

Oracle Database 12c R2: Clusterware Administration Ed 2

Duration: 4 Days

What you will learn

This Oracle Database 12c R2: Clusterware Administration training will explore general cluster concepts and Oracle Clusterware architecture. Work with expert Oracle University instructors through interactive instruction and hands-on exercises to reinforce your learning. In this course, you will be introduced to Oracle Database Exadata Cloud Service.

Learn To:

Perform Grid Infrastructure pre-installation tasks.

Describe available cluster configuration options.

Install Standalone Flex Clusters.

Add and remove nodes from a cluster in addition to upgrading and patching existing Grid Homes.

Manage and administer both Traditional Clusters and Policy-Managed Clusters.

Monitor and Troubleshoot Oracle Clusterware.

Use Oracle Clusterware to make applications highly available.

Benefits to You

Learn how to make applications highly available using Oracle Clusterware. You'll walk away with the ability to install, configure, manage, monitor and troubleshoot standalone flex clusters. Furthermore, you will have developed the skills to upgrade and patch Clusterware environments.

Audience

Administrator

Database Administrators

Related Training

Required Prerequisites

Working knowledge of Oracle Database 11g: Release 2 on Linux Operating System

Suggested Prerequisites

Oracle Database 12c R2: Administration Workshop

Oracle Database 12c R2: Administration Workshop Ed 3

Oracle Database 12c R2: Install and Upgrade Workshop

Oracle Database 12c R2: Install and Upgrade Workshop NEW

Oracle Database 12c R2: Managing Multitenant Architecture

Oracle Database 12c R2: Managing Multitenant Architecture Ed 2

Oracle Database 12c: Administration Workshop Ed 2

Oracle Database 12c: Install and Upgrade Workshop

Working knowledge of Oracle Clusterware, ASM & RAC on Linux

Course Objectives

Describe the components and functions of Oracle Autonomous Health Framework

Use the Cluster Resource Activity Log

Locate the Oracle Clusterware log files

Explain the principles and purposes of clusters

Describe cluster hardware best practices

Describe the Oracle Clusterware architecture

Describe Available Cluster Options

Perform pre-installation tasks for Grid Infrastructure

Perform an image-based Grid Infrastructure installation

Perform the prerequisite steps to extend a cluster

Add a Leaf node and a Hub node to a Flex cluster

Describe the scope and capabilities of what-if command evaluation

Demonstrate your Clusterware management proficiency

Describe the architecture and components of policy-based cluster management

Implement load-ware resource placement

Implement server weight-based node eviction

Course Topics

Introduction to Clusterware

Cluster in general

Oracle Clusterware Characteristics

Oracle Clusterware Architecture and Cluster Services Overview

Oracle Clusterware Requirements: OS, Public/Private Networks, and IP addresses

Grid Naming Service (GNS), Shared GNS, and Highly Available GNS
GNS Configuration Options
Single Client Access Name (SCAN)

Cluster Configuration Options

Oracle Standalone Clusters
Oracle Domain Services Cluster
Oracle Member Cluster for Oracle Databases
Oracle Member Cluster for Applications
Oracle Extended Clusters

Grid Infrastructure Pre-Installation Tasks

Shared Storage for Oracle Clusterware
Sizing Storage for Oracle Standalone Cluster
Grid Infrastructure Management Repository Details
Checking System Requirements
Single Client Access Name for the Cluster
Redundant Interconnect Usage
Kernel Requirements
Groups and Users

Grid Infrastructure Installation

Performing an image-based Grid Infrastructure Installation
Choosing a Cluster Configuration Option
Grid Plug and Play Support for Flex Cluster Configuration
Configuring Shared GNS
Verifying the Oracle Clusterware Installation

Managing Cluster Nodes

Adding Oracle Clusterware Homes
Prerequisites for running addnode.sh
Adding a Node with addNode.sh
Configuring the node role
Removing a Node from the Cluster

Traditional Clusterware Management

Clusterware Admin Tools Review
Oracle Clusterware startup and shutdown
Administering the Voting Disk file
Administering the Oracle Cluster Registry Disk file
Network Administration
Reasoned What-If Command Evaluation

Policy-Based Cluster and Capacity Management

Policy-Based Cluster Management Overview
Server Categorization
Policy Set
Load-Aware Resource Placement
Server Weight-Based Node Eviction

Patching Grid Infrastructure

Out-of-Place Oracle Clusterware Upgrade

Types of Patches

Obtaining Oracle Clusterware Patches

Rolling Patches

Installing a Rolling Patchset with OUI

OPatch Overview

Installing a Rolling Patch with OPatch

OPatch Automation

Monitoring and Troubleshooting Oracle Clusterware

Using Oracle Autonomous Health Framework Overview

Cluster Verify Utility (CVU)

Cluster Health Monitor (CHM)

Cluster Health Advisor (CHA)

Trace File Analyzer (TFA) Collector

Using the Cluster Resource Activity Log (CALOG)

Using Oracle Clusterware Diagnostic and Alert Log Data

Node Eviction

Making Applications Highly Available

Overview of Using Oracle Clusterware to Enable HA

Oracle Clusterware HA Components

Resource Management Options

Server Pools

Overall flow diagram of HA lifecycle

Clusterware Resource Modeling

Creating an Application VIP

Clusterware Resource Group