

Building Shared Perspectives by Piecing Together Measurements

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Overview

- Measuring networks is important, challenging, and necessary.
- But, possibly not sufficient.
- In the interests of the Internet's evolution, we should consider kicking it up a level:

COLL[ABOR]ATE

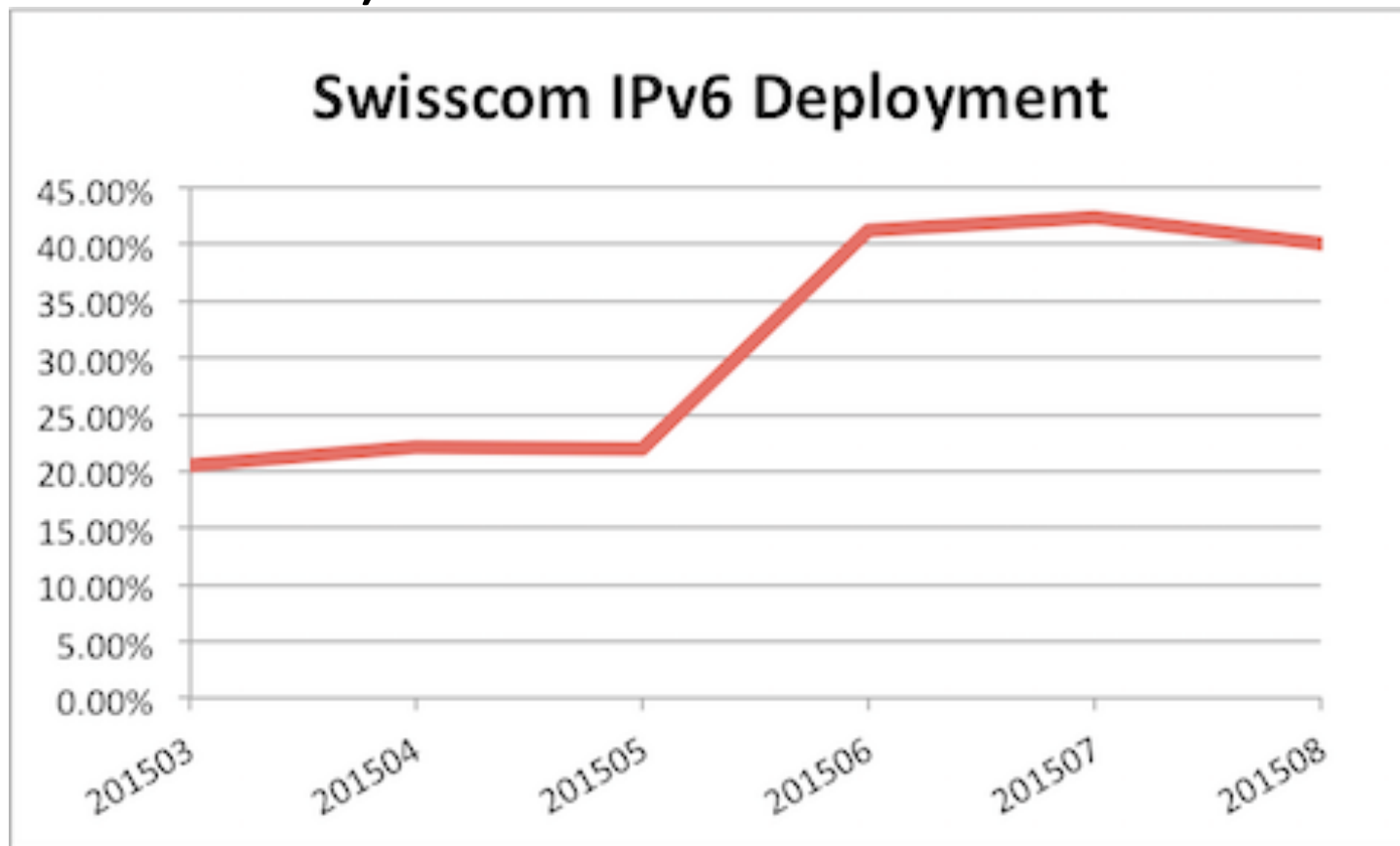
EXISTING EXAMPLE – TRACKING IPv6 NETWORK GROWTH

Broad spectrum insights

- From <http://www.worldipv6launch.org/telekom-malaysia-joins-top-10-ipv6-networks/>
 - “– [Telekom Malaysia \(AS4788\)](#) are now in the Top 10 networks by our methodology with an IPv6 deployment percentage of 15.36%.
 - – New entrants this month include [Canadian telecommunications firm TELUS \(AS852\)](#) with 2.85%, [US cable provider Mediacom Communications \(AS30036\)](#) with 6.40% IPv6 deployment, and [major US telco Centurylink \(AS209\)](#) with 0.11% IPv6 deployment.”

Particular observations

- (Same source)



“How do they *do* that?”

- No single source could provide that perspective
- *Collaboration* of major content providers and willingness of networks to be measured/show their stats.
- *Collation* of data to manage privacy and sensitive data.

Q: HOW TO MEASURE THE INTERNET'S STABILITY AND HEALTH

A: One network at a time...

- Operational: network operators need to measure themselves for their own purposes
 - E.g., see “Software Architecture and Guidelines for Creating an LMAP Reference Implementation”, draft-jjmb-lmap-reference-implementation-guide-00
- Simple building blocks
 - E.g., tracking round trip times for sites over IPv4 and IPv6, from all edge customers
 - Ratio can be used as a metric of v6 viability and improvement over time

Intended Outcome

- A target for new operators (e.g., in developing economies) to shoot for, in terms of performance and “what good looks like”
- Promoting more networks to be objectively introspective

<http://www.thinkingcat.com>

This I believe...

The Internet was created for connecting and sharing — initially, connecting research networks and sharing (computing) resources. Ever since it “escaped” the research lab, it has provided a basis for individuals of all age and background to connect and share in ways previously unimagined. The things we’ve seen in the last twenty years would surely have been deemed *impossible*, except that they have been achieved. As long as the Internet remains open and non-discriminating to all-comers, the people (individuals, communities and organizations) of this planet will continue to amaze each other with the creative uses to which they put the Internet.

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