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Course Outline ::20467D::

Module Title   :   20467D-Designing Business Intelligence Solutions with Microsoft SQL Server 2014

Duration   :   5 days

About This Course

This training course teaches database and business intelligence (BI) professionals how to plan and design a BI solution that is based on Microsoft SQL Server 2014 and other Microsoft BI technologies.

Audience Profile

This course is not designed for students who are new to SQL Server 2014 BI technologies; it is targeted at BI professionals with experience of implementing solutions with SQL Server database Engine, SQL Server Integration Services, SQL Server Analysis Services, and SQL Server Reporting Services.

At Course Completion

After completing this course, students will be able to:

- Plan a BI solution.
- Plan SQL Server BI infrastructure.
- Design a data warehouse.
- Design an extract, transform and load (ETL) solution.
- Design analytical data models.
- Plan a BI delivery solution.
- Design a Reporting Services solution.
- Design a Microsoft Excel-based reporting solution.
- Plan a SharePoint Server BI solution.
- Monitor and optimize a BI solution.
- Operate a BI solution.

Course Outline

Module 1: Planning a BI Solution

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 SQL Server Business Intelligence 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.

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 ModelLab : 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

- 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.

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

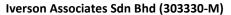**Lab : Operating a BI Solution**

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.

Prerequistes

In addition to their professional experience, students who attend this training should already have the following technical knowledge:

- A basic understanding of dimensional modeling (star schema) for data warehouses
- Basic server hardware knowledge
- 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