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IPv6 vs. IPv4 NAT:
Why Not Both?
Why?

- Radically reduce IPv4 footprint
- NAT-PT
  - RFC4966
  - Doesn’t (yet) work for applications that can’t understand IPv6
- Desire to make end-to-end solution available
- Wanted something I could implement RSN
Proof-of-concept

Router

Globally-routable v6+v4

RFC1918 IPv4 and
Globally-routable IPv6

NAT

Globally-routable v4
and RFC1918 v4
(default route for v4 clients)

Clients
Advantages

• Nothing new or innovative: it’s what we already have and know
• Supports legacy apps
• True, end-to-end v6 connectivity
• Radically reduces v4 consumption
Disadvantages

• Your clients will still have to be dual stack
• Engineering scalability/capacity planning
• NAT-PT is better in one particular scenario
Conclusions

• Lots of interesting discussion about how ISPs reduce their v4 address footprint (Durand I-D). I’d like to make sure we include the goal of end-to-end v6.

• If we think this is a reasonable approach, let’s add it to our bag of tricks (along with modified NAT-PTs), and think about implementation and support.
Thank Yinz