IP/ICMP Translation Algorithm (rfc6145bis-02)

https://datatracker.ietf.org/doc/draft-bao-v6ops-rfc6145bis/

IETF94

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Outline

- RFC6145
- RFC6145bis
- Next step

RFC6145

- IP/ICMP Translation Algorithm
  - https://datatracker.ietf.org/doc/rfc6145/referencedby/
- The Building block of
  - rfc6146 (NAT64, stateful)
  - rfc6219 (IVI, stateless NAT64)
  - rfc6877 (464XLAT, stateful double translation)
  - rfc7599 (MAP-T, stateless double translation)
- Referenced by
  - 31 rfcs (rfc6127, rfc6144, rfc6146, rfc6156, rfc6180, rfc6219, rfc6264, rfc6269, rfc6272, rfc6296, rfc6316, rfc6342, rfc6384, rfc6535, rfc6586, rfc6724, rfc6736, rfc6751, rfc6791, rfc6864, rfc6877, rfc6887, rfc6889, rfc6992, rfc7059, rfc7269, rfc7368, rfc7381, rfc7598, rfc7599, rfc7600)
  - 23 active drafts

RFC6145bis

- Erratum
- Atomic Fragments
- Address mapping algorithm update

Erratum

From
http://www.rfc-editor.org/errata_search.php?rfc=6145

Section 5.1 says:

〈Removed from RFC 2765 where it had existed after Destination Address field description〉

It should say:

If any of an IPv6 Hop-by-Hop Options header, Destination Options header, or Routing header with the Segments Left field equal to zero are present in the IPv6 packet, those IPv6 extension headers MUST be ignored (i.e., there is no attempt to translate the extension headers) and the packet translated normally. However, the Total Length field and the Protocol field are adjusted to "skip" these extension headers.
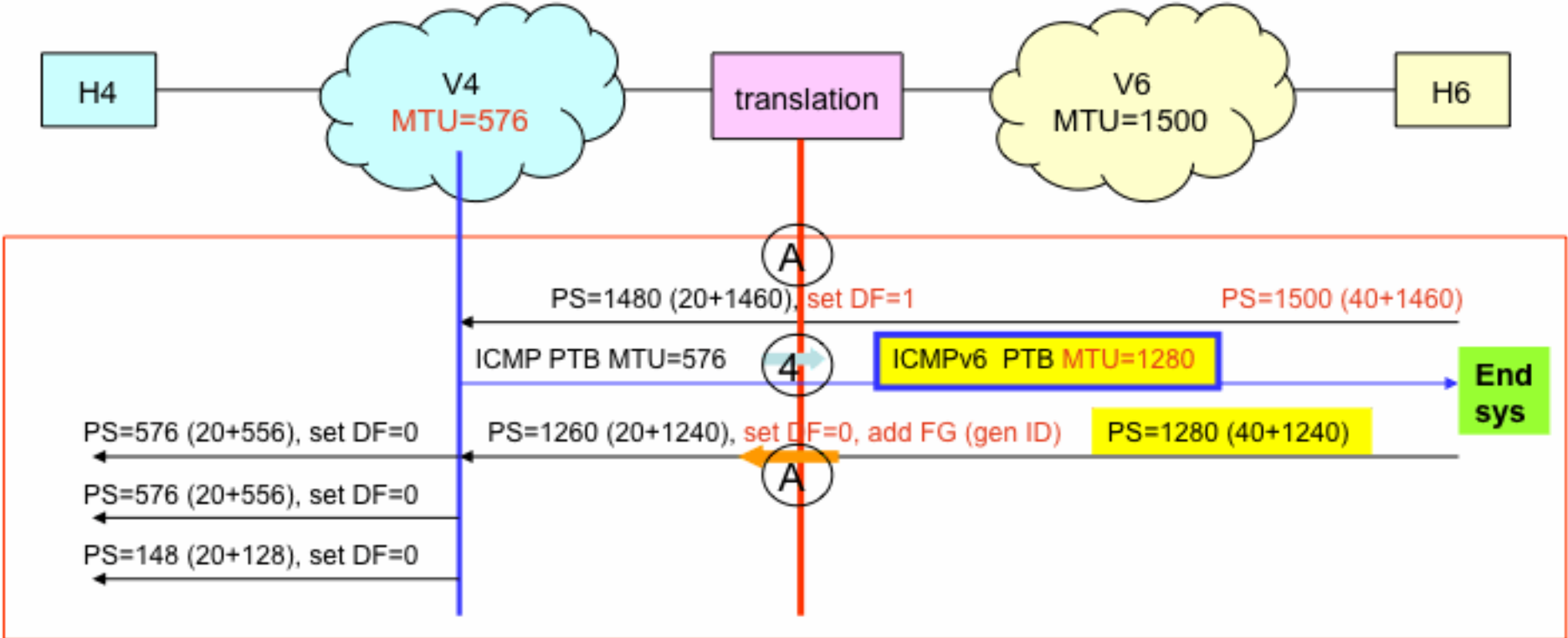
   etc

Atomic Fragments

From 6man's document concerning "Deprecating the Generation of IPv6 Atomic Fragments"

https://datatracker.ietf.org/doc/draft-ietf-6man-deprecate-atomfrag-generation/

RFC6145 already has this mechanism, but it is just an option. The rfc6145bis makes this mechanism the default and the only one.

Appendix: Example 4 (non-RFC2460)

Address mapping algorithm update

- Mapping of IP Addresses
  - SHOULD
    - rfc6052 default
    - http://datatracker.ietf.org/doc/draft-ietf-v6ops-siit-eam/ (EAM)
    - rfc6791 (Stateless Source Address Mapping for ICMPv6 Packets)
  - MAY
    - rfc6146 (NAT64)
    - rfc6799 (MAP-T)

Next step

- Start a 30 day IETF LC and take this as an AD-sponsored draft