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Exhibition: **November 14-17, 2016** Salt Palace Convention Center
Conference: **November 13-18, 2016** Salt Lake City, Utah

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SC16 Conference Brings World's Most Powerful Network to Salt Lake City

November 12, 2016 — Leave a Comment

Salt Lake City, UT – Saturday, Nov. 12 – The Salt Palace Convention Center is home to the fastest, most innovative computer network in the world during the SC16 conference, November 13-18.

SCinet, the high-performance, experimental network built specifically for the conference, offers an unprecedented amount of bandwidth within the conference exhibit hall and connecting the convention center to the broader Internet.

Partnering with the Utah Education Network (UEN) and CenturyLink, SCinet provides more than 5 Tbps of internal network bandwidth, along with tens of 100 Gbps Ethernet circuits to bring 3.15 Tbps of Wide Area Network bandwidth to the convention center. UEN guides this collaboration with national and international research & education networks and commodity Internet providers.

More than 12,000 conference exhibitors and attendees rely on SCinet to showcase and discover the latest research in High Performance Computing and Networking. SCinet's capacity, reliability and experimental features enable data-intensive research and real-time use of cutting-edge, high performing hardware to run multi-100-gigabit demonstrations. Among these are the Network Research Exhibition (NRE) demos. SCinet also supports research initiatives through a full-day workshop, Innovating the Network for Data-Intensive Science (INDIS). SCinet organizes the INDIS workshop to discuss technical papers and show NRE demonstrations dedicated to high performance networking technologies, innovations, protocols, hardware and much more.

Corby Schmitz, SCinet Chair from Argonne National Laboratory

This powerful network is made possible with the help of vendors from around the world that provide the cutting-edge technology. "SCinet is more than hardware and software; its unprecedented scale is achieved by volunteers and vendors from around the world," said Corby Schmitz, SCinet chair and manager of network communications operations and support at the Argonne National Laboratory. "SCinet hardware is supplied by vendors, and then volunteers collaborate to design a network architecture that exists nowhere else in the world."

A team of more than 200 volunteers from industry, research & education and government in 18 countries collaborate to build SCinet. For SC16, the SCinet team used more than $32 million in vendor-provided equipment and services. They also installed 56 miles of fiber optic cable and 200+ wireless access points that can support more than 10,000 simultaneous users on the conference wifi. The wireless network supports eduroam, the worldwide education roaming service, which allows anyone from participating institutions to securely access the protected wireless network using their home organization's login credentials.

"New scientific techniques for experimentation, observation and simulation are driving exponential growth in the data our community must analyze. High performance networks are critical for researchers to access, share and compute these large data sets no matter where these resources are in the world," said John West, SC16 General Chair. "SCinet provides us a window into the future of the highest performing networks our community can expect. With a massive three terabits per second of bandwidth optimized for science data, SCinet allows SC16 attendees the ability to

John West, SC16 General Chair from the Texas Advanced Computing Center

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showcase real-time demonstrations of their latest HPC applications."

West added, "I'm grateful for the dedication of the over 200 volunteers who have spent countless hours planning and building SCinet. This includes bringing together companies to collaborate and bring our attendees the best of the best, who on any other week would be competitors. With over $ 32 million in loaned equipment – including even pre-commercial hardware – SCinet will indeed be another highlight of this year's conference."

SCinet takes over a year to design, three weeks to build, four days to operate and 24 hours to tear down. "The chance to work with cutting-edge equipment in a multi-faceted environment attracts leading talent who volunteer to bring SCinet to life," Schmitz said. "Without the contributions of all these people, SCinet would be likely impossible and a lot less fun to create given the aggressive timeline." To give an idea of just how intense this process is, SCinet captured a time-lapse video of the Network Operating Center construction process.

SCinet is the result of the hard work and significant contributions of many government, research & education and corporate collaborators who have volunteered time, equipment and expertise to ensure SC16's success. This year, SCinet continued the Contributors Program and we would like to give special thanks to all SCinet vendor contributors and volunteers!

- **Platinum vendor contributors:** CenturyLink, Ciena, Cisco, Coriant, Corsa, ESnet, Infinera, Internet2, Juniper, Zayo
- **Gold vendor contributors:** Arista, Brocade Communication Systems, UEN/CloudLab
- **Silver vendor contributors:** ADVA, ECI Telecom, Gigamon, InMon, Ixia, Metaflow, Nokia, Reservoir, Spirent, Splunk, Viavi
- **Bronze vendor contributors:** Cablexpress, Commscope, Leverage, Palo Alto, Puppet, RedSeal

Volunteers from the following organizations supporting the development and deployment of SCinet: Berkeley Lab, UTEP, OSCER, University of Benin, South Dakota School of Mines and Technology, NOAA, University of Heidelberg, Colorado State University, Easy English, Indiana University, UMEA University, The University of Arizona, The University of Wisconsin, International Networks at Indiana University, University of Cincinnati, Rice University, Argonne National Laboratory, SURFnet, GÉANT, Oak Ridge National Laboratory, Scripps Institution of Oceanography UC San Diego, Sandia National Laboratory, University of Colorado Boulder, REANNZ, n-wave, Georgia Tech, University of Illinois, Clemson University, University of Amsterdam, CREST, NCSA, DDN Storage, Institute of Geophysics and Planetary Physics, HiSeasNet, ziti, NERSC, Global NOC, University of Denver, KINBER, ARL, University of Illinois at Urbana-Champaign, Los Alamos National Laboratory, Uniwersytet Wroclawski, The University of Chicago, SDSC, Virginia Tech, CENIC, The University of Tennessee Knoxville, FLR, NICS, LEARN, AFRL DSRC, University of Delaware, FAU, Franklin & Marshall College, University of OSLO, Lawrence Livermore National Laboratory, Georgia Tech Office of Information Technology, TACC, Oklahoma University, perfSONAR powered, UC Davis University of California, Purdue University, Idaho State University, UT Dallas OIT, The University of Utah, NCAR, Washington State University, Penn State, NDSU Information Technology.

If you're interested in volunteering for SCinet or participating in the Contributor's Program for SC17, please email **scinet@info.supercomputing.org**.

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