

# Implementing Azure Database for MySQL

## Course Description

This 3-day training introduces Azure Database for MySQL from basics to intermediate level, covering deployment, configuration, security, scaling, and monitoring in Azure environments. Participants gain hands-on skills using Flexible Server (primary focus) with practical labs on provisioning, basic optimization, and integration. Ideal for DBAs, developers, and cloud admins transitioning to Azure-managed MySQL.

## Duration

3 days (24 hours)

## Prerequisites

- Basic SQL knowledge (queries, tables)
- Introductory Azure concepts (portal navigation, resource groups)
- General IT experience; no advanced MySQL or cloud required
- **Access to an active Azure Subscription**

## Learning Objectives

By the end of this course, participants will be able to:

- Provision and connect to basic Azure Database for MySQL Flexible Servers.
- Apply core security and networking configurations.

- Set up backups, basic high availability, and monitoring.
- Perform simple performance tuning and scaling.
- Migrate data and integrate with essential Azure services.
- Troubleshoot common issues using Azure tools.

## **Content Coverage**

### **Module 1: Azure Database for MySQL Fundamentals**

- PaaS overview and benefits over on-premises MySQL
- Flexible Server vs. Single Server basics
- Azure Portal navigation and resource groups

### **Module 2: Server Provisioning Basics**

- Creating servers via Portal and CLI
- Compute tiers and storage selection
- Initial server restart and overview page

### **Module 3: Database and Data Setup**

- Creating databases and tables
- Data import with mysqldump and samples
- Running basic SELECT/INSERT queries

### **Module 4: Client Connectivity**

- Installing/connecting MySQL Workbench and Azure Data Studio
- Testing connections and query execution

- Common first-connection pitfalls

### **Module 5: Networking Fundamentals**

- Firewall rules and public access
- VNet integration intro
- SSL/TLS enforcement basics

### **Module 6: User Security Basics**

- Creating/managing MySQL users and privileges
- Password policies and role assignments
- Basic authentication troubleshooting

### **Module 7: Encryption and Auditing**

- At-rest and in-transit encryption setup
- Enabling audit logs and slow query logs
- Azure AD auth intro

### **Module 8: Backups and Restore**

- Automated backup policies and PITR
- Manual exports to Blob Storage
- Point-in-time restore lab

### **Module 9: High Availability Intro**

- Zone-redundant HA setup

- Read replicas creation and usage
- Basic failover testing

### **Module 10: Monitoring Essentials**

- Azure Monitor metrics and alerts
- Performance insights dashboard
- Log analysis for issues

### **Module 11: Scaling and Migration**

- Vertical/horizontal scaling steps
- DMS for MySQL migrations
- Integrations with Power BI and Functions

### **Module 12: Troubleshooting and Best Practices**

- Resolving CPU spikes, locks, connections
- Optimization checklist