OAM for Deterministic Networks with IP Data Plane

draft-ietf-detnet-ip-oam

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Active DetNet IP OAM

• Recap active DetNet IP OAM using DetNet-in-UDP
• How active OAM for DetNet Service sub-layer in the DetNet IP environment can work?
Active OAM using DetNet-in-UDP encapsulation

- An IP DetNet flow is encapsulated in UDP
- A DetNet-in-UDP tunnel between IP DetNet nodes ensures that active OAM test packets are fate-sharing with the packets of the monitored DetNet flow.
DetNet Service Sub-layer OAM using DetNet MPLS-over-UDP encapsulation

- draft-varga-detnet-ip-preof describes how the DetNet service sub-layer can be supported using MPLS-over-UDP [RFC 9025]
- DetNet Service sub-layer OAM MUST use the MPLS-over-UDP encapsulation to ensure it is in-band with the monitored DetNet flow
DetNet Service sub-layer OAM

```
+-------------------+            +-------------------+            +-------------------+            +-------------------+
|                   |            |                   |            |                   |            |                   |
| DetNet App-Flow   |            | DetNet OAM       |            | PREOF capable      |            | DetNet IP data     |
| (original IP)     |            | Packet           |            | plane encapsulation|
| Packet            |            |                  |            |                    |
|                   +            |                   +            |                   +            |                   +
| DetNet CW         |            | DetNet ACH       |            |                     |
|                   +            |                   +            |                   +            |                   +
| Service-ID (S-Label) |            | Service-ID (S-Label) |            |                     |
|                   +            |                   +            |                   +            |                   +
| UDP Header        |            | UDP Header       |            |                     |
|                   +            |                   +            |                   +            |                   +
| IP Header         |            | IP Header        |            |                     |
|                   +            |                   +            |                   +            |                   +
| Data-Link         |            | Data-Link        |            |                     |
|                   +            |                   +            |                   +            |                   +
| Physical          |            | Physical         |            |                     |
|                   +            |                   +            |                   +            |                   +
```
Next steps

• Your comments, suggestions, questions always welcome and greatly appreciated
• WG LC?

Thank you!