

Administering Snowflake

Course outline

Overview and Architecture

- Snowflake Cloud Data Platform
- Functional Architecture and Workloads
- Global Structure: Cloud Platforms and Regions

Snowflake Environment

- Cloud Services Layer
- Compute Layer
- Data Storage Layer
- Scaling Up, Out, and Across
- Account Structure
- Set Account Parameters

Data Storage and Metadata

- What is Micro-partitioning?
- Data Clustering

Data Objects and Commands

- Objects
- Tables
- Constraints
- Views
- Data Types
- Semi-structured Data
- Querying Semi-structured dat

Clients, Connectors, and Ecosystems

- Clients and Interfaces
- SnowSQL

Caching

- Metadata Cache
- Query Result Cache
- Data Cache

Managing Security

- Access
- Authentication
- Encryption Key Management
- Authorization and Access Control
- Privileges and Roles
- Role Management
- User Management

Administering Data Governance

- Data Governance and Snowflake
- Identify and Classify
- Protect
- Audit and Analyze

Managing Data Ingestion and Scaling

- Streaming and Batch Loading
- Bulk Loading
- Storage Integration
- Snowpipe
- Load Operation Performance

DML and Transaction Concurrency

- Transaction Concurrency Goals
- System's Point of View
- Monitoring and Management Functions

Data Sharing

- Data Providers
- Data Consumers
- The Data Marketplace
- Reader Account

Back-up, Restore, and Snapshot

- Time Travel and Point-in-time Restore
- Fail-safe
- Zero-copy Cloning

Data Replication

- Configuring Data Replication
- Failover and Failback

Managing Query Performance

- Query Profiles
- Explain Plan
- Writing Efficient Queries

Advanced Tuning Strategies

- Micro-partitions and Clustering
- Automatic Clustering Service
- Designing Clustering Keys
- Materialized Views
- Search Optimization Service

Organizations

- Account Management Challenges
- Snowflake Organizations

- Administrative Operations with Organizations
- ORGADMIN Role
- Creating Accounts
- Querying Organization Account Usage
- Account Management Commands

Resource and Cost Governance

- Monitoring Compute
- Monitoring Serverless Compute
- Monitoring Storage
- Monitoring Data Transfer
- Resource Monitors

Stored Procedures and Tasks

- Stored Procedures
- Tasks