MySQL Performance & Tuning

Cursusduur: 2 Dagen **Cursuscode: MYSDBAPT**

Beschrijving:

MySQL Performance & Tuning Course Overview

English - Please note this course is only available in English.
Nederlands - Let op: deze training is alleen in het Engels beschikbaar.
Français - Veuillez noter que ce cours est uniquement disponible en anglais.
This MySQL Performance & Tuning course is designed for Database Administrators,Application Developers and Technical Consultants who

Doelgroep:

Who will the Course Benefit?

Doelstelling:

- Course Objectives
- To provide the skills necessary to monitor and tune MySQL database performance.

Vereiste kennis en vaardigheden:

Delegates must have a working knowledge of MySQL Database Administration.

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

Vervolgcursussen:

Further Learning

- Apache Web Server

Cursusinhoud:

MySQL 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
- Resolving Performance Issues
- Recommended Approach to Tuning
- Items to Evaluate
- Where to look for performance issues
- Develop a monitoring and tuning plan
- Building a New Database for Performance
- Tuning an Existing Database for performance
- Set Suitable performance goals

Session 2: MYSQL PERFORMANCE TUNING TOOLS

- 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 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 MySQL 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 MySQL 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

Session 6: THE INNODB ENGINE

- Transactions
- Crash recovery with the innodb engine
- Effects of innodb locking on performance
- Monitoring InnoDB Locks in MySQL
- MySQL 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 FOR PERFORMANCE

- The Performance Advantages of Clustering
- Performance Issues and Clustering
- The NDB Cluster
- The Galera Cluster
- The Percona XtraDB Cluster
- MySQL InnoDB Cluster
- The Federated Engine

Session 8: OPTIMIZING THE PERFORMANCE OF DUMPING AND LOADING DATA

- SQL statements versus delimited data
- Parameters affecting dump performance
- Parameters affecting load performance

Session 9: PARTITIONING TABLES FOR PERFORMANCE

- The concept of partitioned tables
- How partitioning can improve performance
- Range partitioning
- 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

Nadere informatie:

Neem voor nadere informatie of boekingen contact op met onze Customer Service Desk 030 - 60 89 444

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