Case Study: TeraData to Snowflake in 99 days

Micron®

Industry: Computer Chip Manufacturer
Location: Boise, ID
Size: 43,000+ employees

Company Bio
Micron Technology is a world leader in innovating memory and storage solutions that accelerate the transformation of information into intelligence, inspiring the world to learn, communicate and advance faster than ever.

Overview

Micron is a global semiconductor manufacturer that build roughly a third of the world's memory. In their hi- tech manufacturing process, tiny variances cause costly declines in quality and product yield. To remain competitive, constant innovation is a necessity. The same goes for both their product and their IT capabilities. Feeding forward data through the manufacturing process is paramount. The data volumes are mind-blowing. Sample testing of individual bits through multiple process steps yields literally billions of records per day. All that takes serious CPU and IO horsepower, not to mention multiple PB of storage.

Challenge

The Teradata boxes handling the volumes were tapped out. They were top-of-line on-prem technology, but could not handle the simultaneous user query volume running in parallel with continuous data loading jobs. The cloud came calling, with Snowflake technology promising a solution. Eventually, the path to cloud was blazed and a contract with Snowflake was signed. The race was on and the clock was ticking. Avoiding renewal dates for legacy technology would save millions of dollars, IF the data and users could migrate to the cloud in just 4 months.

The Impact

The goal had been met. Data was migrated to the cloud and legacy retired in time to save millions of dollars in deprecated licensing fees. Plus the users could enjoy the scalable power of Snowflake uninterrupted by the regular loading jobs which could now be segregated into their own virtual compute warehouses.

> "infoVia provided expertise on Teradata to Snowflake migrations leveraging the existing automation tool set of Wherescape. The results was a lightening-fast migration of petabytes of data in time to save Micron millions."
>
> Mike Magalsky infoVia Founder

The Solution

Micron had an advantage. Metadata-driven tools had been chosen to build their data warehouse objects and ETL/ELT code from pattern-based templates. Plus a similar data-driven approach was leveraged for row-level security. That fact made a migration plan quick and painless. All they needed was Snowflake templates for the automation tool. That undertaking was no small feat, but infoVia had the right resources for the job.

With resident expertise in Teradata and an eagerness to engage with the Snowflake team (who themselves were still learning in that early stage of the database technology company's growth), high-performing templates for automating the Snowflake DB Objects and ELT code were built.

The Results

Leveraging the same meta data that built the original TeraData warehouse, hundreds of Snowflake db objects, ELT code instances, and migration scripts were auto-generated. The structure was built, code generated, and data migrated. Users were moved. And in 99 days from the signing of the Snowflake contract, the legacy DW server boxes were turned off. Mission accomplished!

Migrated Data Vault Objects	300 TB structured data 3+ PB semi-structured data	10+ Trillion Rows
50+		

About infoVia

infoVia is a premier group of agile-minded Data Vault experts with the know-how and sense of urgency to help your organization start and grow in Data Vault.

Contact us to help you with guide you on your Data Vault journey.

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