UDP-based Transport for Configured Subscriptions

draft-ietf-netconf-udp-notif-01

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Agenda

• Quick reminder
• -00 vs. -01, considering comments received on the ML
• Discuss
Objective

- Publication of **massive amounts** of networking device data
- LC’s to **directly send out data**, need for low performance impact

Configured subscriptions

- To be used in conjunction with "Subscription to Distributed Notifications"
  draft-ietf-netconf-distributed-notif-01
Terminology

- Fragmentation option ➔ Segmentation option (Transport)
- Generator-ID ➔ Observation-Domain-ID (consistency with netconf-distributed-notif-01)

Applicability section

- Reworked content to align with RFC8085 (UDP Usage Guidelines)
- Congestion control, Message size, Lack of reliability
draft-ietf-netconf-udp-notif-01
Diff 2/3 UDP Notif message Header (proposal)

Figure 2: UDP-Notif Message Header Format

Version: 4 3 bits
S: Space flag, 1 bit
  • 0: Standard ET space
  • 0: CBOR
  • 1: JSON
  • 2: XML
  • 1: Private ET space
    • E.g. GPB

Comments Andy/Mahesh
> Obs domain and message ID Needed
  Segmentation + QoL
> Version set to 1 : OK.
> How to deal with private space: Discuss
An implementation of this specification **MUST NOT** rely on IP fragmentation by default to carry large messages. An implementation of this specification **MUST** either restrict the size of individual messages carried over this protocol or support the segmentation option.

**TODO:** Simplify: **SHOULD NOT** do fragmentation

**TODO:** SeqNum vs. L bit relationship (Andy/Mahesh)
Implementation by Huawei tested within Swisscom labs

Implementation status
• Producer and collector implementation projects now follow -01
  Scapy based collector validation
  VRP → golang collector → Kafka producer following -01 in the lab
  VRP → C collector : Segmentation support and integration with pmacct remaining

Next steps
• Draft DTLS
• Proposed changes based on comments
• More?
Thanks !