



## How Ceph Is Helping to Unlock the Secrets of the Universe

September 30, 2019

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Did you know that the CERN Data Centre processes an average of *one petabyte* of data per day as a result of the particle collision experiments in their Large Hadron Collider (LHC)? The 27km long, circular tunnel's experiments alone churn out approximately 90PB of data per year, and a further 25PB are produced per year from other, non-LHC-related experiments at CERN.<sup>1</sup> When scientists at the helm of the LHC in 2012 sifted through the data and discovered the Higgs boson, they were able to confirm its position in the Standard Model of physics and definitively prove the existence of the mysterious process that gives all other particles their substance. This was a pivotal moment for science as it opened the door to further our understanding of the very origins of the universe.

So how is all this data managed? What technology acts as the backbone for securing, accessing and sharing this vast storage estate, and how is it working to support CERN's ground-breaking research?

Over the years, the rise of super-computing and the resulting growth in storage requirements (such as the need for block storage for both OpenStack VMs and file services like AFS and NFS) have driven the development of a generic backend storage service for CERN IT.

Ceph is a natural solution due to its native block device layer RBD which is built upon its scalable, reliable, and performant object storage system, RADOS. Ceph is the leading open-source software-defined storage solution on the market, with countless supporters from research data centers of every size and vertical. Some of the reasons it's such an ideal solution are that it's flexible, inexpensive, fault-tolerant, hardware neutral, and infinitely scalable which makes it an excellent choice for research institutions of any size and vertical, not just CERN. In addition, because most research organizations have unique storage requirements, vendor lock-in can be avoided altogether. Other benefits include:

- support for multiple storage types including object, block, and file systems. Regardless of the type of research being conducted, the resulting files, blocks and/or objects can all live in harmony in Ceph.
- natively supporting hybrid cloud environments which makes it easy for remote researchers, who might be located anywhere in the world, to upload their data in different storage formats.
- resilience: there's no need to buy redundant hardware in the event a component fails, because Ceph's self-healing functionality quickly replicates the failed node, ensuring data redundancy and higher availability.

SoftIron ([https://bit.ly/HPCwireAdvertorial\\_Softiron](https://bit.ly/HPCwireAdvertorial_Softiron)) makes the world's finest, unified storage solutions for today's enterprise. Their HyperDrive ([https://bit.ly/HPCwireAdvertorial\\_Softiron](https://bit.ly/HPCwireAdvertorial_Softiron))® storage appliance is custom-designed and built to optimize Ceph, unleashing the full potential of the technology for the research data center. HyperDrive is a high-performance, scale-out solution that runs at wire-speed, and at less than 100W per 1U form factor.

The University of Minnesota's Supercomputing Institute (MSI) is a world-class facility that provides computing infrastructure and expertise to foster innovation through advanced computing technologies, scientific computing services, and more. When MSI's legacy infrastructure was hampering the Institute's goals to service its internal customers with scalable, easy-to-deploy, high-performance data solutions, it turned to SoftIron for a more cost-effective, scalable storage solution. Read more about how the Minnesota Supercomputing Institute unlocked cost savings and scalability with SoftIron and Ceph here: [Download the Minnesota Supercomputing Institute case study](https://bit.ly/MSI_HyperDrive) ([https://bit.ly/MSI\\_HyperDrive](https://bit.ly/MSI_HyperDrive)).

To learn more about SoftIron, Ceph, and HyperDrive, visit [www.softiron.com](http://www.softiron.com) ([https://bit.ly/HPCwireAdvertorial\\_Softiron](https://bit.ly/HPCwireAdvertorial_Softiron)).

<sup>1</sup> <https://home.cern/science/computing/storage> (<https://home.cern/science/computing/storage>)

<sup>2</sup> Daniel van der Ster and Arne Wiebalck 2014 J. Phys.: Conf. Ser. 513 042047

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## Off The Wire

## Industry Headlines



## November 25, 2019

- ➊ RJM International's HPC Cluster Supports Power Plant Emissions Reductions (<https://www.hpcwire.com/off-the-wire/rjm-internationals-hpc-cluster-supports-power-plant-emissions-reductions/>)
- ➋ ColdQuanta Closes Additional \$10M in Seed Financing (<https://www.hpcwire.com/off-the-wire/coldquanta-closes-additional-10m-in-seed-financing/>)
- ➌ Kitware Joins Scientific Systems Company Inc. to Begin Development of DARPA System (<https://www.hpcwire.com/off-the-wire/kitware-joins-scientific-systems-company-inc-to-begin-development-of-darpa-system/>)
- ➍ WekaIO Places First on IO-500 Challenge (<https://www.hpcwire.com/off-the-wire/wekao-places-first-on-io-500-challenge/>)
- ➎ Argonne HPC Efforts in Climate Garner Innovation Award (<https://www.hpcwire.com/off-the-wire/argonne-hpc-efforts-in-climate-garner-innovation-award/>)
- ➏ Dell Technologies to Upgrade Pawsey's Cloud with 5x More Memory and 25x Storage (<https://www.hpcwire.com/off-the-wire/dell-technologies-to-upgrade-pawseys-cloud-with-5x-more-memory-and-25x-storage/>)

## November 22, 2019

- ➊ Mellanox Announces Extreme-Scale High Performance Computing Program (<https://www.hpcwire.com/off-the-wire/mellanox-announces-extreme-scale-high-performance-computing-program/>)
- ➋ Lenovo, Intel Announce University AI Innovation Challenge (<https://www.hpcwire.com/off-the-wire/lenovo-intel-announce-university-ai-innovation-challenge/>)
- ➌ GRC to Provide All-in-One Immersion-Cooling Server Systems Through Collaboration with Dell (<https://www.hpcwire.com/off-the-wire/grc-to-provide-all-in-one-immersion-cooling-server-systems-through-collaboration-with-dell/>)
- ➍ NUMECA adopts Advania Data Centers HPC-as-a-Service (<https://www.hpcwire.com/off-the-wire/numeca-adopts-advania-data-centers-hpc-as-a-service/>)
- ➎ HPC4EnergyInnovation Program Announces Spring 2019 Awards (<https://www.hpcwire.com/off-the-wire/hpc4energyinnovation-program-announces-spring-2019-awards/>)
- ➏ Ayar Labs Selected to Support DARPA PIPES Research Project (<https://www.hpcwire.com/off-the-wire/ayar-labs-selected-to-support-darpa-pipes-research-project/>)
- ➐ Data Science Expert Bader Looks to Fed Funding for Info Analysis (<https://www.hpcwire.com/off-the-wire/data-science-expert-bader-looks-to-fed-funding-for-info-analysis/>)
- ➑ Beijing Meteorological Service Selects 200 Gigabit HDR InfiniBand to Accelerate Supercomputing Platform (<https://www.hpcwire.com/off-the-wire/beijing-meteorological-service-selects-200-gigabit-hdr-infiniband-to-accelerate-new-supercomputing-platform/>)
- ➒ Pawsey Supercomputing Centre Honored in the 2019 HPCwire Readers' and Editors' Choice Awards (<https://www.hpcwire.com/off-the-wire/pawsey-supercomputing-centre-honored-in-the-2019-hpcwire-readers-and-editors-choice-awards/>)
- ➓ DOD Works with NVIDIA to Ease Deployment for Data Intensive AI and HPC (<https://www.hpcwire.com/off-the-wire/dod-works-with-nvidia-to-ease-deployment-for-data-intensive-ai-and-hpc/>)

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## IBM's AI Helps to Unearth Hidden Nasca Lines

(<https://www.hpcwire.com/2019/11/25/ibms-ai-helps-to-unearth-hidden-nasca-lines/>)

The Nasca Lines, a group of giant, mysterious designs in the earth in southern Peru that date back thousands of years, have mystified explorers and researchers since their re (<https://www.hpcwire.com/2019/11/25/ibms-ai-helps-to-unearth-hidden-nasca-lines/>).

By Oliver Peckham

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status=IBM%26%238217%3Bs%20AI%20Helps%20to%20Unearth%20Hidden%20Nasca%20Lines+https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F25%2Fibms-ai-helps%2F&title=IBM%26%238217%3Bs%20AI%20Helps%20to%20Unearth%20Hidden%20Nasca%20Lines&source=https%3A%2F%2Fwww.hpcwire.co (<https://www.facebook.com/sharer/sharer.php?u=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F25%2Fibms-ai-helps-to-unearth-hidden-nasca-lines%2F&title=IBM%26%238217%3Bs%20AI%20Helps%20to%20Unearth%20Hidden%20Nasca%20Lines/>)



## How the Gordon Bell Prize Winners Used Summit to Illuminate Transistors

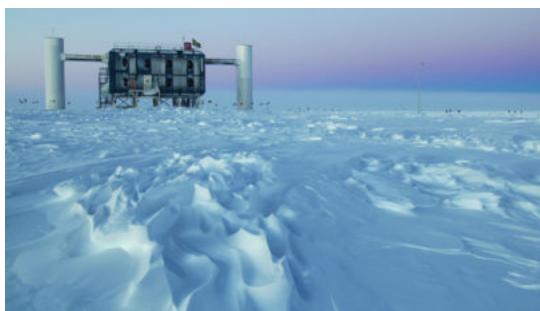
(<https://www.hpcwire.com/2019/11/22/how-the-gordon-bell-prize-winners-used-summit-to-illuminate-transistors/>)

At SC19, the Association for Computing Machinery (ACM) awarded the prestigious Gordon Bell Prize to the Swiss Federal Institute of Technology (ETH) Zurich. The team's pr more... (<https://www.hpcwire.com/2019/11/22/how-the-gordon-bell-prize-winners-used-summit-to-illuminate-transistors/>).

By Oliver Peckham

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## 51,000 Cloud GPUs Converge to Power Neutrino Discovery at the South Pole

(<https://www.hpcwire.com/2019/11/22/51000-cloud-gpus-converge-to-power-neutrino-discovery-at-the-south-pole/>)

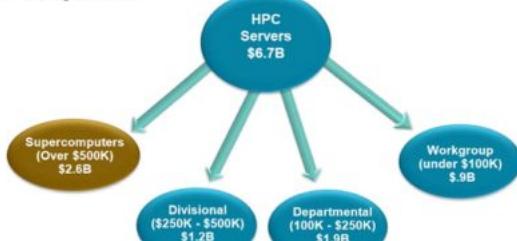
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At the dead center of the South Pole, thousands of sensors spanning a cubic kilometer are buried thousands of meters beneath the ice. The sensors are part of IceCube, an Ai more... (<https://www.hpcwire.com/2019/11/22/51000-cloud-gpus-converge-to-power-neutrino-discovery-at-the-south-pole/>)

By Oliver Peckham

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## \$6.7 Billion in First Half 2019

- Strong revenues!



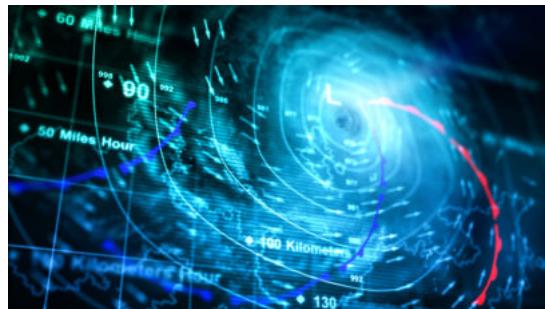
## Hyperion: AI-driven HPC Industry Continues to Push Growth Projections

(<https://www.hpcwire.com/2019/11/21/hyperion-ai-driven-hpc-industry-continues-to-push-growth-projections/>)

Three major forces – AI, cloud and exascale – are combining to raise the HPC industry to heights exceeding expectations. According to market study results released this week (<https://www.hpcwire.com/2019/11/21/hyperion-ai-driven-hpc-industry-continues-to-push-growth-projections/>)

By Doug Black

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## At SC19: Bespoke Supercomputing for Climate and Weather

(<https://www.hpcwire.com/2019/11/20/exploring-a-bespoke-supercomputer-for-climate-and-weather-at-sc19/>)

Weather and climate applications are some of the most important uses of HPC – a good model can save lives, as well as billions of dollars. But many weather and climate models (<https://www.hpcwire.com/2019/11/20/exploring-a-bespoke-supercomputer-for-climate-and-weather-at-sc19/>)

By Oliver Peckham

[Twitter](https://twitter.com/intent/tweet?status=At%20SC19%3A%20Bespoke%20Supercomputing%20for%20Climate%20and%20Weather+https%3A%2F%2Fwww.hpcwire.com%2F2019%2Ffor-climate-and-weather-at-sc19%2F) (<https://twitter.com/intent/tweet?status=At%20SC19%3A%20Bespoke%20Supercomputing%20for%20Climate%20and%20Weather+https%3A%2F%2Fwww.hpcwire.com%2F2019%2Ffor-climate-and-weather-at-sc19%2F&title=At%20SC19%3A%20Bespoke%20Supercomputing%20for%20Climate%20and%20Weather&source=https%3A%2F%2Fwww.facebook.com/sharer/sharer.php?u=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F20%2Fexploring-a-bespoke-supercomputer-for-climate-and-weather-at-sc19%2F&title=At%20SC19%3A%20Bespoke%20Supercomputing%20for%20Climate%20and%20Weather/>)

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High performance computing (HPC) ([https://aws.amazon.com/hpc/?&trk=ba\\_a131L0000057XmkQAE&trkCampaign=pac-edm-2019-hpc\\_product\\_page&sc\\_channel=ba&sc\\_channel\\_pdp&sc\\_outcome=Enterprise\\_Digital\\_Marketing&sc\\_publisher=Others](https://aws.amazon.com/hpc/?&trk=ba_a131L0000057XmkQAE&trkCampaign=pac-edm-2019-hpc_product_page&sc_channel=ba&sc_channel_pdp&sc_outcome=Enterprise_Digital_Marketing&sc_publisher=Others)) brings a powerful set of tools to a broad range of industries, helping to drive innovation and boost other fields. [Read more...](#) ([https://www.hpcwire.com/solution\\_content/aws/manufacturing-engineering-aws/making-high-performance-computing-affordable-and-accessible-for-small-and-medium-businesses-with-hpc-on-aws/](https://www.hpcwire.com/solution_content/aws/manufacturing-engineering-aws/making-high-performance-computing-affordable-and-accessible-for-small-and-medium-businesses-with-hpc-on-aws/))

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- Efficiency and Cost-Optimization for HPC Workloads – AWS Batch and Amazon EC2 Spot Instances ([https://www.hpcwire.com/solution\\_content/aws/efficiency-and-cost-optimal-spot-instances/](https://www.hpcwire.com/solution_content/aws/efficiency-and-cost-optimal-spot-instances/))

## IBM Accelerated Insights



## Data Management – The Key to a Successful AI Project ([https://www.hpcwire.com/solution\\_content/ibm/cross-industry-data-management-the-key-to-a-successful-ai-project/](https://www.hpcwire.com/solution_content/ibm/cross-industry-data-management-the-key-to-a-successful-ai-project/))

### Five characteristics of an awesome AI data infrastructure

[Attend the [IBM LSF & HPC User Group Meeting](#) (<https://tci.taborcommunications.com/l/21812/2019-11-15/6km3tj>) at SC19 in Denver on November 19!]

AI is powered by data

While neural networks seem to get all the glory, data is the unsung hero of AI projects – data lies at the heart of everything from model training to tuning to selection to validation ([https://www.hpcwire.com/solution\\_content/ibm/cross-industry-data-management-the-key-to-a-successful-ai-project/](https://www.hpcwire.com/solution_content/ibm/cross-industry-data-management-the-key-to-a-successful-ai-project/))

Visit the



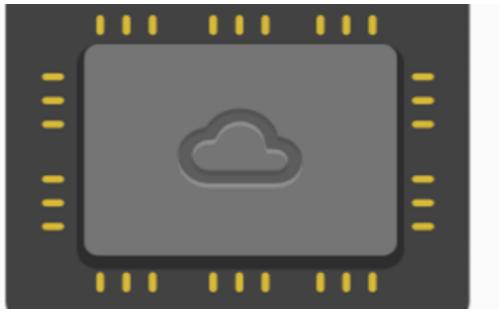
([https://www.hpcwire.com/solution\\_channel/ibm/](https://www.hpcwire.com/solution_channel/ibm/))

Previous:

- Help HPC Work Smarter and Accelerate Time to Insight ([https://www.hpcwire.com/solution\\_content/ibm/cross-industry/help-hpc-work-smarter-and-accelerate-time-to-insight/](https://www.hpcwire.com/solution_content/ibm/cross-industry/help-hpc-work-smarter-and-accelerate-time-to-insight/))
- IBM HPC is NOW ([https://www.hpcwire.com/solution\\_content/ibm/cross-industry/ibm-hpc-is-now/](https://www.hpcwire.com/solution_content/ibm/cross-industry/ibm-hpc-is-now/))
- Breaking Boundaries with Supercomputer Storage ([https://www.hpcwire.com/solution\\_content/ibm/cross-industry/breaking-boundaries-with-supercomputer-storage/](https://www.hpcwire.com/solution_content/ibm/cross-industry/breaking-boundaries-with-supercomputer-storage/))

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## Microsoft, Nvidia Launch Cloud HPC Service

(<https://www.hpcwire.com/2019/11/20/microsoft-nvidia-launch-cloud-hpc/>)

Nvidia and Microsoft have joined forces to offer a cloud HPC capability based on the GPU vendor's V100 Tensor Core chips linked via an InfiniBand network scaling up to 800 (<https://www.hpcwire.com/2019/11/20/microsoft-nvidia-launch-cloud-hpc/>).

By George Leopold

[Twitter](https://twitter.com/intent/tweet?status=Microsoft%20Nvidia%20Launch%20Cloud%20HPC%20Service+https%3A%2F%2Fwww.hpcwire.com%2Fcloud-hpc%2F) (<https://twitter.com/intent/tweet?status=Microsoft%20Nvidia%20Launch%20Cloud%20HPC%20Service+https%3A%2F%2Fwww.hpcwire.com%2Fcloud-hpc%2F>) [LinkedIn](https://www.linkedin.com/shareArticle?mini=true&url=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F20%2Fmicrosoft-nv-hpc%2F&title=Microsoft%20Nvidia%20Launch%20Cloud%20HPC%20Service&source=https%3A%2F%2Fwww.hpcwire.com/) (<https://www.linkedin.com/shareArticle?mini=true&url=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F20%2Fmicrosoft-nv-hpc%2F&title=Microsoft%20Nvidia%20Launch%20Cloud%20HPC%20Service&source=https%3A%2F%2Fwww.hpcwire.com/>) [Facebook](https://www.facebook.com/sharer.php?u=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F20%2Fmicrosoft-nvidia-launch-cloud-hpc%2F&t=Microsoft%20Nvidia%20Launch%20Cloud%20HPC%20Service) (<https://www.facebook.com/sharer.php?u=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F20%2Fmicrosoft-nvidia-launch-cloud-hpc%2F&t=Microsoft%20Nvidia%20Launch%20Cloud%20HPC%20Service>)

### Leading Solution Providers

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### ISC 2019 Virtual Booth Video Tour

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## Hazra Retiring from Intel Data Center Group, Successor Not Known

(<https://www.hpcwire.com/2019/11/20/hazra-retiring-from-intel-data-center-group-successor-not-known/>)

Rajeeb Hazra, corporate VP of Intel's Data Center Group and GM for the Enterprise and Government Group, is retiring after more than 24 years at the company. At this writing [intel-data-center-group-successor-not-known/](#)

By Doug Black

[Twitter](#) (<http://twitter.com/intent/tweet?status=Hazra%20Retiring%20from%20Intel%20Data%20Center%20Group%2C%20Successor%20Not%20Known+hgroup-successor-not-known%2F>) [LinkedIn](#) (<http://www.linkedin.com/shareArticle?mini=true&url=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F20known%2F&title=Hazra%20Retiring%20from%20Intel%20Data%20Center%20Group%2C%20Successor%20Not%20Known&source=https%3A%2F%2Fu=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F20%2Fhazra-retiring-from-intel-data-center-group-successor-not-known%2F&title=Hazra%20Retiring%20from%20Intel%20Data%20Center%20Group%2C%20Successor%20Not%20Known>



## Jensen Huang's SC19 – Fast Cars, a Strong Arm, and Aiming for the Cloud(s)

(<https://www.hpcwire.com/2019/11/20/jensen-huangs-sc19-fast-cars-a-strong-arm-and-aiming-for-the-clouds/>)

We've come to expect Nvidia CEO Jensen Huang's annual SC keynote to contain stunning graphics and lively bravado (with plenty of examples) in support of GPU-accelerated [aiming-for-the-clouds/](#)

By John Russell

[Twitter](#) (<http://twitter.com/intent/tweet?status=Jensen%20Huang%E2%80%99s%20SC19%20%26%238211%3B%20Fast%20Cars%2C%20a%20Strong%20Arm%2C%20and%20Aiming%20huangs-sc19-fast-cars-a-strong-arm-and-aiming-for-the-clouds%2F>) [LinkedIn](#) (<http://www.linkedin.com/shareArticle?mini=true&url=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F20%2Fhuangs-sc19-fast-cars-a-strong-arm-and-aiming-for-the-clouds%2F&title=Jensen%20Huang%E2%80%99s%20SC19%20%26%238211%3B%20Fast%20Cars%2C%20a%20Strong%20Arm%2C%20and%20Aiming%20for%20the%20Clouds%2F>)

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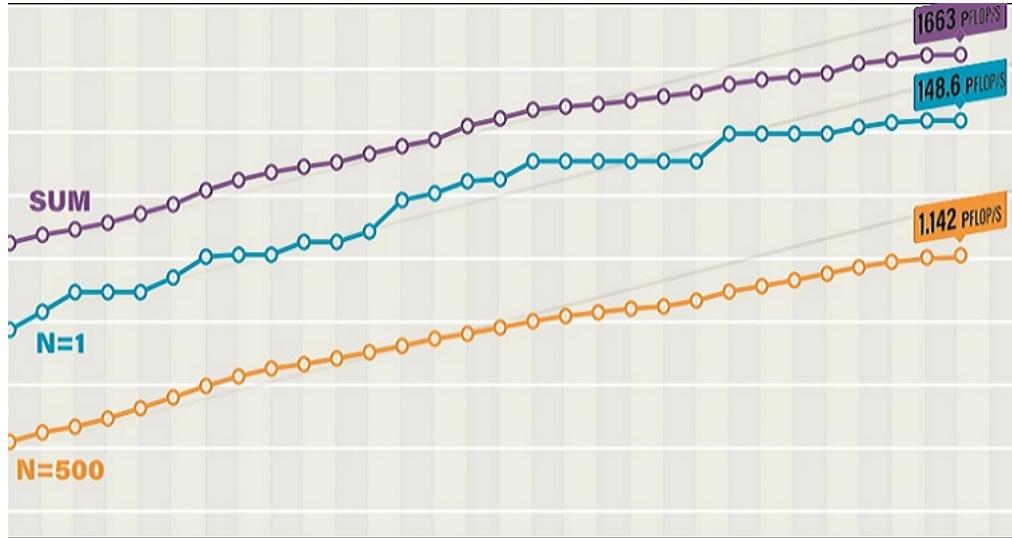
## SC19 Student Cluster Competition: Know Your Teams

(<https://www.hpcwire.com/2019/11/19/sc19-student-cluster-competition-know-your-teams/>)

I'm typing this live from Denver, the location of the 2019 Student Cluster Competition... and, oh yeah, the annual SC conference too. [Read more...](https://www.hpcwire.com/2019/11/19/sc19-student-cluster-competition-know-your-teams/)

By Dan Olds

[Twitter](https://twitter.com/intent/tweet?status=SC19%20Student%20Cluster%20Competition%3A%20%20%20Know%20Your%20Teams+https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F19%2Fsc19-student-cluster-competition-k) ([LinkedIn](https://www.linkedin.com/shareArticle?mini=true&url=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F19%2Fsc19-student-cluster-competition-k)) [HPCWire](https://www.hpcwire.com/2019/11/19/sc19-student-cluster-competition-know-your-teams%2F&title=SC19%20Student%20Cluster%20Competition%3A%20%20%20Know%20Your%20Teams&source=https%3A%2F%2Fwww.hpcwire.com/)



## Top500: US Maintains Performance Lead; Arm Tops Green500

(<https://www.hpcwire.com/2019/11/18/top500-us-maintains-performance-lead-arm-tops-green500/>)

The 54th Top500, revealed today at SC19, is a familiar list: the U.S. Summit (ORNL) and Sierra (LLNL) machines, offering 148.6 and 94.6 petaflops respectively, remain in first place.

By Tiffany Trader

[Twitter](https://twitter.com/intent/tweet?status=Top500%3A%20US%20Maintains%20Performance%20Lead%3B%20Arm%20Tops%20Green500+https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F18%2Ftop500-us-maintains-performance-lead-arm-tops-green500%2F&title=Top500%3A%20US%20Maintains%20Performance%20Lead%3B%20Arm%20Tops%20Green500) ([LinkedIn](https://www.linkedin.com/shareArticle?mini=true&url=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F18%2Ftop500-us-maintains-performance-lead-arm-tops-green500%2F&title=Top500%3A%20US%20Maintains%20Performance%20Lead%3B%20Arm%20Tops%20Green500)) [HPCWire](https://www.hpcwire.com/2019/11/18/top500-us-maintains-performance-lead-arm-tops-green500%2F&title=Top500%3A%20US%20Maintains%20Performance%20Lead%3B%20Arm%20Tops%20Green500&source=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F18%2Ftop500-us-maintains-performance-lead-arm-tops-green500%2F)

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## ScaleMatrix and Nvidia Launch ‘Deploy Anywhere’ DGX HPC and AI in a Controlled Enclosure

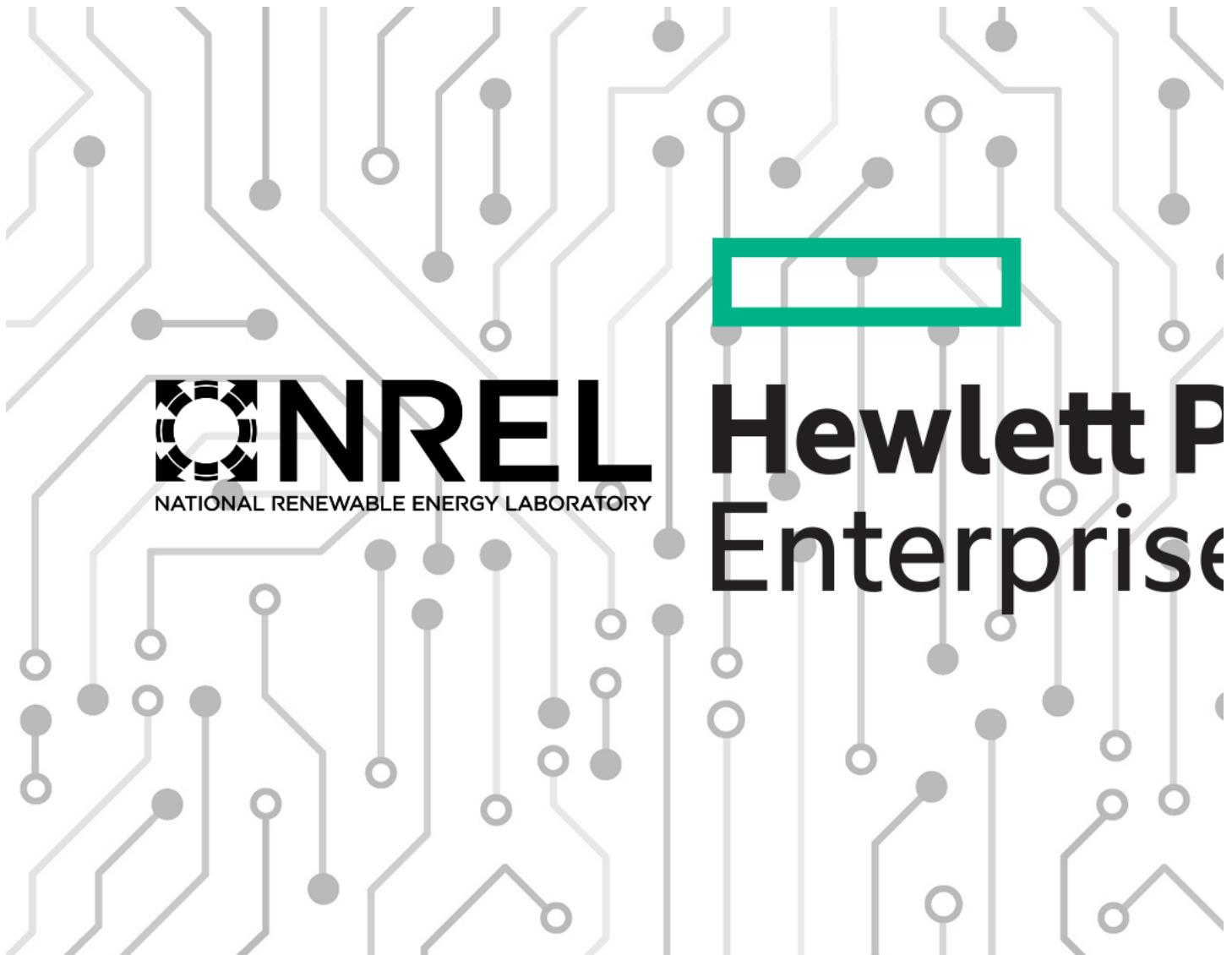
(<https://www.hpcwire.com/2019/11/18/scalematrix-and-nvidia-launch-deploy-anywhere-dgx-hpc-and-ai-in-a-controlled-enclosure/>)

HPC and AI in a phone booth: ScaleMatrix and Nvidia announced today at the SC19 conference in Denver a joint offering that puts up to 13 petaflops of Nvidia DGX-1 compute more... (<https://www.hpcwire.com/2019/11/18/scalematrix-and-nvidia-launch-deploy-anywhere-dgx-hpc-and-ai-in-a-controlled-enclosure/>).

By Doug Black

[Twitter](http://twitter.com/intent/tweet?status=ScaleMatrix%20and%20Nvidia%20Launch%20%E2%80%98Deploy%20Anywhere%20%80%99%20DGX%20HPC%20and%20AI%20in%20a%20and-nvidia-launch-deploy-anywhere-dgx-hpc-and-ai-in-a-controlled-enclosure%2F) ([http://twitter.com/intent/tweet?](http://twitter.com/intent/tweet?status=ScaleMatrix%20and%20Nvidia%20Launch%20%E2%80%98Deploy%20Anywhere%20%80%99%20DGX%20HPC%20and%20AI%20in%20a%20and-nvidia-launch-deploy-anywhere-dgx-hpc-and-ai-in-a-controlled-enclosure%2F)

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# Hewlett P Enterprise

**HPE and NREL Collaborate on AI Ops to Accelerate Exascale Efficiency and Resilience**  
(<https://www.hpcwire.com/2019/11/18/hpe-and-nrel-collaborate-on-ai-ops-to-accelerate-exascale-efficiency-and-resilience/>)

The ever-expanding complexity of high-performance computing continues to elevate the concerns posed by massive energy consumption and increasing points of failure. [Read and resilience/](#)

By Oliver Peckham

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Intel Debuts New GPU – Ponte Vecchio – and Outlines Aspirations for oneAPI

(<https://www.hpcwire.com/2019/11/17/intel-debuts-new-gpu-ponte-vecchio-and-outlines-aspirations-for-oneapi/>)

Intel today revealed a few more details about its forthcoming Xe line of GPUs – the top SKU is named Ponte Vecchio and will be used in Aurora, the first planned U.S. [Read more](#)

 (<http://twitter.com>)

[status=Intel%20Debuts%20New%20](#)



SC19: Welcome to Denver

(<https://www.hpcwire.com/2019/11/17/sc19-returns-denver/>)

A significant swath of the HPC community has come to Denver for SC19, which began today (Sunday) with a rich technical program. [Read more... \(https://www.hpcwire.com/2018/11/13/sc19-denver-hpc-technical-program/\)](https://www.hpcwire.com/2018/11/13/sc19-denver-hpc-technical-program/)

By Tiffany Trader

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## SC19's HPC Impact Showcase Chair: AI + HPC a 'Speed Train'

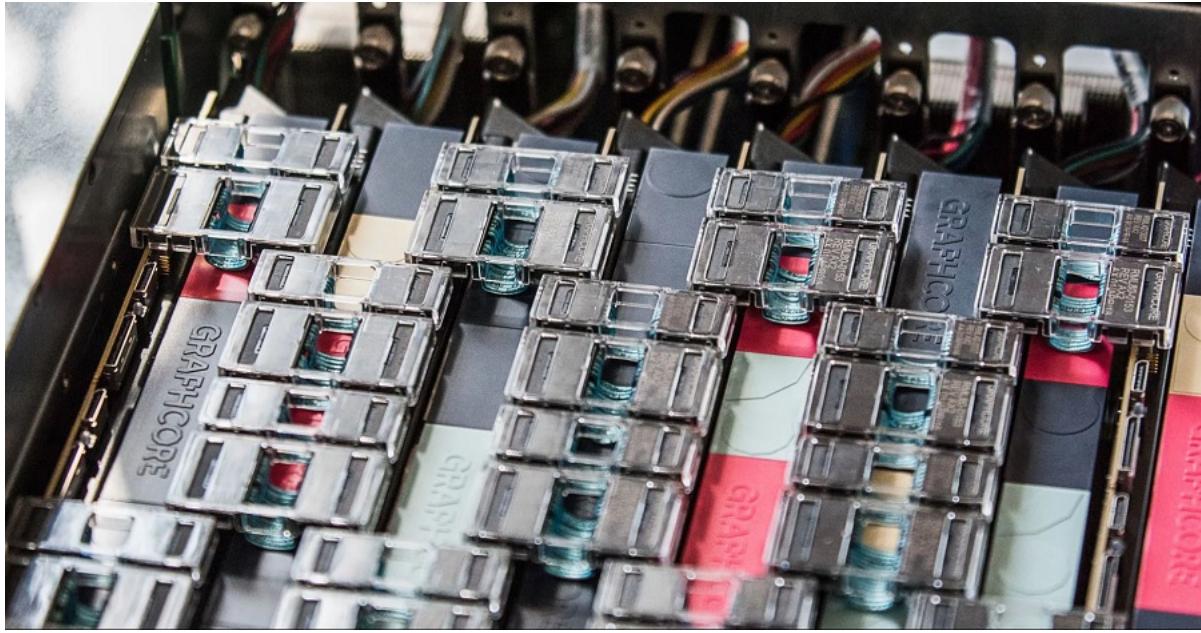
(<https://www.hpcwire.com/2019/11/16/sc19s-hpc-impact-showcase-chair-ai-hpc-a-speed-train/>)

This year's chair of the HPC Impact Showcase at the SC19 conference in Denver is Lori Diachin, who has spent her career at the spearhead of HPC. Currently deputy director (<https://www.hpcwire.com/2019/11/16/sc19s-hpc-impact-showcase-chair-ai-hpc-a-speed-train/>)

By Doug Black

 (<http://twitter.com/intent/tweet?>

status=SC19%E2%80%99s%20HPC%20Impact%20Showcase%20Chair%3A%20AI%20%2B%20HPC%20a%20%20E%20%80%98Speed%20Train%E2%8C  
chair-ai-hpc-a-speed-train%2F) in ([train%2F&title=SC19%E2%80%99s%20HPC%20Impact%20Showcase%20Chair%3A%20AI%20%2B%20HPC%20a%20%20E%20%80%98Speed%20Train%  
\(](http://www.linkedin.com/shareArticle?mini=true&url=https%3A%2F%2Fwww.hpcwire.com%2F2019%2F11%2F16%<br/>train%2F&title=SC19%E2%80%99s%20HPC%20Impact%20Showcase%20Chair%3A%20AI%20%2B%20HPC%20a%20%20E%20%80%98Speed%20Train%<br/>(<a href=)



## Microsoft Azure Adds Graphcore's IPU

(<https://www.hpcwire.com/2019/11/15/microsoft-azure-adds-graphcores-ipu/>)

Graphcore, the U.K. AI chip developer, is expanding collaboration with Microsoft to offer its intelligent processing units on the Azure cloud, making Microsoft the first large public cloud provider to do so. (Source: <https://www.hpcwire.com/2019/11/15/microsoft-azure-adds-graphcores-ipu/>).

By George Leopold

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