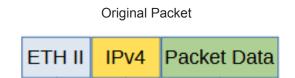


Encapsulate

When a packet is encapsulated with a VxLAN header the new VxLAN header segments are added to the original packet. The VxLAN header segments consists of L2, L3, UDP and VxLAN as shown below.



VxLAN Encapsulated Packet

ETH II	IPv4	UDP	VxLAN	ETH II	IPv4	Packet Data
--------	------	-----	-------	--------	------	-------------

Encapsulating a packet with a VxLAN header involves two configuration procedures.

- Create a flow to add the VxLAN header
- Create a TAP Group

This document discusses the procedure to create a flow to add the VxLAN header. The procedure to create a TAP Group is discussed in the TAP Group Guide.



Create a Flow

- 1. Select TAP Management.
- 2. Select Flow.
- 3. Select + Add Flow.

The Add Flow panel will appear.

Add Flow			×
Flow Name	Test1		
Decap	Off		
		✓Add Flow ¥	Close

- 4. Enter the Flow Name.
- 5. Select Add Flow.

The flow will be displayed.

TAP Flow Statistics				+ Add Flow
#	Flow Name	Remark	Decap	Options
1	VXLAN	N/A	Disable	+ 💼

6. Select the + in the Options column to define the attributes.

The Add Flow Entry panel will be displayed.

The Add Flow Entry panel is divided into two sections, match rule and action.

Match Rule Section

- Defines whether the packets are permitted or denied
- Determines the permitted or denied packet filter criteria
- Determines which permitted packets will be modified by any action(s) selected and defined in the action section

Action Section

• The action section is used to define the modification(s) that will be performed on any packet(s) that is permitted by the match rule section



Flow Match Options

- 7. Action permit
- 8. IP Protocol Number any
- 9. Select any other desired options and enter the desired values to define which packets will be encapsulated. The defaults may be used to encapsulate all packets.

Flow Action Options

10. Add Vxlan	enable
11. Vxlan-dest-mac	Enter the desired address. This defines the destination MAC in the L2 segment of the VXLAN header.
12. Vxlan-src-ip	Enter the desired address. This defines the source IP in the L3 segment of the VXLAN header.
13. Vxlan-dest-ip	Enter the desired address. This defines the destination IP in the L3 segment of the VXLAN header.
14. Vxlan-dst-port	Enable to enter the UDP destination port in the VXLAN header other than the default 4789. The system will automatically define the UDP destination port value as 4789.
15. Vxlan-src-port	Enable to enter the UDP source port in the VXLAN header other than the default 0. The system will automatically define the UDP source port value as 0.
16. Vxlan-vni-num	Enter the desired VXLAN VNI number. The range is 1 to 16777215.
17. Select OK.	

18. Select the flow name to display the attributes.

The Flow Entry panel will be displayed

#	Flow Entry	Options
	sequence-num 10 permit any src-ip any dst-ip any add-vxlan vxlan-sip 10.10.10.10 vxlan-dip 10.10.10.10 vxlan-dmac f093.c5f1.a1a1 vxlan-dport 4789 vxlan-set-vni 1234	Ê

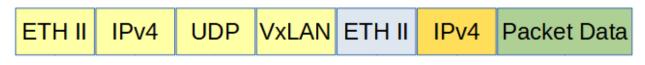
Additional entries may be created for the flow. Entries may be deleted by selecting the Trash Can. Entries may not be modified.



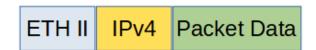
Decapsulate

When the VxLAN header is decapsulated from a packet, the VxLAN header segments are removed as shown below.

VxLAN Encapsulated Packet



VxLAN Decapsulated Packet



The Advanced Features supports two methods to decapsulate VxLAN headers.

- Packets per VxLAN VNI
- All VxLAN packets

The flow to decapsulate VxLAN packets per VxLAN VNI may be configured via the GUI. The flow to decapsulate all VxLAN packets must be configured via CLI commands.

Decapsulating the VxLAN header from a packet(s) involves two configuration procedures.

- Create a flow to strip the VxLAN header
- Create a TAP Group

This document discusses the procedure to create a flow to strip the VxLAN header. The procedure to create a TAP Group is discussed in the TAP Group Guide.



Create a Flow (Decapsulate VxLAN per VNI)

- 1. Select TAP Management.
- 2. Select Flow.
- 3. Select + Add Flow.

The Add Flow panel will appear.

Add Flow			
Flow Name	Test1		
Decap	flo		
		✓ Add Flow 🗙 (Close

- 4. Enter the Flow Name.
- 5. Select Add Flow.

The flow will be displayed.

TAP Flow Statistics				+ Add Flow
#	Flow Name	Remark	Decap	Options
1	VXLAN	N/A	Disable	+ 🛍

6. Select the + in the Options column to define the attributes.

The Add Flow Entry panel will be displayed.

The Add Flow Entry panel is divided into two sections, match rule and action.

Match Rule Section

- Defines whether the packets are permitted or denied
- Determines the permitted or denied packet filter criteria
- Determines which permitted packets will be modified by any action(s) selected and defined in the action section

Action Section

• The action section is used to define the modification(s) that will be performed on any packet(s) that is permitted by the match rule section



Flow Match Options

7. Action	permit
-----------	--------

- 8. IP Protocol Number udp
- 9. Dst-port enable
- 10. Type eq
- 11. Port 4789
- 12. Vxlan-VNI enable
- 13. ID VxLAN VNI value
- 14. Wildcard 0x0
- 15. Select any other desired options and enter the desired values to define which packets will be decapsulated. The defaults may be used.

Flow Action Options

- 16. Strip-header enable
- 17. Select OK.
- 18. Select the flow name to display the attributes.

The Flow Entry panel will be displayed

VXL	AN
~ / \	

#	Flow Entry	Options
1	sequence-num 10 permit udp dst-port eq 4789 vxlan-vni 1234 0x0 src-ip any dst-ip any strip-header	Ē

X Close

×

Additional entries may be created for the flow. Entries may be deleted by selecting the Trash Can. Entries may not be modified.



Create a Flow (Decapsulate All VxLAN)

Connect to the Advanced Features unit. A connection to the unit may be established using two options:

Directly connected to the Console Interface to COM Port using Putty/Serial connection.

Connected via the IP Management Interface using Putty/SSH connection.

- 1. Press the Return key.
- 2. Enter enable.
- 3. Enter configure terminal.
- 4. Enter the following commands to create the flow.

Switch(config)# flow VXLAN

VXLAN is the flow name.

Switch(config-flow-VXLAN)# permit udp dst-port eq 4789 vxlan-vni any src-ip any dst-ip any strip-header

5. Once the flow is created it will be displayed in the GUI.

TAP Flow Statistics				+ Add Flow
#	Flow Name	Remark	Decap	Options
1	VXLAN	N/A	Disable	+ 🛍

6. Select the flow name to display the attributes.

The Flow Entry panel will be displayed

VXLAN

#	Flow Entry	Options
1	sequence-num 10 permit udp dst-port eq 4789 vxlan-vni any src-ip any dst-ip any strip-header	Ē

X Close

 \times

Additional entries may be created for the flow. Entries may be deleted by selecting the Trash Can. Entries may not be modified.