

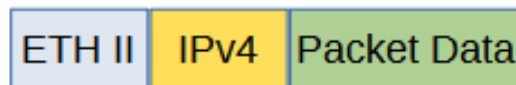
## AF40G24AC

### I3GRE Encapsulate

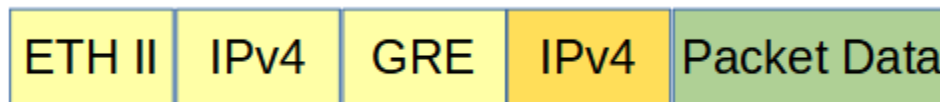
Overview:

When a packet is encapsulated with an I3GRE header the original Ethernet II segment is removed from the packet and the new GRE header segments are added. The I3GRE header segments consist of Ethernet II, IPv4, and GRE as shown below.

Original Packet



I3GRE Encapsulated Packet



Encapsulating a packet with an I3GRE header involves two configuration processes.

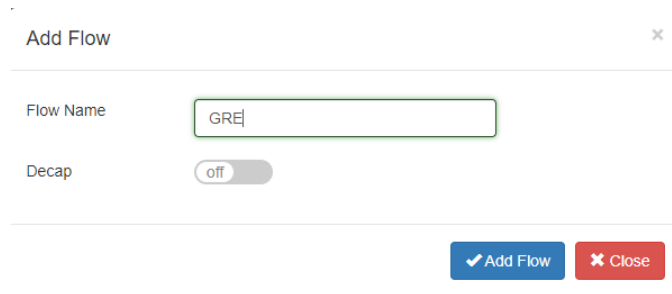
1. Create a Flow
2. Create a Tap Group

## 1. Create a Flow

The flow defines which packets will be encapsulated with an I3GRE header. Packets that do not meet the flow attributes will not be encapsulated. In some cases, it may be required to create more than 1 flow.

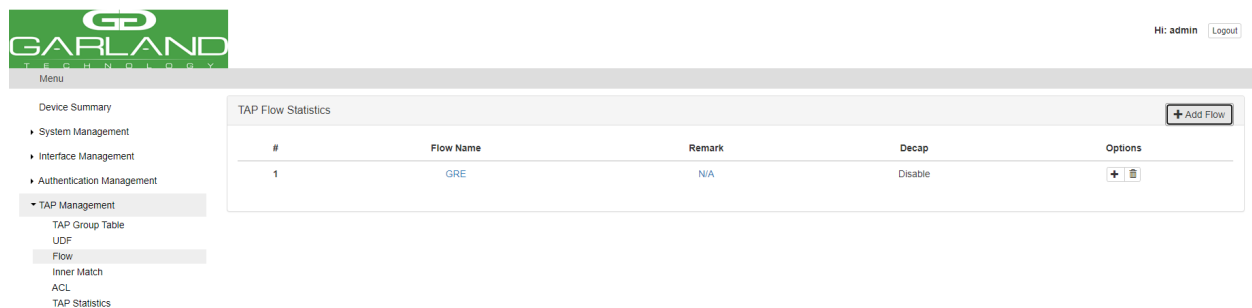
1. Select Tap Management.
2. Select Flow.
3. Select + Add Flow.

The Add Flow panel will appear.



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

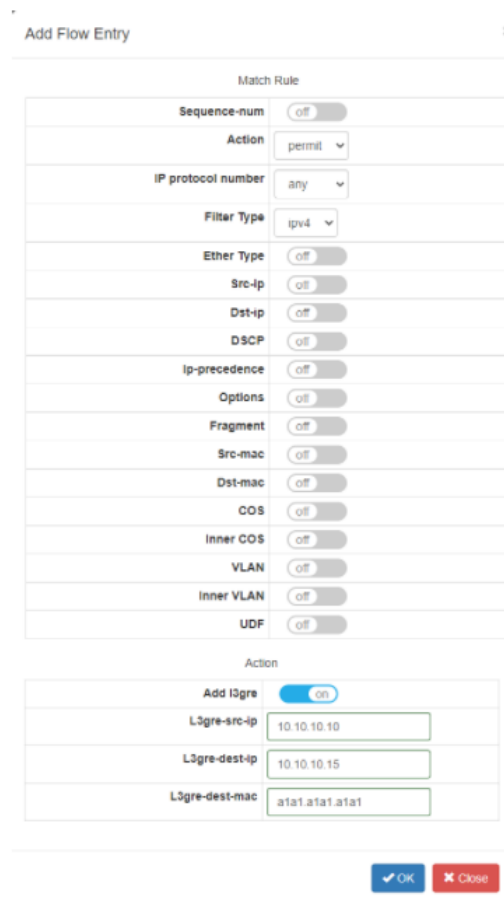
The flow will be displayed.



#	Flow Name	Remark	Decap	Options
1	GRE	N/A	Disable	+   🗑️

6. Select the + in the Options column for the desired flow to define the flow attributes.

The Add Flow Entry panel will be displayed.



Match Rule	
Sequence-num	<input type="checkbox"/> off
Action	permit
IP protocol number	any
Filter Type	ipv4
Ether Type	<input type="checkbox"/> off
Src-ip	<input type="checkbox"/> off
Dst-ip	<input type="checkbox"/> off
DSCP	<input type="checkbox"/> off
Ip-precedence	<input type="checkbox"/> off
Options	<input type="checkbox"/> off
Fragment	<input type="checkbox"/> off
Src-mac	<input type="checkbox"/> off
Dst-mac	<input type="checkbox"/> off
COS	<input type="checkbox"/> off
Inner COS	<input type="checkbox"/> off
VLAN	<input type="checkbox"/> off
Inner VLAN	<input type="checkbox"/> off
UDF	<input type="checkbox"/> off

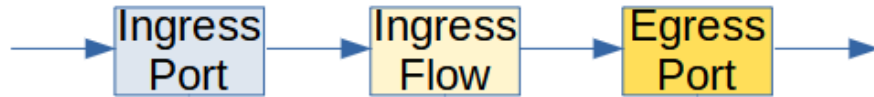
  

Action	
Add I3gre	<input checked="" type="checkbox"/> on
L3gre-src-ip	10.10.10.10
L3gre-dest-ip	10.10.10.15
L3gre-dest-mac	a1a1.a1a1.a1a1

7. Under Match Rule select the desired options and enter the desired values to define which packets are encapsulated with a I3GRE header. If desired the default options may be used to encapsulate all packets.
8. Under Action, select Add I3gre.
9. Enter the desired L3gre-src-ip. This defines the Source IP in the IPv4 segment of the I3GRE header.
10. Enter the desired L3gre-dest-ip. This defines the Destination IP in the IPv4 segment of the I3GRE header.
11. Enter the desired L3gre-dst-mac. This defines the Destination MAC in the Ethernet II segment of the I3GRE header.
12. Select OK.

## 2. Create a Tap Group

The Tap Group defines the ingress port, ingress flow, and egress port.



1. Select Tap Management.
2. Select TAP Group Table.
3. Select + Add TAP Group.

The TAP Group Name panel will appear.

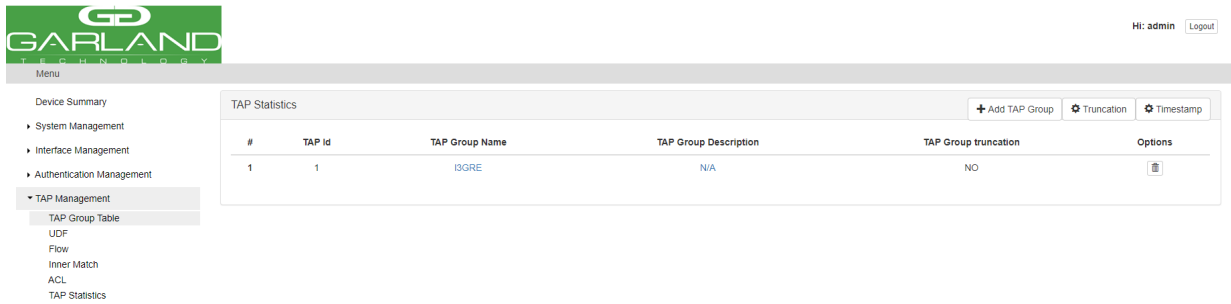
TAP Group Name

TAP Group Name

TAP Group ID

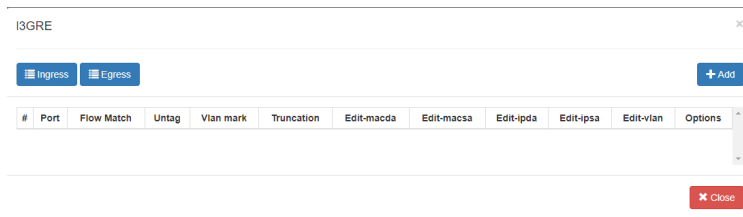
4. Enter the TAP Group Name.
5. Select OK.

The Tap Group will be displayed.



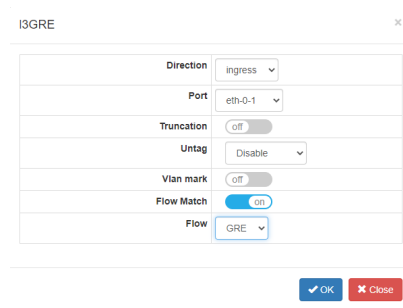
6. Place the cursor on the tap group name under the TAP Group Name column and press the left mouse button.

The TAP group panel will appear.



7. Select the + Add to define the ingress port and ingress flow.

The add panel will appear.



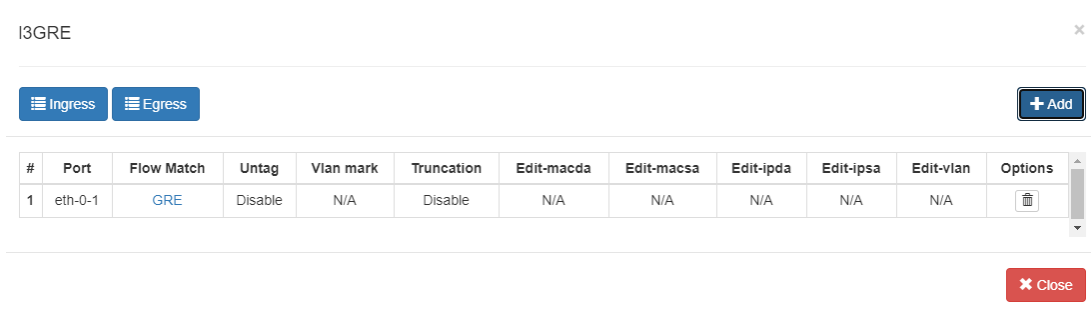
8. Select the Direction, ingress.

9. Select the desired ingress port.

10. Enable Flow Match.

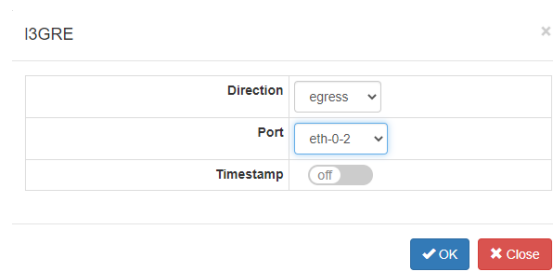
11. Select the I3GRE flow.

12. Select OK.



13. Select the + Add to define the egress port.

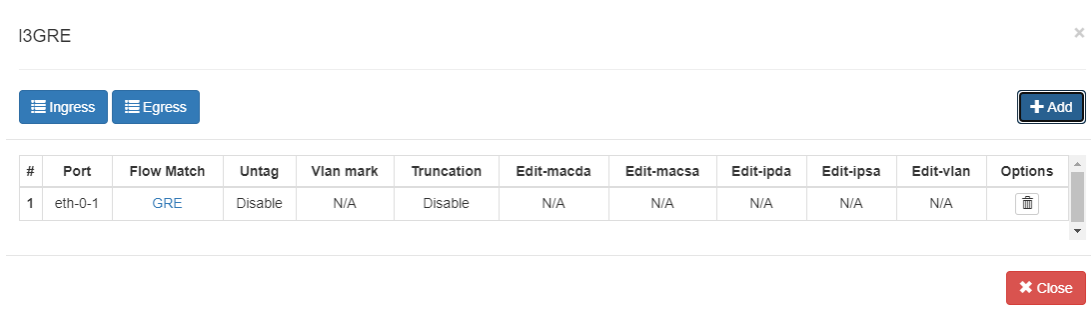
The add panel will appear.



14. Select the Direction, egress.

15. Select the desired egress port.

16. Select OK.



17. The ingress port, ingress flow, and egress port may be displayed by selecting Ingress or Egress. Additional ingress ports, ingress flows, or egress ports may be added to the Tap Group using the same steps.

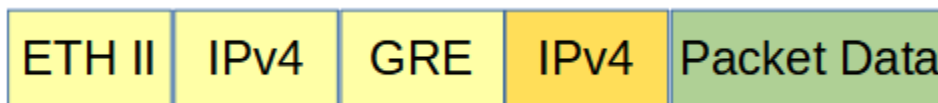
18. Select Close to return the TAP Group Table display.

## I3GRE Decapsulate

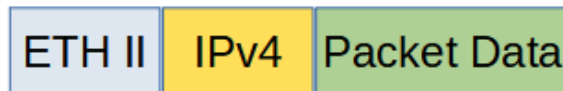
Overview:

When an I3GRE packet is decapsulated the I3GRE header segments are removed from the packet. A new Ethernet II segment is added as shown below.

L3GRE Encapsulated Packet



I3GRE Decapsulated Packet



Decapsulating the I3GRE header from a packet involves two configuration processes.

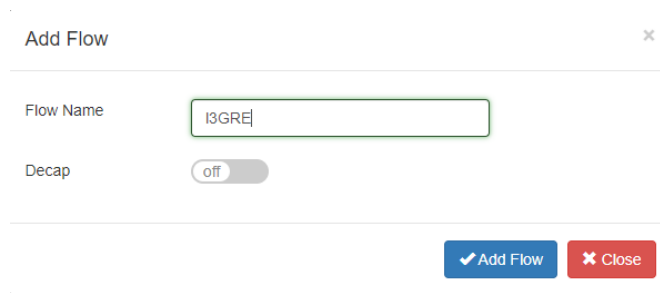
1. Create a Flow
2. Create a Tap Group

## 1. Create a Flow

The flow defines which I3GRE packets will be decapsulated. Packets that do not meet the flow attributes will not be decapsulated. In some cases, it may be required to create more than 1 flow.

1. Select Tap Management.
2. Select Flow.
3. Select + Add Flow.

The Add Flow panel will appear.



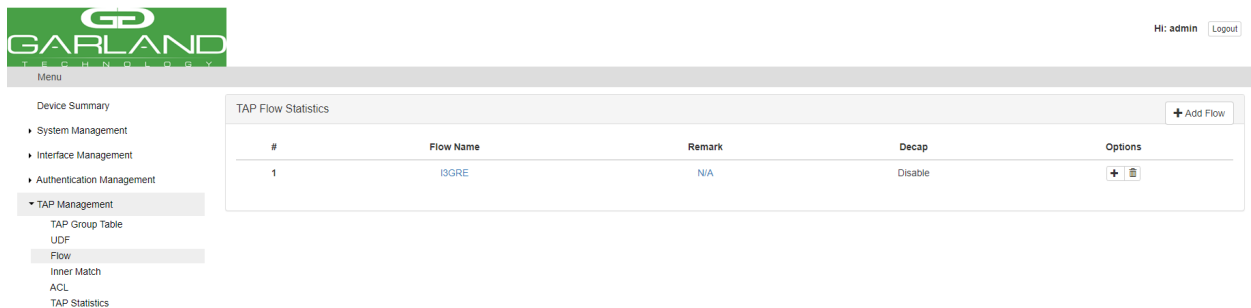
Add Flow ×


Flow Name

Decap  off

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

The flow will be displayed.




Hi: admin [Logout](#)

Menu

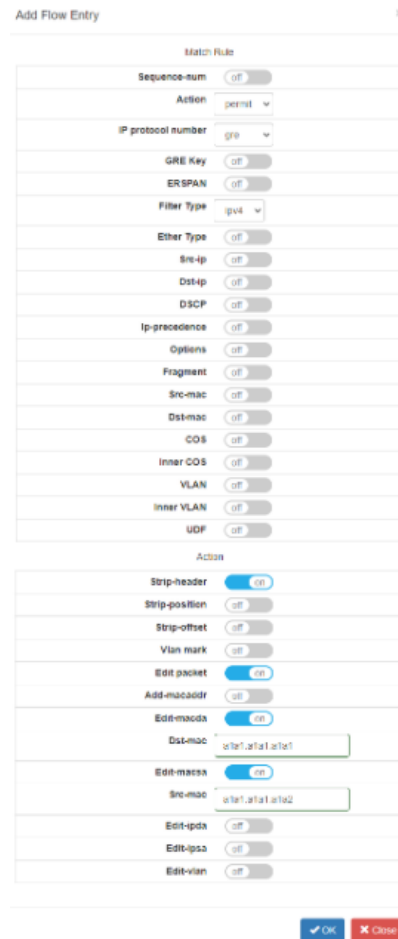
- Device Summary
- System Management
- Interface Management
- Authentication Management
- TAP Management**
  - TAP Group Table
  - UDF
  - Flow**
  - Inner Match
  - ACL
  - TAP Statistics

#	Flow Name	Remark	Decap	Options
1	I3GRE	N/A	Disable	<input type="button" value="+"/>

6. Select the + in the Options column for the desired flow to define the flow attributes.



The Add Flow Entry panel will be displayed.



The screenshot shows the 'Add Flow Entry' configuration window. It is divided into two main sections: 'Match Rule' and 'Action'.

**Match Rule Section:**

- Sequence-num: off
- Action: permit
- IP protocol number: gre
- GRE Key: off
- ERSPAN: off
- Filter Type: ipv4
- Ether Type: off
- Src-ip: off
- Dst-ip: off
- DSCP: off
- Ip-precedence: off
- Options: off
- Fragment: off
- Src-mac: off
- Dst-mac: off
- COS: off
- Inner COS: off
- VLAN: off
- Inner VLAN: off
- UDF: off

**Action Section:**

- Strip-header: on
- Strip-position: off
- Strip-offset: off
- Vlan mark: off
- Edit packet: on
- Add-macaddr: off
- Edit-macda: on
- Dst-mac: 01:00:00:00:00:01
- Edit-macsa: on
- Src-mac: 01:00:00:00:00:02
- Edit-ipda: off
- Edit-ipsa: off
- Edit-vlan: off

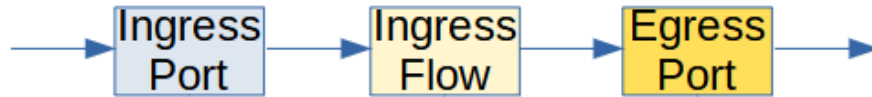
At the bottom right, there are 'OK' and 'Close' buttons.

7. Under Match Rule select gre for the IP Protocol Number.
8. Select the other desired options and enter the desired values to define which I3GRE packets are decapsulated. The defaults may be used to decapsulate all I3GRE packets.
9. Under Actions enable Strip-header.
10. Enable Edit packet.
11. Enable Edit-macda.
12. Enter the desired Dst-mac. This will define the Destination MAC for the new Ethernet II segment added to the packet.
13. Enable Edit-macsa.
14. Enter the desired Src-mac. This will define the Source MAC for the new Ethernet II segment added to the packet.

15. Select OK.

## 2. Create a Tap Group

The Tap Group defines the ingress port, ingress flow and egress port.



1. Select Tap Management.
2. Select TAP Group Table.
3. Select + Add TAP Group.

The TAP Group Name panel will appear.

TAP Group Name ✕

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TAP Group Name

TAP Group ID

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4. Enter the TAP Group Name.

5. Select OK.

The Tap Group will be displayed.

Hi: admin Logout

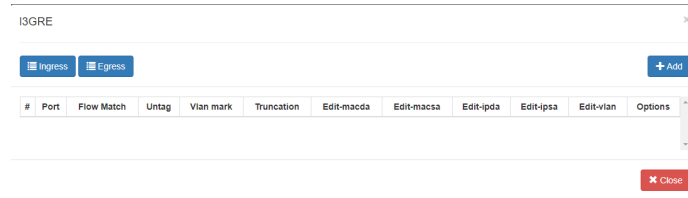
Menu

- Device Summary
- System Management
- Interface Management
- Authentication Management
- TAP Management
  - TAP Group Table
  - UDF
  - Flow
  - Inner Match
  - ACL
  - TAP Statistics

#	TAP Id	TAP Group Name	TAP Group Description	TAP Group truncation	Options
1	1	I3GRE	N/A	NO	✕

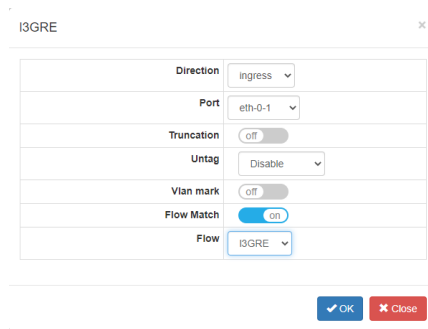
- Place the cursor on the tap group name under the TAP Group Name column and press the left mouse button.

The TAP group panel will appear.

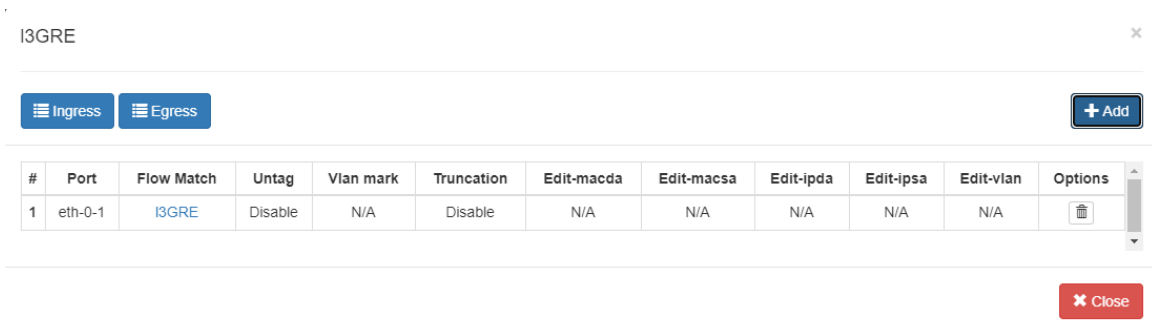


- Select the + Add to define the ingress port and ingress flow.

The add panel will appear.



- Select the Direction, ingress.
- Select the desired ingress port.
- Enable Flow Match.
- Select the I3GRE flow.
- Select OK.



13. Select the + Add to define the egress port.

The add panel will appear.

I3GRE

Direction	egress
Port	eth-0-2
Timestamp	off

OK Close

14. Select the Direction, egress.

15. Select the desired egress port.

16. Select OK.

I3GRE

Ingress Egress + Add

#	Port	Flow Match	Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	Options
1	eth-0-1	I3GRE	Disable	N/A	Disable	N/A	N/A	N/A	N/A	N/A	🗑️

Close

17. The ingress port, ingress flow and egress port may be displayed by selecting Ingress or Egress. Additional ingress ports, ingress flows or egress ports may be added to the Tap Group using the same steps.

18. Select Close to return the the TAP Group Table display.