DetNet Flow Information Model

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Introduction

• Current draft: draft-ietf-detnet-flow-information-model-02

• This presentation
  • summarizes the changes from draft: draft-ietf-detnet-flow-information-model-01
  • lists further items to do in order to bring the draft up-to-date
  • (additional changes may be needed)

• Background
  • Architecture is getting done
  • MPLS and IP data plane solution are getting close to be finalized
Summary of Email Discussion

• Updates to draft-ietf-detnet-flow-information-model-01 have been discussed on the DetNet WG email list in this thread.

• The main discussion topics were related to Section 5.2 Service parameters:
  • Delay parameters
  • Misordering

• The changes from v01 to v02 aim to capture the discussion items.
Summary of The Changes to Section 5.2

• The introductory text of the section has been updated to bring it in-line with the architecture draft

• Restructuring
  • The description of the service parameters have been moved into the body of the bullet list of the service parameters (it was separate list and description in v01)

• No changes to the text to these service parameters
  • Connectivity type
  • Service rank

• Changes to these parameters explained in detail in the following slides
  • Bandwidth
  • Delay parameters
  • Loss parameters
  • Misordering / In order delivery
Service Parameters: Bandwidth

• The bandwidth guaranteed for the DetNet service
Service Parameters:
Delay Parameters

• Two delay parameters:

• Maximum latency
  • Maximum end-to-end one-way latency for the DetNet service between the edges of the DetNet network

• Packet Delay Variation (PDV)
  • The difference between the minimum and the maximum end-to-end one-way latency
Service Parameters: Loss Parameters

- Two loss parameters:
  - Maximum Packet Loss Ratio (PLR)
    - Maximum packet loss ratio for the DetNet service between the edges of the DetNet network
  - Maximum consecutive loss tolerance
    - The maximum number of consecutive packets whose loss can be tolerated
Service Parameters: Maximum Allowed Misordering

- Maximum allowed misordering describes the tolerable maximum number of packets that can be received out of order.
- Can be measured based on sequence number.
- The value zero = in order delivery is required, misordering cannot be tolerated.
To Do

• Update further the service parameters as needed based on WG discussion
  • Enrich service parameters (Section 5.2) with DetNet Flow Traffic Specification (Section 7.2)
  • Do we want time-based DetNet service establishment and tear down? (see RFC 8413)

• Double check DetNet flow related parameters (sections 7, 13, and 14) and update as needed according to architecture and data plane solutions for MPLS and IP

• Double check DetNet Domain, End System, and UNI (sections 8, 9, 10, 13) and update as needed according to architecture

• Double check consistency between information model and YANG data model

• Fill-in or remove placeholders (sections 11, 12, 15)

• Update summary, IANA, and security consideration sections

• Contributions are welcome!