MOC 55061 A PerformancePoint 2013 and MDX Combo Pack

Course Summary

Description

This six-day instructor-led course provides students with the necessary knowledge to work with PerformancePoint 2013 Services. The new and improved Business Intelligence Center is explored, and all the exciting new features within the SharePoint 2013 release are covered.
The focus of this course is on the SharePoint 2013 business intelligence platform and not on the SQL business intelligence services.
PowerPivot and Dashboards have included modules.
Using the current set of tools that Microsoft has available the average user can with minimum training utilize drag-and-drop to get the answers to questions such as: sales by quarter, reseller gross profit, and products purchased by geography. They can also create graphical reports and KPIs all without writing a single line of code! (Microsoft course 50561A)

- But what if you need questions like this answered?
- What are the top 5 customers by country over the last 8 quarters?
- What is our reorder point based on inventory levels?
- What are our best customers in terms of volume and gross profit?
- What effect does shipping cost have on profitability on a geographical distribution?
- How do we calculate the year-to-date value?
- How do we do year-over-year growth?
- When looking at manufacturing how do we account only for workdays?

Enter Microsoft Multidimensional Expressions (MDX). This instructor-led course is designed to take a person from the very beginning, think “Hello World” in programing to journeyman. The first chapters (1-4) get you well-grounded then from there we expand out. You won’t know how to do every MDX query. You won’t look at every function. But you will understand the patterns and from them you can examine examples and build on them to code your own sophisticated queries. The MBAs will love you!

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

- Browse the data within the cube using SQL Server Management Studio.
- Browse data using Visual Studio 2013.
- Connect to a tabular source, import tables, and explore the data.
- Explore the options and settings available within the new SharePoint 2013 Central Administration.
- Create a new web application and business intelligence site while exploring the features of both.
- Create a SharePoint library to hold Excel workbooks and explore trusted file locations.
- Utilize the Power View add-in for Excel.
- Create an Excel workbook with a parameter and save it to a SharePoint document library.
- Add Web Apps to a webpage.
- Explore the Dashboard Designer interface and know how to create and configure a data source.
- Create and configure a standard KPI and a scorecard.
- Create and configure a leaf KPI and a scorecard.
- Create two blank KPI’s and then roll them into an objective KPI.
- Create and configure an analytic chart and an analytic grid, add them to a dashboard, deploy them to SharePoint, and explore the options available.
- Create and configure a filter, and tie the filter into both the analytic chart and analytic grid created earlier.
- Create and configure a cascading filter and then tie it into a new analytic chart and grid.
- Create a Time Intelligence data connection, a Time Intelligence filter, and create a report using both.
- Create four copies of the Objective Scorecard, configure settings in each of the four copies, and deploy them to SharePoint in a dashboard.
- Create a new leaf KPI and use that KPI in two new scorecards, one with a filter configured, and one without.
- Create an objective scorecard and matching strategy map, place them in a dashboard, and then upload the dashboard to the Student BI Site.

MOC 55061 A PerformancePoint 2013 and MDX Combo Pack

Course Summary (cont'd)

- Use PowerPivot within Excel to import a table from SQL Server.
- View the relationships existing within the imported tables from SQL Server and then import an additional table and configure a relationship between it and the existing.
- Hide columns they don't want reflected in the resulting PivotTable.
- Create a PivotTable within an existing worksheet.
- Navigate the Report Builder 3.0 interface.
- Create an embedded data source connecting into a database.
- Create an embedded data source connecting into an OLAP database.
- Create a shared data source using the Report Manager.
- Create a shared dataset using the shared connection they created in the previous exercise.
- Create a new dashboard and explore three different ways to connect the Web Apps.
- Be at a mid-level of competence in MDX.
- Understand how to use MDX in a Business Intelligence Development Studio editor.
- Understand MDX calculations in Form view.
- Understand how to create KPIs.

Topics

- Course Overview
- The Microsoft Business Intelligence Stack
- SharePoint 2013 Business Intelligence Center
- PerformancePoint 2013
- PowerPivot
- Dashboards
- Reviewing The Microsoft Business Intelligence Stack
- Getting Started with MDX
- The All-Important Dimensions; The Bearers of Truth
- Navigation and the Secrets Of Relatives
- MDX Calculations
- Working with Time, Multiple Calendars, and Divergent Horizons
- Business Insights; Now Let's Put It to Work and Get Some Situational Answers
- Where Else Will MDX Work? SQL Reports
- KPIs and MDX in The Business Intelligence Development Studio Editor

Audience

This course is intended for power users, business intelligence developers, and IT professionals that will be involved with the design, development and maintenance of SharePoint 2013 business intelligence solutions.

If the past is any indicator of the future then this course will be attended mainly by SQL professionals, Microsoft Analysis Services cube and report developers, and business intelligence professionals coming from competing platforms. But you do not need those skills. The course was not written assuming those skills.

Prerequisites

Before attending this course, students must have:

- A good idea of what direction their organization wants to go with business intelligence.
- Basic Microsoft interface skills such as working with Excel.

Duration

Six days

MOC 55061 A PerformancePoint 2013 and MDX Combo Pack

Course Outline

I. Course Overview
This module explains how the class will be structured and introduces course materials and additional administrative information.

A. Introduction
B. Course Materials
C. Facilities
D. Prerequisites
E. What We'll Be Discussing

Lab: Course Overview

II. The Microsoft Business Intelligence Stack
In this module we will first look at the three different ways in which business intelligence can be viewed. Then we're going to look at the services SQL 2012 provides us and how they apply to business intelligence. We will then move to SharePoint 2013 and look at the SharePoint services to examine their relevance and how we can use them in business intelligence to surface data. In this section we will also cover the new business intelligence features available within the SharePoint 2013 release. Finally, we will take a brief look at PowerPivot, examining the new features and their significance. PowerPivot is covered in more detail in a later module.

A. Business Intelligence in Three Ways
B. SQL 2012 Business Intelligence
C. New 2013 SharePoint Business Intelligence Features
D. New 2013 PowerPivot in Excel Features

Lab: The Microsoft Business Intelligence Stack

- SQL 2012 Multidimensional Model Basics
- SQL 2012 Tabular Model Basics

III. SharePoint 2013 Business Intelligence Center
In this module, we will explore the new and improved 2013 SharePoint Central Administration site. We are going to cover specifically the new 2013 Business Intelligence Center template within SharePoint. We are also going to cover some things that generically apply to SharePoint that you can use within business intelligence. Permissions and Roles will be illuminated and the included Document Library and List apps will be explained.

A. New 2013 SharePoint Central Administration
B. New 2013 Business Intelligence Center
C. Permissions and Roles
D. Included Document Library and List Apps

Lab: SharePoint 2013 Business Intelligence Center

- SharePoint 2013 Central Administration
- SharePoint 2013 Business Intelligence Center (Optional)

IV. PerformancePoint 2013
In this module, we will cover in-depth 2013 PerformancePoint Services features. Dashboard Designer is explored along with many of the objects and connections available within.

A. New 2013 Overview of PerformancePoint Services
B. Dashboard Designer
C. Data Sources
D. Indicators
E. KPIs
F. Visual Reports
G. Filters
H. Scorecards
I. Dashboards

Lab: PerformancePoint 2013

- PerformancePoint Services Dashboard Designer Introduction and Data Source Configuration
- Standard or Blank KPI Demonstration
- Leaf KPI Demonstration
- Objective KPI Demonstration
- Visual Reports
- PerformancePoint Filters
- PerformancePoint Cascading Filters
- Time Intelligence Filters
- Scorecard Settings
- Scorecards Filtered Using the Wizard
- PerformancePoint Dashboards

V. PowerPivot
PowerPivot is not a feature of SharePoint business intelligence; however, an Excel workbook with PowerPivot can be saved to a SharePoint site and then used in a business intelligence scenario. This module is intended as an overview of the product only and covers all the new features available in the 2013 release of the add-in.

A. New 2013 PowerPivot Features
B. PowerPivot and Excel
C. PowerPivot and SharePoint
D. Enterprise Business Intelligence and PowerPivot
E. Importing Data
F. Enriching Data
G. SharePoint Sharing

Lab: PowerPivot

- Import Data from SQL
- Review and Edit the Imported Relationships
- Hide Unused Columns
- Create a PivotTable

MOC 55061 A PerformancePoint 2013 and MDX Combo Pack

Course Outline (cont'd)

VI. Dashboards
This module borrows from the three-day Microsoft course on Dashboards number 50596A. Monitoring, analyzing, and managing dashboards are discussed along with details on how to use them most effectively. This module does not cover Dashboard Designer as it is covered in more detail in the PerformancePoint Services module. Coverage of the Microsoft Report Builder 3.0 tool is brief as this course focuses on the SharePoint space.

A. Dashboard Migration
B. Three Types of Dashboards
C. Successful Dashboards
D. Tables or Graphs
E. Types of Graphs
F. Choosing a Chart Type
G. Key Performance Indicators
H. Pitfalls In Dashboard Design
I. Microsoft Report Builder 3.0
J. Plan Your Reports
K. Datasets
L. New 2013 SharePoint Designer Features
M. SharePoint Web Apps

Lab: Dashboards

- Explore the Report Builder 3.0 Interface (Optional)
- Create an Embedded Data Source into SQL 2012 Engine (Optional)
- Create an Embedded Data Source into SQL 2012 Analysis Services (Optional)
- Create a Shared Data Source Using the Report Manager (Optional)
- Create a Shared Dataset Using the Shared Data Source (Optional)
- Three Methods for Connecting Dashboard Web Apps

VII. Reviewing The Microsoft Business Intelligence Stack
This module explains how to name, declare, assign values to, and use variables. It also describes how to store data in an array. (e.g. This module explains how to install, upgrade and migrate to Windows 7. It also describes the key features, editions, and hardware requirements of Windows 7.)

A. What Business Intelligence Can Do for Your Organization
B. What to Watch Out for in Implementation
C. The Scope and What Types of Tools Address Each

Lab: Reviewing The Microsoft Business Intelligence Stack

- Examine and Run a Pre-Built SQL Integration Services Package That Performs an Extract Transform and Load into a Data Mart

VIII. Getting Started with MDX
We walk then run. Learn this and you won't trip.

A. Multidimensional VS. Tabular Space
B. Data Warehouse Data Mart
C. MDX Introduction
D. The Editors

Lab: Getting Started with MDX

- Familiarization with the SQL Server Management Studio Query Editor
- Familiarization with the Business Intelligence Development Studio Query Editor
- SQL Profiler
- Basic MDX

IX. The All-Important Dimensions; The Bearers of Truth
This module explains how to name, declare, assign values to, and use variables. It also describes how to store data in an array. (e.g. This module explains how to install, upgrade and migrate to Windows 7. It also describes the key features, editions, and hardware requirements of Windows 7.)

A. Dimensions
B. Dimension Attributes
C. Hierarchies
D. Referencing Members
E. Tuples
F. Cells
G. Sets
H. Set Functions

Lab: The All-Important Dimensions; The Bearers of Truth

- Dimension Properties
- Dimension Attributes
- Single Dimension Hierarchies
- Multidimensional Hierarchies
- The AllMember Function
- The Members Function
- Referencing Members
- Syntax Errors
- Partial Tuple References
- Multiple Axis
- Crossjoin

MOC 55061 A PerformancePoint 2013 and MDX Combo Pack

Course Outline (cont'd)

- Autoexists
- Exists
- Removing Duplicate Tuples

X. Navigation and the Secrets Of Relatives

This module explains how to name, declare, assign values to, and use variables. It also describes how to store data in an array. (e.g. This module explains how to install, upgrade and migrate to Windows 7. It also describes the key features, editions, and hardware requirements of Windows 7.)

A. Navigation in Reporting
B. Relatives
C. Navigational Functions
D. Controlling Sorting
E. Filtering the Results
F. How to Combine a Set

Lab: Navigation and the Secrets Of Relatives

- Navigating a Hierarchy
- Locating Immediate Relatives: Siblings, Cousin, Lead, Tail, Head, Premember, Lastchild, Firstchild
- Combining Relative Functions
- Using the Members Function Effectively
- Hierarchize Function

XI. MDX Calculations

This module explains how to name, declare, assign values to, and use variables. It also describes how to store data in an array. (e.g. This module explains how to install, upgrade and migrate to Windows 7. It also describes the key features, editions, and hardware requirements of Windows 7.)

A. Expressions
B. Calculated Members
C. Formatting Output Through the WITH Clause
D. Dynamic Expressions
E. IIF Function
F. Statistical Functions
G. Determining Which Tuples Satisfy a Parameter in a Report

Lab: MDX Calculations

- Explore Variations of the WITH Clause
- Create Members
- Calculate Percentages
- Advanced Formatting

XII. Working with Time, Multiple Calendars, and Divergent Horizons

This module explains how to name, declare, assign values to, and use variables. It also describes how to store data in an array. (e.g. This module explains how to install, upgrade and migrate to Windows 7. It also describes the key features, editions, and hardware requirements of Windows 7.)

A. Time Dimension
B. Multiple Calendars
C. Time-Based Functions
D. ParallelPeriod
E. OpeningPeriod
F. ClosingPeriod
G. LastPeriod
H. Year-To-Date
I. Calculated Measures and a Time Dimension
J. Comparing Periods
K. Sum Function
L. Aggregate Function
M. Max and Min Function in Time

Lab: Working with Time, Multiple Calendars, and Divergent Horizons

- ParallelPeriod
- OpeningPeriod
- ClosingPeriod
- LastPeriod
- Year-To-Date
- Calculated Measures and a Time Dimension
- Comparing Periods
- Sum Function
- Aggregate Function
- Max
- Min
- Use Crossjoin and ParallelPeriod

MOC 55061 A PerformancePoint 2013 and MDX Combo Pack

Course Outline (cont'd)

XIII. Business Insights; Now Let's Put It to Work and Get Some Situational Answers

This module explains how to name, declare, assign values to, and use variables. It also describes how to store data in an array. (e.g. This module explains how to install, upgrade and migrate to Windows 7. It also describes the key features, editions, and hardware requirements of Windows 7.)

A. OR Logic
B. AND Logic
C. Combining OR and AND Logic From Different Hierarchies
D. Logical AND with Members From the Same
E. Using the NonEmpty Function
F. Moving Averages
G. Last Date with Data
H. ParallelPeriod for Multiple Dates
I. Testing Current Context
J. Options of the Descendants Function
K. Ranking Values

Lab: Business Insights; Now Let's Put It to Work and Get Some Situational Answers

- OR Logic
- AND Logic
- Combining OR and AND Logic From Different Hierarchies
- Logical AND with Members From the Same
- Using the NonEmpty Function
- Moving Averages
- Last Date with Data
- ParallelPeriod for Multiple Dates
- Testing Current Context
- Options of the Descendants Function
- Ranking Values

XIV. Where Else Will MDX Work? SQL Reports

This module explains how to name, declare, assign values to, and use variables. It also describes how to store data in an array. (e.g. This module explains how to install, upgrade and migrate to Windows 7. It also describes the key features, editions, and hardware requirements of Windows 7.)

A. Create a SSRS Report
B. Create a Connection into the Cube
C. Create a MDX Query with the Query Designer
D. Create a Custom Query
E. Pass a Parameter
F. PerformancePoint Services Dashboard Designer (not installed PowerPoint and video demonstration)

Lab: Where Else Will MDX Work? SQL Reports

- Create a SSRS Report
- Create a Connection into the Cube
- Create a MDX Query with the Query Designer
- Create a Custom Query
- Pass a Parameter

XV. KPIs and MDX in The Business Intelligence Development Studio Editor

This module explains how to name, declare, assign values to, and use variables. It also describes how to store data in an array. (e.g. This module explains how to install, upgrade and migrate to Windows 7. It also describes the key features, editions, and hardware requirements of Windows 7.)

A. Use Business Intelligence Development Studio to Create a Named Calculation in the Cube
B. Use Business Intelligence Development Studio to Create KPIs

Lab: KPIs and MDX in The Business Intelligence Development Studio Editor

- Create a Named Calculation
- Create a Leaf KPI
- Create an Objective KPI
- Utilize IIF Logic in a KPI