Export User Flow Telemetry Data by Postcard Packets

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

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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

- Forwarding performance impact
- Packet size inflation
- Encapsulation
- Security
- Drop localization

- Self-describing
- Export overhead
- Configuration overhead
Postcard-based INT: PBT-M

- Forwarding performance impact
- Packet size inflation
- Encapsulation
- Security
- Drop localization

Data correlation
Export overhead
Configuration overhead

Data as postcards
Instruction
Data
User packet

Instruction
Data
User packet

Postcard INT (PBT-M)
Postcard-based INT: PBT-I

- Forwarding performance impact
- Data correlation
- Packet size inflation
- Export overhead
- Encapsulation
- Configuration overhead
- Security
- Drop localization

Data as postcards

- Instruction
- Data
- User packet
# PBT-I Instruction Header Format

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<th>4</th>
<th>78</th>
<th>15</th>
<th>16</th>
<th>23</th>
<th>24</th>
<th>31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next Header</td>
<td>Length</td>
<td>Reserved</td>
<td>Hop Count</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Flow ID</td>
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</tr>
<tr>
<td>Data Element Bitmap</td>
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<tr>
<td>Data Type Bitmaps (Optional Extension)</td>
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</tbody>
</table>
```
Next Steps

- Collect feedbacks for revision
- Demonstrate PBT prototype