
20767 Implementing a SQL Data Warehouse

Overview

Ready to learn how to implement a SQL data warehouse with confidence? This course from New Horizons will prepare you to create advanced BI solutions and advance your career.

In the "Implementing a SQL Data Warehouse course", you'll learn how to provision a Microsoft SQL Server database both on-premises and in Azure.

Prerequisite Comments

Your success is our top priority. To ensure you're fully prepared for the course material, you should have at least two years of professional experience working with relational databases. You should also have basic knowledge of the Windows operating system and foundational database design skills.

Target Audience

If you are a database professional looking to further your career in business intelligence development, this course is ideal for you. It will also benefit you if you're responsible for data warehouse implementation, ETL or data cleansing in your day-to-day role.

Course Objectives

Are you a BI professional ready to take your career to the next level? After finishing this course, you will have the skills needed to install and provision a data warehouse platform, migrate from an existing install and much more.

This course empowers you to:

- Describe the main hardware required to build a data warehouse
- Execute logical and physical design for a data warehouse
- Create columnstore indexes and dynamic packages that include variables and parameters
- Implement an Azure SQL Data Warehouse
- Represent the key features of SSIS
- Apply control flow by using tasks and precedence constraints
- Debug and deploy SSIS projects
- Understand the considerations to implement an ETL solution
- Enable Data Quality Services and a Master Data Services model
- Interpret how to use custom components to extend SSIS
- Define common BI scenarios

Course Outline

1 - Introduction to Data Warehousing

Gain an Introduction to Data Warehousing
Consider Factors Involved in a Data Warehouse Solution
Lab: Exploring a Data Warehouse Solution

2 - Planning Data Warehouse Infrastructure

Review Considerations for Building a Data Warehouse
Plan Data Warehouse Hardware
Lab: Planning Data Warehouse Infrastructure

3 - Designing and Implementing a Data Warehouse

Design Dimension Tables and Fact Tables
Determine Physical Design for a Data Warehouse
Lab: Implementing a Data Warehouse Schema

4 - ColumnStore Indexes

Review Columnstore Indexes
Create and Work with Columnstore Indexes
Lab: Using Columnstore Indexes

5 - Implementing an Azure SQL Data Warehouse

Understand the Advantages of Azure SQL Data Warehouse
Implement an Azure SQL Data Warehouse
Develop an Azure SQL Data Warehouse
Migrate to an Azure SQL Data Warehouse
Copy Data with the Azure Data Factory
Lab: Implementing an Azure SQL Data Warehouse

6 - Creating an ETL Solution

Gain an Introduction to ETL with SSIS
Explore Source Data
Implement Data Flow
Lab: Implementing Data Flow in an SSIS Package

7 - Implementing Control Flow in an SSIS Package

Introduce Control Flow
Create Dynamic Packages
Adopt Containers
Lab: Implementing Control Flow in an SSIS Package
Lab: Using Transactions and Checkpoints

8 - Debugging & Troubleshooting SSIS Packages

Debug an SSIS Package
Log SSIS Package Events
Handle Errors in an SSIS Package
Lab: Debugging and Troubleshooting an SSIS Package

9 - Implementing a Data Extraction Solution

Navigate Incremental ETL
Extract and Load Modified Data
Manage Temporal Tables
Lab: Extracting Modified Data
Lab: Loading Incremental Changes

10 - Enforcing Data Quality

Apply Data Quality Services to Cleanse Data
Use Data Quality Services to Match Data
Lab: Cleansing Data
Lab: De-Duplicating Data

11 - Using Master Data Services

Become Familiar with Master Data Services
Execute a Master Data Services Model
Create a Master Data Hub
Lab: Implementing Master Data Services

12 - Extending SQL Server Integration Services (SSIS)

Utilize Custom Components in SSIS
Perform Scripting in SSIS
Lab: Using Scripts and Custom Components

13 - Deploying and Configuring SSIS Packages

Review SSIS Deployment
Deploy SSIS Projects
Plan SSIS Package Execution
Lab: Deploying and Configuring SSIS Packages

14 - Consuming Data in a Data Warehouse

Understand Basic Concepts of Business Intelligence, Reporting and Data Analysis
Analyze Data with Azure SQL Data Warehouse
Lab: Using Business Intelligence Tools