



20463 Implementing a Data Warehouse with Microsoft SQL Server

Price: Call
Length: 35 Hours (5 days)

Introduction: This course describes how to implement a data warehouse platform to support a BI solution. Students will learn how to create a data warehouse with Microsoft SQL Server 2014, implement ETL with SQL Server Integration Services, and validate and cleanse data with SQL Server Data Quality Services and SQL Server Master Data Services.

Target Student: This course is intended for database professionals who need to create and support a data warehousing solution. Primary responsibilities include: implementing a data warehouse; developing SSIS packages for data extraction, transformation, and loading; enforcing data integrity by using Master Data Services; cleansing data by using Data Quality Services.

Prerequisites: This course requires that you meet the following prerequisites:

- At least 2 years' experience of working with relational databases, including:
 - Designing a normalized database.
 - Creating tables and relationships.
 - Querying with Transact-SQL.
 - Some exposure to basic programming constructs (such as looping and branching).
- An awareness of key business priorities such as revenue, profitability, and financial accounting is desirable.

Objectives: After completing this course, students will be able to:

- Describe data warehouse concepts and architecture considerations.
- Select an appropriate hardware platform for a data warehouse.
- Design and implement a data warehouse.
- Implement Data Flow in an SSIS Package.
- Implement Control Flow in an SSIS Package.
- Debug and Troubleshoot SSIS packages.
- Implement an ETL solution that supports incremental data extraction.
- Implement an ETL solution that supports incremental data loading.
- Implement data cleansing by using Microsoft Data Quality Services.
- Implement Master Data Services to enforce data integrity.
- Extend SSIS with custom scripts and components.
- Deploy and Configure SSIS packages.
- Describe how BI solutions can consume data from the data warehouse.

Course Outline

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| <ul style="list-style-type: none"> I. Introduction to Data Warehousing <ul style="list-style-type: none"> A. Overview of Data Warehousing B. Considerations for a Data Warehouse Solution II. Data Warehouse Considerations <ul style="list-style-type: none"> A. Considerations for Data Warehouse Infrastructure B. Data Warehouse Reference Architectures and Appliances III. Designing and Implementing a Data Warehouse <ul style="list-style-type: none"> A. Logical Design for a Data Warehouse B. Physical Design for a Data Warehouse IV. Creating an ETL Solution with SSIS <ul style="list-style-type: none"> A. Introduction to ETL with SSIS B. Exploring Data Sources C. Implementing Data Flow V. Implementing Control Flow in an SSIS Package <ul style="list-style-type: none"> A. Introduction to Control Flow B. Creating Dynamic Packages C. Using Containers D. Managing Consistency VI. Debugging and Troubleshooting SSIS Packages <ul style="list-style-type: none"> A. Debugging an SSIS Package B. Logging SSIS Package Events C. Handling Errors in an SSIS Package VII. Implementing an Incremental ETL Process <ul style="list-style-type: none"> A. Introduction to Incremental ETL B. Extracting Modified Data C. Loading Modified data | <ul style="list-style-type: none"> VIII. Enforcing Data Quality <ul style="list-style-type: none"> A. Introduction to Data Quality B. Using Data Quality Services to Cleanse Data C. Using Data Quality Services to Match data IX. Master Data Services <ul style="list-style-type: none"> A. Introduction to Master Data Services B. Implementing a Master Data Services Model C. Managing Master Data D. Creating a Master Data Hub X. Extending SQL Server Integration Services <ul style="list-style-type: none"> A. Using Scripts in SSIS B. Using Custom Components in SSIS XI. Deploying and Configuring SSIS Packages <ul style="list-style-type: none"> A. Overview of SSIS Deployment B. Deploying SSIS Projects C. Planning SSIS Package Execution XII. Consuming Data in a Data Warehouse <ul style="list-style-type: none"> A. Introduction to Business Intelligence B. Enterprise Business Intelligence Self-Service BI and Big Data |
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