MySQL [MariaDB] Admin Training

1.Open Source Introduction

- Overview of MySQL
- History of MySQL
- The Main Features of MySQL
- Basics of Linux Commands

2.MariaDB Installation

- Ubuntu Operating System Installation
- **Installing MariaDB from apt repository on Ubuntu**
- How to start, stop and restart the server
- How to check the MySQL Status and Configuration file
- Differences between MySQL & MariaDB
- MariaDB Architecture
- INFORMATION_SCHEMA Tables
- System Catalog Views

3.MySQL user management.

- CREATE USER, ALTER USER,DROP USER
- Rename user
- How to maintain the user privileges using DDL
- How to maintain the user privileges using DML
- Account Locking
- Create role, drop role, set role
- OpenSSL
- **Installation on Windows**
- **Installation of HeidiSQL**

4.Storage Engines with Simple Examples

- The MyISAM Storage Engine
- The INNODB Storage Engine
- The MEMORY Storage Engine
- The CSV Storage Engine
- The MERGE Storage Engine
- The SEQUENCE Storage Engine
- The ARIA Storage Engine

5.Monitoring Server logs

- **Error Log**
- General Log
- Slow Log
- Binary Log

6.MariaDB Programs

- innochecksum
- mysqlaccess
- myisamlog
- mysqldump
- mysqlbinlog
- mysqlcheck
- mysql

7.Configuring InnoDB

- InnoDB Table and Index Structures.
- Managing InnoDB Data and Redo Log Files.
- Memory allocation for Innodb
- Turnoff Innodb

8. Database Backup Methods

- Using mysqldump for Backups
- Dumping Data in SQL Format.
- Full Backup & Recovery
- Percona XtraBackup Installation on MySQL Server

9.Percona Server

- Percona Overview
- Percona Server Installation
- Percona XtraBackup Installation
- Percona Features
- Configuration of XtraBackup
- Taking Full Backup
- Taking Incremental Backups
- Restoring / Recovering Full Backups and Incremental
- Partial Backups

10. Performance Tuning - Partitioning

- Overview of Partitioning in MySQL
- Partitioning Types
- RANGE Partitioning
- LIST Partitioning
- HASH Partitioning
- KEY Partitioning

11.Replication

- Overview Replication
- Master-Slave Configuration
- Binary Log
- Relay Log
- Master-Slave Configuration
- Master-Master Configuration
- Replication trouble shooting / errors

12.Performance Tuning

- MyISAM Key Cache
- InnoDB PT Parameters
- InnoDB Startup Options.
- Restrictions on InnoDB Tables
- The InnoDB Buffer Pool
- Optimization [About Constraints]
- Index Management
- About Locking & Issues
    - Locking Methods
    - Table Locks
    - Deadlock

13. Azure for DBA's [1 Hour]

- Introduction of Cloud Computing
- What is IAAS, PAAS & SAAS
- Introduction of Azure MariaDB

14. Third Party Tools

- **SQLyog for MySQL / MariaDB**
- SQL Diagnostic Manager for MySQL / MariaDB