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# Monitoring of DetNet Flow Requirements

## Introduction

Deterministic Networking (DetNet) provides capabilities to transport data flows with reliable low latency and packet loss within a network domain [1]. Service is provided by lower-layer technologies such as TSN or MPLS. DetNet itself operates at the IP layer.

RFC 9016 describes models and requirements of flows in DetNet, such as minimum guaranteed bandwidth and maximum latency [3]. In this project a real-time aware monitoring solution for those flow properties shall be developed and evaluated.

## Research Questions

- In the context of DetNet, which protocols are suited to transport relevant monitoring information such as sequence numbers and timestamps?
- What are use cases and requirements for the monitoring of DetNet flows?
- Is an implementation feasible and what are its performance constraints?

## Literature

- [1] N. Finn, P. Thubert, B. Varga, and J. Farkas. Deterministic Networking Architecture. RFC 8655, Oct. 2019.
- [2] Mach Chen and Andrew Malis. Detnet packet loss and delay performance measurement, 2018.
- [3] B. Varga, J. Farkas, R. Cummings, Y. Jiang, and D. Fedyk. Flow and Service Information Model for Deterministic Networking (DetNet). RFC 9016, Mar. 2021.

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