

IETF 114 – v6ops WG Notes

Tuesday 7/26, 10-12pm, Liberty C

Administrative and Warren's Talk

- AD Warren Kumari asked for candidates for the upcoming cycle. He is open to give suggestions about the role

Individual Drafts Presentations

- Unintended Operational Issues With ULA, draft-buraglio-v6ops-ula
 - Nick Buraglio (ESnet) presented. The draft is intended to identify existing ULA issues and no solutions have been proposed. It was noted that RFC6724 has not been totally deployed.
 - Ted Lemon asked if this implies a real operational problem.
 - Jen Linkova mentioned that this is a real problem since with dual stack you are not using IPv6. Maybe a solution to the problem is to use GUA instead of ULA. Operation guidelines could also be included in the draft.
 - Mark Andrews said that we need help from the vendors to automatically install local prefixes. But Nick Buraglio highlighted that it is not possible since he did try for some years.
 - Russ White agreed that vendors should fix it, but the solution with GUA may be good but this also affects GUA space.
 - Eric Vyncke agreed about the unexpected behavior but he does not believe that ULA is so much needed for enterprises.
 - Cheng Li asked for mailing list discussion on this topic.
- Just Another Measurement of Extension header Survivability (JAMES), draft-vyncke-v6ops-james
 - Justin Iurman presented. The draft is about the test conducted on EHs. The measurements will be continued.
 - Nalini Elkins considered this work interesting. She is especially interested in understanding the reason for packet drop with EHs. For example, drops can also happen because of bad network configuration.
 - Fernando Gont asked what is the length of the EH chain since it can be extended. He expects the big drop for 64bytes. Justin Iurman said that the length can be extended. Fernando Gont also explained the difference between UDP and TCP since for TCP the EH chain is longer.
 - Jen Linkova asked if it is used TCP SYN packets and supported the analysis on the EHs.
- Selectively Applying Host Isolation to Simplify IPv6 First-hop Deployment, draft-xiao-v6ops-nd-deployment-guidelines
 - Xipeng Xiao presented. The draft is to summarize the known ND issues and solutions to provide a 1-stop reference for ND, and to provide guidelines for IPv6 First Hop deployments

- Jen Linkova said GUA isolation does not solve some problems such as on-link security issues
 - Xipeng Xiao said that the draft is providing a list starting from the strongest isolation. So if on link security is an issue, a stronger isolation like P2P or P2MP link isolation plus subnet isolation may be selected.
 - Jen Linkova also asked what happens if hosts would need to communicate with each other.
 - Xipeng: for each isolation method, we provide the applicable scenarios. You can choose the right isolation method (or isolation) based on the scenarios
 - Jen Linkova highlighted that Proxy ND is experimental and not standard
 - Xipeng Xiao: will look into it and make it clear in the draft
- Framework of Multi-domain IPv6-only Underlay Network and IPv4 as a Service, draft-xie-v6ops-framework-md-ipv6only-underlay
 - Chongfeng Xie presented. The draft is about IPv6-only underlay network in multi domain scenarios
 - Jen Linkova did not agree on the requirements on IPv6-only and SRv6 and the missing security issues.
 - Chongfeng Xie said that the draft assumes the transition towards IPv6-only and SRv6 is considered in current version. SRv6 is not necessary for IPv6-only, this requirement will be revised according to the comments of the mailing list. The solutions do not imply security issues.
 - Ron Bonica asked whether this is for ISP networks. Since not every network requires TE, he questioned why SRv6 is a requirement.
 - Chongfeng Xie is available to discuss offline the requirement of SRv6 since it is not closely related to the framework.

Operational Discussion

- Cisco Enterprise deployment
 - E. Marie Brierley presented
 - The IPv6 corporate network transition was presented from the perspective of business program level not technical level. The focus is to communicate areas for technical solutions as observed from the transition business program.
 - The main recommendations were about the impacts on external and internal systems, the determination of strategy, the method for flow transition and to keep security parity with IPv4. Several suggestions were also provided in the presentation.
 - Xipeng Xiao asked what is the biggest challenge. E. Marie Brierley mentioned that it is to sell it inside the company (for many departments) in order to find key people and influence
- Alibaba Cloud deployment
 - Linjian Song presented
 - Alibaba started to deploy IPv6 in the core infrastructure in 2018-2019. IPv6 trial up to 2017.
 - The motivation is IPv4 exhaustion and government influence.

- IPv6 performance measurement were also collected. Dual-Stack adaptation for Apps were also mentioned.
- Main challenges: legacy network equipment and applications.
- Alibaba can play a key role because it could convert IPv4 to IPv6.
- Happy Eyeballs has a value and it has been adopted.
- IPv6 MTU can be an issue for network nodes so MTU has been restricted to improve the experience. Alibaba is also thinking about SRv6.
- Fred Baker questioned whether it is practical to recommend sunset of IPv4. Linjian Song responded saying that running only IPv6 is more efficient than running Dual-Stack
- Michael Ackermann asked whether IPv4 price a serious problem. Linjian said IPv4 address is getting higher and higher
- Chongfeng Xie asked how IPv6-only is possible if everything Dual-Stack is still applied.
- Eduard Vasilenko asked if there is a plan to translate from 4 to 6.