NAOPpag Notes

May 12, 2021

In attendance: Dee Childs, James Deaton, Andrew Gallo, Bernie Gulachek, Jonah Keough, Derek Masseth, Shawn McKee, Dan Schmiedt, Tracy Smith, Jim Stewart, Scott Valcourt, Rod Wilson

Internet2 staff: Paul Howell, George Lotfus, Linda Roos, Mike Simpson, Rob Vietzke, Steve Wallace, Chris Wilkenson

Unable to attend: Sarah Christen, Mike Corn, Michele Norin

Agenda

•Welcome (James Deaton, NAOPpag Chair)

•Discussion Topics

1. Network Routing Security (Paul Howell, Steve Wallace)

Paul provided background on Internet2 Network Routing Security. In 2016, Internet2 reviewed the four requirements of MANRS and Internet2 joined MANRS in 2017. Then, Internet2 began several initiatives to raise awareness about MANRS within the community. RPKI, a part of MANRS, makes it easy for people to protect their networks from hijacking. An agreement is required for the protection. As part of raising awareness of routing security within the community, Internet2 has been promoting the use of RPKI. Recently, the Internet2 Security team created a routing security report showing IRR compliance and RPKI use. The report shows where the community is trailing. An important takeaway is that without correct IRRs, networks will reject those routes over Internet2. Users may not notice because the return path may not take I2PX. RPKI protects against route hijacking and RPKI requires an ARIN agreement. Andrew mentioned that the community has plateaued on compliance, especially around the agreement. The institutions don’t know that they need to sign the agreement so need executive sponsorship. Being in alignment with MANRS protects overall routing security for the community. The group discussed two questions: How do we tell the community this story so people pay attention? What are the specific actions to get community in motion? One suggestion was to put together a working group to walk people through this. The group recognized that there are many topics including RPKI, MANRS, v6 and there would be a need to prioritize the work of the working group. Tracy encouraged the group to identify the message to the community and propagate it out.

The reports are found here: <https://github.internet2.edu/ssw/IRR-report/tree/master/Connectors>

2. Follow-up on Multicast discussion from last meeting (Chris Wilkinson, Andrew Gallo)

Chris provided background on the community multicast working group and mentioned that the working group has created a paper outlining their perspectives on multicast. He also mentioned that Interdomain Multicast isn’t supported on the new NGI platform. There is very little use of Interdomain Multicast. EUMETSAT, one user, sends weather data to several sites in the US and we aren’t aware of other use cases for hard science data. GEANT is facing a similar issue as they are supporting EUMETSAT and they have made a decision to transition to unicast. ARENET has turned off multicast.

Discussion ensued around the question of Internet2 continuing to support interdomain multicast on the backbone. Bernie suggested that we follow the data and also indicated that there are two ways to look at this (1) researcher who might come along to use it and we need to be ready, or (2) can’t afford to leave all protocols open, have to learn to manage a network in the right way with the risks that are out there. We need to consider flipping the default to not having multicast available unless someone asks for it. The group agreed that they would be comfortable to make a policy decision to not support interdomain multicast until a use case appears. Tracy reiterated that nothing would preclude the community from supporting in the future if there were a project that requires it.

Chris and Andrew will review the survey data when the survey closes and will report to the NAOPpag on future calls.

3. NGI Progress (Chris Wilkinson)

Chris Wilkinson provided an update on NGI progress, mentioning that the 400G backbone is 95% deployed, with both transport and router-to-router connectivity at layer 2 and 3 implemented. Internet2 has been focused on testing and validation for the past month or so. The Shim phase will begin soon, and connectors’ services will be transitioned through the summer, finishing by September.

4. Other topics

Rob mentioned that Internet2 had gathered a number of community focus groups to discuss research infrastructure as it relates to national projects and to draft a paper requesting funding for the research infrastructure. The focus groups considered the impact of expanding world-class broadband to community anchors, expanding the ability to engage and empower every mind. After the focus group discussions, a paper was created, articulating a goal to ensure that the US remains competitive and a leader in the world by supporting research infrastructure. The next step will be to find advocates for the ideas articulated in the paper.

The NAOPpag’s next meeting is on June 9.