
MariaDB Performance & Tuning

Duración: 2 Días Código del Curso: MARDBAPT

Temario:

MariaDB Performance & Tuning Course Overview

English - Please note this course is only available in English.

Español - Por favor, tenga en cuenta que esta formación solo está disponible en inglés.

This MariaDB Performance & Tuning course is designed for Database Administrators, Application Developers and Technical Consultants

Dirigido a:

Who will the Course Benefit?

Objetivos:

■ Course Objectives

- To provide the skills necessary to monitor and tune MariaDB database performance.
-

Prerequisitos:

■ Delegates must have a working knowledge of MariaDB Database Administration.

This course is run on a Linux operating system, a basic knowledge of Linux/UNIX is recommended but is not essential.

Siguientes cursos recomendados:

Further Learning

- Apache Web Server
-

Contenido:

MariaDB Performance ; Tuning Training Course Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: INTRODUCTION TO PERFORMANCE TUNING

- Tuning Overview
- Hardware optimization
- Increase RAM and use faster RAM
- Use more CPU cores
- Use a clustered database
- Optimize the operating system
- Use indexes to improve performance
- Optimize queries
- Optimize tables
- Assign suitable memory allocations
- Set values for system variables that affect performance
- Use benchmarking tool

Session 2: MARIADB PERFORMANCE TUNING TOOLS

- Tools that can assist with performance tuning
- The Information Schema
- Performance-related SHOW Commands to collect data for tuning
- Tools that can be used to benchmark databases
- Common benchmarks to use
- The BENCHMARK() function
- The mariadb-slap client load emulator
- Use session status variables to determine statement usage
- Use SHOW PROFILE to profile queries
- Obtaining performance information through the Performance Schema
- Obtaining performance information through the SYS Schema

Session 3: STATEMENT TUNING

- Overview of Statement Tuning
- Identifying and improve problem queries
- The Optimizer
- Understand the output from the Explain command
- Monitor queries using the Information Schema Processlist table
- Optimization strategies
- Optimizations for derived tables
- Filesort with small LIMIT optimization
- Limit rows examined
- Query limits and timeouts
- Abort statements that exceed a specific time to execute

Session 4: INDEXES

- An overview of MariaDB indexes
 - Types of MariaDB indexes
 - Make efficient usage of indexes
 - Assess the size of an Index
 - Resolve queries without accessing some tables referred to in the query
 - Force query plans using index hints
 - Find rows in a table using named indexes
 - Ignore indexes using an index hint
 - How indexes impact table joins
 - InnoDB Cached Indexes Information
- MariaDB Performance ; Tuning Training Course Course Contents - DAY 2

Session 5: SERVER CONFIGURATION AND MONITORING

- Set suitable values for server configuration variables
- Use server status variables to monitor performance
- Use table caching
- Store key distributions for a table with the ANALYZE TABLE command
- Reclaim unused space and defragment data with the OPTIMIZE TABLE command
- Use multi-threading
- Solve connection issues
- Query Cache

Session 6: THE INNODB ENGINE

- Transactions
- Monitoring InnoDB locks in MariaDB
- MariaDB disable deadlock detection
- Monitor the performance of the InnoDB engine
- Set and monitor caches and buffers
- Configuring data files for performance
- Configuring the log files for performance

Session 7: OVERVIEW OF CLUSTERING AND PERFORMANCE

- Advantages Performance Advantages of Clustering
- Performance Issues and Clustering
- The Galera Cluster
- The Percona XtraDB Cluster
- The FederatedX Engine

Session 8: DUMPING AND LOADING DATA

- SQL statements versus delimited data
- Parameters affecting dump performance
- Parameters affecting load performance
- Exercises: Dump and load performance

Session 9: PARTITIONING TABLES FOR PERFORMANCE

- The concept of partitioned tables
- How partitioning can improve performance
- Hash partitioning
- Key partitioning
- List partitioning
- Composite partitioning or subpartitioning
- Partition Pruning
- Adding,dropping and coalescing partitions
- Convert a non-partitioned table to a partitioned table

Más información:

Para más información o para reservar tu plaza llámanos al (34) 91 425 06 60

info.cursos@globalknowledge.es

www.globalknowledge.com/es-es/

Global Knowledge Network Spain, C/ Retama 7, 6ª planta, 28045 Madrid