

What is zero-copy cloning?

- Which enables the creation of a new table using the structure and data of an existing table, without the need to physically copy the data. This process is primarily a metadata operation, resulting in reduced costs and time associated with data duplication.
- The new table shares the same underlying data as the original but modifications made to either table are isolated and do not affect the other.

2. Time Travel?

Time Travel is a robust feature that enables users to query historical data from their tables at various specific points in the past. This capability allows you to see the state of your data as it appeared at those moments without requiring manual backups or creating separate data copies. By leveraging "micro-partitions", Snowflake keeps track of data changes, making it happen possible to access historical data effortlessly and perform temporal analysis on your datasets.

3. permanent table:

Standard tables used for persistent, long-term data storage.

Temporary table:

Session-specific tables used for temporary data storage during a user's session.

Transient Table: Used for temporary or non-critical data that can be automatically dropped after a specified time or manually when needed.

External Table: References data stored externally and allows querying data without physically loading it into snowflake.

q. Failsafe Implementation: Regular backups, data replication, disaster recovery plan.

Retention Implementation: Data classification, define retention policies, automated data purging, data archiving, monitoring & auditing, security measures

5. What will happen in 0 copy cloning when you change the data on source?

In "zero-copy cloning", changes to the data on the source do not affect the cloned data. The clone maintains its own independent state after the initial copy.

6. What will happen in 0 copy cloning when you change the data on target?

In zero-copy cloning, changes to the data on the target (cloned data) only affect the specific clone. The source data and other clones remain unchanged and independent from the modifications made to the target.

7. Task in Snowflake

Tasks can be combined with table streams for continuous ETL workflows to process recently changed table rows. Streams ensure exactly once semantics for new or changed data in a table.

Tasks can also be used independently to generate specific periodic reports by inserting or merging rows into a report table or perform other periodic work.

A Task can execute any one of the following types of SQL code:

- Single SQL statement
- call to a stored procedure
- procedural logic using Snowflake Scripting.

8. How to load 10k records from Salesforce to Snowflake?

Export the data from Salesforce using data export or Salesforce API (e.g., Rest or Bulk API). And transforms the data to match the Snowflake Schema if needed. Create a staging area in Snowflake to temporarily hold the data. Load the data from the Staging area into the target table using Snowflake's copy INTO or INSERT INTO commands. Verify the data load for accuracy and completeness.

9. How do you perform or increase the performance tuning in a project?
 Performance Analysis, Query optimization, Data model Optimization, Data model optimization, Indexing and partitioning, Hardware and Resource configuration, caching and In-memory processing, parallel processing, Compression and data pruning, Data partitioning and Sharding, Query performance Monitoring, Query Caching and Materialized Views, optimized ETL/ELT processes, Regular performance Testing, periodic Review and Maintenance.