Computers and Information Technology · IT384

Advanced Oracle Database 19c High Availability Grid Infrastructure Administration

Duration	Category	Ref
2 Weeks	**Computers and Information Technology**	**IT384**
Language	Certificate	
English	**Certificate of attendance**	

Introduction

Modern enterprise environments require highly available, scalable, and resilient database infrastructures. This advanced 10-day programme is designed for experienced database administrators who want to master high availability architecture using Oracle Database 19c, including Multitenant architecture, Real Application Clusters (RAC), Automatic Storage Management (ASM), and Oracle Grid Infrastructure.

The course provides in-depth theoretical knowledge combined with intensive hands-on labs to enable participants to install, configure, manage, troubleshoot, and optimise mission-critical Oracle 19c clustered environments. Participants will gain practical expertise in designing and maintaining enterprise-level high availability database systems.

Course Objectives

By the end of this programme, participants will be able to:

- Install and configure Oracle 19c in standalone and clustered environments.
- Deploy and manage Oracle Grid Infrastructure.
- Configure and administer Oracle RAC environments.
- Manage ASM disk groups and storage architecture.
- Implement high availability and fault tolerance strategies.
- Configure and manage the Multitenant architecture (CDB & PDB).
- Perform advanced performance tuning in RAC environments.
- Monitor and troubleshoot cluster and database issues.
- Apply backup and recovery strategies in clustered environments.
- Implement best practices for enterprise-level Oracle 19c deployments.

Organisational Impact

Organisations implementing the skills gained from this programme will benefit from:

- Increased database availability and system resilience
- Reduced downtime and faster incident recovery
- Optimised cluster performance and resource utilisation
- Improved data protection and backup reliability
- Stronger IT infrastructure stability
- Enhanced capacity planning and scalability

Personal Impact

Participants will gain:

- Advanced expertise in Oracle 19c enterprise environments
- Confidence in managing RAC and Grid Infrastructure
- Strong troubleshooting and performance tuning skills
- Enhanced career opportunities as senior DBA or infrastructure specialist
- Practical hands-on experience in high availability architectures
- Readiness for advanced Oracle certifications

Target Audience of Data-Driven Decision Making, Root Cause Analysis & Risk Management

This course is designed for:

- Senior Database Administrators (DBAs)
- Oracle Infrastructure Engineers
- IT Systems Administrators managing Oracle environments
- Technical Consultants working with Oracle HA solutions
- Data Centre and Cloud Infrastructure Specialists
- Professionals preparing for advanced Oracle certifications

Course Outlines

Day 1

Oracle 19c Architecture Review

- Oracle 19c new features overview
- Multitenant architecture (CDB & PDB)
- High availability concepts
- Architecture planning for enterprise deployments

Day 2

Grid Infrastructure Installation & Configuration

- Grid Infrastructure architecture
- Installing Oracle Grid Infrastructure
- Oracle Clusterware components
- Managing cluster resources

Day 3

Automatic Storage Management (ASM)

- ASM architecture and concepts

- Creating and managing ASM disk groups
- ASM redundancy and failure groups
- ASM performance considerations

Day 4

Oracle RAC Architecture

- RAC architecture and background processes
- RAC networking configuration
- SCAN listeners
- Cache fusion concepts

Day 5

RAC Installation & Administration

- Installing Oracle RAC 19c
- Managing RAC databases
- Services configuration
- Instance management

Day 6

Multitenant in RAC Environment

- Creating and managing CDBs and PDBs
- PDB cloning and relocation
- Resource management in multitenant RAC
- Backup strategies for CDB/PDB

Day 7

High Availability & Failover Mechanisms

- Cluster failover
- Service failover
- Node failure scenarios
- Data protection strategies

Day 8

Backup & Recovery in RAC & ASM

- RMAN configuration in RAC
- Backup strategies with ASM
- Restore and recovery scenarios
- Flashback technologies

Day 9

Performance Tuning in RAC

- AWR and ADDM reports
- Global Cache performance
- Tuning RAC workloads
- Monitoring tools and diagnostics

Day 10

Troubleshooting & Best Practices

- Diagnosing cluster issues
- Log file analysis
- Patch management
- Best practices for enterprise deployments

Ask us for a date for this course

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