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Oracle 12c Data Guard

Course Summary

Description

This Oracle course will describe the components of Oracles' Data Guard tool. This training covers the differences between the physical and logical databases and the overall architecture of Data Guard. This course will continue to build your skills through learning how to backup an Oracle data guard environment, implementing a failover and switchover, and utilizing data guard with flashback database technology as well as RMAN commands.

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

- Implement Oracle Data Guard
- Create a Physical and Logical Standby Database
- Create Data Guard with Oracle Cloud Control
- Use Oracle's Active Data Guard with Real-Time Apply
- Create Snapshot databases
- Use Oracle's Data Guard Broker
- Describe the Data Guard components

Topics

- Data Guard Components
- Data Guard Transport Method
- Differences between Failover and Switchover
- Data Guard Framework
- Data Guard Broker Configuration
- Defining Gap Resolution
- Defining Protection Modes
- Operating System Requirements
- Manually Creating a Physical Standby Database
- Physical Standby Database and Grid
- Logical Standby Database
- Using Grid to Create a Logical Database
- Backup Methods and Data Guard
- Flashback Database and Data Guard
- Backing up in a Data Guard Environment
- Data Guard and Failover
- Grid and Failover
- Data Guard and Switch Over
- Grid and Switch Over
- Define Fast Start Failover
- Failover Client
- Define a Snapshot Standby Database
- Oracle Active Data Guard
- Managing Data Guard Components
- Upgrading databases with Data Guard

Audience

This course is appropriate for anyone needing to learn key features of Database Disaster Recovery. It is suitable for Database Administrator, Network Administrators, System Administrators and Developers.

Prerequisites

Familiarity with Oracle computing or IT infrastructure is desired.

Duration

Four days

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Course Outline

I. Data Guard Components
- A. Identify what is Oracles' Data Guard
- B. Describe the differences between a physical and logical standby
- C. Quiz

II. Data Guard Transport Method
- A. Redo Transport Services
- B. Apply Services
- C. Role Management Services

III. Differences between Failover and Switchover
- A. Database Failover
- B. Database Switchover

IV. Data Guard Framework
- A. Data Guard Broker
- B. Standby Database
- C. Oracles Grid
- D. Quiz

V. Data Guard Broker Configuration
- A. Using Data Guard Broker
- B. Non Data Guard Broker

VI. Defining Gap Resolution
- A. Resolving Gaps with Redo Apply
- B. Resolving Gaps with Archive Apply

VII. Defining Protection Modes
- A. Maximum Protection
- B. Maximum Availability
- C. Maximum Performance
- D. Quiz

VIII. Operating System Requirements
- A. CPU Requirements
- B. Memory Requirements
- C. Operating System Binaries
- D. Oracle Binaries

IX. Manually Creating a Physical Standby Database
- A. Create a Physical Standby database
- B. Modify initialization parameters
- C. Verify the Standby database is receiving logs

X. Physical Standby Database and Grid
- A. Creating a Standby database with Grid
- B. Verify the Standby Databases
- C. View the configuration Status
- D. Quiz

XI. Logical Standby Database
- A. Manually Create a Logical Standby Database
- B. Create the Standby Database using SQL/RMAN
- C. Verify the Standby database is functional

XII. Using Grid to Create a Logical Database
- A. Set up the Logical Standby database
- B. Configure the Logical Standby Database
- C. Create the Standby Database with Grid
- D. Quiz

XIII. Backup Methods and Data Guard
- A. Flashback database and Data Guard
- B. RMAN commands and Data Guard
- C. SQL Commands and Data Guard
- D. Quiz

XIV. Flashback Database and Data Guard
- A. Using Flashback database instead of Apply Delay
- B. Recover the database from a prior point in time
- C. Use Real-time Apply
- D. Quiz

XV. Backing up in a Data Guard Environment
- A.Oracle Managed Backups
- B.User Managed Backups
- C. Recovery in a Data Guard Environment
- D. Quiz

XVI. Data Guard and Failover
- A. Define Failover
- B. Define Failover versus Switchover
- C. Perform a manual Failover

XVII. Grid and Failover
- A. Identify Failover needs
- B. Perform a Failover using Grid

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Course Outline (con't)

XVIII. Data Guard and Switch Over
- A. Define Switchover
- B. Define Switchover versus Failover
- C. Perform a manual Switchover

XIX. Grid and Switch Over
- A. Identify Switchover requirements
- B. Perform a Switchover using Grid

XX. Define Fast Start Failover
- A.Configure Fast Start Failover
- B.Monitor Fast Start Failover
- C. Re-instating the database
- D. Quiz

XXI. Failover Client
- A. Configure automatic failover for OCI Clients
- B. Configure automatic failover for JDBC clients
- C. Design database mirroring
- D. Quiz

XXII. Define a Snapshot Standby Database
- A. Convert a physical Standby Database to a Snapshot DB
- B. Using a Snapshot Database
- C. Monitoring the Snapshot Database

XXIII. Oracle Active Data Guard
- A. Define Oracle Active Data Guard
- B. Implement Active Data Guard

XXIV. Managing Data Guard Components
- A. Data Guard Monitoring Tools
- B. Using Grid and Data Guard
- C. View Dynamic performance views

XXV. Upgrading databases with Data Guard
- A. Use SQL apply to upgrade
- B. Use Physical Standby for rolling upgrades