

40 HORAS

INTRODUCTION

This five-day instructor-led course provides students with the knowledge and skills to provision a Microsoft SQL Server 2016 database. The course covers SQL Server 2016 provision both on-premise and in Azure, and covers installing from new and migrating from an existing install.

AUDIENCIA

The primary audience for this course are database professionals who need to fulfil a Business Intelligence Developer role. They will need to focus on hands-on work creating BI solutions including Data Warehouse implementation, ETL, and data cleansing.

AT COURSE COMPLETION

After completing this course, students will be able to:

- Describe the key elements of a data warehousing solution
- Describe the main hardware considerations for building a data warehouse
- Implement a logical design for a data warehouse
- Implement a physical design for a data warehouse
- Create columnstore indexes
- Implementing an Azure SQL Data Warehouse
- Describe the key features of SSIS
- Implement a data flow by using SSIS
- Implement control flow by using tasks and precedence constraints
- Create dynamic packages that include variables and parameters
- Debug SSIS packages
- Describe the considerations for implement an ETL solution
- Implement Data Quality Services
- Implement a Master Data Services model
- Describe how you can use custom components to extend SSIS
- Deploy SSIS projects
- Describe BI and common BI scenarios

PREREQUISITES

In addition to their professional experience, students who attend this training should already have the following technical knowledge:

- Basic knowledge of the Microsoft Windows operating system and its core functionality.
- Working knowledge of relational databases.
- Some experience with database design.

COURSE OUTLINE

Module 1: Introduction to Data Warehousing

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution

Module 2: Planning Data Warehouse Infrastructure

- Considerations for Building a Data Warehouse
- Planning data warehouse hardware.

Module 3: Designing and Implementing a Data Warehouse

- Data warehouse design overview
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse

Module 4: Columnstore Indexes

- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes

Module 5: Implementing an Azure SQL Data Warehouse

- Advantages of Azure SQL Data Warehouse
- Implementing an Azure SQL Data Warehouse
- Developing an Azure SQL Data Warehouse
- Migrating to an Azure SQ Data Warehouse
- Copying data with the Azure data factory

Module 6: Creating an ETL Solution

- Introduction to ETL with SSIS
- Exploring Source Data
- Implementing Data Flow

Module 7: Implementing Control Flow in an SSIS Package

- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.

Module 8: Debugging and Troubleshooting SSIS Packages

- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package

Module 9: Implementing a Data Extraction Solution

- Introduction to Incremental ETL
- Extracting Modified Data
- Loading modified data
- Temporal Tables

Module 10: Enforcing Data Quality

- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data

Module 11: Using Master Data Services

- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub

Module 12: Extending SQL Server Integration Services (SSIS)

- Using Scripting in SSIS
- Using Custom Components in SSIS

Module 13: Deploying and Configuring SSIS Packages

- Overview of SSIS Deployment
- Deploying SSIS Projects
- Planning SSIS Package Execution

Module 14: Consuming Data in a Data Warehouse

- Introduction to Business Intelligence
- An Introduction to Data Analysis
- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse