

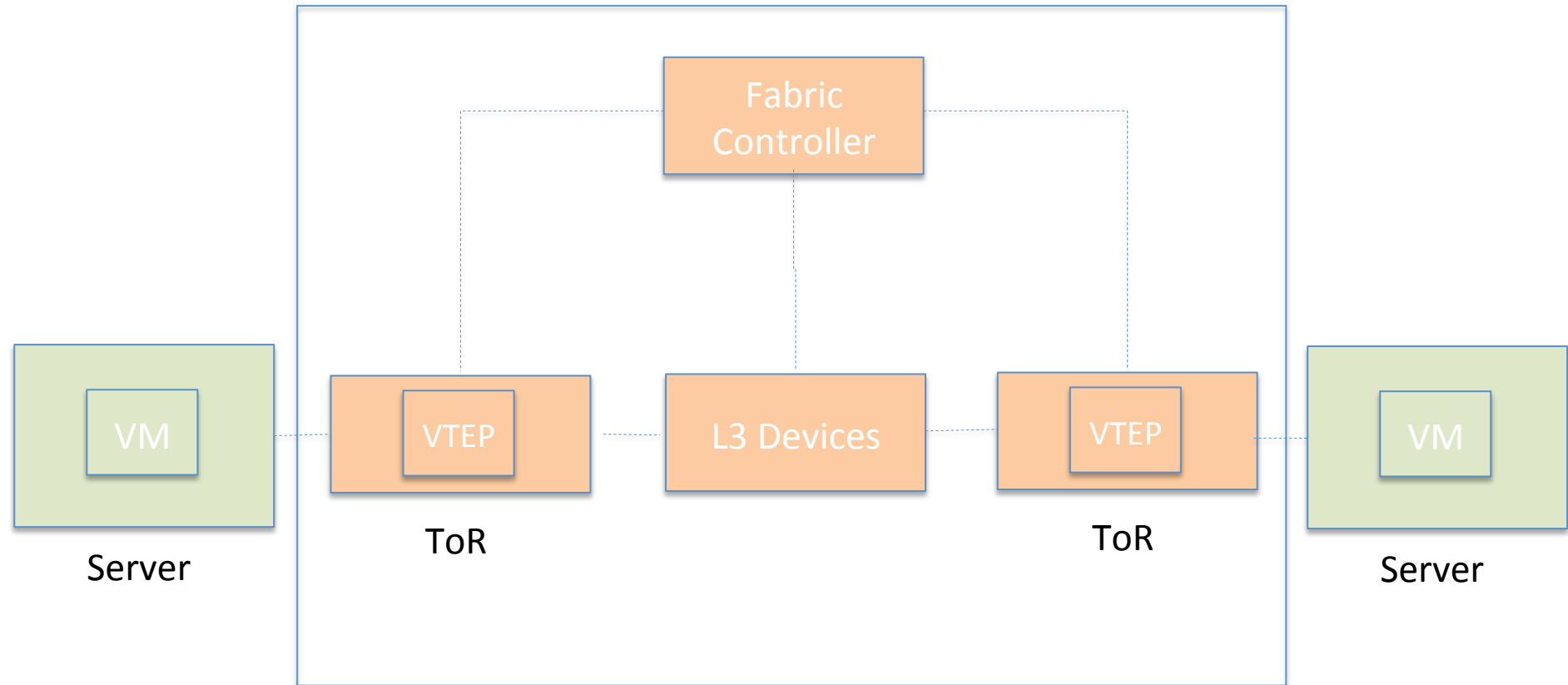
# Path Detection in VXLAN Overlay Network

draft-pang-nvo3-vxlan-path-detection-01

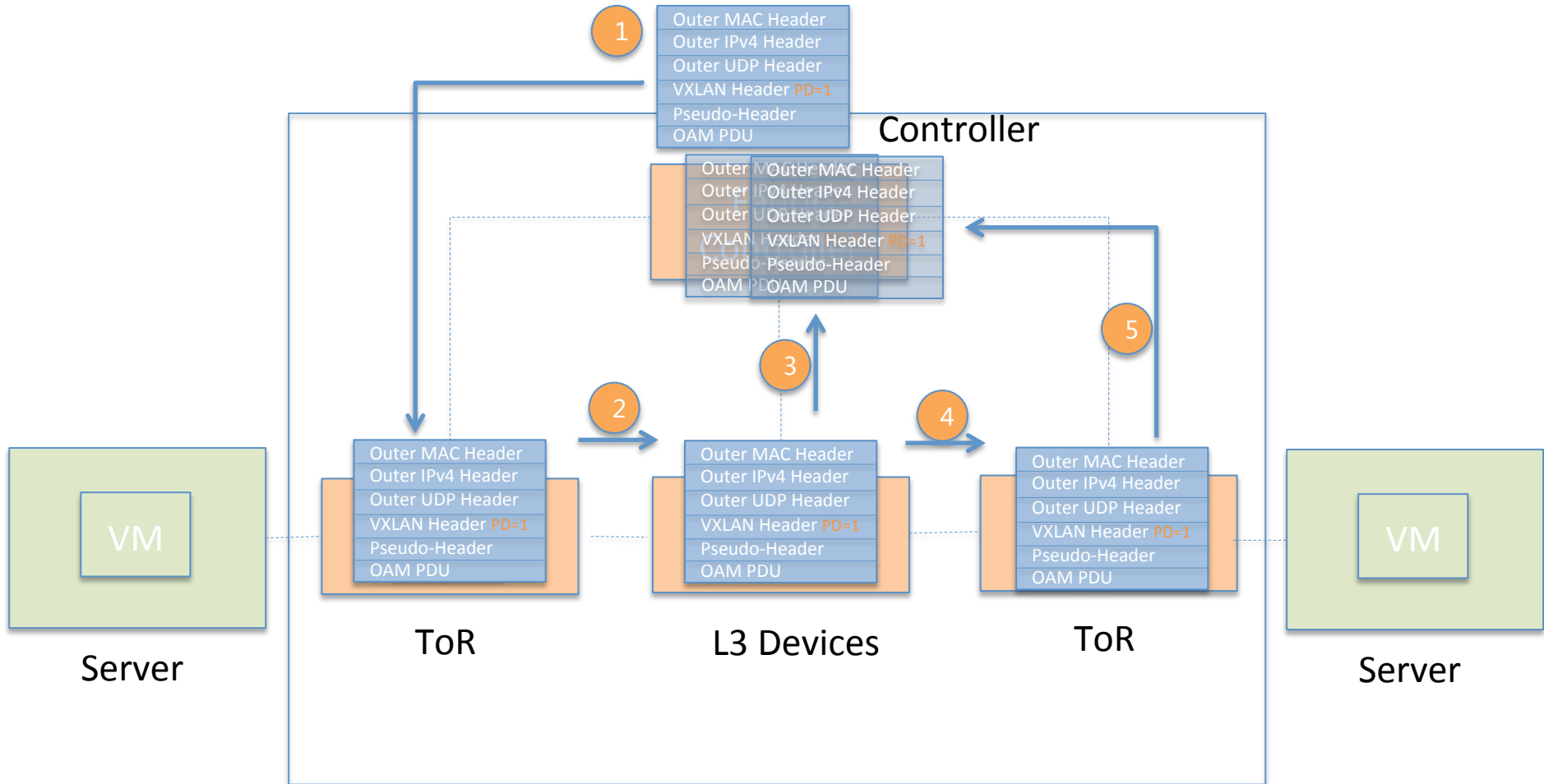
IETF 94

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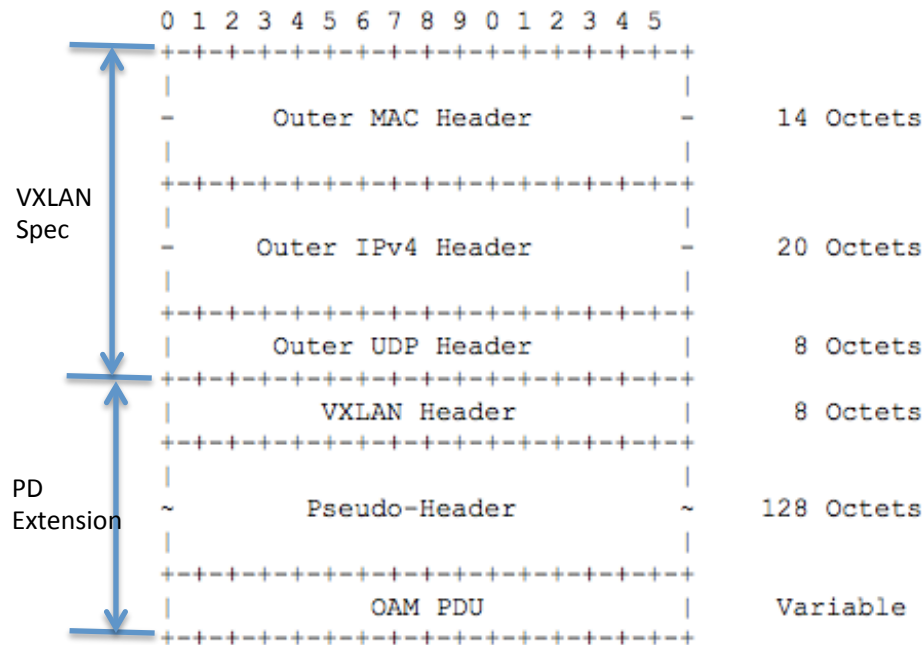
# Path Detection for VXLAN: Architecture



# Path Detection for VXLAN: How it works



# Format of the PD Packet



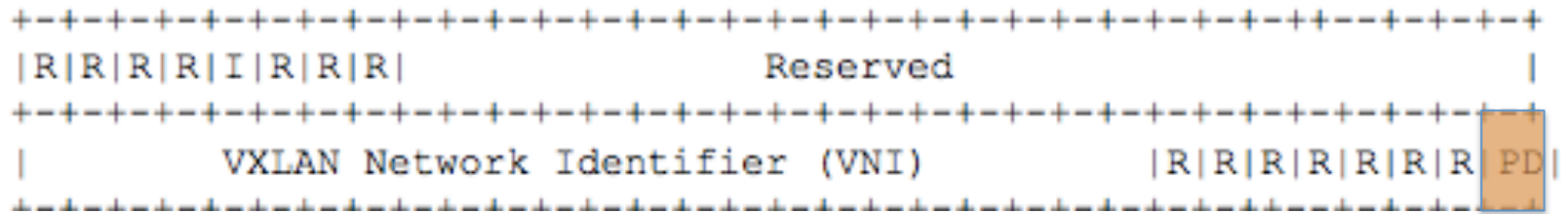
**VXLAN Header:** Complies with VXLAN header specified in RFC 7348;

Use a reserve field as the PD packet flag.

**Pseudo-Header:** Ethernet header, IPv4 header, TCP/UDP header.

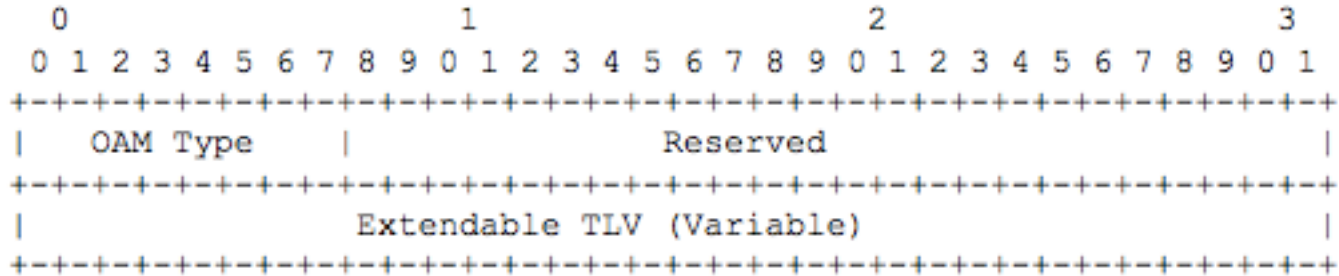
**OAM PDU:** Carry the path detection information. Consists of OAM flag, OAM type, extendable TLV.

# Format of VXLAN Header Extension



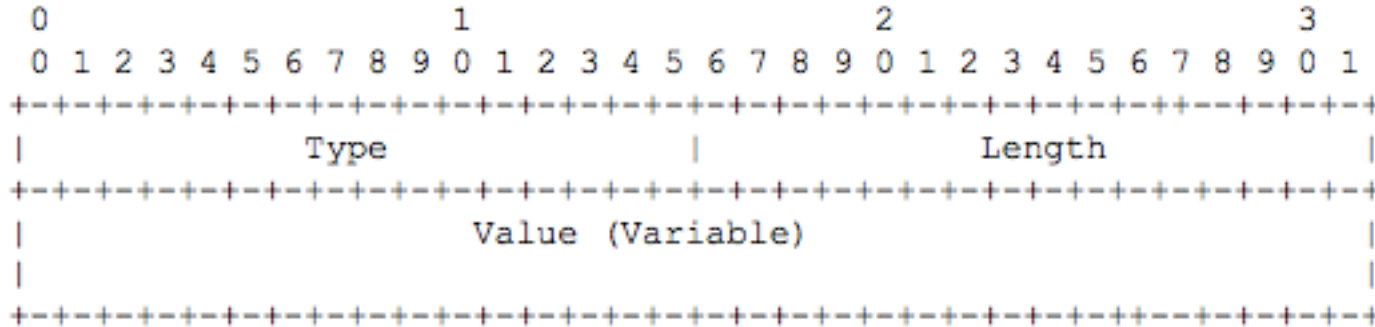
PD(1 bit): Indicates it is a PD packet.

# Format of OAM PDU



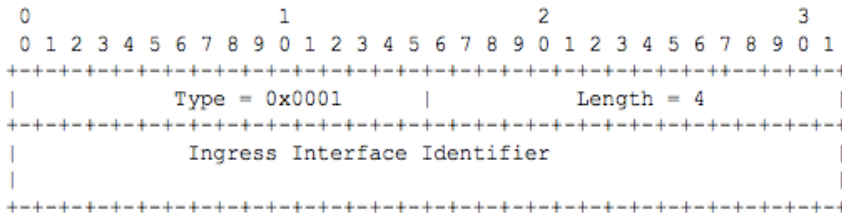
OAM Type	Function
-----	-----
0x01	Path Traversal
0x02	Path Tracking
Other	Reserved

# Format of Extendable OAM TLV

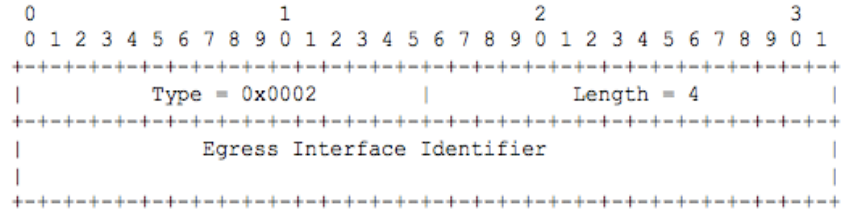


Type	TLV Name
0x0001	Ingress Interface Identifier
0x0002	Egress Interface Identifier
0x0003	Transaction Identifier
0x0004	Ingress Interface Name Identifier
0x0005	Egress Interface Name Identifier
0x0006	Authentication

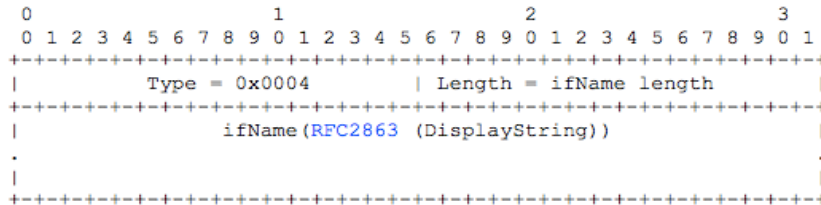
# Extendable OAM TLV



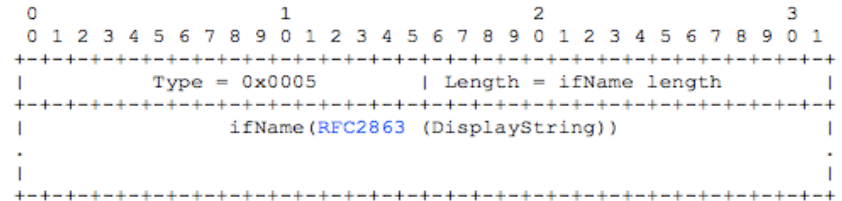
IIID TLV



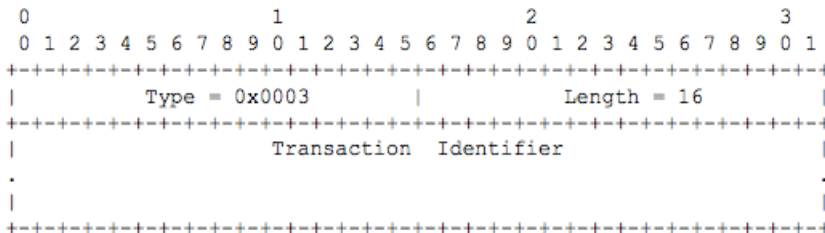
EIID TLV



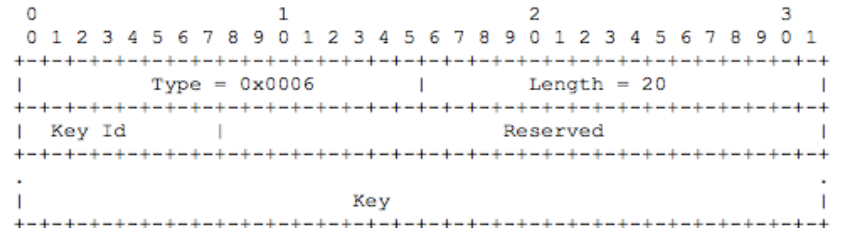
Ingress Interface Name TLV



Egress Interface Name TLV



Transaction Identifier TLV



Authentication TLV



# Security Consideration

- Similar as VXLAN
- Administrative measures, ACL, authentication and encryption etc could be used.
- IPSEC (RFC 6071) etc could be used to protect the communication between controller and network switch. (Out Scope)

# Next Step

- Call for adoption in next meeting?