Find out what faster big data analytics can do for your business

The need for speed in all things related to big data is an enormous challenge. How do you simplify deployment, configuration, tuning, and optimization of Apache Hadoop® software and start delivering speedy analytics sooner rather than later? Find out how the Dell® In-Memory Appliance for Cloudera® Enterprise built on the latest Intel® Xeon® processor E7 family can help you achieve these capabilities for your organization.

What’s your use case?

See if one of these top four use cases for the Dell appliance might work for your enterprise.

- **Streaming data ingestion**
  Ingest data into Apache Hadoop® software for storage that is analytics ready

- **Fast interactive queries**
  Ad-hoc queries to stored data requiring near-real-time results

- **Memory-intensive workloads and interactive queries**
  Fast, unfettered access to an entire data set

- **Streaming data processing on the fly**
  Immediate real-time analytics on inbound data
How does your use case work with this solution?

The Dell In-Memory Appliance for Cloudera Enterprise is a purpose-built, turnkey, Apache Spark*-powered, leading-edge appliance built for stream processing and predictive and iterative analytics. The preconfigured fully integrated hardware and software stack takes the effort out of implementation, simplifying and speeding up complex Hadoop* cluster deployments. It is also massively scalable, using an enterprise data hub to store and analyze any amount or type of data in its original form and for as long as needed.

How does data flow through the appliance?

**Streaming data ingestion**
Data can be ingested in any data format and flows into Hadoop software, which is used as a staging environment for analytics tools.

**Fast interactive queries**
Get fast results for interactive queries with Cloudera Search, Apache* Impala, and Apache Spark support for data processing and interactive analysis.

**Memory-intensive workloads and interactive queries**
The appliance includes ScaleMP* versatile SMP (vSMP) architecture, which aggregates multiple x86 servers into a single virtual machine to create large memory pools for in-memory processing with almost immediate access to data for fast analytics.

**Streaming data processing**
Streaming data is staged in Hadoop software, which performs parallel processing of the disparate data sources.

The Dell* appliance is a preconfigured hardware and software stack that takes the effort out of deployment, simplifying and speeding up complex Apache Hadoop* cluster deployments.
Data can be ingested in any data format and flows into the Apache Hadoop* framework, which is used as a staging environment for analytics tools.

**Data Sources**
Transactions, machine data, enterprise content, social data, third-party data

**Dell* In-Memory Appliance**

**Apache Spark** real-time data stream

**Cloudera* Enterprise**

Dell* PowerEdge* servers Intel® Xeon® processor E7 family

Processing performance
Encryption acceleration
Compression/decompression
Intel Math Kernel Library

**Analytics tools and applications**
Transactions, machine data, enterprise content, social data, and third-party data, such as Dell Statistica analytics packages
How does the solution optimize Intel® technologies?

The Dell In-Memory Appliance for Cloudera Enterprise is specifically optimized to run efficiently on Intel technologies.

Data protection with fast, strong security

- Intel® Advanced Encryption Standard New Instructions (Intel AES-NI)™ accelerates Cloudera’s encryption solution for faster data protection and greater security.
- Pervasive encryption is feasible in more areas of your data center.

Impressive data compression and decompression rates

- Intel® and Cloudera® technologies work together to push compute-intensive workloads down to the silicon.
- Delivers dramatic data compression and decompression rate gains delivered via SSE 4.2, a compression algorithm on the silicon.

Accelerated application performance

- Validated designs are optimized to take advantage of the latest hardware and software combinations.
- Specific silicon features leveraged to speed up the Intel® Math Kernel Library (MKL) algorithms.
- Accelerates math processing and application performance and reduces development time.

Faster time to value

- Production-ready, validated configurations eliminate guesswork and design uncertainties.
- Fast Apache Hadoop* installation and operation with the optimum combination of hardware and software.
- Takes advantage of Intel® Rack-Scale Architecture.
- In addition to the Dell® In-Memory Appliance for Cloudera® Enterprise, Dell also offers Dell Quickstart for Cloudera Hadoop® software to help organizations quickly engage in Hadoop development, and the Dell Cloudera Apache Hadoop Solution, a fully supported Hadoop cluster with hardware, software, and services.
Case study

Find out how the Dell In-Memory Appliance for Cloudera Enterprise is speeding up decision making.

Searches billions of records in seconds for a 360-degree view of supply chain data

Sourcing for today's global economy while protecting product quality is a major challenge for today's manufacturers. Dell partner Omneo developed a solution that provides an end-to-end, holistic view of huge volumes of diverse product and supply chain data. The solution ingests millions of data points for customers each day from dozens of data sources and transforms them into actionable intelligence in seconds.

Read about the manufacturing solution:
http://dell.to/1D5gWKT

Want to get started with real-time analytics?

Talk to your local Dell representative or contact Dell at 1-800-456-3355.

To find out more about the Dell In-Memory Appliance for Cloudera Enterprise, visit Dell Hadoop solutions and Cloudera Enterprise. Or visit Intel big data solutions in the Intel IT Center for resources that will help you craft a smart big data strategy that creates advantage for your organization.

Dell Hadoop solutions:
dell.com/hadoop

Cloudera Enterprise:
coudera.com/content/cloudera/en/products-and-services/cloudera-enterprise.html

Intel big data solutions:
inintel.com/bigdata

1 No computer system can be absolutely secure. Intel technologies’ features and benefits depend on system configuration and may require enabled hardware, software, or service activation. Learn more at intel.com, or from the OEM or retailer.

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