Oracle Cloud Database Service Professional Workshop (2025) LVC

Oracle Cloud Infrastructure

DURATION	MODULES	COURSE CODE
2 Days	**10 Lectures**	**—**

Course Overview

This course equips database professionals, DevOps engineers, and cloud architects to provision, manage, and optimize Oracle Database services on OCI. You'll learn how to streamline database operations across Base Database Service and Exadata Database Service, enhance availability with Data Guard, and leverage additional services like MySQL HeatWave and NoSQL Database Cloud Service. You'll gain the skills to efficiently handle backup, recovery, upgrades, and advanced security, all while reducing complexity and operational costs.

What You Will Learn

Module 1: Oracle Base Database Service Overview

- Oracle Base Database Service Introduction
- Automated Database Life Cycle Operations under Customer Control
- Licensing Models and Options
- License Included Oracle Database OCPU Consumption
- Virtual Machines and VM Database System Options
- Shapes for VM Database Systems
- Base Database Service Storage Architecture
- Fault Domains, Availability Domains, and Regions
- Oracle Maximum Availability Architecture (MAA)
- Integrated Security: From Data to Identity
- Data Safe – Database Security Control Center

Module 2: Provisioning Oracle Base Database Service

- Objectives and Prerequisites
- OCI Networking Concepts (Region, VCN, Subnet, AD)
- Identity and Access Management (IAM) Service and Policy Syntax
- Launching Base Database Service Instances
- Logging in to OCI Console
- Creating VCN and Subnet

- Provisioning DB System
- Viewing Provisioning Status
- DB System Tags and Management
- Base Database Service OS Users
- SSH Connection and Access

Module 3: Managing Oracle Base Database Service

- DB System Management Overview
- Cloud Automation for Life Cycle Management
- Viewing DB System and Database Details
- Scaling Operations
- Scale Storage and CPU
- Scale OCPUs for DB Systems
- Creating Databases from Backups and Point-In-Time Restore
- Cloning Databases
- Enabling Oracle Data Guard
- Data Guard Overview, Topology, and Benefits
- Switchover, Failover, and Reinstate Operations
- Protection Modes and Redo Transport Configuration
- Start, Stop, Reboot DB System Nodes
- PDB Lifecycle Management
- Terminating DB Systems

Module 4: Backup & Recovery

- Backup Types and Cloud Automation
- Backup Destinations
- Zero Data Loss Autonomous Recovery Service
- Backup Retention Periods and Automatic Backup Configuration
- Configuring Backups during DB Creation and for Existing DBs
- Listing Available Backups
- Creating On-Demand Backups
- Restore Options and Backup/Restore from Standby
- Backup & Recovery Summary and Features

Module 5: Updates & Upgrades

- DB System Update and Upgrade Best Practices
- Updating DB System, OS, Grid Infrastructure (GI), and Database Home
- Viewing Patch History
- Preparing for 12c to 19c Database Upgrade
- Performing Database Upgrades with Data Guard
- Summary of Update and Upgrade Procedures

Module 6: Exadata Database Service Overview

- Exadata Overview and Architecture

- Exadata Vision and Optimizations
- Fastest OLTP and Analytics
- Best Consolidation
- Exadata Database Service in Oracle Cloud
- Deployment Options: Dedicated Infrastructure, Cloud@Customer
- Management Responsibilities and Lifecycle Operations
- Cost-Effective Licensing and Elastic OCPU Scaling
- Integrated Security and Operator Access Control (OpCtl)

Module 7: Exadata Provisioning & VM Cluster Management

- Provisioning Exadata Cloud@Customer Instances
- Network Architecture, Control Plane Configuration, DNS & NTP Planning
- Activating Infrastructure
- VM Cluster Network and Resource Management
- Scaling VM Cluster Resources
- Multi-VM Cluster Management
- Node Subsetting and Relocation
- VM Power Management
- Updating License Types
- Summary

Module 8: MySQL HeatWave Overview

- MySQL as #1 Open-Source Database
- OLTP and Analytic Processing
- HeatWave Features: OLTP, OLAP, ML & Lakehouse
- HeatWave Security, Compliance, and Ease of Use
- MySQL Autopilot Overview
- MySQL HeatWave Provisioning and Connectivity
- Loading Sample Data and Migration from On-Premises
- Overview of HeatWave OLAP, AutoML, and Lakehouse
- Cluster Management: Start, Stop, Delete
- Monitoring, Performance, and Backup

Module 9: Oracle NoSQL Database Cloud Service

- Overview and Licensing Options
- Feature Highlights and Pricing Model
- Throughput Capacity: Write Unit and Read Unit
- Seamless Multi-Model Support
- Security and Compliance Features
- Instant Elasticity at Table Level
- Data Models and Connecting Applications
- Java, Python, Node.js, Go, .NET
- Credentials and Configuration
- Data Regions and Service Endpoints

Module 10: OCI Database Management Service

- Overview of OCI Database Management

Key Use Cases: Monitoring, Administration, Autonomous, Cloud, External Databases

- Architecture and Supported Deployments
- Enabling Database Management for Oracle Cloud Databases
- Database Management Pricing
- Monitoring Cloud Databases
- Cloud Database Metrics, Alarms, Alert Logs
- Dashboards: Out-of-the-box & Custom
- Diagnostics and Tuning of Cloud Databases
- Performance Hub, Real-Time SQL Monitoring, Exadata Monitoring
- Administration of Cloud Databases: Schema, Tablespace, and Scheduler Jobs