Cel szkolenia:

This Oracle Database 12c: Data Guard Administration Ed 1 training teaches you how to use Oracle Data Guard. Expert Oracle University instructors will demonstrate how this solution protects your Oracle database against planned and unplanned downtimes.

Plan szkolenia:

- Introduction to Oracle Data Guard
  - What Is Oracle Data Guard?
  - Types of Standby Databases
  - Types of Data Guard Services
  - Role Transitions: Switchover and Failover
  - Oracle Data Guard Broker Framework
  - Choosing an Interface for Administering a Data Guard Configuration
  - Oracle Data Guard: Architecture(Overview)
  - Primary Database Processes

- Networking for Oracle Data Guard
  - Networking Overview
  - Listener.ora Configuration
  - Statics vs. Dynamic Registration
Static Entries for Database Duplication and SQL Maintenance
Static Entries for Broker Operations
Oracle Network Configuration Tuning
Tnsnames.ora Configuration

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
Configuring Standby Redo Logs
Creating Standby Redo Logs
Using SQL to Create Standby Redo Logs
Viewing Standby Redo Log Information
Setting Initialization Parameters on the Primary Database to Control Redo Transport

Oracle Data Guard Broker: Overview
Oracle Data Guard Broker: Features
Data Guard Broker: Components
Data Guard Broker: Configurations
Data Guard Broker: Management Model
Data Guard Broker: Architecture
Data Guard Monitor: DMON Process
Benefits of Using the Data Guard Broker
Comparing Configuration Management With and Without the Data Guard Broker

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

Creating a Physical Standby Database by Using Enterprise Manager Cloud Control
Using Oracle Enterprise Manager to Create a Broker Configuration
Creating a Configuration
Creating a New Configuration
Adding a Standby Database to an Existing Configuration
- Using the Add Standby Database Wizard
- Standby Database Creation: Processing
- Standby Database Creation: Progress
- Verifying a Data Guard Configuration

- Creating a Logical Standby Database
  - Benefits of Implementing a Logical Standby Database
  - Logical Standby Database: SQL Apply Architecture
  - SQL Apply Process: Architecture
  - Preparing to Create a Logical Standby Database
  - Unsupported Objects
  - Unsupported Data Types
  - Checking for Unsupported Tables
  - Checking for Tables with Unsupported Data Types

- Creating and Managing a Snapshot Standby Database
  - Snapshot Standby Databases: Overview
  - Snapshot Standby Database: Architecture
  - Converting a Physical Standby Database to a Snapshot Standby Database
  - Activating a Snapshot Standby Database: Issues and Cautions
  - Snapshot Standby Database: Target Restrictions
  - Viewing Snapshot Standby Database Information
  - Using DGMGRL to View Snapshot Standby Database Information
  - Converting a Snapshot Standby Database to a Physical Standby Database

- 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

- Configuring Data Protection Modes
  - Data Protection Modes and Redo Transport Modes
  - Maximum Protection Mode
  - Maximum Availability Mode
  - Maximum Performance Mode
Comparing Data Protection Modes
- Setting the Data Protection Mode by Using DGMGRL
- Setting the Data Protection Mode

Performing Role Transitions
- Role Management Services
- Role Transitions: Switchover and Failover
- Switchover
  - Preparing for a Switchover
  - Performing a Switchover by Using DGMGRL
  - Performing a Switchover by Using Enterprise Manager
- Considerations When Performing a Switchover to a Logical Standby Database
- Situations That Prevent a Switchover

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

Enabling Fast-Start Failover
- Fast-Start Failover: Overview
- When Does Fast-Start Failover Occur?
- Installing the Observer Software
- Fast-Start Failover Prerequisites
- Configuring Fast-Start Failover
- Setting the Lag-Time Limit
- Configuring the Primary Database to Shut Down Automatically
- Automatic Reinstatement After Fast-Start Failover

Managing Client Connectivity
- Understanding Client Connectivity in a Data Guard Configuration
- Understanding Client Connectivity: Using Local Naming
- Preventing Clients from Connecting to the Wrong Database
- Managing Services
- Understanding Client Connectivity: Using a Database Service
- Creating Services for the Data Guard Configuration Databases
- Configuring Role-Based Services
- Adding Standby Databases to Oracle Restart Configuration

- 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
  - Restrictions and Usage Notes
  - Backup and Recovery of a Logical Standby Database
  - Using the RMAN Recovery Catalog in a Data Guard Configuration
  - Creating the Recovery Catalog
  - Registering a Database in the Recovery Catalog
  - Setting Persistent Configuration Settings

- Patching and Upgrading Databases in a Data Guard Configuration
  - Upgrading an Oracle Data Guard Broker Configuration
  - Upgrading Oracle Database in a Data Guard Configuration with a Physical Standby Database
  - Upgrading Oracle Database in a Data Guard Configuration with a Logical Standby Database
  - Using DBMS_ROLLING to Upgrade the Oracle Database
  - Requirements for Using DBMS_ROLLING to Perform a Rolling Upgrade
  - Leading Group Databases and Leading Group Master
  - Trailing Group Databases and Trailing Group Master
  - Performing a Rolling Upgrade by Using DBMS_ROLLING

- Monitoring a Data Guard Broker Configuration
  - Monitoring the Data Guard Configuration by Using Enterprise Manager Cloud Control
  - Viewing the Data Guard Configuration Status
  - Monitoring Data Guard Performance
  - Viewing Log File Details
  - Enterprise Manager Metrics and Alerts
  - Data Guard Metrics
  - Managing Data Guard Metrics
  - Viewing Metric Value History

- Optimizing a Data Guard Configuration
  - Monitoring Configuration Performance by Using Enterprise Manager Cloud Control
  - Optimizing Redo Transport Services
  - Setting the ReopenSecs Database Property
  - Setting the NetTimeout Database Property
  - Optimizing Redo Transmission by Setting MaxConnections
Setting the MaxConnections Database Property
Compressing Redo Data by Setting the RedoCompression Property
Delaying the Application of Redo

Wymagania:

Wymagane prerekwizyty:

- Database Administration
- Linux operating system fundamentals
- Oracle Database 11g: Administration Workshop I Release 2
- Oracle Database 11g: Administration Workshop II Release 2

Sugerowane prerekwizyty:

- Basic understanding of PL/SQL and Triggers

Poziom trudności

Certyfikaty:

Uczestnicy szkoleń otrzymają zaświadczenia o ukończeniu kursu sygnowane przez firmę Oracle.

Prowadzący:

Autoryzowany wykładowca Oracle.