Implementing a SQL Data Warehouse

Duration: 5 Days **Course Code: M20767** **Version: C** **Delivery Method: Company Event**

Overview:

EOL - 30/12/21

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.

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

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.

Objectives:

- After completing this course, students will be able to:
- Provision a Database Server.
- Upgrade SQL Server.
- Configure SQL Server.
- Manage Databases and Files (shared).

Prerequisites:

In addition to their professional experience, students who attend this training should already have the following technical knowledge:

•Basic knowledge of the Microsoft Windows operating system and its core functionality.

•Working knowledge of relational databases.

•Some experience with database design.

Content:

Module 1: Introduction to Data Warehousing

This module describes data warehouse concepts and architecture consideration.

Lessons

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- 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
- Copying data with the Azure data factory
- Introduction to ETL with SSIS
- Exploring Source Data
- Implementing Data Flow
- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.
- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package
- Introduction to Incremental ETL
- Extracting Modified Data
- Loading modified data
- Temporal Tables
- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data
- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub
- Overview of SSIS Deployment
- Deploying SSIS Projects
- Planning SSIS Package Execution
- Introduction to Business Intelligence
- An Introduction to Data Analysis
- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Exploring a Data Warehouse Solution

- Exploring data sources
- Exploring an ETL process
- Exploring a data warehouse

Module 3: Designing and Implementing a Data Warehouse

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
- Create Columnstore indexes
- Work with Columnstore Indexes
- 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
- Describe ETL with SSIS
- Explore Source Data
- Implement a Data Flow
- Describe control flow
- Create dynamic packages
- Use containers
- Debug an SSIS package
- Log SSIS package events
- Handle errors in an SSIS package
- Describe incremental ETL
- Extract modified data
- Load modified data.
- Describe temporal tables
- Describe data quality services
- Cleanse data using data quality services
- Match data using data quality services
- De-duplicate data using data quality services
- Describe the key concepts of master data services
- Implement a master data service model
- Manage master data
- Create a master data hub
- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
- Deploy an SSIS package
- Plan SSIS package execution
- 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

Module 7: Implementing Control Flow in an SSIS Package

This module describes implementing control flow in an SSIS package.

Lessons

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
- Create Columnstore indexes
- Work with Columnstore Indexes
- 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
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- Use scripting in SSIS
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- Show an understanding of data analysis
- Analyze data with Azure SQL data warehouse

Module 11: Using Master Data Services

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

Lessons

- Overview of Data Warehousing
- Considerations for a Data Warehouse

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

Lessons

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- 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
- Copying data with the Azure data factory
- Introduction to ETL with SSIS
- Exploring Source Data
- Implementing Data Flow
- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.
- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package
- Introduction to Incremental ETL
- Extracting Modified Data
- Loading modified data
- Temporal Tables
- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data
- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub
- Overview of SSIS Deployment
- Deploying SSIS Projects
- Planning SSIS Package Execution
- Introduction to Business Intelligence
- An Introduction to Data Analysis
- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Implementing a Data Warehouse Schema

- Implementing a star schema
- Implementing a snowflake schema
- Implementing a time dimension table

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
- Create Columnstore indexes
- Work with Columnstore Indexes

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
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- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Implementing Control Flow in an SSIS Package

- Using tasks and precedence in a control flow
- Using variables and parameters
- Using containers

Lab : Using Transactions and Checkpoints

- Using transactions
- Using checkpoints

After completing this module, you will be able

- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- 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
- Copying data with the Azure data factory
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- An Introduction to Data Analysis
- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Implementing Master Data Services

- Creating a master data services model
- Using the master data services add-in for Excel
- Enforcing business rules
- Loading data into a model
- Consuming master data services data

After completing this module, you will be able to:

warehouse
- Implement a physical design for a data warehouse
- Create Columnstore indexes
- Work with Columnstore Indexes
- 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
- Describe ETL with SSIS
- Explore Source Data
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- Describe the key concepts of master data services
- Implement a master data service model
- Manage master data
- Create a master data hub
- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
- Deploy an SSIS package
- Plan SSIS package execution
- 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

Module 4: Columnstore Indexes

This module introduces Columnstore Indexes.

Lessons

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- Advantages of Azure SQL Data Warehouse
- Implementing an Azure SQL Data

to:

- Implement a logical design for a data warehouse
- Implement a physical design for a data warehouse
- Create Columnstore indexes
- Work with Columnstore Indexes
- 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
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- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
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- Plan SSIS package execution
- 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

Module 8: Debugging and Troubleshooting SSIS Packages

This module describes how to debug and troubleshoot SSIS packages.

Lessons

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

- 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
- Describe ETL with SSIS
- Explore Source Data
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- Manage master data
- Create a master data hub
- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
- Deploy an SSIS package
- Plan SSIS package execution
- 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

Module 12: Extending SQL Server Integration Services (SSIS)

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

Lessons

- Using scripting in SSIS
- Using custom components in SSIS

Lab : Using scripts

- Using a script task

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
- Developing an Azure SQL Data Warehouse
- Migrating to an Azure SQ Data Warehouse
- Copying data with the Azure data factory
- Introduction to ETL with SSIS
- Exploring Source Data
- Implementing Data Flow
- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.
- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package
- Introduction to Incremental ETL
- Extracting Modified Data
- Loading modified data
- Temporal Tables
- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data
- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub
- Overview of SSIS Deployment
- Deploying SSIS Projects
- Planning SSIS Package Execution
- Introduction to Business Intelligence
- An Introduction to Data Analysis
- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Using Columnstore Indexes

- Create a Columnstore index on the FactProductInventory table
- Create a Columnstore index on the FactInternetSales table
- Create a memory optimized Columnstore table

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
- Create Columnstore indexes
- Work with Columnstore Indexes
- 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
- Describe ETL with SSIS
- Explore Source Data
- Implement a Data Flow
- Describe control flow
- Create dynamic packages
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- 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
- Copying data with the Azure data factory
- Introduction to ETL with SSIS
- Exploring Source Data
- Implementing Data Flow
- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.
- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package
- Introduction to Incremental ETL
- Extracting Modified Data
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- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data
- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub
- Overview of SSIS Deployment
- Deploying SSIS Projects
- Planning SSIS Package Execution
- Introduction to Business Intelligence
- An Introduction to Data Analysis
- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Debugging and Troubleshooting an SSIS Package

- Debugging an SSIS package
- Logging SSIS package execution
- Implementing an event handler
- Handling errors in data flow

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
- Create Columnstore indexes
- Work with Columnstore Indexes

warehouse
- Create Columnstore indexes
- Work with Columnstore Indexes
- 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
- Describe ETL with SSIS
- Explore Source Data
- Implement a Data Flow
- Describe control flow
- Create dynamic packages
- Use containers
- Debug an SSIS package
- Log SSIS package events
- Handle errors in an SSIS package
- Describe incremental ETL
- Extract modified data
- Load modified data.
- Describe temporal tables
- Describe data quality services
- Cleanse data using data quality services
- Match data using data quality services
- De-duplicate data using data quality services
- Describe the key concepts of master data services
- Implement a master data service model
- Manage master data
- Create a master data hub
- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
- Deploy an SSIS package
- Plan SSIS package execution
- 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

Module 13: Deploying and Configuring SSIS Packages

This module describes how to deploy and configure SSIS packages.

Lessons

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- Advantages of Azure SQL Data

- Use containers
- Debug an SSIS package
- Log SSIS package events
- Handle errors in an SSIS package
- Describe incremental ETL
- Extract modified data
- Load modified data.
- Describe temporal tables
- Describe data quality services
- Cleanse data using data quality services
- Match data using data quality services
- De-duplicate data using data quality services
- Describe the key concepts of master data services
- Implement a master data service model
- Manage master data
- Create a master data hub
- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
- Deploy an SSIS package
- Plan SSIS package execution
- 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

Module 5: Implementing an Azure SQL Data Warehouse

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

Lessons

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- 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
- Copying data with the Azure data factory
- Introduction to ETL with SSIS
- Exploring Source Data
- Implementing Data Flow
- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.
- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package
- Introduction to Incremental ETL
- 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
- Describe ETL with SSIS
- Explore Source Data
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- Load modified data.
- Describe temporal tables
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- Cleanse data using data quality services
- Match data using data quality services
- De-duplicate data using data quality services
- Describe the key concepts of master data services
- Implement a master data service model
- Manage master data
- Create a master data hub
- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
- Deploy an SSIS package
- Plan SSIS package execution
- 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

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

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- 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
- Copying data with the Azure data factory
- Introduction to ETL with SSIS
- Exploring Source Data
- Implementing Data Flow
- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.
- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package
- Introduction to Incremental ETL
- Extracting Modified Data
- Loading modified data
- Temporal Tables
- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data
- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub
- Overview of SSIS Deployment
- Deploying SSIS Projects
- Planning SSIS Package Execution
- Introduction to Business Intelligence
- An Introduction to Data Analysis
- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Deploying and Configuring SSIS Packages

- Creating an SSIS catalog
- Deploying an SSIS project
- Creating environments for an SSIS solution
- Running an SSIS package in SQL server management studio
- Scheduling SSIS packages with SQL server agent

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
- Create Columnstore indexes
- Work with Columnstore Indexes
- Describe the advantages of Azure SQL Data Warehouse
- Implement an Azure SQL Data Warehouse
- Describe the considerations for developing an Azure SQL Data Warehouse

- Extracting Modified Data
- Loading modified data
- Temporal Tables
- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data
- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub
- Overview of SSIS Deployment
- Deploying SSIS Projects
- Planning SSIS Package Execution
- Introduction to Business Intelligence
- An Introduction to Data Analysis
- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Implementing an Azure SQL Data Warehouse

- Create an Azure SQL data warehouse database
- Migrate to an Azure SQL Data warehouse database
- Copy data with the Azure data factory

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
- Create Columnstore indexes
- Work with Columnstore Indexes
- 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
- Describe ETL with SSIS
- Explore Source Data
- Implement a Data Flow
- Describe control flow
- Create dynamic packages
- Use containers
- Debug an SSIS package
- Log SSIS package events
- Handle errors in an SSIS package
- Describe incremental ETL
- Extract modified data
- Load modified data.
- Describe temporal tables
- Describe data quality services
- Cleanse data using data quality services
- Match data using data quality services
- De-duplicate data using data quality services
- Describe the key concepts of master data services
- Implement a master data service model
- Warehouse
- Implementing an Azure SQL Data Warehouse
- Developing an Azure SQL Data Warehouse
- Migrating to an Azure SQ Data Warehouse
- Copying data with the Azure data factory
- Introduction to ETL with SSIS
- Exploring Source Data
- Implementing Data Flow
- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.
- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package
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- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data
- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub
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- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Extracting Modified Data

- Using a datetime column to incrementally extract data
- Using change data capture
- Using the CDC control task
- Using change tracking

Lab : Loading a data warehouse

- Loading data from CDC output tables
- Using a lookup transformation to insert or update dimension data
- Implementing a slowly changing dimension
- Using the merge statement

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
- Plan for migrating to Azure SQL Data Warehouse
- Describe ETL with SSIS
- Explore Source Data
- Implement a Data Flow
- Describe control flow
- Create dynamic packages
- Use containers
- Debug an SSIS package
- Log SSIS package events
- Handle errors in an SSIS package
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- De-duplicate data using data quality services
- Describe the key concepts of master data services
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- Manage master data
- Create a master data hub
- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
- Deploy an SSIS package
- Plan SSIS package execution
- 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

Module 14: Consuming Data in a Data Warehouse

This module describes how to debug and troubleshoot SSIS packages.

Lessons

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- 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
- Copying data with the Azure data factory
- Introduction to ETL with SSIS

- Manage master data
- Create a master data hub
- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
- Deploy an SSIS package
- Plan SSIS package execution
- 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

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

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- 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
- Copying data with the Azure data factory
- Introduction to ETL with SSIS
- Exploring Source Data
- Implementing Data Flow
- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.
- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package
- Introduction to Incremental ETL
- Extracting Modified Data
- Loading modified data
- Temporal Tables
- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data
- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub
- Overview of SSIS Deployment
- Deploying SSIS Projects
- Planning SSIS Package Execution
- Introduction to Business Intelligence
- An Introduction to Data Analysis
- Create Columnstore indexes
- Work with Columnstore Indexes
- 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
- Describe ETL with SSIS
- Explore Source Data
- Implement a Data Flow
- Describe control flow
- Create dynamic packages
- Use containers
- Debug an SSIS package
- Log SSIS package events
- Handle errors in an SSIS package
- Describe incremental ETL
- Extract modified data
- Load modified data.
- Describe temporal tables
- Describe data quality services
- Cleanse data using data quality services
- Match data using data quality services
- De-duplicate data using data quality services
- Describe the key concepts of master data services
- Implement a master data service model
- Manage master data
- Create a master data hub
- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
- Deploy an SSIS package
- Plan SSIS package execution
- 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

Module 10: Enforcing Data Quality

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

Lessons

- Overview of Data Warehousing
- Considerations for a Data Warehouse Solution
- Designing dimension tables
- Designing fact tables
- Physical Design for a Data Warehouse
- Introduction to Columnstore Indexes
- Creating Columnstore Indexes
- Working with Columnstore Indexes
- Exploring Source Data
- Implementing Data Flow
- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.
- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package
- Introduction to Incremental ETL
- Extracting Modified Data
- Loading modified data
- Temporal Tables
- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data
- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub
- Overview of SSIS Deployment
- Deploying SSIS Projects
- Planning SSIS Package Execution
- Introduction to Business Intelligence
- An Introduction to Data Analysis
- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Using a data warehouse

- Exploring a reporting services report
- Exploring a PowerPivot workbook
- Exploring a power view report

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
- Create Columnstore indexes
- Work with Columnstore Indexes
- 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
- Describe ETL with SSIS
- Explore Source Data
- Implement a Data Flow
- Describe control flow
- Create dynamic packages
- Use containers
- Debug an SSIS package
- Log SSIS package events
- Handle errors in an SSIS package
- Describe incremental ETL
- Extract modified data
- Load modified data.

- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Implementing Data Flow in an SSIS Package

- Exploring source data
- Transferring data by using a data row task
- Using transformation components in a data row

- 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
- Copying data with the Azure data factory
- Introduction to ETL with SSIS
- Exploring Source Data
- Implementing Data Flow
- Introduction to Control Flow
- Creating Dynamic Packages
- Using Containers
- Managing consistency.
- Debugging an SSIS Package
- Logging SSIS Package Events
- Handling Errors in an SSIS Package
- Introduction to Incremental ETL
- Extracting Modified Data
- Loading modified data
- Temporal Tables
- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data
- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub
- Overview of SSIS Deployment
- Deploying SSIS Projects
- Planning SSIS Package Execution
- Introduction to Business Intelligence
- An Introduction to Data Analysis
- Introduction to reporting
- Analyzing Data with Azure SQL Data Warehouse

Lab : Cleansing Data

- Creating a DQS knowledge base
- Using a DQS project to cleanse data
- Using DQS in an SSIS package

Lab : De-duplicating Data

- Creating a matching policy
- Using a DS project to match data

- Describe temporal tables
- Describe data quality services
- Cleanse data using data quality services
- Match data using data quality services
- De-duplicate data using data quality services
- Describe the key concepts of master data services
- Implement a master data service model
- Manage master data
- Create a master data hub
- Use custom components in SSIS
- Use scripting in SSIS
- Describe an SSIS deployment
- Deploy an SSIS package
- Plan SSIS package execution
- 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

Further Information:

For More information, or to book your course, please call us on 353-1-814 8200

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