IPv6 Address Accountability

draft-ccc-v6ops-address-accountability-00

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Rationale

Enterprise / campus admins are used to having some level of address accountability through DHCPv4 and its linkage to MAC addresses

Admins have a concern that with IPv6, and hosts being multi-addressed, especially with self-generated and multiple IPv6 temporary addresses over time, that their comfy pair of DHCP-based slippers no longer fit

I get asked this question quite a lot by university network admins

This draft aims to list potential solutions to this problem

[This is a rev to an old -00 draft from 2011!]

The solution space so far …

Switch-router polling - need a rapid enough frequency

Record all ND traffic - e.g., syslog

DHCPv6-only - but not everything supports IA_NA

802.1X - used heavily for WiFi eduroam in R&E networks

Host-based registration protocol - draft-ietf-dhc-addr-notification-13

Prefix-per host - RFC 8273, RFC 9663

FCFS SAVI - RFC 6620

List comments

We've had some good feedback on the list already

Refer to **temporary** addresses not privacy addresses

Add text about streaming telemetry (as an alternative to device polling)

How far into Layer 2 techniques should we dip?

Should we make it IP version agnostic, e.g., "Record ND **and** ARP" ?

What size prefix for prefix per host?

Open issue tracker at https://github.com/timchown/address-accountability/issues

Questions / comments …

Is this work useful?

If so, do we want to adopt it formally as v6ops work?

Are the existing solutions valid? Are they appropriate?

Are there any solutions missing?

Are there specific solutions we wish to recommend? If so, for what scenarios?

We probably need to note the privacy vs management tussle

Anything else to consider?