

20467 - Designing Self-Service Business Intelligence and Big Data Solutions

Duration: 5 days

Overview:

This five-day instructor-led course teaches students how to implement self-service Business Intelligence (BI) and Big Data analysis solutions using the Microsoft data platform. The course discusses the rationale for self-service BI, and describes how to use Microsoft SQL Server Reporting Services, Microsoft Excel, Microsoft SharePoint Server, and Microsoft Office 365 Power BI to create self-service data models and reports. The course then goes on to describe how to use Windows Azure HDInsight to perform Big Data analysis.

Note: This course is designed for customers who are interested in learning SQL Server 2012 or SQL Server 2014. It covers the new features in SQL Server 2014, but also the important capabilities across the SQL Server data platform.

Target Audience:

The primary audience for this course is database and business intelligence (BI) professionals who are familiar with data warehouses and enterprise BI solutions built with SQL Server technologies. Experienced data analysts who want to learn how to use Microsoft technologies for self-service analysis and reporting will also benefit from attending this course.

Pre-requisites:

Before attending this course, students must have:

- Knowledge of data warehousing and data modeling principles.
- Familiarity with Microsoft Excel and Microsoft SharePoint Server 2013.

Module 1: Planning a BI Solution

Lessons

- Elements of a BI Solution
- Planning a BI Project
- The Microsoft BI Platform

Lab : Planning BI Solutions

Module 2: Planning BI Infrastructure

Lessons

- Considerations of BI Infrastructure
- Planning Data Warehouse Hardware

Lab : Planning BI Infrastructure

Module 3: Designing a Data Warehouse

Lessons

- Data Warehouse Design Overview
- Designing Dimension Tables
- Design FACT tables

Lab : Designing a Data Warehouse Logical Schema

Module 4: Designing an ETL solution

Lessons

- ETL Overview
- Planning for Data Extraction
- Planning for Data Transformations
- Planning for Data Loading

Lab : Designing an ETL Solution

Module 5: Designing Analytical Data Models

Lessons

- Introduction to Analytical data Models
- Designing Analytical Data Models

Lab : Designing Analytical Data Mode

Lab : Designing Dimensions and Hierarchies

Module 6: Planning a BI Delivery Solution

Lessons

- Considerations for BI delivery
- Common Reporting Scenarios
- Choosing a Reporting Tool

Lab : Planning a BI Delivery Solution

Module 7: Designing a Reporting Services Solution

Lessons

- Planning a Reporting Solution
- Designing Reports
- Planning Report Consistency

Lab : Designing a Reporting Services Solution

Module 8: Designing an Excel Based reporting Solution

Lessons

- Using Excel for Data Reporting and Analysis
- PowerPivot in Excel
- Power View in Excel

Lab : Designing and Excel Reporting Solution

Module 9: Planning a SharePoint Server BI Solution

Lessons

- Introduction to SharePoint Server as a BI Platform
- Planning Security for a SharePoint Server BI Solution
- Planning Reporting Services Configuration
- Planning PowerPivot Configuration
- Planning for PerformancePoint Services

Lab : Implementing a SharePoint Server BI Solution

Lab : Implementing PerformancePoint Services

At Course Completion:

After completing this course, students will be able to:

- Describe key features and benefits of self-service BI.
- Use SQL Server Reporting Services to implement a self-service reporting solution.
- Use PowerPivot in Microsoft Excel to create analytical data models.
- Use Power Query in Microsoft Excel to import data into a data model.
- Use Power View in Microsoft Excel to create interactive data visualizations.
- Use Power Map in Microsoft Excel to create geographic data visualizations.
- Use Microsoft SharePoint Server to implement collaborative self-service BI solutions.
- Provision and use a Windows Azure HDInsight cluster for Big Data analysis.
- Use Pig and Hive to analyze big data in Windows Azure HDInsight.
- Design and implement Big Data processes to support self-service BI.

Module 10: Monitoring and Optimizing a BI Solution

Lessons

- Overview of BI Monitoring
- Monitoring and Optimizing the Data Warehouse
- Monitoring and Analyzing Analysis Services
- Monitoring and Optimizing Reporting Services

Lab : Monitoring and Optimizing a BI Solution

Module 11: Operating a BI Solution

Lessons

- Overview of BI Operations
- ETL Operations
- Data Warehouse Operations
- Analysis Services Operations
- Reporting Services Operations

Lab : Operating a BI Solution