JET Meeting Minutes
April 19, 2011

I. Participants

John Baird	DREN	Baird@hpcmo.hpc.mil
Joe Breen	UofUtah	joe.breen@utah.edu
Rich Carlson	DOE	rcarlson@ascr.doe.gov
Vince Dattoria	DOE/SC	vince.dattoria@science.doe.gov
Phil DeMar	DOE/FermiLab	demar@fnal.gov
Jan Evelyth	Pacific Northwest GiGaPoP	eveleth@cac.washington.edu
Bill Fink	NASA	bill@wizard.sci.gsfc.nasa.gov
Pat Gary	NASA/GSFC	James.P.Gary@nasa.gov
Andy Germain	NASA/GSFC-EOS	andrew.m.germain@nasa.gov
Michael Gill	NIH/NLM	gill@nlm.nih.gov
Kevin Jones	NASA/Ames	kevin.L.jones@nasa.gov
Paul Love	NCO	epl@sover.net
Brian Lyles	NSF	jbl2403@earthlink.net
Joe Mambretti	Northwestern U.	j-mambretti@northwestern.edu
Joe Metzger	Esnet	metzger@es.net
Grant Miller	NCO	miller@nitrd.gov
Mark Mutz	NOAA	mark.mutz@noaa.gov
Chris Robb	Internet2	chrobb@internet2.edu
Brent Sweeny	GRNOC/Indiana U	sweeny@indiana.edu
Kevin Thompson	NSF	kthompso@nsf.gov
Brian Tierney	ESnet	bltierney@es.net
George Uhl	NASA/Goddard	george.d.uhl@nasa.gov
Alan Verlo	UIC/StarLight	verlo@uic.edu
Ken White	NASA	ken.white@msfc.nasa.gov

Action Items

1: Joe Metzger will talk to Matt Mathis about developing NPAD for IPv6.

2: The perfSONAR IPv6 testbed will be an agenda item for the May JET meeting

3: Joe Metzger will provide a briefing on the perfSONAR testbed activity to the JET in August in preparation for reporting on it at the September LSN meeting.

Proceedings

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

Advanced Networking Initiative (ANI): Brian Tierney

DOE has a three year funded testbed for 100 G networking, the Advanced Networking Initiative (ANI). ANI has three phases. Phase 1 is a tabletop deployment at LBL from June 2010 to March 2011. Phase 2 deploys the testbed to the Long Island

MAN when dark fiber is available (April 2011 to September 2011). Phase 3 extends the WAN when 100 Gbps is available in late 2011.

ANI is intended to support end-to-end networking and middleware and applications experiments including interoperability testing of multi-vendor 100 Gbps components. Researchers have root access to all devices. Virtual machine technology will support custom experiments. Detailed monitoring capabilities will be provided.

Sample projects on the testbed include:

- Path computation algorithms
- New transport protocols
- Protection and recovery algorithms
- Automatic classification of large bulk data flows
- New routing protocols'
- Network management techniques
- Novel packet processing algorithms
- High throughput middleware and applications research

The Phase 1 tabletop deployment consists of DWDM devices (Layer 0-1), Layer 2 switches supporting Openflow, Layer 3 routers, test and measurement hosts.

The proposal process for access to the testbed is given at:
https://sites.google.com/a/lbl.gov/ani-testbed/
The testbed is available to anyone and the intent is to accept five proposals every 6 month review. So far 12 projects have been granted access including 4 for high speed middleware and 3 for network control plane research.

Under Phase 3 the testbed will be deployed in 2 separate testbeds, a control plane testbed in Long Island and a 100 Gbps application/middleware testbed from NERSC to ANL. The 100 Gbps testbed will also be used to support the Magellan cloud environment research project.

For more information, please see:
http://sites.google.com/a/lbl.gov/ani-testbed/
http://100gbs.lbl.gov/

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. The project has characterized the development/deployment status for IPv6 of the perfSONAR tools. BWTCL and OWAMP are in production deployment. pSB MA PinGER, and SNMP MA are in development and deployment. NDT and the toolkit largely have been IPv6 developed. NPAD requires development. There have been several inquiries about participating in testing of perfSONAR over IPv6 so there should be interesting results to report eventually.

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Discussion among the JET members indicated that:

- NASA Goddard is interested in deploying IPv6 and is finalizing plans for participation in IPv6 day (June 8).
- NISN is finalizing its plans for IPv6 deployment with the NASA architecture board.

Network Roundtable

DREN: John Baird

Nothing new to report

Internet2Net: Chris Robb

Optical gear for USUCAN is starting to arrive. Other hardware has been ordered.

ESnet: Joe Metzger

A new ESnet Website was released yesterday. An RFP for 100 Gbps routers for ANI was issued yesterday. They are seeking 10 routers supporting 30 10 G interfaces. The transport is scheduled to be signed in 2-3 weeks.

NISN: Ken White

The NASA video capability is operational over E1s. NISN submitted a request to implement v6 peering with DREN and Ineternet2. An agreement with NASA Security Ops Center is needed for monitoring the interfaces. NISN is implementing a DREN interface for the ISIS video. NISN core IPv6 has been operational for 3-4 weeks and no problems have been observed. NISN will be implementing external peerings.

Discussion among the JET participants for IPv6 implementation indicted that:

- DREN has had a plan for v6 addressing coast-to-coast for some time
- ESnet has also had a plan for v6 coast-to-coast addressing

NOAA: Mark Mutz

NOAA is still building out its backbone network. The NOAA Fairmont building is still under construction and needs fiber installation. N-Wave is expecting to be installed their by month's end. NOAA labs in Miami and Norman will be connected over the next month. In the June time frame, the core node in Seattle will be built out. NCDC in Asheville needs fiber installation.

TransPac/ACE: Brent Sweeney

TransPac has completed its circuit upgrade. Japan is planning to upgrade. TransPac is a 10 G circuit.

ACE circuit proposals are due this week. They will decide on deployment to Europe over the next few weeks

Exchange Points Roundtable

PacWave: Jan Evelyth

PacWave is planning a Seattle to Chicago deployment by early 2012. Several points of interconnect will be provided with Layer 2 access.

StarLight: Alan Verlo

Support for GEC10 went well. GEC11 will be held in Chicago the end of July.

DOE and ESSC IPv6 Activities: Phil DeMar

DOE appointed an IPv6 transition manager, Samara Moore. A DOE IPv6 taskforce was formed to coordinate DOE implementation of IPv6 goals, determine an implementation strategy, and develop a plan to share approaches and experiences. OMB2012 milestones include implementing public-facing services including Web servers, site email gateway, and DNS. DOE has established working sub-groups for IPv6 IT management, technology, cyber security, and outreach. DOE is planning to participate in the June 8 World IPv6 Day. DOE has an ESnet Site Coordinators Committee (ESCC) that collaborates with the Internet2 community through Joint Techs. The ESSC also provides coordination of common network tasks for IPv6

Meetings of interest:

April 26-27	Colorado Rocky Mountains v6 Task Force
July 10-13	ESCC/Internet2 Techs Workshop, Fairbanks, AK
July 13-14	ESCC, Fairbanks, AK
July 26-28	GENI Engineering Conference 11, Chicago, IL
August 15-17	NASA IT Summit, San Francisco, CA
August 15-18	DREN Networking and Security Conference, Denver, CO
August 22-26	APAN, New Delhi, India
October 12-14	ARIN, Philadelphia, PA
November 12-18	SC11, Seattle, WA
March 2012	US-India workshop on network cooperation
January-February 2013	Techs in Paradise, Honolulu, HI

Next JET Meetings

May 17: 11:00-2:00, NSF
June 21, 11:00-2:00, NSF
July 11, 7:45-10:15PM, University of Alaska, Fairbanks. This meeting is being held in conjunction with the summer ESCC/Internet2 Techs Workshop