

KOENIG SOLUTIONS · COURSE OUTLINE

SQL Server with Management Studio

Learn to build, administer and query SQL Server databases and integrate them with Business Intelligence tools using Management Studio.

6

MODULES

46

TOPICS

COURSE OVERVIEW

This course covers the SQL Server suite of products and its component tools, followed by building relational databases, defining tables and applying constraints in Management Studio. It then addresses server programmability, including retrieving and modifying data with Transact-SQL and creating stored procedures, functions and triggers. Administration topics cover maintenance plans, automated jobs, monitoring and security, before the course moves to integrating SQL Server with Office applications and other external data sources. Finally, it introduces Business Intelligence solutions using Integration Services, Reporting Services and Analysis Services.

WHO THIS COURSE IS FOR

Database Administrators

Database Developers

Business Intelligence Developers

Report Developers

Data Analysts

LEARNING OBJECTIVES

- Describe the SQL Server suite of products and component tools
- Build relational databases, tables and schemas in Management Studio
- Apply constraints such as primary keys, foreign keys and check constraints
- Retrieve and modify data using Transact-SQL commands
- Develop stored procedures, user-defined functions and triggers
- Plan database maintenance, automation and monitoring tasks
- Configure security through logins, roles and permissions
- Integrate SQL Server with Excel, Access and Business Intelligence tools

6 Modules, 46 Topics

01

Introducing SQL Server

OVERVIEW OF THE SQL SERVER SUITE OF PRODUCTS

- Fundamentals of the relational database engine
- Benefits of the Business Intelligence stack

SQL SERVER COMPONENTS AND TOOLS

- SQL Server Agent and Management Studio
- Integration Services
- Analysis Services
- Reporting Services
- Data Quality Services
- Master Data Services

02

Building the Database

CONSTRUCTING A RELATIONAL DATABASE

- Choosing optimal file size and growth parameters
- Working with database schemas

DEFINING TABLES

- Specifying appropriate data types
- Indexing tables with Management Studio
- Adding, modifying or removing columns

SAFEGUARDING DATA WITH CONSTRAINTS

- Enforcing uniqueness through primary key constraints
- Validating conditions with check constraints
- Protecting relationships with foreign keys

03

Leveraging Server Programmability

RETRIEVING DATA WITH TRANSACT-SQL

- Employing Query Designer to construct select statements
- Retrieving subsets of data from multiple tables using joins and the where clause criteria
- Analyzing data for aggregate functions

MODIFYING DATA WITH SQL COMMANDS

- Inserting new rows into tables
- Updating targeted data
- Deleting specific rows

INTRODUCTION OF DEVELOPING PROGRAMMING CONSTRUCTS

- Creating stored procedures for productivity
- Writing user-defined functions to simplify queries
- Deploying triggers to capture change events

04

Administering SQL Server Databases

EXECUTING THE MAINTENANCE PLAN WIZARD

- Defragmenting data and checking database integrity
- Improving performance by rebuilding indexes

AUTOMATING ADMINISTRATIVE TASKS

- Scheduling repeating jobs
- Implementing a backup strategy

MONITORING SQL SERVER RESOURCES

- Displaying current activity and expensive queries
- Running reports with Management Studio

SECURING THE DATABASE INFRASTRUCTURE

- Authenticating SQL Server and Windows logins
- Assigning users to database and server roles
- Granting or revoking permissions

05

Integrating External Applications

CONNECTING TO MICROSOFT OFFICE

Pulling data from SQL Server into Excel · Creating a front-end interface with Access

TRANSFERRING BUSINESS INFORMATION

Importing and exporting data from text files · Migrating an Access database to SQL Server

06

Implementing Business Intelligence Solutions

EXTRACTING DATA WITH INTEGRATION SERVICES

- Transforming and cleaning data
- Loading data into a data warehouse

INFORMATION DELIVERY WITH REPORTING SERVICES

- Designing reports quickly with the Report Builder
- Deploying reports for centralized access

AGGREGATING DATA WITH ANALYSIS SERVICES

- Building multidimensional cubes
- Predicting trends with data mining

DEVELOPING A BUSINESS INTELLIGENCE STRATEGY

- Leveraging Excel and Power Pivot
- Transferring data into knowledge with BI functionality

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

Visit koenig-solutions.com

✉ info@koenig-solutions.com