EXECUTIVE SUMMARY

Now more than ever, IT teams are relying on data to help them innovate, differentiate, and improve multiple facets of their businesses. But storing, processing, and managing the data is difficult.

Intel has contributed to major advances in hardware technologies that have benefited big data like encryption acceleration and optimized hardware-based libraries. Red Hat is the leading provider of open source software solutions used by more than 90% of the Fortune 500. Cloudera delivers the market-leading Hadoop distribution complete with enterprise security and management. Together, the companies are accelerating big data adoption and enabling analytics to the scale demanded by today’s enterprises. Key components of this collaborative approach to big data include:

LAYERED SECURITY

- Hardware offload of encryption/decryption supported by Intel® Xeon® E5 V3 based servers
- Operating system level security and identity management in Red Hat® Enterprise Linux® and SELinux (Security-enhanced Linux)
- Cluster-level security via Cloudera’s enterprise data hub that includes data access, encryption and key management, and governance

OPTIMIZED PERFORMANCE

- Derived from a combination of Intel processor, networking, and storage infrastructures
- Includes direct software extensions relevant to improved performance in Cloudera Enterprise and Red Hat Enterprise Linux cluster environments

SIMPLIFIED EASE OF USE

- Optimized datacenter management with hardware and power infrastructure via Intel’s suite of datacenter management tools
- Seamless management of the life cycle, operations, and security of the data hub via Cloudera Manager
- Flexibility to choose a bare metal, cloud, or hybrid deployment model with Red Hat Enterprise Linux OpenStack® Platform.

Intel, Red Hat, and Cloudera are collectively involved in hundreds of open source big data projects that foster the evolution of a dynamic community that can innovate quickly to help enterprises around the world accelerate the adoption of big data technologies.

1 Red Hat client data, 2014
QUALITATIVE HIGHLIGHTS

Below are some examples of how the three companies are working together to accelerate the adoption of big data in the enterprise:

Intel is working a roadmap to co-evolve silicon and software and to push compute-intensive workloads down to the silicon. For example:

- Accelerate encryption/decryption performance on the chip with AES-NI
- Boost data compression/decompression rate through SSE 4.2
- Compression algorithm that sits inside the silicon
- Silicon features to speed up the Math Kernel Library (MKL) algorithms

Intel will continue to work closely with Red Hat and Cloudera to enable a vibrant, open ecosystem from software to silicon.

Red Hat is dedicated to creating an innovative, big data community that delivers an open, agile solution to enterprise customers. Built on and in cooperation with Intel and Cloudera, Red Hat provides big data infrastructure based on Red Hat Enterprise Linux, Red Hat Storage Server, and Red Hat Enterprise Linux OpenStack Platform. This foundation supports Cloudera Enterprise with an enterprise-grade platform that is secure, scalable, and easy to manage. Red Hat also provides application development tools such as Red Hat JBoss® Data Virtualization, Red Hat JBoss Data Grid, OpenJDK, and OpenShift by Red Hat, which give big data application developers the tools to code, test, and deploy applications quickly, securely, and easily.

Cloudera provides enterprise-grade innovations to Hadoop while staying true to its open source roots. These include the industry-leading Hadoop system management application, comprehensive security and governance, and a myriad of ways to access all your enterprise data—structured and unstructured—for self-service business intelligence and diverse analytic workloads.

Together, the companies are accelerating the pace of innovation and delivering customer value on a leadership platform for the market.

RECOMMENDATIONS

Intel, Red Hat, and Cloudera are enabling organizations to put data and analytics at the center of their businesses. As other open source technologies have proven, this can only be achieved through a robust community that drives innovation for all participants including developers, IT operators, and business analysts. We encourage our enterprise customers to join us and help us accelerate the maturity of big data into the enterprise.

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