

DetNet

Packet Ordering Function (POF)

[draft-varga-detnet-pof](#)

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DetNet WG

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DetNet Service sub-layer Packet Ordering Function (POF)

- Intended status:
 - Informational
- Actual version:
 - draft-varga-detnet-pof-02

- Abstract:

- Replication and Elimination functions of DetNet [RFC8655] may result in out-of-order packets, which may not be acceptable for some time-sensitive applications. The [Packet Ordering Function \(POF\)](#) algorithm described herein enables to restore the correct packet order when replication and elimination functions are used in DetNet networks.

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Clarification on DetNet POF

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- Clarification on possible delay variation caused by POF
 - It is out-of-scope: to eliminate the delay variation caused by the packet ordering.
 - Dealing with delay variation is a DetNet forwarding sub-layer target and it can be achieved for example by placing a de-jitter buffer or flow regulator (e.g., shaping) function after the POF functionality.
- DetNet functions are defined as building blocks to achieve a given target. Several of these building blocks may be needed to ensure the envisioned deterministic end2end characteristics, required by an application.

Summary – Next Steps

- Discussion on the list:
 - Content is stable
- Next Steps
 - Asking for WG adoption

Thanks ...

Two POF Algorithms Defined

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- Basic algorithm
 - Max incremental packet delay: "POFMaxDelay" time.
 - In-order packets are not delayed.
 - Applicable to all scenarios where the delay budget of a flow allows "POFMaxDelay" time for ordering.
 - Management & Control: "POFMaxDelay", "POFTakeAnyTime"
- Advanced algorithm adds the following extensions to the basic algorithm
 - Identify the path of the received packet at the POF location
 - Path dependent "POFMaxDelay": "POFMaxDelay_i", where "i" denotes the path.
 - Management & Control : "POFMaxDelay_i", "POFTakeAnyTime", path identification related configuration

