# Oracle Cloud Database Service Professional Workshop 2024 ELS

Oracle Cloud Infrastructure

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

## Course Overview

At the end of this training, you will be prepared to take theOracle Cloud Database Services 2024 Professional Certification.

## What You Will Learn

### Module 1: Oracle Base Database Service Overview

- Oracle Base Database Service Introduction
- Automated Database Life Cycle Operations under Customer Control
- Choice of Licensing Models for Maximum Value
- License Included Oracle Database OCPU Consumption Options
- Virtual Machines and VM Database System Options
- Shapes for Virtual Machine Database Systems
- Base Database Service Storage Architecture
- Fault Domains, Availability Domains, and Regions
- Oracle Maximum Availability Architecture (MAA)
- MAA Components for License Included Editions
- 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
- Logging in to OCI Console
- Launch Console to Create a VCN
- Create a VCN and Subnet
- Provision Base Database Service DB System
- Filling Required Information
- Viewing DB System Provisioning Status

- DB System Tags and Management
- Base Database Service OS Users and SSH Connection

## 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: Storage and CPU
- Creating Database from Backup and Point-In-Time Restore
- Cloning Databases
- Enabling Oracle Data Guard
- Overview, Topology, and Benefits
- Switchover, Failover, Reinstate
- 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
- Editing Backup Settings for Existing DBs
- Configuring Automatic Backups during DB Creation
- Listing and Creating On-Demand Backups
- Restore Options and Backup/Restore from Standby
- Backup & Recovery Summary

## Module 5: Patching & Upgrades

- Update and Upgrade Best Practices
- Updating DB System, OS, Grid Infrastructure, Database Home
- Viewing Patch History
- Preparing for 12c to 19c Database Upgrade
- Upgrading Database with Data Guard Association
- Summary

## Module 6: Exadata Database Service Overview

- Exadata Overview, Database Machine, and Vision
- Exadata Optimizations: Fastest OLTP, Analytics, Best Consolidation
- Exadata Database Service in Oracle Cloud
- Deployment Options: Dedicated Infrastructure, Cloud@Customer
- Management Responsibilities and Lifecycle Operations
- Cost-Effective Software Licensing and Elastic OCPU Scaling

- Integrated Security and Operator Access Control (OpCtl)

## Module 7: Exadata Provisioning & VM Cluster Management

- Provisioning Exadata Cloud@Customer Infrastructure
- Network Architecture and Control Plane Configuration
- DNS & NTP Planning
- VM Cluster Network and Resource Overview
- Creating Exadata VM Cluster Resources
- Storage Configuration: ASM Allocation, Snapshot Databases, Sparse Test Masters
- Managing Exadata Infrastructure and VM Cluster
- Scaling, Multi-VM Cluster, Node Subsetting, Shrinking, Relocating
- VM Power Management
- Updating License Types

## Module 8: MySQL HeatWave

- Introduction to MySQL and HeatWave
- Features: OLTP, OLAP, ML & Lakehouse
- MySQL Autopilot Overview
- Security, Compliance, and Ease of Use
- Provisioning and Connecting MySQL HeatWave
- Loading Sample Data and Migration from On-Premises
- HeatWave Cluster Management: Start, Stop, Delete
- Operating, Monitoring, and Backing up MySQL HeatWave

## Module 9: Oracle NoSQL Database Cloud Service

- Overview, Product Licensing, and NoSQL Databases
- Feature Overview and Pricing Models
- Throughput Capacity: Write Unit and Read Unit
- Seamless Multi-Model and Fully Managed Service
- Security and Compliance
- Instant Elasticity at Table Level
- Data Models
- Connecting Applications: Java, Python, Node.js, Go, .NET
- Data Regions and Service Endpoints

## Module 10: OCI Database Management Service

- Overview and Key Use Cases
- Supported Deployments: Autonomous, Cloud, External/On-Premises Databases
- Enabling Database Management in OCI
- Architecture and Database Management Features
- Pricing Model
- Monitoring Cloud Databases
- Metrics, Alarm Definitions, Alert Logs, Dashboards
- Diagnostics and Tuning, Performance Hub, SQL Monitoring

- Administration: Schema Management, Tablespaces, Scheduler Jobs