

Course MS55063A

Advanced SharePoint 2013 Business Intelligence

Length: 5 Days

About this Course

This 5-day Instructor Led course How to use SharePoint as your platform for Business Intelligence. Journey through the SharePoint Business Intelligence Center, Excel Services, Reporting Services, Analysis Service, Performance Point and PowerPivot to implement your BI Strategies and enable your decision makers to see data in new and dynamic ways! Also included are Power* features like PowerView, PowerQuery, PowerMap and PowerBI. You will also be exposed to Big Data topics such as Hadoop, HDInsight and StreamInsight. This course will take you down a path of building a BI environment from scratch to full interactive dashboards using the Microsoft BI Stack.

Audience Profile

This course is intended for Sr. Business Intelligence Architects and Consultants, Sr. Business Analysts, anyone responsible for implementing BI with SharePoint.

At Course Completion

The 2013 refresh of the popular 2010 BI course! This course explores the new design of the Business Intelligence Center, changes in Excel Services and Office Web Apps, Business Connectivity Services and OData, Visio Services, Access Services 2013, PowerPivot, PowerBI, PowerView, PowerQuery and Power Maps, PerformancePoint and Bing Maps via the GeoLocation field. A coverage of Big Data topics like Hadoop, HDInsight and StreamInsight are also included.

Prerequisites

Before attending this course, students must have:

Understanding of SharePoint 2013 User Interface, database reporting concepts and familiarity with Data Marts and Data Warehouses.

Course Outline

Module 1: Overview

A simple introduction module.

After completing this module, students will be able to:

Understand your course, classroom, classmates, facility and instructor.

Module 2: Business Intelligence

In this module we review what Business Intelligence (BI) is and what the typical BI goals are. We also explore how Microsoft BI tools are enabling more advanced Business Intelligence features to filter down/up to the decision makers and Information Workers in general.

Lessons

Why Business Intelligence?

Lab : Business Intelligence Worksheet

Answer Business Intelligence Questions

After completing this module, students will be able to:

Define Business Intelligence

Understand what P=R-C means to BI

Accept that empowering end users is a GOOD thing

Understand your BI will only be as good as your data, tools and processes

Module 3: Business Intelligence Center

In this module we are going to explore the Business Intelligence Center site definition that comes with SharePoint.

Lessons

Business Intelligence Center

Lab : Business Intelligence Center

Create the Business Intelligence Center

Explore SharePoint Business Intelligence Center

Explore Dashboard Designer

After completing this module, students will be able to:

Navigate and describe the Business Intelligence Center Site Definition

Understand what a SharePoint Dashboard is

Understand what integration points are compatible with the Business Intelligence Center

Module 4: Data Mart & Data Warehouses and Master Data Services

In this module we explore what data is and some of the many forms that it takes. We then explore and define the terms Data Warehouse and Data Mart. This module is important in that as we move through the remainder of the course, we will need to have data to manipulate and work with to build our BI components.

Lessons

Understanding Data and Data Formats

Building Data Marts & Data Warehouses

Master Data Services

Lab : Data & Data Formats

Explore Data Formats

Lab : Build A Data Warehouse

Create a Simple Data Warehouse

Lab : Extract & Load

Explore the Extract stage

Lab : Transform & Load

Explore Transform & Load stages

Realize the importance of primary/unique keys

Lab : Granularity

Create Data Warehouse Granularity Levels

Lab : Build A Data Mart

Create a Data Mart

Lab : Master Data Services

Configure Master Data Services

Create Data sources in Master Data Services

Configure Master Data Services add-in

Connect to MDS data

Publish data changes

Module 5: Business Connectivity Services and Secure Store

In this module we are going to take a look at the SharePoint Business Connectivity Services and the SharePoint Secure Store service and how they can help surface external data into SharePoint sites.

Lessons

Business Connectivity Services

Secure Store

Lab : BCS Basics

Explore External Content Types

Create a new External Content Type

Create an External List

Add items to External Lists

Lab : BCS With Data Warehouse

Creating an Large External List using ECTs

Using Filters and External lists

Creating and Configuring Entity Profile Pages

Enable Revert To Self

Lab : Office & BCS for BI

Explore Office and BCS Integration

Lab : BCS and OData

Explore BCS models using OData as source

Create external list from OData

After completing this module, students will be able to:

Describe what Business Connectivity is used for

Describe the new features in BCS 2013

Describe how BCS integrates with SharePoint features

How to work with security in BCS applications

How to change throttle limits of BCS

How to build new BCS applications

How security works in BCS

Module 6: Analysis Services, HDInsight and StreamInsight

In this module we will explore the feature of SQL Server called Analysis Services (SSAS). When regular SQL queries can't handle your data, MDX queries in SSAS can. You will also learn about leading edge technologies like HDInsight and StreamInsight.

Lessons

Analysis Services

HDInsight & Hadoop

StreamInsight

Lab : Analysis Services

Create Dimension and Fact tables with SSIS

Lab : Building An Analysis Services Database

Create a Analysis Services Database

Create a Cube

Create Dimensions

Create Fact Tables

Create a KPI

Lab : Key Performance Indicators

Create Status Indicator list in 2013

Lab : Hadoop and Azure HDInsight

Install Hadoop for Windows
 Configure Hadoop for Windows
 Export Hadoop data
 Render reports based on Hadoop data
 Use and configure HDInsight
 Install the Hadoop .NET SDK
 Install HDFS ODBC driver
 Build Reports using Excel and Power Query
 Lab : StreamInsight
 Install StreamInsight
 Setup demo application
 Write StreamInsight queries
 After completing this module, students will be able to:
 Describe OLAP terms
 Understand how to navigate Analysis Services
 How to build a simple cube
 How to write simple MDX queries
 How to use data mining models
 Describe Hadoop and HDInsight
 How to install Hadoop locally
 How to deploy HDInsight to Azure
 Describe StreamInsight
 Install and configure StreamInsight
 Write StreamInsight queries

Module 7: Filter Web Parts

In this module we will explore Filter Web Parts and the important role they play in building Business Intelligence portals.

Lessons

Filter Web Parts

Lab : Filter Web Parts

Use each of the Filter Web Parts

After completing this module, students will be able to:

Describe what Filter Web Parts are

Work with Filter Web Parts

Understand how to integrate Filter Web Parts into other BI technologies

Module 8: Excel, Excel Services and Excel Web App

In this module we will explore and work with the various features of SharePoint's Excel Services.

Lessons

Excel Services

Lab : Create An Excel Report

Create An Excel Report

Lab : Excel Services

Learn to use Excel Services

Create/Publish to Excel Services

Configure Excel Services

Shared Data Connections

Excel Interactive View

Lab : MDX

Explore Excel MDX features

Create a Slicer

Create an MDX Set

Lab : Sparklines

Use Excel Sparklines

Lab : Filters & Excel Services

Explore Filter Web Parts and Excel Services

Lab : REST & Web Services

Explore REST features of Excel Services

Explore the Excel Services Web Service

After completing this module, students will be able to:

Understand the difference between Excel Services and Office Web Apps

Setup and configure Excel Services

Setup Excel workbooks to use Shared Data Connections

Use the Excel Services Web Parts

Use Excel to modify MDX queries

Use Excel to create Sparklines

Use Excel Services REST-ful APIs

Module 9: PowerPivot, Tabular Data Sources

In this module we explore the PowerPivot tools of SQL Server and Excel and how they integrate with SharePoint. You will also gain knowledge of a new SQL Server tool called Master Data Services.

Lessons

PowerPivot For Excel

PowerPivot For SharePoint

Lab : Use PowerPivot

Explore PowerPivot Functions

Use Basic PowerPivot

Use PowerPivot with Large DataSets

Create PowerPivot Linked Tables

Create Slicers

Lab : Integrate Power Pivot and SharePoint

Install PowerPivot for SharePoint Addin

Install PowerPivot on Database Server

Configure PowerPivot for SharePoint

Publish to SharePoint

Automating Data Refresh

Analyzing Usage Data

Lab : Tabular Models

Create a Tabular Model Project

Adding Data

Creating Relationships

Creating Calculated Columns and Measures

Creating Key Performance Indicators

Deploying Tabular models

Analyzing data in Excel

Lab : Import PowerPivot to SSAS

Import PowerPivot to SSAS

After completing this module, students will be able to:

Install PowerPivot on SQL Server and SharePoint

Configure PowerPivot SharePoint integration

Create PowerPivot enabled spreadsheets

Understand the DAX syntax

Utilize common DAX functions and tools

Describe Tabular Models in SASS

Create Tabular Models in SASS

Module 10: Reporting Services

In this module we will explore Reporting Services, its integration with SharePoint and how to build Reporting Services reports.

Lessons

Reporting Services

Reports

Lab : Install Reporting Services

Configure Reporting Services

Create a Reporting Services Report

Configure Reporting Services Web Part

Lab : Building Reports with Reporting Services

Create Advanced Reporting Services report

Filter Web Parts and Reports

Lab : Automating Reports with Reporting Services

Create Report Part Gallery

Create a Report Library

Create Report Parts

Create a Report using Report Parts

Automated Report Delivery

Lab : Reporting Services and PowerPivot

Setup Reporting Services RSS Feed

Create and Use Data Feed Library

Utilize Reporting Services data in PowerPivot

Utilize PowerPivot data in Reporting Services

After completing this module, students will be able to:

Describe the new features of Reporting Services 2013

Understand and describe the integration between reporting services and SharePoint

Build Reporting Services reports

Use the Reporting Services web part

Create Report and Report Part Libraries

Integrate Reporting Services and PowerPivot

Module 11: Power View, Power Query and Power BI

In this module we explore the new Microsoft BI Stack components available which include PowerView, PowerQuery and PowerBI.

Lessons

Power View

Power Query

Power BI

Lab : Use Power View

Create PowerView view
 Utilize images in PowerView views
 Create Chart Visualizations
 Create Map Visualizations
 Work with slicers
 Work with multiples
 Work with sorting
 Work with Visualization Filters
 Deploy to SharePoint
 Export to PowerPoint
 Lab : Use Power Query
 Install Power Query
 Explore Power Query reports
 Create Power Query reports
 Lab : Use Power BI
 Install PowerBI Windows App
 Configure PowerBI
 Working with Power BI in O365
 After completing this module, students will be able to:
 Describe Power View, Power Query and Power BI features
 Create Power View reports
 Deploy Power View reports to SharePoint
 Create Power Query reports
 Utilize Power BI for report delivery
 Describe how Power BI works with Office 365
 Setup a Power BI O365 Instance
 Install and configure the Power BI Windows 8 App

Module 12: Performance Point

In this module we will explore Performance Point and how it supercharges your BI Dashboards and Key Performance Indicators.

Lessons

Performance Point

Lab : Performance Point

Explore Performance Service Application

Explore the Dashboard Designer

Create A Scorecard

Create A PP KPI

Explore Time Intelligence

Create Performance Point Reports

Create Filters

Create A Dashboard

After completing this module, students will be able to:

Describe features and benefits of Performance Point

Use the new Performance Point Dashboard designer to build reports

Create Performance Point Scorecards and KPIs

Use Time Intelligence features in your BI solutions

Module 13: Visio & Access Services

In this module we will explore Visio and Access Services and how to integrate it into your Report process.

Lessons

Visio Services

Access Services

Lab : Visio Services

Use Visio Services

Publish a Visio to SharePoint

Utilize data driven Visio diagrams

Utilize Visio for site architecture diagram

Lab : Access Services

Access and SharePoint integration

Removed features

Publish Access Database To SharePoint

Explore Access Services 2013

Module 14: GeoSpatial Data, GeoLocation and Power Map

In this module we will explore how to store GeoSpatial data in SQL Server, how to use the new GeoLocation column, the new Power Map add-in for Excel and how to use continue to use the .NET Charts feature from 2010.

Lessons

GeoSpatial Data

GeoLocation, Bing Maps and Charts

Power Map

Lab : GeoSpatial Data with SQL Server

Populate a SQL Server Database using Shape2SQL

Utilize the new Spatial Data Types in SQL Server

Create a Reporting Services Report using Geospatial Data

Publish Geospatial Data to SharePoint

Lab : Bing Maps and GeoLocation column

Utilize Bing Maps API

Create and use GeoLocation columns

Create a Map View

Explore SharePoint Store Map Apps

Lab : Use Power Map

Install Power Map

Explore Power Map reports

Create Power Map reports

Create Power Map Tour and Scenes

Lab : Use Power Map and Power Query

Create Power Query Report

Create Power Map from Power Query data

Lab : NET Charts

Import Chart web part file

Utilize .NET Charts in 2013

After completing this module, students will be able to:

How to build geospatial maps using BI data

How to use the new GeoLocation column in SharePoint list data

Create and use GeoLocation columns

Create a Map View

Explore SharePoint Store Map Apps
How to install Power Map Excel add-in
Create Power Map reports
Create Power Map and Power Query reports