Hiding IPv6 Hop-by-Hop Options

draft-eastlake-6man-hide-options

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Scenario

• Packets have a significant chance of being discarded in some network (perhaps the global Internet) if they have IPv6 hop-by-hop options.
Assumptions

• Generally assuming the following:

  • There is a cooperating destination or destinations

  • Best Effort service is satisfactory
IPv6 Header

<table>
<thead>
<tr>
<th>Version</th>
<th>Traffic Class</th>
<th>Flow Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payload Length</td>
<td>Next Header</td>
<td>Hop Limit</td>
</tr>
</tbody>
</table>

Source Address

Destination Address
IPv6 Header

- Next Header = 0 indicates Hop-by-Hop options
An Elegant Solution

• Simply replace the 0 next header in the IPv6 header with TBD, a new “opaque” IP protocol number, before the problematic part of the network and switch it back to zero after that part of the network.

• The packet change is a trivial and reversible change to one byte which does not change packet size!
Looking For

• Comments on draft

• Implementers

• Dispatch as appropriate.
END