JET Meeting Minutes
August 19, 2014

Participants

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Action Items

1. Please contact Matt Zekauskas if you wish to use Internet2 resources for SC14 demonstrations.

2. Dale Finkelson will contact Don Preuss at NIH/NLM to discuss the availability and architecture of the trans-Atlantic 100G link to support SC14 demonstrations of biogenomics demonstrations. [This task is completed.]

3. The JET should plan to co-locate meetings in CY15 at SC15 and two Internet2 or Internet2/ESnet meetings to facilitate technical exchanges among a broader networking constituency including the Internet2 Global Summit in April.

4. Grant Miller will send the JET the list of JET potential tasks for FY15 and ask for input from JET members for these and additional potential tasks.

5. Grant Miller will provide a short white paper discussion of JET completion of FY14 taskings from the LSN and circulate it to the JET members.

Proceedings

This meeting of the JET was chaired by Vince Dattoria of DOE.

Network Roundtable

CAAREN: Andrew Gallo

CAAREN is implementing connectivity to Howard University which is in the process of joining Internet2. They are working with RENCI to get their GENI rack

working. CAAREN is hosting a Spring GENI meeting. CAAREN will be getting IPv6 capability from Cogent.

DREN III: Ron Broersma

The transition of DREN networking to DREN III is complete and operational. DREN is now tweaking peering. They will add gateways in Atlanta and New York. DREN III was verified to be operating at 5 9's reliability, meeting its requirements. Both IPv6 and IPv4 are native on DREN. They operate without any tunneling. DREN extensively uses IPv6 for its internal communications and operations. All network management - Help desk, NOC, etc - are IPv6 only.

GENI: Heidi Dempsey, Mark Berman

GENI has several workshops in the near future:

- October 1-2 in Washington DC on next generation cyberinfrastructure. Rob Ricci (University of Utah) and Victor Hazlewood (U. Tennessee - Chattanooga) are leading. Looking at control plane technology for federated, interoperable, mid-scale research cyberinfrastructure. Likely to incorporate innovations from GENI and grid computing.

- Early November, Washington DC: Research infrastructure for the wireless edge. Suman Banerjee (Wisconsin) and Ray Raychaudhuri (Rutgers WINLAB) are leading. Looking at experimental infrastructure for LTE and streamlined GENI-like configurations that enable slicing, push processing onto distributed cloud computing resources, and extend to city scale.

- Late October-early November, Morgan State University in Baltimore: Wole Akpose (Morgan State) and Jeannie Albrecht (Williams College) are leading. Perhaps the first in a series of regional GENI workshops focused on student introductions to GENI.

GENI is continuing to implement GENI racks and to test them. They plan to deploy 52 racks. 11 racks await monitoring to support their joining GENI in September. GENI is working with GWU to get their GENI rack working for the GWU regional GENI conference. GENI is working with Internet2 on GENI stitching and AL2S controller integration with operational capability targeted for September.

Internet2 Network: Dale Finkelson

Internet2 is installing AL2S in Missoula, Hartford, and Indianapolis. Internet2 will be supporting numerous SC14 demonstrations.

AI: Please contact Matt Zekauskas if you wish to use Internet2 resources for SC14 demonstrations.

Internet2 fully supports IPv6. They are working to implement IPv6 over the GENI racks. IPv6 capability with commercial partners is further off.

NASA networking: Bobby Cates

NASA will be upgrading their transit interface to 10G before the end of the calendar year. By the end of December, NASA should have new network topology to provide symmetry across the NASA networks for TIC compliance.

NIH: Mike Gill

NIH networking is business as usual. They plan to get 100G connectivity to the MAX by the end of the year.

Exchange Point Roundtable

Ames Exchange Point: Bobby Cates

In mid-September Ames will upgrade its hardware to Cisco 7010s. The PAIX switch will transition to a 6880 and the PAIX will link will transition to 10G initially, moving quickly to 40G. This is over new dark fiber to PAIX. They are expecting dark fiber to Equinix by year's end.

StarLight: Joe Mambretti

StarLight will be supporting an SDX extravaganza at the LambdaGrid workshop in Queenstown, New Zealand. They will demonstrate a joint venture among StarLight, Atlanta, Tokyo, London, and New Zealand. They will showcase international GENI, OpenFlow, SDN fabric and SDX operational capabilities.

StarLight supported the SigCom workshop in Chicago and demonstrated applications between U.S. researchers and Korean researchers.

They've supported IPv6 for a decade.

3ROX: Michael Lambert

They received a GENI rack last week but still need power to support it which is expected very soon. They are working to implement CCNIE SDN and scheduling network support for supercomputing requests. Their IPv6 capability has been operational for a long time.

ANA Trans-Atlantic link: Dale Finkelson

Internet2 has received requests for traffic across the ANA link for demonstrations at SC14. The ANA circuit is transitioning from a research link to a production link with the European end point in London. It will continue to support science applications. A 2nd trans-Atlantic 100G link will land in Amsterdam later this year. Current plans call for a 10 day overlap between the ANA link and the new London production link. The new capacity is expected to be available to support SC14 demonstrations.

AI: Dale Finkelson will contact Don Preuss at NIH/NLM to discuss the availability and architecture of the trans-Atlantic 100G link to support SC14 demonstrations of biogenomics demonstrations

WIX and MAN LAN: Dale Finkelson

SDN is deployed at both locations. ESnet OSCARS is supported with an NSI bridge.

Meetings of Interest:

September 14-15	CANS, New York, NY
September 15-16	LHCOPN & LHCONE, Ann Arbor, MI

29 September – 1 October	14th Annual Global LambdaGrid Workshop, Queenstown, New Zealand
October 1-2	GENI workshop on next generation control plane technology for federated interoperability, Washington, DC
October 6-8	NANOG62, Baltimore, MD
October 20-23	GEC21, Bloomington, IN
October 26-30	2014 Technology Exchange, Indianapolis, IN
Late October/early November	GENI workshop to introduce students to GENI, Baltimore, MD
Early November	GENI workshop on infrastructure for the wireless edge, Washington, DC
November 9-14	IETF91, Honolulu, HI
November 16-21	SC14, New Orleans, LA
February 2-4, 2015	NANOG63, San Antonio, TX
March 22-27	IETF92, Dallas, TX

JET Co-located Meetings

JET has traditionally met in conjunction with Internet2 meeting/workshops and SC Conferences. JET is meeting at SC14 in November where international participants can attend and contribute. The Internet2/ESnet Technical Exchange meeting is in late October this year and that is too close to the JET meeting at SC14 to plan for a JET meeting there.

AI: The JET should plan to co-locate meetings in CY15 at SC15 and two Internet2 or Internet2/ESnet meetings to facilitate technical exchanges among a broader networking constituency including the Internet2 Global Summit in April.

LSN Tasking to the JET: Grant Miller

LSN tasked JET last year to continue to support the JET Big Data demonstrations at SC14. The SC14 demonstrations, under the leadership of Joe Mambretti, are on-track.

The JET was tasked to hold a perfSONAR workshop which was held at the NSF. JET was also tasked to t4rack technologies (SDN, IPv6, TICs, and perfSONAR). These technologies were addressed in the monthly JET meetings.

Discussion among the JET members indicated that JET focus topics for FY15 should include:

- Continuation of the JET Big Data demonstrations at SC15.
- Tracking networking technologies (SDN, TICs, perfSONAR)
- Workshops on:
  - Follow-on to the SDN workshop: planning next steps and commercial involvement
  - Integration of mobile wireless technology with SDN and GENI resources (NSF has a workshop planned that should be expanded to broader LSN/JET sponsorship and participation)
  - Enabling Extreme Data Science: Emphasis is on making more routine the End-to-End support of data-intensive science including endpoints

with 100G NICs. How do we enable 98 Gbps over 100G links for end-to-end applications (or 9.5 Gbps over 10G links)?

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AI: Grant Miller will provide a short white paper discussion of JET completion of FY14 taskings from the LSN and circulate it to the JET members.

Next JET Meetings:

September 16	11:00-2:00 EDT, NSF
October 21	11:00-2:00 EDT, NSF
November 18, 19 or 20	Day & time TBA, New Orleans, LA. This meeting is coincident with SC14.