

Vertica & Tableau— Big Data Visualized

Vertica tightly integrated with Tableau helps data-driven organizations to visualize trends and predict behaviors. The power of Vertica and Tableau comes from the capability to deliver advanced, complex analytics to a broader universe of users on any device with data on-premises, on Hadoop, or in the clouds. Vertica and Tableau drive the democratization of data and analytics everywhere.

Vertica & Tableau at a Glance:

Tableau extends Vertica with fine-grained, visual analysis. Tableau provides:

- + Seamless integration with Vertica via a fine-tuned live connector
- + Easy-to-use solution to visualize Big Data quickly and easily
- + Interactive dashboards that let users drill-down, in real time, to ask questions and get answers
- + Simple, easy collaboration that lets users share findings, quickly, when discovered, with others

Vertica & Tableau— Built For Fast. Built For Freedom. Big Data Visualized

In today's highly competitive business environment, where nearly every industry is experiencing transformation and disruption, change is constant. Maintaining a competitive advantage requires data-driven organizations to think differently and develop new core competencies derived from analytical insight. Success and growth have become intrinsically linked with Machine Learning for predictive analytics. As companies collect and rely on data more frequently, the velocity, variety, and volume of data sources evolves daily. This creates higher levels of complexity and scale that traditional, or legacy, and even newer open source systems either were not designed to handle or are not yet proven enough in real-world, unforgiving environments with stringent SLAs. While organizations grapple with these challenges and market demands, a new trend has emerged—data may be the new black, but information is gold. Welcome to the world of Machine Learning for predictive analytics.

As industry markets have demonstrated, generous valuations and financial success are often rewarded to organizations capable of monetizing business data—now, not after the opportunity has passed. A common theme amongst these revolutionary companies is the ability to harness powerful 21st century data

management platforms—Vertica and Tableau. With industry-leading performance at Exabyte scale, machine learning and advanced analytics, freedom from underlying infrastructure, and the ability to analyze data wherever it resides.

Deeper Insights = Greater Value

Built by design to dramatically improve query performance over traditional relational database systems and unproved open source offerings, Vertica is purpose built with in-database advanced analytics capabilities that are fine-tuned to handle a range of complex Big Data queries. Two popular techniques are Live Aggregate Projections and Flattened Tables. Live Aggregate Projections are easy-to-optimize yet powerful complex queries with pre-aggregated data and calculations. Because the data is already aggregated, retrieving the data directly from this innovative technology is faster than retrieving it from the source table.

Flattened Tables lets you optimize the performance of query joins. If your queries operate on a large fact table that requires many joins from multiple dimension tables, Flattened Tables will speed up the queries significantly by denormalizing your schema. Detailed granularity of data is maintained and advanced analytics, including geospatial, in-database machine learning, statistical, time-series, and pattern matching, can be applied. In addition, the Vertica SDK helps you with custom procedural programming.

Comparison WebSite Pages

Changes .. [8/1/2016]

Changes .. [7/31/2016]

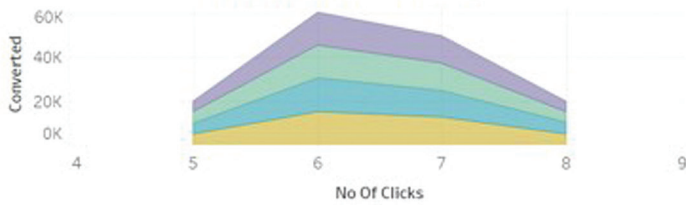
Page Name

- http://www.Finance.Yahoo.com/page3.html
- http://www.Geocities.Yahoo.com/page2.html
- http://www.Home&Garden.Amazon.com/page4.html
- http://www.Real-Estate.Yahoo.com/page1.html

Page Name

- http://www.Cricket.Rediff.com/page5.html
- http://www.Jewellery&Watches.Amazon.com/page6.html
- http://www.Jewellery&Watches.Amazon.com/page7.html
- http://www.Maps.Yahoo.com/page8.html

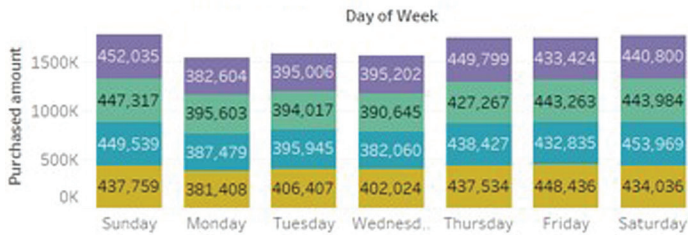
Customer Conversion by Number of Clicks for each page (Before Changes)



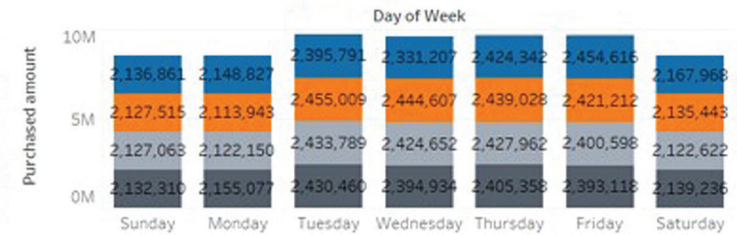
Customer Conversion by Number of Clicks for Each Page(After Changes)



Weekly Revenue/Purchase Generated by Websites Pages (Before Changes)



Weekly Revenue/Purchase Generated by Website Pages (After Changes)



These unique capabilities enable actionable insights—the ability to engage and take action on information while it maintains relevance and value. Vertica customers separate themselves from their competitors by producing value from petabytes and, in the not too distant future, exabytes of data.

Ask and Answer Questions at the Speed of Thought

With the ability to uncover and communicate what the numbers say, analytic insights can become game-changing decisions. Tableau's live connector to Vertica provides a seamless path to conduct real-time visual analysis. With

Vertica, data is fine-tuned upon loading. There's no need to re-create data structures, no data silo explosion, and no questions about data timeliness. Just point Tableau at Vertica and go. This integration enables billions of rows of data to be delivered in real time. Vertica makes this possible by providing blazingly fast data analysis. And Tableau makes this all possible by helping to visualize the value of what the data says.

Tableau lets users work with their data, visually and interactively, in real time, through charts, reports, and dashboards. With a click of a mouse, Tableau shows data in a way that makes sense,

whether it is a pie chart, a detailed map, or anything in between. Swiftly answer questions about your Vertica data at the speed of thought.

Analytics Everywhere

For applications and organizations of all types and sizes, getting business users equipped to take full advantage of an analytics infrastructure is critical. Vertica and Tableau are designed with business users in mind. With point-and-click simplicity, users can deploy Vertica and Tableau and immediately begin investigating the data that matters most. Once created, reports and dashboards can be shared easily. Teams can begin investigations to find insights that propel

business. With business users enabled through virtually self-service business intelligence, your IT department or cloud provider focuses on building and managing the data infrastructure, rather than running reports for others. Machine Learning for predictive analytics is a competitive advantage. And Big Data that you can visualize in the moment will make you unstoppable.

Conceived by legendary database guru Michael Stonebraker, the Vertica Advanced Analytics Platform is purpose built from the very first line of code for Big Data analytics. Why? Because it is clear that data warehouses and “business-as-usual” practices are limiting technologies, causing businesses to make painful compromises. Vertica is consciously designed with speed, scalability, simplicity, and openness at its core and architected to handle analytical workloads via a distributed compressed columnar architecture. Vertica provides blazingly fast speed (queries run 50–1,000x faster), Exabyte scale (store 10–30x more data per server), openness (seamless integration with open source tools and technology, such as Apache Spark, Apache Kafka, and R), advanced analytics for Machine Learning and more (built-in

SQL-based analytics from graph analysis to triangle counting to Monte Carlo simulations) and simplicity—all at a much lower cost than traditional data warehouse solutions and much more proven than open source solutions. Vertica is available in the broadest range of deployment and consumption models, including on premise, on Hadoop, and in the Amazon Web Services, Microsoft Azure, and Google clouds.

Joint Customer Success: AmeriPride

AmeriPride deployed Vertica as part of a total data system overhaul, resulting in huge productivity savings and revenue gains. AmeriPride had cobbled together a patchwork of data management and analytics tools that produced data silos across the business and was not scaling well with its growing data requirements. AmeriPride turned to Vertica to build a comprehensive data solution, deploying it in tandem with Informatica’s data management and Tableau’s data discovery solutions.

ROI: 419%

Payback: 1.3 years

Average annual benefit: \$3,682,527

About Tableau

Tableau (NYSE: DATA) helps people see and understand data. Tableau helps anyone quickly analyze, visualize and share information. More than 61,000 customer accounts get rapid results with Tableau in the office and on-the-go. Over 300,000 people use Tableau Public to share public data in their blogs and websites. See how Tableau can help you by downloading the free trial at: www.tableau.com/trial

About Vertica

Vertica is the fastest, most advanced SQL analytics database, available on-premise, on Hadoop, and multiple clouds—all delivered via one unified platform. With tight integration with Hadoop, Kafka, and Spark, and built-in advanced analytics and Machine Learning, Vertica delivers the highest performance at extreme scale. Vertica. Built for fast. Built for freedom. www.vertica.com/try

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