

Hands-on course , 4
day(s)
Ref : SQS

Participants

SQL Server DBAs, project managers having to drive developments with high volumes (data, access ...) and developers facing response time problems

Pre-requisites

Good knowledge of RDBMS data modeling concepts, SQL Server, Transact SQL and SQL languages. Basic knowledge of Windows operating systems

Next sessions

SQL Server Tuning

OBJECTIVES

This course provides an introduction to rational and efficient optimization of SQL Server databases for complex or high volume applications. It covers SQL Server 2000 to 2008 versions

[1\) Model and data](#)

[2\) Hardware optimization](#)

[3\) SQL Server settings](#)

[4\) Writing and reading data](#)

1) Model and data

- Importance of data type, schema design, keys content.
- Modeling methods depending on data volume
- Using constraints and triggers
- Data quality and redundancy management.

Exercise

Comparison between two models with identical data

2) Hardware optimization

- Processors and parallelism management
- RAM configuration
- Windows 32 Bits vs Windows 64 Bits comparison
- Choosing Hard Disk: RAID, SAN, etc...
- Network infrastructure : best practices

Exercise

Measuring physical I/O using « Perfmon » tool

3) SQL Server settings

- Installation considerations : OS, SQL Server, sessions, etc... Auditing server with « Perfmon » tool
- Managing quotas on Resources

Exercise

Retrieving server information using SQL queries and « Perfmon » tool

4) Writing and reading data

- Storage engine and buffer cache
- Checkpoint and LazyWriter
- Organization of tables and indexes taking into account data volume
- Transactions, logs and isolation level
- Files organization

Exercise

Creating a multi files database and migrating data