16
Quiz 5-17
Summary 5-19
Practice 5 Overview: Configuring and Using a Flex Cluster 5-20

Module 6: Oracle Database In-Memory

Objectives 6-2
Introducing Oracle Database In-Memory 6-3
In-Memory Column Store 6-4
Row Store Versus Columnar Format 6-5
In-Memory Compression Unit 6-6
IMCS Architecture: Overview 6-7
Enabling Oracle Database In-Memory 6-8

Configuring IMCS Candidate Objects 6-10
IMCS Supported and Unsupported Data 6-11
Configuring IMCS Candidate Objects: Column Subsets 6-12
Defining the Population Priority 6-13
Defining the Compression Level 6-14
Controlling Data Distribution 6-15
Controlling Data Duplication 6-16
Setting INMEMORY Clause Defaults: INMEMORY_CLAUSE_DEFAULT 6-17
Setting INMEMORY Clause Defaults: Tablespace Defaults 6-18
Examining Candidate Objects 6-19
Examining the IMCS: Segment Information 6-20
Examining the IMCS: Column Information 6-21
Column Projection and IMCU Pruning 6-22
IMCU Pruning Statistics 6-23
In-Memory Query Statistics 6-24
Simple Query Execution Plans 6-25
In-Memory Joins 6-26
Joining In-Memory and Non-In-Memory Tables 6-28
DML Processing with Oracle Database In-Memory 6-29
Oracle Database In-Memory and Oracle RAC 6-30
Quiz 6-31
Summary 6-33
Practice 6 Overview: Using Oracle Database In-Memory in conjunction with Oracle RAC 6-34

Module 7: Application Continuity

Objectives 7-2
The Situation Prior to Application Continuity 7-3
Introducing Transaction Guard and Application Continuity 7-4
Key Concepts of Application Continuity 7-5
Workflow of a Database Request 7-7
What Is Transaction Guard? 7-8
How Transaction Guard Works 7-9
Using Transaction Guard 7-10
Benefits of Transaction Guard 7-11
What Is Application Continuity? 7-12
How Does Application Continuity Work? 7-13

Using Application Continuity 7-14
Application Continuity Processing Phases 7-15
Restrictions 7-17
Potential Side Effects 7-18
Actions That Disable Application Continuity 7-19
When Is Application Continuity Transparent? 7-20
Benefits of Application Continuity 7-21
Application Assessment for Using Application Continuity 7-22
Handling Request Boundaries 7-24
Handling Request Boundaries: Example 7-25
Disabling Replay by Using the disableReplay API 7-26
Connection Initialization Options 7-27
Mutable Objects and Application Continuity 7-29
Keeping Mutable Objects for Replay 7-30
Configuring the JDBC Replay Data Source 7-31
Configuring Database Services for Application Continuity 7-32
Resource Requirements for Application Continuity 7-33
Application Continuity and Oracle RAC 7-34
Quiz 7-35
Summary 7-38
Practice 7 Overview: Using Application Continuity 7-39

Module 8: Oracle Global Data Services

Objectives 8-2
Global Data Consolidation 8-3
Oracle Global Data Services 8-4
The Global Data Services Framework 8-5
Logical Global Data Services Components 8-6
Logical Global Data Services Components: The Global Data Services Configuration 8-7
Logical Global Data Services Components: Global Data Services Pool 8-8
Logical Global Data Services Components: Global Services 8-9
Logical Global Data Services Components: Global Data Services Region 8-10
Physical Global Data Services Components:

Global Service Manager 8-11
Physical Global Data Services Components:
Global Data Services Catalog 8-13
Physical Global Data Services Components:
Databases 8-14
Physical Global Data Services Components:
Oracle Notification Servers 8-15
Physical Global Data Services Components: The
gdsctl Utility 8-16
Global Service: Overview 8-17
Global Service Attributes 8-20
Global Services in a RAC Database 8-21
Global Services in an Data Guard Broker
Configuration 8-22
Database Placement of a Global Service 8-24
Global Singleton Services 8-26
Replication Lag and Global Services 8-27
Global Connection Load Balancing 8-28
Role-Based Services 8-29
Quiz 8-31
Summary 8-32

Module 9: Oracle Database Exadata Cloud Service Overview

Objectives 9-2
Introducing Exadata Cloud Service 9-3
Service Configuration Options 9-5
Service Connection Options 9-7
Service Architecture 9-9
Service Availability 9-10
Management Responsibilities 9-11
Storage Configuration 9-13
Storage Management Details 9-15
Simple Web-Based Provisioning 9-16
Simple Web-Based Management 9-17
REST APIs 9-18
Migrating to Exadata Cloud Service 9-19
Summary 9-20

END OF PAGE