Chapter3 : SnowFlake Pricing.

Third Chapter of the SnowFlake SnowPro Core Certification Complete Course.

In this chapter, we will study in detail SnowFlake pricing, the different capacity options, and the exam preparation part with the typical questions that usually appear in the SnowFlake SnowPro Core Certification about pricing:

COSTS IN SNOWFLAKE

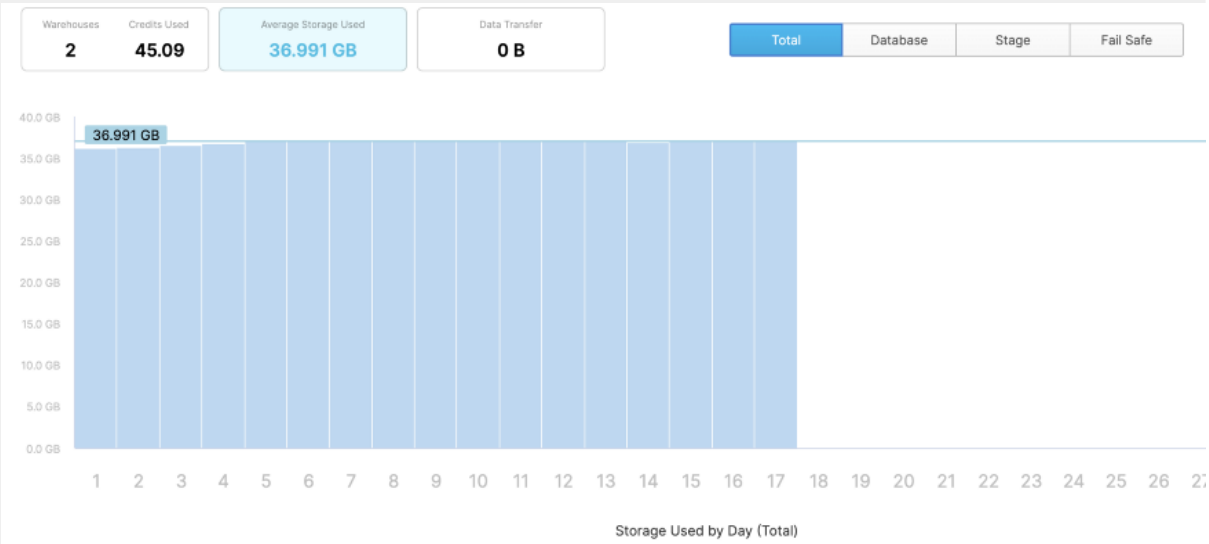
Snowflake pricing and cost are based on the actual usage. You pay for what you use and scale storage and compute independently. This is important; we **will be charged individually for the computing and storage.** Let's see the price of each layer in detail.

Storage Costs

All customers are charged a monthly fee for the data they store in Snowflake. Storage cost is measured using the **average amount of storage used per month, after compression**, for all customer data stored in Snowflake. **This question appears typically in the exam; remember** that it's the average amount after compression.

The storage includes:

- Data stored in tables, including historical data for Time Travel.
- Fail-Safe historical data.
- Internal Stages

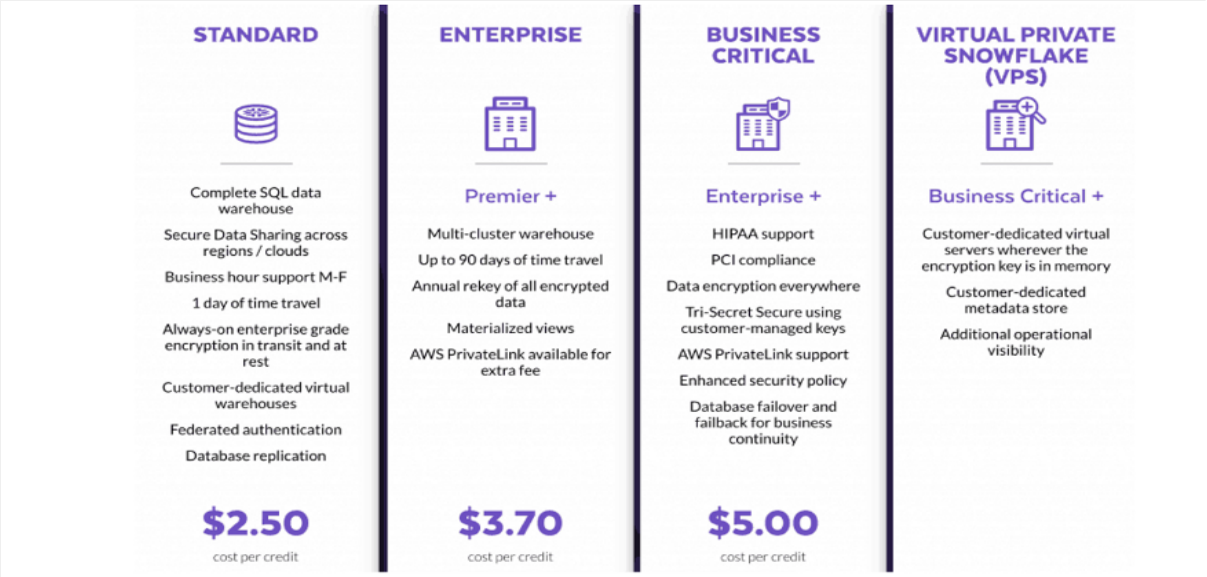


Storage Costs of a SnowFlake Account.

We will see Fail-Safe and Time Travel later in the course, but it's important to know that storage costs are not just the data from the tables.

Compute Costs

Customers pay for virtual warehouses using Snowflake credits. The cost of these credits depend on the SnowFlake edition that you are using:



Cost per credit depending on the SnowFlake edition we choose.

Apart from the SnowFlake edition that we are using, the number of credits that a Warehouse consumes is determined by:

- **The warehouse size, as we will see in the following image.**
- **The number of clusters (for multi-cluster warehouses).**
- **The length of time each server in each cluster runs** → They **are billed by seconds with a one-minute minimum.** For example, if our warehouse runs for 20 seconds, it will be billed as 1 minute, whereas if it runs for 1.20 minutes, it will be billed for this exact time.

VIRTUAL WAREHOUSE SIZE

	XS	S	M	L	XL	2XL	3XL	4XL	5XL*	6XL*
Credits consumed per hour	1	2	4	8	16	32	64	128	256	512

*5XL and 6XL Virtual Warehouse sizes are Previews.

Credits consumed per hour by different sizes Warehouses.

Cloud Services Costs

Customers pay for cloud services using Snowflake credits. **Typical utilization of cloud services (up to 10% of daily compute credits) is included for free**, which means most customers will not see incremental charges for cloud services usage.

Data Transfer Costs

Customers who wish to **move or copy their data between regions or cloud providers** will incur data transfer charges. Features such as External Tables, External Functions, and Data Lake Export may incur data transfer charges. Here we can see some examples for AWS:

Cloud	Region where data is stored	Transfer to same region, same cloud (per TB)	Transfer to different region, same cloud (per TB)	Transfer to different cloud (per TB)
AWS	US East (Northern Virginia)	$0.00	$20.00	$90.00
AWS	US East (Ohio)	$0.00	$20.00	$90.00
AWS	US West (Oregon)	$0.00	$20.00	$90.00
AWS	Canada (Central)	$0.00	$20.00	$90.00
AWS	EU (Ireland)	$0.00	$20.00	$90.00
AWS	EU (London)	$0.00	$20.00	$90.00
AWS	EU (Frankfurt)	$0.00	$20.00	$90.00

Data Transfer Costs of some AWS regions.

If you want to examine a little more in-depth everything related to pricing (although it will not appear in the exam more than what is explained in this chapter), you can access the following guide: https://www.snowflake.com/pricing/pricing-guide/.

CAPACITY OPTIONS

There are two different ways to buy the Snowflake Service: **On-Demand or pre-paid Capacity.**

- **On-Demand** → Customers are charged a fixed rate for the consumed services and are billed in arrears every month.
- **Pre-paid** → Pre-purchase Capacity, which involves a **commitment to Snowflake.** The Capacity purchased is then consumed monthly, and it provides lower prices and a long-term price guarantee, among other advantages.

TYPICAL EXAM QUESTIONS ABOUT PRICING

1. What influences SnowFlake pricing? (SELECT ONLY ONE)

1. Amount of data queried from SnowFlake.
2. Amount of data scanned from SnowFlake.
3. SnowFlake pricing is based on usage & storage.

Solution: 3.

2. Compute cost in SnowFlake depends on...

1. The query execution time.
2. The query execution time and the waiting query time.
3. The WareHouse size and how long the WareHouse runs.

Solution: 3. The cost does not depend on how many queries you run in the warehouse. It depends on which warehouse size and how long the warehouse runs.

3. What are the two major cost categories in SnowFlake? (SELECT TWO)

1. Storage.
2. Compute.
3. Cloud Service.
4. Data Transfers.

Solution: 1, 2. These are the main costs in SnowFlake, and it's always a good idea to build solutions trying to reduce these costs, like using caches, as we will see in the next chapters.

4. How is the data storage cost computed for SnowFlake?

1. Based on the average daily amount of uncompressed data stored.
2. Based on the average daily amount of compressed data stored.
3. Based on the amount of uncompressed data stored on the last day of the month.
4. Based on the amount of compressed data stored on the last day of the month.

Solution: 2.

5. Which type of data incur in SnowFlake storage cost?

1. Data Stored in permanent tables.
2. Data Stored in temporal tables.
3. Cache results.
4. Data retained for Fail-Safe & Time-Travel.

Solution: 1, 2, 4. It also includes data stored in Snowflake locations (i.e., user and table stages or internal named stages).

6. Tables with Fail-Safe turned on incurs additional storage costs compared to tables where Fail-Safe is turned off?

1. True
2. False

Solution: 1.

7. Does data stored in a temporary table not contribute to SnowFlake's storage cost?

1. True
2. False

Solution: 2.

8. Which factors influence the unit cost of snowflake credits and data storage?

1. SnowFlake Edition.
2. Region of the SnowFlake account.
3. On-Demand or Pre-Paid account.
4. Users on SnowFlake.

Solution: 1, 2, 3.

Thanks for Reading!

If you like my work and want to support me.