Packet Timestamp Formats

Tal Mizrahi  Marvell
Joachim Fabini  Vienna University of Technology
Al Morton  AT&T Labs

draft-ietf-ntp-packet-timestamps-00
IETF 100, Singapore, November 2017
Goals of this Draft

• **Recommended** timestamp formats.

• **Guidelines** for defining new timestamp formats.
History of this Draft

• June 2017 – draft 00 submitted.
• September 2017 – revised based on comments.
• October 2017 – adopted by the NTP WG.

• Main changes compared to draft 00:
  – More discussion on what to consider before you pick a timestamp format.
  – Added a Use Case section.
  – ‘Synchronization Aspects’ have been separated from the timestamp format.
Things to consider before choosing a timestamp format

- Timestamp resolution
- Wraparound period
- Timestamp size
- Co-existence with other protocols
- …
# Timestamp Use Cases

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Recommended formats</th>
<th>Other format</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTP [RFC5905]</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>OWAMP [RFC4656]</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>TWAMP [RFC5357]</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>TWAMP [RFC8186]</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>TRILL [RFC7456]</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>MPLS [RFC6374]</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>TCP [RFC1323]</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>RTP [RFC3550]</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>draft-ietf-ippm-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>initial-registry</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To be added to the draft
Next Steps

• Address comments from the WG

• Control field for packet timestamp

• WG last call
Thanks!

draft-ietf-ntp-packet-timestamps@ietf.org
Packet Timestamps – The Problem

• No common timestamp format(s).
• No common format for defining a new timestamp.

[RFC 5905] – NTP
[RFC 4656] – OWAMP
[RFC 5357] – TWAMP
[RFC 1323] – TCP
[RFC 6374] – MPLS
[RFC 7456] – TRILL
[RFC 3550] – RTP
...
draft-ietf-ippm-ioam-data
draft-ietf-ippm-initial-registry
draft-lijo-6lo-expiration-time
draft-foschiano-erspan
draft-ooamdt-rtgwg-ooam-header
draft-mymb-sfc-nsh-allocation-timestamp
draft-browne-sfc-nsh-kpi-stamp
...
References


