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**Joint Engineering Team (JET) Meeting Minutes<sup>1</sup>**

**JET Meeting Minutes**  
**January 16, 2018; 12:00-2 p.m. EDT**  
**National Coordination Office**  
**490 L'Enfant Plaza SW, Suite 8001 (8th floor)**  
**Washington, DC 20024**

**Participants**

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<sup>1</sup> Any opinions, findings, conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Networking and Information Technology Research and Development Program.

### **Review of the Minutes of the November 2017 Meeting**

No corrections were noted by those in attendance. They will be posted after allowing 2 weeks for email comments.

### **Proceedings**

This meeting of the JET was chaired by Rich Carlson (DOE/SC) and Kevin Thompson (NSF).

### **Networks Roundtable**

#### **ESnet: Patricia Giuntoli**

Work continues on ESnet6. The Conceptual Design Review is scheduled for the end of this month. The March meeting would be a good time for an update to the JET as the Directors Review will be close on the heels of the Conceptual Review.

#### **Internet2 Network: Dale Finkelson**

No changes since the last meeting. Internet2 is continuing to do proofs of concept for its next generation with various partners. One of these is with NYSERnet on the capabilities, etc. of the Voyager box.

#### **NIH/NLM: Mike Gill**

No update.

#### **NOAA: Mark Mutz**

NOAA is completing migrations to inline for its TICAPs - a couple of sites in the DC area followed by the NOAA lab in Boulder. NOAA has had initial discussions with other DOC agencies on sharing its TICAP infrastructure.

#### **NRL: Linden Mercer**

NRL is trying to get extensions to tie into the MAX and the Ciena testbed.

#### **TransPAC and NEAAR: Edward Moynihan**

The TransPAC and NEAAR 100Gs are stable. Two updates:

- In December, they signed an MOU that included Internet2, Pacific Wave and partners in Asia which created the Asia Pacific Ring with a 100G Singapore<>Tokyo (via Hong Kong.) The ring is Seattle-Tokyo-Hong Kong-Singapore-Los Angeles-Seattle.
- NEAAR is working to install the hardware for an open exchange point in Lagos, Nigeria. WACREN is anticipated to be up and running by May 2018 with the new gear ready by them.

#### **Pacific Wave: Jonah Keough**

Pacific Wave is continuing work on its SDN/SDX deployment. Some 100G DTN resources are now available. It has signed the MOU for the Asia Pacific Ring.

#### **3ROX: Michael Lambert**

No updates for PSC or 3ROX. They are working with Internet2 to migrate the existing XSEDE mesh of layer 2 circuits to layer 3 VPNs. They hope to begin testing between 3 sites in the next few weeks.

#### **US Ignite: Glenn Ricart**

No update.

## **Exchange Points Roundtable**

### **PNWGP: Jonah Keough**

PNWGP is working with WRN and the PIR supplement to add additional POPs in Texas and Oklahoma.

### **MAN LAN & WIX: Dale Finkelson**

No new connections at either location. They continue to work with MAX on how to rebuild WIX.

### **StarLight: Joe Mambretti**

StarLight (SL) is building on what was accomplished and shown at SC17. For 2018, SL plans to take its box full of tools and provide services built on SDX and SDN techniques and architectures.

- SL is planning to do a number of experimental demonstrations with CERN and the wider LHC community.
- SL testing new transport protocols; it has been asked to support demonstrations at two upcoming March supercomputer conferences (Warsaw and Singapore.)
- SL is also working with Alex Szalay and his Open Storage Network. This will allow SL to provide 1 PB of storage for science projects.

## **Meetings of Interest**

January 21-24	<a href="#">PTC</a> , Honolulu, HI
January 23-24	<a href="#">HIC</a> , Kauai, HI
February 5-7	<a href="#">NANOG72</a> , Atlanta, GA
March 5-7	<a href="#">CENIC</a> , Monterey, CA
March 17-23	<a href="#">IETF101</a> , London, United Kingdom
March 26-29	<a href="#">APAN45</a> , Singapore
April 15-18	<a href="#">ARIN 41</a> , Miami, FL
May 6-9	<a href="#">Internet2 Global Summit</a> , San Diego, CA
June 10-14	<a href="#">TNC18</a> , Trondheim, Norway
June 25-27	<a href="#">NANOG73</a> , Denver, CO
July 14-20	<a href="#">IETF102</a> , Montreal, Canada
August 6-7	<a href="#">2nd National Research Platform Workshop</a> , Bozeman, MT
August 6-10	<a href="#">APAN46</a> , Auckland, New Zealand
September 20-21	<a href="#">18th Annual Global LambdaGrid Workshop</a> , Helsingør (Elsinore), Denmark

## **Enterprise Infrastructure Solutions (EIS) Update for the Research & Engineering Networking Community: Jeff Smith (GSA)**

According to GSA, EIS can benefit the JETnets with items such as optical wavelength, dark fiber, and Virtual Private Network services. EIS complements the existing relationships between the JETnets and academic R&E networks such as Internet2 and the Regional Optical Networks. It offers a source for multiple pricing when using commercial providers and can help streamline the acquisition of telecom and IT. The new contract also offers cloud and data hosting services.

### **Contract**

The new contract is a firm, fixed price IDIQ contract with provision for economic price adjustment for 15 years: a 5-year base plus two 5 year options. The contract's final 3 years are for transitioning to the follow-on contract. It includes support for federal mandates: IPv6, MTIPS (which is becoming MSS), etc.

## Process

When EIS is used, the contracting agency signs the contract with the provider rather than GSA.

## Services Provided

The contract was awarded to 10 providers with initial task order awards start dates of approximately October 2018 (pending GSA testing and certification.) Please see posted slides for detailed list of services by provider. Of interest to JETnets:

- Optical Wavelength Services
  - Speeds of 1 to 100 Gbps (some providers may offer higher)
  - Available for metro areas, regions in the US (domestic wavelengths), and internationally
- Dark Fiber Services
  - May be a fiber pair in a cable or the entire cable
  - Can be point-to-point or one-to-many locations
  - Optronics can be either provided by vendor or by the agency
  - Vendor can be contracted to provide design, implementation, and management of the fiber service
- Managed Security Service (MSS) – MTIPS replacement
  - Managed Preventions Service: monitoring of traffic
  - Vulnerability Scanning Service: both external and internal scanning
  - Incident Response Service: combats and documents intrusions, some proactively, some reactively
- Ethernet Transport Service
  - 10 Mbps to 100 Gbps (and perhaps higher)
  - Available as either point-to-point or point-to-multipoint
- Infrastructure as a Service
  - Secure access to cloud-based IT environments
  - Private cloud: virtual machines, storage, server hosting, security components, storage backup, continuity of operation and disaster recovery services
  - Data center augmentation: augments virtualized agency premises data center resources with dynamically expandable and contractible virtualized cloud-based resources
- Other services:
  - Virtual Private Network Service
  - Collocated Hosting Services
  - Platform as a Service: provides an environment for the development, testing and deployment of applications. Not priced in contract, would need to be put out to bid, then CLIN added to contract for all to use.

## GSA Tools

GSA has several tools available for pricing, tracking of contracts, task order support. GSA reviews any final agency solicitations to ensure compatibility with the EIS contract.

- See slide 17 for contact information for GSA EIS managers for larger agencies.
- Or contact Jeff for additional information: Jeff Smith <[Jeffreya.smith@gsa.gov](mailto:Jeffreya.smith@gsa.gov)>, 202 273-3561.

## Discussion

- Will this help get Ethernet into remote/isolated sites? Yes, but there may well be construction costs borne by the agencies.

## In-Person Meetings of the JET in DC

JJ Jamison presented his concern that the lack of face-to-face meetings with core JET members in the D.C. area was reducing the synergies that occur from in-person meetings. While JET does meet twice a year in person (at Global Summit and Tech Exchange), these are much broader meetings than the local JET meetings and have a different dynamic.

JJ proposed local, face-to-face meetings be held twice a year – perhaps in February and September. They would be announced far enough in advance so that members would make the effort to come downtown knowing others would be in attendance.

The group decided that the first such in-person meeting would take place in March to give sufficient time for planning.

## Next JET Meetings:

February	Feb 20, 12-2 pm EST, NCO/NITRD, Washington, DC
March	Mar 20, 12-2 pm EDT, NCO/NITRD, Washington, DC <i>nb: 1st local, in person meeting of the JET</i>
April	Apr 17, 12-2 pm EDT, NCO/NITRD, Washington, DC
May	Week of May 7. Day/date & time TBD <i>nb: This meeting will be concurrent with Internet2's Global Summit held at the Marriott Marquis San Diego Marina, San Diego, CA</i>