

ExecuTrain Course Outline

Course 40009A:

Updating your Business Intelligence Skills to Microsoft SQL Server 2012

3 Days

About this Course

This three-day instructor-led course provides existing SQL Server Business Intelligence (BI) professionals with the knowledge and skills to use new and enhanced BI capabilities in SQL Server 2012.

Audience Profile

This course is intended for BI professionals with experience of using SQL Server 2008 R2.

At Course Completion

After completing this course, students will be able to:

- Describe key new and enhanced features for BI in SQL Server 2012.
- Use new and enhanced features in SQL Server Integration Services.
- Manage data quality by using SQL Server Data Quality Services.
- Manage master data by using new and enhanced features of SQL Server Master Data Services.
- Use new and enhanced features of SQL Server Reporting Services.
- Create tabular data models with PowerPivot and DAX.
- Implement a tabular data model in SQL Server Analysis Services.
- Use Power View to create interactive data visualizations.
- Integrate Microsoft cloud technologies into a BI solution.

Pre-requisites

Before attending this course, students must have:

- Experience of creating database solutions in SQL Server, including basic Transact-SQL programming.
- Familiarity with data warehousing and BI solutions, including extract, transform, and load (ETL), data modeling, and reporting.

Course Outline

Module 1: Introduction to SQL Server 2012 for Business Intelligence

This module provides an overview of how SQL Server 2012 can be used to build BI solutions.

Lessons

- Overview of SQL Server 2012 for Business Intelligence
- SQL Server 2012 for Enterprise Integration Management
- SQL Server 2012 for Data Warehousing
- SQL Server 2012 for Data Analysis and Reporting

After completing this module, students will be able to:

- Describe the role of SQL Server in a BI solution.
- Describe features of SQL Server 2012 that support enterprise information management.
- Describe features of SQL Server 2012 that support data warehousing.
- Describe features of SQL Server 2012 that support data analysis and reporting.

Module 2: New and Enhanced Features in SQL Server Integration Services

This module describes the new and enhanced features in SQL Server Integration Services that can be used to create an ETL solution to load a data warehouse.

Lessons

- Using the CDC Control Task for Incremental Data Loads
- Deploying and Operating SSIS Packages

Lab: Using SQL Server Integration Services

- Extracting Modified Data
- Deploying and Operating an SSIS Project
- After completing this module, students will be able to:
- Use the CDC Control task to perform incremental data extractions in an ETL solution.
- Deploy and operate an SSIS project.

Module 3: Data Quality Services

This module provides an introduction to SQL Server Data Quality Services, and teaches you how to build knowledge based data quality solutions for cleansing and matching data.

Lessons

- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data

Lab: Cleansing Data

- Creating a DQS Knowledge Base
- Using a DQS Project to Cleanse Data
- Using DQS in an SSIS Package

Lab: Deduplicating Data

- Creating a Matching Policy
- Using a DQS Project to Match Data

After completing this module, students will be able to:

- Describe how Data Quality Services can help you manage data quality.
- Use Data Quality Services to cleanse data.
- Use Data Quality Services to match data.

Module 4: Master Data Services

This module provides an introduction to master data management with SQL Server 2012 Master Data Services.

Lessons

- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Managing Master Data
- Creating a Master Data Hub

Lab: Implementing Master Data Services

- Creating a Master Data Services Model
- Using the Master Data Services Add-in for Excel
- Enforcing Business Rules
- Loading Data into a Model
- Consuming Master Data Services Data

After completing this module, students will be able to:

- Describe key Master Data Services concepts.
- Implement a Master Data Services model.
- Use Master Data Services tools to manage master data.
- Use Master Data Services tools to create a master data hub.

Module 5: SQL Server 2012 Reporting Services

This module provides an introduction to new and enhanced features in SQL Server 2012 Reporting Services.

Lessons

- Reporting Services Overview
- Reporting Services and Microsoft SharePoint Server
- Introduction to Data Alerts

Lab: Using SQL Server 2012 Reporting Services

- Viewing SharePoint Mode Configuration
- Authoring, Publishing, and Viewing a Report
- Creating and Managing Data Alerts

After completing this module, students will be able to:

- Describe the key capabilities of Reporting Services.
- Install and configure Reporting Services in SharePoint Mode.
- Use data alerts to notify users of changes to report data.

Module 6: Creating Tabular Data Models with PowerPivot

This module provides an introduction to new and enhanced features in PowerPivot.

Lessons

- Introduction to Tabular Data Models and PowerPivot Technologies
- Using PowerPivot
- Using DAX in a PowerPivot Data Model

Lab: Using PowerPivot for Excel

- Creating a Tabular Data Model by Using PowerPivot for Excel
- Using a Tabular Data Model in Excel
- Sharing a PowerPivot Workbook to PowerPivot Gallery

Lab: Creating Calculated Columns and Measures

- Creating Calculated Columns
- Creating Measures

After completing this module, students will be able to:

- Describe the key features and benefits of tabular data models and PowerPivot technologies.
- Create a PowerPivot for Excel workbook.
- Share a PowerPivot for Excel workbook to PowerPivot Gallery and use a PowerPivot for Excel workbook as a data source.

Module 7: Implementing an Analysis Services Tabular Data Model

This module describes how to create tabular Analysis Services databases.

Lessons

- Introduction to Analysis Services Tabular Data Model Projects
- Developing an Analysis Services Tabular Data Model

Lab: Working with an Analysis Services Tabular Data Model

- Creating an Analysis Services Tabular Data Model Project
- Implementing a Perspective
- Implementing Partitions
- Deploying an Analysis Services Tabular Data Model
- Using a Tabular Data Model
- Configuring DirectQuery Storage Mode
- Implementing Security in a Tabular Data Model

After completing this module, students will be able to:

- Describe Analysis Services tabular data model projects.
- Implement an Analysis Services tabular data model by Using SQL Server Data Tools.

Module 8: Creating Data Visualizations with Power View

This module provides an introduction to Power View, and describes how it can be used to create interactive data visualizations.

Lessons

- Introduction to Power View
- Visualizing Data with Power View

Lab: Creating Interactive Reports with Power View

- Configuring a Tabular Data Model for Power View
- Creating a Simple Power View Report
- Using Interactive Visualizations
- Creating a Scatter Chart and a Play Axis
- Exporting a Power View Report to PowerPoint

After completing this module, students will be able to:

- Describe the Power View and its place in the BI ecosystem.
- Create data visualizations by using Power View.

Module 9: Using Cloud Technologies in a BI Solution

This module introduces Microsoft cloud technologies that can be used in a BI solution.

Lessons

- Overview of Cloud Data Sources
- SQL Azure
- SQL Azure Reporting Services
- The Windows Azure Marketplace DataMarket

Lab: Using Cloud Data in a BI Solution

- Creating a SQL Azure Solution
- Extracting Data from SQL Azure
- Obtaining Data from the Windows Azure Marketplace DataMarket

After completing this module, students will be able to:

- Describe cloud data scenarios.
- Use SQL Azure.
- Use SQL Azure Reporting Services.
- Use the Windows Azure Marketplace DataMarket.