MOC 50491(A) End to End Microsoft Business Intelligence: An exploration of the entire stack

Course Summary

Description

This course provides students with the knowledge and skills to develop Microsoft End-to-End business solutions using SQL Server 2008 R2 in an integrated environment with SharePoint 2010 and Office 2010. The course introduces the students to Microsoft Unified Data Model, SQL 2008 R2 Analysis Services, Integration Services, Reporting Services, Report Builder 3.0, SharePoint 2010 Integration, Reporting Services Content Types, PerformancePoint Services, Dashboard Designer, Excel Services, Power Pivot and Data Mining

Objectives

At the end of this course, students will be able to:

- Describe the Microsoft Business Intelligence stack
- Explain the Unified Dimension Model and when it can and cannot be used.
- Use the new Business Intelligence Features in SQL 2008 R2
- Create a SSAS Project using the Microsoft Unified Dimension Model
- Create a Data Mart using Business Intelligence Studio
- Create a Integration Services project and load a Data Mart
- Load a Data Mart from a flat file.
- Model Dimensions, Measures and Cubes
- Understand the pros and cons of Integration into SharePoint
- Create a Report using Report Builder 3.0
- Load and Manage Reports with SharePoint
- Utilize the Business Intelligence add-ins for Excel
- Discover, design and implement KPIs
- Understand the role of SQL Server Analysis Services in measurement for KPIs
- Implement Time Intelligence features to query such as Year-To-Date, Last 6 Months etc.
- Use Excel Services and Excel Workbooks in Scorecards or as a data source
- Utilize the document management capabilities of SharePoint 2010 for objects for versioning, document retention and reverting.
- Use Dashboard Designer
- Gain a generalized understanding of MDX to write basic queries
- Generate Visual Reports and tie them into Dashboards
- Utilize decomposition trees
- Understand what the advantages of having SharePoint as the platform are.
- Use dynamic hierarchies in Scorecards
- Implement User Menus in Scorecards

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Course Summary

Topics

- The Business Intelligence Stack
- Unified Data Model
- SQL Server Integration Services
- SQL Server Analysis Services
- SQL Server Reporting Services
- MDX (Optional)
- PerformancePoint Services 2010
- Excel and Visio Services 2010
- Excel PowerPivot
- Data Mining

Audience

This course is intended for DBAs, Developers and Business Intelligence Professionals seeking an introduction to the Microsoft BI Stack whether for new or existing projects or migration to the Microsoft environment or having a desire to view the new features in the entire stack.

Prerequisites

Before attending this course, students should have:

- An understanding of the benefits of business intelligence.

Duration

Five days

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Course Outline

I. Business Intelligence Stack

A. SQL 2008R2 Business Intelligence Platform
B. SQL Analysis Services
C. SQL Reporting Services
D. Performance Management Tools
E. SharePoint 2010
F. Multidimensional Space
G. MDX
H. Data Mining
I. Understanding the Terminology

Lab: The Business Intelligence Stack

- Explore Business Intelligence Development Studio
- Connect into a SQL Server Analysis Services Cube
- Use SQL Server Management Studio
- Explore SharePoint 2010

II. Unified Data Model

A. UDM Defined
B. User Experience: Relational vs. UDM
C. Advantages
D. Trouble in River City

Lab: Unified Data Model

- Creating a Data Mart using Business Intelligence Development Studio.
- Enabling Table Compression

III. SQL Server Integration Services

A. Major Components
B. New or Changed Features
C. Script Task
D. Samples
E. SSIS and ETL
F. Transformers
G. Best Practices 1
H. Best Practices 2

Lab: Lab SSIS Projects

- Create A SSIS Project
- Add a Data Source
- Create A Data Flow
- Create Another Data Flow
- Load Data via a SQL Statement
- Populating the Fact Table
- Loading Manufacturing Facts
- Handling Errors
- Inventory Fact Flow

IV. SQL Server Analysis Services

A. Key Concepts
B. Schemas
C. Measures
D. Dimensions
E. Cube Processing
F. Partitions
G. Proactive Caching
H. Aggregations

Lab: Lab SSAS Key Concepts

- Define an OLAP Cube
- Working with Measures and Measure Groups
- Time and Hierarchies
- Relating Dimensions
- Build Deploy and Browse the Cube
- Multiple Partitions
- Set Storage
- Design Aggregations
- Default Members

V. SQL Server Reporting Services

A. Integration with SharePoint
B. Report Builder 3.0
C. Tablix
D. Charts

Lab: Lab SQL Server Reporting Services

- Managing Reports with SharePoint 2010
- Creating Subscriptions
- Viewing Reports via SharePoint 2010
- Report Builder 3.0

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Course Outline (cont'd)

VI. MDX (Optional)
- A. What is MDX?
- B. MDX Query Editor
- C. Select Statement
- D. Key Concepts
- E. Sets
- F. Functions
- G. Time Intelligence

Lab: MDX (Optional Module)
- Understand the Cell
- Write a Tuple
- MDX Sets
- Write a SELECT statement
- Write a Function
- Implement Time

VII. PerformancePoint Services 2010
- A. Integration with SharePoint Server 2010
- B. Common Service Application Framework
- C. New PerformancePoint Features
- D. Storage Security
- E. Time Intelligence and Dynamic Filters
- F. Linking of Web Parts
- G. KPI Details Report
- H. Retired Features
- I. Scorecards in PPS
- J. KPI Collections
- K. Dashboard Design Guidelines

Lab: PerformancePoint Services 2010
- Use SharePoint to create a site collection
- Configure Central Administration for PerformancePoint Services
- Create and Explore a PerformancePoint Business Intelligence Center
- Create a Basic Dashboard
- Deploy the Dashboard
- Explore the Dashboard in PPS
- Dashboard Designer Internals
- Dashboard Designer Interface
- First Class Objects
- Main Window
- Properties
- Dashboard Designer Features

VIII. Excel and Visio Services 2010
- A. Integration with SharePoint Server 2010
- B. Storage Security
- C. Single version of the truth
- D. Excel Web Services
- E. New capabilities

Lab: Excel Services 2010
- Deploy a Excel spread sheet for a single version of the truth
- Utilize excel Web Services
- Create a Strategy map with Visio Services

IX. Excel PowerPivot
- A. Integration with SharePoint Server 2010
- B. Understanding
- C. Modeling

Lab: PowerPivot 2010
- Explore Excel PowerPivot

X. Data Mining
- A. Key Terms in Data Mining
- B. Types of Data Mining Algorithms
- C. The Algorithms
- D. Excel and the BI Extensions
- E. Visio 2007

Lab: Lab Excel 2010 and Data Mining BI
- Utilize the Excel Data Mining Tools

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