HeatWave MySQL: DB System Essentials LVC

MySQL

DURATION	MODULES	COURSE CODE
2 Days	**13 Lectures**	**—**

Course Overview

After completing this course, you should be able to: Create and Manage HeatWave MySQL Service Instances Configure and Manage MySQL DB Systems Monitor Instances and Adjust Use of Resources Implement HeatWave MySQL for Query Acceleration Migrate Your Data to HeatWave MySQL (edited)

What You Will Learn

Module 1: Introduction to MySQL HeatWave Service

- Objectives
- Overview of MySQL HeatWave Service
- Benefits of a Fully Managed HeatWave Service
- Customer and Oracle Responsibilities
- Single Database for Transactional and Analytical Operations
- HeatWave System Overview: Single System for OLTP, Analytics, and ML
- HeatWave Solutions for Different Workloads
- Summary

Module 2: Introduction to Oracle Cloud Infrastructure (OCI)

- Objectives
- OCI Physical Architecture
- Regions, Availability Domains, and Fault Domains
- Compartments and Tenancy
- Virtual Cloud Network (VCN), Public and Private Subnets
- IAM Policies
- Summary

Module 3: DB System Overview

- Objectives

- Overview of HeatWave DB System
- Prerequisites for Creating a DB System
- DB System Provisioning
- Data Security
- Standalone vs. High Availability DB Systems
- Automatic Failover
- HeatWave Cluster and Nodes
- HeatWave Storage Layer
- Summary

Module 4: Creating a DB System

- Objectives
- Steps to Create a DB System
- Navigating to the DB Systems Page
- Selecting DB System Type (Production or Development)
- Providing DB System Information and Admin Credentials
- Configuring Networking, Placement, Hardware, Backup Plan
- Inspecting the DB System Endpoint
- Summary

Module 5: High Availability

- Objectives
- HeatWave Service High Availability Concepts
- MySQL Group Replication Within OCI
- Prerequisites and On-Premises Disaster Recovery
- Benefits of High Availability
- Creating a DB System with High Availability
- Failover, Switchover, and Monitoring Procedures
- Best Practices for Handling Failovers
- Summary

Module 6: Connecting to a DB System

- Objectives
- DB System Endpoint and Network Path
- Connecting Using OCI Cloud Shell
- Connecting Using a Compute Instance
- Summary

Module 7: Managing a DB System

- Objectives
- DB System States and Operations (Start, Stop, Restart, Delete)
- Navigating and Inspecting the DB System Details Page
- Summary

Module 8: Backup and Recovery

- Objectives
- Creating Manual Backups and Managing Backups
- Backup Types and Configurations
- Point-in-Time Recovery
- Restoring DB Systems (Standalone & High Availability)
- Limitations and Best Practices
- Summary

Module 9: Replicating to a DB System – Part 1

- Objectives
- HeatWave Inbound Replication Concepts
- Prerequisites, Connectivity Scenarios, and Source DB Requirements
- Creating a Dedicated Replication User
- Loading Initial Data to Your DB System
- DB System Creation and Pre-Authenticated Requests (PAR)
- Summary

Module 10: Replicating to a DB System – Part 2

- Objectives
- Creating and Managing Replication Channels
- SSL Configuration and Replication Positioning
- Channel Operations (Enable, Disable, Reset, Resume, Delete, Edit)
- Troubleshooting Inbound Replication Errors
- Summary

Module 11: Replicating to MySQL Server (Outbound Replication)

- Objectives
- Outbound Replication Scenarios (On-Premises and OCI)
- Prerequisites for Replication
- Configuring Outbound Replication Channels
- Managing and Troubleshooting Replication
- Summary

Module 12: Migrating Data to MySQL HeatWave Service

- Objectives
- Data Migration Overview
- Using MySQL Dump Utilities
- Dumping Data to OCI Object Storage
- Performing Compatibility Checks and Modifications
- Summary

Module 13: Read Replicas

- Objectives
- Read Replica Concepts and Load Balancer
- Prerequisites and Use Cases
- Creating and Monitoring Read Replicas
- Connecting to a Read Replica
- Maintenance and Limitations
- Summary