Export User Flow Telemetry Data by Postcard Packets

draft-song-ippm-postcard-based-telemetry-00

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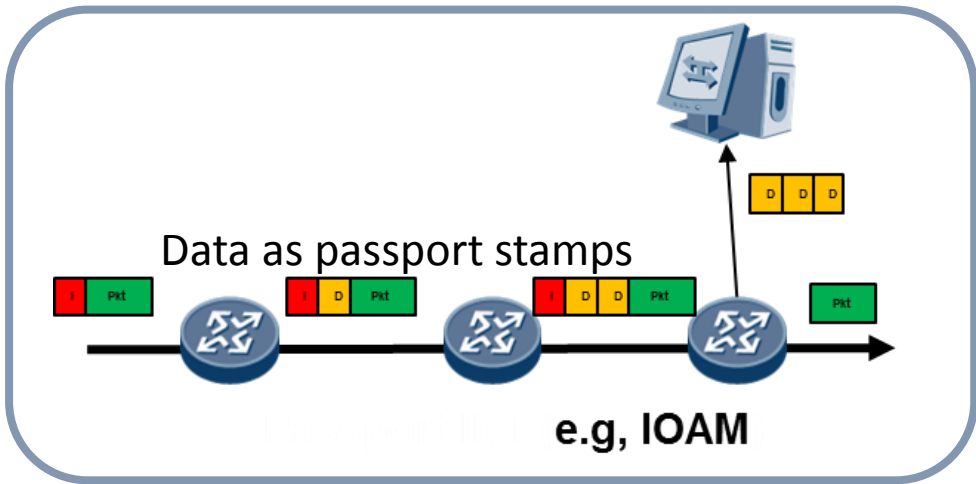
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Data Plane Telemetry

Out-of-Band

In-Band

In-band Network Telemetry (INT) is a direct and accurate way to understand user traffic's real network behavior and experience

Passport-based INT: IOAM

Instruction
Data
User packet

Data as passport stamps

e.g, IOAM

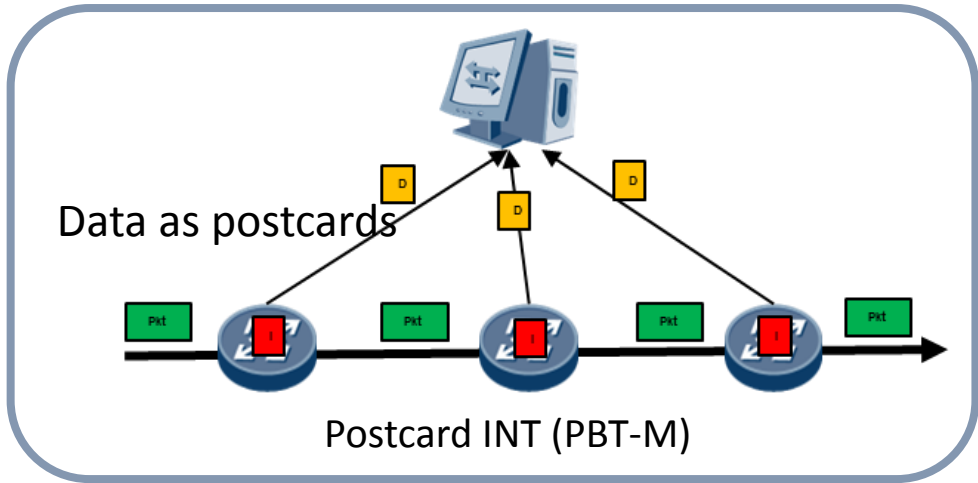Forwarding performance impact

Packet size inflation

Encapsulation

Security

Drop localization

Self-describing

Export overhead

Configuration overhead

Postcard-based INT: PBT-M

Instruction
Data
User packet

Data as postcards

Postcard INT (PBT-M)

Forwarding performance impact

Packet size inflation

Encapsulation

Security

Drop localization

Data correlation

Export overhead

Configuration overhead

Postcard-based INT: PBT-I

Instruction
Data
User packet
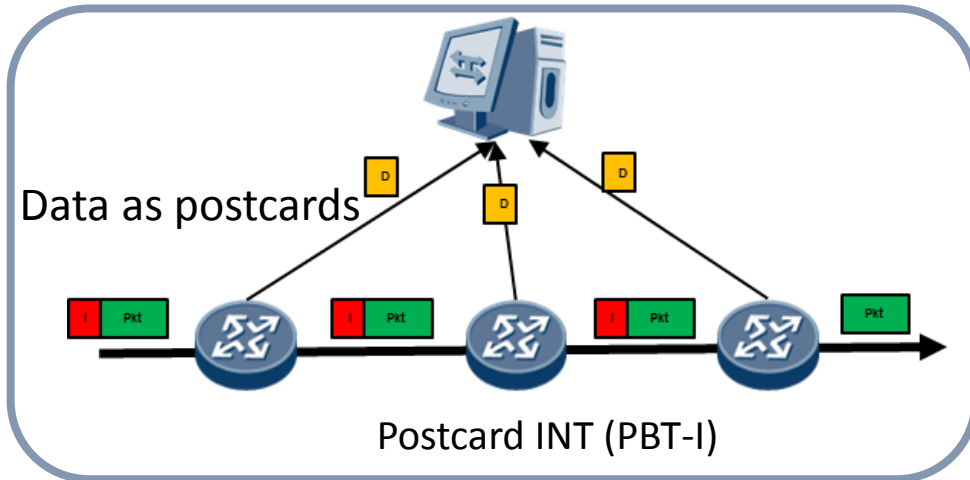
Data as postcards

Postcard INT (PBT-I)

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Configuration overhead

PBT-l Instruction Header Format

0 3	4 7	8 15	16 23	24 31
Next Header		Length	Reserved	Hop Count
Flow ID				
Flow ID				
Sequence Number				
Data Element Bitmap				
Data Type Bitmaps (Optional Extension)				
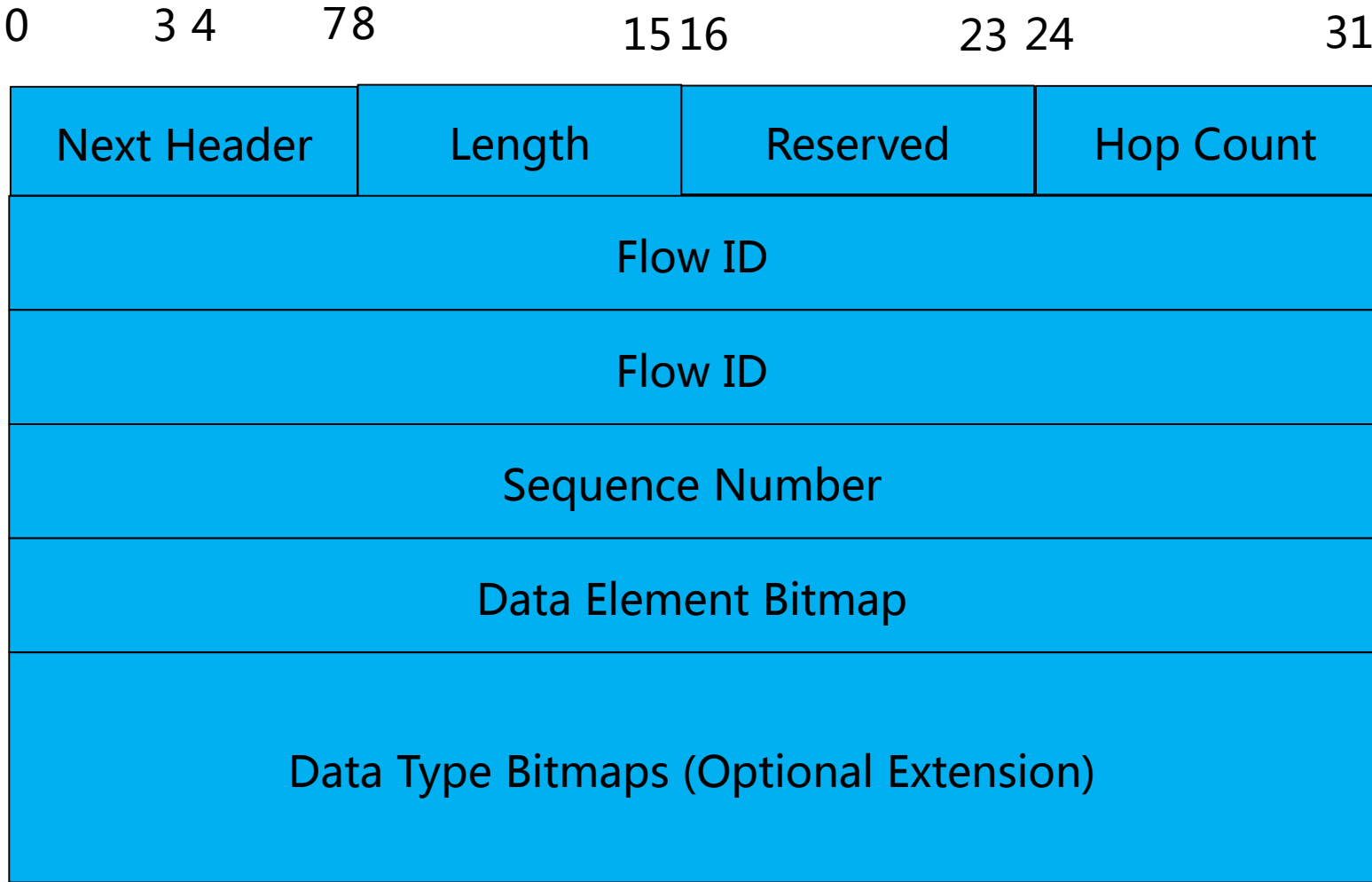
Next Steps

- Collect feedbacks for revision

- Demonstrate PBT prototype