

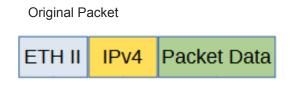


AF1G40AC

I2GRE Encapsulate

Overview:

When a packet is encapsulated with a I2GRE header the new I2GRE header segments are added to the original packet. The I2GRE header segments consists of Ethernet II, IPv4 and I2GRE as shown below.



I2GRE Encapsulated Packet

ETH II	IPv4	I2GRE	ETH II	IPv4	Packet Data
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Encapsulating a packet with a I2GRE 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 a I2GRE 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.

Add Flow		×
Flow Name	I2GRE	
Decap	off	
L		✓ Add Flow Close

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

The flow will be displayed.

					HI: admin Logou
Device Summary	TAP Flow Statistics				+ Add Flow
System Management Interface Management	#	Flow Name	Remark	Decap	Options
Authentication Management	1	I2GRE	N/A	Disable	+ 🗊
 ▼ TAP Management 					
TAP Group Table UDF					
Flow					
Inner Match ACL TAP Statistics					

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



Match	Rule
Sequence-num	(10)
Action	permit 👻
IP protocol number	any 👻
Filter Type	ipv4 👻
Ether Type	10
Src-ip	(of)
Dst-ip	(10)
DSCP	of
Ip-precedence	of
Options	of
Fragment	(10)
Src-mac	of
Dst-mac	of
cos	of
Inner COS	(off
VLAN	ot
Inner VLAN	of
UDF	(m)
Acti	on
Add I2gre	Con
L2gre-sro-ip	10.10.10.10
L2gre-dest-ip	10.10.10.15
L2gre-dest-mac	atat atat atat
L2gre-key-length	24 ¥
L2gre-key-num	123

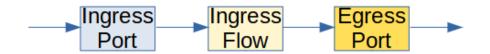
The Add Flow Entry panel will be displayed.

- Under Match Rule select the desired options and enter the desired values to define which packets are encapsulated with a I2GRE header. If desired the default options may be used to encapsulate all packets.
- 8. Under Action, select Add I2gre.
- 9. Enter the desired L2gre-src-ip. This defines the Source IP in the IPv4 segment of the I2GRE header.
- 10. Enter the desired L2gre-dest-ip. This defines the Destination IP in the IPv4 segment of the I2GRE header.
- 11. Enter the desired L2gre-dst-mac. This defines the Destination MAC in the Ethernet II segment of the I2GRE header.
- 12. Select the L2gre-key-length, 16, 20, 24, 32. The default is 24.
- 13. Enter the L2gre-key-num, 1-16777215.
- 14. 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	I2GRE	
TAP Group ID	0	
		✓ OK K Close

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



The Tap Group will be displayed.

GARLAND						Hi: admin Logout
Menu						
Device Summary	TAP Statis	tics			+ Add TAP Group	runcation 🌣 Timestamp
 System Management 						
 Interface Management 	#	TAP Id	TAP Group Name	TAP Group Description	TAP Group truncation	Options
Authentication Management	1	1	I2GRE	N/A	NO	節
▼ TAP Management						
TAP Group Table						
UDF						
Flow						
Inner Match						
ACL						
TAP Statistics						

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.

2GRE										
🗏 Ingr	ress 🛛 🔳 Egre	ess								+ A
# Poi	rt Flow Mat	tch Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	Options

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

The add panel will appear.

Direction	ingress 🗸
Port	eth-0-1 🗸
Truncation	Off
Untag	Disable 🗸
Vlan mark	Off
Flow Match	On
Flow	I2GRE ¥

- 8. Select the Direction, ingress.
- 9. Select the desired ingress port.
- 10. Enable Flow Match.
- 11. Select the I2GRE flow.
- 12. Select OK.

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:=	RE	≣ Egress									+ Ad
≔ #	Port	Flow Match	Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	Options
1	eth-0-1	I2GRE	Disable	N/A	Disable	N/A	N/A	N/A	N/A	N/A	1

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

The add panel will appear.

Direction	egress	~		
Port	eth-0-2	~		
Timestamp	off			

- 14. Select the Direction, egress.
- 15. Select the desired egress port.
- 16. Select OK.

E											
	Port	Flow Match	Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	Options
	eth-0-1	I2GRE	Disable	N/A	Disable	N/A	N/A	N/A	N/A	N/A	Ê

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.

I2GRE Decapsulate

Overview:

When a I2GRE packet is decapsulated the I2GRE header segments are removed from the packet.

I2GRE Encapsulated Packet



I2GRE Decapsulated Packet

ETH II	IPv4	Packet Data
--------	------	-------------

Decapsulating the I2GRE 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 I2GRE 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	I2GRE
Decap	off
	✓ Add Flow Close

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

The flow will be displayed.

					Hi: admin Log
Menu Device Summary	TAP Flow Statistics				+ Add Flow
 System Management 					T Add How
Interface Management	#	Flow Name	Remark	Decap	Options
Authentication Management	1	I2GRE	N/A	Disable	+ 1
 TAP Management 					
TAP Group Table					
UDF					
Flow Inner Match					
ACL					
TAP Statistics					

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



Sequence-num off Action permit IIP protocol number rwgre NVGRE-VNI off Fitter Type gpv4 Ether Type off DSt-p off DSt-p off DSt-p off DSt-p off DSt-p off DSt-p off Options off Stro-pacedence off OS off DSt-max off DSt-max off Inner VLAN off Inner VLAN off Strip-head off Strip-ofstet off Strip-ofstet off Edit packet off Add I2gre off Add VXIan off	Match	Rule	
IP protocol number mygre NVGRE-VNI off Filter Type ipv4 Ether Type off Strc-lp off Dst-lp off Options off Strc-mac off Dst-mac off Ost-mac off VLAN off UDF off Strip-header off Strip-position off Strip-offset off Vian mark off Edit packet off Add I3gre off Add Erspantype-1 off	Sequence-num	off	
NVGRE-VN off Filter Type ipv4 ↓ Ether Type off Sre-ip off Dst-ip off Dst-ip off DSCP off Ip-precedence off Options off Sre-mac off Ost-mac off Ost-mac off Inner COS off VLAN off Inner VLAN off ODF off Strip-header off Strip-offset off Vlan mark off Edit packet off Add 13gre off Add Erspantype-1 off	Action	permit ~	
NVGRE-VNI Off Filter Type pp/4 ✓ Ether Type off Src-ip off DSt-ip off DSt-ip off DSCP off Ip-precedence off Options off Stro-mac off OSt-mac off Strip-header off Strip-offset off Vian mark off Add 12gre off Add 13gre off Add Erspantype-1 off	IP protocol number		
Filter Type Ipv4 v Ether Type Off Sr-ip Off DSt-ip Off DSCP Off Ip-precedence Off Options Off Sre-mac Off DSt-mac Off OSCP Off Stre-mac Off Options Off Stre-mac Off OSCP Off VLAN Off OUDF Off Strip-header Off Strip-offset Off Strip-offset Off Strip-offset Off Add 13gre Off Add Erspantype-1 Off	NVORE VNI		
Ether Type off Src-ip off Dst-ip off Dst-ip off Ip-precedence off Options off Src-mac off Dst-mac off Options off Src-mac off Options off Src-mac off Ost-mac off Ost-mac off VLAN off UDF off Strip-header off Strip-offset off Vlan mark off Add 12gre off Add 33gre off Add Erspantype-1 off			
Src-ip off DSt-ip off DSCP off Ip-precedence off Options off Fragment off Src-mac off DSt-mac off Options off Src-mac off Options off Src-mac off Options off Src-mac off Options off Options off Src-mac off Options off Opti	Pitter type	ipv4 v	
Dst-ip off DSCP off Ip-precedence off Options off Fragment off Src-mac off Dst-mac off Dst-mac off COS off Inner COS off VLAN off UDF off Strip-header off Strip-offstet off Strip-offstet off Vian mark off Edit packet off Add I3gre off Add Erspantype-1 off		off	
DSCP or Ip-precedence or Options or Fragment or Sro-mac or Dst-mac or COS or Inner COS or VLAN or VLAN or UDF or Strip-header or Strip-offset or Strip-offset or Vlan mark or Edit packet or Add I3gre or Add Vxlan or Add Erspantype-1 or	Src-ip	Off	
Ip-precedence Options Fragment Options Fragment OT Src-mac OT Dst-mac OT Dst-mac OT LINNET COS OT VLAN OT UDF OT Strip-header Strip-optition Strip-optition Strip-optition OT OT OT OT OT Add I3gre OT Add Uxian OT OT OT OT OT OT OT OT OT OT	Dst-ip	017	
Options ort Fragment ort Sre-mac ort Dst-mac ort COS ort Inner COS ort VLAN ort UDF ort Strip-header ort Strip-opsition ort Strip-offset ort Vian mark ort Edit packet ort Add l3gre ort Add Erspantype-1 ort	DSCP	off	
Fragment off Src-mac off Dst-mac off COS off Inner COS off VLAN off UDF off Strip-header off Strip-offset off Vian mark off Edit packet off Add I3gre off Add Erspantype-1 off	Ip-precedence	off	
Src-mac off Dst-mac off COS off Inner COS off VLAN off UDF off UDF off Strip-header Strip-offset off Strip-offset off Vian mark Edit packet off Add I3gre off Add I3gre off	Options	off	
Dst-mac on COS on Inner COS on VLAN on Inner VLAN on UDF on Strip-header on Strip-position on Strip-position on Strip-deader on Strip-deader on Add I2gre on Add I3gre on Add Erspantype-1 on	Fragment	off	
COS ON Inner COS ON VLAN ON Inner VLAN ON UDF ON Strip-header ON Strip-opsition ON Strip-opsition ON Strip-offset ON Vian mark ON Edit packet ON Add I3gre ON Add I3gre ON Add Erspantype-1 ON	Src-mac	off	
Inner COS VLAN ON Inner VLAN ON Inner VLAN ON UDF ON Acton Strip-pesition ON Strip-offset ON Vian mark ON Edit packet ON Add I3gre ON Add I3gre ON Add Erspantype-1 ON	Dst-mac	off	
VLAN on Inner VLAN on UDF on Action Action Strip-presition off Strip-opsition off Strip-offset off Vian mark off Edit packet off Add l2gre off Add l3gre off Add Erspantype-1 off	cos	Off	
Inner VLAN OT UDF OT Action Strip-header OT Strip-opsition OT Strip-offset OT Vian mark OT Edit packet OT Add I2gre OT Add I2gre OT Add I3gre OT Add I2gre OT	Inner COS	017	
UDF off Action Strip-header off Strip-opsition off Strip-offset off Vian mark off Edit packet off Add 12gre off Add 13gre off Add 13gre off Add 13gre off	VLAN	T	
Action Strip-header Strip-opsition Off Strip-opsition Off Vian mark Off Edit packet Off Add 12gre Off Add 13gre Off Add 13gre Off Add 13gre Off Add 13gre Off Off Off Off Off Off Off Off Off Of	Inner VLAN	off	
Strip-header on Strip-opsition off Strip-offset off Vlan mark off Edit packet off Add 12gre off Add 13gre off Add tysian off Off off	UDF	off	
Strip-position off Strip-offset off Vian mark off Edit packet off Add 12gre off Add 13gre off Add range off Add Erspantype-1 off			
Strip-offset off Vlan mark off Edit packet off Add 12gre off Add 13gre off Add Vxlan off Add Erspantype-1 off			
Vian mark Edit packet Add 12gre Add 13gre Critical Add Vxian Add Erspantype-1 Critical			
Edit packet off off off off off off off off off of			
Add 12gre or Add 13gre or Add Vxlan or Add Erspantype-1 or			
Add I3gre Off Add Vxlan Off Add Erspantype-1 Off			
Add Vxlan off			
Add Erspantype-1 off	-		
	Add Erspantype-2	off	

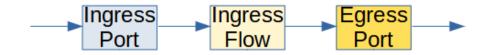
The Add Flow Entry panel will be displayed.

- 7. Under Match Rule select nvgre for the IP Protocol Number.
- 8. Select the other desired options and enter the desired values to define which I2GRE packets are decapsulated. The defaults may be used to decapsulate all I2GRE packets.
- 9. Under Actions enable Strip-header.
- 10. 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	I2GRE	
TAP Group ID	0	
		✓ OK X Close

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

The Tap Group will be displayed.

								Hi: admin Logout
Device Summary	TAP Statis	tics				+ Add TAP Group	Truncation	✿ Timestamp
System Management Interface Management	#	TAP Id	TAP Group Name	TAP Group Description	TAP Grou	up truncation		Options
Authentication Management	1	1	I3GRE	N/A		NO		
 ▼ TAP Management 								
TAP Group Table UDF Flow Inner Match ACL TAP Statistics								

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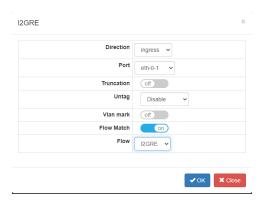


6. Place the cursor on the tap group name under the TAP Group Name column and press the left mouse button.

The TAP group panel will appear.

GRE	≣ Egress									+ A
Port	Flow Match	Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	Options
										× Clo

- 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 I2GRE flow.
- 12. Select OK.



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	Ingress	Egress									+ A
ŧ	Port	Flow Match	Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	Options
			Disable	N/A	Disable	N/A	N/A	N/A	N/A	N/A	â

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

The add panel will appear.

I2GRE	×
Direction	egress 🗸
Port	eth-0-2 🗸
Timestamp	Off
	✓ OK K Close

- 14. Select the Direction, egress.
- 15. Select the desired egress port.
- 16. Select OK.

Port	Flow Match	Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	Options
eth-0-1	I2GRE	Disable	N/A	Disable	N/A	N/A	N/A	N/A	N/A	a

- 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.