JET Meeting Minutes
January 24, 2012

I. Participants

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Action Items

1. If any network would like to test perfSONAR across the Pacific region, please contact Translight (Alan Whinery whinery@hawaii.edu)

2. Grant Miller will contact Alex Moura for the URLs for Brazilian networking to include in the JET minutes.

3. Paul Love will provide an updated draft of the position paper on naming of perfSONAR IPv4 and IPv6 tools and send it to the JET members for comment.

Proceedings

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

Review of the August action items identified that:
- Bobby Cates will be scheduled to talk about TIC status in a future JET meeting

    nb: This is scheduled for the Feb meeting

JETnet Roundtable

DREN: Ron Broersma

The DREN network services recompetition is still ongoing. DREN is planning to provide one or two GENI nodes, one in San Diego. The Hawaii Internet Consortium (HIC) meeting was held in Hawaii 2 weeks ago. The DREN Annual Conference is being held June 16 in conjunction with the DREN Users Conference.

ESnet: Greg Bell

Steve Cotter has started a new position in New Zealand; Greg Bell is the acting Director. A new Director is being sought. ESnet has been upgraded from a Department to a full Division of LBNL.

ANI has accepted the next round of proposals for applications on the ANI testbed. Four papers have been submitted for publication on ANI to date. ANI provided 98 Gbps between Argonne and NERSC using 10 TCP streams.

For the ESnet update at the Winter Techs Workshop, see:

http://events.internet2.edu/2012/jt-loni/agenda.cfm?go=session&id=10002188&event=1223

C-Wave: Kevin McGratten

C-Wave is implementing perfSONAR.

Internet2: Dale Finkelson

Circuits for the new network have been completed between Cleveland and New York and Washington, DC and Atlanta. Dallas and Houston will be completed in the next couple of weeks. The Phase 2 Internet2 build is scheduled for completion in March. New York to DC is currently in production.

NOAA: Rob Sears

The NWave Program of NOAA has implemented its 5th core node in the Weston Building. Existing fiber is being used to connect NOAA's Western Regional Center in

Seattle. An OC3 from the University of Hawaii will be used to connect the Pacific Regional Center (PRC) in Honolulu, Hawaii.

PacWave: Schyler Batey
PacWave is replacing its Seattle switch with a Brocade 100G switch.

Atlantic Wave: Dale Finkelson
Nothing to report at this time.

ACE/TransPAC: Steve Wallace
ACE plans to enhance its trans-Atlantic connections. TransPAC is currently completing a connection with China.

NASA: Andy Germain
NASA has completed two contract upgrades. NISN has changed its name to the Communications Service Office (CSO). Ken White at CSO has been replaced by Dave Peterson. NASA is currently implementing IPv6 and is benefitting from DRENs documentation of its v6 implementations. NASA has started 10G testing with Internet2.

Northern Tier: Dave Farmer
NorthernWave, Northern Tier's layer 2 service, is moving forward toward deployment. Routers have been purchased and await deployment. They expect to have Northern Tier lit over the next 60 days all the way from Chicago to Seattle with several intermediate sites.

3ROX: Michael Lambert
3ROX lit a 10G link to WVnet in Morgantown. This in turn supports West Virginia University and DoE's National Energy Technology Laboratory. The wave replaces an OC3 link WVu has had.

TransLight: Alan Whinery
AI: If any network would like to test perfSONAR across the Pacific region, please contact Translight (Alan Whinery whinery@hawaii.edu)

Brazilian Networking: Alex Moura
Brazil has widely deployed 10G networking. They plan to implement sites north of the Amazon. Metro networks using dark fiber have been deployed in 21 of 27 cities so far. TeleBras is a new partner that is expected to hook up 1 million users in Brazil for $30. per month. This network will be larger than RNP. RNP Internet links were upgraded to 2 x 10G with one link to RNP and the other shared by several organizations. RNP hosted GLIF 2011 and supported demonstrations at that conference with connectivity from Kotec to Rio to Sao Paulo and a link from the UK to Rio. RNP is cooperating with GENI to test OpenFlow. The RNP link to Europe has been upgraded from STM4 to 2.5 G

AI: Grant Miller will contact Alex Moura for the URLs for Brazilian networking to include in the JET minutes.

Brazilian networking URLs include:
RNP National Backbone - Phase 6 (in Portuguese):

http://www.rnp.br/_images/backbone/bkb_ipe-6a.geracao.2011.jpg

International connectivity for Brazil:
http://amlight.net/about/about.html

RNP's Metro Networks Initiative - RedeComep (only in Portuguese):
http://www.redecomep.rnp.br/

New strategic partner for RNP: Telebrás
Some pointers of news about Telebrás:
http://www.telegeography.com/products/commsupdate/articles/2011/06/09/telebras-inks-first-contract-to-supply-cheaper-broadband-services/
http://www.telegeography.com/products/commsupdate/articles/2011/10/19/telebras-to-roll-out-backbone-network-in-three-cities-by-year-end/

RedCLARA Network Update:
http://www.redclara.net/index.php?option=com_content&view=article&id=51&Itemid=422&lang=en

GLIF South America Map Updated
http://www.glif.is/publications/maps/GLIF_5-11_SA_1k.jpg

RNP hosted GLIF2011 and CineGrid@Rio workshop last September 2011 in Rio de Janeiro:
http://www.glif.is/meetings/2011/
http://www.glif.is/publications/press/20110920.html

RNP's Experimental (pre-production) Dynamic Circuit Network Service, SE-CIPO for short (in Portuguese):
http://wiki.rnp.br/display/secipo/Home

Future Internet and other testbed networks:
http://dana.i2cat.net/fibre/uncategorized/
http://www.my-fire.eu/documents/11433/58820/FIBRE+%E2%80%93%20Future+Internet+Experimentation+between+Brazil+and+Europe.pdf

Exchange Points

MAX: Abdella Battou
        With Internet2 MAX is implementing a joint international exchange in McLean (WIX) at 100G. It is now operational and will support service from NASA to Chicago.

MAN LAN: Dale Finkelson
        MAN LAN established VLANs to connect LHCONE sites. The peerings have not been established yet.

StarLight: Alan Verlo

StarLight supported the CineGrid Workshop in San Diego with demonstrations including sites at Cal Tech, Brazil, and Japan. StarLight supported a demonstration of training for surgeons in Brazil including the University of San Francisco and Johns Hopkins. GLORIAD brought up a new circuit to Egypt through Amsterdam. StarLight is working with LHCONE, GLIF, DYNES and is obtaining GENI racks.

Seattle GigaPoP: Schyler Batey
The Seattle GigaPoP will implement a core refresh over the next fiscal year in an effort to save power.

AMPATH: James Grace
AMPATH is upgrading its core, migrating to a Brocade MLXe. DYNES equipment is now running and an Open Flow bopx just being installed. AMPATH supported the CineGrid demonstration for RNP.

Naming of perfSONAR IPv4 and IPv6 tools: Rich Carlson
Paul Love and Rich Carlson authored a draft JET position paper on a naming convention for perfSONAR IPv4 and IPv6 tools. This paper was provided to the attending JET members. The paper addresses the issue that when you are looking at a log file or running a test you need to be sure you have obtained the event and target you want. Discussion identified that:
- Regulations require Federal agencies have a single host name for a test's target. When the test & host support both v4 and v6 not all tools permit the protocol selection. In addition to a generic name, DNS can carry *host–v4* and *host–v6* to specify either IPv4 or IPv6.
- In the case where the mechanism used to select is a run-time flag, then "-4" and "-6" should be used
- Tools must write the host name and IP address into the log file so you have an unambiguous address and therefore can easily determine if v4 or v6 was used.
- The paper should specify that PTR records should point back to the generic host name
- This naming convention should cover other tools in addition to perfSONAR

AI: Paul Love will provide an updated draft of the position paper on naming of perfSONAR IPv4 and IPv6 tools and send it to the JET members for comment.

Web 10G Project: John Estabrook
The Web10G Project is a joint project of PSC and NCSA. It provides instrumentation of the Linux kernel to add TCP Extended Statistics as defined in RFC4898. It is follow-on to the Web 100 Project. Web 100 used the Proc interface. This does not scale and the kernel instrument sets do not match RFC4898. Web10G provides a minimal kernel patch and a loadable kernel module consistent with RFC4898. The Web10G kernel API is unobtrusive and extensible. NPAD will be ported by PSC. NDT will be ported by Internet2.
This presentation may be found at:
http://web10g.org/index.php?option=com_content&view=article&id=74
 And at:
http://web10g.org/index.php?option=com_content&view=article&id=68&Itemi

African Networking: Carlos Vincente

NSF has funded African connectivity under its IRNC program. There are 3 operational RENs. There was a workshop in boulder, Colorado this summer, bringing together the African atmospheric scientists to explore collaboration opportunities with U.S. scientists. This meeting resulted in a large number of collaborations. Wireless sensors are used for applications in Malawi, Senegal and Zambia. Extensive development is taking place in Africa for campus networks and RENs including sensor networks, wireless networks, and aggregation points. In 2012 additional connectivity will be provided to Burkina Faso, Nigeria, Guinea, and Tanzania.

Tanzania Networking: Steve Lukindo
Most Tanzanian networks are located in city centers, providing connectivity to institutions. A collaboration with Cisco is ongoing to train people to run the equipment and networks. Power for the equipment is rarely stable. Management and policies have to be developed. A new supercomputer in Tanzania will need to be supported.

DREN IPv6 Update: Ron Broersma
IPv6 capabilities in networking equipment have increased significantly over the last 9 months. Most vendors have not implemented Flow Export. A new mandate was issued to provide IPv6 public facing services by September 2012. The major carriers are not ready for IPv6 operation. Lots of planning is under way but mostly by people who have no experience with IPv6. Common mistakes include:
- Doing other than /64 for subnets
- Thinking the addressing plan has to be perfect the first time
- Choosing site allocations based on site size

Meetings of interest:
February 13-17   APAN, Chiang-Mai, Thailand
March 13-15   GENI Engineering Conference, Los Angeles, CA
March 22-23   US-India workshop on network cooperation, Arlington, VA
April 22-25   ARIN, Vancouver, BC
April 23-25   Internet2 Spring Member Meeting, Arlington, VA
June 16   DREN Annual Conference
July 15-18   ESCC/Internet2 Techs Workshop, Palo Alto, CA
July 18-19   ESCC, Palo Alto, CA
October 11-12   GLIF meeting, Chicago, IL
Week of January 13th, 2013   Techs in Paradise (APAN, Jt Techs & ESCC), Honolulu, HI

Next JET Meetings
February 21, 11:00-2:00, NSF, Room II-415
March 20, 11:00-2:00, NSF, Room II-415