

# Oracle 12c RAC Administration

**Intended Audience:**DBA/Technical Consultant/Support Engineer

**Course Duration :** 6 Days

**Section 1 - Grid Infrastructure: Clusterware and ASM**

**Day 1:**

## Oracle Grid Infrastructure

- Explain the principles and purposes of clusters
- Describe Cluster hardware best practices
- Understand Oracle Clusterware Architecture
- Describe how Grid Plug and Play affects Clusterware
- Describe ASM architecture and components

## Grid Infrastructure Installation

- Perform pre-install tasks for Grid Infrastructure
- Install Grid Infrastructure
- Verify the installation
- Configure ASM disk groups
- Configure ASM volumes
- Make ASM cluster file system
- Mount ACFS volumes

## Administering Oracle Clusterware

- Display Clusterware management proficiency
- Demonstrate OCR backup and recovery techniques
- Managing Network Settings

## Managing Clusterware

- Perform prerequisite steps for extending a cluster
- Use Oracle Universal Installer (OUI) to add a node to an Oracle Clusterware home
- Use OUI to remove a node from an Oracle Clusterware home



## **Day 2:**

### **Making Applications Highly Available With Oracle Clusterware**

- Describe the High Availability components of Oracle Clusterware
- Contrast Policy-Managed and Administration Managed databases
- Describe the functionality of server pools
- Describe application placement policies
- Create an application Virtual IP (VIP)
- Manage application resources

### **Troubleshooting Oracle Clusterware**

- Locate Oracle Clusterware log files
- Gather all log files using diagcollection.pl
- Enable resource debugging
- Enable component-level debugging
- Enable tracing for Java-based tools

## **Day 3:**

### **Administering ASM Instances**

- Understand and apply ASM Initialization Parameters
- Manage ASM Instances and associated Processes
- Monitor ASM Using the v\$ASM Dynamic Performance Views

## **Administering ASM Disk Groups**

- Create and delete ASM disk groups
- Set the attributes of an existing ASM disk group
- Perform ongoing maintenance tasks on ASM disk groups
- Explain key performance and scalability considerations for ASM disk groups

## **Administering ASM Files, Directories, and Templates**

- Use different client tools to access ASM files
- Describe the format of a fully qualified ASM file name
- Explain how ASM files, directories and aliases are created and managed
- Understand and manage disk group templates

## **Administering ASM Cluster File Systems**

- Administer ASM Dynamic Volume Manager
- Manage ASM volumes
- Implement ASM Cluster File System
- Manage ASM Cluster File System (ACFS)
- Use ACFS Snapshots
- Using command line tools to Manage ACFS

## **Section 2 - Real Application Clusters**

### **Day 4:**

- Installation & Configuration of 12cRAC
- Installation & Configuration of Flex Cluster
- Installation & Configuration of Flex ASM

### **Day 5:**

#### **Real Application Clusters Database Installation**

- Install the Oracle database software
- Create a cluster database
- Perform post-database creation tasks
- Perform a single instance to RAC conversion

## **RAC Database Administration**

- Use Enterprise Manager cluster database pages
- Define redo log files in a RAC environment
- Define undo tablespaces in a RAC environment
- Start and stop RAC databases and instances
- Modify initialization parameters in a RAC environment

### **Managing Backup and Recovery for RAC**

- Configure the RAC database to use ARCHIVELOG mode and the flash recovery area
- Recover from media failure and instance failures
- Tune instance recovery in RAC
- Configure RMAN for the RAC environment

## **Day 6 :**

### **RAC DB Monitoring and Tuning**

- Determine RAC-specific tuning components
- Determine RAC-specific wait events, global enqueues, and system statistics
- Implement the most common RAC tuning tips
- Use the Cluster Database Performance pages
- Use the Automatic Workload Repository (AWR) in RAC
- Use Automatic Database Diagnostic Monitor (ADDM) in RAC

### **Services**

- Configure and manage services in a RAC environment
- Use services with client applications
- Use services with the Database Resource Manager and scheduler
- Configure services aggregation and tracing
- Configure Transparent Application Failover(TAF)