

JET Meeting Minutes
February 20, 2018
National Coordination Office for Networking and Information Technology R&D
(NCO/NITRD)
490 L'Enfant Plaza SW, Suite 8001 (8th floor)
Washington, DC 20024

Participants

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Review of the Minutes of the January 2018 meeting

No corrections were noted by those in attendance. No comments have been received from the minutes' e-mail distribution on February 12.

Action Item: None

Proceedings

This meeting of the JET was chaired by Kevin Thompson (NSF) and Rich Carlson (DOE/SC).

Networks Roundtable

ESnet: Patricia Giuntoli & Rich Carlson

- The Conceptual Design Review for ESnet6 was held at the end of last month. ESnet has just received the reviewers' report and the results look good. Work is to be done on some detailed design and cost estimates. The March JET meeting remains a good time for an update on ESnet6.
- ESnet is working hard to recruit engineers. ESnet is also working to beef up their software design and operations activities. ESnet continues to work to meet their customer's needs with the current network, ESnet5. As part of the work on ESnet 6, ESnet has done a lot of work on capacity planning. This has supported both the work on ESnet6 and the needs of ESnet5. ESnet is hoping to automate the planning so that it can be done quarterly.

- ESnet has been working to achieve very large data flows as part of their Petascale DTN Project. Through tuning, file system arrangement and understanding of data flows, they have reliably archived 40-50 Gbps between LBNL, ARNL, ORNL, and NCSA using the Globus on-line tool kit. For more information see ESnet's blog on the project at:
<https://esnetupdates.wordpress.com/2017/12/11/esnets-petascale-dtn-project-speeds-up-data-transfers-between-leading-hpc-centers/>

Internet2 Network: Dale Finkelson

- Internet2 continues their augmentation program as paths hit 40%.
- It continues its proof-of-concept efforts with various groups for its next generation network.
- John Moore is scheduled to give an update to the JET next month on the progress of Internet2's next generation network effort.

NASA Ames: Bobby Cates

- NASA's four TICAPs are doing their job. There is no eminent change on status. NASA is still working on TIC compliant cloud access.
- NASA Ames is still working with USGS to resolve whether USGS will use NASA's TICAP at Ames or create a second, independent TICAP at Moffett Field.
- NASA's TIC Compliance Review is scheduled for late spring. An analysis of its results will direct future changes.

NEAAR and TransPAC: Edward Moynihan

Circuits are stable with no changes.

- On February 1, ESnet moved some of its transatlantic traffic onto NEAAR - a consistent delta of 10-15G more traffic.
- The WACREN conference in March will launch the WACREN network with three or four countries initially coming online and joining the international R&E network community.
- The NEAR project continues working with WACREN to deploy an Open Exchange in Lagos this year. More details are expected at the next JET meeting.

NIH/NLM: Mike Gill

Nothing new to report.

RNP: Alex Moura

- RNP is working on the first deployment of 100G circuits in the northeast of Brazil. They expect these to be up by mid-year.
- RNP has reached agreements with providers of dark fiber in the south and southeast of the country. With these, RNP should have 100G circuits to most parts of Brazil by year's end.
- RNP is also working on performance measurement between NRENs in different countries - particularly in support of the astronomy community to support such projects as LSST & CTA. With REUNA & RedCLARA, RNP is establishing a perfSONAR matrix to support these inter-NREN R&E links.

3ROX: Michael Lambert

No updates for 3ROX. For PSC & XSEDE, work is progressing with Internet2 to bring up layer 3 VPNs. Currently, perfSONAR servers at PSC and NCSA are talking over the VPN. No performance figures are available yet.

Utah Research & Education Networking: Joe Breen

Over the next few months, Utah is building out 100G into southern Utah. This will pick up another data center as well as provide the foundation for a connection to Internet2 in Las Vegas, thereby gaining a second, diverse path out. Utah is working with Globus so that genetic data can be protected when transferred.

US Ignite: Glenn Ricart

Nothing new to report

Exchange Points Roundtable

MAN LAN & WIX: Dale Finkelson

No new connections at either location. They continue to work with MAX on how to rebuild WIX.

StarLight: Joe Mambretti

- StarLight (SL) is working with science communities and the international networking community to build a global point-to-point service. As part of that effort, SL is doing DTN testing between SL and Seattle.
- Additionally SL, in partnership with FNL and Wenji Wu, is testing the Big Data Express between a DTN at SL and the KLM/Air France DTN in Amsterdam.
- In partnership with the LHC networking community SL has been testing between a SL DTN and one at CERN. The results will be presented at LHC's networking meeting (March 6-7.) The first two remote DTNs are connected at 100G while the testing to CERN is at 10G. CERN has approved upgrading their DTN's connection from 10 to 100G. The next phase of the testing will be with the University of Michigan, Caltech and several Asian sites.

NASA Ames: Bobby Cates (via e-mail)

Ames will be connecting ESnet directly from 1380 Kifer Rd Sunnyvale via their Ciena 6500 (as opposed to a tunneled VLAN from NREN/AS24.)

Meetings of Interest Roundtable

March 5-7	CENIC , Monterey, CA
March 6-7	LHCOPN-LHCONE , Abingdon, United Kingdom
March 15-16	WACREN 2018 , Lomé, Togo
March 17-23	IETF101 , London, United Kingdom
March 26-29	APAN45 , Singapore
April 15-18	ARIN 41 , Miami, FL
May 6-9	Internet2 Global Summit , San Diego, CA
June 10-14	TNC18 , Trondheim, Norway
June 25-27	NANOG73 , Denver, CO
July 14-20	IETF102 , Montreal, Canada
August 6-7	2nd National Research Platform Workshop , Bozeman, MT
August 6-10	APAN46 , Auckland, New Zealand

September 18-29 [NORDUnet 2018](#), Helsingør (Elsinore), Denmark
September 20-21 [18th Annual Global LambdaGrid Workshop](#),
Helsingør (Elsinore), Denmark
September 25-27 [2018 NSF, ESCC & The Quilt Collocated Program](#),
College Park, MD
October 1-3 [NANOG74](#), Vancouver, BC, Canada
October 4-5 [ARIN 42](#), Vancouver, BC, Canada
October 15-18 [2018 Technology Exchange](#), Orlando, FL

Next JET Meetings:

March Mar 20, 12-2 pm EDT, NCO/NITRD, Washington, DC
nb: 1st local, in person meeting of the JET
April Apr 17, 12-2 pm EDT, NCO/NITRD, Washington, DC
May May 9, 7-8:30 am PDT, Room *tbd*, Marriott Marquis San Diego
Marina, San Diego, CA
nb: This meeting will be collocated with Internet2's Global Summit