Enterprise Computing Solutions - Education Services

TRAINING OFFERING

Vous pouvez nous joindre ici

.

Email: training.ecs.fr@arrow.com
Phone: 01 49 97 50 00

Implementing a SQL Data Warehouse

CODE:	DURÉE:	PRIX H.T.:
MCS_20767	40 Hours (5 Jours)	€2,830.00

Description

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.

Objectifs

After completing this course, students will be able to:

Describe the key elements of a data warehousing solution
Describe the main hardware considerations for building a data warehouse
Implement a logical design for a data warehouse
Implement a physical design for a data warehouse
Create columnstore indexes
Implementing an Azure SQL Data Warehouse
Describe the key features of SSIS
Implement a data flow by using SSIS
Implement control flow by using tasks and precedence constraints
Create dynamic packages that include variables and parameters
Debug SSIS packages
Describe the considerations for implement an ETL solution
Implement Data Quality Services
Implement a Master Data Services model
Describe how you can use custom components to extend SSIS
Deploy SSIS projects
Describe BI and common BI scenarios

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.

Prérequis

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.

Programme

Module 1: Introduction to Data Warehousing This module describes data warehouse concepts and architecture consideration.
Overview of Data Warehousing
Lessons Considerations for a Data Warehouse Solution Lab : Exploring a Data Warehouse Solution
Exploring data sources
Exploring an ETL process
Exploring a data warehouse 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
This module describes the main hardware considerations for building a data warehouse. Lessons

Considerations for data warehouse infrastructure.
Planning data warehouse hardware. Lab : Planning Data Warehouse Infrastructure
Planning data warehouse hardware 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
This module describes how you go about designing and implementing a schema for a data warehouse. Lessons
Designing dimension tables Implementing a star schema
Designing fact tables Implementing a snowflake schema
Physical Design for a Data Warehouse Lab : Implementing a Data Warehouse Schema Implementing a time dimension table
Implement a logical design for a data warehouse
After completing this module, you will be able to: Implement a physical design for a data warehouse
Introduction to Columnstore Indexes
Creating Columnstore Indexes
Module 4: Columnstore Indexes This module introduces Columnstore Indexes. Lessons Working with Columnstore Indexes
Create a Columnstore index on the FactProductInventory table
Create a Columnstore index on the FactInternetSales table
Lab : Using Columnstore Indexes Create a memory optimized Columnstore table
After completing this module, you will be able to: Create Columnstore indexes Work with Columnstore Indexes
Module 5: Implementing an Azure SQL Data Warehouse
This module describes Azure SQL Data Warehouses and how to implement them. Lessons
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 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:
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 At the end of this module you will be able to implement data flow in a SSIS package. Lessons
Introduction to ETL with SSIS
Exploring Source Data
Implementing Data Flow 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 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
This module describes implementing control flow in an SSIS package. Lessons Managing consistency.
Using tasks and precedence in a control flow
Using variables and parameters
Lab : Implementing Control Flow in an SSIS Package Using containers
Using transactions
Lab : Using Transactions and Checkpoints Using 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
This module describes how to debug and troubleshoot SSIS packages. Lessons Handling Errors in an SSIS Package
Debugging an SSIS package
Logging SSIS package execution
Implementing an event handler
Lab : Debugging and Troubleshooting an SSIS Package Handling errors in data flow
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 a Data Extraction Solution
This module describes how to implement an SSIS solution that supports incremental DW loads and changing data. Lessons
Introduction to Incremental ETL Using a datetime column to incrementally extract data
Extracting Modified Data Using change data capture
Loading modified data Using the CDC control task
Temporal Tables Lab : Extracting Modified Data Using change tracking
Loading data from CDC output tables
Using a lookup transformation to insert or update dimension data
Implementing a slowly changing dimension
Lab : Loading a data warehouse Using the merge statement
After completing this module, you will be able to: Describe incremental ETL Extract modified data Load modified data.
Describe temporal tables Module 10: Enforcing Data Quality

This module describes how to implement data cleansing by using Microsoft Data Quality services. Lessons
Introduction to Data Quality
Using Data Quality Services to Cleanse Data
Using Data Quality Services to Match Data
Lab : Cleansing Data
Creating a DQS knowledge base
Using a DQS project to cleanse data
Using DQS in an SSIS package
Creating a matching policy
Lab : De-duplicating Data
Using a DS project to match 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
This module describes how to implement master data services to enforce data integrity at source. Lessons
Introduction to Master Data Services
Implementing a Master Data Services Model
Hierarchies and collections
Creating a Master Data Hub
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:
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 scripting in SSIS
This module describes how to extend SSIS with custom scripts and components. Lessons
Using custom components in SSIS
Lab : Using scripts
Using a script task
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
This module describes how to deploy and configure SSIS packages. Lessons
Planning SSIS Package Execution
Creating an SSIS catalog
Deploying an SSIS project
Creating environments for an SSIS solution
Running an SSIS package in SQL server management studio
Lab : Deploying and Configuring SSIS Packages
Scheduling SSIS packages with SQL server agent
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
This module describes how to debug and troubleshoot SSIS packages. Lessons
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:
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

Dates de session

Sur demande. Merci de nous contacter

Informations Complémentaires

Cette formation est également disponible sous forme de formation sur site. Veuillez nous contacter pour en savoir plus.