5 Days

Oracle Database 12c: Clusterware & ASM Admin Accelerated Ed 1

Oracle Database 12c: Clusterware & ASM Admin Accelerated training is a five-day fast track training that provides a comprehensive curriculum to database administrators in understanding the specifications of Oracle Cluster and Oracle ASM. During this training, participants learn the integration of Oracle Clusterware and ASM architectures and how these products work in union with each other.

Completion of this training course will enable candidates in:

- Performing Grid Infrastructure pre-installation tasks.
- Installing both Standard and Flex clusters.
- Adding and removing nodes from a cluster moreover upgrading and patching existing Grid Homes.
- Managing and administering both Standard Clusters and Policy-Managed Clusters.
- Using Oracle Clusterware to make applications highly available.
- Administering ASM files, directories, templates, and disk groups.
- Managing and administering Oracle Cloud File System and its components and features.

Course Benefits:

Attaining certification of this course will ensure fast, reliable, secure and easy to manage performance. Also, this training will help individuals to optimize database workloads, at lower IT costs and deliver a better quality of service by enabling smooth and rapid consolidation within your Data clouds when one learns functionalities of Oracle Database 12c Grid Infrastructure, specifically about Oracle Cluster and Oracle ASM.

Course Details

Course Outline

1. Introduction to Grid Infrastructure

- Define a Cluster
- Define a Flex Cluster
- Describe Clusterware Characteristics
- Oracle Clusterware
- High-level Concepts of Hardware and Software
- Shared Storage Overview

2. Oracle Clusterware Architecture

- Identify Cluster Storage Requirements
- Clusterware Initialization and OHASD
- Clusterware Process Architecture
- Background and Architecture of shared GNS
- Configure shared GNS
- Migrate to shared GNS
- Move GNS to Another Cluster

3. Flex Cluster Architecture

- Flex Cluster Architecture
- Configure Flex Cluster
- Flex Clusters and Node Failure

4. Grid Infrastructure Pre-Installation Tasks

- Shared Storage for Oracle Clusterware
- Check System Requirements
- Single Client Access Name for the Cluster
- Kernel Requirements
- Redundant Interconnect Usage
- Groups and Users
- Shell Settings
- Oracle Validated Configuration

5. Installing Grid Infrastructure

- Install Oracle Grid Infrastructure
- Install Flex Cluster
- Verify the Oracle Clusterware Installation

6. Managing Cluster Nodes

- Add Oracle Clusterware Homes
- Prerequisites for Running addNode.sh
- Add a Node with addNode.sh
- Remove a Node from the Cluster
- Configure the node role

7. Traditional Clusterware Management

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

8. Policy-Based Cluster Management

- Overview
- Policy Set
- Server Categorization

9. Patching Grid Infrastructure

- Out-of-Place Oracle Clusterware Upgrade
- Types of Patches
- Obtain Oracle Clusterware Patches
- Rolling Patches
- Install a Rolling Patchset with OUI
- OPatch Overview
- Install a Rolling Patch with OPatch
- OPatch Automation

10. Troubleshooting Oracle Clusterware

- Diagnostic Framework Support for CRS
- Overview of Cluster Health Monitor Enhancements
- Component level checks - cluvfy with -comp
- Java Tools and Dynamic Debugging
- Troubleshooting Node Evictions
- The oclumon Utility

11. Making Applications Highly Available

- Overview of Using Oracle Clusterware to Enable HA
- Components of Oracle Clusterware HA
- Server Pools
- Resource Management Options
- Overall flow diagram of HA lifecycle (crs_profile, crs_register, crs_start….)
- Clusterware Resource Modeling
- Create an Application VIP

- ONS and FAN overviews

12. Oracle ASM Overview

- Overview of ASM
- ASM Placement in Storage Stack
- ASM Cluster Configuration for Oracle RAC
- ASM System Privileges
- ASM Components
- Software
- Configure disks as ASM candidate disks
- OS Groups and Role Separation

13. Oracle ASM Instance Administration

- ASM Instance Administration
- Instance Parameters
- Adjusting ASM Instance Parameters in SPFILEs
- ASM_DISKGROUPS
- Relevant V$Views
- Instance Startup and Shutdown

14. Flex ASM

- Flex ASM Architecture
- Configuring Flex ASM
- Managing Flex ASM
- Background and Overview
- Relocating an ASM Client
- ASM Deployment Alternatives

15. Administering ASM Disk Groups

- Disk Group Attributes
- Compatibility Attributes
- ASM Disk Group Overview
- Disk Group Metadata
- Disk Group Management
- Diskgroup Rebalance
- ASM Fast Mirror Resync
- Viewing Connected Clients

16. Administering ASM Files, Directories, and Templates

- Interaction Between Database Instances and ASM
- Access ASM Files
- Fully Qualified ASM File Names
- ASM File Creation
- ASM Directories Overview
- View ASM Aliases, Files, and Directories
- Manage ASM Directories
- Manage Alias File Names

17. Administering Oracle Cloud File System

- Overview of Oracle ACFS
- Oracle Cloud File System Components
- Oracle ASM Dynamic Volume Manager
- High Availability NFS (HANFS) Overview
- Oracle ACFS Administration
- Integrating Oracle ACFS with Oracle ASM
- Clusterware Resources and ACFS Administration
- ACFS and Dismount or Shutdown Operations

Who Should Attend

The Oracle Database 12c Clusterware & ASM Admin Accelerated Ed1 Training course is ideal for:

- Support Engineer
- Database Administrators
- Technical Consultant
- Technical Administrator
- Administrator

Pre Requisite

Working experience and knowledge of Oracle Database 11g: Release 2, including Clusterware, ASM, and RAC

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