

Oracle 19c Data Guard (ODG 19c) (TTOR30519)

Gain the skills required to effectively implement, manage, and optimize Data Guard environments for optimal database protection and disaster recovery

Course Snapshot

- **Course: Oracle 19c Data Guard (ODG 19c) (TTOR30519)**
- **Duration:** 3 days
- **Audience & Skill-Level:** Introductory-level course for database administrators and technical support staff who are required to plan and implement Oracle Data Guard configurations.
- **Hands-on Learning:** This hands-on course combines engaging expert lessons, demos and group discussions with real-world, skills-focused machine-based labs and exercises. Student machines are required.
- **Delivery Options:** This course is available for onsite private classroom presentation, live online virtual presentation, or can be presented in a blended learning format.
- **Public Schedule:** This course has active dates on our live-online open enrollment **Public Schedule**.
- **Customizable:** This course agenda, topics and labs can be further adjusted to target your specific training skills objectives, tools and learning goals. Please ask for details.

Overview

Oracle 19C Data Guard is a three-day hands-on course, designed provide you with a thorough understanding of this powerful technology, equipping you with the skills needed to create, manage, and optimize your Oracle Data Guard environment. Whether you're a seasoned professional or new to the field, our expert-led sessions will empower you to take control of your data and enhance your organization's resilience and performance.

Throughout the course, you'll gain valuable insights into the various types of standby databases, Data Guard services, and data protection modes. You'll explore Oracle Net Services in a Data Guard environment, learning about local naming configuration files, connect-time failover, and dynamic service registration. In addition, our hands-on exercises will guide you through the process of creating physical and logical standby databases, managing files, and optimizing your Data Guard configuration. By the end of the course, you'll be well-versed in implementing and managing Oracle Active Data Guard, enabling Fast-Start Failover, and utilizing Flashback Database in your Data Guard setup.

Don't miss this opportunity to elevate your career and unlock the potential of Oracle Data Guard. Our interactive course offers a valuable blend of theoretical knowledge and practical application, ensuring that you leave with a deep understanding of the technology and its real-world applications. With our expert instructors by your side, you'll gain the confidence and expertise needed to harness the power of Oracle Data Guard, maximizing your organization's data protection and availability.

NOTE: This training is NOT Official Oracle University training. This is independent, adjustable content that aligns with current topics, skills and tools that participants need to excel in these areas. This course is for 19c.

Learning Objectives

This course combines expert lecture, real-world demonstrations and group discussions with machine-based practical labs and exercises. Working in a hands-on learning environment led by our expert facilitator, you'll explore:

- Understand the concepts of Oracle Data Guard architecture
- Create, manage, and monitor Physical and Logical Standby databases
- Implement and manage Data Guard Broker
- Perform Role Transitions: Switchover and Failover
- Implement Fast-Start Failover
- Implement Oracle Active Data Guard

- Create and manage Snapshot Standby database
- Implement client failover in a Data Guard Configuration
- Use RMAN in a Data Guard environment
- Understand the advanced options in Oracle Data Guard

Need different skills or topics? If your team requires different topics or tools, additional skills or custom approach, this course may be further adjusted to accommodate. We offer additional Oracle, database, scripting, administration and other related topics that may be blended with this course for a track that best suits your needs.

Audience

This course is designed to introduce Oracle Data Guard to experience attendees who are new to Data Guard. Attendees would include experienced:

- Database Administrators (DBAs) who are responsible for managing and maintaining Oracle databases and seeking to enhance their knowledge of data protection and disaster recovery solutions.
- IT professionals working in the areas of data management, data protection, and disaster recovery who want to gain a solid understanding of Oracle Data Guard and its applications.
- System administrators and architects responsible for designing, implementing, and managing high availability and disaster recovery solutions for Oracle databases.
- IT managers and decision-makers who want to learn about Oracle Data Guard to make informed choices when implementing data protection and disaster recovery strategies in their organizations.

Pre-Requisites

In order to gain the most from this hands-on course, you should have:

- Basic understanding of Oracle database concepts: Participants should have a foundational knowledge of Oracle databases, including database architecture, storage structures, and SQL.
- Familiarity with database administration tasks: Prior experience or understanding of essential database administration tasks, such as backup and recovery, performance tuning, and security management, will be beneficial for grasping the course content.
- Experience with Oracle Database environment: It is helpful if participants have some hands-on experience with Oracle Database, particularly in creating and managing databases, as it will enable them to better understand the concepts and practices discussed in the course.
- Knowledge of the Linux operating system

Take Before: To be successful in the course, you should have skills equivalent to the topics in the course below or should have attended it as a pre-requisite:

- TTOR20519 Oracle 19c Database Administration I (Oracle 19c DBA I)

Course Topics / Agenda

Please note thew course topics, agenda and labs are subject to change, and may adjust during live delivery based on audience interests, skill-level and participation.

1. Introduction to Oracle Data Guard

- What Is Oracle Data Guard?
- Types of Standby Databases
- Types of Data Guard Services
- Data Protection Modes
- Benefits of Implementing Oracle Data Guard

2. Oracle Net Services in a Data Guard Environment

- Oracle Net Services Overview
- Local Naming Configuration Files
- Connect-Time Failover
- Dynamic Service Registration

3. Creating a Physical Standby

Database

- Steps to Create a Physical Standby Database
- Preparing the Primary Database
- Database Nologging Enhancements
- Using SQL to Create Standby Redo Logs
- Specifying Role-Based

- Destinations
- Creating Directories for the Physical Standby Database
- Real-Time Apply
- Creating a Physical Standby by Using SQL
- 4. Managing Physical Standby Files**
 - Action Required on Physical Standby
 - Using Transportable Tablespaces
 - Renaming a Data File in the Primary Database
 - Adding or Dropping a Redo File Group
 - Refreshing the Password File
 - Controlling PDB Replication
- 5. Using Oracle Active Data Guard**
 - Oracle Active Data Guard
 - Enabling and Disabling Real-Time Query
 - Monitoring Apply Lag
 - Forcing Redo Apply Synchronization
 - DDL on Global Temporary Tables
 - Support for Session Sequences
 - Example: Performing DML on a Physical Standby
- 6. Using Oracle Active Data Guard**
 - Far Sync: Redo Transport
 - Far Sync Instance Creation by Using RMAN
 - Benefits: Far Sync
 - Far Sync: Alternate Design
 - Real-Time Cascade and benefits
- 7. Creating and Managing a Snapshot Standby Database**
 - Issues and Cautions
 - Target Restrictions
 - Viewing Snapshot Standby Database Information
 - Snapshot Standby Space Requirements
- 8. Creating a Logical Standby Database**
- SQL Apply Architecture
- SQL Apply Process: Architecture
- Unsupported Objects
- Identifying Internal Schemas
- Checking for Tables with Unsupported Data Types
- Ensuring Unique Row Identifiers
- Creating a Logical Standby Database by Using SQL Commands
- Creating SQL Apply Filtering Rules
- Viewing SQL Apply Filtering Settings
- 9. Oracle Data Guard Broker**
 - Data Guard Broker: Components
 - Management Model
 - DMON Process
 - Data Guard Broker Interfaces
 - Data Guard Overview Page
 - Benefits of Using Enterprise Manager
- 10. Creating a Data Guard Broker Configuration**
 - Data Guard Broker: Requirements
 - Data Guard Broker and the SPFILE
 - Log Files
 - Creating a Broker Configuration
 - Adding a Far Sync to the Configuration
 - Far Sync Example with RedoRoutes
 - Setting LogXptMode to SYNC
 - Example: SET TRACE_LEVEL command
 - Export/Import Broker Configuration
- 11. Monitoring a Data Guard Broker Configuration**
 - Monitoring Data Guard Performance
 - Viewing Log File Details
 - Data Guard Metrics
 - Viewing Metric Value History
 - The VALIDATE DATABASE DATAFILE Command
- New Data Guard Broker Commands
- Identifying Destination Settings
- 12. Configuring Data Protection Modes**
 - Data Protection Modes
 - Maximum Availability Mode
 - Comparing Data Protection Modes
 - Setting the Data Protection Mode by Using DGMGRL
 - Setting the Data Protection Mode by Using SQL
- 13. Optimizing and Tuning a Data Guard Configuration**
 - Optimizing Redo Transport Services
 - Delaying the Application of Redo
 - Optimizing SQL Apply
 - Adjusting the Number of PREPARER Processes
 - Diagnostic Tools in Active Data Guard
- 14. Performing Role Transitions**
 - Role Management Services
 - Switchover
 - Performing a Switchover by Using Enterprise Manager
 - Performing a Switchover by Using DGMGRL
 - Situations That Prevent a Switchover
 - Failover and types
 - Performing a Failover to a Physical Standby Database
- 15. Using Flashback Database in a Data Guard Configuration**
 - Configuring Flashback Database
 - Using Flashback Database and Real-Time Apply
 - Using Flashback Database After Failover
 - Automatic Flashback on Physical Standby Databases
- 16. Enabling Fast-Start Failover**
 - When Does Fast-Start Failover

Occur?

- Installing the Observer Software
- Configuring Fast-Start Failover
- Specify the Target Standby Databases
- Set the Protection Mode
- Set the Fast-Start Failover Threshold
- Setting the Lag-Time Limit
- Configure Additional Fast-Start Failover Conditions
- Enable Fast-Start Failover
- Enable Fast-Start Failover
- Verify the Configuration
- Disabling Fast-Start Failover
- Using Enterprise Manager to Enable Fast-Start Failover

17. Backup and Recovery

Considerations

- Offloading Backups to a Physical Standby
- Restrictions and Usage Notes
- Creating the Recovery Catalog
- Configuring Daily Incremental Backups
- Enhancements to Block Media Recovery
- Excluding the Standby Database

18. Enhanced Client Connectivity

- Connecting to the Appropriate Environment
- Managing Services
- Connecting Clients to the Correct Database
- Example: Configuring Role-

Based Services

- Client Failover: Components
- What Is Application Continuity?
- Configuring Client

19. Patching and Upgrading Databases

- Data Guard Standby-First Patch Apply
- Using SQL Apply to Upgrade the Oracle Database
- Identifying Unsupported Data Types
- Cases
- DBMS_ROLLING: Concepts
- Examples
- Rolling Upgrade Support for Multitenant Databases

Student Materials & Lab Environment

All course software (limited versions, for course use only), digital courseware files or course notes, labs / data sets and solutions (as applicable) are provided for you in our “easy access / no install required” high-speed remote lab environment. Our tech team works with every student to ensure everyone is set up with working access and ready to go prior to every course start date, ensuring a smooth delivery and great hands-on experience. Please ask for details.

For More Information

For more information about our dedicated skills-focused training services (instructor-led, self-paced or blended), collaborative coaching services, robust Learning Experience Platform (LXP) solutions, Career Experiences, public course schedule, partner programs, courseware licensing options or to see our complete list of course offerings, training solutions and special offers please visit us at www.triveratech.com, email Info@triveratech.com or call us toll free at **844-475-4559**. Our pricing and services are always satisfaction guaranteed.

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