

## 20767: Implementing a SQL Data Warehouse

- **Formato do curso:** Presencial e Live Training
- **Preço:** 1720€
- **Duração:** 35 horas

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.

**The 70-767 certification exam retires on January 31, 2021**

### Destinatários

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.

### Pré-requisitos

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

### Objectivos

- 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
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## Programa

### **Module 1: Introduction to Data Warehousing**

Describe data warehouse concepts and architecture considerations.

Lessons

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

Lab : Exploring a Data Warehouse Solution

### **Module 2: Planning Data Warehouse Infrastructure**

This module describes the main hardware considerations for building a data warehouse.

Lessons

- Considerations for Building a Data Warehouse
- Data Warehouse Reference Architectures and Appliances

Lab : Planning Data Warehouse Infrastructure

### **Module 3: Designing and Implementing a Data Warehouse**

This module describes how you go about designing and implementing a schema for a data warehouse.

Lessons

- Logical Design for a Data Warehouse
- Physical Design for a Data Warehouse

Lab : Implementing a Data Warehouse Schema

### **Module 4: Columnstore Indexes**

This module introduces Columnstore Indexes.

Lessons

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

Lab : Using Columnstore Indexes

## **Module 5: Implementing an Azure SQL Data Warehouse**

This module describes Azure SQL Data Warehouses and how to implement them.

Lessons

- 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

Lab : Implementing an Azure SQL Data Warehouse

## **Module 6: Creating an ETL Solution**

At the end of this module you will be able to implement data flow in a SSIS package.

Lessons

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

Lab : Implementing Data Flow in an SSIS Package

## **Module 7: Implementing Control Flow in an SSIS Package**

This module describes implementing control flow in an SSIS package.

Lessons

- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers

Lab : Implementing Control Flow in an SSIS PackageLab : Using Transactions and Checkpoints

## **Module 8: Debugging and Troubleshooting SSIS Packages**

This module describes how to debug and troubleshoot SSIS packages.

Lessons

- Debugging an SSIS Package
- Logging SSIS Package Events

- Handling Errors in an SSIS Package

Lab : Debugging and Troubleshooting an SSIS Package

## **Module 9: Implementing a Data Extraction Solution**

This module describes how to implement an SSIS solution that supports incremental DW loads and changing data.

Lessons

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

Lab : Extracting Modified Data

Lab : Loading a data warehouse

## **Module 10: Enforcing Data Quality**

This module describes how to implement data cleansing by using Microsoft Data Quality services.

Lessons

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

Lab : Cleansing Data

Lab : De-duplicating Data

## **Module 11: Using Master Data Services**

This module describes how to implement master data services to enforce data integrity at source.

Lessons

- Master Data Services Concepts
- Implementing a Master Data Services Model
- Managing Master Data
- Creating a Master Data Hub

Lab : Implementing Master Data Services

## **Module 12: Extending SQL Server Integration Services (SSIS)**

This module describes how to extend SSIS with custom scripts and components.

Lessons

- Using Custom Components in SSIS
- Using Scripting in SSIS

Lab : Using Scripts and Custom Components

### **Module 13: Deploying and Configuring SSIS Packages**

This module describes how to deploy and configure SSIS packages.

Lessons

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

Lab : Deploying and Configuring SSIS Packages

### **Module 14: Consuming Data in a Data Warehouse**

This module describes how to debug and troubleshoot SSIS packages.

Lessons

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

Lab : Using Business Intelligence Tools

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