

## Oracle Database 11g: Data Guard Administration

**Duration:** 3 Days

### What you will learn

In this course, students learn how to use Oracle Data Guard to help protect their Oracle database against planned and unplanned downtimes. They also learn how Data Guard standby databases can be used to support production functions such as reporting, querying, and testing, while in a standby role. The course includes Data Guard architecture, the configuration of physical and logical standby databases, and role transitions. Oracle Data Guard 11g features, including Oracle Active Data Guard and snapshot standby databases are outlined. In addition, management of a Data Guard configuration and troubleshooting are discussed.

This is appropriate for a 10g audience too. There are few minor changes between 10g and 11g features.

This course counts towards the Hands-on course requirement for the Oracle Database 11g Administrator Certification.

Only instructor-led inclass or instructor-led online formats of this course will meet the Certification Hands-on

Requirement. Self Study CD-Rom and Knowledge Center courses DO NOT meet the Hands-on Requirement.

**Learn To:** Use Data Guard to achieve a highly available Oracle database  
Use Data Guard standby databases to support production functions such as reporting, querying, testing, and performing backups  
Create and manage physical and logical standby databases

### Audience

Database Administrators

Support Engineer

Technical Consultant

### Prerequisites

*Required Prerequisites*

Oracle Enterprise Manager 10g Grid Control Release 2

Oracle Database 11g: Administration Workshop II

Oracle Database 11g: Administration Workshop I

### Course Objectives

Create a physical standby database

Evaluate benefits of using the Data Guard Broker

Monitoring the Data Guard Configuration

Configure fast-start failover

Identify the factors that affect planned and unplanned downtime

### Course Topics

#### Introduction to Oracle Data Guard

Causes of Data Loss

Oracle Data Guard Architecture

Data Protection Modes

## **Creating a Physical Standby Database by Using SQL and RMAN Commands**

Preparing the Primary Database

Creating a Physical Standby Database

## **Overview of the Data Guard Broker**

Oracle Data Guard Broker Features

Oracle Data Guard Broker Configurations

## **Using DGMGRL to Create a Data Guard Broker Configuration**

Creating the Broker Configuration

Adding the Standby Database to the Configuration

## **Creating a Physical Standby Database by Using Enterprise Manager Grid Control**

Using the Add Standby Database Wizard

Verifying a Configuration

Viewing the Data Guard Configuration Status

## **Monitoring a Data Guard Broker Configuration**

Monitoring the Data Guard Configuration

Verifying the Configuration

Using Enterprise Manager Data Guard Metrics

Viewing Log File Details

## **Managing Data Protection Modes**

Determining Which Data Protection Mode to Use

Setting Up Standby Redo Logs

Setting the Data Protection Mode

## **Optimizing a Data Guard Configuration**

Monitoring Configuration Performance

Optimizing Network Configuration

Implementing Cascaded Destinations

## **Using Flashback Database in a Data Guard Configuration**

Using Flashback Database and Real-time Apply

Using Flashback Database Instead of Apply Delay

Recovering Data from the Standby Database From a Past Point-in-time

## **Performing Role Transitions**

Understanding Roles in an Oracle Data Guard Configuration

Performing a Switchover to a Physical Standby Database

Performing a Failover to a Physical Standby Database

Re-enabling a Disabled Database After a Role Transition

## **Enabling Fast-Start Failover**

Configuring Fast-Start Failover

Viewing Fast-Start Failover Information

Performing Role Changes

Reinstating the Database

## **Implementing Client Failover Procedures**

Configuring Your Database to Automate Failover for OCI Clients

Configuring Your Database to Automate Failover for JDBC Clients

Troubleshooting Client Failover

### **Creating and Managing a Snapshot Standby Database**

Converting a Physical Standby Database into a Snapshot Standby Database

Using a Snapshot Standby Database

Monitoring a Snapshot Standby Database

### **Using Oracle Active Data Guard**

Opening a Physical Standby Database in Read-only Mode

Enabling Block Change Tracking on a Physical Standby Database for Fast Incremental Backups

### **Creating a Logical Standby Database**

Preparing to Create a Logical Standby Database

Creating a Logical Standby using SQL/RMAN Commands

Creating a Logical Standby using Grid Control

Managing SQL Apply Filtering

Performing Rolling Upgrades

### **Managing the Data Guard Configuration**

Viewing Data Guard Diagnostic Information

Troubleshooting

### **Backup and Recovery Considerations in an Oracle Data Guard Configuration**

Using RMAN to Back Up and Restore Files in a Data Guard Configuration

Offloading Backups to a Physical Standby Database

Recovering a Corrupted Datafile on the Primary Database

Backing Up a Logical Standby Database

### **Upgrading Databases in a Data Guard Configuration**

Using SQL Apply to Upgrade the Oracle Database

Using a Physical Standby for Rolling Upgrades

Upgrading an Oracle Data Guard Release 10.n Configuration to Release 11.1