JET Meeting Minutes
June 19, 2012

I. Participants

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Action Items

1. DREN asks science networks to let DREN know (Phil Dykstra: phil@hpcmo.hpc.mil) about their peerings: who they peer with, where they peer and standard/bandwidth of peering. A GoogleDoc spreadsheet to report peerings is located at:
   <https://docs.google.com/spreadsheet/ccc?key=0AvSVTszGZypkdEx0WTZCVXZfdlQ4M21vcENfYU42bVE#gid=0>
2. If there is a location in the Bay Area you'd like the Ames IX to connect to, please let Bobby Cates know
3. JET members should provide comments on the JET Charter to enable it to be finalized

4. Grant Miller will submit the JET Charter to the LSN for their approval

Proceedings
This meeting of the JET was chaired by Bryan Lyles of the NSF and Vince Dattoria of DOE.

JETnet Roundtable
DREN: John Baird, Phil Dykstra
DREN3 was initially awarded to CenturyLink. The announcement is at: <http://www.nextgov.com/big-data/2012/06/verizon-protests-750-million-defense-high-speed-network-award-centurylink/56333/>
A protest has placed this award on-hold. The protest has to be decided by September 24. DREN is updating its peerings. DREN would like to know which of the science nets peers with others, where the peering takes place and the bandwidth of the peering so it can make more educated decisions about where to peer.

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If they peer at the WIX do they also need to peer at College Park? For example, the VLAN for NASA Ames' MIX is working but the transfer services for it are deleted. Should DREN need to continue to peer there? The Ames IX is a distributed facility located at PAX, Sunnyvale, South Market, San Francisco, and San Jose.

DREN obtained its v6 allocation directly from ARIN in 2006. In addition DOD received a large allocation of address space to provide most DOD address space.

ESnet: Greg Bell, Patrick Dorn
ESnet received a v6 allocation in the early 2000s directly from ARIN. ESnet is holding a BOF at the July Joint Techs meeting on Metrics; Quantifying success in R&E networks. Please plan to attend this BOF. ESnet will provide consolidated information at the BOF.
Joe Burrescia and Jim Gagliardi are retiring imminently. ESnet and JET recognize their important contributions and continuing service to the science networking community over the last 30 years. We wish them well in their well-deserved retirements.
ESnet is working with Internet2 on shared optical transport for East/West routes. The structure is in-place except for the link between LA and Seattle. Phase 2 deployment has started and ESnet has deployed 5 routers and will deploy an additional 4 routers. For World IPv6 Day ESnet worked with the Federal labs and users to implement IPv6. It was good news that the Day was "not a big difference." It is described in the MyESnet portal off the MyESnet Web page. There is a good article there on the Dangers of Not Deploying IPv6.

Internet2: Dale Finkelson

The Internet2/ESnet build is going well. It is expected to be completed in late July or early August. Internet2 is migrating waves from their Infinera deployment to the new structure.

Internet2 received an IPv6 allocation directly from ARIN. They handed some of this allocation to regionals and campuses but most of those later obtained their own address space and returned the Internet2 allocation to the pool of addresses.

Internet2 supported World IPv6 Day but it was primarily a campus issue to push IPv6 out to the users.

EOS: Andy Germain

Nothing new to report

GLORIAD: Predrag Raduolovic

The link between Bangalore and Singapore was opened last weekend. The Bangalore facility is the Tata Applied Mathematics building. The Egypt link to Chicago was reconfigured.

NOAA: Dave Hartzell

NOAA is developing Task Orders to implement an OC3 from Seattle to Hawaii. It is scheduled to be installed over the next few weeks. NOAA is formulating plans for a multi-agency TIC in Hawaii that will include NOAA, USGS and island entities.

University of Alaska: Shawn Armstrong

Alaskan connectivity is running smoothly.

NASA

NASA received an allocation of IPv6 space directly from ARIN in 2006

Exchange Points
MANLAN: Dale Finkelson

The recently deployed third 10 G link to GEANT was added to the existing 20G bundle.

WIX: Dale Finkelson

ESnet, GEANT, and Internet2 are all peering at the WIX at 20 G. WIX has a 10 G link to the NGIX in College Park.

StarLight: Alan Verlo, Joe Mambretti

StarLight is working with GEANT to implement a 10 G link in support of LHCONE. It is expected to be operational soon. There is a GENI engineering meeting in early July. StarLight is implementing fiber to museums in Chicago. StarLight has experienced a couple of line card failures. There is a direct link form StarLight to Cairo. Northern Tier's shared layer 2 service, Northern Wave, should be up at StarLight with 10 G by the end of week.

VLANs have been implemented from Japan to LA to StarLight in support of demonstrations at the GLIF meeting in Chicago which will showcase 100 G applications.

Ames IX: Bobby Cates

Ames IX is migrating its core switch to its Nexus 7000. Ames IX has a pair of unallocated dark fiber. If you have a "place of interest" please let Bobby know. They are starting testing DWDM supporting SDN.

AI: If there is a location in the Bary Area you'd like the Ames IX to connect to, please let Bobby Cates know.

NITRD Report: Grant Miller

White House lawyers looked at the National Coordination Office (NCO) implementation of JET to see if it conformed to Federal FACA guidelines. They identified that JET does conform to FACA guidelines but they asked for:
- JET to develop a charter. Grant Miller provided a Draft JET Charter
- NCO to provide a written statement for each JET meeting that "This meeting is public; the government is seeking individual input and attendees are to provide individual input only". This statement will be placed on each JET Agenda
- JET membership is limited to Federal agency representatives only. Participants in JET meetings can be from any constituency

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The White House announced the US Ignite project to develop broadband applications through a consortium of Federal agencies, communities and university research centers. Network engineering expertise may be needed to engineer last-mile broadband connectivity to the participants.

TERENA Meeting Summary: Jon Dugan

TERNA held a meeting recently in Reykjavik, Iceland. Jeff Huston provided a talk on IPv6 and big data projects. TERENA has a core project to provide privacy on-line. There was an update on the CERN data center in Hungary. Bill Johnston gave a talk on the Square Kilometer Array telescope that is being built in Sout Africa and Australia. The facility will produce staggering amounts of data. All optical data transmission will reduce power requirements. Other presentations included: OSCARS for end-to-end data transfers, the usefulness of perfSONAR, MyESnet portal presentation, TERENA compendium of all the European R&E networks, and Identity Management. All the presentations are available on-line on the TERENA Conference Website.

<https://tnc2012.terena.org/>

JET 2013 Tasking

       JET participants identified a number of topics they felt the JET should focus on for FY2013, including:

- Large scale data transfers
  - o Science DMZ
  - o Website for best practices
  - o End-to-end tuning
  - o Performance measurement, including perfSONAR
  - o Campus architecture and management
- Dynamic optical networking
- Measurement, management, and control of large-scale distributed infrastructures
- Track Software Defined Networking research, advances, and testbeds.

JET members identified that metrics should be included for each focus topic so progress can be tracked and measured.

Arab NREN Update: JJ Jamison

       GLORIAD is a cooperative project funded by the NSF, US AID, Tata and a number of other entities. It provides a network ring around the world. ASREN (Arab States Research and Education Network) promotes Pan-Arab e-infrastructures for scientific research and regional cooperation. It is an association of Arab state networks. A number of international demonstrations have taken place with Arab participation, e.g., NLR/Ankabut demonstration of telepresence between universities over NRENs. EUMEDConnect2 is a regional network in the Arab Mediterranean countries. A GLORIAD Africa Ring provides a 1 Gbps link from Amsterdam to Cairo. In the future GLORIAD will provide two 1 Gbps rings; one with connectivity to Algeria, Libya, Morocco, Tunisia and Egypt and another to Ethiopia, Sudan and Southern Sudan. There are NRENs in most of the Arab countries. The proposed GulfLight exchange in Fujairah, UAE, could provide a hub within the Gulf region for better connectivity and local peering. It is already a significant landing point for submarine cable systems. It could be part of ASREN.

For the complete briefing please see the JET Minutes & Materials site under the June 2012 Meeting.
       <http://www.nitrd.gov/subcommittee/lsn/jet/JetMeetingDetail.aspx>

Meetings of Interest:

Date	Event
July 9-11	GEC14, Boston, MA
July 15-18	ESCC/Internet2 Joint Techs Workshop, Palo Alto, CA
July 18-19	ESCC, Palo Alto, CA
October 1-4	Internet2 Fall Member Meeting, Philadelphia, PA
October 11-12	GLIF meeting, Chicago, IL
November 10-16	SC12, Salt Lake City, UT
January 13-17, 2013	Techs in Paradise (APAN, Jt Techs, ESCC, etc), Honolulu, HI

       <www.hawaii.edu/tip2013> & <http://events.internet2.edu/2013/tip/>

Next JET Meetings
July 17, 8:15-10:45PM PDT, Marriott San Mateo San Francisco Airport, San Mateo, CA
                 nb: this is in conjunction with the Summer Jt Tech
August 21, 11:00-2:00, NSF, Room II-415