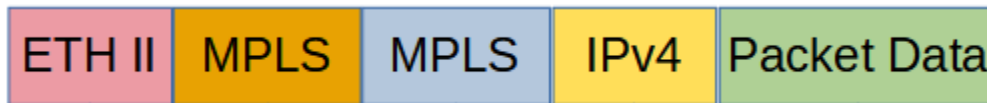
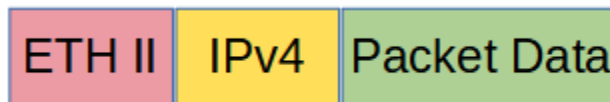


When the MPLS label(s) are removed from a packet, the packet maintains the original L2, L3 and packet data as shown below.

MPLS Packet



MPLS Packet – Labels Removed



The Advanced Features MPLS abilities:

- Strip up to 9 MPLS labels
- Filter on up to 3 MPLS Labels

Stripping and/or filtering MPLS labels on packets involves two configuration procedures.

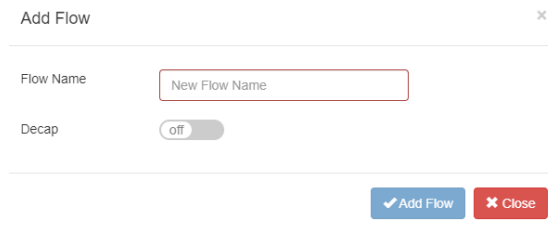
- Create a flow. A flow may be created to perform the following:
  - Strip MPLS labels from packets based on IP Protocol number
  - Strip MPLS labels based on filtering up to 3 MPLS Labels, 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup>
  - Filter MPLS packets based on filtering up to 3 MPLS Labels, 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup>
  - Filter MPLS packets based on IP Protocol
  - Filter MPLS packets based on Ether Type
- Create a TAP Group

*This document discusses the procedure to create MPLS flows. 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.*



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	MPLS	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

### Strip MPLS Labels (IP Protocol)

This flow may be used to strip all of the MPLS labels from packets without specifying the number of MPLS labels or using filtering to determine which MPLS packets are affected.

#### Flow Match Options


- 1. Action                      permit
- 2. IP Protocol Number    mpls
- 3. Mpls enable              enable

#### Flow Action Options

- 5. Strip-header              enable
- 6. Select OK.
- 7. Select the flow name to display the attributes.

*The Flow Entry panel will be displayed*

MPLS ×

#	Flow Entry	Options
1	sequence-num 10 permit mpls any strip-header	

✖ Close

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

### Strip MPLS Labels (Strip 1-9 Labels and Filter on 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup>)

This flow may be used to strip all of the MPLS labels from packets by specifying the packets that meet the number of MPLS labels and using filtering to determine which MPLS packets are affected.

#### Flow Match Options

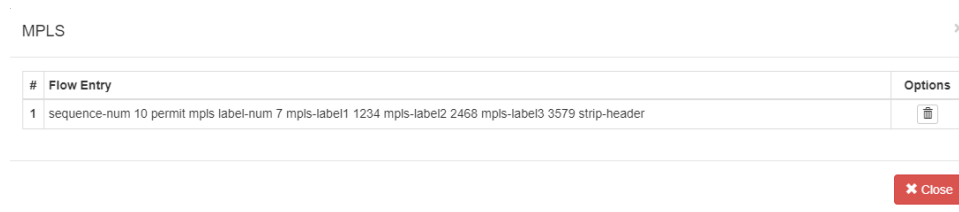
- 1. Action                      permit

2. IP Protocol Number    mpls
3. Mpls enable            enable
4. Number                Select the MPLS label number, 1-9. The MPLS labels will only be stripped from the packets that match the number selected. If 7 is selected, packets with 1-6, 8-9 MPLS labels will not be affected.
5. label1                any     If any is selected this flow will not use the 1<sup>st</sup> MPLS label as a filter option.
6. label1                number        If number is selected an option will appear to enter the matching MPLS 1<sup>st</sup> label.
7. label1\_number        Enter the desired number. Range is 0 to 1048575.
8. label2                any     If any is selected this flow will not use the 2<sup>nd</sup> MPLS label as a filter option.
9. label2                number        If number is selected an option will appear to enter the matching MPLS 2<sup>nd</sup> label.
10. label2\_number      Enter the desired number. Range is 0 to 1048575.
11. label3                any     If any is selected this flow will not use the 3<sup>rd</sup> MPLS label as a filter option.
12. label3                number        If number is selected an option will appear to enter the matching MPLS 3<sup>rd</sup> label.
13. label3\_number      Enter the desired number. Range is 0 to 1048575.

## Flow Action Options

14. Strip-header        enable
15. Select OK.
16. Select the flow name to display the attributes.

*The Flow Entry panel will be displayed*



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

## Filter MPLS Packets (Filter on 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup>)

This flow may be used to filter MPLS packets based on the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> MPLS label number.

### Flow Match Options


- |                       |   |   |
|-----------------------|---|---|
| 1. Action             | permit  |   |
| 2. IP Protocol Number | mpls  |   |
| 3. Mpls enable        | enable  |   |
| 4. Number             | Select the MPLS label number, 1-9. The MPLS labels will only be stripped from the packets that match the number selected. If 7 is selected, packets with 1-6, 8-9 MPLS labels will not be affected. |   |
| 5. label1             | any   | If any is selected this flow will not use the 1 <sup>st</sup> MPLS label as a filter option.  |
| 6. label1             | number  | If number is selected an option will appear to enter the matching MPLS 1 <sup>st</sup> label. |
| 7. label1_number      | Enter the desired number. Range is 0 to 1048575.  |   |
| 8. label2             | any   | If any is selected this flow will not use the 2 <sup>nd</sup> MPLS label as a filter option.  |
| 9. label2             | number  | If number is selected an option will appear to enter the matching MPLS 2 <sup>nd</sup> label. |
| 10. label2_number     | Enter the desired number. Range is 0 to 1048575.  |   |
| 11. label3            | any   | If any is selected this flow will not use the 3 <sup>rd</sup> MPLS label as a filter option.  |
| 12. label3            | number  | If number is selected an option will appear to enter the matching MPLS 3 <sup>rd</sup> label. |
| 13. label3_number     | Enter the desired number. Range is 0 to 1048575.  |   |

### Flow Action Options

- 14. Select OK.
- 16. Select the flow name to display the attributes.

*The Flow Entry panel will be displayed*

MPLS ✕

#	Flow Entry	Options
1	sequence-num 10 permit mpls label-num 7 mpls-label1 1234 mpls-label2 2468 mpls-label3 3579	

✕ Close

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

## Filter MPLS Packets (Filter on IP Protocol)

This flow may be used to filter MPLS packets based on IP Protocol only.

### Flow Match Options

1. Action                      permit
2. IP Protocol Number    mpls
3. Mpls enable              enable

### Flow Action Options

14. Select OK.
16. Select the flow name to display the attributes.

*The Flow Entry panel will be displayed*

MPLS ✕

#	Flow Entry	Options
1	sequence-num 10 permit mpls any	

✕ Close

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

## Filter MPLS Packets (Filter on Ether Type)

This flow may be used to filter MPLS packets based on Ether Type only.

### Flow Match Options


- 1. Action                      permit
- 2. IP Protocol Number    any
- 3. Ether Type                enable
- 4. Value                      0x8847
- 5. Wildcard                 0x0

### Flow Action Options

- 14. Select OK.
- 16. Select the flow name to display the attributes.

*The Flow Entry panel will be displayed*

MPLS
×

#	Flow Entry	Options
1	sequence-num 10 permit any src-ip any dst-ip any ether-type 0x8847 0x0	

✕ Close

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