Brochure

Cisco Unified Data Center Ecosystem for Big Data: The Value of End-to-End Workload Automation with Cisco Tidal Enterprise Scheduler

Today's enterprises must store and analyze massive amounts of unstructured data to uncover crucial insights that lead to competitive advantages. The accurate processing of these big data jobs is mission critical to the success of these services. Cisco® Tidal Enterprise Scheduler extends the value of Cisco's Unified Data Center solutions that support big data initiatives and deliver enterprise-class workload automation for end-to-end business processing that is cost effective, flexible, and scalable.

As competitive pressures increase, so too has the amount of data and the need for timely business and market analytics, in turn increasing the need for cost-effective, flexible, and scalable infrastructure to host Apache Hadoop deployments. Cisco delivers a tested and certified infrastructure solution and ongoing support that helps reduce the time spent and risk of deploying and managing Hadoop infrastructures and business processing. The solution provides:

- Proven data center architecture featuring Cisco Unified Computing System™ (Cisco UCS®) C-Series Rack-Mount Servers powered by Intel® Xeon® processors
- High-bandwidth, low-latency Cisco Nexus® switching to meet the most demanding performance and scalability requirements at lower cost
- Cisco Tidal Enterprise Scheduler (TES), an enterprise-class, end-to-end workload automation solution that easily connects leading enterprise resource planning (ERP), database, warehouse, data integration, business intelligence, and business processes with big data workloads

Together these powerful and tightly integrated components yield building blocks that can be used to rapidly deploy, connect, and easily scale your Hadoop infrastructure.

The Rise of Big Data and Apache Hadoop

The volume, variety, and velocity of unstructured data coming from a profusion of connected devices is unprecedented. Big data does not fit easily into traditional relational models, and it requires a new type of platform to adequately capture and extract value from it. Apache Hadoop lets organizations mine the insights of new and emerging types of information, a capability that simply did not exist before.

Moving beyond its roots in Web 2.0 technology, the Apache Hadoop framework is rapidly emerging as an essential enterprise analytics platform. Consumer, commercial, and financial industries are all finding applications for data analytics, particularly as they are faced with new challenges in today's web and social-oriented content and communication models.

Cisco is well positioned to help organizations exploit the valuable business insights that lie buried in the mountain of their unstructured data.

Cisco Solution Overview

The combination of Cisco Tidal Enterprise Scheduler, Cisco Nexus high-performance switches, and Cisco UCS C-Series servers address the needs of high-performance Hadoop environments as well as the business and operational requirements of evolving data centers.

This approach offers:

- Infrastructure simplicity and a building-block approach to reduce total cost of ownership (TCO)
- Enhanced business resilience with greater operational continuity based on the modular Cisco NX-OS Software operating system
- Capability to use existing operational models and administrative domains for easy deployment
- Transparent integration of Hadoop data processing environments with Oracle e-Business Suite and Oracle database; Microsoft SQL Server; SAP, Business Warehouse, and BusinessObjects; Informatica, Cognos, and other industry-standard API integrations such as Simple Object Access Protocol (SOAP) and web services based on representational state transfer (REST); Java Database Connectivity (JDBC); and FTP and Secure FTP (SFTP)

Highlights

Tested and Certified Building Blocks to Reduce Cost and Risk

- Cisco offers infrastructure building blocks that help organizations deploy Hadoop distributions quickly, while scaling configurations rapidly and predictably as demand dictates.

Powerful and Cost-Effective Cisco UCS C-Series Rack-Mount Servers

- A choice of Cisco UCS servers with Intel Xeon processors delivers a best-in-class, next-generation platform that can be deployed quickly and scaled to meet data processing needs.

A Choice of Cisco Nexus Switches

- A choice of popular Cisco Nexus switches can be selected based on workload needs and help ensure Hadoop infrastructure growth without arbitrary restrictions.

Business Process Integration with Cisco Tidal Enterprise Scheduler

- With an intuitive graphical user interface, Cisco Tidal Enterprise Scheduler makes the process of job scheduling easy for operations staff by supporting and managing:
  - Script-free job scheduling through a comprehensive visual interface
  - Scalable, extensible architecture
  - Reduction of risks due to error
  - Management of hundreds of thousands of tasks per day
  - Detailed notification and alerts with minimum disruption
- Used as the standard in data centers all over the world, Cisco TES can be deployed quickly, contribute to overall data center efficiency and time savings, and ultimately increase IT's ability to focus resources on high-value, strategic initiatives. Cisco's workload automation solution simplifies the process of automating and optimizing the data center.

For More Information

For complete details on Cisco UCS C-Series Rack-Mount Servers, please visit:
http://www.cisco.com/en/US/products/ps10493/index.html

For complete details about the Cisco Nexus 5000 Series, please visit:
http://www.cisco.com/en/US/products/ps9670/index.html

For complete details on the Nexus Fabric Extender architecture, please visit:
http://www.cisco.com/en/US/products/ps10110/index.html

For more information on Cisco Tidal Enterprise Scheduler, please visit:
http://www.cisco.com/go/workloadautomation

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