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November 17, 2014

Dell Announces New HPC Offerings

NEW ORLEANS, La., Nov. 17 — Today at SC14 (http://sc14.supercomputing.org/), Dell continued to push the boundaries of high-performance computing (HPC) by unveiling the PowerEdge C4130 (http://www.dell.com/us/business/p/poweredge-c4130/pd), the next addition in the Dell PowerEdge server portfolio that is an industry leader in

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November 17, 2014

HPCwire Reveals Winners of the 2014 Readers' and Editors' Choice Awards at SC14 (http://www.hpcwire.com/off-the-wire/hpcwire-

GPU/accelerator density to speed even the most demanding workloads. Dell also introduced Dell Storage for HPC with Intel Enterprise Edition for Lustre software (http://en.community.dell.com/dell-blogs/dell4enterprise/b/dell4enterprise/archive/2014/11/17/dell-storage-for-hpc-with-intel-enterprise-edition-for-lustre) (Intel EE for Lustre software), one of the first solutions that has been engineered and validated with Intel to bring an HPC file system to enterprise and research organizations of all types. These HPC achievements deliver on Dell's promise to enable discovery and innovation through collaboration, and provide market-ready solutions that help solve the real HPC challenges customers are facing.

Rapid, seamless and reliable access to information is one of the most powerful advantages a company can have over its competitors. As a leader in HPC, Dell is committed to providing robust, scalable and responsive solutions that are innovative and accelerate time-to-discovery. Along with Dell's HPC solutions and servers deployed across the globe, the new future-ready HPC solutions introduced today help power the revolutionary discoveries being made by top research organizations and leading IT, computing, industrial and financial companies.

Dell PowerEdge C4130, an accelerator-optimized server

As an incredibly GPU dense and flexible HPC-focused rack server purpose-built toaccelerate the most demanding HPC workloads (http://en.community.dell.com/dell-blogs/dell4enterprise/b/dell4enterprise/archive/2014/11/17/density-and-flexibility-in-one-box-the-poweredge-c4130), the PowerEdge C4130 is the only Intel Xeon E5-2600v3 1U server to offer up to four GPUs/accelerators. It has up to 33 percent better GPU/accelerator density than its closest competitors and 400 percent more PCIe GPU/accelerators per processor per rack U than a comparable HP system. The PowerEdge C4130 can achieve over 7.2 Teraflops on a single 1U server and has a performance/watt ratio of up to 4.17 Gigaflops per watt. This allows customers to further optimize application performance and productivity while unshackling the constraints of traditional datacenter space and energy use.

Incorporating innovative technology from NVIDIA and Intel, the PowerEdge C4130 is available in five uniquely-designed configurations that address the flexibility necessary for varying HPC workload characteristics. This supercomputing agility allows for scientific and medical research labs, financial firms, industrial companies and organizations with analytical or data-intensive computing needs to deliver faster results and quickly adapt to changing business needs.

The PowerEdge C4130 adds up to two Intel Xeon E5-2600v3 processors, 16 DIMMs of DDR4 memory and up to two 1.8-inch SATA SSD boot drives in just 1U of rack space. With up to four 300W Intel Xeon Phi coprocessors or NVIDIA Tesla GPU accelerators, including the new NVIDIA Tesla K80 dual-GPU accelerator, the PowerEdge C4130 enables seamless analysis and execution of data on even the most complex and intensive computing workloads.

Dell Storage for HPC with Intel Enterprise Edition for Lustre Software

Today's HPC workloads require storage infrastructure that scales endlessly and delivers unmatched I/O levels, while increasing the overall utilization rate. Dell Storage for HPC with the Intel EE for Lustre software combines Dell's state-of-the-art hardware with Intel's open-source software to bring the benefits of an HPC file system to enterprise organizations of all types. The solution delivers a higher level of computing power and throughput, making available information and insights derived from big data and compute-intensive applications – including advanced modeling, simulation, and data analysis – to a wider audience of enterprise users.

The solution is built on Dell's PowerEdge servers and Dell Storage MD3460 arrays and MD3060e dense enclosures to provide redundant servers and failover-enabled storage. It is one of the first solutions with validation and support for Intel EE for Lustre software, providing customers with simplified installation, configuration, monitoring and overall management features that are backed by both Dell and Intel. With Dell Storage for HPC with Intel EE for Lustre software, customers can:

• Start small and scale to tens of thousands of clients and petabytes of data to support business workloads.
• Run larger and more complex applications easier with faster throughput and capacity.
• Build future-ready storage for the most demanding workloads with a fully supported, commercial-ready Lustre file system, backed by Dell and Intel.
• Reduce time spent on design, validation, testing and tuning with a solution that has been rigorously tested and validated by Dell.

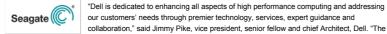"Dell is dedicated to enhancing all aspects of high performance computing and addressing our customers' needs through premier technology, services, expert guidance and collaboration," said Jimmy Pike, vice president, senior fellow and chief Architect, Dell. "The advancements and innovations in the new HPC solutions introduced today will help power the revolutionary discoveries being made by the top research organizations and accelerate product and service development for leading IT companies."

"The PowerEdge C4130 has really impressive features for HPC environments, including industry-leading accelerator density with up to four 300W PCIe accelerators per 1U," said Darren Kozlek, Western Hemisphere Information Systems Manager, TGS. "But I'm even more impressed with how Dell listened to our feedback and deliberately designed a flexible solution that met our technical computing needs. With the PowerEdge C4130, Dell delivered the density and flexibility we need to tackle our most demanding workloads."

"Organizations around the world in academia and industry are using HPC to push the boundaries of insight, innovation and product development," said Charles Wuischpard, vice president, Data Center Group and General Manager of Workstations and High Performance Computing at Intel. "To better compete in a world-wide market, they need ever-higher performance and scalability to solve today's increasingly complex challenges.

Along These Lines

SC14 Twitter Roundup (http://www.hpcwire.com/2014/11/17/sc14-twitter-roundup/)

Intel Lends Custom Lift to the AWS Cloud (http://www.hpcwire.com/2014/11/14/intel-lends-custom-lift-aws-cloud/)

Seagate Stakes its Claim as an HPC Storage Leader Helping to Shape IT's Future (http://www.hpcwire.com/2014/11/17/seagate-stakes-claim-hpc-storage-leader-helping-shape-future/)

Weekly Twitter Roundup (http://www.hpcwire.com/2014/11/13/weekly-twitter-roundup-21/)

HPC Tweets

ABB Robotics USA @ABBRoboticsUSA   12m
Hmmm, the news was just saying that there are unseasonably cold temperatures throughout much of the USA. Maybe… fb.me/1HZsF2wMu
Retweeted by ANSYS, Inc.
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Sin Min Yap @Sin_Min_Yap   11m
What Can We Learn From #Systems #Engineering Failures? blogs.ptc.com/2014/11/17/wha…
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Expand

IBM Big Data & HPC @ibmhpc   28m
Attend " Hybrid and Public Cloud Optimized for Technical and High Performance Computing" today at #SC14, 7:15AM-8:15AM CDT#ibmhpc #hpc

Kenneth Hoste @kehoste   34m
Is there any streaming of any of the

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Dell's new HPC solutions using Intel Xeon processors, Xeon Phi coprocessors and enhanced Intel EE for Lustre* software epitomize a commitment to helping customers solve their greatest challenges at every scale."

"A majority of HPC users are moving to higher GPU density configurations to drive discovery and innovation in seismic processing, signal and image processing, computational chemistry, and machine learning," said Sumit Gupta, general manager of Tesla Accelerated Computing at NVIDIA. "The Dell PowerEdge C4130 is a unique platform that packs four Tesla K40 or the new Tesla K80 dual-GPU accelerators into a compact 1U form factor, with a very flexible architecture that maximizes application performance with NVIDIA GPUDirect."

Dell will be showcasing the Dell PowerEdge C4130 and Dell Storage for HPC with Intel EE for Lustre software at SC14 (http://sc14.supercomputing.org/) Nov.18 – 20th at Booth 1739. Stop by to see these solutions and more from Dell's premier line-up of HPC solutions or visit Dell HPC Solutions (http://www.dell.com/learn/us/en/555/high-performance-computing) on Dell.com.

About Dell

Dell Inc. listens to customers and delivers innovative technology and services that give them the power to do more. For more information, visit www.dell.com (http://www.dell.com/).

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NASA Pushes Long-Range Climate Model Limits with SGI (http://www.hpcwire.com/2014/ pushes-long-range-climate-model-limits-sgi/)
The Discover system at NASA's Center for Climate Simulation was designed with scalability and flexibility in mind, starting with its original Read more… (http://www.hpcwire.com/2014/1 pushes-long-range-climate-model-limits-sgi/)

Monday Twitter Roundup (http://www.hpcwire.com/2014 twitter-roundup/)
In celebration of SC14, we've decided to put together a daily list of some the top tweets from the event. For those unable to attend, we hope Read more… (http://www.hpcwire.com/2014/1 twitter-roundup/)

Why the Top 500 Standstill Won't Last Forever (http://www.hpcwire.com/2014 standstill-top-500-wont-last-forever/)
Traditionally, one of the most exciting opening elements of the annual SC event is the announcement of the list of the Top 500 supercomputers on Read more… (http://www.hpcwire.com/2014/11/1 standstill-top-500-wont-last-forever/)

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Short Takes

Weekly Twitter Roundup (http://www.hpcwire.com/2014/11/ twitter-roundup-21/)
Here at *HPCwire,* we want to help keep the HPC community as up-to-date as possible on some of the most captivating news items that were Read more… (http://www.hpcwire.com/2014/11/ twitter-roundup-21/)

Big Data Compels HPC Adoption in Life Sciences (http://www.hpcwire.com/2014/1 data-compels-hpc-adoption-life-sciences/)
Expect a lot of the talk at SC14 this year to revolve around big data. Ari E. Berman, Ph.D., Director of Government Services and Principal Read more… (http://www.hpcwire.com/2014/11/13 data-compels-hpc-adoption-life-sciences/)

UK Project Tackles Bike Helmet Safety (http://www.hpcwire.com/2014/11/13/uk-project-tackles-bike-helmet-safety/)
There are certain HPC projects that stand out for their ability to help humankind in practical ways. One recent example of such a project Read more… (http://www.hpcwire.com/2014/11/13 uk-project-tackles-bike-helmet-safety/)

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