NTAC Peering and Routing Working Group minutes 3/19/2019

1. Agenda Bash
   a. No bashing was required.
2. Routed Services Futures Community Report – Linda
      i. Convened a routed services futures community group from regionals and campuses as well as I2 staff.
      ii. Met through the fall.
      iii. James Deaton (GPN) and Dave Lois (WiscNet) were co-chairs.
      iv. NAOP endorsed the report, and that's where we are now.
      v. Implemented one recommendation: change TR-CPS name to I2PX.
   b. Some recommendations will take some work and specific discussion with the community.
   c. Linda Roos: James Deaton: anything to add?
   d. James Deaton: There was much good feedback at I2 Tech Exchange meeting.
   e. Dale Finkelson: There were a number of places where future work was identified as well as desired outcomes.
   f. Linda Roos: some recommendations will require much community input.
   g. James Deaton: expecting bulk of feedback will come from this group.
   h. Tony Brock: From I2's perspective, what are the specific things that this working group can address and provide deliverables?
   i. Linda: Great question – will likely need some time to develop.
   j. Tony: curious to see that as performance/automation/instrumentation is implemented, how can this be done *campus to campus*, as opposed to just RON to RON.
   k. Dave Farmer: two recommendations at the end:
      i. Community approach to CDNs
      ii. Access to core internet services including DNS and NTP
   l. Dave Farmer: Maybe the start is to do a survey. Who has root servers, CDN boxes, etc; so that we could learn what assets exist in the community.
   m. James Deaton: who would be in a position to host such things? If I2 could take advantage of distributed RON and campus facilities, that would be good.
   n. Michael Lambert: sometimes we are prohibited from divulging such information.
   o. Dave Farmer: UMN specifically does not sign such prohibitions. Google for example has relaxed such requirements lately.
   p. Discussion of some specific caches and peerings.
   q. Jeff Bartig: noted that I2 is often in expensive colos. Generally might make more sense to put caches in regionals. Cheaper colos, closer to eyeballs, etc.
   r. Matt Valenzisi: most RONs already have caches…
   s. Dave Farmer: would be happy to open caches to I2 community
   t. Tony Brock: place to start is an assessment. Realize not all can divulge. Can I2 put together a survey?
   u. Dave Farmer: one answer could be "I may have one but I can't tell you."

     v. Linda Roos: would be glad to build the survey but would need help writing questions.

    w. Dave Farmer: also include RON community, not just NTAC. (General agreement.)

    x. Dave Farmer: what else to go in survey?

    y. Schmiedt/Bartig: routing table reconfiguration discussion needed.

    z. Farmer: need community discussion about route preference, etc. Not everyone localprefs R&E paths or prepends.

    aa. Tony Brock: want to be explicit about ensuring that Net+ prefixes arrive in CPS table with preference over commodity routes.

    bb. Dave Farmer: some traffic is going over R&E coast-to-coast instead of over more direct peers that exist in CPS.

    cc. Jeff Bartig: campuses will be impacted by a change. Must involve community.

    dd. Dale Finkelson: this is something a small subset of this working group should address.

    ee. Dave Farmer: Should this be surveyed?

    ff. Dale Finkelson: probably not; once a small group really outlines the options it will be easier to engage the community.

    gg. Linda Roos: would welcome community solutions including training and hosting. Everything is open.

    hh. Tony Brock: Solicit involvement at CIO level so it's an ongoing/living thing.

    ii. Dave Farmer: has everyone in connector community seen the report?

    jj. Linda Roos: they will in a few days.

    kk. Noted that there are still version control issues in the document. Will clean up.

3. Potential topics for investigation:
   a. See above

4. Any feedback to Dave Farmers email on pmacct?
   a. Dave Farmer: if you set up RPKI validator and tag routes, you could do the same thing with any netflow system; tag routes instead of drop them. Could then do netflow analysis based on that.
   b. Karl Newell: working on spinning that up now!

5. Update on peering and TR-CPS/I2
   a. See above/below.

6. Network Weather Update - Trends and Coming Events
   b. Jeff Bartig: completed replacing MX960s at Equinix Ashburn with 10003's and 5100's to give short term access to 100G ports rather than investing in old 960s until NGI is in place.
   c. Similar upgrade at Equinix Chicago.
   d. Had discussion with Apple 100G in Ashburn in Chicago. Google to 200G NY, Ash, Chicago. Amazon R&E 200G Ashburn Chicago as well as on TR-CPS. Fastly 200G Ash Chicago. Equinix San Jose now live. Decom Equinix Palo Alto; 90 day clock counting down.
   e. Dave Farmer: What happened with apple weirdness on middle of afternoon March 5?

  f. Jeff Bartig: vague confirmation from Apple that they use limelight CDN. Apparently briefly filled PNIs above 80% and Apple shifted traffic elsewhere. Appears that Apple was over-aggressive on traffic engineering. Larger interfaces will help in the near future.

7. I2 Network update

  a. See above.

8. AOB

  a. Tony Brock: Thanks to Linda Roos and James Deaton for joining the discussion.

  b. Linda Roos: Very much look forward to working with everyone!