

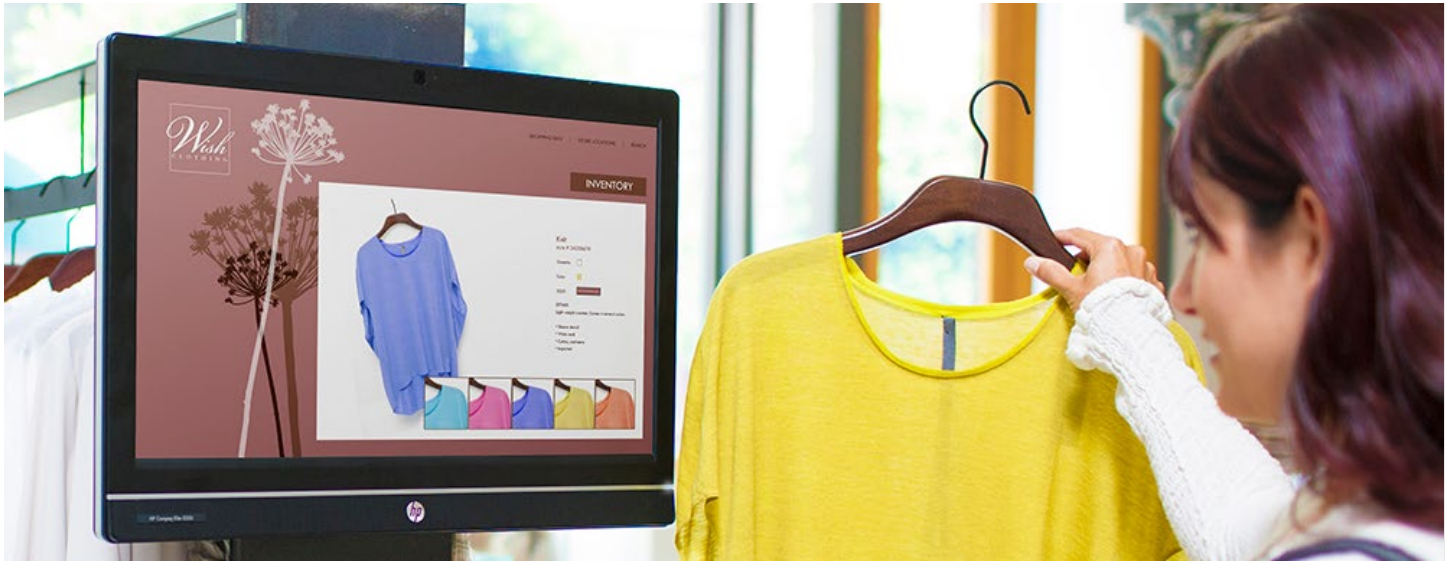
Brief

E-Retail Online Commerce Analytics



Turning massive volumes of clicks into revenue with the HP Vertica Analytics Platform

“Thanks to digital disruption, consumers have fully embraced a world where they use digital enablers to connect with companies more deeply than ever before. Consumers are building up their capacity for ever-deeper digital relationships, both with each other and with the companies and brands they enjoy.”¹



Featured E-Retail customers

GUESS
BY MARCIANO



E-Retail Online Commerce Analytics

With the advent of mobile connectivity and the rise of social media, consumers now have immediate access to a broad range of E-Retail websites for comparison shopping and a multitude of peer reviews. Now, more than ever, consumers are demanding a seamless shopping experience with products and services, customized to their personal tastes. For E-Retailers to remain competitive and collect their share of wallet, they need to provide consumers with personalized offers that compel them to act now – not “broad brush” promotional offers based on old data. “Neurological Connectivity - creating an addictive, irresistible personalized shopping experience for on-line shoppers”² is at the core of every successful E-Retail strategy, this is only possible by getting a thorough understanding of the buyer. The E-Retailers that are leaders will manage and analyze massive volumes of data in near real time – clickstreams, Tweets, and even past purchase history.

Gain a competitive advantage through unique shopper insights

“Creating a holistic view of the customer by pulling together data from disparate systems is a huge – and seemingly impossible – task. Successful organizations prioritize: 1) understanding which customer segments they need to personalize for; 2) which key customer interactions need a personal touch; 3) how much personalization is required; and 4) what technology strategies and solutions can help them achieve that goal.”³

A scalable and high-performance Big Data analytics platform is critical to enable personalized customer interactions that produce growth and loyalty. Key E-Retail Big Data analytics needs include:

- Advanced context-aware predictive analytics and data management to establish reliable understanding and intelligence about consumers, channels, supply chains, and operations.

¹“Start to Build Your Ultimate Customer Relationship”, January 2014, Forrester.

²“The New Rules of Retail” Robin Lewis & Michael Dart

³“Advance to Next-Generation Personalization”, January 2014, Forrester.

- Web experience analytics to discover trends and customer behavior on their website and E-Retail portals.
- On-time decision engines, fraud detection, feedback management, customer profitability management, campaign segmentation and tracking, and price and promotion optimization that enable consumer-centric merchandising.
- Consumer sentiment analytics to understand the top-of-mind topics and sentiment of the product and service specific target audiences.
- Master data management to enable a 360-degree view of consumers across channels.

Comprehensive E-Retail Analytics with HP Vertica

The HP Vertica Analytics Platform is uniquely suited to handle the needs of E-Retail analytics that enable users to combine all their relevant data coming in from disparate sources into one platform for fast in-database analytics. With HP Vertica's tight integration with R, machine learning techniques can be applied to the E-Retail data to achieve customer-centricity and drive loyalty and growth.

HP Vertica offers a purpose-built platform for running analytics on massive volumes of E-Retail analytics data with these core features—all delivered at an overall lower total cost of ownership:

Blazing Fast E-Retail Analytics

HP Vertica organizes data on disk as columns of values from the same attribute instead of storing it as rows of tabular records. Because of this organization, when a query only needs to access a few columns of a table, it only reads those columns, conserving resources through the processing pipeline. This enables you to get insights into:

- **Dynamic pricing:** Fast big data analytics brings in much more refined indicators than traditional dynamic pricing (which typically focuses on influencers such as time and availability) across multiple models. You can bring in more factors such as weather, location, a customer's complete buying profile and social media presence (prescriptive analytics).

- **Market basket analysis:** Layering onto the traditional model of matching products that are often bought together, fast analytics can bring in more depth of insight—e.g. time of day, length of visit, weather, etc. (descriptive analytics).
- **Shopping cart defection:** Adds consideration of additional factors such as URL destination, duration on site, pages/screens per visit, and actions completed on site (ex: clicked on “buy now” button) to this established analysis in the E-Retail sector (diagnostic analytics).
- **Customer sentiment –** Automatically analyze social media posts to gain actionable insight into what consumers are talking about and how they feel about your products and services.⁴

Website Clickstream Analysis

Your website is your revenue-generating engine, and it is critical for you to understand how your customers interact with your website or content. However, observing your customers on the Internet is very data intensive. To profit from customer interactions, you also need to look at how you can integrate data from many, different sources, such as customer relationship management (CRM) systems, visitor and ad logs, and data from social media sites. Only HP Vertica lets you combine all your disparate data into one integrated platform for quick analysis. Here are some of the other benefits that HP Vertica offers for clickstream analytics:

- **Massive Scalability –** Infinitely and easily scale your solution by adding an unlimited number of industry-standard servers, offering you the flexibility to start small and grow as your business grows.
- **Open Architecture –** Protect your investment in hardware and software with built-in support for Hadoop, R, and leading BI/ETL tools.
- **Easy Set Up and Administration –** Get to market quickly with your analytics initiatives at low cost of administration and maintenance.
- **Optimized Data Storage –** Store 10x-30x more data per server than traditional databases with patented columnar compression.

In addition to these benefits, HP Vertica

offers optimal agility with flexible deployment options – on industry-standard hardware, in the cloud, and as an appliance.

E-Retail Customer Success Stories

Real-time information empowers non-traditional Business Intelligence users

Guess?, one of the world's largest retailers, needed to improve their IT and business performance by empowering everyone—designers, buyers, planners, and retail store managers—to serve customers.

Another of the challenge they had was; the processing and updating of large amounts of data and the frequency with which that data changed. Having current sales and inventory information was critical. For example, store managers usually met with their staff about two hours before stores opened. During these meetings, employees need up-to-date information about the prior day's sales. In the past, Guess? was dependent on a database platform that typically took three hours to generate sales reports, which made it impossible to share the data with stores on the East Coast before 11:00 a.m. Eastern—too late to be useful at daily staff meetings.

To that end, Guess? developed an easy-to-use mobile BI application, powered by the HP Vertica Analytics Platform. Leveraging columnar database performance inherent in HP Vertica, Guess? reduced the load window by 50 to 62.5%, from 3 to 4 hours on the legacy platform to 90 minutes at most. Their legacy data warehouse could not scale; with HP Vertica they were able to scale globally. The open architecture and flexibility of HP Vertica enabled them to extend their business front lines via a visual, easy-to-use mobile application. Superior data compression freed them from archiving their historical data.

Also, with the HP Vertica platform, query speeds increased dramatically. As a result, stores now have the sales reports they need at their morning meetings, with detailed information about what happened yesterday, along with better sales tracking.

Additional benefits included:

- **Faster report generation** (up to 400 times faster).

⁴“Source: Gartner- “Toolkit: Big Data Business Opportunities from over 100 Use Cases”

HP Vertica E-Retail customers



- Improved merchandise allocation and distribution of inventory across retail locations due to complex queries, such as sales for all best-sellers, performing 60 to 80 times faster.
- Sales promotions developed based on instant affinity and market basket analysis to better understand consumer purchasing behaviors.

Understanding customers to drive revenue

As an E-Retailer, Snapfish was held back—not by its customer data—but by an intelligence feedback loop that couldn't really know customers, or anticipate their needs. Their analytics team saw golden opportunities that were untapped:

- Static product promotions failed to capitalize on customer behavior or preference data.
- Customer photos sat unsorted in albums instead of being pre-populated into ready-to-buy photo books.
- A time delay prevented popular card designs from being featured promptly.

Snapfish's experiment with HP Vertica began with a simple desire: to untap the value in its customer data (notably on-time clickstream), personalize the customer experience, and make it quicker to buy their products. The HP Vertica Analytics Platform deployment at Snapfish processes more than 21 billion records, which Snapfish is using to reduce cart abandonment, and raise per-customer revenue.

The keystone of the analytics initiative is a product recommendations engine that uses multiple sources of customer intelligence to show users the products and card designs most likely to interest them. Additional features include:

- Highly targeted email offers with reduced lag time to contact.
- Pre-populated photo books using customers' most recently uploaded

photos—solving the big problem of customers not having time to get started on a photo book.

The expected business value of the HP Vertica enabled analytics initiative can be summarized in three areas:

- **Save money**—With ad-hoc reporting provided by HP Vertica, Snapfish has eliminated the costs of external vendors' static reports and analysis. They're also reducing marketing costs by relying on targeted email messages rather than expensive, low-conversion mass promotions.
- **Make money**—Snapfish conservatively expects the new recommendations engine to initially improve conversion rates by 5% - 10% —a figure that should net several million dollars in additional annual revenue. But the new analytics power will let Snapfish optimize iteratively, so even greater improvements are expected over time.
- **Increase site stickiness**—Using a combination of behavior and psychographic profiles, Snapfish provides a customized experience that takes individual family situation, personal style, and regional trends into account. Not only will visitors stay longer, but Snapfish expects customers to share photo albums and custom products with friends and family more often, which results in greater per-album revenue.

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