

Measurement and Analysis for Protocols

Research Group (maprg)
Chicago, March 28, 2017

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

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See RFC 3979 (BCP 79) for definitions of "IPR" and "contribution" and for the detailed rules (substituting "IRTF" for "IETF").

Administrivia

- 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/98/session/maprg/>
- Remote participation
Audio: <http://ietf98streaming.dnsalias.net/ietf/ietf986.m3u>
Meetecho: <http://www.meetecho.com/ietf98/maprg>
Jabber: xmpp:maprg@jabber.ietf.org?join

This Meeting's Notes

- Call for Contributions:
We, again, ran a CfC via mailing list, requesting abstract weeks in advance; receiving 14 proposed contributions, 9 of which will be presented in full today.
 - Thanks for the proposals!
 - Please supply abstract with details!
 - Again, we will include “ads” at the end of these Intro slides for projects and works for which there wasn't time in the agenda.
- Next meeting: share ideas in the mailing list.

Charter Notes

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.

Agenda (i)

- **Introduction & Overview** – Dave Plonka and Mirja Kühlewind, 5m
- **Refresing MLab: www.measurementlab.net** – Matt Mathis, 5m
- **LE codepoint: preliminary results and ongoing work in the IETF** – Gorry Fairhurst, 10m
- **TCP ECN: Experience with Enabling ECN on the Internet** – Padma Bhooma, 20m

Agenda (ii)

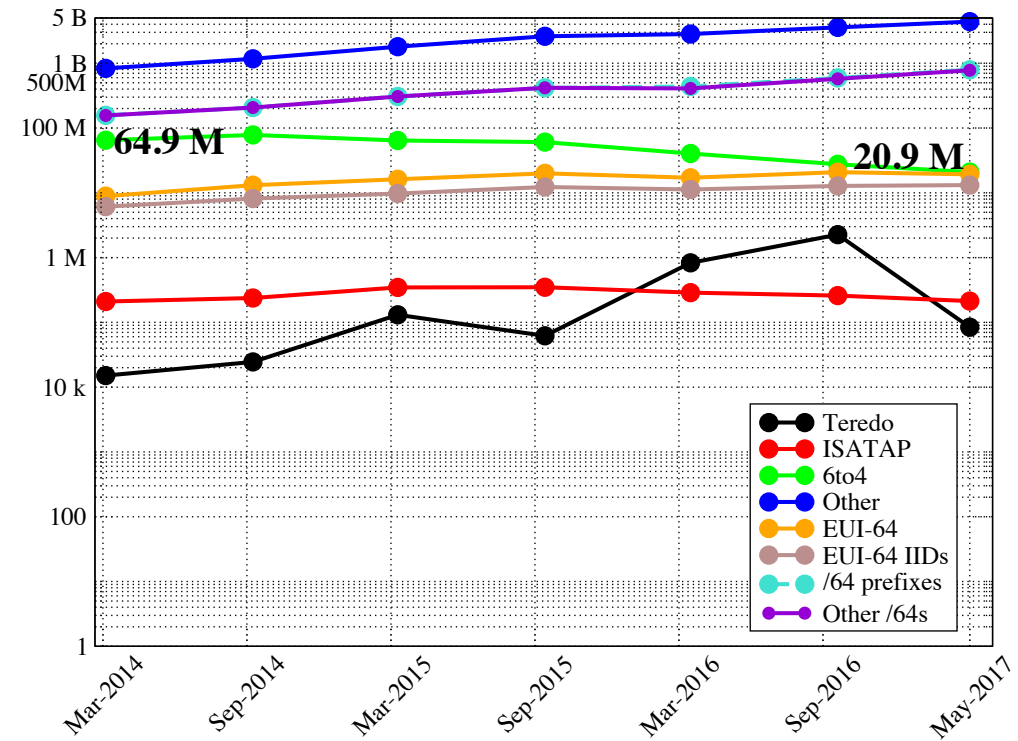
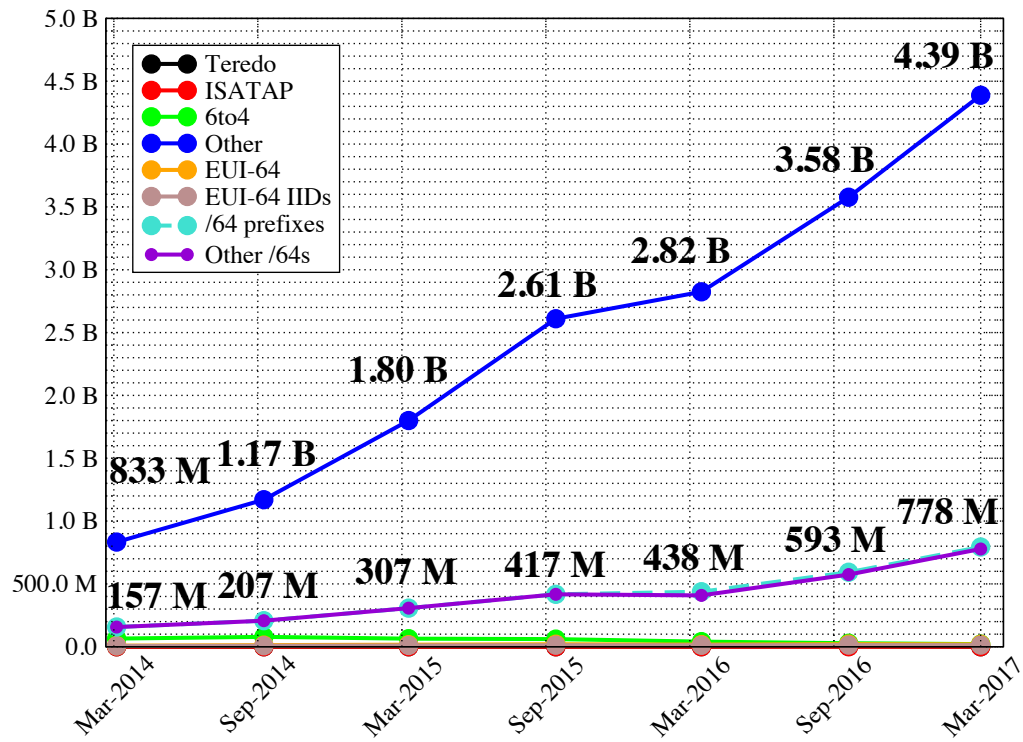
- **Measuring Trends in IPv6 Support**– Tommy Pauly, 10m
- **You can -j REJECT but you can not hide: Global scanning of the IPv6 Internet**– Tobias Fiebig, 15m
- **No domain left behind: is Let's Encrypt democratizing encryption?** – Giovane C. M. Moura, 20m

Agenda (iii)

- **How Broadcast Data Reveals Your Identity and Social Graph –**
Rolf Winter, 15m
- **Weak keys remain widespread in network devices –**
Marcella Hastings, 20m
- **Open Measurement of Internet Censorship–** Will Scott, 20m

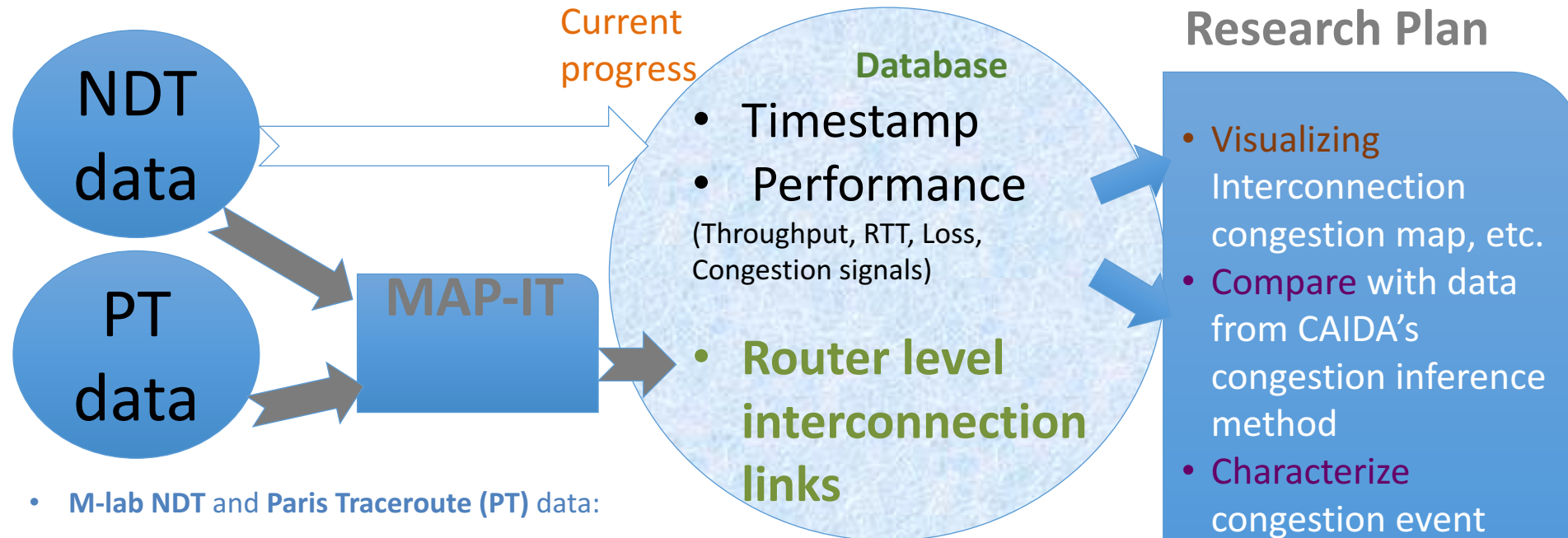
Recent Related Works “Advertisements”

- Active IPv6 client address counts per week (Akamai):



- Sunsetting SixXS: <https://www.sixxs.net/sunset/>

Inferring Interconnection congestion using M-lab NDT and Paris Traceroute data



- M-lab NDT and Paris Traceroute (PT) data:

<https://www.measurementlab.net/>

- MAP-IT: Multipass Accurate Passive Inferences from Traceroute

<https://github.com/alexmarder/MAP-IT>

- CAIDA project: Mapping Interconnection in the Internet: Colocation, Connectivity and Congestion, Funding source: NSF CNS-1414177



Center for Applied Internet Data Analysis

X.DENG, A. DHAMDHERE

K. CLAFFY

CAIDA/UC San Diego

Research Plan

- Visualizing Interconnection congestion map, etc.
- Compare with data from CAIDA's congestion inference method
- Characterize congestion event across AS boundaries
- Capture hidden confounding factors (distance, host buffer, speed tier) by applying statistical and machine learning tools