draft-denis-v6ops-nat-addrsel-00

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The scenario

- “Typical” unmanaged dual-stack “client”:
  - Native IPv4 (especially NAT'ed)
  - Transitional IPv6 (e.g. 6to4, Teredo)
- The RFC3484 source

- “Typical” managed dual-stack “server”:
  - Native IP, both versions
- The RFC3484 destination

The problem(s)

- Mismatch between RFC3484 and NAT(44)
- Outdated default policy tables: Teredo absent
  - Already fixed by several implementations
- Rule 2: always prefer public IP addresses
  - Great for isolated/gateway'd private networks
  - Good for NAT-unfriendly protocols
  - **Bad for NAT-friendly protocols**

The consequence

- Transitional mechanisms less reliable.
- Depend on both IP versions.
- More point of failures

- Applications work...

...when IPv6 is disabled.

Solutions (besides `rmmod ipv6`)

- Non-standard hacks in the field:
  - RFC1918 private address as global scoped
  - Teredo as separate policy table label
- Parallel connection probing
  - Transport/congestion issues?
- New source address selection flag?
- Others ?

End

Questions?
Comments?