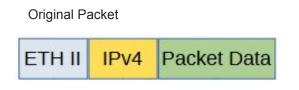


## AF1G40AC / AF1G52AC / AF10G72AC / AF40G24AC

### **I3GRE Encapsulate**

#### Overview:

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



I3GRE Encapsulated Packet



Encapsulating a packet with a 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 a 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.

Add Flow		×
Flow Name	GRE	
Decap	off	
		Add Flow Close

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

#### The flow will be displayed.

					Hi: admin Logo
Device Summary	TAP Flow Statistics				+ Add Flow
System Management     Interface Management	#	Flow Name	Remark	Decap	Options
Authentication Management	1	GRE	N/A	Disable	+ =
<ul> <li>TAP Management</li> </ul>					
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.



### The Add Flow Entry panel will be displayed.

Match	Rule
Sequence-num	(01)
Action	permit 🖌
IP protocol number	any 👻
Filter Type	ipv4 v
Ether Type	ott
Src-Ip	ot
Dst-ip	(off
DSCP	(To)
Ip-precedence	(0)
Options	(III)
Fragment	(off
Src-mac	(10)
Dst-mac	(off
COS	(Ito)
Inner COS	(10)
VLAN	(10)
Inner VLAN	ot
UDF	(01)
Actic	in
Add I3gre	(O)
L3gre-src-ip	10.10.10.10
L3gre-dest-ip	10.10.10.15
L3gre-dest-mac	alalalalal

- 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.

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### 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	I3GRE	
TAP Group ID	0	

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



The Tap Group will be displayed.

						Hi: admin Logou
Device Summary	TAP Statis	stics			+ Add TAP Group	Truncation 🌣 Timestamp
System Management     Interface Management	#	TAP Id	TAP Group Name	TAP Group Description	TAP Group truncation	Options
Authentication Management	1	1	13GRE	N/A	NO	ŵ
- TAP Management						
TAP Group Table UDF Flow Inner Match ACL TAP Statistics						

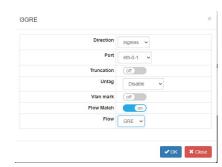
6. Place the cursor on the tap group name under the TAP Group Name column and press the left mouse button.

The TAP group panel will appear.

3G	RE											
	Ingress	≣ Egress									+ ^	dd
#	Port	Flow Match	Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	Options	
											× Cid	se

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.



	Ingress	==									
ŧ	Port	Egress	Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	+ Ad
	1 011		Disable	N/A	Disable	N/A	N/A	N/A	N/A	N/A	â
1	eth-0-1	GRE	Disable	19/75							

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.

Ingress	Egress 🗮									<b>+</b> Ad
Port	Flow Match	Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	Options
eth-0-1	GRE	Disable	N/A	Disable	N/A	N/A	N/A	N/A	N/A	â

- 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.

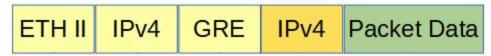


## **I3GRE Decapsulate**

Overview:

When a 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

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

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			2
Flow Name	I3GRE		
Decap	Off		
		✓Add Flow	X Close

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

The flow will be displayed.

					Hi: admin Logo
Device Summary	TAP Flow Statistics				+ Add Flow
System Management     Interface Management	#	Flow Name	Remark	Decap	Options
Authentication Management	1	13GRE	N/A	Disable	+ 💼
<ul> <li>TAP Management</li> </ul>					
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.



# I3GRE Guide Advanced Features / 3.0.6.r2

Sequence-aum         (r)           Axision         permit         v           GPE protocol number         (g)         v           GRE Key         (r)         (g)         v           Ether Type         (g)         v         (g)           Bartype         (r)         (g)         (g)           DSEP         (r)         (g)         (g)           Options         (r)         (g)         (g)           Strip-tocoline         (r)         (g)         (g)           Options         (r)         (g)	Artisis     permit     w       IP protocol number     grai     w       GRUE Key     GRUE Key     GRUE Key       ESSPAN     GRUE Key     GRUE Key       Filter Type     gruE w       Start p     GRUE Key       Datep     GRUE Key       Options     GRUE Key       Options     GRUE Key       Obtemac     GRUE Key       Datep     GRUE Key       Datep     GRUE Key       Options     GRUE Key       Datep     GRUE Key       Obtemac     GRUE Key       Datep     GRUE Key       Datep     GRUE Key       Strip-opsition     GRUE Key       Datemac     GRUE Key       Datemac     GRUE Key       Strip-opsition     GRUE Key       Datemac     GRUE Key <tr< th=""><th>titation (</th><th>Ficie</th></tr<>	titation (	Ficie
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Filer Type gol v Ether Type gol v Ether Type er Dat-p er Dat-p er Dat-p er Dat-p er Dat-p er Pragmant er Se-mac er Dat-mac er Dat-mac er VLAN er VLAN er VLAN er VLAN er Strip-header er Strip-header er Strip-beater er Strip-header er Strip-he	Filler Type god w Etter Type god w Star type of Star type of Star type of DSCP of DSCP of DSCP of DSCP of DSCP of DSCP of DSCP of DSCP of DSCP of OSC of	GRE Key	(07)
Ether Type (m) Ether Type (m) Sin-ip (m) Dist-ip (m) Dist-ip (m) Dist-ip (m) Dist-ip (m) Fragmant (m) Sine-mia (m) COS (	Bitser Type     me       Bitser Type     me       Diskap     me       Diskap     me       Diskap     me       Diskap     me       Diskap     me       Optiens     me       Strip-optiet     me       Optiens     me       Strip     m	ERSPAN	(of )
Brieje     et       Dst-p     et       Dst-p     et       Dst-p     et       Opisenas:     et       Dst-mas:     et       Dst-mas:     et       Dst-mas:     et       Dst-mas:     et       UDF     et       NuAN     et       Strip-hesser     et	Sinip Ossima Sinip Call Sinip Call Sini	Filler Type	ipot w
Bre-pp     err       D34-pp     err       D35-pp     err       D35-pp     err       Ip-procedence     err       Optimist     err       Src-mac     err       Dst-mac     err       Dst-mac     err       Obtimist     err       UDF     err       Strip-header     err       Strip-header     err       Strip-header     err       Strip-boshten     err       Strip-boshten     err       Strip-boshten     err       Strip-backet     err       Eidet-maccad     err       Eidet-maccad     err       Eidet-maccad     err       Eidet-maccad     err       Eidet-maccad     err	Brt-ip     cr       Dst-ip     cr       DsCP     cr       DpCP     cr       Options     cr       Src-max     cr       Dst-ip     cr       Src-max     cr       Options     cr       Src-max     cr       Options     cr       Src-max     cr       COS     cr       UDF     cr       UDF     cr       Strip-baster     cr       Strip-optist     cr       Strip-optiptist<	Ether Type	
DSCP or Ipsprecedence of Optiens or Sic-maic or Ost-maic or Strip-beader or St	DSCP of Ip-precisions of Options of Frigmant of Sremac of Obtions of Obtions of Sremac of Obtions of Obti	Sre-ip	
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Options (III) Fragmant (III) Sic-inac (III) Dist-mac (III) COS (III) Immer COS (III) VLAN (III) VLAN (III) VLAN (III) VLAN (III) Strip-header (III) Strip-h	Options (m) Fragmant (m) Sre-mac (m) Ost-mac (m) Ost-mac (m) Ost-mac (m) Ost-mac (m) VLAN (m) VLAN (m) VLAN (m) Srip-hader (m) Srip	Ip-precedence	of
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Datemas or COS or Inner COS or VLAN or VLAN or UDP or ACSION Strip-Possfer or Strip-Possfer or Strip-Ossfer or Stri	Distense off COS off Inner COS off VLAN off Inner VLAN off UDF off Strip-position off Strip-opsition off Strip-opsitio	Src-mac	
COS (rt) Inner COS (rt) VLAN (rt) UDP (rt) ACISIO Strip-header (rt) Strip-header (rt) Strip-header (rt) Strip-header (rt) Add-micador (rt) Edit paciet (rt) Add-micador (rt) Edit-maco (rt) Edit-maco (rt)	COS (m) Inser COS (m) VLAN (m) Inser VLAN (m) Inser VLAN (m) UDF (m) Strip-position (m) Strip-position (m) Strip-otset (m) Strip-otse		
Inner COS (rf) VLAN (rf) Inner VLAN (rf) UDP (rf) Actual Strip-header (rf) Strip-bosRion (rf) Strip-osRion (rf) Strip-osRion (rf) Strip-osRion (rf) Strip-osRion (rf) Strip-baset (rf	Inner COS (0) VLAN (0) Inner VLAN (0) KUDF (0) ACCOL ACCOL STOP-baster (0) STOP-baster (0) STOP-bast	cos	
VLAN an Inner VLAN on UDP on Actuar Strip-header on Strip-header on	VLAN 07 Inner VLAN 07 UDF 07 ACCON Strip-oster (7 Strip-oster) Strip-oster (7 Strip-oster	Inner COS	(of)
Inner VLAN (rt) UDP (rt) ACISH Strip-hesder (rt) Strip-oshter (rt) Strip-oshter (rt) Strip-oshter (rt) Strip-oshter (rt) Strip-oshter (rt) Strip-oshter (rt) Strip-oshter (rt) Strip-oshter (rt) Edt-mack (rt) Edt-mack (rt) Edt-mack (rt) Strip-istalister)	Inner VLAN (n) UDF (n) ACCON Strip-bester (n) Strip-ostion (n)	VLAN	
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Strip-heser (m) Strip-otstien (m) Strip-otstien (m) Vian mark (m) Edit pociet (m) Add-macadd (m) Edit-macad (m) Dat-mac (m) Edit-macas (m)	Strip-position Strip-position Strip-offset Strip-offset Viun mark Edd pack Edd p	UDF	
Strip-ositien en Strip-ositien en Vian mark en Edit posiet en Add-macadd en Edit-macad en Dat-mac en Edit-macas en	Strip-position () Strip-position () Strip-other () Vian mark () Edd packet () Edd packet () Edd packet () Edd packet () Edd packet () () Edd packet () () () Edd packet () () () () () () () () () ()	Actu	20
Strip-offset (#) Vian mark (#) Edit packet (#) Add-macadd (#) Edit-macada (#) Dist-mac (#)er/artis/artis/ Edit-macas (#)	Strip-offset (#) Vian mark (#) Edit paceat (*) Adid-macaolir (#) Edit-macaolir (#) Strip-offset (	Strip-header	(1)
Vian mark (re) Edd packet (re) Add-macaadr (re) Edd-macaadr (re) Disk-mac Uiter (art artist) Eddt-macaa	Vian mark (a) Edit pocket (a) Add-maceadir (a) Edit-macea Strat-macea (a) (a) (a) (b) (b) (b) (c) (c) (c) (c) (c) (c) (c) (c	Strip-position	(off)
Edit pachet Con Add macadar III Edit-macada Con Disk-maca IIII arten Edit-macas Con	Edit packet (r) Add-macadd (r) Edit-macad (r) Dat-mac (r) Edit-marks (r) Bro-mac (r) Bro-m	Strip-offset	(1)
Add-macaadr (m) Edit-macaa Bat-maca Edit-macaa Edit-macaa	Add-macadir (a) Edit-macadir (a) Dst-mac (a) (a) Edit-marsa (a) Sro-mac (a) (a) (a) (b) (b) (b) (c) (c) (c) (c) (c) (c) (c) (c	Vlan mark	(stt)
Edit-macda Dist-mac Edit-macea Edit-macea Edit-macea Edit-macea	Edit-inacda Dist-mace Edit-masea Sro-mace arter-stal arte2 Edit-ipace Edit-ipace editace edit-ipace edit-	Edit packet	(n)
Dst-moc aleri,sisi alati	Bot-mace one of the function o	Add-macaddr	(off )
Edit-macsa (cn)	Edit-massa Stro-massa Stro-massa Edit-space Edit-s	Edit-macda	(n)
	Browneo etert.eta1.ete2 Bent-pda (at) Edit-ipsa (at)	Dst-mac	atel.stat.atat
Sro-mao ate1.sta1.sta2	Edit-ipsa of	Edit-macsa	(Cn)
	Edit-Ipsa (off)	Bro-map	etet.atatate2
Edit-ipda (af)	Edit-Ipsa (off)	Edit-ipda	(at
		Edit-lpsa	
	Edit-vian (aff.)	Edit-vlan	(

### The Add Flow Entry panel will be displayed.

- 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.

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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		×
TAP Group Name	I3GRE	
TAP Group ID	0	
	I	✓ OK X Close

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

The Tap Group will be displayed.

							Hi: admin Log
Device Summary	TAP Statis	stics			+ Add	TAP Group 🗘 Truncation	Timestamp
System Management Interface Management	#	TAP Id	TAP Group Name	TAP Group Description	TAP Group truncat	on	Options
Authentication Management	1	1	13GRE	N/A	NO		1
TAP Management							
TAP Group Table							
UDF							
Flow Inner Match							

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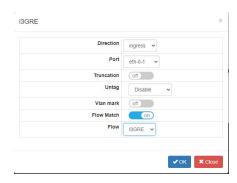
6. Place the cursor on the tap group name under the TAP Group Name column and press the left mouse button.

The TAP group panel will appear.

	Ingress	Egress									+ /
#	Port	Flow Match	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.



- 8. Select the Direction, ingress.
- 9. Select the desired ingress port.
- 10. Enable Flow Match.
- 11. Select the I3GRE flow.
- 12. Select OK.

									≣ Egress	Ingress	
Options	Edit-vlan	Edit-ipsa	Edit-ipda	Edit-macsa	Edit-macda	Truncation	Vlan mark	Untag	Flow Match	Port	ŧ
<b></b>	N/A	N/A	N/A	N/A	N/A	Disable	N/A	Disable	<b>I3GRE</b>	eth-0-1	
								-			

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

### The add panel will appear.

3GRE	
Direction	egress 🗸
Port	eth-0-2 🗸
Timestamp	Off

• ок	× Close

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

Ingress	<b>≣</b> Egress									<b>+</b> A
Port	Flow Match	Untag	Vlan mark	Truncation	Edit-macda	Edit-macsa	Edit-ipda	Edit-ipsa	Edit-vlan	Options
eth-0-1	I3GRE	Disable	N/A	Disable	N/A	N/A	N/A	N/A	N/A	â

- 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 to the TAP Group Table display.