

NTAC Peering and Routing Working Group

5/21/2019 Call Notes

1. Agenda Bash
 - a. There was no bashing of the agenda.
2. Update on peering and I2PX/I2
 - a. Jeff Bartig: POP decommissioning at equinix Palo Alto. Now Completely vacated.
 - b. New service is at Equinix San Jose.
 - i. Now have 10G metro to Equinix Palo Alto PX (down from 2x 10 when co-located at Palo Alto)
 - ii. But have 3x 10G to local PX at Equinix San Jose
 - iii. Aggregate 40G capacity, up from previous 20G.
 - iv. Peering up with Google and Fastly
 - c. Have 100G to Akamai at Chicago, NY, and Ashburn
 - d. 2x 100G between R&E and in Chicago and Ashburn
 - e. 2x 100G to Google in NY. Working on Chicago and Ashburn next.
 - f. Working with Fastly on 100G in NY, Chicago.
 - g. Matt Valenzisi: What parts of Amazon are on Net+ vs. I2PX?
 - i. Jeff Bartig: Net+ has peers in Ashburn, Chicago, Seattle; I2PX has peerings in 7 locations. This keeps Amazon in the R&E table.
 - ii. Matt V: this works; he tells customers that they will go to Amazon the best way, but perhaps over different ASes.
3. Network Weather Update – Trends and Coming Events
 - a. Today is deadline for nominations for design workshop in July.
 - b. Work is progressing on next gen network project. RFP coming to conclusion.
 - c. On packet/ L2L3, have completed RFI process.
 - i. Had face to face presentations in San Jose with responding vendors.
 - ii. Had community members in attendance.
 - iii. Will feed into community design workshop in July.
 - iv. Will result in RFP for new routing and switching vendors.
4. I2 Network update
 - a. See above
5. Any Other Business
 - a. Tony to Jeff: any updates on Google's plan to filter based on IRR?
 - i. Jeff: not yet; hopefully at next NANOG. Nothing in peering portal that looks new.
 - b. Tony: Do we have update on connector survey?
 - i. Dale: it is close to completion. Speculate that it may be ready in early June.
 - c. Tony: is there any urgency in moving peers from Net+ to I2PX?
 - i. Jeff Bartig: Box and Microsoft are leaving R&E table. Will be moving to I2PX.
 - ii. Tony: **would like working group to be thinking about the use of communities or other ways to manipulate traffic.** If anyone has other proposals or ideas to get options on table so that we can begin working towards decision. Approaching 9 months on this decision.
 - iii. Jeff: there are institutions that do not have I2PX connectivity, and others that prefer R&E routes. Some concern that this may cause traffic to shift to less desirable paths like paid transit.
 - iv. Tony to working group: **please reach out if you have concerns about potential impact your organization's connectivity.**
 - v. Jeff: will be working on getting a test point

- vi. Tony: let's not let all the work fall on Jeff; let's help him; we are a **working** group..
- vii. Tony: **need to get a note out to the community so that concerns could be voiced.**
- viii. Matt V: Have we published a list of affected prefixes?
- ix. Jeff: not specifically, but it is Net+ prefixes in the R&E table.
- x. Matt V: Can you send us the list of prefixes? Jeff: Yes.
- d. Tony: Precision Time Protocol (PTP). Andrew Gallo uses it for specific research cases on his campus.
 - i. Does anyone else use it? (no answers)
 - ii. **If anyone sees a need to utilize at national scale, please let us know.**
- e. Tony: What is policy on Jumbo frames on connections?
 - i. Jeff:
 1. Backbones have MTUs greater than 9K.
 2. I2PX: commercial peers use 1500.
 3. One exception: apple once asked for 9K but never utilized.
 4. On participant side, all MTU are 1500.
 - ii. Jeff: on R&E side MTU 9K is generally encouraged.
 - iii. Tony: so there is generally no benefit to having it turned on for I2PX because other will not be using it?
 - iv. Jeff: correct.
 - v. Tony: has a dream of a PerfSonar node in Amazon, so have a desire to see Jumbo frames work on that path.
 - vi. Jeff/Matt: Amazon is supporting 9K frames on DirectConnect.
 - vii. Jeff: MTU Mismatch can cause problems.
- f. Tony: Is multicast used to any Net+ services today? Can we see method of determining utilization?
 - i. Jeff: not aware of multicast with any Net+ peers?
- g. Dale: Tony, you might ping Matt Z. about your Perfsonar in Amazon dream.