Microsoft Performance Tuning of T-SQL Queries

Seminarziel

The course makes participants familiar with the writing of optimal T-SQL queries. Participants acquire the skills to successfully monitor the T-SQL queries to identify difficult operations, to understand an execution plan, the usage of indexes and statistics. They will get a broader knowledge behind query optimization, like analyzing the causes of slow execution, caused by the query itself or another queries. This course will cover recommended guidelines for writing queries, as well as other alternatives to demanding query processing.

Upon successful completion of this course, students will be able to:

- Understand how query processing in SQL Server works
- Monitor the server for performance and query problems
- Analyse the causes of poor query performance
- Use indexes properly to make queries much faster
- Use full-text indexes for efficient querying of text data
- Rewrite queries for more effective execution
- Design application processing for performance
- Avoid the biggest mistakes by creating and using queries
- Describe built-in SQL Server alternatives to demanding query processing

Seminarinhalt

Query Processing Architecture
Query processing process . Execution plans . Compilation and recycling of execution plans .   SQL Server caches, their functionality and impact on overall performance . Factors affecting the performance of database on OS level - CPU, RAM, disks and others .

Monitoring of Queries and System Performance
Activity Monitor . Dynamic Management Views . SQL Profiler . Automated analysis of monitoring . Performance monitor . Data Collector, UCPs .

Query and Server Analysis
Analysis of queries, execution plans and resource consumption . Analysis and tuning indexes . Analysis of locking and blocking . Analysis of waiting and other resource issues .

Optimizing Queries
Guidelines for proper design of queries . Indexes in SQL Server and their usage . Acceleration of existing indexes . Removing bookmark lookups . Little known ways of using indexes . Quick searching in the text using the full-text indexes . Optimization of JOINs . Fast data synchronization using the MERGE operator . Other techniques of query refactoring .

Optimizing Application Processing
Minimizing blocking and deadlocks . Optimization of transactions . Hints .
 Minimizing operations in tempdb .   SQL Server Performance Killers .
 Optimization of the entire workload . Optimization Checklist .
 Recommendations from the practice .

Alternatives to T-SQL Processing
Analysis and aggregation – SQL Server Analysis Services . Transfer and transformation of data – SQL Server Integration Services . Massively parallel processing – StreamInsight .

Zielgruppe

Developers and database administrators, which need to write their T-SQL queries efficiently, and are interested just in their proper design and efficient execution, or just want to use optimization techniques from the development

point of view.

Fundamentals of SQL querying.

Preis auf Anfrage

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