

# 2791 – Implementing and Maintaining Microsoft SQL Server 2005 Analysis Services

**Vendor Course Code:** 2791

**Course Length:** 3 days

**Overview:**

For information on the next scheduled course, please refer to our SQL 2008 offering: <http://www.ddls.com.au/VendCourseDet/MS+/127/SSQL6234.htm>

This three-day instructor-led course teaches students how to implement an Analysis Services solution in their 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.

\*Please note that if this course is not currently scheduled, you may find 6234 an appropriate course to attend as content coverage is very similar\*

**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 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 2005 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

Overview of Data Analysis Solutions

Overview of SQL Server 2005 Analysis Services

Installing SQL Server 2005 Analysis Services

After completing this module, students will be able to:

- Describe data analysis solutions.
- Describe the key features of Microsoft SQL Server 2005 Analysis Services.
- Install SQL Server 2005 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

Developing Analysis Services Solutions

Data Sources and Data Source Views

Creating a Cube

Lab 2: Creating a Multidimensional Analysis Solution

Exercise 1: Creating a Data Source

Exercise 2: Creating and Modifying a Data Source View

### Exercise 3: 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 Dimensions

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

Lessons

Configuring Dimensions

Defining Hierarchies

Sorting and Grouping Attributes

Lab 3: Defining Dimensions

Exercise 1: Configuring Dimensions

Exercise 2: Defining Relationships and Hierarchies

Exercise 3: 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

Working with Measures

Working with Measure Groups

Lab 4: Configuring Measures and Measure Groups

Exercise 1: Configuring Measures

Exercise 2: Defining Dimension Usage and Relationships

Exercise 3: 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

MDX Fundamentals

Adding Calculations to a Cube

Lab 5: Querying a Cube

Exercise 1: Querying a Cube by Using MDX

Exercise 2: Creating a Calculated Member

Exercise 3: 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

Implementing Key Performance Indicators  
Implementing Actions  
Implementing Perspectives  
Implementing Translations

#### Lab 6: Customising a Cube

Exercise 1: Implementing a KPI  
Exercise 2: Implementing an Action  
Exercise 3: Implementing a Perspective  
Exercise 4: 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

Deploying an Analysis Services Database  
Securing an Analysis Services Database

#### Lab 7: Deploying and Securing an Analysis Services Database

Exercise 1: Deploying an Analysis Services Database  
Exercise 2: 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

Configuring Processing Settings  
Logging, Monitoring, and Optimising an Analysis Services Solution  
Backing Up and Restoring an Analysis Services Database

#### Lab 8: Maintaining an Analysis Services Database

Exercise 1: Configuring Processing  
Exercise 2: Implementing Logging and Monitoring  
Exercise 3: 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

Overview of Data Mining  
Creating a Data Mining Solution  
Validating Data Mining Models

#### Lab 9: Implementing Data Mining

Exercise 1: Creating a Data Mining Structure

Exercise 2: Adding a Data Mining Model  
Exercise 3: Exploring Data Mining Models  
Exercise 4: 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:

This course is intended for information technology (IT) professionals and developers who need to implement analysis solutions by using Microsoft SQL Server 2005 Analysis Services.

### 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)