In-situ Flow Information Telemetry (iFIT) Framework

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Haoyu Song (Futurewei)
Zhenbin Li (Huawei)
Tianran Zhou (Huawei)
Fengwei Qin (China Mobile)
Jongyoon Shin (SK Telecom)
Jaewhan Jin (LG U+)
Motivation

• Clarify the terms and underlying techniques for data plane on-path telemetry
• Present a framework that addresses the practical implementation and deployment challenges
• Identify the open issues and directions for related standard development
On-path Data Plane Telemetry Techniques

Passive

Hybrid

Active

Passport

Postcard

IOAM Trace

IOAM E2E

IOAM PHP

PBT-M
Challenges for Deployment in Carrier Networks

- **Performance**
  - Forwarding impact due to packet processing
  - Bandwidth and server overload due to exported data
- **Limited data flexibility and extensibility**
- **Deployment issues**
  - Encapsulation
  - Tunnel
iFIT Solution Framework

- Performance
  - Smart Flow/Data Selection
  - Export Data Reduction
  - Encapsulation & Tunnel Modes
  - Dynamic Network Probe
- Deployability
- Flexibility
Discussion & Next Steps

- Collect feedbacks
  - What other challenges for carrier network data plane telemetry?
  - What other suggestions to make the framework more complete?