

JET Meeting Minutes
September 17, 2013

Participants

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Action Items

1. Kristin Rauschenbach and Inder Monga will report out on the Terabit Networking workshop to the JET
2. Paul Love will ask Internet2 if there is space to hold a JET meeting at their April I2 Member's meeting.
3. Grant Miller will prepare JET slides for the LSN Annual Planning Meeting to provide to the JET CoChairs

Proceedings

This meeting of the JET was chaired by Kevin Thompson of NSF and Vince Dattoria of DOE/SC.

Roundtable

ESnet: Patrick Dorn

ESnet is progressing on the installation of its 100G network. The Brookhaven 100G circuit is up across the LIMAN Infinera equipment. Circuit acceptance testing remains to be done. Planning is in process for a 100G connection to OmniPoP's new switch at StarLight. The ESnet-MAN LAN 100G connection has been stable since a MAN LAN vendor fix was re-applied 26 Aug. The ANA 100G trans-Atlantic link connection re-homing to Amsterdam is completed now. Work continues on correction of circuit errors. The SC13 circuit plans remain at 3x100G; the 100G testbed circuit will be

broken at Denver yielding a links to NERSC and StarLight. Additionally a 100G will be brought to the show from the Denver production router.

GENI: Kristin Rauschenbach

GENI racks are being deployed in multiple sites including Illinois and California. GENI is working toward an international federation including sites in Europe and Japan. Current activities include shakedown experiments, education experiments, and training. 15 institutions are currently implementing education applications. There is a GEC in Brooklyn October 27-29. An invitation-only workshop is being held in Belgium in October. There is also a Scalable Terabit networking workshop September 19-20 by invitation only.

AI: Kristin Rauschenbach and Inder Monga will report out on the Terabit Networking workshop to the JET.

GENI relies heavily on SDN from both AL2S and NLR. They are shaking down that technology and the exchange points are becoming SDN capable.

Internet2: Chris Robb

They have delayed migrating their IP network onto the Layer 2 network while some identified issues are resolved. Internet2 is instrumenting segments of AL2S for identifying performance. They will start regular reporting on performance soon. The 100G links are being transitioned off of demonstration mode onto production mode.

NASA: Bill Fink

NASA is working with the MAX and ESnet for SC13 demonstrations using split 50G links.

NLR: Sana Bellamine

Preparing for SC13 support including deploying additional hardware as needed.

NOAA: Dave Hartzell

The N-Wave backbone remains nice & stable. NOAA is working to get their sites behind one of four TICs with a target of 50% of their field sites by the end of CY13. NOAA is working to boost bandwidth to Gilmore Creek, AK, to support a new generation of satellites. NOAA is still in discussions on a Hawaiian TIC. NOAA would consider making the Hawaiian TIC a multi-agency TIC serving other agency networking facilities in Hawaii. Currently N-Wave does not make use of SDN circuits but where appropriate they will be used.

GRNOC: Brent Sweeny

The GRNOC is demonstrating SDN networking October 3-4. They, Internet2, and ESnet are holding a workshop on Operating Innovative Networks that will discuss deploying and operating SDN networks, Science DMZs, perfSONAR and Sata Transfer Nodes.

TransPAC: Brent Sweeney

TransPAC is “just working.” It is carrying out SDN testing. At the APAN meeting last month, they demonstrated SDN over the TransPac links. Jim Williams just retired and Jennifer Schopf has replaced him as Director of International Networking at Indiana University.

ACE: Dale Finkelson

ACE circuits are also “just working.” The Amsterdam to Chicago link is down for a few weeks while undersea equipment is being replaced. ACE will be supporting GLIF demonstrations.

Exchange Points**MAX: Tom Lehman**

MAX is continuing to deploy 100G at Layer 1 with a direct 100G connection to Internet2 next month. Eventually the current 100 G link will be upgraded to 2 x 100G. The WIX also has a separate 100G link to AL2S. The MAX has an InstaGENI rack in-place at the University of Maryland campus.

MAN LAN & WIX: Dale Finkelson

The WIX continues to operate smoothly. They have perfSONAR nodes directly connected to the MAN LAN and the WIX switches. They will provide VLANs and addresses to connect to. MAN LAN has an IDC running on it so you can build circuits through it to Europe (AutoBahn). WIX is tracking SC13 demonstrations - a fluid and changing environment.

Pacific NorthWest GigaPoP: Jonah Keough

The PNWGP is preparing for SC13. They are implementing 100G ports in Chicago and Seattle via AL2S.

Chicago: Alan Verlo

StarLight is supporting the upcoming GLIF meeting and is working with Joe Mambretti to support several demonstrations. They are also support Joe Mambretti’s demonstrations at SC13. StarLight is building a 100G exchange now and 2 x 100G connectivity to ESnet and 100G connectivity to I2. Joe Mambretti will be implementing an ExoGENI soon. He is currently setting up the racks. The GENI racks will support SDN.

Big Data Demonstrations: Joe Mambretti

The JET Big Data Team is planning several demonstrations at SC13. These include:

- Sloan Digital Sky Survey which will move data from Johns Hopkins to StarLight and the ESnet 100G production network to access the Titian computational facility at Oak Ridge National laboratory for modeling and analysis. The results will be sent back to Johns Hopkins and SC13. This demonstration was previously demonstrated over 10G links. Discussion identified that we should try to show the difference in speed/quality between the 10G connectivity and the 100G connectivity.

- Bioinformatics/Genomics demonstration between the NIH in Bethesda, Maryland, the U. of Chicago (Bob Grossman) and SC13.
- Remote I/O: Linden Mercer has been working with the Luster User's group to demonstrate a UDT Luster interface that will be demonstrated at SC13.
- Data Accelerator Demonstration: Phoebus; Eli Dart and Martin Swany are seeking a site to demonstrate the Phoebus accelerator application at SC13
- NASA Goddard Space Flight Center, iCAIR, StarLight, and the Laboratory of Advanced Computing are planning to stage 100 Gbps demonstrations centered on high performance transport for climate data for SC13.

Potential JET Tasking from the LSN

JET members discussed potential tasks from the LSN for next year. Suggestions included:

- Continuation of the JET Big Data Task with an emphasis on performance measurement
- perfSONAR workshop, SDN Workshop
- Tracking technologies: TICs, IPv6, SDN, perfSONAR

Future JET meeting locations

AI: Paul Love will ask Internet2 if there is space to hold a JET meeting at their April Global Summit (formerly Annual Meeting.)

Meetings of Interest:

September 19-20	Workshop on Scaling Terabit Networks , Washington, DC
October 1-2	Global LambdaGrid Annual Workshop , Singapore
October 3-4	Operating Innovative Networks , hands on training in SDN, Science DMZs, DTNs, & perfSONAR. Big Ten Conference Center, Rosemont, IL
October 7-9	NANOG59 , Phoenix, AZ
October 10-11	ARIN 32 , Phoenix, AZ
October 27-29	GEC18 , Brooklyn, NY
October 28-29	2013 CANARIE National Summit , Ottawa, ON, Canada
November 17-22	SC13 , Denver, CO
December 17-18	SDN Operational Prototype Network Workshop: By invitation and by Webcasting
January 20-24, 2014	APAN37 , Jakarta, Indonesia
January 27-28	APAN Workshop, Berkeley, with ESnet
February 10-12	NANOG60 , Atlanta, GA
April 6-10	Internet2 Global Summit, Denver, CO

Next JET Meetings:

October 15:	11:00-2:00, NSF, Room TBA
November 19: 1:30-3:30 MST,	Room 507, Colorado Convention Center, Denver, CO
	<i>nb: This is during SC13</i>