



MICROSOFT TRAINING

Azure Data Warehouse

Master Azure Data Warehouse to build and optimize scalable cloud data solutions. Process and analyze big data for enterprise needs.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

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- Globally Recognized Certification
 - Expert-Led Hands-On Training
 - Flexible Scheduling

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COURSE OVERVIEW

This Azure Data Warehouse course is meticulously designed for IT professionals keen on mastering scalable analytics solutions using Microsoft Azure's powerful data warehousing capabilities. Focusing primarily on Azure Synapse Analytics, a comprehensive analytics service that brings together enterprise data warehousing and Big Data analytics, this course will equip you with the expertise to design, implement, and optimize robust cloud-based data warehouses. You will learn how to leverage core technologies within Synapse to ingest, transform, and manage vast amounts of data, preparing it for insightful business intelligence.

The curriculum covers essential aspects from understanding data warehousing concepts and Azure Synapse architecture to practical implementation details such as designing distributed tables, efficient data loading using PolyBase and the COPY statement, and advanced performance optimization techniques. Furthermore, you will delve into integrating your data warehouse with other Azure services like Azure Data Factory for ETL/ELT processes and Power BI for data visualization, ensuring a holistic understanding of the analytics ecosystem. The course also addresses critical security considerations to safeguard your data assets.

By completing this intermediate-level program, you will gain hands-on skills to build and manage high-performance data warehousing solutions, enabling organizations to derive data-driven insights faster and more reliably. This specialized knowledge is crucial for anyone looking to advance their career in cloud data engineering, business intelligence development, or data architecture, providing a competitive edge in today's data-intensive professional landscape.

Duration	2 hours
Level	Intermediate
Vendor	Microsoft

COURSE CURRICULUM

01 Module 1: Introduction to Azure Data Warehousing & Synapse Analytics

- What is Data Warehousing?
- Introduction to Azure Synapse Analytics architecture
- Dedicated SQL Pools vs. Serverless SQL Pools overview
- Key components of Azure Synapse Analytics
- Use cases for Azure Data Warehousing

02 Module 2: Designing and Implementing Azure Synapse SQL Pools

- Designing data warehouse schemas (Star, Snowflake)
- Choosing distribution methods (Hash, Round Robin, Replicated)
- Creating and managing Dedicated SQL Pools
- Understanding data types and table structures in Synapse
- Scaling and pausing Dedicated SQL Pools

03 Module 3: Data Ingestion and Transformation

- Introduction to data loading strategies
- Using PolyBase for high-throughput data loading
- Implementing COPY statement for data ingestion
- Data transformation with Azure Data Factory
- ELT (Extract, Load, Transform) patterns in Azure Synapse

04 Module 4: Performance Optimization and Security

- Understanding workload management in Synapse
- Indexing strategies (Clustered Columnstore, Clustered, Non-Clustered)
- Optimizing queries using views and statistics
- Implementing security features (Row-Level Security, Column-Level Security, data masking)
- Monitoring and troubleshooting performance

05 Module 5: Integration and Advanced Topics

- Integrating Azure Synapse with Power BI
- Connecting with Azure Data Lake Storage Gen2
- Introduction to Synapse Studio for development and monitoring
- Brief overview of Spark Pools and Data Explorer Pools in Synapse
- Best practices for Azure Data Warehouse management

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Azure Data Engineer**
- > **Cloud Business Intelligence Developer**
- > **Azure Data Warehouse Architect**

FREQUENTLY ASKED QUESTIONS

Q: What specific data loading and transformation techniques will I learn to populate an Azure Data Warehouse effectively?

This course delves into efficient data ingestion methods such as PolyBase and the COPY statement, crucial for high-volume data movement into Azure Synapse SQL pools. You will also learn foundational ELT (Extract, Load, Transform) patterns and how to orchestrate data pipelines using Azure Data Factory to prepare and transform data before loading, ensuring data quality and readiness for analytics.

Q: Does this course cover strategies for optimizing query performance on massive datasets within Azure Synapse Analytics?

Absolutely. A significant portion of the course is dedicated to performance optimization. You will learn about appropriate table distribution methods (hash, round robin, replicated), effective indexing strategies including Clustered Columnstore Indexes, workload management, and how to utilize statistics and views to accelerate query execution. These techniques are vital for extracting timely insights from large-scale data warehouses.

Q: What foundational knowledge or prior experience is recommended to get the most out of this Azure Data Warehouse course?

While this is an intermediate-level course, a basic understanding of relational databases and SQL query syntax is highly recommended. Familiarity with core Azure concepts, such as Azure Storage Accounts and Azure portal navigation, would also be beneficial but is not strictly required as key Azure services will be introduced. This background will help you quickly grasp the specialized concepts of cloud data warehousing on Azure.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

Professionals Trained

50+

Vendor Certifications

READY TO ENROL?

Take the next step in your technology career.

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