

MySQL for Database Administrators Ed 4

Duration: 5 Days

What you will learn

The MySQL for Database Administrators course teaches DBAs and other database professionals how to maximize their organization's investment in MySQL and about the benefits of using the MySQL Cloud Service. Learn to configure the MySQL Server, set up replication and security, perform database backups, optimize query performance, and ensure high availability.

Through a variety of realistic, hands-on activities, expert MySQL instructors will teach you to install, configure, secure, and maintain your database server which you can deploy on-premise or as a MySQL Cloud Service instance.

Learn To:

- Install and configure MySQL Server and client programs.
- Recognize the key components of the MySQL architecture.
- Secure your server.
- Troubleshoot server slowdowns and other issues.
- Improve query performance.
- Configure and administer a variety of replication topologies.
- Understand the benefits of MySQL Cloud.

Benefits To You:

After taking this course, you will be equipped to use all the features of MySQL to get the best out of your Web, Cloud, and embedded applications, whether you work with the command line or graphical tools such as MySQL Workbench and MySQL Enterprise Monitor, whether you use on-premise or MySQL Cloud-based instances, and whether your challenge is complex replication requirements, or highly-tuned transactional systems.

Audience

- Database Administrators
- Database Developers
- Technical Consultant

Related Training

Required Prerequisites

Should be knowledgeable with Joining tables

Should be knowledgeable with MySQL data types and executing basic DDL and DML queries using SQL

Should be knowledgeable with relational database concepts and using the mysql command-line client

MySQL Fundamentals Ed 1

Suggested Prerequisites

MySQL for Developers

Course Objectives

Define and implement a backup strategy

Perform physical and logical backups of your data

Describe MySQL replication and its role in high availability and scalability

Configure simple and complex replication topologies

Administer a replication topology

Install the MySQL server and client programs

Upgrade MySQL on a running server

Describe MySQL architecture

Explain how MySQL processes, stores, and transmits data

Configure MySQL server and client programs

Use server logs and other tools to monitor database activity

Create and manage users

Protect your data from common security risks

Identify and optimize poorly-performing queries

Troubleshoot server slowdowns and other common problems

Gain an understanding of MySQL Cloud

Course Topics

Introduction to MySQL

MySQL overview

MySQL Enterprise Edition

MySQL on the Web

MySQL in the Cloud
The MySQL community

Installing MySQL

Installing MySQL
Installed Files and Directories
Initial Configuration
Starting and Stopping MySQL
Upgrading MySQL

MySQL Architecture

Architectural Overview
How MySQL Transmits Data
How MySQL Processes Requests
How MySQL Stores Data
Tablespaces
Redo and Undo Logs
How MySQL Uses Memory
Plug-in Interface

Configuring MySQL

Server Options, Variables, and the Command Line
Option Files
System Variables
Launching Multiple Servers on the Same Host

Monitoring MySQL

Monitoring MySQL with Log Files
Monitoring MySQL with Status Variables
Monitoring MySQL with Performance Schema
MySQL Enterprise Audit
MySQL Enterprise Monitor
Monitoring User Activity

User Management

MySQL Privilege System
Creating and Modifying User Accounts
Configuring Passwords and Account Expiration
Authentication Plug-Ins
Granting Permissions
Grant Tables
Resetting a Forgotten Root Password

MySQL Security

Security Risks
Network Security
Secure Connections
Password Security
Operating System Security
Protecting Against SQL Injections
MySQL Enterprise Firewall

Maintaining a Stable System

Stability

Why Databases Fail

Capacity Planning

Troubleshooting

Identifying the Causes of Server Slowdowns

InnoDB Recovery

Optimizing Query Performance

Identifying Slow Queries

The EXPLAIN statement

Working with Indexes

Index Statistics

Backup Strategies

Understanding Backups

Backup Techniques

Creating a Backup Strategy

Performing Backups

MySQL Backup Tools

Raw Backup Methods

Techniques that Use the Binary Log

Configuring a Replication Topology

Overview of Replication

Replication Conflicts

When to Use Replication

Configuring Replication

Administering a Replication Topology

Failover

MySQL Utilities

Replication Threads

Monitoring Replication

Troubleshooting Replication

Group Replication

Overview

Single-Primary and Multi-Primary Modes

Configuring Group Replication

Monitoring Group Replication

Conclusion

Course Overview

MySQL Curriculum

Course Evaluation

Thank You!

Q&A Session