

JET Meeting Minutes
August 15, 2006

I. Participants

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Action Items

1. NISN will give a presentation on transitioning its ATM service at the November JET meeting.
2. DNSSec will be a topic for discussion at the November JET meeting.
3. George Seweryniak will send the JET the URL for the ESSC paper on DNSSec.
4. If you have any comments on or suggestions for the TransAPac Arbor system please contact Jim Williams
5. If you have any inputs on international networking please contact Heather Boyles at: heather@internet2.edu
6. George Seweryniak will prepare a JET presentation for the October 10 LSN meeting.
7. James Cook will send the JET the URL for NIST guidance on VOIP security.
8. Matt Zekauskas will send his performance measurement slides to the JET
9. Matt Zekauskas and James Cook will discuss their performance measurement program

at the October JET meeting.

Proceedings

This meeting of the JET was coordinated by Kevin Thompson of NSF and Paul Love of the National Coordination Office.

Network Roundtable

Abilene

RedClara is now peering with Abilene. A Dante circuit will be completed to New York from Paris using the Abilene European link. The AtlanticWave circuit from Washington, DC to ManLAN is now operational.

NewNet

NewNet is canvassing its potential connectors and peers to determine their requirements for the NewNet. They are close to finalizing the requirements for collocation. Installation of network links will begin soon. The NY/DC/Chicago link will be in-place by the end of October. It will be extended to Boston from New York City. The network will be used for demonstrations at the Fall Internet2 members meeting in Chicago. They will transition the links to regional networks as soon as possible. Eventually Abilene functions will be transferred to NewNet.

Qwest circuits are being implemented to Tampa to support SC06

DREN

DREN is holding its networker users conference next week. The University of North Dakota is being connected to DREN with a connection from Fargo to StarLight.

DREN is doing a site survey for a DREN delivery point in the UK. In addition DREN is looking at potentially connecting to Ramstein Germany and another site in Germany.

NISN

The NISN OC48 backbone has been implemented. ATM services are being transitioned to the backbone and the ATM services are being discontinued.

AI: NISN will give a presentation on transitioning its ATM service at the November JET meeting.

NISN has a testbed of OC192 lambdas including Marshall Space Flight Center to the MAX to Goddard Space Flight Center. They will extend this testbed to Glenn and Johnson Space Flight Center.

NISN is applying a security posture throughout NISN. Working Groups were established to manage security centers to deliver standard security services. NISN expects approval of its security plan in a few weeks.

ESnet

ESnet is working on Washington, DC area connectivity to the MAX, Jefferson

Lab (JLab) and the Chicago MAN. JLab should be connected next week. In the Chicago area ESnet is shipping routers to Argonne and FermiLab for connection to the Chicago MAN.

At the ESSC meeting during the Joint Techs meetings, ESSC had a long discussion on the OMB/FISMA mandate for secure DNS (DNSSec). OMB requires DNSSec implementation by the end of CY 2008. ESSC has published a paper on secure DNS. NIST has published guidelines for DNSSec, NIST SP 800-81.

AI: DNSSec will be a topic for discussion at the November JET meeting.

AI: George Seweryniak will send the JET the URL for the ESSC paper on DNSSec.

TransPac

Jim Williams discussed TransPac use of the Arbor Peakflow system used in cooperation with Internet2 to monitor their system. TransPac maintains a Web site for access to their traffic data. REN ISAC is also implementing the Arbor tool.

AI: If you have any comments on or suggestions for the TransAPac Arbor system please contact Jim Williams

Exchange Points

NGIX-West

Ames is considering Layer 1 services at remote locations using DWDM, based at Kypher Road. They will then support Layer 1, 2, and 3 services.

StarLight

The OC3 CERnet circuit to StarLight is operational. The USGS OC12 circuit will be operational this month. The CIC group has a new Force 10 switch.

StarLight will support the Internet2 fall conference with 2 x 10G circuits.

NGIX-East

NGIX-East is supporting the implementation of Atlantic-Wave (AWave). AWave is operational from New York to Washington, DC to Jacksonville. AWave is waiting for the cards to implement Jacksonville to Miami. AWave is in discussions with Canarie on how to get to Chicago/StarLight.

PacificWave

NREN is now at the PacificWave facility in Sunnyvale.

Meetings of General Interest

December 4-7: Internet2 fall members meeting in Chicago: The Chinese-American networking symposium meeting will be held after the I2 meeting.

September 22-23, Fairbanks, Alaska: I2 Performance measurement workshop

August 21-25: DREN users conference, Sonoma County, California

October: NISN mission communications Working Group in Colorado Springs

ONT3 Workshop in Tokyo, Japan

September 7-8 the LSN in coordination with NICT in Japan and supported by the NSF and DOE will hold the ONT3 workshop. ONT3 will provide a forum for the discussion of research being conducted on optical network research testbeds sponsored by NICT, LSN, and partner organizations, together with the US, Japanese, and other international advanced networking communities, including representatives from government agencies and research and education optical testbed initiatives. Such initiatives will include those represented by the JET and partner advanced networks and regional optical networks (RONs). This forum will build upon the efforts of the ONT-2 (Ref: www.nren.nasa.gov/workshop8) to develop clear objectives, roadmaps and processes for transitioning the advanced networking community and its networking infrastructure to leading edge, next generation optical networks. The themes of this forum include a range of advanced optical networking topics, especially those that relate to international communication services. This workshop will present concepts emerging from optical testbeds from throughout the world as well as those established on international fabrics. This workshop has been scheduled in advance of the Global Lambda Integrated Facility (GLIF) conference, which will be held the following week at the same conference center in Tokyo.

Gloriad

Gloriad held its first Executive Council meeting in Moscow. Kees Negers is the chair of this group. Nordunet joined Gloriad and will be providing connectivity. Gloriad plans to provide 10G service. In February 2005 an OC-12 (622 Mbps) circuit began operating from Moscow to Amsterdam to New York City to Chicago with circuits and engineering support donated by Tyco Telecomm, CANARIE and SURFnet. In November 2004 the Beijing – Hong Kong section of GLORIAD was upgraded to 2.5G. In December 2004 a 1 Gbps link was completed between Hong Kong and Japan at HKLight.

Gloriad has NSF approval to implement 3 x 1GE circuits from StarLight to the Netherlands to support North American to Russia applications. Gloriad capacity is being increased across Russia and will be STM4 this year and STM16 next year. Gloriad is discussing the establishment of a virtual NOC. The next Gloriad meeting will be held in conjunction with the GLIF meeting in Tokyo.

REN-ISAC

REN-ISAC provides information sharing and coordination for operating and managing networks. They do security monitoring using the Abilene Netflow application. They provide notification of incidents and Botnets. They are using the Arbor tools and provided pilot equipments so GigaPoPs can share a monitoring system and see a segmented view of their traffic in the common system.

International Networking

Heather Boyles of Internet2 presented information on international networking. The International Partner program forms partnerships among organizations with common goals, objectives, and constituencies. Trans-Atlantic connectivity includes over a total of 100 Gbps to GEANT2, CERN, SURFNET, NetherLight and other organizations. Trans-Pacific connectivity includes a total of over 70 Gbps to APAN, JGN2, AARNET,

KREONET, SINET and others. Connectivity to Latin America includes links to redCLARA, redCUDI, RNP, RETINA, REACCIUN-2, and Gemini/NOAO. Eighty-one international networks are reachable by Abilene.

In Europe, BGEANT2 provides a pan-European backbone. Each connecting NREN has 2 x 10G connections, one for IP traffic and one for point-to-point services.

Connectivity to Africa is provided by EUMEDCONNECT in North Africa. UbuntuNet is developing connectivity to Eastern Africa via fiber. A proposal is being developed for the NSF to provide connectivity to Western Africa.

In Asia, India (ERNET) was just connected. Pakistan, Singapore, Sri Lanka, and Nepal are discussing connectivity.

A common issue across international networks is inter-federation cooperation.

For further information on international networking, please see:

<http://international.internet2.edu>

AI: If you have any inputs on international networking please contact Heather Boyles at: heather@internet2.edu

Agency Plans for FY07 and FY08

DoD and Internet2 are working cooperatively on performance measurement across domains. DoD is interested in IPv6 and DNSSEC deployments. IPv6 has been mandated by OMB to be deployed by June 2008. DNSSEC is to be deployed by December 2008.

NIH/NLM is looking at communications to respond to disasters and crises. Topics of interest include very low bandwidth communications (e.g., text-messaging, walkie-talkie), and self-discovery and self-organizing of communications networks.

NSF is pursuing the GENIE and FIND programs. They are planning a program for software development to support application codes and data management and curation.

AI: George Seweryniak will prepare a JET presentation for the October 10 LSN meeting.

JET Initiatives for FY 2007

Discussion among the JET members identified areas of special interest for the JET over the upcoming year. These areas include:

- Implementation of IPv6 and DNSSEC in accordance with OMB guidelines
- Optical layer exchange points
- Testbeds: DRAGON, CHEETAH, UltraScience Net,... next steps
- International cross-domain issues including AAA and privacy
- Performance measurement
- ONT4 workshop: Planning the deployment of ONT results
- VOIP security
- Networking to support Grid applications

AI: James Cook will send the JET the URL for NIST guidance on VOIP security.

Network Performance Measurement

James Cook, Phil Dykstra, and Matt Zekauskas are working on inter-domain performance measurement. They are preparing the hosts to support performance measurement. Some network segments were not supporting 9000 Byte MTUs. They are now taking some measurements on some systems.

AI: Matt Zekauskas will send his performance measurement slides to the JET

AI: Matt Zekauskas and James Cook will discuss their performance measurement program at the October JET meeting.

Next JET Meetings

September: No meeting due to overlap with the ONT3 Workshop in Tokyo.

October 17, 11-2, NSF, Room 1150

November 15, 9-11:30, Tampa Marriott, Waterside, in coordination with SC06

December 19, 11-2, NSF, Room 1150: Will be held IFF needed.