On-Path Telemetry for Active Performance Measurements

draft-fioccola-ippm-on-path-active-measurements-02

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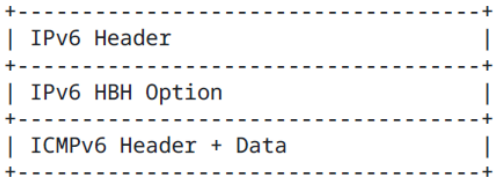
Giuseppe Fioccola
Huawei

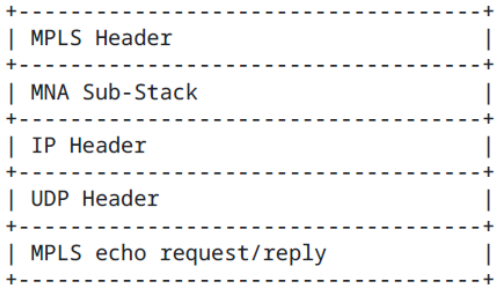
How to perform HBH and E2E active measurements

In several scenarios it is beneficial to perform HBH and E2E active measurements.

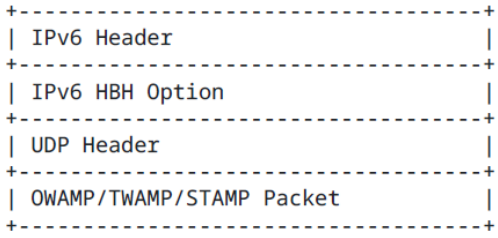
- Active test packets can be used in combination with Hybrid Methods: On-path Active Performance Measurements.

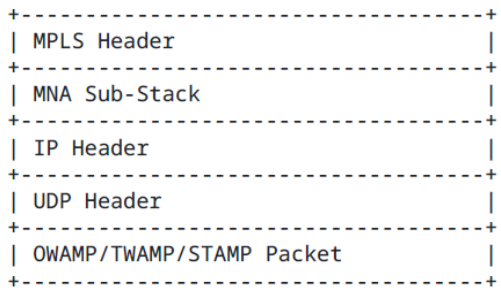
ICMP, ICMPv6, LSP Ping





OWAMP, TWAMP and STAMP

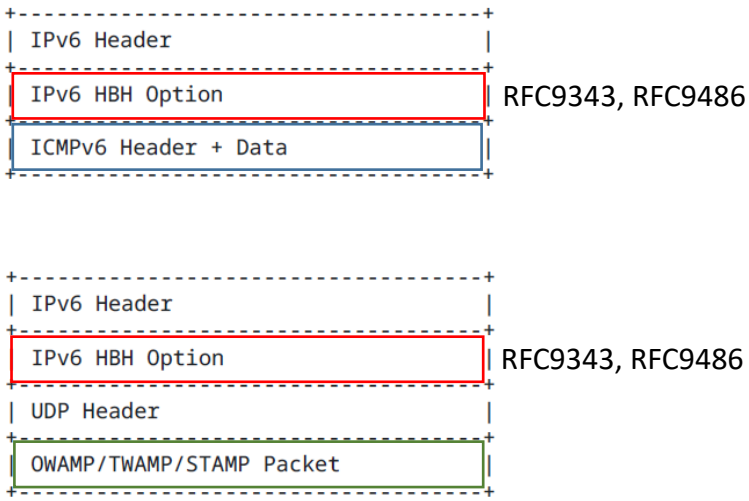




IPv6 Example

The IPv6 HBH options, **RFC9343 (AltMark)** or **RFC9486 (IOAM)**, augment the active methods by enabling on-path HBH measurements in addition to E2E measurements.

- This approach is not adding any new functionalities to ICMPv6, OWAMP, TWAMP or STAMP, but it is only leveraging existing mechanisms.



Note that the same applies to the MPLS data plane with MNA Sub-Stacks in the MPLS header.

Changes from -00 to -01 to -02

Some comments received during the IETF 120 and IETF121 and addressed in the new revision, in particular:

- Added MPLS echo request/reply (RFC8029), MPLS Loss and Delay Measurement (RFC6374)
- Included the case of the MPLS LSP Ping
- Minor changes and references updated

Next Steps

Evaluate WG Adoption.

Comments are welcome!

Thank You