ORACLE DATABASE 19C: RAC ADMINISTRATION WORKSHOP

Duration: 5 days; /35 hours; Instructor-led/ remote online training
Time: 9.00am – 5.00pm
Break: 10.15am – 10.30am /3.15pm – 3.30pm
Lunch: 1.00pm – 2.00pm

WHAT YOU WILL LEARN
This Oracle Database 19c: RAC Administration Workshop course will teach you about Oracle RAC database architecture. Expert Oracle University instructors will deep dive into Global Resources and Cache Fusion.

Learn To:
- Install and configure RAC.
- Manage RAC Database
- Upgrade and patch RAC Database
- Manage backup and recovery for RAC.
- Monitor and tune RAC Database.
- Manage high availability of services.
- Implement High Availability for connections and applications.
- Configure RAC One Node Database
- Implement In-Memory Column Store in RAC
- Configure Multitenant Architecture in RAC
- Manage Quality of Service in RAC

METHODOLOGY
This program will be conducted with interactive lectures, PowerPoint presentation, discussions, and practical exercise.

COURSE OBJECTIVES
Upon completion of this course, you should be able to:
- Install and configure RAC.
- Manage RAC Database
- Upgrade and patch RAC Database
- Manage backup and recovery for RAC.
- Monitor and tune RAC Database.
- Manage high availability of services.
- Implement High Availability for connections and applications.
- Configure RAC One Node Database
- Implement In-Memory Column Store in RAC
- Configure Multitenant Architecture in RAC

- Manage Quality of Service in RAC

COURSE OUTLINES

Module 1: Grid Infrastructure: Overview
- Grid Infrastructure: Overview
- Clusterware Architecture and Cluster Services
- Oracle Clusterware Initialization
- Grid Naming Service (GNS)
- Course Practice Environment: Security Credentials
- Practice 1-1: Configuring a Standalone Flex Cluster (Part 01)
- Practice 1-1: Configuring a Standalone Flex Cluster (Part 02)
- Practice 1-1: Configuring a Standalone Flex Cluster (Part 03)
- Practice 1-1: Configuring a Standalone Flex Cluster (Part 04)

Module 2: RAC Databases Overview and Architecture
- RAC Databases Overview and Architecture
- Cluster-Aware Storage Solutions
- Levels of Scalability
- Parallel Execution with RAC

Module 3: Installing with Configuring Oracle RAC
- Installing with Configuring Oracle RAC
- Installing the Oracle Database Software
- Database Content
- Background Processes Specific to Oracle RAC
- Example: Result of Step 3
- Practice 3-1: Installing RAC Database Software (Part 01)
- Practice 3-1: Installing RAC Database Software (Part 02)
- Practice 3-2: Creating a RAC Database (Part 01)
- Practice 3-2: Creating a RAC Database (Part 02)
- Practice 3-2: Creating a RAC Database (Part 03)

Module 4: Oracle RAC Administration
- Oracle RAC Administration
- Redo Log Files and RAC
- Local Temporary Tablespaces
- Switch between Automatic and Manual Policies
- Parameters That Require Unique Settings

- Practice 4-1: Operating System and Password File Authenticated Connections
- Practice 4-2: Oracle Database Authenticated Connections
- Practice 4-3: Stopping a Complete ORACLE_HOME Component Stack

Module 5: Upgrading and Patching Oracle RAC
- Upgrading and Patching Oracle RAC
- OPatch: Overview

Module 6: Managing Backup and Recovery for RAC
- Managing Backup and Recovery for RAC
- Media Recovery in Oracle RAC
- Oracle Recovery Manager
- Distribution of Backups
- Overview of Practice
- Practice 6-1: Configuring Archive Log Mode
- Practice 6-2: Configuring RMAN and Performing Parallel Backups

Module 7: Global Resource Management Concepts
- Global Resource Management Concepts
- Global Resource Access Coordination
- Scenario 2: Read-Write Cache Fusion

Module 8: RAC Database Monitoring and Tuning
- RAC Database Monitoring and Tuning
- Global Enqueue Waits
- High-Water Mark Considerations
- AWR Snapshots in RAC
- Practice 8-1: ADDM and RAC PartI (Part 01)
- Practice 8-1: ADDM and RAC PartI (Part 02)
- Practice 8-1: ADDM and RAC PartI (Part 03)
- Practice 8-2: ADDM and RAC PartII
- Practice 8-3: ADDM and RAC PartIII

Module 9: Managing High Availability of Services
- Managing High Availability of Services
- Default Service Connections
- Using Service with Client Applications
- Using Service with the Resource Manager
- Service Aggregation and Tracing
- Practice 9-1: Working with Service
- Practice 9-2: Monitoring Services

Module 10: High Availability for Connections and Applications
- High Availability for Connections and Applications
- Implementing FAN Events
- Server-Side Callout Filter: Example
- TAF Basic Configuration on Server-Slide: Example
- What Is Application Continuity?
- Practice 10-1: Using Application Continuity (Part 01)
- Practice 10-1: Using Application Continuity (Part 02)

Module 11: Oracle RAC One Node
- Oracle RAC One Node
- Online Relocation Illustration
- Practice 11-1: RAC One Node

Module 12: Oracle Database In-Memory in RAC
- Oracle Database In-Memory in RAC
- In-Memory Column Store and Oracle RAC
- How the Database Reads from the FastStart Area
- Practice 12-1 Reconfiguring the Environment (Part 01)
- Practice 12-1 Reconfiguring the Environment (Part 02)

Module 13: Multitenant Architecture and RAC
- Multitenant Architecture and RAC
- Containers
- Connection to a Non-RAC CDB
- Creating a RAC CDB
- Adding a PDB to a RAC CDB
- Practice 13-1: Exploring CDB Architecture and Structures in RAC (Part 01)
- Practice 13-1: Exploring CDB Architecture and Structures in RAC (Part 02)
- Practice 13-2: Cloning a PDB in a RAC CDB
- Practice 13-3: Affinitizing PDB Services to CDB Instances (Part 01)
- Practice 13-3: Affinitizing PDB Services to CDB Instances (Part 02)
- Practice 13-4: Dropping a PDB

Module 14: Quality of Service Management
- Quality of Service Management
- Qos Management Policy Sets
- Performance Objectives