Vertica in the Clouds

Vertica maximizes cloud economics for mission-critical big data analytical initiatives. Vertica delivers advanced SQL analytics on massive amounts of data with blazing performance, and elastic scalability for just-in time deployments on major public clouds–AWS, Azure, and Google Cloud Platform.

Product Highlights

Vertica performs queries 10 to 50* times faster than traditional databases, at a fraction of the cost and using a fraction of the cloud compute and storage resources. Unlike traditional RDBMS databases, which are not designed for analytics and today's complex analytics workloads in the cloud, the Vertica Analytics Platform is built from the ground up for the cloud to elastically and independently scale compute and storage resources to deliver breakneck performance on Exabyte data volumes. With support for advanced analytics and built-in machine learning models, Vertica delivers meaningful insights on large amounts of data. The Vertica Analytics Platform provides freedom from the underlying infrastructure as it runs on-premises, on Hadoop, and on your choice of Cloud platforms—Amazon Web Services, Microsoft Azure and Google Cloud Platform, all with the same powerful, unified architecture.

Key Features

Multi-Cloud Deployment with a Consistently Optimal Experience

As more and more customers deploy big data in the cloud, Vertica is proven and optimized to run on all major public cloud platforms—AWS, Azure, and Google Cloud Platform. You can consume and rapidly deploy Vertica in minutes, right from the cloud providers' marketplace. Organizations deploying Vertica on at least two different public clouds can seamlessly replicate data between clouds for rapid disaster recovery.

Vertica in Eon Mode Maximizes Cloud Economics

With Vertica 9.1, you can run Vertica in Eon Mode on Amazon Web Services to capitalize on cloud economics, while still enjoying the fast query processing of Vertica. Running Vertica in Eon mode separates the computational processes from the storage layer of your database. This new architecture enables Vertica to scale elastically, adapting to varying dynamic workloads and linearly scaling throughput.

With Eon Mode, organizations provision compute and storage independently. This enables you to elastically scale up and down the cluster to accommodate for analytic workload peaks and troughs. For example, most retail organizations have to over provision for the holiday season. Eon Mode allows them to provision for normal workloads but add compute resources to scale the query throughput, accommodating greater user concurrency and response times required for peak periods. The Eon Mode architecture makes the analytic database easier to operate even when compute nodes are down. Node recoveries are rapid, reliable, and predictable. Furthermore, Eon Mode simplifies the process of adding and resizing of cluster nodes with no disruption to users or queries.

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Techvalidate reference: **www.techvalidate.com/ product-research/hp-vertica/charts/B9F-BA0-073**

Key Benefits

- **Choice of Cloud Deployment**—Get maximum flexibility and complete choice–deploy Vertica on AWS, Azure and Google Cloud Platform.

- **Maximize Cloud Economics**—Provision your compute for the queries that you want to run and provision your storage for all the data that you want to store.

- **Advanced Analytics and Machine Learning**—Manage and deploy machine learning models and advanced analytics using simple SQL-based functions to empower data analysts and democratize predictive analytics=

- **Insight into Data Lakes**—In-place querying of data-lakes, without having to move and re-format data via direct querying of Hadoop and S3 data stored in Parquet and ORC

- **Hybrid Architectures**—Support for on premise, in a VM and in the Cloud. Seamlessly replicate databases between on-premises and cloud or across different cloud providers

Exabyte Scalability

Scale your data analytics solution as much as you need by adding an unlimited number of compute nodes and storage resources to your analytics environment.

Machine Learning and Advanced Analytics

Built into Vertica's core are machine learning and advanced analytics. There is no need to download and install separate packages for machine learning. Vertica's in-database machine learning transforms the way data scientists and analysts across industries interact with data, while removing barriers and accelerating time to value on predictive analytics projects.

Seamless Integration with Cloud Object Store and Data Lakes

Vertica provides in-place querying of cloud data-lakes, without having to move and reformat data via direct querying of Hadoop data stored in Parquet and ORC, and of Parquet data on AWS S3. Rapidly load data to and from cloud object store such as Amazon S3, or perform JOINS across your data warehouse, S3 and Hadoop data infrastructure for accelerated insights.

Hybrid Architectures

Vertica can be deployed on premise, in a VM, on Hadoop and in the Cloud. Vertica allows movement of cooler data out of the data warehouse into lower-cost storage such as Hadoop or the Clouds and still have the ability to analyze it. Vertica also protects your database from site failures caused by catastrophic disasters by allowing you to seamlessly replicate databases between on-premises and cloud or across different cloud providers.

Flattened Tables

The Flattened tables feature makes the task of performing complex JOINs across multiple tables much less cumbersome and much more performant. Analysts can write straight-forward, fast-running queries as if the data resided in a single big flat table, simplifying and speeding the process of big data analytics in databases with complex schemas.

Automatic Availability

Run non-stop with data replication, failover, and recovery. Vertica is optimized for performance and is transparent to your integration and operations teams.
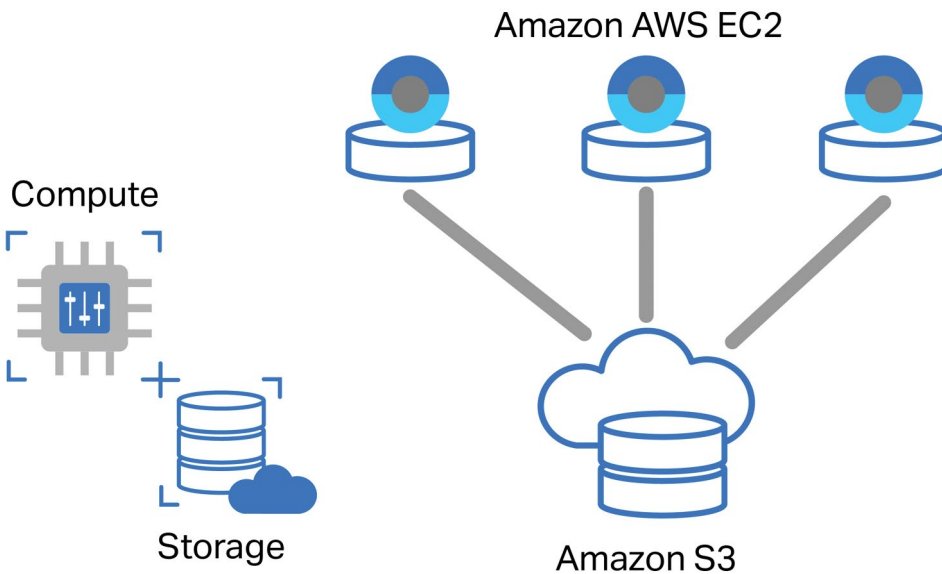
Contact us at:
www.vertica.com

Optimized System and Performance Management

The Vertica Management Console displays tuning recommendations from the Workload Analyzer tool, addressing a wide range of system concerns, including empty administrator passwords, high CPU usage, and recommendations for better data management. Vertica also makes it easier to provision and deploy Vertica nodes in AWS via the Management Console, enabling you to easily get started with analytics in the cloud.

Try Vertica Today

Vertica is the core SQL database analytics engine that was purpose-built for the cloud with speed, elastic scalability, simplicity, and openness. With Vertica, your queries run 10 to 50x faster than any data warehouse or database technology. It's proven to run at Exabyte-scale and gives you complete openness to use any BI/ETL tool, and leverage scalable predictive analytics and a comprehensive library of built-in advanced analytical functions.

Get started today and download Vertica Community Edition, a free version of the Vertica Analytics Platform. Store up to 1 TB of data and deploy Vertica on a three-node cluster. Sign up for Vertica Community Edition at: **www.vertica.com/try**

Learn More At
www.vertica.com/clouds/

Figure 1. Vertica Eon Mode with Separation of Compute and Storage