Deprecating 6to4
draft-ietf-v6ops-6to4-to-historic-06

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Why now?

- This draft didn't obtain consensus in 2011.

  – So we published RFC 6343 "Advisory Guidelines for 6to4 Deployment".

- Since then:

  – the number of operational 6to4 anycast relays has declined;

  – 6to4 has been de-preferenced in many stacks;

  – many browsers support Happy Eyeballs (which hopefully hides 6to4 black holes);

  – 6to4 traffic has declined dramatically as a fraction of IPv6 traffic (now ~0.2% at Google).

  – but the problems identified in 2011 are still real.

- Therefore, it seems appropriate to proceed with deprecation now.

Main changes since -05 version

- Proposed status now BCP.

- Future products are NOT RECOMMENDED to support 6to4. If included, it MUST be disabled by default.

- Routers MUST NOT enable 6to4 without explicit user configuration.

- Existing 6to4 relay deployments SHOULD be reviewed for discontinuation.

  – Content providers might maintain a return relay for the benefit of residual 6to4 clients.

- Peer-to-peer 6to4 mechanism, not depending on anycast, might continue harmlessly.

Issues raised (1)

- ## Would it make sense to move only 3068 (anycast) to historic, and not 3056 (peer to peer mode)?

  - Brian's opinion: deprecate both to get the message across.

  - Tim's comment: but will this hurt legacy users when they upgrade s/w?

  - Keith's comment: it's the IPv4 network that's broken, not protocol 41.

- ## What BGP routes are announced, and is 6to4 traffic to be treated as bogus?

  - Brian's opinion:

    - RECOMMEND filtering 192.88.99.0/24, so that anycast clients see immediate failure. This prefix becomes a possible bogon.

    - do not recommend filtering 2002::/16, so that existing return paths still work, both for p2p users and residual anycast users. This prefix does not become a bogon.

Issues raised (2)

- Change text to ensure that 192.88.99.0/24 isn't reassigned anytime soon.

- Anything to say about the use of the prefix in address selection policy tables (noting that 3ffe::/16 is still cited there)?

- Mention the alternatives to 6to4 for clients on IPv4-only networks?