



Designing Business Intelligence Solutions with Microsoft SQL Server

Course 20467D 5 Days Instructor-led, Hands-on

Introduction

This five-day instructor-led course teaches business intelligence architects how to plan and design 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 in the design of self-service data models and reports. Finally, the course covers monitoring, optimizing and operating BI solutions.

At Course Completion

After completing this course, students will be able to:

- Plan a BI solution and infrastructure
- Design a data warehouse
- Design an ETL solution
- Design analytical data models
- Plan a BI delivery solution
- Design a reporting services solution
- Design an Excel based reporting solution
- Plan a SharePoint server BI solution
- Monitor and optimize a BI solutions
- Operating a BI solution

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.

Course Materials

The student kit includes a workbook and other necessary materials for this class.

Course Outline

Module 1: Planning a BI Solution

Contact ISInc for more information at 916.920.1700 or by visiting our website at <http://www.isinc.com>



This module enables students to plan the components of a BI Solution.

Lessons

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

Lab : Planning BI Solutions

After completing this module, you will be able to:

- Describe the components of a BI Solution.
- Identify the components of a BI Solution.
- Plan a BI Project.

Module 2: Planning BI Infrastructure

This module describes how to use plan appropriate BI Infrastructure given a set of BI Parameters.

Lessons

- Considerations of BI Infrastructure
- Planning Data Warehouse Hardware

Lab : Planning BI Infrastructure

After completing this module, you will be able to:

- Describe the components of a BI Infrastructure and where you would use them.
- Plan for the hardware requirements of a data warehouse implementation.

Module 3: Designing a Data Warehouse

This module describes how to design a data warehouse given a set of user requirements.

Lessons

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

Lab : Designing a Data Warehouse Logical Schema

After completing this module, you will be able to:

- Design a data warehouse.
- Design dimension tables.
- Design Fact tables.
- Design a logical schema for a data warehouse.

Module 4: Designing an ETL solution

This lesson describes how to design an extract, transform and load (ETL) solution.

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Lessons

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

Lab : Designing an ETL Solution

After completing this module, you will be able to:

- Describe the components of an ETL solution.
- Design an ETL solution.

Module 5: Designing Analytical Data Models

This module describes how to design analytical data models for specific BI scenarios.

Lessons

- Introduction to Analytical data Models
- Designing Analytical Data Models

Lab : Designing Analytical Data Model

Lab : Designing Dimensions and Hierarchies

After completing this module, you will be able to:

- Describe the features of an analytical data model.
- Design an analytical data model.

Module 6: Planning a BI Delivery Solution

This module describes how to choose an appropriate delivery solution for a given scenario.

Lessons

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

Lab : Planning a BI Delivery Solution

After completing this module, you will be able to:

- Describe the components of a BI delivery solution.
- Describe some common reporting scenarios.
- Choose an appropriate delivery solution for a given scenario.

Module 7: Designing a Reporting Services Solution

This module describes how to design a reporting services solution.

Lessons

- Planning a Reporting Solution

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- Designing Reports
- Planning Report Consistency

Lab : Designing a Reporting Services Solution

After completing this module, you will be able to:

- Plan for a reporting Services solution.
- Design reports for a reporting services solutions.
- Plan for consistency of reporting

Module 8: Designing an Excel Based Reporting Solution

In this module students will learn how to design a reporting solution using Excel.

Lessons

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

Lab : Designing and Excel Reporting Solution

After completing this module, you will be able to:

- Describe key features of excel reporting solutions.
- Use PowerPivot in Excel to create reports.
- Use Power View in excel to create reports.

Module 9: Planning a SharePoint Server BI Solution

This module introduces the use of SharePoint Server as a 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

After completing this module, you will be able to:

- Describe the components of a SharePoint Server BI solution.
- Plan security for a SharePoint Server BI solution.
- Plan reporting solutions for a SharePoint Server BI solution.
- Describe the components of a PerformancePoint Solution.
- Implement PerformancePoint services.

Module 10: Monitoring and Optimizing a BI Solution

At the conclusion of this module you will be able to optimize and monitor a BI solution.

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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

After completing this module, you will be able to:

- Describe the options for monitoring and optimizing a BI solution.
- Be able to monitor and optimize a BI solution.

Module 11: Operating a BI Solution

At the conclusion of this module you will be able to plan management and maintenance operations of a BI solution.

Lessons

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

Lab : Operating a BI Solution

After completing this module, you will be able to:

- Describe the components to be managed in a BI Solution.
- Be able to manage the components of a BI solution.