

# 6234 – Implementing and Maintaining Microsoft SQL Server 2008 Analysis Services

**Vendor Course Code:** 6234

**Course Length:** 3 days

**Overview:** This three-day instructor-led course teaches students how to implement an Analysis Services solution in an organisation. The course discusses how to use the Analysis Services development tools to create an Analysis Services database and an OLAP cube, and how to use the Analysis Services management and administrative tools to manage an Analysis Services solution.

**Skills Gained:** After completing this course, students will be able to:

- Describe how SQL Server Analysis Services can be used to implement analytical solutions.
- Create multidimensional analysis solutions with SQL Server Analysis Services.
- Implement dimensions and cubes in an Analysis Services solution.
- Implement measures and measure groups in an Analysis Services solution.
- Query a multidimensional Analysis Services solution.
- Customise an Analysis Services cube.
- Deploy and secure an Analysis Services database.
- Maintain a multidimensional Analysis Services solution.
- Implement a Data Mining solution.

**Key Topics:** **Module 1: Introduction to Microsoft SQL Server Analysis Services**

This module introduces common analysis scenarios and describes how Analysis Services provides a powerful platform for multidimensional OLAP solutions and data mining solutions. The module then describes the main considerations for installing Analysis Services.

**Lessons**

Lesson 1: Overview of Data Analysis Solutions  
Lesson 2: Overview of SQL Server Analysis Services  
Lesson 3: Installing SQL Server Analysis Services

Lab: Using SQL Server Analysis Services  
Exercise 1: (Level 200) Installing SQL Server Analysis Services  
Exercise 2: (Level 200) Verifying Installation

After completing this module, students will be able to:

- Describe data analysis solutions.
- Describe the key features of SQL Server Analysis Services.
- Install SQL Server Analysis Services.

**Module 2: Creating Multidimensional Analysis Solutions**

This module introduces the development tools you can use to create an Analysis Services multidimensional analysis solution, and describes how to create data sources, data source views, and cubes.

**Lessons**

Lesson 1: Developing Analysis Services Solutions  
Lesson 2: Creating Data Sources and Data Source Views  
Lesson 3: Creating a Cube

Lab: Creating Multidimensional Analysis Solutions  
Exercise 1: (Level 200) Creating a Data Source  
Exercise 2: (Level 200) Creating and Modifying a Data Source View  
Exercise 3: (Level 200) Creating and Modifying a Cube

After completing this module, students will be able to:

- Develop Analysis Services solutions.
- Create a data source and a data source view .
- Create a cube.

### **Module 3: Working with Cubes and Dimensions**

This module describes how to edit dimensions and to configure dimensions, attributes, and hierarchies.

Lessons

Lesson 1: Configuring Dimensions

Lesson 2: Defining Attribute Hierarchies

Lesson 3: Sorting and Grouping Attributes

Lab: Working with Cubes and Dimensions

Exercise 1: (Level 200) Configuring Dimensions

Exercise 2: (Level 200) Defining Relationships and Hierarchies

Exercise 3: (Level 200) Sorting and Grouping Dimension Attributes

After completing this module, students will be able to:

- Configure dimensions.
- Define hierarchies.
- Sort and group attributes.

### **Module 4: Working with Measures and Measure Groups**

This module explains how to edit and configure measures and measure groups.

Lessons

Lesson 1: Working With Measures

Lesson 2: Working with Measure Groups

Lab: Working with Measures and Measure Groups

Exercise 1: (Level 200) Configuring Measures

Exercise 2: (Level 200) Defining Dimension Usage and Relationships

Exercise 3: (Level 200) Configuring Measure Group Storage

After completing this module, students will be able to:

Work with measures.  
Work with measure groups.

### **Module 5: Querying Multidimensional Analysis Solutions**

This module introduces multidimensional expressions (MDX) and describes how to implement calculated members and named sets in an Analysis Services cube.

Lessons

Lesson 1: MDX Fundamentals

Lesson 2: Adding Calculations to a Cube

Lab: Querying Multidimensional Analysis Solutions

Exercise 1: (Level 200) Querying a Cube by Using MDX

Exercise 2: (Level 200) Creating a Calculated Member

Exercise 3: (Level 200) Defining a Named Set

After completing this module, students will be able to:

- Describe Multidimensional Expression (MDX) fundamentals.
- Add calculations to a cube.

### **Module 6: Customising Cube Functionality**

This module explains how to customise a cube by implementing key performance indicators (KPIs), actions, perspectives, and translations.

Lessons

Lesson 1: Implementing Key Performance Indicators

Lesson 2: Implementing Actions  
Lesson 3: Implementing Perspectives  
Lesson 4: Implementing Translations

Lab: Customising Cube Functionality  
Exercise 1: (Level 200) Implementing a KPI  
Exercise 2: (Level 200) Implementing an Action  
Exercise 3: (Level 200) Implementing a Perspective  
Exercise 4: (Level 200) Implementing a Translation

After completing this module, students will be able to:

- Implement Key Performance Indicators (KPIs).
- Implement actions.
- Implement perspectives.
- Implement translations.

### **Module 7: Deploying and Securing an Analysis Services Database**

This module describes how to deploy an Analysis Services database to a production server, and how to implement security in an Analysis Services multidimensional solution.

Lessons

Lesson 1: Deploying an Analysis Services Database  
Lesson 2: Securing an Analysis Services Database

Lab: Deploying and Securing an Analysis Services Database  
Exercise 1: (Level 200) Deploying an Analysis Services Database  
Exercise 2: (Level 200) Securing an Analysis Services Database

After completing this module, students will be able to:

- Deploy an Analysis Services database.
- Secure an Analysis Services database.

### **Module 8: Maintaining a Multidimensional Solution**

This module discusses the maintenance tasks associated with an Analysis Services solution, and describes how administrators can use the Analysis Services management tools to perform them.

Lessons

Lesson 1: Configuring Processing  
Lesson 2: Logging, Monitoring, and Optimising an Analysis Services Solution  
Lesson 3: Backing Up and Restoring an Analysis Services Database

Lab: Maintaining a Multidimensional Solution  
Exercise 1: (Level 200) Configuring Processing  
Exercise 2: (Level 200) Implementing Logging and Monitoring  
Exercise 3: (Level 200) Backing Up and Restoring an Analysis Services Database

After completing this module, students will be able to:

- Configure processing settings.
- Log, monitor, and optimise an Analysis Services solution.
- Back up and restore an Analysis Services database.

### **Module 9: Introduction to Data Mining**

This module introduces data mining, and describes how to implement data mining structures and models. It then explains how to validate data model accuracy.

Lessons

Lesson 1: Overview of Data Mining  
Lesson 2: Creating a Data Mining Solution  
Lesson 3: Validating Data Mining Models

Lab: Introduction to Data Mining  
Exercise 1: (Level 200) Creating a Data Mining Structure  
Exercise 2: (Level 200) Adding a Data Mining Model  
Exercise 3: (Level 200) Exploring Data Mining Models

#### Exercise 4: (Level 200) Validating Data Mining Models

After completing this module, students will be able to:

- Describe data mining.
- Create a data mining solution.
- Validate data mining models.

#### Target Audience:

The primary audience for this course is individuals who design and maintain business intelligence solutions for their organisation. These individuals work in environments where databases play a key role in their primary job and may perform database administration and maintenance as part of their primary job responsibilities.

The secondary audience for this course is individuals who develop applications that deliver content from SQL Server Analysis Services to the organisation.

#### Prerequisites:

Before attending this course, students must have:

- Conceptual understanding of OLAP solutions.
- Experience navigating the Microsoft Windows Server environment.
- Experience with Windows services (starting and stopping).
- Experience creating service accounts and permissions.
- Experience with Microsoft SQL Server, including:
  - SQL Server Agent.
  - SQL Server query language (SELECT, UPDATE, INSERT, and DELETE).
  - SQL Server System tables.
  - SQL Server accounts (users and permissions).