Flow Measurement in IPv6 Network

draft-wang-ippm-ipv6-flow-measurement-05

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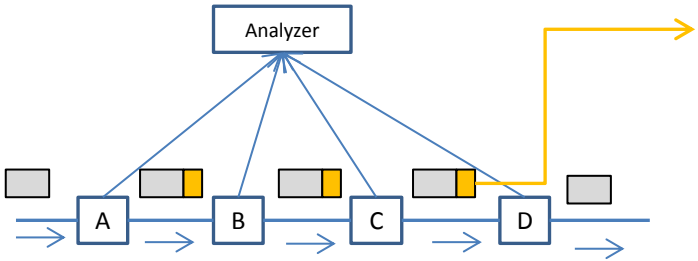
Overview

✓ **objective**

To deploy in-situ flow performance measurement based on **Alternate-Marking** method [[I-D.draft-ietf-ippm-rfc8321bis]] in IPv6 domain With the participation of a **controller.**

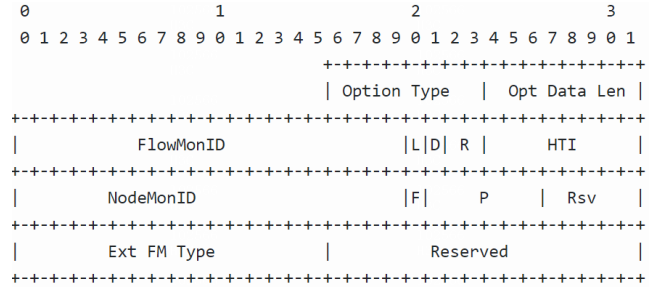
✓ **Flow Measurement Operation**

- To Identifye a monitored flow
  - The NodeMon identifier
  - The FlowMon identifier
- Measurement Type
  - End-to-End measurement
  - Hop-by-Hop measurement
- Packet Loss Measurement
- Packet Delay Measurement
- Two-way Flow Measurement
- Data Collection and Report
- Function Extension Consideration



✓ **New Option to carry Flow Measurement data**

- Carrying basic and extended Flow Measurement data
- Be Encapsulated in the Hop-by-Hop Options Header and Destination Options Header



key members:

- FlowMonID: 20bits / NodeMonID: 20bits
- L: Loss Flag (for Packet Loss Measurement)
- D: Delay Flag (for packet delay measurement)
- P: 6 bits, measurement period

Running code

- **Lab Interop-test Status**

  Hardware devices and software versions which have been verified by lab tests of China Mobile and China Telcom in 2021 ~ 2023.

  - China Unitechs Unified Controller
  - Huawei NE40E and NE5000E
  - H3C CR16010H-FA and CR19000-8
  - ZTE M6000-8S Plus and M6000-3S

- **Deployment Status**

  Field trial has been implemented in 2021.

  - China Mobile Zhejiang metro network
  - Zhejiang government network

Next Step

- This draft has been presented at IETF-115 in IPPM WG.
- Any questions or comments are Welcomed
- Seeking for adoption call

Thank You