

United Data Learning & Consulting

Email us for free demo session

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MySQL Training Contents

Normal Track- Duration 20 Session 2 Hour Daily

Fast Track- Duration 7-8 Sessions 4 Hours Daily

1. General Information

What is MySQL?

The Main Features of MySQL

History of MySQL

2. Installing and Upgrading MySQL

Which MySQL Version and Distribution to Install

How to Get MySQL

Installing MySQL on Linux Using the MySQL Yum Repository

Installing MySQL on Linux Using RPM Packages from Oracle

Post installation Setup and Testing (Starting the Server, Testing the Server)

Upgrading MySQL

Connecting to and Disconnecting from the Server

Entering Queries

Creating and Using a Database

Creating and Selecting a Database

Creating a Table

Loading Data into a Table

Retrieving Information from a Table

Getting Information About Databases and Tables

3. MySQL Server and Server-Startup / Client Programs

Using Option Files

mysqld — The MySQL Server

mysqld_safe — MySQL Server Startup Script

mysql.server — MySQL Server Startup Script

mysqld_multi — Manage Multiple MySQL Servers

mysql_upgrade — Check and Upgrade MySQL Tables

mysql — The MySQL Command-Line Tool

mysqladmin — Client for Administering a MySQL Server

mysqlcheck — A Table Maintenance Program

mysqldump — A Database Backup Program

mysqlimport — A Data Import Program

mysqlpump — A Database Backup Program

mysqlsh — The MySQL Shell

mysqlshow — Display Database, Table, and Column Information

mysqlslap — Load Emulation Client

4. MySQL Server Administration

The MySQL Server
Server Option and Variable Reference
Server Configuration Defaults

Server Command Options
Server System Variables
Using System Variables
Server Status Variables
Server SQL Modes
MySQL Server Logs
Selecting General Query and Slow Query Log Output Destinations
The Error Log
The General Query Log
The Binary Log
The Slow Query Log
The DDL Log
Server Log Maintenance

5. Security

Security Guidelines
Keeping Passwords Secure
Making MySQL Secure Against Attackers
Security-Related mysqld Options and Variables
How to Run MySQL as a Normal User
Security Issues with LOAD DATA LOCAL
Client Programming Security Guidelines
Privileges Provided by MySQL
Grant Tables
User Names and Passwords
Adding User Accounts
Removing User Accounts
Setting Account Resource Limits
Assigning Account Passwords
Password Expiration Policy

6. Backup and Recovery

Backup and Recovery Types
Database Backup Methods
Example Backup and Recovery Strategy
Using mysqldump for Backups
Point-in-Time (Incremental) Recovery Using the Binary Log
Point-in-Time Recovery Using Event Times
MyISAM Table Maintenance and Crash Recovery
Using myisamchk for Crash Recovery
Using MySQL Enterprise Backup

7. Optimization

Optimization Overview
Optimizing SQL Statements
Optimization and Indexes

- Optimizing Database Structure
- Optimizing for InnoDB Tables
- Optimizing for MyISAM Tables
- Understanding the Query Execution Plan
- Buffering and Caching
- Optimizing Locking Operations
- Optimizing the MySQL Server

- Benchmarking
- Examining Thread Information

8. Data Types

- Data Type Overview
- Numeric Types
 - Integer Types (Exact Value) - INTEGER, INT, SMALLINT, TINYINT, MEDIUMINT, BIGINT
 - Fixed-Point Types (Exact Value) - DECIMAL, NUMERIC
 - Floating-Point Types (Approximate Value) - FLOAT, DOUBLE
- Bit-Value Type - BIT
- Date and Time Types
 - The DATE, DATETIME, and TIMESTAMP Types
 - The TIME Type
 - The YEAR Type
 - Automatic Initialization and Updating for TIMESTAMP and DATETIME
- String Types
 - The CHAR and VARCHAR Types
 - The BINARY and VARBINARY Types
 - The BLOB and TEXT Types
 - The ENUM Type

9. Functions and Operators

- String Comparison Functions
- Regular Expressions
- Logical Operators
- Assignment Operators

10. SQL Statement Syntax

- Data Definition Statements
- Data Manipulation Statements

11. The InnoDB Storage Engine

- InnoDB Architecture
- Benefits of Using InnoDB Tables
- Best Practices for InnoDB Tables
- Buffer Pool
- Redo Log Buffer
- System Tablespace

- InnoDB Data Dictionary
- Doublewrite Buffer
- File-Per-Table Tablespaces
- General Tablespaces
- Undo Tablespace
- Redo Log

12. Alternative Storage Engines

- The MyISAM Storage Engine
- The MEMORY Storage Engine
- The CSV Storage Engine
- The ARCHIVE Storage Engine
- The BLACKHOLE Storage Engine
- The MERGE Storage Engine
- The FEDERATED Storage Engine

13. Replication

- Configuring Replication
- Replication log files
- Troubleshooting

14. MySQL Cluster Overview

- Configuring MySQL Cluster

15. Partitioning

- Overview of Partitioning in MySQL
- Partitioning Types
- RANGE Partitioning
- LIST Partitioning
- COLUMNS Partitioning
- HASH Partitioning
- KEY Partitioning
- Subpartitioning
- How MySQL Partitioning Handles NULL
- Partition Management

16. INFORMATION_SCHEMA Tables

17. Errors, Error Codes, and Common Problems

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