

ICMPv6 errors for discarding packets due to processing limits

draft-ietf-6man-icmp-limits-03

Tom Herbert <tom@quantonium.net>

Overview

ICMP error hosts and middleboxes can send when dropping packets

- Four new parameter problem codes
- Extend applicability of one parameter problem code
- One new destination unreachable

ICMPv6 Parameter problems code

- 1 - Parameter problem
- 4 - Extension header too big
- 5 - Extension header chain too long
- 6 - Too many options in extension header
- 7 - Options too big (new in -02)
 - Length of option exceeds limit
 - # consecutive padding options exceed limit (seven)

Other ICMPv6 changes

- Extend applicability of Parameter problem code
 - 1 - Unrecognized Next Header type
 - allow intermediate nodes to send this it
- New Destination Unreachable code
 - 8 - Headers too long applicability of Parameter

Drafts

- -01
 - WG draft
- -02
 - Added Option too big (parameter problem code 7)
- -03 changes
 - Clarify security section

Implementation

- Linux patch
 - <https://marc.info/?l=linux-netdev&m=155957688615285&w=2>
- Send ICMP error for RFC8504 limits
 - ICMPV6_TOOBIG_OPTION (sysctl length)
 - ICMPV6_TOOMANY_OPTIONS (sysctl count)
 - ICMPV6_EXTHDR_TOOBIG (padding, sysctl length)
 - ICMPV6_HDR_FIELD (non-zero padding)
- Need IANA assignment to upstream

Next step

Is this ready for WGLC?

Thank you!