Hewlett Packard Enterprise

Implementing a Data Warehouse Microsoft SQL Server (20463) H8N63S

In this course, you will learn how to implement a data warehouse platform to support a business intelligence (BI) solution. You will discover how to create a data warehouse, implement extract, transform, and load (ETL) with SQL Server Integration Services (SSIS), and validate and cleanse data with SQL Server Data Quality Services (DQS) and SQL Server Master Data Services.

This course incorporates material from the Official Microsoft Learning Product 20463: Implementing a Data Warehouse with Microsoft SQL Server. It covers the skills and knowledge measured by Exam 70-463 and along with on-the-job experience, helps you prepare for the exam.

Implementing a Data Warehouse Microsoft SQL Server (20463)	
Price	USD $3,000
Links to local schedules, pricing and registration	**US/Canada**
HP course #	H8N63S
Category	Microsoft SQL Server
Duration	5 days

Special note

Elements of this syllabus are subject to change.

Audience

This course is intended for:

- Database professionals who administer and maintain SQL Server databases including database maintenance
- Database professionals who work in environments where databases play a key role in their primary job responsibilities or develop applications that deliver content from SQL Server databases

Prerequisites

- Minimum two years experience working with relational databases, including designing a normalized database, creating tables and relationships
- Basic programming constructs, including looping and branching
- Focus on key business priorities, such as revenue, profitability, and financial account
- Course H8N61S: Querying Microsoft SQL Server (20461) or equivalent skills and knowledge.

Course objectives

During this course, students will learn:
- Data warehouse concepts and architecture considerations
- Select an appropriate hardware platform for a data warehouse
- Design and implement a data warehouse
- Implement data flow and control flow in a SSIS package
- Debug and troubleshoot SSIS packages
- Implement a SSIS solution that supports incremental data warehouse loads and extracting data
- Implement data cleansing using Microsoft DQS
- Implement Master Data Services (MDS) to enforce data integrity
- Extend SSIS with custom scripts and components
- Deploy and configure SSIS packages
- How Business Intelligence solutions consume data in a data warehouse

Course outline

1. Data Warehousing
- Concepts and Architecture Considerations
- Considerations for a Data Warehouse Solution

2. Data Warehouse Infrastructure
- Hardware Selections
- Considerations for Business Intelligence Infrastructure

3. Design and Implement a Data Warehouse
- Logical Design, Including Dimension Tables and Fact Tables
- Physical Implementation, Including a Star Schema, Snowflake Schema, and Time Dimension

4. Create an ETL Solution with SSIS
- ETL with SSIS
- Explore Source Data
- Implement Data Flow

5. Implement Control Flow in an SSIS Package
- Control Flow
- Create Dynamic Packages
- Using Containers
- Manage Consistency with Transactions and Checkpoints

6. Debug and Troubleshoot SSIS Packages
- Debug an SSIS Package
- Log SSIS Package Events
- Implement an Event Handler
- Handle Errors in an SSIS Package

7. Implement an Incremental ETL Process
- Incremental ETL
- Data and Modified Data Extraction

8. Load Data into a Data Warehouse
- Data and Modified Data Load planning
- Incremental loads Using SSIS
- Transact-SQL Loading Techniques

9. Enforce Data Quality
- Microsoft SQL Server DQS
- Use DQS to Cleanse Data
- Use DQS to Match Data

10. Master Data Services
- Master Data Services Concepts
- Implement a Master Data Services Model
- Master Data Services Tools to Manage and Create Master Data

11. Extend SSIS
- Custom Components in SSIS
- Scripting in SSIS

12. Deploy and Configure SSIS Packages
- Deployment Considerations
- Deploy SSIS Projects
- Plan SSIS Package Execution

13. Consume Data in a Data Warehouse
- Business Intelligence Solutions
- Enterprise BI Solution
- Self-Service BI and Big Data Solutions

Labs

Lab 1: Explore a Data Warehouse Solution

Lab 2: Data Warehouse Infrastructure Planning

Lab 3: Data Warehouse Implementation

Lab 4: Implement Data Flow in a SSIS Package

Lab 5A: Implement Control Flow in a SSIS Package

Lab 5B: Transactions and Checkpoints Usage

Lab 6: Debug and Troubleshoot a SSIS Package

Lab 7: Extract Modified Data

Lab 8: Data Warehouse Loading

Lab 9: Cleanse Data

Lab 10: Implement Master Data Services

Lab 11: Custom Scripts

Lab 12: Deploy and Configure SSIS Packages

Lab 13: Data Warehouse Usage in Enterprise and Self-Service BI Scenarios

Learn more at

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