Introduction to Oracle Fast Data
What is Fast Data? ........................................................................................................... 2
Fueling the Demand for Managing Data Velocity ..................................................... 2
Run your Business Smarter with Fast Data ............................................................... 3
Oracle’s Solution for Fast Data .................................................................................... 4
Summary ..................................................................................................................... 6
What is Fast Data?

To understand fast data, one must first look at one of the most compelling new the breakthroughs in data management: big data. Oracle believes that big data solutions address the challenge today’s businesses are facing when it comes to managing the increasing volume, velocity, variety of all data - not just data within the organization but also about the organization. Little has been talked about velocity [or real-time] when it comes to big data. Velocity is about the ability to process large volumes of data in real-time and make decisions in a more rapid fashion to create value from highly-perishable, high-volumes of data in business operations.

This is where fast data comes in. Fast data is a term that was coined recently by Ovum’s Tony Baer who wrote, “Fast data, the velocity side of big data, is not new, but technology price/performance trends are making fast data applications more widely available”. ¹

“Fast data is a complimentary approach to big data” writes Hasan Rizvi, “for managing large quantities of “in-flight” data that helps organizations get a jump on those business-critical decisions. Fast data is the continuous access and processing of events and data in real-time for the purposes of gaining instant awareness and instant action. Fast data can leverage big data sources, but it also adds a real-time component of being able to take action on events and information before they even enter a Big Data system.”²

Fueling the Demand for Managing Data Velocity

There are a couple of reasons why the appeal of fast data has grown. As increased volumes of data become commonplace across many industry sectors, the value of applying a fast data strategy as an end-to-end solution has become more apparent.

Another factor which has fueled the demand for solutions that manage high velocity data is the ‘internet of things’. There are more devices than ever before. In fact the number of devices over the next 5 years is expected to increase by 22 times. Increased connectivity leads to higher volumes of data generation at faster rate. It also allows end users to leverage real-time information across work and personal interactions.

As more and more devices come on board we’re also seeing an uptake in solutions that require device to datacenter (D2D); fast data is an important element in connecting streams of data together from device to the datacenter. This data that exists beyond the companies four walls can also be tapped – and when it is tapped it’s important to use the most current information. For example, device sensors within a city center can help first responders react faster in a storm or a critical situation. And they should be aware of the latest developments to be completely ready to best handle the situation at hand.

Finally, customer touch points are increasing. As more and more mobile devices add to the social conversation, so does the demand for instantaneous responsiveness and improved customer experiences. Fast data helps improved customer experience by getting the most current and real-time information to customers, customer service representatives, and business analysts in a timely manner.

Run your Business Smarter with Fast Data

Every business wants to be smarter about how they do business. Velocity is a critical component to achieving this end goal. By capturing data faster and moving it faster means being able to analyze it and act on it faster. The following are four key value drivers that we’re seeing from leveraging fast data solutions:

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3 CISCO VNI Mobile 2012
Introduction to Oracle Fast Data

- **Building new services**  Ability to process highly-dynamic data efficiently provides broader insight into customers and allows companies to offer differentiated services or products that were not possible before.

- **Improving customer experience** By leveraging the latest customer information—including most recent contacts across all customer touch-points, support issues, and operational data—companies can offer real-time personalized service at every customer interaction.

- **Increasing operational efficiencies**: Ability to process highly-dynamic data in a rapid fashion brings advanced optimization opportunities across the business, such as in asset utilization, workforce management, or inventory management.

- **Developing higher quality in operations**. Fast data expands the breadth of data analysis and delivers great predictability and visibility which enable higher quality in business operations.

Oracle’s Solution for Fast Data

Oracle’s fast data solutions offer multiple technologies that work hand-in-hand to create value out of high-velocity, high-volume data. They are designed to optimize the efficiency, scale for processing high volume events and transactions.
Filter and Correlate. With Oracle Event Processing and Oracle NoSQL you can use predefined rules to filter and correlate data through big data sources. In addition, this solution has the advantage that it can run in-memory to optimize performance, scale by integrating with Oracle Coherence.

Move and Transform. With Oracle Data Integrator and Oracle GoldenGate you can capture data (structured or unstructured) and immediately move information where it is needed—and in the right format—to best support decision making. Oracle Data Integration product family combines all the elements of data integration—real-time and bulk data movement, data synchronization, big data transformation, data quality, and data services into a unified platform.

Analyze. Oracle Business Analytics enable you to discover what’s possible for real-time analysis. Oracle Endeca Information Discovery is an enterprise data discovery platform for advanced, yet intuitive, exploration and analysis of complex and varied data.

Act. Oracle Real-Time Decisions together with Oracle BPM, helps support both automated decision-making as well as more complex, human-based interactions, such as business process management. Oracle Real-Time Decisions makes optimized real-time decisions based on available data by leveraging real-time predictive models, business rules and performance goals.

All of these components run on a rich data tier environment which supports both: Big Data Hadoop/NoSQL, as well as SQL, and scales elastically on standards based Java platforms.
Only Oracle has a complete and integrated solution with the best-of-breed components when it comes to processing events, data, and analytics in real time. And, only Oracle can run these fast data components on diverse deployment architectures, including device gateways, big data environments, or engineered systems.

Summary

While the term Fast data might be new; it’s a set of mature ideas and technologies around the rapid processing of events and high volumes of data for improved analytical insights. It's recently been impacted by the explosion in volume and variety of data [big data]; the ubiquitous nature of devices and internet of things, and ultimately the heightened expectations of customers. No longer do we see fast data in only financial stock exchanges or limited to Hadoop based deployments; but it's becoming more and more pervasive across industries as companies are recognizing the need to run their businesses in real-time.

Only Oracle provides a complete and best-of-breed platform for fast data to handle increasing volume, velocity & variety of events and data to generate value for customers looking to implement real time analytics use cases. The components of this platform are engineered to work together. In addition, each component is based on open standards and interfaces that allow customers to leverage their existing enterprise standard components in areas where investments may have already been made. With the use of Oracle Engineered Systems, Oracle is the only vendor today that can add even more increased value by tapping your high velocity data to improve performance, reduce business risk and deliver innovative new services.

For more information on Oracle’s complete solution for Fast Data goto www.oracle.com/fastdata