

# MSQ4-4 - MOC 20767 - IMPLEMENTING A SQL DATA WAREHOUSE

Categoria: **SQL Server 2017 e 2016**

## INFORMAZIONI SUL CORSO



**Durata:**  
5 Giorni



**Categoria:**  
SQL Server 2017 e  
2016



**Qualifica Istruttore:**  
Microsoft Certified  
Trainer



**Dedicato a:**  
Professionista IT



**Produttore:**  
Microsoft

## OBIETTIVI

Descrivere gli elementi chiave di una soluzione di data warehousing  
Descrivere le principali considerazioni di hardware per la costruzione di un data warehouse  
Implementare un disegno logico per un data warehouse  
Implementare una progettazione fisica di un data warehouse  
Creare indici columnstore  
Implementare un data warehouse Azure SQL  
Descrivere le caratteristiche principali di SSIS  
Implementare un flusso di dati utilizzando SSIS  
Implementare flusso di controllo, utilizzando i compiti e vincoli di precedenza  
Creare pacchetti dinamici che includono variabili e parametri  
Pacchetti di debug SSIS  
Descrivere le considerazioni per implementare una soluzione ETL  
Implementare Data Services di qualità  
Implementare un modello di Master Data Services  
Descrivere come è possibile utilizzare componenti personalizzati per estendere SSIS  
Distribuire progetti SSIS  
Descrivere la BI e gli scenari comuni di BI

## PREREQUISITI

Almeno 2 anni di esperienza di lavoro con i database relazionali, ad esempio: Progettazione di un database normalizzato. Creazione di tabelle e relazioni. Interrogazione con Transact-SQL.  
Esposizione ai costrutti di programmazione di base (ad esempio, looping e branching).  
E' auspicabile la consapevolezza delle priorità di business chiave come entrate, redditività e contabilità finanziaria.

## CONTENUTI

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

Overview of Data Warehousing

Considerations for a Data Warehouse Solution

**Lab : Exploring a Data Warehouse Solution**

After completing this module, you will be able to:

Describe the key elements of a data warehousing solution

Describe the key considerations for a data warehousing solution

**Module 2: Planning Data Warehouse Infrastructure**

Considerations for Building a Data Warehouse

Data Warehouse Reference Architectures and Appliances

**Lab : Planning Data Warehouse Infrastructure**

After completing this module, you will be able to:

Describe the main hardware considerations for building a data warehouse

Explain how to use reference architectures and data warehouse appliances to create a data warehouse

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

Logical Design for a Data Warehouse

Physical Design for a Data Warehouse

**Lab : Implementing a Data Warehouse Schema**

After completing this module, you will be able to:

Implement a logical design for a data warehouse

Implement a physical design for a data warehouse

**Module 4: Columnstore Indexes**

Introduction to Columnstore Indexes

Creating Columnstore Indexes

Working with Columnstore Indexes

**Lab : Using Columnstore Indexes**

After completing this module, you will be able to:

Create Columnstore indexes

Work 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

**Lab : Implementing an Azure SQL Data Warehouse**

After completing this module, you will be able to:

Describe the advantages of Azure SQL Data Warehouse

Implement an Azure SQL Data Warehouse

Describe the considerations for developing an Azure SQL Data Warehouse

Plan for migrating to Azure SQL Data Warehouse

**Module 6: Creating an ETL Solution**

Introduction to ETL with SSIS

Exploring Source Data

Implementing Data Flow

**Lab : Implementing Data Flow in an SSIS Package**

After completing this module, you will be able to:

Describe ETL with SSIS  
Explore Source Data  
Implement a Data Flow

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

Introduction to Control Flow  
Creating Dynamic Packages  
Using Containers

### **Lab : Implementing Control Flow in an SSIS Package**

#### **Lab : Using Transactions and Checkpoints**

After completing this module, you will be able to:  
Describe control flow  
Create dynamic packages  
Use containers

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

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

### **Lab : Debugging and Troubleshooting an SSIS Package**

After completing this module, you will be able to:  
Debug an SSIS package  
Log SSIS package events  
Handle errors in an SSIS package

## **Module 9: Implementing an Incremental ETL Process**

Introduction to Incremental ETL  
Extracting Modified Data  
Temporal Tables

### **Lab : Extracting Modified Data**

#### **Lab : Loading Incremental Changes**

After completing this module, you will be able to:  
Describe incremental ETL  
Extract modified data  
Describe 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

### **Lab : Cleansing Data**

#### **Lab : De-duplicating Data**

After completing this module, you will be able to:  
Describe data quality services  
Cleanse data using data quality services  
Match data using data quality services

De-duplicate data using data quality services

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

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

#### **Lab : Implementing Master Data Services**

After completing this module, you will be able to:  
Describe the key concepts of master data services  
Implement a master data service model  
Manage master data  
Create a master data hub

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

Using Custom Components in SSIS  
Using Scripting in SSIS

#### **Lab : Using Scripts and Custom Components**

After completing this module, you will be able to:  
Use custom components in SSIS  
Use scripting in SSIS

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

Overview of SSIS Deployment  
Deploying SSIS Projects  
Planning SSIS Package Execution

#### **Lab : Deploying and Configuring SSIS Packages**

After completing this module, you will be able to:  
Describe an SSIS deployment  
Deploy an SSIS package  
Plan SSIS package execution

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

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

#### **Lab : Using Business Intelligence Tools**

After completing this module, you will be able to:  
Describe at a high level business intelligence  
Show an understanding of reporting  
Show an understanding of data analysis  
Analyze data with Azure SQL data warehouse

## **INFO**

**Materiale didattico:** Materiale didattico in formato digitale

**Costo materiale didattico:** incluso nel prezzo del corso a Calendario

**Natura del corso:** Operativo (previsti lab su PC)