

1. Introduction to Oracle RAC

- ✓ *Introduction to Clusters*
- ✓ *About Clusterware*
- ✓ *What is RAC?*
- ✓ *Overview of Oracle Clusterware*
- ✓ *Overview of Storage in RAC*
- ✓ *Overview of Oracle ASM*
- ✓ *Benefits of RAC*
- ✓ *Tools for Managing RAC*

2. Overview of Oracle Standard Cluster, Flex Cluster & Flex ASM

- ✓ *Overview of Standard Cluster*
- ✓ *Flex Cluster Architecture*
- ✓ *Hub Nodes & Leaf nodes*
- ✓ *Flex ASM Architecture*
- ✓ *Benefits of Flex ASM*
- ✓ *Oracle Flex ASM Clusters Network*
- ✓ *Oracle Flex ASM Listener*
- ✓ *Oracle Grid Infrastructure Management Repository*
- ✓ *IPV6 Support for Public Networks*
- ✓ *Overview of GNS*
- ✓ *Shared GNS*

3. Oracle Clusterware Concepts

- ✓ *About OCR & Voting disks*
- ✓ *About Cluster Interconnect*
- ✓ *Oracle Clusterware processes*
- ✓ *About Virtual IPs (VIP)*
- ✓ *Single Client Access Name (SCAN)*

4. ASM Concepts

- ✓ *ASM Instances*
- ✓ *ASM Disks & Disk Groups*
- ✓ *ASM Mirroring & Failure groups*
- ✓ *ASM Files, Extents, Allocation Unit*

5. Preparing for Oracle 12C Grid Infrastructure Installation

- ✓ Verifying System Requirements
- ✓ Configuring the Network
- ✓ Preparing the Operating System
- ✓ Configuring Users & Groups
- ✓ Configuring SSH
- ✓ Configuring Installation Directories
- ✓ Configuring Shared Storage

6. Installing Oracle 12C Grid Infrastructure

- ✓ Verifying installation requirements with Cluster Verification Utility
- ✓ Installing the Oracle Grid Infrastructure
- ✓ Verifying Oracle Clusterware Installation

7. Installing & Creating Oracle 12c RAC Database

- ✓ Installing Oracle Software
- ✓ Creating Additional Disk Groups
- ✓ Creating RAC Database
- ✓ Verifying RAC Database Creation

8. Administering Oracle Clusterware

- ✓ Oracle Clusterware Processes
- ✓ Starting & Stopping Clusterware
- ✓ Enabling & Disabling Clusterware
- ✓ Checking the Integrity of OCR & Voting Disks
- ✓ Adding/Removing OCR Locations & voting disks
- ✓ Backup of OCR & Voting disks
- ✓ OCR backups to Oracle ASM Diskgroups

9. FLEX Administration

- ✓ *Verifying Cluster mode*
- ✓ *Verifying ASM mode*
- ✓ *Testing ASM Failure in Flex ASM*

10. Administering ASM Instances

- ✓ *Initialization Parameters for ASM Instances*
- ✓ *Parameter Files for ASM Instances*
- ✓ *Shared Oracle ASM Password File in a Disk group*
- ✓ *Starting & Stopping ASM Instances*

11. Administering ASM Disk Groups

- ✓ *Creating Disk groups*
- ✓ *Altering Disk groups*
- ✓ *Adding & Removing Disks*
- ✓ *Mounting & Dismounting Disk Groups*
- ✓ *Dropping Disk Groups*
- ✓ *ASM Failure Groups*

12. Administering ASM Directories & Files

- ✓ *ASM Directory structure*
- ✓ *Managing ASM Directories*
- ✓ *ASM Files*
- ✓ *Fully Qualified File Names*
- ✓ *Alias File Names*
- ✓ *Incomplete File Names*

13. ASM Command-Line Utility (ASMCMD)

- ✓ *Types of ASMCMD commands*
- ✓ *Running ASMCMD in Interactive mode*
- ✓ *Running ASMCMD in Non-Interactive mode*

14. Oracle RAC Architecture

- ✓ *Instance in RAC*
- ✓ *Cache Fusion in RAC*
- ✓ *Database in RAC*

15. Administering RAC Instances & Database

- ✓ *Overview of RAC DB Administration*
- ✓ *Starting and Stopping RAC Instances and Databases*
- ✓ *Terminating Sessions in RAC*
- ✓ *Initialization Parameters in RAC*
- ✓ *Data Dictionary in RAC*
- ✓ *Files in RAC*
- ✓ *Archiving in RAC*
- ✓ *Client connections in RAC*

16. Workload Management with Services

- ✓ *Introduction to Oracle Services*
- ✓ *Default Services*
- ✓ *Creating Services*
- ✓ *Preferred & Available Instances*
- ✓ *Administering Services*
- ✓ *Using Services with Client Applications*
- ✓ *Transparent Application Failover (TAF)*
- ✓ *TAF with Client-side configuration*
- ✓ *TAF with Services*

17. Backup & Recovery in RAC

- ✓ *Configuring RMAN Snapshot Control File location*
- ✓ *Configuring Control File & SPFILE auto backups*
- ✓ *Configuring Channel connections in RAC*
- ✓ *Instance Recovery in RAC*
- ✓ *Media Recovery in RAC*
- ✓ *Parallel Recovery in RAC*

18. Migrating non-ASM Database to ASM

- ✓ *Why migrate to ASM?*
- ✓ *Basic concepts of migrating to ASM*
- ✓ *Preparing to migrate to ASM*
- ✓ *Migrating Database to ASM*

19. Converting Single Instance Database to RAC Database

- ✓ *About rconfig utility*
- ✓ *Verifying prerequisites*
- ✓ *Using rconfig for Conversion*

20. Patching RAC Environments

- ✓ *Patchset, Bundle Patch, One-Off Patch, Patchset Updates*
- ✓ *Rolling Patches, OPatch Utility*
- ✓ *Downloading & Analyzing Patches*
- ✓ *Installing Rolling Patches*
- ✓ *Verifying Patch Application*

21. Adding & Deleting Nodes and Instances in RAC

- ✓ *Preparing the new node*
- ✓ *Extending Oracle Grid Infrastructure & Oracle RAC to the new node*
- ✓ *Creating new Instance*
- ✓ *Verifying new Instance*
- ✓ *Deleting Instances*
- ✓ *Deleting Nodes*