

Hybrid Tables

Sujith Nair

Cloud Data Architect

Snowflake Snowpro Certified

What is a Hybrid table ? What are its main features ?

Hybrid table is a snowflake table type that is designed for OLTP or Transactional workloads.

Transactional workloads need low latency and high throughput which is provided by Hybrid tables.

Hybrid tables features

- Primary Key Constraints
- Unique Key Constraints
- Referential Integrity constraints.
- Indexes.

When to use Hybrid tables ?

Operational or Transactional workload
High concurrency random point reads
High concurrency random writes.

What is Unistore and what does Hybrid tables have to do with Unistore?

Companies have different type of workloads in their databases.

- Analytical workloads which can be thought of as facts /dimensions or data warehouses
- Transactional workloads like those found in source systems like point of sale at Walmart.

Companies generally use different databases for different type of workloads as different databases have different performance characteristics and some work better for Operational workloads and some work better for Analytical workloads.

Unistore is snowflake's offering which with the help of Hybrid tables will be able to perform extremely well with transactional workloads which it was not able to do with regular snowflake table types.

It is called Unistore because snowflake can have hybrid and regular tables in the same database and they can also be joined together and have both type of workloads operate in conjunction with each other

How are Hybrid tables different from other tables types like permanent tables ?

Hybrid tables have the following differences

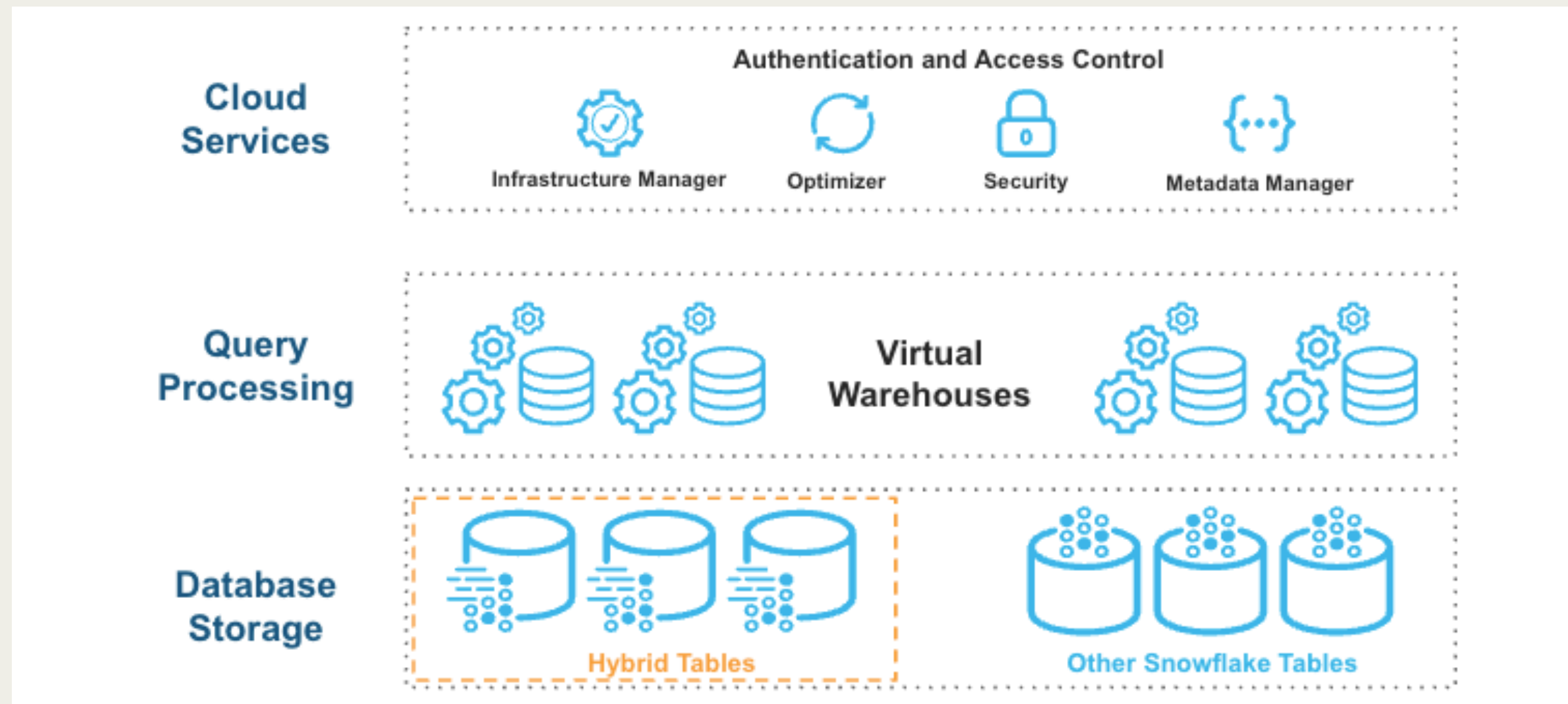
- You need to use the `HYRBID` keyword to define hybrid tables.
- Hybrid tables need to have a primary key, it is mandatory and it is enforced.
- Hybrid tables can have Unique constraints
- Hybrid tables can have indexes

They also have several limitations.

They also have several **limitations**: Hybrid tables do not support

- Cloning
- Clustering Keys
- Time Travel/Data Retention Period/UNDROP
- Data sharing
- Dynamic Tables
- Fail-safe
- Materialized Views
- Periodic rekeying
- Query Acceleration Service
- Replication
- Search Optimization Service
- Snowpipe
- Streams
- Tri-secret secure encryption
- Collations

Is snowflake Architecture different for Hybrid tables ?



There is no change in the Cloud Services layer or the Query processing layer. The database storage layer is different due to the addition of a row store which stores data in row-oriented manner with secondary columnarization

Thank you!
