SQL Server 2016 Business Intelligence Application Development (SSRS, SSIS, SSAS)

Duration: 5 Days *(Face-to-Face & Remote-Live)*, or 35 Hours *(On-Demand)*

Price: $2495 *(Face-to-Face & Remote-Live)*, or $895 *(On-Demand)*

Discounts: We offer multiple discount options. Click here for more information.

Delivery Options: Attend face-to-face in the classroom, remote-live or via on-demand training.

Description

SQL Server Reporting Services 2016 contains significant new functionality and improvements over its predecessors including the new Reporting Services Web portal, support for mobile reports and dashboards, a new HTML5 rendering engine and exciting new report design enhancements.

All reports are developed utilizing SQL Server Data Tools (SSDT), however the new 2016 Report Designer is also introduced. Students will complete hands-on exercises creating a number of reports including table-based, cross tabular and forms based designs. Reports utilizing the newly designed charts, gauges, KPIs, spark lines, data bars and tree maps will be built. Exercises will incorporate the use of report parameters and features such as drill down, interactive sorting, hyperlinks, book marks and report maps.

Consuming data from relational, multi-dimensional and the new tabular data sources will be incorporated into report designs. Students will become familiar with report deployment to the new Reporting Service Web Portal (replaced Report Manager) and learn how to use portal the management tools to configure report caches, snapshots and subscriptions. Instruction and practice in designing report security to insure protection of enterprise data will be provided.

The student will gain experience with the new Report Services Web portal, which enables publishing content other than paginated reports, such as Excel and Power BI. Students will also learn how to include KPIs (Key Performance Indicators) directly from a shared data set.

One day is reserved for SQL Server Integration Services (SSIS). Students will learn the

basics of creating SSIS packages using SQL Server Data Tools to create Extract Transform and Load solutions used to populate data warehouses and marts.
In the final day, based on a populated data warehouse they have created, students will then learn how to develop an SQL Server Analysis Services (SSAS) multidimensional (cube) model using Multidimensional Expressions (MDX) syntax. Cubes will be customized to include Key Performance Indicators (KPIs), Calculated Members, Named Sets, Navigational Hierarchies, and Perspectives. Also, a brief introduction to the SSAS Tabular module will be provided.

Students only interested in SSRS coverage should sign up for the 3-day SQL Server 2016 Reporting Services course.

Students interested in SSRS coverage and extended coverage of SSIS and SSAS should instead sign up for the SQL Server 2016 Reporting Services course followed by the SQL Server 2016 Business Intelligence: Integration Services and Analysis Services course, which provides 5-days of coverage for SSIS and SSAS capabilities. An 8-day training pass is available for $3,290.

Prerequisites

Familiarity with database concepts, Windows desktop navigation and software installation techniques. Attendance at SST's SQL Programming course or Microsoft Transact-SQL Programming course is highly recommended although not required.

Course Overview

Reporting Services Architecture

- Defining the Report Server Components
- Reviewing the Report Server Databases
- Managing the Report Server Web Portal
- Creating Mobile Reports and Dashboards
- Report Lifecycle Step by Step

Creating Basic Reports

- Creating Table Reports
- Formatting Options
- Adding Headers and Footers
- Using Subtotals and Formulas
- Adding Charts and Gauges
- Using Lists for Free-Form Reports
- Paging and Sorting
- Managing Data Sources
- Adding Key Performance Indicators (KPIs)

Advanced Report Features

- Setting Up Input Parameters
- Adding Custom Report Navigation
- Adding Drill-Down for Master-Detail Reports
- Linking Reports
- Using Sub-reports

Matrix Reports

- Pivoting Data with Matrix Controls
- Adding Multiple Data Regions
- Grouping and Sorting
- Adding Subtotals
- Adding Custom Aggregate Formulas
- Using the Tablix object

- Adding Conditional Formatting

Implementing BI Semantic Model

- Understanding Multi-dimensional Models
- Using Tabular Models
- Creating MDX Data Sources and Data Sets

Report Designer

- Creating Reports with Report Designer
- Adding Charts and Gauges in Report Designer
- Differences Between SQL Server Data Tools and Report Builder

Reporting Services Security

- Organizing Reports in Folders
- Setting Permissions on Reports and Folders
- Managing Security Roles
- Securing Data Sources and Report Models
- Logging Activity on the Report Server

Automating Report Creation and Delivery

- Creating Snapshot Reports
- Storing Previous Versions of Reports
- Caching Reports to Improve Performance
- Defining Subscriptions to Automate Report Delivery
- Rending Reports in Excel, MS Word or as a PDF
- Hiding Reports from Users

Adding Custom Code

- Querying the Report Server
- Creating Custom Data Extensions
- Creating Command Objects
- Creating Data Reader Objects
- Generating Report Definition Language

.NET Integration with Reporting Services

- Writing User-Defined Functions in .NET
- Using Custom Functions
- Referencing .NET Libraries
- Managing Report Servers from .NET Applications
    - Accessing SSRS from .NET Applications
    - Retrieving Report Items
    - Listing Report Metadata

Introduction to SSIS

- Overview of Integration Services
- Introducing SSIS Tasks and Transformations
- Using the Advanced Features including Variables, Parameters and Containers
- Implementing Event Handling and Error Trapping
- Deploying and Scheduling SSIS Projects and Packages

Introduction to SSAS

- Understanding the BI Semantic Model
- Creating Multidimensional Data Models (Cubes)
- Introduction to Multidimensional Expressions (MDX)
- Customizing Multidimensional Models
- Deploying and Processing Multidimensional Models

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