Vertica IoT Analytics

Vertica helps organizations, particularly intelligent device manufacturers, manage and analyze massive volumes of sensor data to predict and prevent operational issues and reduce service costs, improve customer satisfaction by extending operational uptime, and bring revenue-generating machine-to-machine (M2M) solutions to market. With the proven performance of Vertica Advanced Analytics Platform as the core IoT data analytics engine, your organization can achieve all of these benefits and much more.

Quick View

- Massively Parallel Processing (MPP)
- Performance at Exabyte scale
- Integration with Apache Kafka and Spark
- In-database machine learning functions
- Geospatial, time-series and log text analytics
- Edge, cloud, Hadoop, and on-premises deployment

Product Highlights

Within a few years, the "IoT" is projected to include millions, if not billions, of connected devices, generating an unfathomable amount of sensor data. To capitalize on new IoT data-driven business models, companies need a robust advanced analytics platform that intelligently manages and analyzes this growing volumes of sensor data in a cost-effective manner. That's how Vertica helps organizations derive greater value from the vast new sources of sensor data collected across the enterprise. Vertica offers a purpose-built, MPP solution for running SQL and in-database machine learning functions on sensor and machine-to-machine data—all delivered at an overall lower total cost of ownership than legacy data warehouse solutions.

Key Benefits

gleaning insights from previously inaccessible data and enabling increasingly complex and higher-value applications with:

- **Blazing fast analytics**—gains insights into data in near real time by running advanced analytics queries 10-50x faster than legacy database and data warehouse solutions.

> "We calculated 17 different statistical functions on 2 billion data points in less than a minute, which is faster than our previous system would have taken or any other system I'm aware of would have taken just to retrieve the data."

MICHAEL SCHULDENFREI
CTO
Optimal+

Contact us at:
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- **Massive scalability**—infinitely and easily scales up by adding an unlimited number of industry-standard servers
- **Open architecture**—protects your investment in hardware and software with built-in support for Hadoop, Kafka, Spark, R, Python and leading business intelligence (BI) and extract, transform, load (ETL) tools.
- **Easy setup and administration**—Get to market quickly with your IoT initiatives at a low cost of administration and maintenance
- **Optimized data storage**—Stores more data per server than traditional databases with patented columnar compression.

Customer Case Study: Optimal+

Optimal+'s customers operate in production environments where errors related to yield and efficiency measurements can lead to losses of millions of dollars per year within a single plant. Therefore, the ability to complete a wide range of analytic queries quickly and inexpensively, while also integrating previously siloed data sources, immediately begins to reduce these costly production issues and leads to rapid ROI

By implementing Vertica, Optimal+ accelerated the speed of analytical insights, while also combining data from different production processes to gain visibility across the whole supply chain:

- Vertica was critical in creating a historical baseline, developing models from this historical data, and then deploying these models into customer supply chains, resulting in near-instant analytics within individual production facilities.

- Vertica also enabled Optimal+ to create a holistic view across both the data of electronic systems and the semiconductor components they contain, allowing for quick identification of the root cause of a defect.

New IoT Data-Driven Business Models

From industrial manufacturing to consumer electronics and energy delivery, organizations are running advanced analytics on sensor data to enable new value-added products, services, and business processes. All of these use cases are driven by analyzing petabytes of data collected from sensors and M2M communications.

- **Fleet management**—sensor data from delivery trucks is helping businesses schedule preventive maintenance before mechanical issues can disrupt fleet operations.
- **Product monitoring**—manufacturers use sensor data analytics to monitor the health and performance of their products and to work proactively to address service and maintenance issues before they lead to product downtime.
- **Predictive maintenance**—continuous monitoring of machine and sensor data help equipment manufacturers and service providers predict and address maintenance issues before they occur, unlocking new value for manufacturers and customers in the form of service cost reductions, new revenue opportunities, SLA adherence, operational efficiencies, reduced downtime, and more.

- **Smart grids**—forward-looking cities and governments are upgrading electrical-grid infrastructure with smarter capabilities to enable smoother operation and tighter security.
- **Usage-based insurance**—insurance companies use data generated from sensors in automobiles to offer drivers rates based on the amount of driving they do, their driving habits, and even where they drive and park.

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