

BFD for Geneve

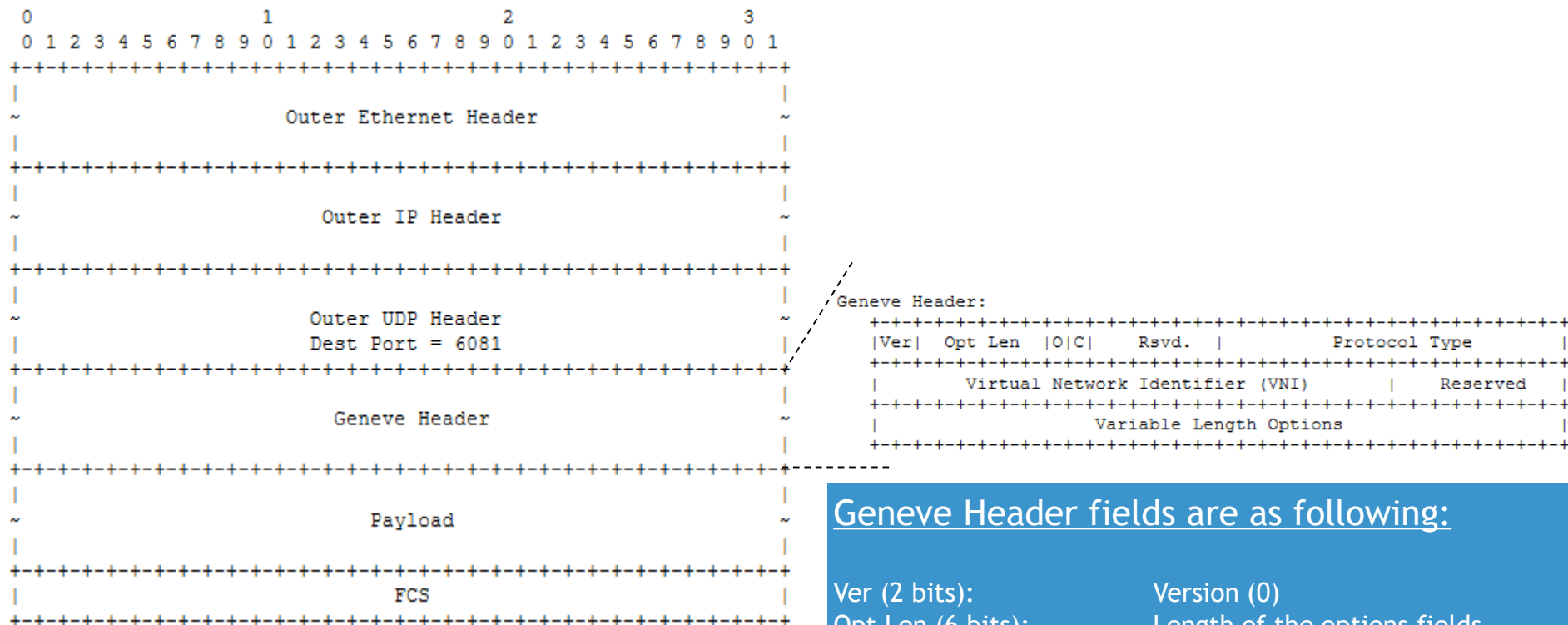
draft-xiao-bfd-geneve-00

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Intention of this draft

- Specifies the use of BFD in Geneve overlay networks:
 - It's similar to draft-ietf-bfd-vxlan which is in IESG processing
 - The main difference between Geneve and VXLAN encapsulation is that Geneve supports multi-protocol payload and variable length options

Geneve Encapsulation



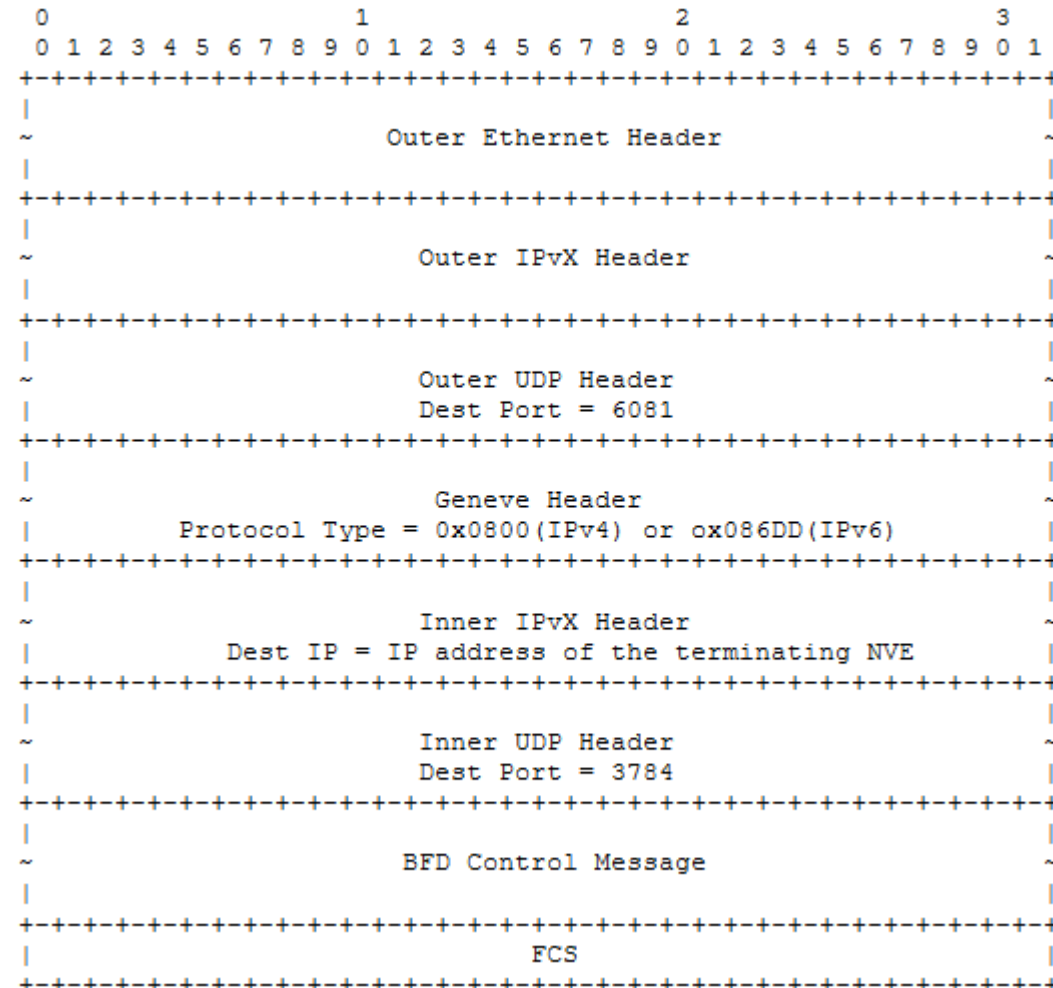
Geneve Header fields are as following:

Ver (2 bits):	Version (0)
Opt Len (6 bits):	Length of the options fields
O (1 bit):	Indicates this packet contains a control message
C (1 bit):	Indicates critical options present
Protocol Type (16 bits):	Follows the EtherType
VNI (24 bit):	Virtual Network Identifier
Options (Variable Length):	Zero or more options in TLV format

Scenario 1 – IP/UDP BFD encapsulation

- If Protocol Type of user traffic is equal to any of below values:

Protocol Type	Payload
0x6558	Ethernet
0x0800	IPv4
0x86DD	IPv6
0x8847	MPLS
0x8848	MPLS with the upstream-assigned label

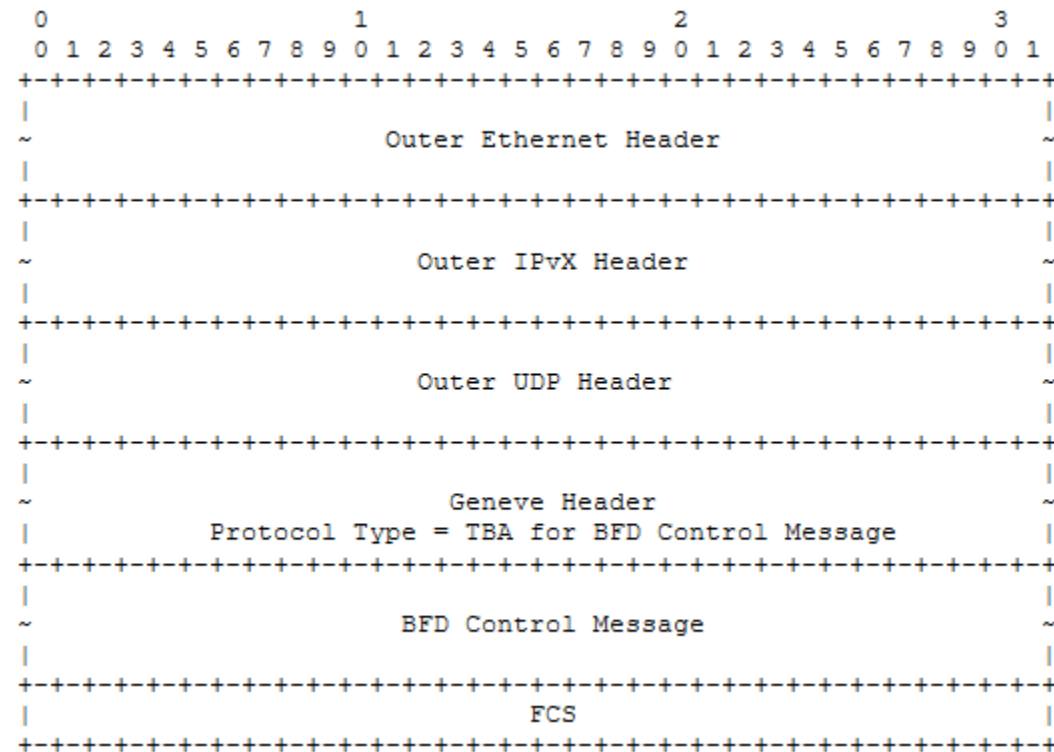


- In this scenario, IP/UDP encapsulation of BFD Control Message is used, simulating RFC 5881

Scenario 2 – Non-IP BFD encapsulation

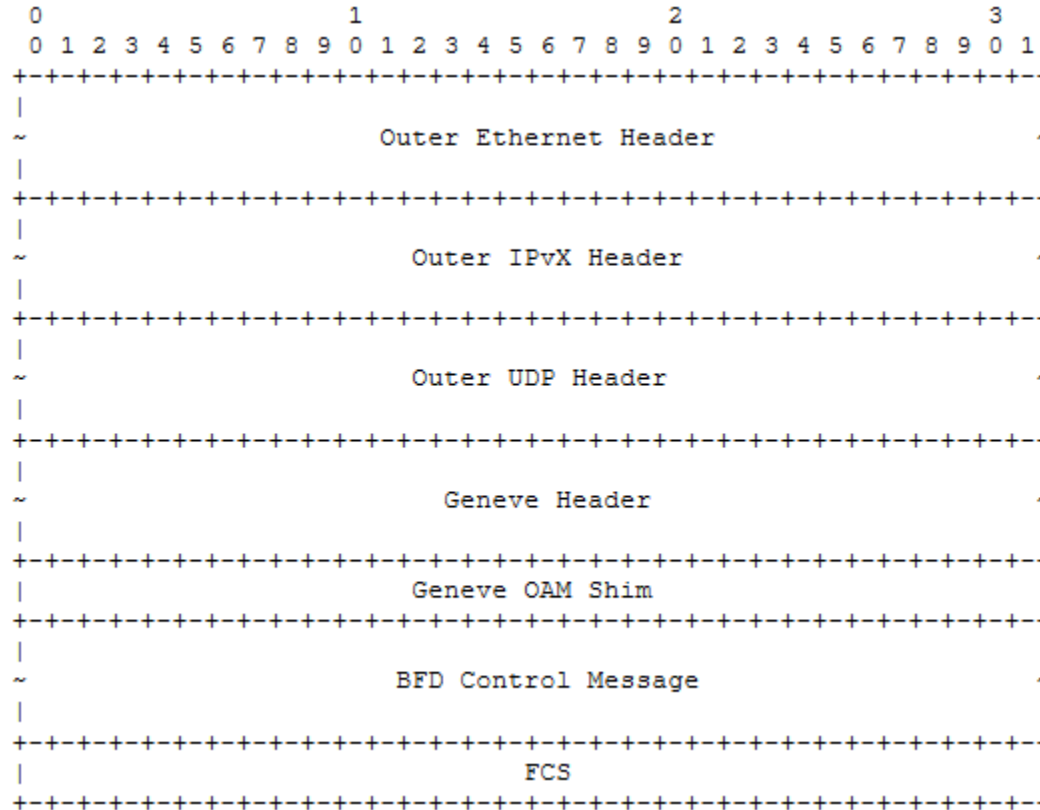
- If Protocol Type of user traffic is not equal to any of below values:

Protocol Type	Payload
0x6558	Ethernet
0x0800	IPv4
0x86DD	IPv6
0x8847	MPLS
0x8848	MPLS with the upstream-assigned label



- In this scenario, a new Protocol Type of Geneve header is requested from IANA, do we pragmatically need this encaps?

Unified Scenario - New Geneve OAM shim



- It's still in discussion whether we need a dedicated Geneve OAM Shim, if yes, this Shim can be used to indicate BFD Control Message

Next steps

- Ask for more reviews and comments
- Revise this draft to resolve comments
- Ask for WG adoption