

IPv6 Performance and Diagnostic Metrics Version 2 (PDMv2) Destination Option: IETF 115

N. Elkins, M. Ackermann, A. Deshpande,
T. Pecorella, A. Rashid

Agenda

- SECDIR early review done
- Implementation proceeding (changing for scalability)
- IAB workshop on management techniques in encrypted networks
- Continuing EH testing on the Internet
- Thoughts on how to proceed

Implementation

- Changing to eBPF as core method rather than patches to kernel (eBPF operates in user mode)
- eBPF can also support Windows
- Testing eBPF PDMv1 implementation on Ubuntu (at Hackathon)
- Working on PDMv2 in eBPF

IAB Workshop: Encrypted Mgmt Techniques

- How to manage encrypted networks a big problem
- PDMv2 may be able to help
- As soon as we have a stable implementation, will try to collocate at various points in the Internet

Can IPv6 Extension Headers Be Used on the Internet?

- Controversy in v6ops for many years
- A number of studies showing that IPv6 extension headers “don’t work”
- Studies (by and large) sent “fake” IPv6 extension headers to Alexa top n sites
- If this is true, our work is really for naught

Our work

- Probably likely that EH's "work" depending on topology
- Testing Using CDN and cloud providers
- Presenting 2 drafts in v6ops
- Side meeting to discuss on Thursday (18:00 – Richmond 6)
- See us at Hackdemo

Plan to Proceed: PDMv2 Draft

1. There are 3 parts to the communication for PDMv2:
 - Secondary to Secondary (S-S)
 - Primary to Secondary (P-S)
 - Primary to Primary (P-P)
2. The current PDMv2 draft is S-S. S-S protocol stands on its own (independent from P-P and P-S)
3. The main purpose of P-P and P-S is to establish a common context / secret between all the communicating entities

Ready for Last Call?

- Thoughts???
- Questions???