

JET Meeting Minutes

March 15, 2011

I. Participants

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Action Items

1. Grant Miller will send a note to the JET inviting additional participation in the JET perfSONAR over IPv6 testbed.
2. Chris Robb will send the JET a diagram of its UCAN network with depiction of the phases of deployment.
3. Chris Robb will send the JET the URL for the Internet2 UCAN blog.
4. Grant Miller will send the JET a message inviting participation in cooperation in networking testbeds among the JET testbeds.

Proceedings

This meeting of the JET was coordinated by Vince Dattoria of DOE and Kevin Thompson of the NSF.

PerfSONAR Testbed: Joe Metzger

Joe Metzger reported on the status of perfSONAR testing among the Federal agency science networks. They are testing perfSONAR for IPv6 networks this year. Currently they are identifying areas where there are constraints to operating perfSONAR with IPv6. Additional development of perfSONAR is needed in some areas. A couple of agency networks are using IPv6 for some internal traffic. There is very little international IPv6 traffic but SurfNet and Internet2net are discussing testing of international IPv6.

AI: Grant Miller will send a note to the JET inviting additional participation in the JET perfSONAR over IPv6 testbed.

Roundtable

Internet2: Chris Robb

Internet2 is switching out MX960s for T1600s. Kansas City received a T1600 and the MX960 was moved to Chicago. Washington DC received a T1600 and the MX960 was moved to Ashburn. LA received a T1600 and the MX960 was moved to another LA location. A TRCPS node is being established in Dallas and an MX960 from New York will be moved to Dallas. Code instabilities and bugs were encountered with Junos. They are working with Juniper to resolve them.

UCAN/Internet2 Build: Chris Robb

The majority of the needed dark fiber has been acquired and the optical equipment has been ordered. Internet2 is in partnership with Ciena to light all except the Northern Tier fiber. There will be an 88 channel system with each channel supporting 100 G.

AI: Chris Robb will send the JET a diagram of its UCAN network with depiction of the phases of deployment.

Internet2 is currently receiving shipping dates for equipment. The initial UCAN network configuration is projected for July 1, 2011 (Phase I). The plan does not currently project having the Seattle network link in-place by SC2011 but they are trying to complete the link in time if possible. Internet2 has started a blog for its UCAN network.

AI: Chris Robb will send the JET the URL for the Internet2 UCAN blog.

DREN: John Baird

DREN received responses to its RFP for its next generation of network services. They will be evaluated soon. DoD has expressed a renewed interest in IPv6.

ESnet: Joe Burescia

The installation of the 10 G Long Island MAN to Brookhaven is close to completion. PerfSONAR has been deployed at all major ESnet sites and it is being deployed now at smaller sites. ESnet expects to be fully instrumented for perfSONAR soon. ESnet is accepting research proposals for prototyping and testing networking concepts at any level on ANI. There is an April 1 due date.

NISN: Ken White

NASA TV multicasting has been implemented for some time. It uses a Vibe encoder. NISN is working with GEANT, DFN and SurfNet to get to Germany with about 1 G going through MANLAN from Goddard Space Flight Center. NISN enabled BGP and OSPF to support IPv6 this weekend. It currently supports internal traffic but will support external traffic in approximately 60 days. NISN pulled out of the University of Colorado in Boulder and is now centered in downtown Denver at the Confluent Data Center.

NOAA: Mark Mutz

NOAA is building out its N-Wave network with edge routers (Juniper MX480s) implemented in Boulder and College Park. The third edge router will be installed in Fairmont, West Virginia in April for a data campus there where a supercomputer for climate research will be installed in late summer.

NLR: Grover Browning

NLR has moved from CRSs to 6500s for its routing. Some issues with net resolvers were resolved. A blizzard impeded resolving an NLR outage. For commodity interchange NLR implemented new peering. There are 3 new RFPs in the pipeline. There are now 160 units on the R&E telepresence exchange. NLR is doing optimized designs now for its 40 G architecture – they are expecting up to 1800km. They will be able to delete several regeneration sites and add/drop multiplexers will replace some regenerators. Phase 2 designs begin in 2 weeks. The 40 G deployments are going well. NLR is purchasing 40 G cards under an ARI grant over the next few months.

NREN: Dave Hartzell

Ames and Goddard are working to resolve Dragon issues between the two facilities. A cloud testbed is being implemented between Ames and Goddard.

TransPAC and ACE: Brent Sweeny

There is a new 10GE CERNET (China) connection coming to the US. The KDDI trans-pacific circuit on which TransPAC rides is intact. (But the JGN circuit parallel to TransPAC (on Japan Telecom) has been down since the earthquake.)

Exchange Points

Ames: Bobby Cates

Ames is setting up a testbed with the Open Cloud Consortium. Points on the cloud will include University of Chicago to StarLight to Ames to Cisco Labs. New connections include the Livermore Valley Open Campus, likely with a 10 G link. Ames

is making some connections using FrameNet, including to McLean, Virginia. This has not been extended to Goddard yet.

Chicago: Alan Verlo

StarLight supported demonstrations at the recent APAN meeting. It supported a VLAN inter-domain project for the GOLEs. It supported a CineGrid demonstration through the Netherlands to Prague to Hong Kong. StarLight provided a connection to Germany for the GENI projects. The GEC10 meeting is being supported. StarLight will begin working with the DYNES project later this year.

MAN LAN: Dale Finkelson

The new Ciena core director has been installed in MAN LAN and is currently operating. The Nortel HDX has been decommissioned. Only one circuit had any difficulties during the move. That was determined to be a carrier issue and was resolved. An IDC for MAN LAN is in planning. Routing at MAN LAN is provided by a Cisco 6513. It has only 2 open ports – discussions are underway on what the replacement should be.

Federal Agency Collaboration on Research Testbeds

The Federal agencies held an initial teleconference to begin cooperation on networking testbeds among the many Federal agency networking testbeds. Discussed were:

- GENI Testbeds: PlanetLab, Orbit, ProtoGENI, and ORCA
- ATDnet
- NASA Goddard testbeds: Pat Gary
- DOE testbeds: ANI, Magellan

This teleconference produced an action item for Brian Tierney for the DOE testbed networks to talk to Chip Elliot for the GENI testbeds to discuss modes of cooperation. The testbed coordination will continue to take place over future teleconferences.

AI: Grant Miller will send the JET a message inviting participation in cooperation in networking testbeds among the JET testbeds.

Meetings of interest:

April 26-27	Colorado Rocky Mountains v6 Task Force
April 10-13 2011	ARIN, San Juan, Puerto Rico
July 10-13 2011	ESCC/Internet2 Techs Workshop, Fairbanks, AK
July 11	JET Meeting, Fairbanks, Alaska
July 13-14 2011	ESCC, Fairbanks, AK
August 15-17	NASA IT Summit, San Francisco, CA
August 22-26 2011	APAN, New Delhi, India
August 15-18 2011	DREN Networking and Security Conference, Denver, CO
12-14 October 2011	ARIN, Philadelphia, PA
12-18 November 2011	SC11, Seattle, WA
March 2012	US-India workshop on network cooperation
January-February 2013	Techs in Paradise, Honolulu, HI

Next JET Meetings

April 19, 11:00-2:00, NSF

May 17: 11:00-2:00, NSF