

## Oracle RAC Course Content:

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

#### 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

#### Making Applications Highly Available With Oracle

- 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
- Troubleshoot the Oracle Cluster Registry (OCR) file

## 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

- 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

### 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

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## 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

## 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

## High Availability Connections(Appendix-D)

- Configure client-side, connect-time load balancing and connect-time failover
- Configure server-side, connect-time load balancing
- Use the Load Balancing Advisory (LBA)
- Describe the benefits of Fast Application Notification (FAN)
- Configure server-side callouts

- Configure Transparent Application Failover (TAF)

## **Design for High Availability**

- Design a Maximum Availability Architecture in your environment
- Determine the best RAC and Data Guard topologies for your environment
- Configure the Data Guard Broker configuration files in a RAC environment
- Patch your RAC system in a rolling fashion