

SNOWFLAKE DATA ENGINEER IN 3 DAYS

Prerequisites: A background in database administration, foundational knowledge of snowflake

Duration: 3 Days (8 Hrs./Day)

Course Objective: This three-day, role-specific course covers key concepts, features, considerations, and Snowflake best practices through the lens of the data engineering workflow. It is intended for participants who will be accessing, developing, and querying datasets for analytic tasks and building data pipelines in Snowflake. This course consists of core data engineering concepts delivered through lectures, demos, labs, and discussions.

Lab Requirement: Koenig DC/Linux.

Module 1 - Supporting Platform Features

Authentication Methods

Drivers, Clients, and Connectors Overview

Integrations

Snowflake Connector for Python

SnowSQL

Role-based Access Control (RBAC) Overview

Introduction to Data Governance

Module 2 - Data Storage

Semi-structured Data



Query Semi-structured Data

Data Lake

Module 3 - Ingestion

Bulk vs. Continuous Data Loading Approaches

Snowpipe

Snowpipe Streaming

Snowflake Connector for Kafka

Snowflake Connector for Kafka With Snowpipe Streaming

Snowflake Data Loading Best Practices

Loading Semi-structured Data

Schema Detection

Working With Unstructured Data

Creating and Managing Streams

Streams on Views

Module 4 - Orchestration

Creating and Managing Tasks

Using Streams and Tasks Together

Module 5 - Transformation

Dynamic Tables

Extensibility Overview

Snowflake Scripting

JavaScript Stored Procedures

SQL and JavaScript UDFs and UDTFs



External Functions

External Network Access

Introduction to Snowpark

Java and Python Functions and Stored Procedures Introduction

Transformations With Unstructured Data

Module 6 - Performance Optimization

Natural Clustering

Explicit Clustering

Automatic Clustering Service

Search Optimization Service Introduction

SQL Performance Tips

Performance Bottleneck Scenarios

Module 7 - Delivery

Materialized Views

Unloading Semi-structured Data

Data Sharing

Data Exchange

Snowflake Marketplace

Secure Views

Secure UDFs

Streams on Shared Tables

Common Table Expressions (CTEs)



Module 8 - Management and Observability

Observability on Snowflake

Outbound Notifications

Snowflake Alerts

Observability Within Snowsight

Query Tags

Cost Controls

Resource Monitors

Parameters