MOC 20467 D Designing Business Intelligence Solutions with Microsoft SQL Server 2014

Course Summary

Description

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.

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.

Objectives

At the end of 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.

Topics

- Planning a BI Solution
- Planning BI Infrastructure
- Designing a Data Warehouse
- Designing an ETL Solution
- Designing Analytical Data Models
- Planning a BI Delivery Solution
- Designing a Reporting Services Solution
- Designing an Excel-Based Reporting Solution
- Planning a SharePoint Server BI Solution
- Monitoring and Optimizing a BI Solution
- Operating a BI Solution

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.

Prerequisites

This course requires that you meet the following prerequisites:

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

Duration

Five days
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Course Outline

I. Planning a BI Solution
This module enables students to plan the components of a BI Solution.
   A. Elements of a BI Solution
   B. Planning a BI Project
   C. The Microsoft BI Platform
Lab : Planning a BI Solution

II. Planning BI Infrastructure
This module describes how to plan an appropriate BI infrastructure given a set of BI parameters.
   A. Considerations for BI Infrastructure
   B. Planning Data Warehouse Hardware
Lab : Planning a BI Infrastructure

III. Designing a Data Warehouse
This module describes how to design a data warehouse for a given set of user requirements.
   A. Data Warehouse Design Overview
   B. Designing Dimension Tables
   C. Designing Fact Tables
Lab : Designing a Data Warehouse Logical Schema

IV. Designing an ETL Solution
This lesson describes how to design an extract, transform and load (ETL) solution.
   A. ETL Overview
   B. Planning for Data Extraction
   C. Planning for Data Transformation
   D. Planning for Data Loads
Lab : Designing an ETL Solution

V. Designing Analytical Data Models
This module describes how to design analytical data models for specific BI scenarios.
   A. Introduction to Analytical Data Models
   B. Designing an Analytical Data Model
Lab : Designing Analytical Data Models
Lab : Designing Dimensions and Hierarchies

VI. Planning a BI Delivery Solution
This module describes how to choose an appropriate delivery solution for a given scenario.
   A. Considerations for Delivering BI
   B. Common Reporting Scenarios
   C. Choosing a Reporting Tool
Lab : Planning a BI Delivery Solution

VII. Designing a Reporting Services Solution
This module describes how to design a Reporting Services solution.
   A. Planning a Reporting Services Solution
   B. Designing Reports
   C. Planning Report Consistency
Lab : Designing a Reporting Services Solution

VIII. Designing an Excel-Based Reporting Solution
In this module students will learn how to design a reporting solution using Excel.
   A. Using Excel for Data Reporting and Analysis
   B. PowerPivot in Excel
   C. Power View in Excel
Lab : Designing an Excel Reporting Solution
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Course Outline (cont’d)

IX. Planning a SharePoint Server BI Solution
This module introduces the use of SharePoint Server as a BI solution.
A. Introduction to SharePoint Server as a BI Platform
B. Planning Security for a SharePoint Server BI Solution
C. Planning Reporting Services Configuration
D. Planning PowerPivot Configuration
E. Planning for PerformancePoint Services
Lab : Implementing a SharePoint Server BI Solution
Lab : Implementing a PerformancePoint Services

X. Monitoring and Optimizing a BI Solution
At the conclusion of this module you will be able to optimize and monitor a BI solution.
A. Overview of BI Monitoring
B. Monitoring and Optimizing the Data Warehouse
C. Monitoring and Optimizing Analysis Services
D. Monitoring and Optimizing Reporting Services
Lab : Monitoring and Optimizing a BI Solution

XI. Operating a BI Solution
At the conclusion of this module you will be able to plan management and maintenance operations of a BI solution.
A. Overview of BI Operations
B. ETL Operations
C. Data Warehouse Operations
D. Analysis Services Operations
E. Reporting Services Operations
Lab : Operating a BI Solution