# Micro-burst Decreasing in Layer3 Network for Low-Latency Traffic

draft-du-detnet-layer3-low-latency-03

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# Modifications

- Make some clarifications about "the purpose of the draft"

- Add some clarifications about "large scale"

- Add some texts in "Section 5.  Analysis of the Proposed Method"

# The purpose of the draft

- Point out the problem:
  - In large scale ISP networks, we need a simple and scalable deterministic mechanism
    - The large-scale network means the network is relatively large, serving for a lot of users, and thus there are **many dynamic flows** in the network
    - In a large-scale network, it is hard to do per-flow shaping for the intermediate nodes because they have high pressure on forwarding on the data plane
- Propose a potential direction for the problem:
  - per flow scheduling on the edge nodes
  - per interface scheduling on the intermediate nodes
    - a large aggregation granularity to ensure the scalability

# Different levels of deterministic

- For "Industrial" networks, critical SLAs are required
  - TSN scheduling mechanisms (solution1) is suitable
  - but they are more complex, have relatively lower scalability, and are not likely be adopted in a relatively near future in a large-scale network
- For "Consumer" networks, relatively lower levels of deterministic are required
  - Statistical multiplexing mechanisms (solution2) in a relatively light load network
    - for example, critical traffic is marked with a high priority, and there are not too much critical traffic in the network
  - Maybe a mechanism (solution3) based on the method in this document can do a better job than the solution2 in the aspect of higher deterministic

# Comparisons of three kinds of mechanism

|  | three mechanisms | levels of deterministic | scalability and easy to be adopted | deterministic scenarioes that can support |
|---|---|---|---|---|
| solution1 | TSN scheduling mechanisms, such as ATS | high | not very good | all scenarioes |
| solution2 | Statistical multiplexing mechanisms | low | good | part of |
| solution3 | a mechanism based on the method in this document | relatively high | relatively good | relatively larger than soluiton2 |

- In conclusion, the proposed method has a better scalability than traditional TSN mechanisms, and a better reliability than the statistical multiplexing based method.

# Thanks for listening

# Welcome for comments