4 Days

Oracle Database 12c: Data Guard Administration

This Oracle Database 12c: Data Guard Administration Ed 1 training course explores the Oracle Data Guard. The course will provide essential learning of how the Oracle Data Guard protects your database against planned and unplanned interruptions. This course will also introduce you to Oracle Database Exadata Cloud Service that helps in building highly available systems.

Completion of this training course will enable candidates in:

- Building highly available systems.
- Offloading business processing needs to another system.
- Offloading backup needs to another system.
- Understanding Oracle Database Exadata Cloud Service.

Course Benefits:

Attaining certification of this course helps individuals to understand how Data Guard standby databases can be deployed to support various production functions. These roles include reporting, querying and testing, that are required in a standby function.

Course Details

Course Outline

1. Introduction to Oracle Data Guard

- Define Oracle Data Guard
- Types of Data Guard Services
- Types of Standby Databases
- Oracle Data Guard Broker Framework
- Role Transitions: Switchover and Failover
- Oracle Data Guard: Architecture
- Primary Database Processes

2. Networking for Oracle Data Guard

- Overview of Networking
- Listener.ora and Tnsnames.ora Configuration

- Static vs. Dynamic Registration
- Static Entries for Broker Operations
- Oracle Network Configuration Tuning

3. Creating a Physical Standby Database by Using SQL and RMAN Commands

- Steps to Create a Physical Standby Database
- Preparing the Primary Database
- FORCE LOGGING Mode
- Creating & Configuring Standby Redo Logs
- Using SQL to Create Standby Redo Logs
- Viewing Standby Redo Log Information

4. Oracle Data Guard Broker: Overview

- Defining its Features
- Describing the Components, & Configurations
- Describing Management Model & Architecture
- Data Guard Monitor: DMON Process
- Benefits of Using the Data Guard Broker

5. Creating a Data Guard Broker (DGB) Configuration

- DGB and the SPFILE
- DGB Requirements
- Data Guard Monitor: Configuration File
- DGB Log Files
- Creating a Broker Configuration
- Adding a Standby Database to the Configuration
- Enabling the Configuration

6. Creating a Logical Standby Database

- Benefits of Implementing a Logical Standby Database
- SQL Apply Process: Architecture
- Preparing to Create a Logical Standby Database
- Unsupported Objects and Data Types
- How to check unsupported Tables
- Logical Standby Database: SQL Apply Architecture

7. Creating and Managing a Snapshot Standby Database

- Overview & Architecture

- Activating a Snapshot Standby Database: Issues and Cautions
- Target Restrictions
- Viewing Snapshot Standby Database Information
- Using DGMGRL to View Snapshot Standby Database Information
- Converting a Snapshot Standby Database into a Physical Standby Database

8. Using Oracle Active Data Guard

- Oracle Active Data Guard
- Using Real-Time Query
- Checking the Standby's Open Mode
- Understanding Lag in an Active Data Guard Configuration
- Setting a Predetermined Service Level for Currency of Standby Queries
- Configuring Zero Lag Between the Primary and Standby Databases

9. Configuring Data Protection Modes

- Data Protection Modes
- Redo Transport Modes
- Maximum Protection Mode
- Compare Data Protection Modes
- Set the Data Protection Mode by Using DGMGRL

10. Using Flashback Database in a Data Guard Configuration

- Use Flashback Database in a Data Guard Configuration
- Overview of Flashback Database
- Configure Flashback Database
- Configure Flashback Database by Using Enterprise Manager
- Use Flashback Database Instead of Apply Delay
- Use Flashback Database and Real-Time Apply
- Use Flashback Database After RESETLOGS
- Flashback Through Standby Database Role Transitions

11. Enabling Fast-Start Failover

- Overview & Causes of Failover
- Installing the Observer Software
- Fast-Start Failover Prerequisites
- Configure Fast-Start Failover
- Set the Lag-Time Limit

- Automatic Reinstatement After Fast-Start Failover

12. Managing Client Connectivity

- Understand Client Connectivity in a Data Guard Configuration
- Understand Client Connectivity: Using Local Naming
- Prevent Clients from Connecting to the Wrong Database
- Manage Services
- Understand Client Connectivity: Using a Database Service
- Create Services for the Data Guard Configuration Databases
- Configure Role-Based Services
- Add Standby Databases to Oracle Restart Configuration

13. Backup and Recovery Considerations in an Oracle Data Guard Configuration

- Use RMAN to Back Up and Restore Files in a Data Guard Configuration
- Offload Backups to a Physical Standby
- Restrictions and Usage Notes
- Backup and Recovery of a Logical Standby Database
- Use the RMAN Recovery Catalog in a Data Guard Configuration
- Create the Recovery Catalog
- Register a Database in the Recovery Catalog
- Set Persistent Configuration Settings

14. Monitoring a Data Guard Broker Configuration

- View the Data Guard Configuration Status
- Monitor Data Guard Performance
- View Log File Details
- Enterprise Manager Metrics and Alerts
- Data Guard Metrics
- Manage Data Guard Metrics
- View Metric Value History

15. Optimizing a Data Guard Configuration

- Monitor Configuration Performance by Using Enterprise Manager Cloud Control
- Optimize Redo Transport Services
- Set the ReopenSecs Database Property
- Set the NetTimeout Database Property
- Optimize Redo Transmission by Setting MaxConnections
- Set the MaxConnections Database Property

- Compress Redo Data by Setting the RedoCompression Property
- Delay the Application of Redo

16. Oracle Database Exadata Cloud Service Overview

- Introduce Exadata Cloud Service
- Service Configuration, Connection, Architecture & Availability
- Storage Configuration & Management Details
- Data Security & Management Responsibilities
- Simple Web-Based Provisioning & Management
- REST APIs
- Backup and Recovery
- Migrating to Exadata Cloud Service

Who Should Attend

The Oracle Database 12c Data Guard Administration Training Course is ideal for those working with the profile of:

- Support Engineer
- Database Administrators
- Technical Consultant

Pre Requisite

Required:

- Database Administration
- Linux operating system fundamentals
- Certifications of either of the following:
- Oracle Database 11g: Administration Workshop I Release 2
- Oracle Database 11g: Administration Workshop II Release 2

Suggested Prerequisites:

- Basic understanding of PL/SQL and Triggers

464, Udyog Vihar Phase V,Gurgaon (Delhi NCR)-122016,India	+91 8882 233 777	training@mercury.co.in	www.mercurysolutions.co

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