

San Diego Supercomputer Center Leverages Bright Cluster Manager in New Expanse Supercomputer

San Jose, CA – May 26, 2020 – Today, Bright Computing, a global leader in Linux Cluster automation and management software for HPC and machine learning, announced that the [San Diego Supercomputer Center](#) (SDSC) at the University of California San Diego will be using Bright Cluster Manager to manage the facility's newest supercomputer, called 'Expanse'. The [Bright Cluster Manager](#) software platform will enable Expanse to balance and manage resource diversity across virtually all domains of their science and engineering users, maximizing resource utilization and increasing workload efficiency for research scientists across the country and beyond. Expanse will enter production in the fall of 2020 and be available to tens-of-thousands of researchers across the U.S. through the National Science Foundation's Extreme Science and Engineering Discovery Environment.

SDSC is a leader and pioneer in high-performance and data-intensive computing, providing cyberinfrastructure resources, services, and expertise to the national research community, academia, and industry. Expanse is a response to the National Science Foundation (NSF) call for a system that will provide computing capacity for research workloads serving a diverse set of end users. SDSC's workload includes everything from modest scale batch jobs of tens of cores, to several thousand cores, to high-throughput computing jobs from the Open Science Grid, which are characterized by tens of thousands of single-core jobs. Part of the mission at SDSC is to support real-world research solutions for critical activities such as [COVID-19 research](#). They also handle data analysis of experimental facilities such as the LIGO Gravitational Wave Conservatory, and the IceCube Neutrino Observatory.

"With Expanse, SDSC has made a strategic decision to partner with Bright Computing to leverage their deep bench of expertise and technical support," explains SDSC Deputy Director Shawn Strande. "As the number and complexity of HPC systems we operate has grown, we need systems management tools that keep up with the technological rate of change. With Bright Cluster Manager, we're able to spend less time on systems administration and more time helping users be productive. An hour saved in a systems administration task is an hour we can spend on user-facing activities like I/O optimization or implementing a complex job workflow."

Bright Cluster Manager will provide comprehensive management of the Expanse system, enabling SDSC to administer its HPC resources as a single entity, provisioning the hardware, operating systems, and workload managers from a single unified web interface. Bright will also provide SDSC with access to:

- [Bright Autoscaler](#), which will enable Expanse to operate as both an HPC cluster and a Kubernetes cluster, supporting heterogeneous computing environments that combine Expanse with remote instruments, data sources, and edge devices.
- [Cloud Bursting](#), which will support SDSC's expansion into the public cloud, enabling users to access the vast computational and data resources via direct scheduler integration with Expanse.

SDSC operates systems at the highest levels of availability and utilization, and Bright's monitoring and health checking will ensure that the entire cluster will continue to operate at peak efficiency throughout its life cycle.

Expanse provides 5 petaflops of peak performance with Dell EMC™ PowerEdge™ servers with AMD EPYC™ processors and NVIDIA® V100 GPUs. The system has been designed to provide high performance and data movement across a diversity of applications.

“SDSC is paving the way for groundbreaking research that is providing real solutions across the spectrum of science and engineering, and we here at Bright Computing enjoy helping them solve some of the world’s toughest challenges. In choosing Bright Cluster Manager to underpin the Expanse system, SDSC will be able to deploy, manage, and monitor their clusters quickly and efficiently, and keep it running reliably throughout its lifecycle,” said Dan Kuczkowski, Sr. Vice President of Sales at Bright Computing.

To learn more about Bright Computing and Bright Cluster Manager, visit www.BrightComputing.com or email us directly at info@brightcomputing.com

About SDSC

SDSC, located on the campus of UC San Diego, is a leader and pioneer in high-performance and data-intensive computing, providing cyberinfrastructure resources, services, and expertise to the national research community, academia, and industry. SDSC supports hundreds of multidisciplinary programs spanning a wide variety of domains, from astrophysics and earth sciences to disease research and drug discovery. In late 2020 SDSC will launch its newest National Science Foundation-funded supercomputer, *Expanse*. At over twice the performance of *Comet*, *Expanse* supports SDSC’s theme of ‘Computing without Boundaries’ with a data-centric architecture, public cloud integration, and state-of-the-art GPUs for incorporating experimental facilities and edge computing.

About Bright Computing

Bright Computing is the leading provider of platform-independent commercial cluster management software. Bright Cluster Manager™, Bright Cluster Manager for Data Science™, and Bright OpenStack™ automate the process of installing, provisioning, configuring, managing, and monitoring clusters for HPC, data analytics, machine learning, and OpenStack environments. Bright's products are deployed in data centers around the world for organizations in healthcare, manufacturing, oil and gas, energy, pharmaceutical, financial, academic, and government. Bright has reseller agreements and technology partnerships with leading enterprise IT providers, including Dell/EMC, Hewlett Packard Enterprise, Cray, Intel, Huawei, Fujitsu, Nvidia, Microsoft, and Amazon.

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