FRGP updates

CHECO CIO Council
06-Mar-2012
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Acronym soup

- University Corporation for Atmospheric Research (UCAR; http://www.ucar.edu)
- National Center for Atmospheric Research (NCAR)
- Front Range GigaPoP (FRGP)
- UCAR Point of Presence (UPoP)
- Bi-State Optical Network (BiSON)

Questions and discussions throughout please – and as for acronym soup ingredients, please ask if I miss one or check a decoder page at http://bit.ly/acronym-soup
Reviews and updates

- Regional networking highlights
  - Front Range GigaPoP (FRGP)
  - UCAR Point of Presence (UPoP)
  - NWSC / BiSON

- National networking highlights
  - WRN
  - Internet2
  - NLR
  - The Quilt, Inc.
Front Range Giga PoP (FRGP)

- 12 years of operation by UCAR Network Engineering and Telecommunications Section (NETS)
- 13 Members
- Internal UCAR audit
- http://www.frgp.net
FRGP members

- Colorado School of Mines
- Colorado State University System
- National Oceanic and Atmospheric Administration (NOAA-Boulder)
- State of Colorado
- United States Antarctic Program
- University Corporation for Atmospheric Research
- University NAVSTAR Consortium (UNAVCO)
- University of Colorado Boulder
- University of Colorado Colorado Springs
- University of Colorado Denver
- University of Denver
- University of Northern Colorado
- University of Wyoming
Front Range GigaPoP (FRGP)

- Equipment refresh
- Recent FMC decision on new switch/router
  - EAGLE-Net contribution
  - NOAA helping with spares
  - Just another example of the kind of collaboration that helps everyone get more collectively (in this case, router hardware) than we might have otherwise been able to
- Colorado Broadband roundtable – Jeff attending meetings on behalf of FRGP/UPoP
  - Strategic plan and new staff person in OIT to help with this effort
UPoP

- UCAR Point of Presence
- [http://upop.ucar.edu](http://upop.ucar.edu)
- 5 years of operation
- 21 members
The UCAR Point of Presence (UPoP - upop.ucar.edu) started in May 2007 with 10 members.
UPoP members

- ARTstor
- Auraria Higher Education Center
- Colorado Association of Research Libraries
- City of Boulder
- City and County of Denver
- Colorado Community College System
- Colorado Telehealth Network
- Community College of Denver
- Colorado Department of Higher Education
- Colorado Mountain College
- Denver Health and Hospital Authority
- DIA
- EAGLE-Net
UPoP members

- Fort Lewis College
- Front Range Internet, Inc. (two school districts)
- Metropolitan State College of Denver
- Open Media Foundation
- St. Mary's Academy
- Science and Technology in Atmospheric Research (STAR) Institute
- University of Colorado Hospital
- University Information Systems (UIS)
UPoP

- Continued QMOE connectivity growth
  - Adding second 1G at 1200 Larimer location
- Frequent discussions from a variety of groups – e.g.,
  - Colorado Christian University
  - WICHE still pending
- EDUCAUSE left UPoP
  - Denver CCC conference Nov-2012 (not same support as for E09?)
  - Discussions with new CIO
NWSC

- NCAR Wyoming Supercomputing Center
  - [http://www.cisl.ucar.edu/nwsc](http://www.cisl.ucar.edu/nwsc)
- Occupied and staffed
  - Data center switch/routers installed
- Supers in over summer 2012
- BiSON fiber for NWSC in place Dec-2011
BiSON to NWSC

- Initially three 10G circuits active
- Options for dedicated 10G connections for high performance computing to other BiSON members
- System is engineered for 40 individual lambdas
  - Each lambda can be a 10G, 40G, or 100G connection
- Independent lambdas can be sent each direction around the ring (two ADVA shelves at NWSC – one for each direction)
  - With a major upgrade system could support 80 lambdas
  - \[100\text{Gbps} \times 80 \text{ channels} \times 2 \text{ paths} = 16 \text{Tbps}\]
Internet2

-US UCAN in progress
  - Connect Community Anchor Institutions (CAIs)
  - Ongoing discussions with RONs on impacts to business and technical models
  - U.S. UCAN selected 14 Affiliate Program Participants To Support Community Anchor Institutions Nationwide

-DYNES
  - NSF-funded project to deploy a hybrid packet and circuit architecture composed of Internet2's ION service and extensions over regional networks to US campuses
  - FRGP and UCB
  - http://www.internet2.edu/ion/dynes.html
National LambdaRail (NLR)

- [http://www.nlr.net](http://www.nlr.net)
- Class B Research and Education Collaboration (CBREC) – ongoing meetings
- CENIC will provide NOC services now
Various related

- Colorado Telehealth Network (CTN):
  - many members connected, continued rollout
  - CenturyLink (CL) continues to operate CTN network
  - Working on ongoing funding support and eventual sustainability

- EAGLE-Net
  - Refer to Perry Movick's update for this group today

- SC13 in Denver
  - Working again on CCC fiber

- N-Wave: up and running; continued connectivity per plans

- WRN: University of Hawaii joined
The Quilt, Inc.

- [http://www.thequilt.net](http://www.thequilt.net)
- Statenets – overlap with Quilt, decisions pending
- CEN new member – membership categories and scale questions
- Working groups, coordination on several strategic planning efforts including
  - BTOP progress from members
  - Telepresence working group
  - ‘above the net’/new service working group
  - CIS RFP 2012 underway (ready in May 2012 with new AQPs)
  - Advocacy workshop
Advocacy

- Messages, champions, and stories
  - What are your key messages and do your champions understand those?
  - A good time to think about things along these lines is when you are not under attack

- What does CHECO CIO Council need from us?
  - What would help with communication?
  - How to best promote awareness and understanding of RONs generally and FRGP related specifically?
  - Links, documents, summary statements, and so on that could help you more easily make our case if asked?
  - Continued discussion and follow up … looking for your input, feedback, and questions
Discussion

✳ Any follow up questions or feedback on items covered?
✳ Other items?

Thank you!