



# SNOWFLAKE FUNDAMENTALS

TWO-DAY COURSE (NO LABS)

24130

## OVERVIEW

This two-day course covers the core concepts, design considerations, and Snowflake recommended best practices intended for critical stakeholders who will be working on the Snowflake AI Data Cloud. The course consists of lectures and demos on a wide range of essential topics.

## ACQUIRED SKILLS

- Outline the unique and differentiated architecture of the Snowflake AI Data Cloud.
- Load and transform data.
- Summarize query constructs, DDL, and DML operations.
- Use Snowflake's extensive SQL capabilities for data analysis.
- Describe how user and application access can be easily managed.
- Apply Snowflake's recommended best practices for working with semi-structured data.
- Discuss Snowflake's unique approach to caching.
- Implement the options provided to connect and interact with the Snowflake AI Data Cloud.
- Employ Snowflake's continuous data protection features.
- Utilize data sharing to send your data in real-time to Customers and Partners.
- Scale your Virtual Warehouses to improve performance and address concurrency needs.
- Explain the different ways you can manage and monitor your Snowflake account.
- Summarize Snowflake's AI and ML capabilities.

## WHO SHOULD ATTEND

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

## PREREQUISITES

Previous Data Warehouse knowledge is assumed.

## DELIVERY FORMAT

Instructor-led Public or Private classes are available.

## TOPICS COVERED

### Overview and Architecture

- Overview of Snowflake
- Snowflake Structure
- Using Snowsight
- Storage Layer
- Compute Layer
- Cloud Services Layer
- Snowgrid

### Connecting to Snowflake

- Connection Options
- SnowSQL
- Visualizations in Snowsight

### Data Protection Features

- Cloning
- Time Travel
- Fail-safe
- Introduction to Replication

### SQL Support in Snowflake

- Tables, Views, and Data Types
- Transactions
- Standard SQL and Snowflake
- Collation
- Multi-table Inserts
- Query Tags
- Working with Parameters

### Metadata and Caching in Snowflake

- Overview
- Metadata
- Query Result Cache

- Data Cache

## Query Performance

- Using Explain
- Query Profile
- SQL Performance Tips

## Data Loading and Unloading

- Data Loading Objects
- Data Loading Process
- Transformations and Copy Options
- Data Loading Recommendations
- Continuous Data Loading
- Unloading Data

## Functions, Procedures, and Snowflake Scripting

- User-defined Functions
- Stored Procedures
- Snowflake Scripting

## Using Tasks, Streams, and Dynamic Tables

- Tasks Overview
- Creating Tasks
- Managing Tasks
- Streams Overview
- Dynamic Tables Overview

## Managing Security

- Security Overview
- Access
- Authentication
- Authorization
- Data Protection
- Trust Center

## Access Control and User Management

- Concepts
- Types of Roles
- Ownership
- View Grants

## Semi-structured Data

- Overview
- Query Semi-structured Data

## Introduction to Data Sharing

- Snowflake Data Sharing Overview
- Shares

## Virtual Warehouse Scaling

- Types of Virtual Warehouse Scaling
- Auto-scaling Policies

## Cost Management

- Overview
- Visibility
- Control
- Optimization

## Introduction to Snowflake AI and ML

- Generative AI
- Overview of Cortex LLM Functions
- Overview of Snowflake ML Functions