Measurement and Analysis for Protocols

Proposed Research Group (maprg)

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co-chairs <maprg-chairs@ietf.org>:
Mirja Kühlewind <mirja.kuehlewind@tik.ee.ethz.ch>
Dave Plonka <plonka@akamai.com>

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Administrivia

- Proposed Charter: https://datatracker.ietf.org/group/maprg/charter/
- Mailing List: maprg@ietf.org
  Subscriptions: https://www.ietf.org/mailman/listinfo/maprg
- Today's slides: https://datatracker.ietf.org/meeting/95/session/maprg/
- Remote participation
  Audio: http://ietf95streaming.dnsalias.net/ietf/ietf956.m3u
  Meetecho: http://www.meetecho.com/ietf95/maprg

Agenda

- **Introduction & Overview** – Dave Plonka and Mirja Kühlewind, 10m

- **ICANN Testbed for Middleboxes** – Paul Hoffman, 5m
- **A Characterization of IPv6 Network Security Policy** – Mark Allman, 20m
- **IPv6 Prefix Intelligence** – Dave Plonka, 15m
- **Support of IPv6 Extension Headers in the IPv6 Internet** – Eric Vyncke, 10m
- **Can We Run the Internet Over UDP?** – Brian Trammell, 10m
- **Open Discussion** – Dave Plonka and Mirja Kühlewind, ~15m

Our Proposed Charter

Premise: The deployment and operation of Internet protocols is clearly sometimes hindered by Internet conditions either unforeseen or otherwise unaccounted-for during development and standardization.

Protocol deployment, operation, and ongoing [re]design can benefit from insight provided by measurements that discover those current Internet conditions.

Likewise, the measurement community's studies are significantly relevant (to the IETF community) confronting obstacles that today's Internet conditions presents to existing IETF-defined protocols.

Our Proposed Charter

The *Measurement and Analysis for Protocols Research Group (maprg)* will focus on two topics:

(1) Discussion of measurements and techniques that would inform *the development, deployment, and/or operation of existing IETF-defined protocols.*

(2) Presentation of measurement results that inform *same.*

Presentations and work items must be obviously or explicitly “mapped” to those aspects of IETF-defined protocols, existing or works-in-progress.

Our Proposed Charter

- Our research group is meant to foster introductions of prospective collaborators, their resulting collaborations, and the sharing of the measurement techniques and their results.

- Membership is open to all interested parties.

- While maprg is an IRTF research group rather than an IETF working group, it will work in loose cooperation with working groups.

Charter Review

- Suggest wording changes for clarification?

  i.e., maprg intends to deal specifically with measurements applied to *discovering* characteristics of existing protocols in operation and of the Internet environment(s) affecting their design or operation.

  Measurement apparatus, measurement frameworks, new measurement protocols, or transmission and storage of measurement data *alone* are currently intended to be out of scope.

  We will take this topic to the mailing list.

Possible Discussion Topics

Which protocols does a given measurement “map” to?
Identify the protocol(s) to which the work applies in design or operation.

Possible Discussion Topics

- **MAP: IPv6, IPv4:**
  What should be measured to determine where we are unnecessarily reliant on IPv4? *e.g.,* Geoff Huston proposed “happy DNS eyeballs” upon discovering DNS infrastructure was performing poorly when presented with both v4 and v6 connectivity to Name Servers. https://labs.apnic.net/presentations/store/2015-10-04-dns-dual-stack.pdf

  sunset4 wg meets Tuesday @ 17:40
  https://datatracker.ietf.org/wg/sunset4/charter/

Possible Discussion Topics

- **MAP: HTTPS, SSL, TLS, TCP**
  Opportunistic encryption in general: what to measure?
  How common is keyless SSL? **TCPINC** meets Thursday @ 17:30
  https://datatracker.ietf.org/group/tcpinc/charter/

  lurk (Limited Use of Remote Keys) BoF meets Tuesday @ 14:00
  https://datatracker.ietf.org/meeting/95/agenda/lurk/

  How often is encryption separated from authentication? *e.g.,*
  https://blog.cloudflare.com/keyless-ssl-the-nitty-gritty-technical-details/