Towards (online) Interop testing for BRISKI + ACP Protocols

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IETF 116: 2023-03-29

ANIMA Working Group
Online ANIMA Interop Testing History

- Efforts around IETF 108, 109, 110 and 111, we did Pledge<->Registrar, and Registrar<->MASA, using Internet connectivity.
  - Some physical pledges are hard to poke, live in labs
- Revealed a bunch of voucher issues, mis-understandings, and RFC8995 and constrained-voucher issues
- Could not do any discovery testing: no GRASP, no Join Proxy, no mDNS.
- Much easier to do with week-long Hackathon before IETF meeting, rather than weekend “marathon” Hackathon
- Pretty much died off in 2022 as we returned to in-person meetings, likely due to attrition from some participants, and time pressure.
History of HackVPN

• Starting around IETF104, the IETF NOC team started offering a L2 VPN service, using Raspberry PIs, to connect remote users to the Hackathon network.
• Much interest during pandemic.
• In late 2021ish, moved from RPI4 to 2-port Mikrotik, and a few of us got that working.
• Gives access to IETF, Eduroam, and wired IETF network.
• It’s a L2 VPN, so **GRASP** and **mDNS** works
Current status of HackVPN

• The VPN end-points are still alive, but NOC team could not maintain them during Pandemic. Some staff-time conflicts with actual network/technology needs *of* pandemic.

• VPN connectivity to Internet gets packed up 10 or 15 days before meeting, and is alive for meeting, and then dies again for awhile after meeting.
  – Much discussion with NOC about options.

• We don’t actually need Internet connectivity exactly.
  – In some ways lack of it is way closer to Pledge experience anyway!

• We just need L2 connectivity with multicast support.
Putting up ZeroTier

- There are a hundred third party, non-standard, (not-RFC IPsec) VPN solutions.
- ZeroTier is first one that I saw that supported the mikrotik boxes, as well as Linux containers, VMs, and Windows, and...
  - Seems to use high-UDP port numbers
  - Seems to be mesh network
- First 25 nodes are free, if we get beyond that, we have to pay, but that’s a good problem to have.
- Please contact me mcr at sandelman dot ca for the network ID to join.
NIST/NCCoE IoT onboarding

• This effort started in July 2022, and is expected to go to July 2023.
• There are two BRSKI-based efforts, second one is in progress
  – One is mine (“Minerva”), and the other from NquiringMinds (UK)
  – The Thread based effort may be using RFC8995 for application onboarding, but it’s very unclear
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Discussion?