Towards (online) Interop testing for BRSKI + ACP Protocols

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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?