

Oracle Database Cloud Migration Professional 2024 ELS

Data Management

DURATION

2 Days

MODULES

11 Lectures

COURSE CODE

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Course Overview

Zero Downtime Migration (ZDM) Techniques: Discover advanced methods such as ZDM to maintain business continuity and minimize disruptions during migration processes.

What You Will Learn

- Oracle Database Cloud Migration – Modular Structure
- SECTION I: Introduction to Database Cloud Migration

Module 1: Overview and Why Migrate

- Oracle Database Cloud Migration: Why Migrate?
- Oracle Database Cloud Services Portfolio in OCI
- Migration Strategies
- Migration Challenges
- Objectives
- The Future of Databases in Oracle Cloud
- Objectives:
- Understand the benefits of cloud migration.
- Learn the Oracle Cloud database portfolio and strategic considerations.

Module 2: Migration Types and Pre-Migration Assessment

- Cloud Migration Advisor Overview
- Migration Types: Physical vs Logical, Offline vs Online
- Cloud Pre-Migration Advisor Tool (CPAT)
- Assess/Evaluate a Migration
- Supported Database Versions and Targets
- Target Database Environment in OCI
- Objectives:
- Determine migration type and plan.

- Assess existing databases using CPAT.
- SECTION II: Migration Tools and Products

Module 3: Migration Products & Tools

- Tools for All Steps of the Migration Process
- Oracle Zero Downtime Migration (ZDM)
- Database Migration Service (DMS)
- OCI GoldenGate
- RMAN for Cross-Platform Migrations
- Data Pump & Transportable Tablespaces
- SQL Developer Web, SQLcl, ORDS, SODA
- Database Migration Workbench
- Objectives:
- Identify tools for planning, executing, and monitoring migrations.
- Understand the use cases and limitations of each tool.
- SECTION III: Migration Planning and Steps

Module 4: Migration Process

- Migration Process Overview
- Migration Steps: Assess, Prepare, Backup, Transfer, Restore
- Physical Migration: AWS RDS to OCI Database/Exadata
- OCI Database Migration Use Cases
- Objectives:
- Execute step-by-step migration processes.
- Plan migration workflows for on-premises or cloud sources.

Module 5: Zero Downtime Migration (ZDM)

- ZDM Overview and History
- ZDM Technical Architecture
- Physical Online Migration Step-by-Step
- Logical Online Migration Workflows
- ZDM Methodologies
- Migration from AWS RDS to OCI Autonomous Database via Data Pump
- Objectives:
- Implement zero-downtime migrations.
- Configure and operate ZDM for physical and logical migrations.

Module 6: Database Migration Service (DMS)

- DMS Overview and Features
- Direct Online Migration
- Indirect Offline Migration
- Registering Source and Target Databases
- Export/Import Initial Load and Replication
- Switchover and Completion

- Objectives:
- Perform automated migrations using DMS.
- Understand DMS pricing and supported workloads.
- SECTION IV: Multitenant and Exadata Migrations

Module 7: Multitenant Architecture Migrations

- Multitenant Architecture Overview
- Operational and Technical Efficiencies
- Migration Methods for Multitenant:
- Remote Cloning
- PDB Hot Clone
- Refreshable PDB
- Online PDB Relocation
- Unplug/Plug
- Upgrading to Multitenant CDB
- Objectives:
- Migrate and upgrade multitenant databases efficiently.
- Leverage PDB cloning and relocation for minimal downtime.

Module 8: Exadata and Base Database Migrations

- Migrating to Exadata Database or Base Database Instances
- RMAN and Cloud Backup Approaches
- Cross-Platform Cloud Migrations
- Planning for Migration to Cloud Database Instances
- Using UI Tools and SQL Developer Web
- Objectives:
- Plan and execute migrations to Exadata or Base Database Service.
- Use RMAN, Data Pump, and cloud backup services.
- SECTION V: Data Loading and Integration Tools

Module 9: Data Loading Approaches

- SQL Developer: Local Files, OSS, JSON Documents
- SQLcl: Data Pump, CloudShell, Liquibase
- Oracle REST Data Services (ORDS)
- SODA for REST and RESTful SQL
- Objectives:
- Load data into Oracle Cloud databases efficiently.
- Integrate with multiple client tools for data ingestion.

Module 10: Database Migration Workbench

- Migration Workbench Overview & Benefits
- Supported Database Scenarios and Workflow
- Analyzing Migration Workflow
- Post-Migration Recommendations

- Objectives:
- Use Migration Workbench to plan and execute migrations.
- Analyze results and perform post-migration checks.
- SECTION VI: Post-Migration Operations

Module 11: Backup and Database Management

- Autonomous Backup Configuration
- Database Management Service Overview
- Performance Hub and Stack Monitoring
- Cross-Service Alarms
- Objectives:
- Configure backup and monitoring in Oracle Cloud.
- Ensure operational stability and performance post-migration.

This structure organizes your entire content into 11 logical modules, covering everything from migration planning, tools, execution, multitenant/exadata migration, data loading, and post-migration operations.