

JET Meeting Minutes

May 19, 2009

I. Participants

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Action Items

1. Grant Miller will send the JET the list of JET activities presented to the LSN at the 2008 LSN Annual Planning Meeting.
2. Grant Miller will work with Rich Carlson to develop a formal proposed recommendation for the LSN to endorse the use of the perfSONAR infrastructure as a ubiquitous end-to-end performance measurement platform.
3. Rich Carlson will send the JET his summary table on perfSONAR.
4. Rich Carlson will work with Bill Fink to enable him to become perfSONAR compliant.
5. Alan Welday will send the JET members a notice of the August DREN meeting.

Proceedings

This meeting of the JET was chaired by Vince Dattoria of DOE and Jennifer Schopf of the NSF.

WAAS

Dave Hartzel has arranged for a talk to be given at Joint Techs on the NASA Wide Area Acceleration Service (WAAS) that accelerates file transfers.

Network and Exchange Point Roundtable

C-Wave

C-Wave has added 10 G circuits between Seattle and Portland and from Sunnyvale to Portland.

DREN

DREN is connecting, near term, to the LA NAP. They are working on connectivity to NAP of the Americas in Washington, DC. They are peering with Qwest on IPv6 services. DREN is improving its connectivity to Alaska and is improving Alaskan fail-over functioning.

DREN is upgrading its DMZ. 14 of 62 nodes will be replaced and the remainder will receive upgrades. The DMZ will provide DNS lookup and port blocking.

DREN is moving to Seminary Road at Route 395 by June 2011. It will provide services in an annex to Fort Belvoir in the Mark Center area.

AmPath/FIU

AmPath is focusing on upgrades to Brazil; two 10 G links under the IRNC REN-LIDA program. Sao Paulo is the local provider for a dark fiber link. The 2 x 10G links are expected to be completed next week. Facilities in Miami are being upgraded to accommodate the new 2 x 10 G links. The Ethernet fabric will connect these links to national networks and to Atlantic-Wave. The University of the Virgin Islands will begin peering with U.S. networks next week. University of the West Indies (Jamaica and Barbados campuses) are implementing connectivity and coordinating through Internet2's Caribbean SIG.

ESnet

The Science Data Network has been extended to Oak Ridge National Laboratory. A VLAN has been completed from NOAA's GFDL in Princeton to Washington, DC. LBNL is reviewing its advanced network initiative to provide 100 Gbps networking as part of the ARRA.

Internet2Net

No significant changes.

NLR

The NLR upgrade has been completed. NLR is upgrading the Philadelphia POP to provide WaveNet and Framenet. All waves going through Chicago currently pass through StarLight. NLR is implementing a pass-through to free-up lambdas. FrameNet is increasingly using SHERPA with billing and scheduling be added. NLR is considering how to share control of shared resources across interfaces for projects. Some users do not want to share control of their resources.

NLR has implemented multi-site shared telepresence across the NLR backbone.

Because of this the Kansas City node will need a call manager.

NREN

NREN is transitioning NASA GSFC and NASA Langley traffic to NISN. All IP address management is being consolidated in a single DNS. The transition is expected to be complete this summer.

NGIX-West: Ames Research Center

No changes to report.

MANLAN

MANLAN reports no significant changes.

MAX: NGIX-East

MAX is extending its fiber from McLean to Equinex and expects completion this month. MAX is talking to NASA GSFC and NASA Ames about high speed testing in the long-haul environment.

StarLight

StarLight is supporting the GLIF conference in October. StarLight issued a call for circuits for the SC09 Conference. StarLight is implementing service for dynamic provisioning. They are providing a dedicated link to NCSA to enable large-scale streaming of data to NCSA. This will be demonstrated at the GLIF meeting and at SC09.

CISCO Networking Research

Steve Wolff described Cisco research programs. Cisco research programs are distributed and loosely coordinated. Dave Frascetti directs the primary Cisco research program. His programs fund computer science research at academic centers. This program is currently unfunded. They accept proposals for two types of awards. Unrestricted gifts are funded through the Silicon Valley Community Research Foundation. This arrangement precludes Cisco collaboration until research results are announced. Restricted research funding provides sponsored research agreements with non-profit organizations.

See: www.cisco.com/research for descriptions of research opportunities with Cisco. RFPs are described on the Cisco Web site.

Research and advanced development are funded out of the office of the CTO at Cisco. There are a small number of research projects including 6Net in Europe and MantiCore virtual router research in collaboration with Juniper.

Cisco is seeking to engage with the NRENs.

JET Input into the LSN Annual Planning Meeting

LSN is holding its Annual Planning Meeting on October 13, all day. JET will provide inputs to this meeting, primarily in the form of initiatives JET will be working on for the next year with a recommendation for the LSN to endorse this work. The JET should develop a set of activities it would like to submit to the LSN. JET discussion identified that a continuation of the Performance Measurement task should be one of

these activities.

AI: Grant Miller will send the JET the list of JET activities presented to the LSN at the 2008 LSN Annual Planning Meeting.

AI: Grant Miller will work with Rich Carlson to develop a formal proposed recommendation for the LSN to endorse the use of the perfSONAR infrastructure as a ubiquitous end-to-end performance measurement platform.

Future LSN/JET Workshop

The report on the NRC Workshop was well received. This has led to interest in a new workshop. Initial thoughts on topics are cross domain optical networks. Other possible topics would be performance measurement and 100G (domestic and/or international). Though dates and funding remain to be confirmed, tentative the workshop will be held in Aug 2010 at NASA Ames.

ARIN Update

ARIN is tracking and providing recommendations, policies, and outreach for the transition from IPv4 to IPv6. Currently, there are 32 /8s available. Depletion of the IPv4 address space is predicted by the end of 2010. Regional registries hold a 12-18 month supply of IPv4 addresses but there are restrictions on those blocks of addresses.

IPv6 traffic is increasing everywhere. 2009 outreach activities to educate people on the need for movement to IPv6 increased in 2009. Chatter on IPv6 uptake and deployment concerns may be found at: twitter.com; search on IPv6 as keyword and enter "submit". ARIN has hired a public relations firm to increase awareness of the depletion of IPv4 address space and the need for adoption of IPv6 address space. ARIN is holding policy discussions on what we should do with the last IPv4 address resources. A world-wide policy under discussion: would have any /8s returned to a registry, be redistributed across all IANA to share the resources internationally. This would have the biggest impact on ARIN since the largest number of /8s are assigned in its area.

ARIN is also tracking 16 bit ASN assignments. The ASN numbers are expected to be adequate for several more years.

ARIN sent a certified letter to every ARIN registrant informing them of the issues associated with depletion of the IPv4 address space.

Gert During provides an IPv6 Report that identifies IPv6 traffic by country and, in some cases compares this traffic to IPv4 traffic.

ARIN will retain two meetings per year: One in the fall in conjunction with NANOG. The other, spring meeting will be in either Canada or the Caribbean.

Legacy RSAs are still being submitted. An extension of the deadline may be given.

ARIN will have a booth at SC09.

PerfSONAR Performance Measurement

Rich Carlson issued a request for information from science networks on what the networks are deploying for performance measurement, what they are measuring, and what are their policies for sharing their performance measurement information. Several

networks have responded and several more indicated they will respond. The responses indicate a lot of commonality among the networks in the information they are collecting and in their policies for sharing data. Most networks are willing to share performance information with security services implemented.

AI: Rich Carlson will send the JET his summary table on perfSONAR.

A BOF is being held at the Joint Techs meeting to inform networks, in general, of the infrastructure for performance measurement that has been developed and to invite other networks to participate in the sharing of performance data.

AI: Rich Carlson will work with Bill Fink to enable him to become perfSONAR compliant.

Meetings of Interest

June: San Diego: DOE and DREN are holding a conference

End of June: NISN Forum in Boston

July 17-19 IPv6 Workshop, Indianapolis, Indiana

July 18-19 DCN Workshop, Indianapolis, Indiana

July 19-24, Joint Techs Meeting, Indianapolis, Indiana. Make your room reservations now as rooms are limited.

First week of August: DREN meeting in Nashville. DREN will issue invitations to NLR and NREN to talk about their networks at this meeting.

AI: Alan Welday will send the JET members a notice of the August DREN meeting.

Future JET Meetings

June 16, 2009, 11:00-2:00, NSF, Room 1150

July 20, 2009, 7:45 PM at the Joint Techs hotel, Indianapolis, Indiana