SNOWFLAKE FUNDAMENTALS

FOUR-DAY COURSE

24I30

OVERVIEW

This four-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, demos, and labs covering 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
- 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