

NVO3 Fault Management

draft-tissa-nvo3-oam-fm-00
March 2014
London

Highlights

- Based on architecture and framework of IEEE 802.1 CFM (Continuity Fault Management)
- Where applicable same opcodes and TLVs as CFM are utilized
- Has the following abilities:
 - Fault verification and isolation
 - Connectivity monitoring and detection of cross connect errors
 - Performance and Loss measurement
 - Accommodate operational hierarchy (domain levels)
 - Nested OAM

OAM Packet

Transport Header

O

F

NVO3 Shim

O- OAM
F- payload
fragment
present

Optional Payload fragment

96 byte fixed size
optional payload.
Use cases coming
up

EthType 0x8902

OAM Message

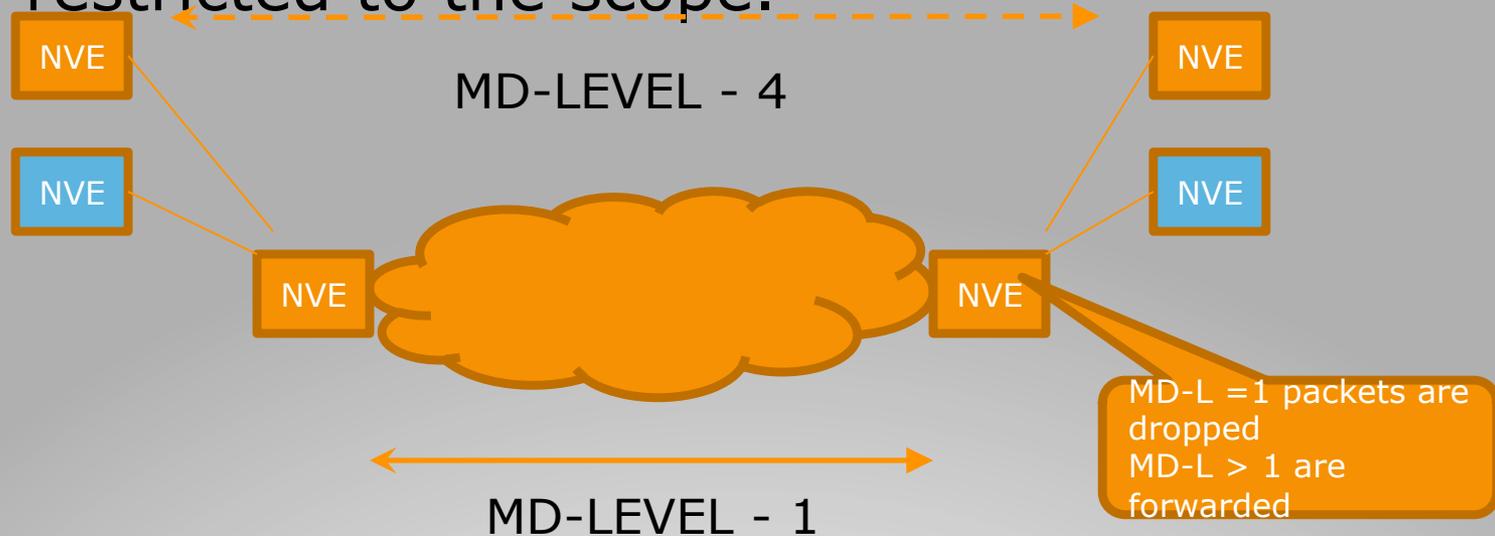
Applicability of Payload fragment

- draft-ietf-nvo3-dataplane-requirements-02
 - Section 3.2.2 – L2VNI and L3VNI can be nested
 - Payload fragment facilitate path selection at boundary nodes for OAM packets



Applicability of MD-Level

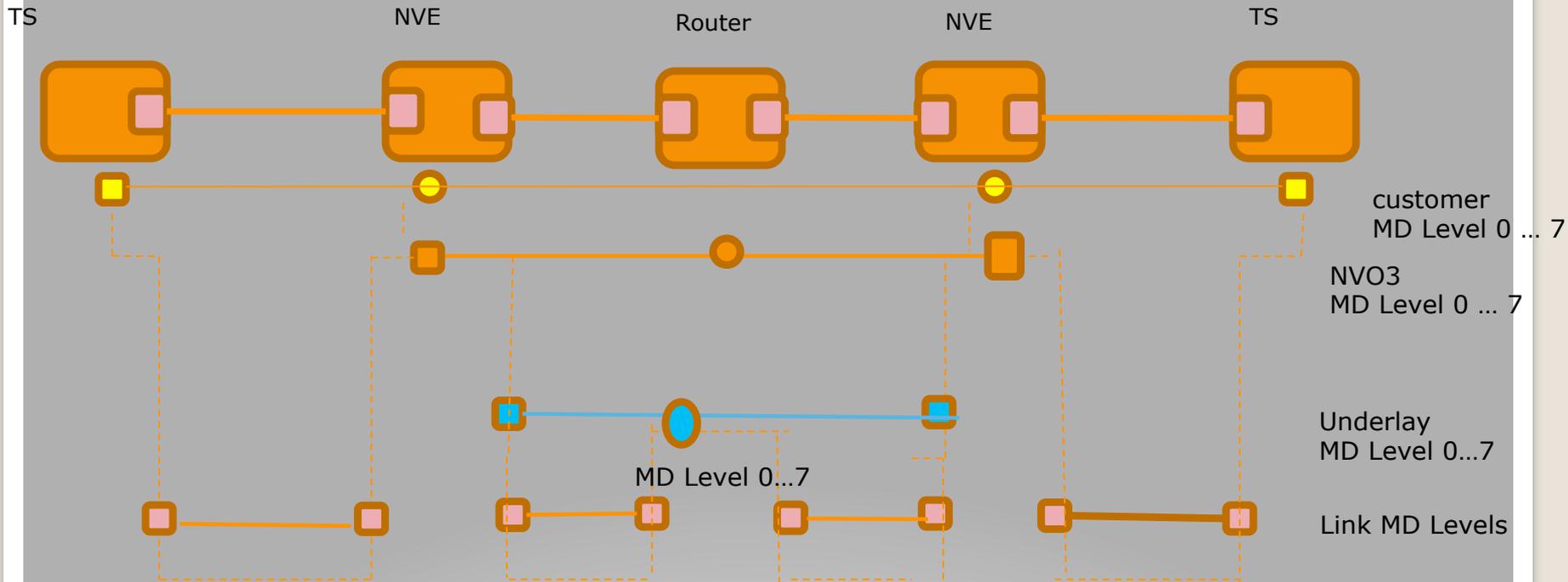
- draft-ietf-nvo3-dataplane-requirements-02
 - Section 3.6 – Introduces concept of Hierarchical NVE for NVO3,
 - MD-LEVEL allows OAM messages to be restricted to the scope.



Applicability of CCM

- Draft-ietf-nvo3-overlay-problem-statement-04
 - Need isolation between tenant traffic
 - Most often leaking between tenant traffic happens due to miss configuration or equipment or software defects
 - CCM (Continuity Check Message) provides cross connect error detection
 - Cross connect error raises notification

Nested MP Interaction



 **MEP for UnderLay**

 **MEP for Overlay**

 **MEP for Link Level**

 **MIP overlay in case of hierarchical Or nested VNI**

 **MIP for underlay**

Next steps

- Wider review and comments
- Suggestions on additional NVO3 specific extensions ?