Intel IT Center

Vendor Spotlight

Oracle Takes You through the Four Phases of Achieving Big Data Insight

Kimberly Billings, *Director of Data Warehousing Product Marketing, Oracle*

Kimberly Billings from Oracle explains how Oracle's big data solutions deliver a uniquely integrated, end-to-end approach to big data acquisition and analysis.

The Big Challenge for Big Data

Today we're seeing an unprecedented amount of unstructured and semistructured data pouring into organizations. By some estimates, this digital data is increasing by 40 percent per year. The volume and velocity of this data can create a lot of challenges. But this is not necessarily a new problem for IT managers. It's simply amplified today.

What is different, however, is the variety of this data. It doesn't fit neatly into rows and columns. The big challenge becomes organizing and transforming this data so that you can quickly integrate it with your other enterprise data, and then do the analysis necessary to gain new insights and real value.

Assemble the Right Technologies

To really gain insight from big data, you need the right technologies that are completely integrated through the four phases of the big data life cycle.
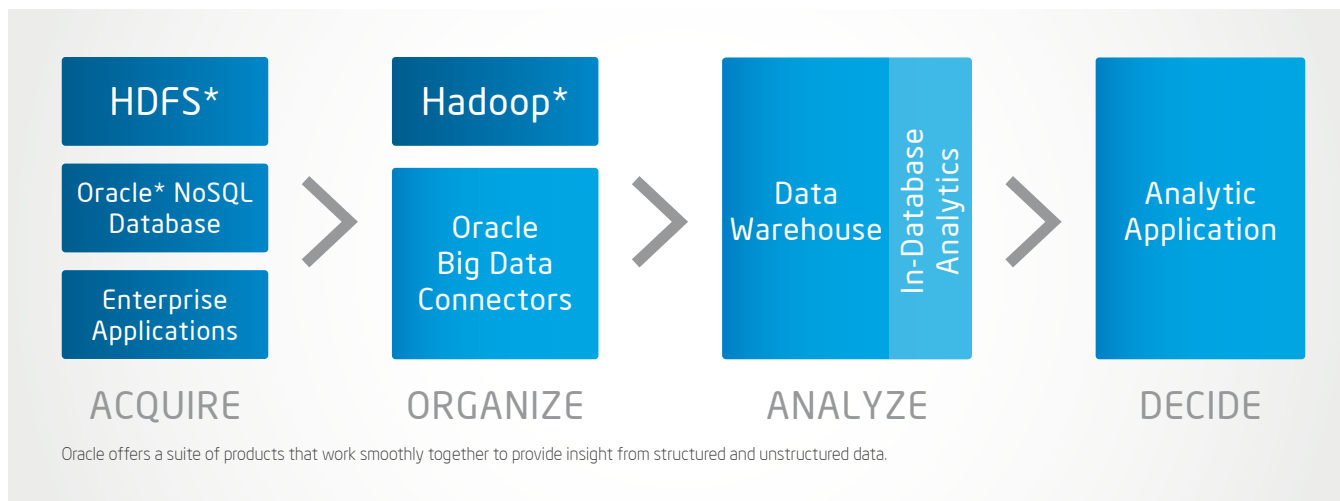
1. **Acquire:** Capture and store a variety of data.

2. **Organize:** Transform and integrate the different types of data.

3. **Analyze:** Run queries, modeling, and algorithms to find new insights.

4. **Decide:** Put the insights into action within your organization.

One of the things that sets the Oracle* big data solution apart is how comprehensive it is. Our architecture for solving a big data problem isn't a single product. It's a suite of products. It begins

with a few of our existing solutions, which are then augmented by our new portfolio of products. Combined in a single stack, you have everything you need for high-performance analytics against big data that covers the entire big data value chain.

The big challenge becomes organizing and transforming this data so that you can quickly integrate it with your other enterprise data, and then do the analysis necessary to gain new insights and real value.

Sponsors of Tomorrow.™ (intel®)

HDFS*		Hadoop*		Data Warehouse	In-Database Analytics		Analytic Application
Oracle* NoSQL Database	>	Oracle Big Data Connectors	>			>	
Enterprise Applications							
ACQUIRE		**ORGANIZE**		**ANALYZE**			**DECIDE**

Oracle offers a suite of products that work smoothly together to provide insight from structured and unstructured data.

The Oracle* Big Data Appliance

Everything you need to address the acquisition and storage of big data can be found in the Oracle Big Data Appliance. It comes in a full-rack configuration with 18 Sun* servers for a total storage capacity of 648 terabytes. Every server in the rack has two Intel® Xeon® processors, each with six cores, for a total of 216 cores per full rack. Each server has 48 gigabytes (GB) of memory for a total of 864 GB of memory per full rack. The Oracle Big Data Appliance also includes Cloudera's distribution including Apache* Hadoop*, for running massively parallel algorithms, and the Oracle NoSQL Database for fast low-latency access to massive amounts of data. The database also supports both data retrieval and data updates using a flexible key-value-pair programming paradigm. For deep analysis of big data, it also includes an open-source distribution of the statistical environment R.

The entire appliance comes preconfigured, preoptimized, and ready to go, so you can get up and running with your big data projects quickly. With the Oracle Big Data Appliance, you can acquire massive amounts of information and then run your MapReduce algorithms to distill that down to really valuable nuggets of information for further analysis.

In addition to the Oracle Big Data Appliance, we also offer:

- **Oracle Big Data Connectors:** Use this high-performance suite of software to integrate your Hadoop data, in parallel, to your enterprise data warehouse.
- **Oracle Exadata* Database Machine:** Improve the performance of your data warehousing queries and reports and perform your statistical and predictive modeling with this machine's built-in advanced analytics capabilities.
- **Oracle R Enterprise:** Run your statistical and graphical analyses using the R language directly within the database with this new component of Oracle Advanced Analytics, an option for Oracle Database.

Put Insights into Action

The Oracle Exalytics* In-Memory Machine is the industry's first engineered system for in-memory analytics that delivers extreme performance for business intelligence and enterprise performance management applications. Built using industry-standard hardware, market-leading business intelligence software, and in-memory database technology, Oracle Exalytics is an optimized system that delivers answers to all your business questions with unmatched speed, intelligence, simplicity, and manageability. Another important feature is its dynamic user interface, which complements large amounts of big data under the covers and delivers rich visualization capabilities. Use the interface to pull up a wide range of reports, dashboards, interactive chart types, maps, and more. Then present business information in meaningful and compelling ways. To make your work a bit easier, our Oracle Exalytics system is optimized to work with other components of Oracle's big data stack, including Big Data Appliance and Oracle Exadata.

We also offer Oracle Endeca* Information Discovery to help you synthesize and analyze unstructured data, structured data, and semistructured data. This solution stores unstructured data in a loosely defined, faceted data model. This enables an iterative "model-as-you-go" approach, rather than requiring a defined data model, and supports broad information exploration, discovery, and analysis.

Oracle Big Data Solutions Leverage Intel® Technologies

Our engineered systems, Exadata, Oracle Exalogic* Elastic Cloud, and Exalytics, are specifically designed to take advantage of Intel's x86 architecture. These systems leverage many Intel Xeon processor features like memory management and parallelization. They also take advantage of Intel features that enable visualization, analytics, and data discovery.

Find Real Value in Your Big Data

Big data offers the promise of new sources of economic value, providing fresh insights into customer behavior and proactively identifying market trends. For your IT department to deliver on this promise, you need the right tools to capture and organize a wide variety of data types from different sources and easily analyze that data within the context of all your enterprise data. Oracle big data solutions can help your enterprise acquire, organize, and analyze all your enterprise data—both structured and unstructured—to make informed decisions that deliver real business value.

Visit oracle.com/bigdata to learn more about Oracle big data solutions.

Share with Colleagues

(intel®)

Sponsors of Tomorrow.™