



20467 Designing Business Intelligence Solutions with Microsoft SQL Server

Price: \$2,295

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Length: 35 Hours (5 days)
Introduction: This five-day instructor-led course teaches students how to design and implement a BI infrastructure. The course discusses design, installation, and maintenance of a BI platform.

Target Audience: This course is intended for BI professionals such as BI Architects or database professionals who need to design BI solutions. BI Architects are responsible for the overall design of the BI infrastructure, including how it relates to other data systems in use. In addition, their responsibilities include Online Analytical Processing (OLAP) cube design and integration with Microsoft SharePoint or line-of-business applications.

Prerequisites: Before attending this course, students must have:

- A basic understanding of dimensional modeling (star schema) for data warehouses.
- The ability to create Integration Services packages that include control flows and data flows.
- The ability to create a basic multidimensional cube with Analysis Services.
- The ability to create a basic tabular model with PowerPivot and Analysis Services.
- The ability to create Reporting Services reports with Report Designer.
- The ability to implement authentication and permissions in the SQL Server database engine, Analysis Services, and Reporting Services.
- Familiarity with SharePoint Server and Microsoft Office applications, particularly Excel.

Objectives: After completing this course, students will be able to:

- Plan the components of a BI solution.
- Plan a BI infrastructure.
- Design a data warehouse.
- Design an ETL solution.
- Plan analytical data models.
- Plan a BI delivery solution.
- Design a Reporting Services solution.
- Design an Excel reporting solution.
- Plan a SharePoint Server BI solution.
- Monitor and optimize a BI solution.
- Plan for BI operations.



Course Outline

I. Planning a BI Solution

- A. Elements of a BI Solution
- B. The Microsoft BI Platform
- C. Planning a BI Project

II. Planning SQL Server Business Intelligence Infrastructure

- A. Considerations for BI Infrastructure
- B. Planning Data Warehouse Hardware

III. Designing a Data Warehouse

- A. Data Warehouse Design Overview
- B. Designing Dimension Tables
- C. Designing Fact Tables
- D. Designing a Data Warehouse Physical Implementation

IV. Designing an ETL Solution

- A. ETL Overview
- B. Planning Data Extraction
- C. Planning Data Transformation
- D. Planning Data Loads

V. Designing Analytical Data Models

- A. Introduction to Analytical Data Models
- B. Designing an Analytical Data Model
- C. Designing Dimensions
- D. Enhancing Data Models

VI. Planning a BI Delivery Solution

- A. Considerations for Delivering BI
- B. Common Reporting Scenarios
- C. Choosing a Reporting Tool

VII. Designing a Reporting Services Solution

- A. Planning a Reporting Services Solution
- B. Designing Reports
- C. Planning Report Consistency

VIII. Designing a Microsoft Excel-Based Reporting Solution

- A. Using Excel for Data Analysis and Reporting
- B. PowerPivot for Excel
- C. Power View for Excel

IX. Planning a SharePoint Server 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

X. Monitoring and Optimizing 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

XI. Operating a BI Solution

- A. Overview of BI Operations
- B. ETL Operations
- C. Data Warehouse Operations
- D. Analysis Services Operations
- E. Reporting Services Operations