[WIP] FinOps Design

Document Control

Document Status

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Key Revision History

0.1	30/10/2025	First Draft	Sai Nikita Boddu	Draft

Introduction

Purpose

This document describes the design and implementation of FinOps in Snowflake. FinOps in Snowflake emphasizes on controlling, optimizing, and governing cloud data platform spend ensuring that every credit used delivers measurable business value.

Scope

This documentation defines the scope and purpose of the **FinOps data capture implementation**, which centralizes financial and operational (FinOps) reporting within the Snowflake data platform.

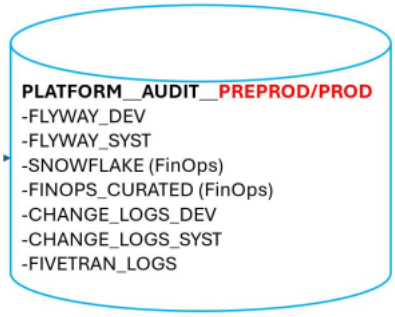
As part of this initiative, two dedicated **schemas** have been created within the **database** to capture, store, and analyze cost and usage information across Snowflake and related cloud services. These schemas are designed to support transparent cost governance, automated reporting, and optimization insights across all environments.

Database: PLATFORM__AUDIT__PREPROD
Schemas:

- FINOPS_CURATED

- SNOWFLAKE

The below picture is for visual reference:



Warehouses and Resource Monitors

Zone-specific warehouses are configured to support workload segregation and performance optimization. Each warehouse is linked to a dedicated resource monitor that enforces a predefined credit threshold, ensuring adherence to FinOps cost governance policies.

The following query as a reference creates a resource monitor with defined credit limits and trigger actions, which will be assigned to the corresponding zone-specific warehouse:

Row Access Policies

A **Row Access Policy (RAP)** has been implemented in Snowflake to enforce **fine-grained access control** at the row level.
This ensures that users can only view data that aligns with their role, department, or assigned access attributes, in accordance with organizational data governance and compliance standards.

The advantage of row access policies like this is that there is a negligible performance cost for Snowflake to evaluate these policies to return query results compared to using row access policies with mapping tables. Below here are the details of the database, schema and tables used to implement the Row Access policy

Database: PLATFORM__AUDIT__PREPROD
Schema: FINOPS_CURATED
Primary Tables:

- credit usage
- storage_usage

Policy Type: Row-Level Security (RLS) using Row Access Policies

Key Benefits

- The **Row Access Policy** framework has been designed to uphold data privacy and regulatory compliance across all zones.
- It ensures that users can view only the data authorized for their respective zones, thereby maintaining strict data segregation in line with compliance requirements.
- Access control is centrally managed through a single mapping table, simplifying administration and ensuring consistent enforcement of access rules.
- All access attempts are fully logged, providing a comprehensive audit trail to support monitoring and governance activities. The solution is also highly scalable, allowing new zones, roles, or access mappings to be added seamlessly as the environment evolves.

Splunk

- Splunk provides a centralized monitoring and analytics layer for the Snowflake platform, enabling real-time visibility into usage, performance, and security events. It consolidates key metrics such as resource monitor activity, warehouse consumption, and access policy enforcement into unified dashboards.
- This integration strengthens FinOps oversight, enhances compliance monitoring, and supports proactive management of Snowflake resources across all environments.

Conclusion

We added automatic security filters to our financial data. People in different zones specific role now see only their own data. It uses standard Snowflake features, so it's reliable and easy to maintain.