

MS SQL 2008

Getting started

SQL Lecture 1

Ch 01-03 | Hotek, 2008



Lecture overview

- Admin of practical classes
- Access to MS SQL 2008 R2
 - Sample databases
- Installing and configuring MS SQL 2008
- Important features of MS SQL 2008
- T-SQL



Admin of Practical Classes

- Self-register into a group
- MS SQL theory given in week (+ exercise)
- 2 hour practical sessions
 - First 30 minutes – discussion & overview
 - Rest of session - helping students with current practical and mark the previous practical exercise
 - For example, during practical 2, the work from practical 1 will be marked
 - For example, during practical 3, the work from practical 2 will be marked etc, etc, etc
 - Do not take chance is thinking that you will quickly finish the work during a practical session in which it will be marked. If found, you will receive zero
 - Use the time that is available to do your work. It will be beneficial during tests and exams by staying up to date with work and keeping up with scheduled work.



Access to MS SQL 2008 R2

- The software is available for download via ClickUP
 - Accompanying sample database AdventureWorks2008 updated available as well
 - Download and install onto your computers










Why the choice of MS SQL 2008

- Ease of use (and therefore)
- Familiarity in growing and emerging markets
 - South Africa
- Increasing backward and forward compatibility with Microsoft applications
- The incorporation of easy to use and adapt Business Intelligence suite of applications



Key features of MSSQL2008

Icon	Feature
	Database Engine: The core service for storing, processing and <u>securing</u> data.
	Analysis Services – Multidimensional Data: Offer support for Online Analytical Processing (OLAP) which allow multidimensional structures that contain aggregated data
	Analysis Services - Data Mining: Enable data mining models using a wide variety of industry-standard algorithms.
	Integration Services: A platform for building high performance data integration solutions for data warehousing.
	Replication: A set of technologies for copying and distributing data and database objects from one database to another, and then synchronizing between databases to maintain consistency.
	Reporting Services: Delivers enterprise, web-enabled reporting
	SQL Server Service Broker: For developers to build scalable, secure database applications e.g. message-based communication



Installing MS SQL 2008 R2

- Hardware (Minimum Specifications)
 - Windows XP Professional SP2 and higher
 - 2GB RAM
 - 4GB free disk space
- Follow download link on ClickUP
 - MS SQL 2008 R2 Enterprise Server edition (this is an ISO image which needs to be mounted - Daemon Lite)
 - AdventureWorks2008 sample databases
- Follow instructions on Page 18 (Hotek, 2008)
- During installation, ensure you write down all usernames, passwords and instances
 - Both default and user-defined



Important definitions

- Instance
 - Defines the container for all operations with SQL server
- SQL Server Management Studio (SSMS)
 - The integrated management environment for accessing, configuring, managing, administering, and developing all components of SQL Server



Documentation - Help

- Books Online
 - Press F1 while in SQL Server Management Studio
 - Configure the Help and Documentation function
- Also download AdventureWorks2008
 - This is a sample database with a fully loaded database



Introduction to SQL

- SQL functions fit into two broad categories:
 - Data definition language
 - Data manipulation language
- Basic command set has vocabulary of fewer than 100 words
- American National Standards Institute (ANSI) prescribes a standard SQL
- Several SQL dialects exist



T-SQL

- MS SQL Server is operated using Transact-SQL (T-SQL) statements to it



T-SQL Basic Conventions

Convention	Used for
UPPERCASE	Transact-SQL keywords.
<i>italic</i>	User-supplied parameters of Transact-SQL syntax.
(vertical bar)	Separating syntax items within brackets or braces. You can choose only one of the items.
[] (brackets)	Optional syntax items. Do not type the brackets.
{ } (braces)	Required syntax items. Do not type the braces.
[,... <i>n</i>]	Indicating that the preceding item can be repeated <i>n</i> number of times. The occurrences are separated by commas.
[... <i>n</i>]	Indicating that the preceding item can be repeated <i>n</i> number of times. The occurrences are separated by blanks.
bold	Database names, table names, column names, index names, stored procedures, utilities, data type names, and text that must be typed exactly as shown.
<label> ::=	The name for a block of syntax. This convention is used to group and label portions of lengthy syntax or a unit of syntax that can be used in more than one place within a statement. Each location in which the block of syntax can be used is indicated with the label enclosed in chevrons: <label>.



Next week

- Creating Databases | Chapter 04
- Designing Tables | Chapter 05