Course : MySQL, tuning

Practical course - 3d - 21h00 - Ref. MYT
Price : 1740 € E.T.

⭐⭐⭐⭐⭐ **5 / 5**

This training course will show you how to efficiently optimize your MySQL database servers and applications. You'll learn how to improve performance through server configuration, proper use of indexes, data organization and better SQL query writing.

🎯 Teaching objectives

At the end of the training, the participant will be able to:

- ✅ Understanding MySQL SDBG measurement and diagnostic tools
- ✅ Master application optimization techniques
- ✅ Analyze and optimize server and application performance
- ✅ Optimize relational schema and SQL queries

Intended audience
System administrators and database administrators.

Prerequisites
Good knowledge of MySQL administration or knowledge equivalent to that provided by the course "MySQL, administration" (ref. MSA).

Practical details
Hands-on work
Theoretical sequences alternate with practical work.

Course schedule

PARTICIPANTS
System administrators and database administrators.

PREREQUISITES
Good knowledge of MySQL administration or knowledge equivalent to that provided by the course "MySQL, administration" (ref. MSA).

TRAINER QUALIFICATIONS
The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS
The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

1 Introduction

- MySQL architecture.
- Choice of storage engine.
- Choice of data types.
- Standardization/denormalization.
- SQL statement processing.
- The INFORMATION_SCHEMA database.
- Statistics collection.

Hands-on work
Statistics collection, choice of data types.

2 Measurement and diagnostic tools

- Tracing and profiling.
- EXPLAIN command.
- Using the BLACKHOLE motor.
- Using MySQLslap.
- Logging and logging of slow requests.

Hands-on work
Profiling, use of the EXPLAIN command, MySQLslap tool, slow query log.

3 Data organization and indexing

- MyISAM tables. Internal architecture.
- Indexing of MyISAM tables.
- Faster searches with "Fulltext" indexes.
- Maintenance of MyISAM tables, troubleshooting.
- InnoDB transactional tables.
- Internal architecture of InnoDB tables. InnoDB table and index structure. Maintenance.
- Management of tablespace(s).
- Use of MEMORY tables. Partitioning.

Hands-on work
Use of Fulltext indexes and MEMORY tables. Compressing MyISAM tables.

4 Application optimization

- How the MySQL optimizer works.
- EXPLAIN tool and working drawings.
- Use of prepared instructions.
- Locking tables.
- Transactional operation and isolation levels (InnoDB).
- Using views.
- Optimize loading operations.

Hands-on work
Execution plans. Using prepared queries, optimizing data loading. Transactions and concurrency enhancement.

⑤ Server optimization

- Observation of server activity.
- Dynamic variables.
- Memory usage in MySQL.
- Query cache. Index cache.
- Optimization of the InnoDB and MyISAM engines.

Hands-on work
Use of query cache and index cache.

Dates and locations

REMOTE CLASS
2026 : 2 Mar., 18 May, 30 Sep.

PARIS LA DÉFENSE
2026 : 18 May, 30 Sep.