

JET Meeting Minutes

April 19, 2016

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Action Items - New

1. Mike Gill will get HHS to report on their networking and TICs at a future JET meeting

Action Items - Carry forward

1. Jennifer Schopf will inform the JET members of her inexpensive deployments of perfSONAR on ACE.

Proceedings

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

NIST Workshop: Lafti Benmohamed

NIST is holding a two day workshop on Named Data Networking (NDN) May 31-June 1, 2016 at the NIST Gaithersburg campus. It is focused on what role NDN will play in future networking, applications, and information services. The first day will be devoted to the Internet of Things (IoT). The second day will focus on big data. The format for both days is to provide presentations followed by a panel discussion.

SCinet: Jim Stewart

SCinet is supporting SC16 from November 14-17 in Salt Lake City. There will be 2 x 100G circuits from MANLAN, 2 x 100G circuits from Washington, DC, 4 x 100G circuits from Chicago (StarLight), 2 x 100G from Seattle, 2 x 100G from LA and 1 x 100G from FIU over Florida Lambda Rail. Planning is now for 1.1 Tbps of networking over the WAN. SCinet is working with CenturyLink and Integra to provide 8 fibers from the CenturyLink PoP to the show floor. Level 3 will have a pair from their PoP to the Salt Palace. Current plans call for Cisco OTN in use by SCinet on the show floor.

JET Roundtable

ESnet: Nick Buraglio

ESnet continues its planning for ESnet6. A formal update will be provided to JET toward the end of summer. ESnet is 95% complete in implementing a software upgrade on the backbone, moving to new vendor code on the Alcatel equipment. The transition has been extraordinarily smooth – no interruption of service.

ESnet is working on their SCinet participation and on an SDN testbed. The ESnet annual summit is upcoming where ESnet will develop future plans and deliverables.

Internet2: Grover Browning

Internet2 added capacity in the DC and New York areas to TR-CPS. Internet2 had a 6 hour outage on April 11. A race condition on a Layer 3 TP-CPS node led to reset and dropped packets. Internet2 is working with Juniper to resolve the issue.

NASA: Bobby Cates

NASA has now deployed a new 10G link between Ames and Equinix SV1 in San Jose. They are turning up connectivity to JPL to provide JPL with TIC access.

NIH: Mike Gill

All HHS nets are now interconnected.

AI: Mike Gill will get HHS to report on their networking and TICS at a future JET meeting

NOAA: Rob Sears, Mark Mutz, Dave Hartzell

TICAPs in Hawaii, Seattle, and Dallas are now fully deployed. Work is continuing on the TICAP in the DC metro area. It is split between McLean, VA and the University of Maryland, College Park, and has been approved as a community TICAP (as the one in Honolulu was previously.) After the TICAPs have been deployed, network links are being migrated to them. DHS will hold a compliance review of the TICAPs this summer. The Denver & DC TICAPs are planned to be fully deployed in FY Q4.

PacWave: Dave Reese

PacWave has a new 100G link to Tokyo. The link goes to Tata, then to WIDE. SINET is connected at 100G in Tokyo and SINET upgraded their Tokyo to LA link to 100G. PacWave has brought up an LA to El Paso 100G link (800 miles) with no regeneration and the link is operating well. This is part of a 100G ring for PacWave that is being implemented now. Southern Cross' northern path is operational. Its southern path will coming up soon. The Southern Cross link now comes to LA, not just the landing site at Los Osos.

TransPac: Andrew Lee, Hans Addelman

The PacWave 100G is deployed between LA and Seattle. The 10G link will be decommissioned soon. APAN will peer in Tokyo soon.

3ROX: Michael Lambert

Nothing new to report

IX Roundtable

MAX: Dave Diller

MAX is moving its last fiber to support its move to Baltimore. Three new 100G connections are operational (2 of these support the NASA EOS Program); 6 more are in the pipeline.

MANLAN: Grover Browning

Nothing new to report

WIX: Grover Browning

Nothing new to report

StarLight: Joe Mambretti

StarLight is working with Internet2, MREN, AT&T, Ciena and Marriott on Michigan Avenue, Chicago to provide 2 x 100G connectivity to the Internet2 Global Summit. This network is currently running at 100G.

StarLight is preparing for SC16. Links will include 4 x 100G from StarLight, and 2 x 100G from Washington DC (probably to be upgraded to 3 x 100G). Last year 15 100G demonstrations were showcased at SC15 and workflows were orchestrated within the SDN/SDX technology. They will build on this capability this year at SC16, There are 2 SDXs at StarLight (one is for the NSF International Connections Program). StarLight is also working to demonstrate Data Transfer Nodes (DTNs). StarLight has a new

network component, a server with a network function, which they will be demonstrating this year.

NASA Ames: Bobby Cates

NASA Ames is upgrading their DREN connections at the exchange. They are transferring their E-Root DNS server to a non-NASA network.

Einstein 3A: Kosta Kalpos, Peter Kim

We face ever increasing cyber threats. Einstein 1 was designed to monitor federal traffic, a logbook registering users. Einstein2 detects bad guys and sounds an alarm if they penetrate the system. Einstein 3A provides a gate and a guard to prevent bad guys from entering or exiting. Einstein 1&2 sensors see about 93% of .gov traffic. Einstein 3A protects approximately 47% of .gov users. An average of 1,000 attempts are blocked per day. The Einstein systems provide insight into network activities and reduce the time to respond, remediate, and recover from cyber attacks.

Authorities for the Einstein program are:

- Federal Cybersecurity Enhancement Act of 2015
- Federal Information Security Management Act of 2002
- National Security Presidential Directive-54/Homeland Security Presidential Directive-23
- Comprehensive National Cybersecurity Initiatives: TIC, IDS, IPSS

For the complete briefing please see the JET WebSite at:

https://www.nitrd.gov/nitrdgroups/index.php?title=JET_Meetings_2016#April_2016

Questioning identified that:

- If you deploy Einstein 1, 2, and 3A but not the TIC, you are not in compliance. All are due December 18, 2016

If a malicious domain is found to have a request, is that request sinkholed? The answer is classified and the question should be addressed directly to Kosta Kalpos.

konstandinos.kalpos@hq.dhs.gov

- What traffic needs to be in-line and what can be offline. Information on this needs to be directed to the engineering level at the agencies.
- Latency is not an issue. Response is very fast relative to email times.

JET May Meeting

The JET May meeting will be held May 17, 7:30-9:30 CDT in Chicago concurrent with the Internet2 Global Summit. NCO will try to provide a teleconference capability.

Meetings of Interest:

May 15-18	Internet2 Global Summit , Chicago, IL
May 31-June 1	NIST NDN Workshop , Gaithersburg, MD
June 12-16	TNC16 , Prague, Czech Republic
June 13-15	NANOG67 , Chicago, IL
July 17-22	IETF 96 , Berlin, Germany
July 31 - August 5	APAN42 , Hong Kong
September 25-28	TechX , Miami, FL
September 29-30	GLIF16 , Miami, FL

October 17-19 [CANS2016](#), Houston, TX
October 17-19 [NANOG68](#), Dallas, TX
October 18-21 [ESCC/Quilt/NSF PIs](#), Philadelphia, PA
October 20-21 [ARIN 38](#), Dallas, TX
November 13-18 [IETF 97](#), Seoul, South Korea
November 13-18 [SC16](#), Salt Lake City, UT

Next JET Meetings

May 17 7:30-9:30 CDT, Chicago, IL
Chicago Marriott Downtown Magnificent Mile
Avenue Room (on 4th floor)
nb: This is the site of the Internet2 Global Summit
June 21 12:00-2:00 EDT, NSF
July 19 12:00-2:00 EDT, NSF