kod szkolenia: AA_20767 / ENG DL 5d

Implementing a SQL Data Warehouse 2022

Training recipients

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.

Benefits

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

Training program

1. Introduction to Data Warehousing
   - Overview of Data Warehousing
   - Considerations for a Data Warehouse Solution
2. Planning Data Warehouse Infrastructure
   - Considerations for data warehouse infrastructure.
   - Planning data warehouse hardware.
3. Designing and Implementing a Data Warehouse
   - Data warehouse design overview
   - Designing dimension tables
   - Designing fact tables
   - Physical Design for a Data Warehouse
4. Columnstore Indexes
   - Introduction to Columnstore Indexes
   - Creating Columnstore Indexes
   - Working with Columnstore Indexes
5. Creating an ETL Solution
   - Introduction to ETL with SSIS
   - Exploring Source Data
   - Implementing Data Flow
6. Implementing Control Flow in an SSIS Package
   - Introduction to Control Flow
   - Creating Dynamic Packages
   - Using Containers
   - Managing consistency.
7. Debugging and Troubleshooting SSIS Packages
   - Debugging an SSIS Package
   - Logging SSIS Package Events
   - Handling Errors in an SSIS Package
8. Implementing a Data Extraction Solution
   - Introduction to Incremental ETL
   - Extracting Modified Data
   - Loading modified data
   - Temporal Tables
9. Enforcing Data Quality
   - Introduction to Data Quality
   - Using Data Quality Services to Cleanse Data
   - Using Data Quality Services to Match Data
10. Using Master Data Services

- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Hierarchies and collections
- Creating a Master Data Hub

11. Extending SQL Server Integration Services (SSIS)
    - Using scripting in SSIS
    - Using custom components in SSIS
12. Deploying and Configuring SSIS Packages
    - Overview of SSIS Deployment
    - Deploying SSIS Projects
    - Planning SSIS Package Execution
13. Consuming Data in a Data Warehouse
    - Introduction to Business Intelligence
    - An Introduction to Data Analysis
    - Introduction to reporting
    - Analyzing Data with Azure SQL Data Warehouse

Expected preparation of the participant

This course requires that you meet the following prerequisites:

- Basic knowledge of the Microsoft Windows operating system and its core functionality.
- Working knowledge of relational databases.
- Some experience with database design.

To increase the comfort of work and training’s effectiveness we suggest using an additional monitor. The lack of additional monitor does not exclude participation in the training, however, it significantly influences the comfort of work during classes.

You can find information and requirements of participation in Distance Learning trainings at: https://www.altkomakademia.pl/en/how-it-works/about-courses/

Training Includes

- manual in electronic form available on the platform: https://www.altkomakademia.pl/
- access to Altkom Akademia's student portal

Czas trwania

> 5 dni / 35 godzin

Language

- **Training**: English
- **Materials**: English