DetNet Configuration YANG Model

draft-ietf-detnet-yang-04

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History

- Version 00: accepted as a WG document after IETF 102
- Version 01: *ietf-detnet-topology-yang* is defined independently
- Version 02: updated following the feedback from IETF103
  - Add ‘Sequence Number Generation’
    - OAM considerations
  - Add ‘DetNet Service Decapsulation’
  - Add ‘DetNet Transport Tunnel Decapsulation’
- Version 03: DetNet Configuration Structure Update in IETF104 and IETF105
- Version 04:
  - Modify the scope of DetNet YANG Model
Version03: DetNet Configuration YANG Model

- DetNet Configuration Module
  - designed for DetNet flow path establishment, flow status reporting, and DetNet functions configuration
  - Including: App flow, service sub-layer, forwarding sub-layer, sub-network

DetNet data plane protocol stack*  |  DetNet Configuration Instance
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Source  |  Destination
Service sub-layer: Packet sequencing, Flow replication, Packet encoding | Service sub-layer: Duplicate elimination, Flow merging, Packet decoding
Forwarding sub-layer: Resource allocation, Explicit routes | Forwarding sub-layer: Resource allocation, Explicit routes
Sub-network Instance 1 | Sub-network Instance 2


DetNet Configuration Module
Version 04: DetNet YANG Model

- DetNet Service Module
  - service quality attributes
    - Maximum Latency
    - Maximum Latency Variation
    - Maximum Loss
    - Maximum Consecutive Loss
    - Maximum Misordering
  - service endpoints attributes
    - The starting and termination reference points of the DetNet Service.
  - service encapsulation type attributes
    - Service Encapsulation attribute defines the data plane type of the DetNet service in a DetNet domain, e.g., MPLS, IP.

- DetNet Configuration Module
  - As Previous Slides
### Conclusion and Next Step

- Not well aligned yet
- TBD: Mapping between information model and YANG Model
- Plan to work together

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**App Flow**

**Characteristics**
- FlowID: unique (manuscript ID)
- FlowType: Eth, MPLS, IP
- DestinationPortForwarding: 0.0.0.0, Label, VLAN, etc.
- Traffic Specification:
  - Interval: pickup, max-packet
  - Packets (octet): 0, 0, 0, 0, 0
- FlowFlag: 
- FlowStatus: 

**Requirements**
- FlowRequirements: 
  - Middle, Maximum, MinValue, MaxValue, Variation, MaxLoss, MaxConnectorLost, Tolerance, MaxMisordering
  - DefLowMD5

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**DetNet Flow**

**Characteristics**
- FlowID: unique (manuscript ID)
- FlowType: Eth, MPLS, IP
- FlowForwarder: MPLS, IP

**Requirements**
- FlowRequirements:
  - Middle, Maximum, MinValue, Variation, Loss, MaxConnectorLost, Tolerance, MaxMisordering

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**DH Service**

- DefLowID: unique (manuscript ID)
- DefLowDeliveryType: Eth, MPLS, IP
- DefLowConnectivity: 0.0, 0.0
- DefLowFlag:
- DefLowProfile:
  - MaxTraffic, MinTraffic, MaxTrafficVariation, MaxLoss, MaxConnectorLost, Tolerance, MaxMisordering
  - DefLowMD5

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**DetNet Status**
Thanks