

## JET Meeting Minutes

September 18, 2012

### I. Participants

|                   |                |  |
|-------------------|----------------|--|
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### Action Items

1. Linden Mercer will send JET contact information for the DARPA Coronet network.
2. Grant Miller will make up a draft JET briefing to the LSN Annual Planning Meeting for approval by Kevin Thompson and Vince Dattoria

### Proceedings

This meeting of the JET was chaired by Kevin Thompson of the NSF.

### International Research and Education Networking: Ed Moynihan

Ed Moynihan of Internet2 presented the current status of international research and education networks. Internet2 maintains an extensive staff to coordinate international networking to ensure access to globally distributed science facilities and to support the interests of Internet2 members. Points of contact for area networks include:

- Europe: Erik-Jan-Bos
- Asia/Pacific Rim: Jim Williams, Shuigen Xiao

- Middle East: John Chapman
- Latin American/Caribbean: Heidi Alvarez
- Africa: Ann Doyle and Erik-Jan-Bos

Internet2 maintains approximately 80 international partners to reach about 100 international networks. International exchange points in the U.S. include StarLight, MAN LAN, NGIX-East & WIX, AtlanticWave, AMPATH, PacificWave-S (LA), PacificWave-N (Seattle).

GEANT is a major partner in reaching Europe, Asia, Africa and South America. Geant's international IP connections are currently about 73 Gbps... The London Open LightPath Exchange is being implemented.

The Middle East is connected through EUMedConnect and the Arab States Research and Education Network (ASREN).

APAN is a major partner providing access to Asian and South Pacific networks. The TEIN3/TEIN4 networks provide connectivity in the Asian area. TIEN is now run by its members.

The development of cables along the African coasts is rapidly improving access to African RENs. The UbuntuNet Alliance provides access to Eastern & Southern Africa. WACREN provides access to Central & Western African countries.

RedCLARA/Alice2 are providing connectivity for South and Central America. A 2.5 Gbps link provides connectivity to Europe. C@ribNET provides connectivity to the Caribbean islands.

The briefing is available on the JET Website at:

<https://connect.nitrd.gov/nitrdgroups/images/b/b3/MoynihanJET-Sept2012.pdf>

## **JETnet Roundtable**

### **Internet2: Dale Finkelson**

Internet2 has completed the first three stages of its BTOP build. They are starting on the northern Tier build which will be completed in late winter or early spring. The devices to support the AL2S network are expected to be in-place by the Internet2 Member Meeting.

### **GLORIAD: Predrag Radulovic**

Canarie and StarLight are helping GLORIAD to augment their connectivity between Chicago & Seattle from 2 Gbps to 10.

### **TransPac/ACE: Jim Williams**

TransPac has in-place a 10 Gbps Tokyo to LA and 10 Gbps LA to Beijing. The Tokyo to LA circuit will support OpenFlow. There is the possibility of some US-Asia expansion based on need.

ACE has from Amsterdam to New York a 3 x 10 Gbps bonded circuit. Frankfurt to Washington DC (WIX) has a 2 x 10 Gbps bonded link that will be upgraded to a 3 x 10 Gbps bonded link by year's end. The London Open Light Path Exchange will implement a 10 Gbps circuit from London to New York City by the end of this month. This is a joint ACE-Internet2 circuit. Dante has funded a 10 Gbps link from Paris to New York City. The 10 Gbps dedicated circuit from Amsterdam to Chicago is being retendered at which time it will be converted to LAN PHY. This circuit is also being changed to

support OpenFlow. Dale Finkelson is engineering ACE now that John Graham has returned to London.

**DARPA: Linden Mercer**

DARPA is providing a wrapped optical layer circuit. Linden Mercer will send the contact information for this link.

AI: Linden Mercer will send JET contact information for the DARPA Coronet network.

**A-Wave: Don Riley**

A-Wave continues to negotiate a new 5 year agreement to support its users with 100 Gbps.

**NOAA: Mark Mutz**

NOAA' is running in Hawaii and is making connections. NOAA implemented a new aggregation router in Asheville. NOAA is bringing up the 4 domestic TICs that it is allowed. They continue to explore a shared TICAP in Hawaii.

**Exchange Points**

**MAN LAN & WIX: Dale Finkelson**

Both exchange points are aggressively pursuing dynamic circuits. They should be implemented in a few more weeks. They are investigating an Open NSA trial at WIX. Andrew Lee is providing engineering support for both.

**StarLight: Alan Verlo**

StarLight is implementing an upgrade for GLORIAD. Demonstrations are being supported for the October Internet2 Members meeting. A 100 Gbps exchange is being implemented to support SC12. StarLight is currently working to support numerous SC12 demonstrations.

**JET tasking: Kevin Thompson/Grant Miller**

AI: Grant Miller will make up a draft JET briefing to the LSN Annual Planning Meeting for approval by Kevin Thompson and Vince Dattoria

**Meetings of Interest:**

|                     |  |
|---------------------|--|
| October 1-4         | Internet2 Fall Member Meeting, Philadelphia, PA                                    |
| September 19-21     | LHCONE & LHCOPN Meetings, Oslo, Norway   |
| October 2-4         | Internet2 Member Meeting, Philadelphia, PA   |
| October 8-10        | CANS meeting: U. of Washington and NW GigaPoP (Chinese American Network Symposium) |
| October 11-12       | GLIF meeting, Chicago, IL  |
| October 23-25       | GENI Meeting, Houston, Texas   |
| November 10-16      | SC12, Salt Lake City, UT   |
| January 10-11, 2013 | HIC, Honolulu, HI  |
| January 12          | MPLS Workshop, Honolulu, HI  |
| January 12          | OpenFlow Workshop, Honolulu, HI  |

January 13-16 TIP2013 (joint APAN, ESnet & Internet2), Honolulu, HI  
<[www.hawaii.edu/tip2013](http://www.hawaii.edu/tip2013)> & <<http://events.internet2.edu/2013/tip/>>  
January 17-18 ESCC, Honolulu, HI  
January 17-18 IPv6 Workshop, Honolulu, HI  
January 17-18 Network Performance Workshop, Honolulu, HI  
March 19-21 GENI Meeting, Salt Lake City, Utah

**Next JET Meetings**

October 16, 11:00-2:00, NSF, Room II-415

November 14, 8:30-10:30 (MST), Salt Palace Convention Center, Room 250AB

(note: the Nov meeting is being held in conjunction with SC12)