



SNOWFLAKE DATA ENGINEER II

TWO-DAY COURSE

24F28



OVERVIEW

This two-day, role-specific course presents additional topics and a deep dive into select subjects for the Data Engineer through the lens of the data engineering lifecycle. The course covers Snowflake concepts, features, considerations, and best practices intended for stakeholders who will be accessing, developing, and querying datasets for analytic tasks, and building data pipelines in Snowflake. This course consists of data engineering concepts delivered through lectures, demos, labs, and discussions.

ACQUIRED SKILLS

- Develop applications for Snowflake, including comprehensive ANSI standard SQL support.
- Identify and describe various data modeling techniques and architectures deployed on the Snowflake Platform.
- Govern data stored and accessed in Snowflake effectively.
- Exploit Snowflake capabilities to work effectively with structured, semi-structured, and unstructured data in Snowflake.
- Use Snowflake’s SQL extensibility features, such as user-defined functions and stored procedures.
- Employ the Snowpark client libraries to query and transform data in a data pipeline and build applications that process data in Snowflake without moving data to the system running the application.
- Automate data ingestion and expand data lake capabilities using Snowflake.

WHO SHOULD ATTEND

- Data Analysts
- Data Engineers
- Data Scientists
- Database Architects
- Database Administrators
- Data Application Developers

PREREQUISITES

Successful completion of either “Snowflake Fundamentals” or “Snowflake Data Engineer” course is recommended.

DELIVERY FORMAT

Instructor-led Public or Private classes are available.

TOPICS COVERED

Snowflake Overview and Architecture

- Overview and Architecture Recap

Data Engineering Workflow Recap

Data Storage

- Table Formats and Iceberg Tables
- Iceberg Tables in Snowflake
- Hybrid Tables in Snowflake
- Define and Implement Hybrid Tables
- Cost Analysis and Limitations

Ingestion

- Schema Detection
- Schema Evolution
- Visualizing Data Ingestion

Transformation

- Developing for Snowflake Overview
- User Defined Functions (Java and Python)
- User Defined Table Functions (Java and Python)
- Snowpark Stored Procedures (Java, Scala, and Python)
- Working With Snowpark

Data Platform Architecture

- Data Modeling
- Data Vault Introduction

Supporting Platform Features

- Data Governance Overview
- Classification and Object Tagging
- Object Dependencies

- Access History
- Snowflake Policies
- Tag-based Masking Policies
- External Tokenization

Performance Optimization

- Search Optimization Service
- Query Acceleration Service

Delivery

- Snowflake Python API
- Snowflake SQL API
- Streamlit in Snowflake

Orchestration

- Scheduling Workflows with Airflow
- Snowflake Python Task API

Management and Observability

- Observability on Snowflake
- No-code Pipeline Observability Within Snowsight
- Cost Governance Framework
- Logging and Tracing