The Enabling Power of Analyzing More Data
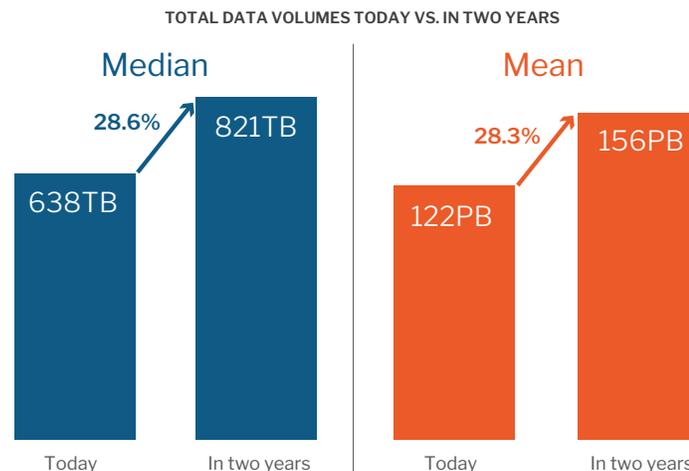
The 451 Take

Enterprises – both small and large – are recognizing the importance and value of data as never before. However, while enterprises continue to place great value on data, and work to incorporate a data-driven culture, there is growing evidence that becoming more data-driven is easier said than done. There are a few reasons for this.

One reason is that data is growing at an accelerated rate. According to 451 Research's Voice of the Enterprise: Data & Analytics, 2H 2019 survey of IT professionals, of those with no less than 1TB but no more than 500PB, the median is 638TB of data under management today. But the number of companies with huge data volumes results in a mean volume of data under management today being significantly higher at 122PB. The volume of data, however, is expected to grow within two years such that the median is expected to be 821TB of data under management, while the mean is expected to reach 156PB.

Growth of Data that Organizations are Expected to Collect

Source: 451 Research's Voice of the Enterprise: Data & Analytics 2H 2019

Q: Approximately how much data does your organization currently have under management? How much do you expect to have in two years? Base: All respondents (n=553)

TOTAL DATA VOLUMES TODAY VS. IN TWO YEARS

Median: 638TB (Today) → 28.6% → 821TB (In two years)

Mean: 122PB (Today) → 28.3% → 156PB (In two years)

Another reason is that data platforms are becoming overburdened. The trend in recent years has been to collect as much data as possible for processing and analysis. However, the fact that an enterprise stores all its available data does not necessarily mean that the data is easy to find and analyze. Most legacy systems were never designed to manage terabytes or petabytes of data, and are simply unable to support high-performance querying or broad data access across an organization.

The goal for enterprises, then, is to utilize a data platform system that allows them to effectively manage large data volumes, and enables high-performance analytic processing while also pushing to be more data-driven. There is emerging evidence that becoming more data-driven involves not only the adoption of new technologies – including new processing engines and hardware accelerators such as GPUs – but also new approaches to data management and data analytics acceleration that can help change the company culture. When enterprises meet this goal and become more data-driven, they can realize many benefits around improving efficiency and deriving new value from products and services.

Business Impact

ACCELERATE THE DEVELOPMENT OF NEW PRODUCTS AND SERVICES. When certain analytical workloads are moved to systems that are tuned to handle these workloads, enterprises soon realize that they have the ability to deliver new products and services because, for instance, larger amounts of data can be analyzed through highly complex queries, leading to more insight or timely results.

LOWER OVERALL COSTS. Research continues to show that cost is top of mind for enterprises. When legacy systems become bogged down with data overload, performance drops. But overburdened systems also become unreliable, leading to excessive tuning and significant administrative efforts to maintain availability. Conversely, when data is moved to modern, high-processing analytical systems, not only is the data burden lifted from legacy systems, but analytic processing increases, leading to lower costs.

ENABLE EFFICIENT DATA ACCESS. Some analytics systems are based on rigid architectures that require significant investment to scale. Modern analytics database systems are not only architected to handle the largest datasets, but they can also process data in parallel over distributed systems that have built-in load balancing of the data, thus enabling greater organizational access to the data that was otherwise not available.

FIT THE RIGHT WORKLOAD TO THE RIGHT SYSTEM. Enterprises' analytical needs evolve over time, but their analytical systems have often been architected and tuned for certain workloads. Modern analytical workloads – e.g., that drive machine learning – require modern systems to run them. As such, enterprises would do well to offload workloads to systems that are best fit to run a specific type of workload, which ensures efficient use of resources and stronger analytical outcomes.

Looking Ahead

Although much about the future is uncertain, there are two things enterprises can expect: high data growth and a strong desire to be more data-driven. These are enabled by analytics systems capable of handling intensive and complex workloads. But the need to be more data-driven often conflicts with the existing analytics infrastructure, which is likely tuned to legacy workloads and may not be able to handle the onslaught of data. At the same time, enterprises may have cost constraints, resource restrictions, or pressure from competitive companies.

It's important for enterprises to view data growth not as a threat but an opportunity to do more with the right tools. While legacy systems may struggle with modern workloads, modern analytics systems have been designed and built specifically for high-intensity workloads. These modern systems are based on SQL, so personnel do not need training to learn a new database or query language. These systems may leverage modern processing hardware, such as GPUs, which can process data in parallel, and they are designed to scale and balance data load. These systems can run on-premises, in the cloud or in a hybrid environment. They are also highly available, secure and extensible, and can connect with legacy systems, making it easier to integrate them into the datacenter. As enterprises consider new approaches to data management and analytics, they not only put themselves on the path to becoming more data-driven, but also to changing their company culture.

SQREAM

Download the whitepaper, "Accelerating SQL and BI Analytics" to learn how your organization can take advantage of the SQream data analytics acceleration platform to overcome big data challenges, achieving better risk management, yield optimization, cost savings and improved customer service. From data preparation and ingestion, to rapid query analysis for critical insights, the GPU-based SQream solution empowers you to analyze your exponentially growing data stores to make better, more impactful business decisions, faster.