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Snowflake Architecture and Overview

- Snowflake Overview
- Architecture
- How to use the Snowflake UI & ecosystem

Introduction to cloud

- What is Cloud
- Different Cloud Vendors
- Advantages of Cloud over On-Premise

Introduction to data warehousing concepts

- What is a Data Warehouse, and Why do we need a Data Warehouse?
- Database Vs Data Warehouse.
- Data Warehouse Architecture
- OLTP Vs OLAP
- What is ETL

Introduction to snowflake

- How different from traditional DB
- Quick start to the snowflake and accessing trial account
- Creating warehouse, DB, Schema, and tables
- · Accessing different roles and using it
- Working with worksheets
- Understanding different type of accounts

Understand cloud platforms

- AWS and understanding S3 storage
- Snowflake architecture and caching
- AZURE and understanding blob storage
- GCP and understanding Bucket storage







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Data loading and unloading

- File formats
- Internal and external storage
- Internal and external stage
- Copy into usage
- Snowflake internal storage
- Accessing Cloud storage data into Snowflake (GCP, AZURE and AWS)
- Data unloading

SnowPipe

- Accessing Snowpipe
- PUT and GET commands
- Bulk loading from cloud storage
- Continuous loading

Partner connect with snowflake

- Snowflake Connector and use cases Python
- BI connectors use cases
- Other connectors hands-on

Handling Json and semi structured data

- Variant Data Type
- File format options
- Creating stages
- Loading JSON semi-structured data into SF tables
- Accessing JSON with select statement

Scheduling with Snowflake

- Creating Tasks
- Streams
- Accessing procedures with tasks
- Scheduling as per time with Different time zones
- Automate loading process Daily and Weekly







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Secure Data Sharing

- Usage of sharing data
- Sharing data with different accounts
- Sharing data with non-SF accounts using reader accounts
- Importance of reader accounts
- Privileges in data sharing
- Challenges with cross-region sharing and understanding replication
- Connecting shared objects with BI tools
- Limitations with Data sharing

Cloning

- Access Control Privileges for Cloned Objects
- Cloning and Snowflake Objects
- Impact of DDL on Cloning
- Impact of DML and Data Retention on Cloning

Time travel and failsafe

- Introduction to Time Travel
- Querying Historical Data
- Enabling and Disabling Time Travel
- Data Retention Period
- Cloning Using Time Travel (Databases, Schemas, and Tables Only)

Query Caching, Clustering, and Performance techniques

- Creating multi-users on large tables
- Performance techniques
- Result set cache
- Metadata cache
- Query data cache
- Best practices of using caching for performance and cost optimization







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Advanced Topics

- Error Handling and Validations
- Snowflake Pricing model and selecting best Edition and Calculation of usage
- Resource Monitoring
- Data Masking
- · Partitioning and Clustering in snowflake
- Materialized View and Normal View
- Integration with Python
- Integration with AWS, Azure and Google Cloud
- Best Practices to follow

