

# April 27, 2010

NTAC

4/27/10

In attendance: Jeff Boote, Eric Boyd, Cort Buffington, Pat Christian, David Crowe, Cas D'Angelo, Dave Farmer, Dale Finkelson, Randy Frank, Carla Hunt, Akbar Kara, Michael Lambert, Richard Machida, Dan Magorian, John Moore, Darrell Newcomb, Dave Pokorney, Dave Reese, Chris Robb, Linda Roos, Chet Ruszczyk, Paul Schopis, Martin Swany, Scott Taylor, Steve Wallace, Linda Winkler, Matt Zekauskas, Jason Zurawski,

1. Topics for Discussion
  - a. Cloud Computing (John Moore)
  - b. Phoebus cost estimate (Jeff Boote)
  - c. Architectural Review of BTOP proposal (Chris Robb)
2. Updates
  - a. Working Groups
    - i. Information Services (Martin Swany)
    - ii. ION (Linda Winkler)
    - iii. IPv6 (Michael Lambert)
    - iv. Multicast (Richard Machida)
    - v. Peering & Routing (Jeff Bartig)
    - vi. Performance (Carla Hunt & Chris Hawkinson)
    - vii. Transport (Steve Senger & Chet Ruszczyk)
  - b. Internet2 (Chris Robb)
  - c. AOAC (John Moore)
  - d. ARIN (Dave Farmer & Michael Lambert)

1. Topics for Discussion
  - a. Cloud Computing (John Moore)

EDUCAUSE cloud computing held a workshop in February. There has been conversation within the AOAC as well as other parts of the community regarding cloud computing. Randy Frank, Internet2, is leading a community effort to examine these issues.

Dave Reese indicated that they have been working with one provider and have set up separate private peerings for direct access into compute storage services.

Dave Farmer indicated that there is interest on his campus and he went on to say that it would be advantageous to use the national network. The main use case on his campus is archival storage.

Randy added that the cloud computing effort that has begun with bringing several universities together. The discussion regarding cloud computing has focused on aggregating services and saving money and it soon became more focused on how do we, as a community, gain control from the service providers. It was mentioned that these efforts were done well with the Internet but not done as well with ERP. John mentioned that the NTAC would be watching for outcomes from the group.

- b. Phoebus cost estimate (Jeff Boote)

Jeff indicated that he found the Phoebus budget estimates and the estimates were based on using the Cienas. In order to do full Phoebus deployment, need to do a full engineering of Phoebus along with re-engineering of the observatory. He indicated that he would present the budget to the NTAC after this work has been done. Chet mentioned that the Phoebus working group came to consensus on this plan at their meeting on Monday, April 26.

- c. Architectural Review of BTOP proposal (Chris Robb)

Chris showed some diagrams and maps from the R&E BTOP proposal. He showed the optical system map. Some in the group asked whether the routing/peering group review the U.S. UCAN IP network. This was not fully vetted because of a lack of time. The NTAC would like to talk about this on the next call.

2. Updates

- a. Working Groups

- i. Information Services (Martin Swany)

Martin indicated that there is a poster in the poster session summarizes the services. He went on to say that they have had interactions with GENI and proto-GENI about the services.

- ii. ION (Linda Winkler)

Linda Winkler indicated that there have been a couple of calls. The group is reviewing the Internet2 service description for rolling out ion service over MX platform and has provided feedback on implementation strategy for the service. Dale indicated that there have been a couple of iterations of the service document and the document has been updated. Dale and Linda Roos have been conducting calls to explain the new service and the response has been positive. John mentioned that the MPLS vs Sonet paper prepared by the NTAC at the request of the AOAC last fall had a couple of alternatives at the end. Has carrier-based Ethernet been considered? Linda Winkler indicated that the charter needs to be revisited with a focus on whether the group is focused on ION service only or some other deliverables.

- iii. IPv6 (Michael Lambert)

No report was available.

- iv. Multicast (Richard Machida)

Richard indicated that a multicast working group meeting had been scheduled for 4/27 and it was cancelled. He went on to say that there is a lack of a killer app for multicast. As long as there is demand for continued education workshops, the multicast working group will continue. Cas asked if the multicast working group would like to add IPTV to the charter. Richard will talk to Walt Magnusen about this. It appears that the role of multicast will become more focused on the campus.

- v. Peering & Routing (Jeff Bartig)

Jeff indicated that there hasn't been much recent activity in the peering and routing group. The group has been waiting for further details on the GEANT request for routing tags. He mentioned that there was discussion about how to proceed with the implementation of the combined CPS/TR service. Akbar mentioned that LEARN has made a formal request to have a Southwest CPS. Steve Wallace mentioned that CENIC will be assuming roles for the combined service. The Internet2 NOC will be the NOC for the combined service.

- vi. Performance (Carla Hunt & Chris Hawkinson)

Carla recognized Eric, Jeff and others for obtaining funding for perfsonar. There is a line in the president's budget for perfsonar. The performance working group had a great meeting on 4/26/10 and the notes will be posted on the performance working group wiki.

- vii. Transport (Steve Senger & Chet Ruszczyk)

Chet reported that the transport working group has a poster in the poster session showing three test cases of phoebus. The performance has been good and the next step will be testing with the astronomy community.

- b. Internet2 (Chris Robb)

Chris Robb briefly discussed the traffic report (posted in the document section of the NTAC wiki).

- c. AOAC (John Moore)

The AOAC welcomed new AOAC members including Stephen Hess, Charlie McMahon, Drew Perkins. They also held Chair and Vice Chair elections. The new Chair is George Loftus and the new Vice Chair is Stephen Hess. During the open AOAC meeting at the SMM, accomplishments for

the past year were presented and are available on the AOAC public wiki. At the open meeting, there was a discussion regarding cloud computing. This discussion commenced at the request of John Moore (NTAC Chair) as the NTAC is investigating cloud computing during 2010. Randy Frank reported that EDUCAUSE sponsored a cloud computing workshop in February 2010. As a follow-up to that workshop, Internet2 is convening a group of ten CIOs to discuss cloud computing. Other discussion topics related to cloud computing included during the open meeting included security, negotiating rates for multiple clouds, etc. Additionally, there was discussion regarding next steps for planning of the Internet2 network as well as network plans included in the R&E NTIA BTOP proposal for U.S. UCAN. During the closed session, the AOAC talked about how the AOAC will engage the NTAC, what Internet2 needs from the AOAC and what the AOAC needs to consider on behalf of the community. It was a good discussion and it will continue.

d. ARIN (Dave Farmer & Michael Lambert)

No report available.