

# Enabling Analytics Innovation



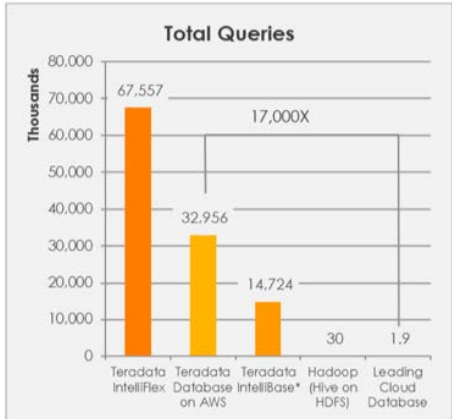
## Optimizing analytics performance with SAS and Teradata

Analytics has become commonplace. A necessity. A must have. If you're not using it, you're falling behind. Intuitive tools, such as SAS' Viya', are making analytics accessible to the masses so that people across the organization can make data-driven decisions and improve processes. As a result, organizations need to support a growing population of new analytics users – while still empowering their experienced data scientists to build more complex models that use more data from more sources in less time.

SAS and Teradata are enabling this innovation with the most advanced analytics architecture built to harness the performance power of SAS Viya, SAS 9.x and Teradata Vantage™. This combined solution is uniquely able to support thousands of citizen data scientists – while still allowing more seasoned data scientists to experiment with new data and build even more powerful analytics solutions.

This starts with the superior processing power of the Teradata Vantage solution that is specifically built to run the more valuable analytics models that are developed using SAS. In side-by-side comparisons, an eight-node Teradata system outperformed

Hadoop and a leading cloud database with 32 nodes each. The test used the same 24 terabytes of data and ran the same mixed workload queries (50 streams of analytics and 300 streams of tactical queries). In each case, the Teradata system performed significantly better at supporting the more advanced analytics workloads produced by SAS data scientists. In fact, even when running the same Teradata software on an AWS cloud environment, the Teradata system performed 17,000 more queries per hour than the larger Hadoop or cloud systems.



\* All 5 systems used the same 24 terabytes of data and all ran the same mixed workload queries – 50 streams of analytics and 300 streams of tactical



This performance boost is only one way that Teradata helps your SAS data scientists be more productive. Another is simplifying data access for both experienced and novice analytics users. As workloads increase, how users access data becomes important. SAS and Teradata have worked together to streamline how user-friendly systems like SAS Viya access and utilize data. This ensures that individual users don't create bottlenecks or pollute everyone's data. For example, SAS Viya allows multiple users to explore and analyze the same data how and when they need it. And with a common integration between SAS Viya and SAS 9.x to Teradata, users in both systems can work with the same data source to produce consistent results with minimal latency.

To further support analytics innovation and improved system performance, Teradata also offers its fourth-generation in-memory platform designed specifically for SAS Viya. This in-memory platform is directly connected to the Teradata SQL database, giving SAS Viya quick access to all the data within Teradata over its high-speed Infini-Band network. This direct access to the database enhances the ability of SAS Viya to provide quick, accurate and reliable analytical insights using ultrafast in-memory processing for large-scale data manipulation and exploration.

Combined with the superior processing power of Teradata, the combination allows users to:

- Quickly explore massive amounts of data visually.
- Simplify access to and management of many different types of data from many different sources.
- Create more complex models that use more data and more variables.
- Integrate advanced machine learning, deep learning and artificial intelligence into their analytics.
- Produce better models by simplifying testing, comparison and experimentation.

- Lower system costs by utilizing the superior processing power of Teradata Vantage.
- Utilize a standardized code base that supports programming in SAS and other languages, like Python, R, Java and Lua.

Together, SAS and Teradata let individuals of all skill levels rapidly create innovative analytics using more data, more quickly. We simplify how users access and manage data, eliminate risk to the system by effectively managing system resources, and empower your data scientists to understand and extract the potential within your data through experimentation.

To learn how SAS and Teradata can help you achieve a competitive advantage with your analytics, contact our SAS and Teradata experts by emailing [sas@teradata.com](mailto:sas@teradata.com) or requesting more information from your local account representative of either company.

## About SAS and Teradata

SAS and Teradata help customers create optimal and agile data and analytics environments. Our offerings combine the strengths of SAS industry-leading analytics and data management with the power of Teradata Vantage. These solutions are also backed by well-defined services delivered by SAS and Teradata skilled professionals for quick implementations and rapid return on investment.

Together, we are pioneers delivering the following benefits through our integrated platform:

- Integrated technology to effectively manage complex data and analytics.
- Support for the full analytics life cycle – from data access and data discovery to model deployment.
- Rapid implementation and time-to-value with experienced implementation resources.
- Flexibility and agility with on-site, cloud and hybrid deployment options.
- Minimal business risk due to proven success and customer validations.

For more information: [sas.com/teradata](https://sas.com/teradata) or [Teradata.com/SAS](https://Teradata.com/SAS)

teradata.

