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???