

PacketMAX™

Advanced Aggregator

User Guide By Garland Technology

AA1G52ACV2, AA10G54AC, AA100G32AC and AA100G64AC



Garland Technology: Advanced Aggregator System
Firmware Rev Level: 3.2.1

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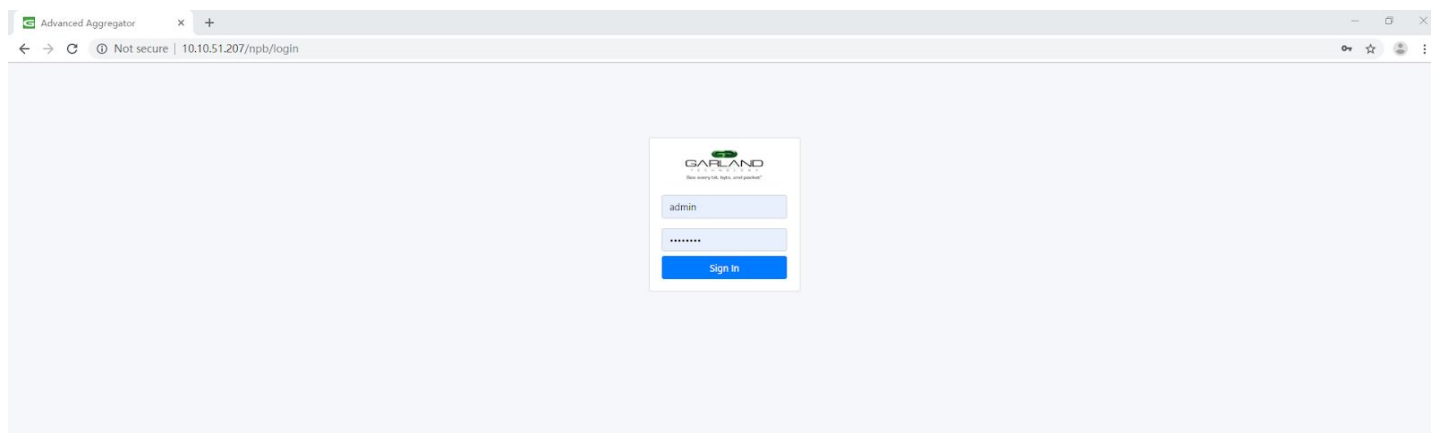
1 Login and Logout

1: The port number is 80.

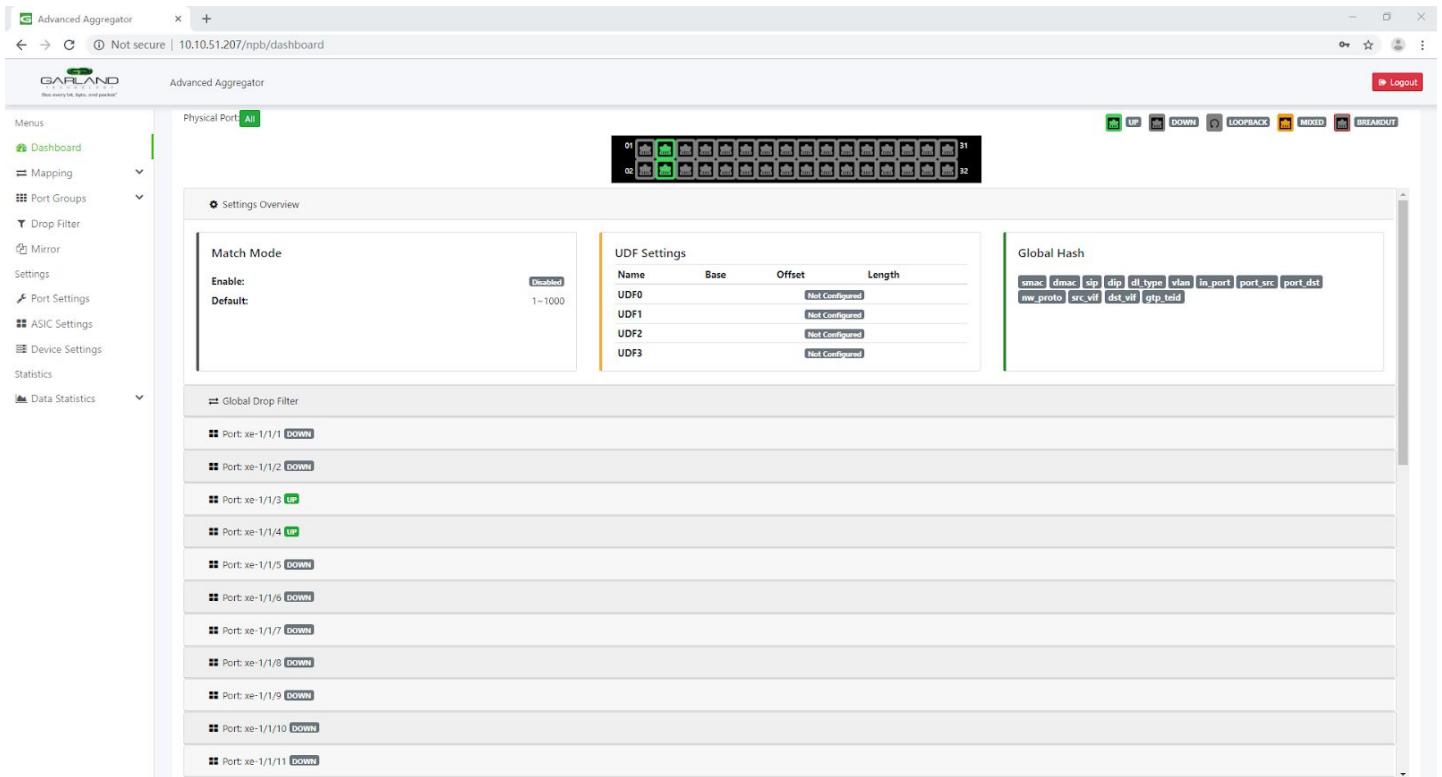
2: With the username and password, there are three ways to login:

1) Admin

Login:

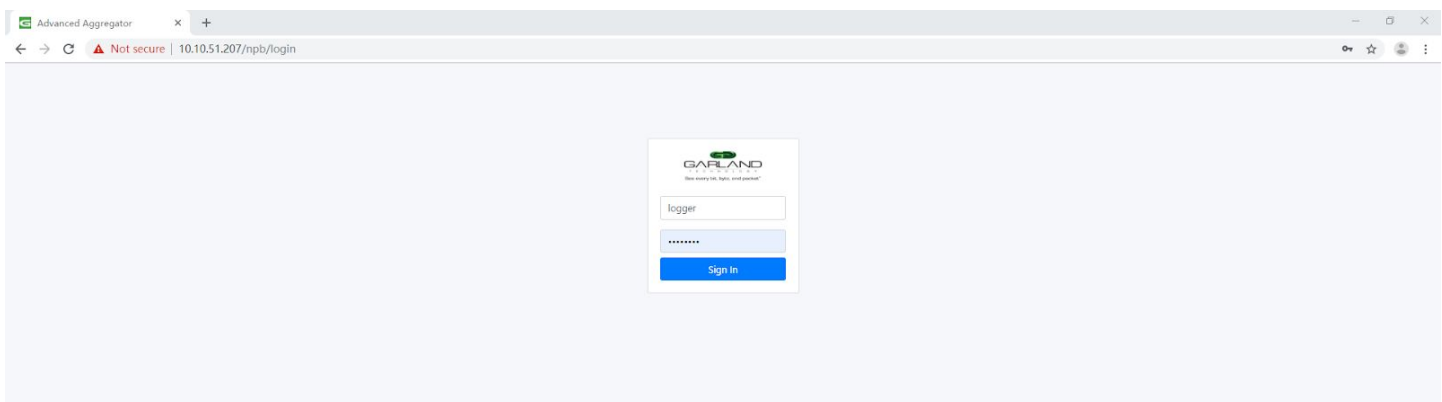


Logout:

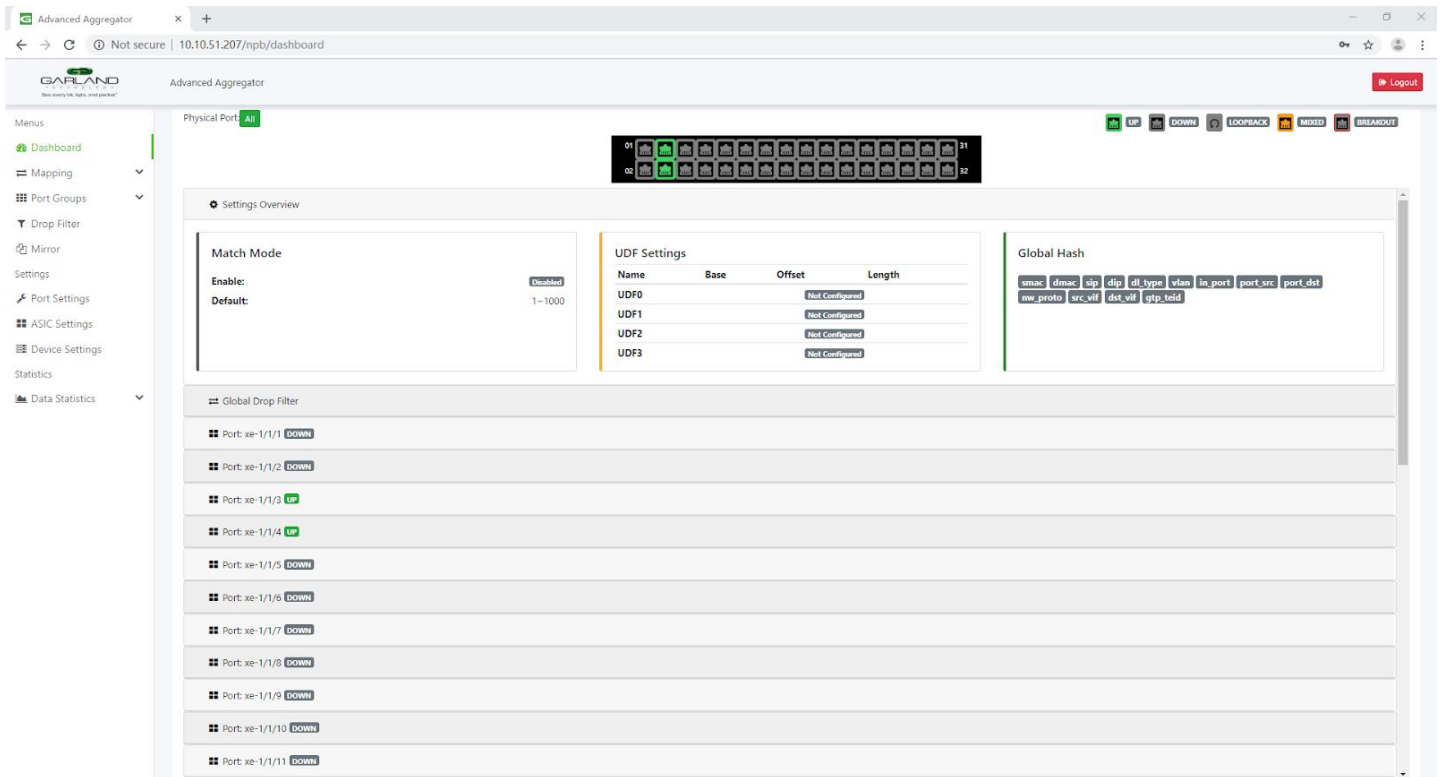


2) Logger

Login:

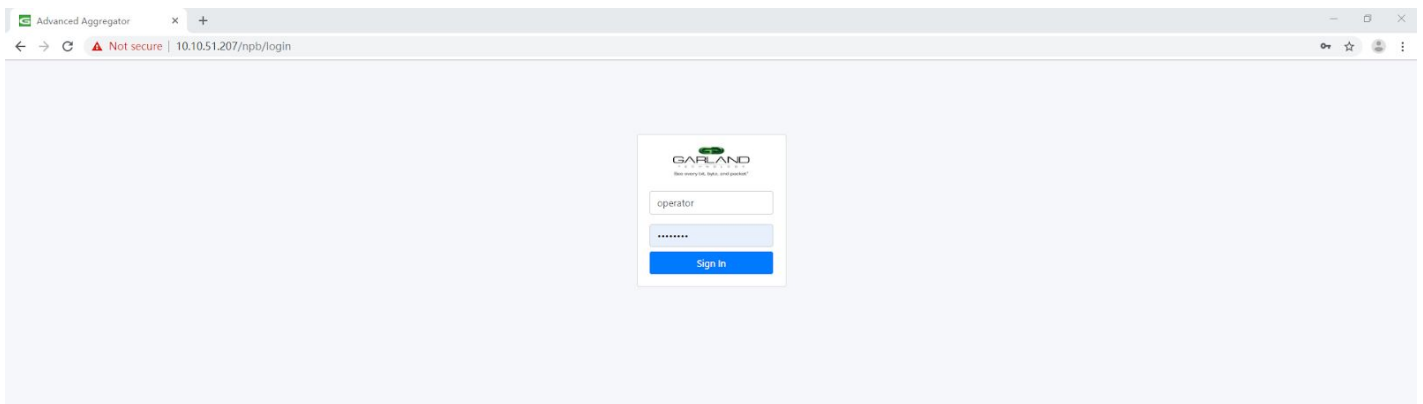


Logout:

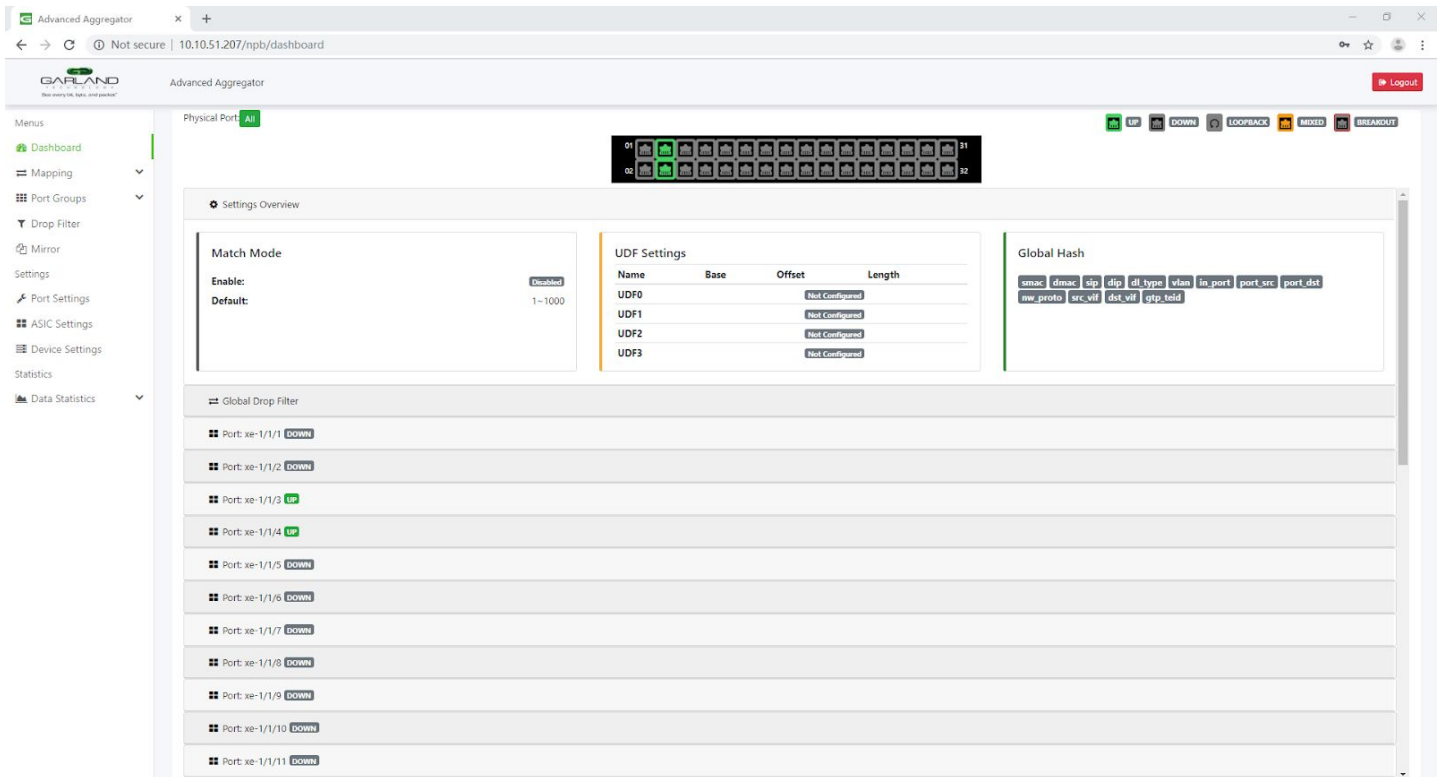


3) Operator

Login:



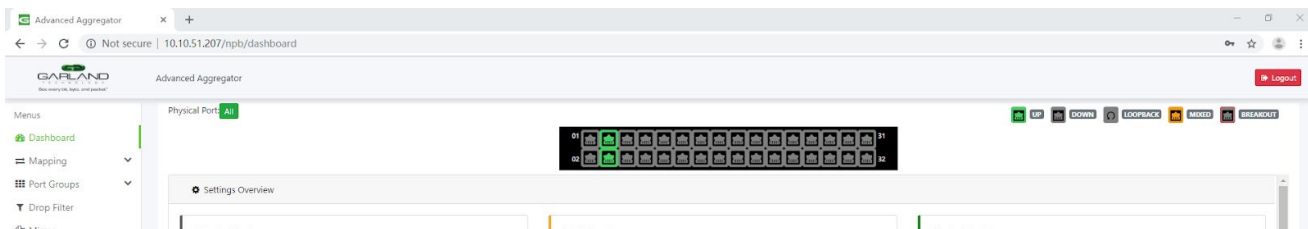
Logout:



2 Dashboard

1) Display physical ports

In the default mode, the ports “up” and “down” status will be displayed on the Dashboard.



2) Global Drop Filter

Click “Global Drop Filter”, it will show the drop filter which matches all ingress ports

Global Drop Filter								
Drop Filter								
Drop Filter Name	Drop Time	Drop Filter Type	Ingress Port		Filter Fields		Egress Port	
			Port Name	Port Type	Match Filed	Value	Port Name	Port Type
drop1	INGRESS	L2L4	All	AllPorts	dmac	00:22:22:22:22:23	xe-1/1/4 UP	None
					smac	00:22:22:22:22:22		
drop2	EGRESS	L2L4	All	AllPorts	dl_type	0x0800		PhysicalPorts
					sip	23.1.1.1		
					dip	24.1.1.1		

And you can click drop1 or drop2 to check the configured in drop filter.

3) The Flows Under port

Click an port, it will show the mapping rules and drop filter

Advanced Aggregator Logout

Physical Port: All

01 02 31 32

UP DOWN LOOPBACK MIXED BREAKOUT

Port: xe-1/1/3 UP

Ingress Side

Mapping Rule

Sequence	Ingress Port Port Name	Port Type	Pass Filter	Egress Port Port Name	Port Type	Action
1	xe-1/1/3 UP	PhysicalPorts	mac	xe-1/1/4 UP	PhysicalPorts	Mod5mac

Drop Filter

Drop Filter Name	Drop Time	Drop Filter Type	Ingress Port Port Name	Port Type	Filter Fields Match Filed	Value	Egress Port Port Name	Port Type
drop3	EGRESS	L2L4	xe-1/1/3 UP	PhysicalPorts	dl_type	0x0800	xe-1/1/4 UP	PhysicalPorts
					sip	56.1.1.2		
					dip	57.1.1.2		

Egress Side

Mapping Rule

Sequence	Ingress Port Port Name	Port Type	Pass Filter	Egress Port Port Name	Port Type	Action
						No Mapping Rules

Drop Filter

Drop Filter Name	Drop Time	Drop Filter Type	Ingress Port Port Name	Port Type	Filter Fields Match Filed	Value	Egress Port Port Name	Port Type
								No Drop Filters

Advanced Aggregator Logout

Physical Port: All

01 02 31 32

Port: xe-1/1/4 UP

Ingress Side

Mapping Rule

Sequence	Ingress Port Port Name	Port Type	Pass Filter	Egress Port Port Name	Port Type	Action
No Mapping Rules						

Drop Filter

Drop Filter Name	Drop Time	Drop Filter Type	Ingress Port Port Name	Port Type	Filter Fields Match Field	Value	Egress Port Port Name	Port Type
No Drop Filters								

Egress Side

Mapping Rule

Sequence	Ingress Port Port Name	Port Type	Pass Filter	Egress Port Port Name	Port Type	Action
1	xe-1/1/3 UP	PhysicalPorts	mac	xe-1/1/4 UP	PhysicalPorts	ModSmac

Drop Filter

Drop Filter Name	Drop Time	Drop Filter Type	Ingress Port Port Name	Port Type	Filter Fields Match Field	Value	Egress Port Port Name	Port Type
drop3	EGRESS	L2L4	xe-1/1/3 UP	PhysicalPorts	dl_type	0x0800	xe-1/1/4 UP	PhysicalPorts
					slp	56.1.1.2		
					dip	57.1.1.2		
drop2	EGRESS	L2L4	All	AllPorts	dl_type	0x0800	xe-1/1/4 UP	PhysicalPorts
					slp	23.1.1.1		
					dip	24.1.1.1		

3 Mapping

On this module, you can add the pass filter and actions and then apply the settings to mapping rules.

Menu: Dashboard Mapping Mapping Rules Pass Filter Action

Mapping Rules [npb / mapping / mapping_rules](#) +

Please click "+" to add a Mapping Rule.

1: Add a pass filter

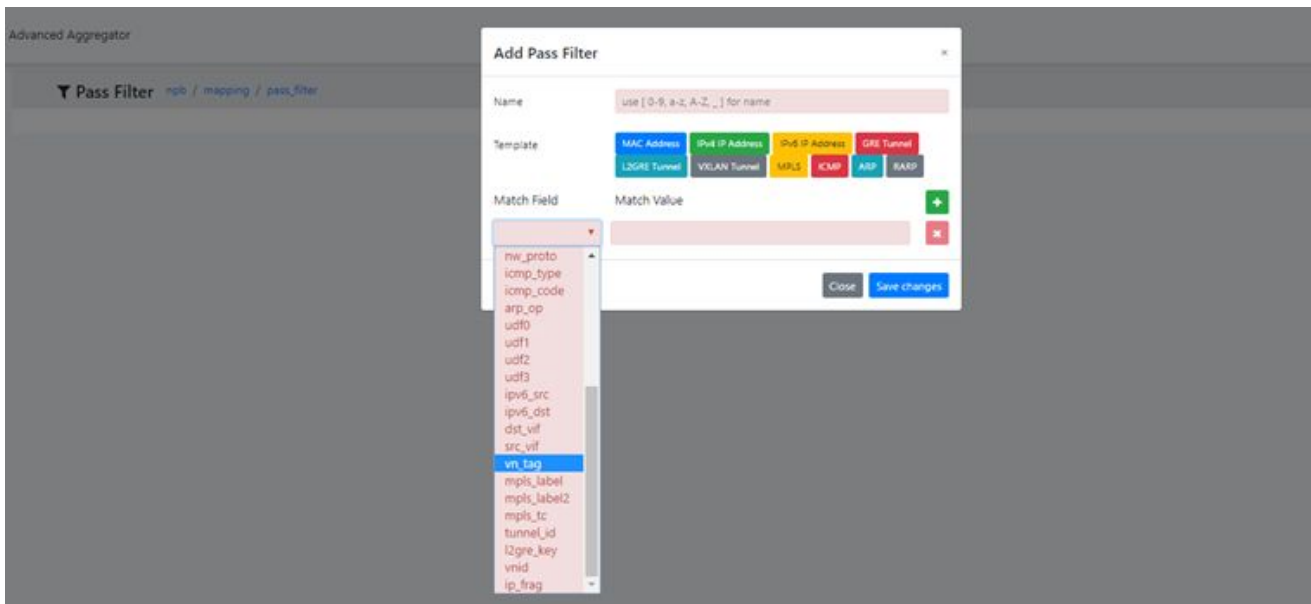
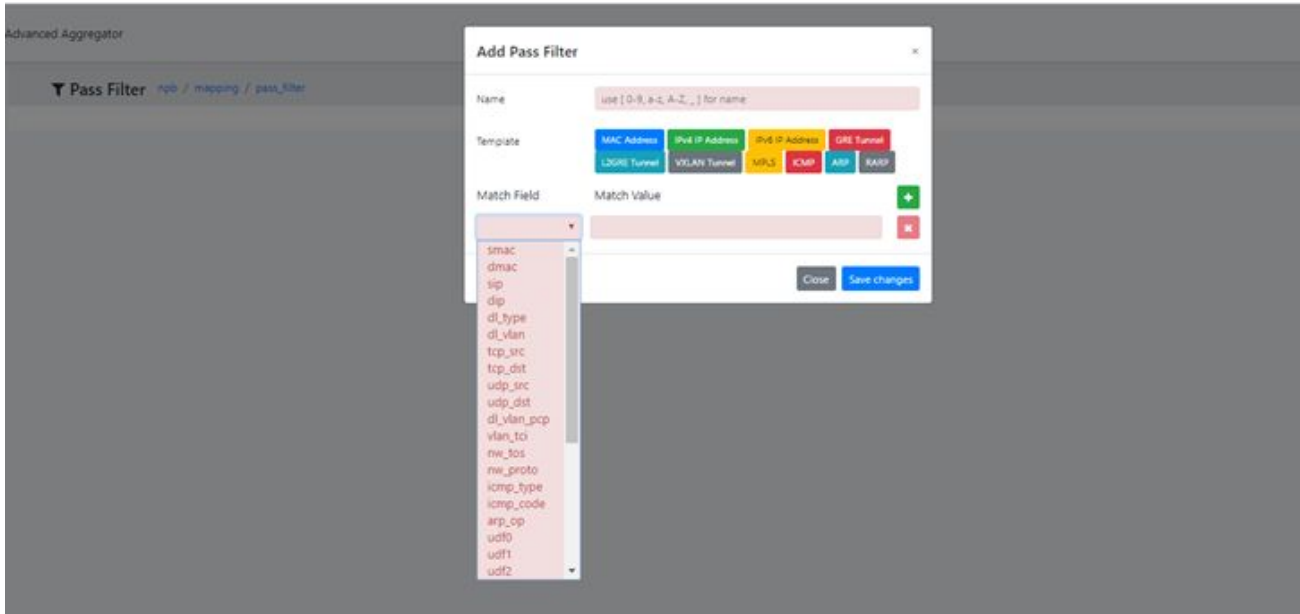
Step1: click "+" button to add a filter.

Step2: you can write the filter name and choose match field or an Template. After setting the value, you can click "+" button to add one or more match fields and click "X" to delete one or more match fields on the filter

Step3: click "Save changes" to save the setting. And then you can click the filter name to see the detailed information.

Step4: Click the " " button to modify this pass filter and click the "X" button to delete this filter.

eg: add a filter to match basic fields:



Advanced Aggregator

Pass Filter [npb](#) / [mapping](#) / [pass_filter](#)

Add Pass Filter

Name:

Template: MAC Address IPv4 IP Address IPv6 IP Address GRE Tunnel L2GRE Tunnel VXLAN Tunnel MPLS ICMP ARP RARP

Match Field:

smac	<input type="text" value="00:23:23:23:23"/>	+
dmac	<input type="text" value="00:23:23:23:31"/>	+

Close Save changes

Click Save changes:

Advanced Aggregator

Pass Filter [npb](#) / [mapping](#) / [pass_filter](#)

mac

#	Field Name	Field Value
1	dmac	00:23:23:23:31
2	smac	00:23:23:23:23

Delete:

Advanced Aggregator

Pass Filter [npb](#) / [mapping](#) / [pass_filter](#)

mac

Delete Pass Filter

Please make sure that you want to delete this Filter.

Close Delete


#	Field Name	Field Value
1	dmac	00:23:23:23:31
2	smac	00:23:23:23:23

2: Add Action

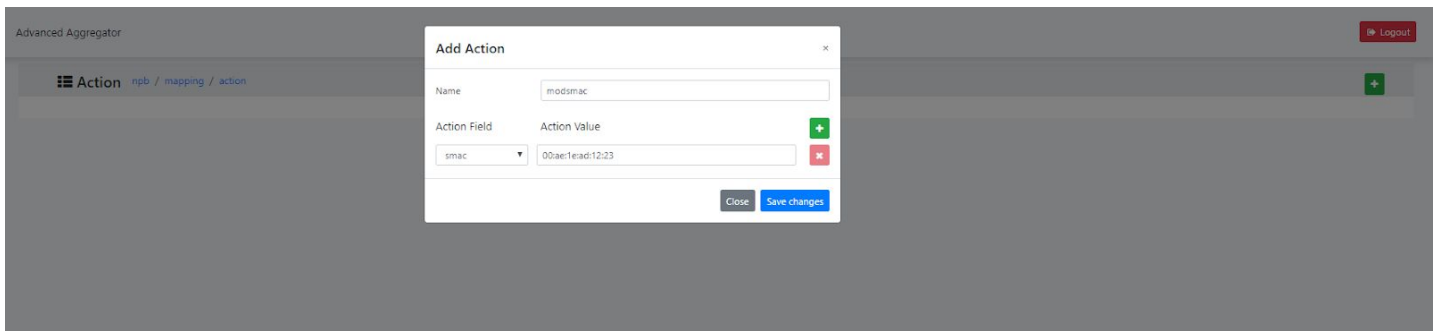
Step1: click “+” button to add an action.

Step2: you can write the action name and choose action Field. After setting the value, you can click “+” button to add one or more action fields and click “X” to delete one or more action fields on the action.

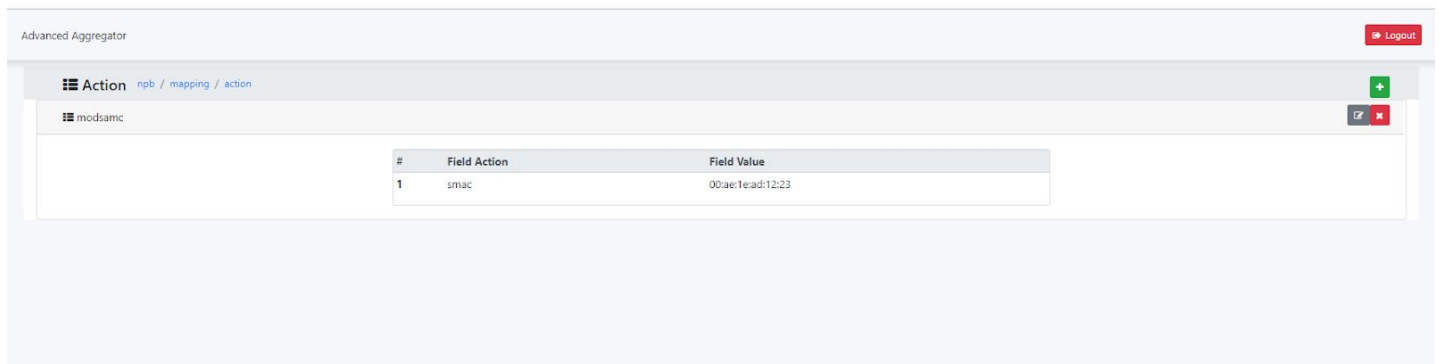
Step3: click “Save changes” to save the setting. And then you can click the action name to see the detailed information.

Step4: Click the “” button to modify this action and click the “X” button to delete this action.

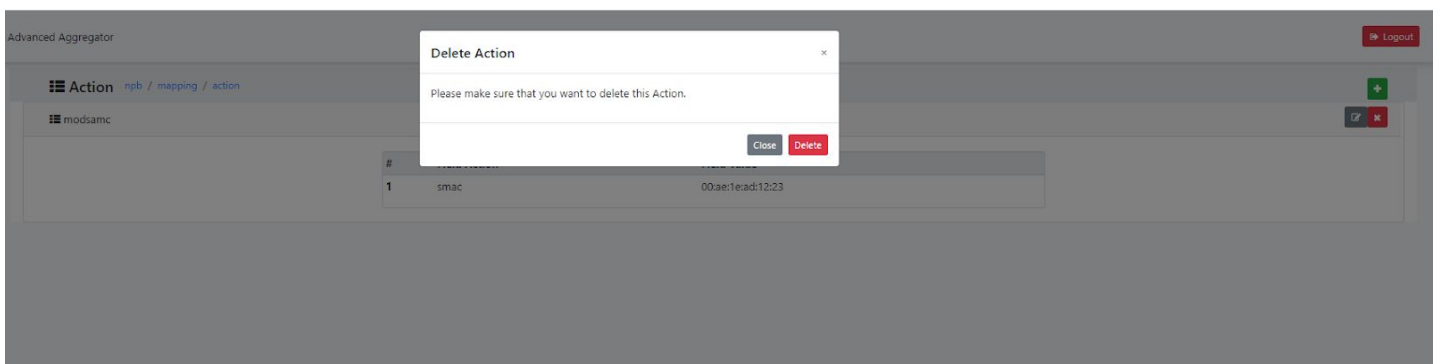
eg: add an action:



Click Save changes:



Delete:




3: Add mapping rules

Step1: click “+” button to add a mapping rule.

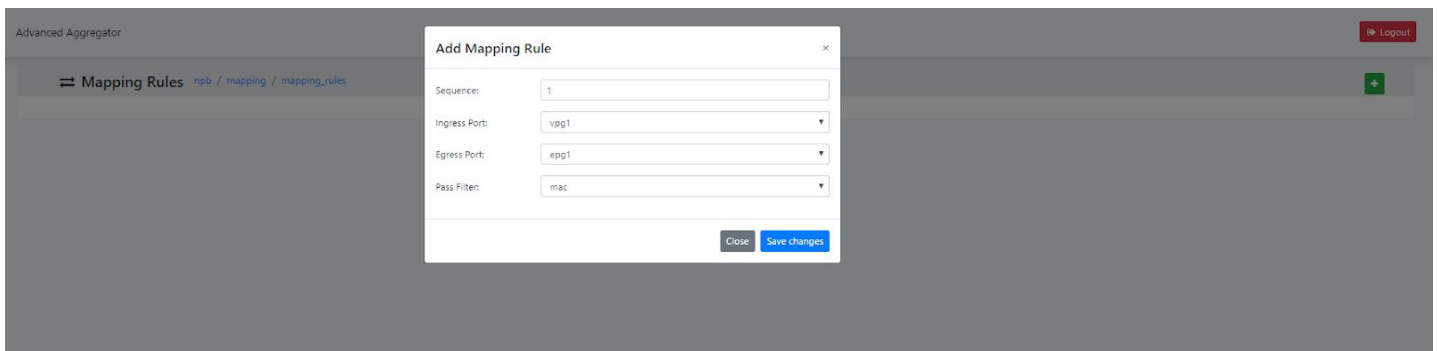
Step2: configure details of mapping rule: the ingress port can be a virtual port group or physical port and the egress port can be a virtual port group or physical port or egress port group.

Step3: after settings, click “Save changes”.

Step4: you can check the details of mapping rule which you added. And click “X” to delete this mapping rule, click “” to change the settings.

eg: add two mapping rules:

When egress port is an egress port group:



Advanced Aggregator

Mapping Rules [nfb / mapping / mapping_rules](#)

Add Mapping Rule

Sequence: 1

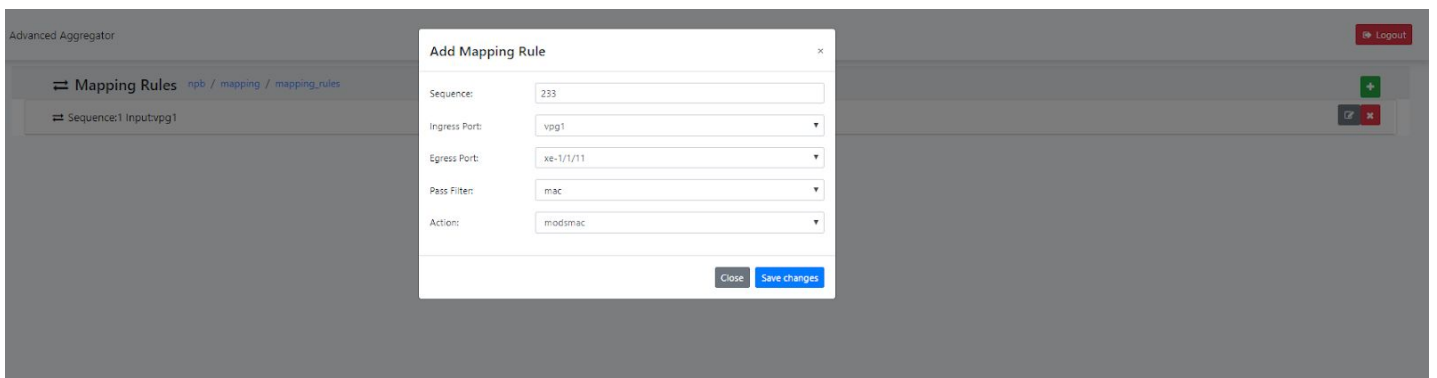
Ingress Port: vpg1

Egress Port: epg1

Pass Filter: mac

Close Save changes

When egress port is a physical port:



Advanced Aggregator

Mapping Rules [nfb / mapping / mapping_rules](#)

Sequence:1 Input vpg1

Add Mapping Rule

Sequence: 233

Ingress Port: vpg1

Egress Port: xe-1/1/11

Pass Filter: mac

Action: modsmac

Close Save changes

After above settings:

Advanced Aggregator Logout

Mapping Rules [npb / mapping / mapping_rules](#) +

Sequence:1 Input:vpg1 ✓ ✕

Sequence	Ingress Port	Egress Port	Pass Filter	Packets Statistics
1	vpg1 Virtual Port Groups	epg1 Egress Port Groups	mac	0

Sequence:233 Input:vpg1 ✓ ✕

Advanced Aggregator Logout

Mapping Rules [npb / mapping / mapping_rules](#) +

Sequence:1 Input:vpg1 ✓ ✕

Sequence:233 Input:vpg1 ✓ ✕

Sequence	Ingress Port	Egress Port	Pass Filter	Action	Packets Statistics
233	vpg1 Virtual Port Groups	xe-1/1/11 Physical Port	mac	modsmac	0

Delete:

Advanced Aggregator Logout

Mapping Rules [npb / mapping / mapping_rules](#) +

Sequence:1 Input:vpg1 ✓ ✕

Sequence:233 Input:vpg1 ✓ ✕

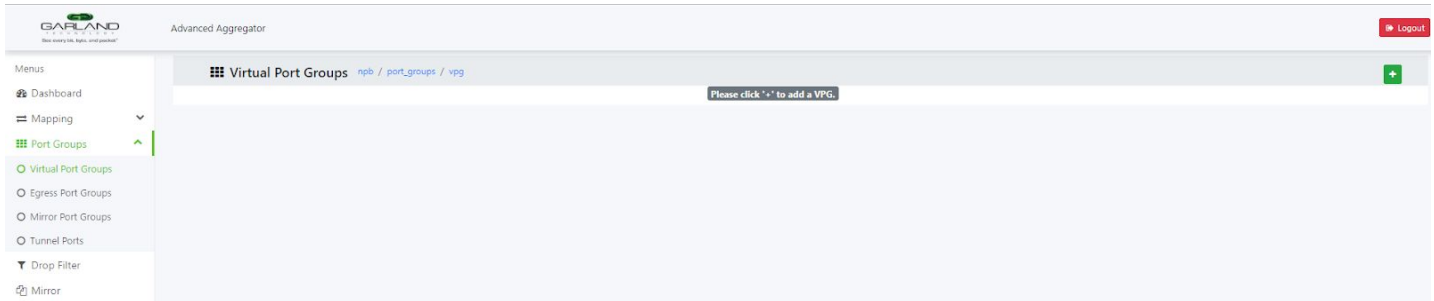
Delete Mapping Rules ✕

Please make sure that you want to delete this Mapping Rule.

Close Delete

Sequence	Ingress Port	Egress Port	Pass Filter	Action	Packets Statistics
233	vpg1 Virtual Port Groups	xe-1/1/11 Physical Port	mac	modsmac	0

4 Port Groups

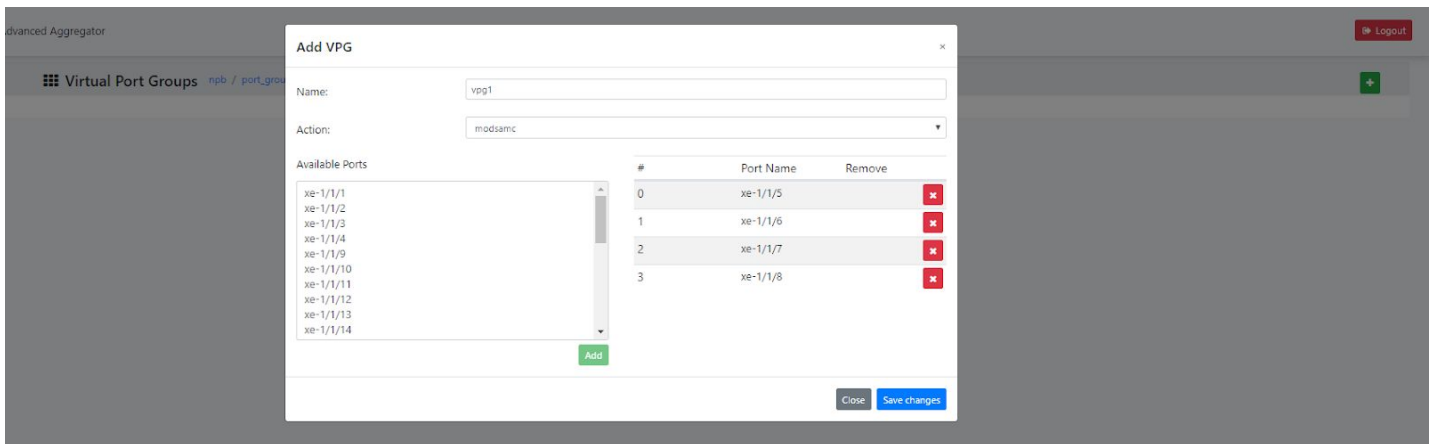


1: Add a Virtual Port Group_(VPG)

Step1: click “+” button to add a vpg.

Step2: click “Add” button to add physical ports to virtual port group.

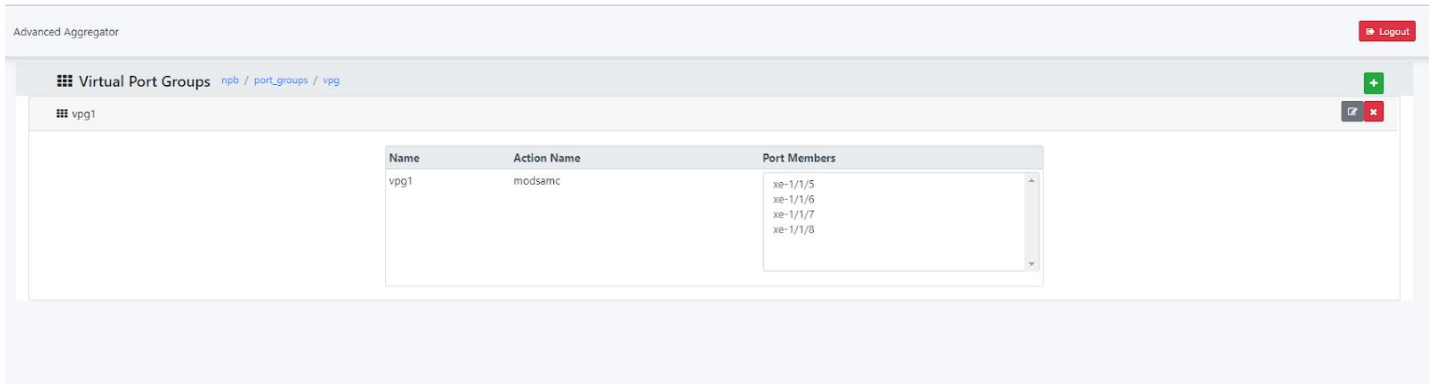
Step3: fill in group name and choose one configured action - you can see the ports which you added; click “X” to delete this port from group. Click “Save changes” to save the setting.



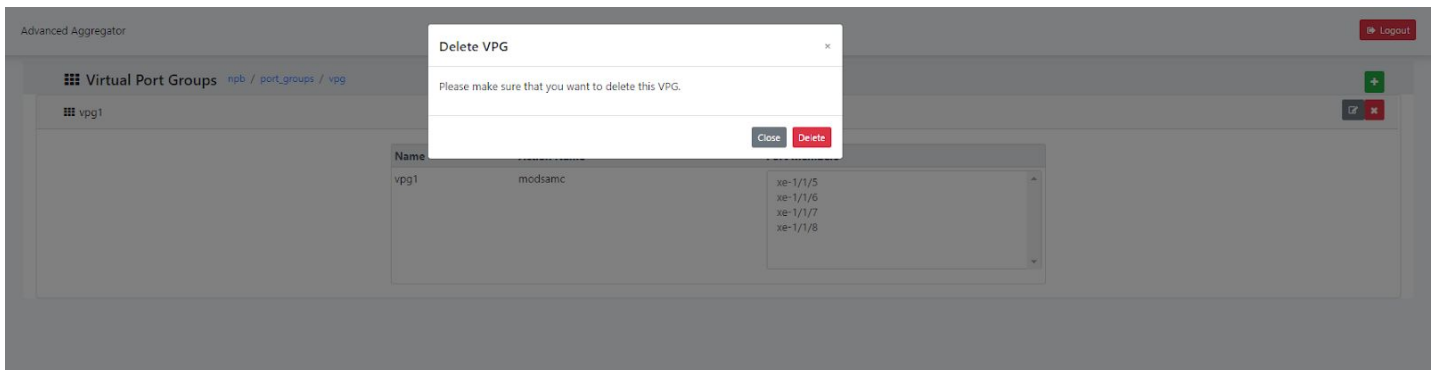
Step4: You can click the virtual port group to see the details.

Click “X” to delete the setting.

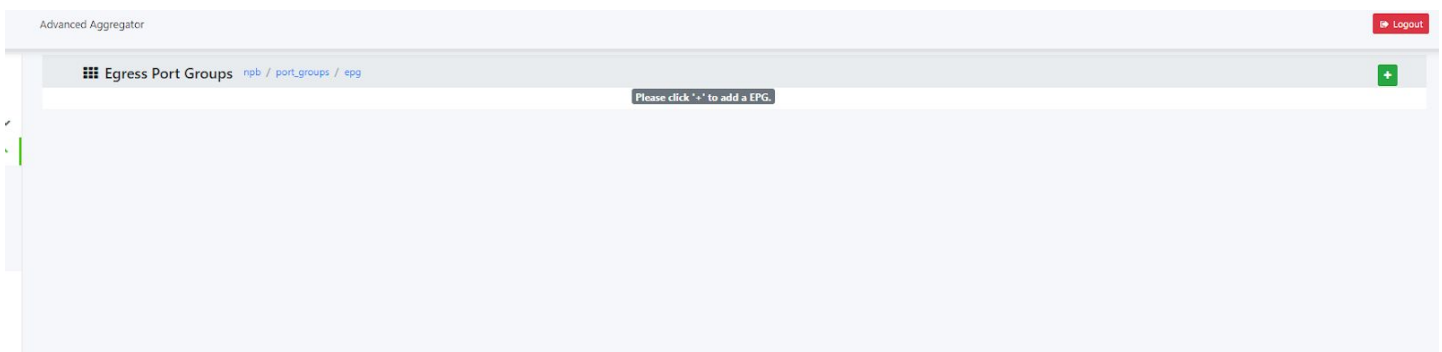
Click “” to modify your setting.



Delete:



2: Add an Egress Port Group_(EPG)




Step1: Click “+” button to add an egress lag group.

Step2: click “Add” button to add physical port to Egress port group.

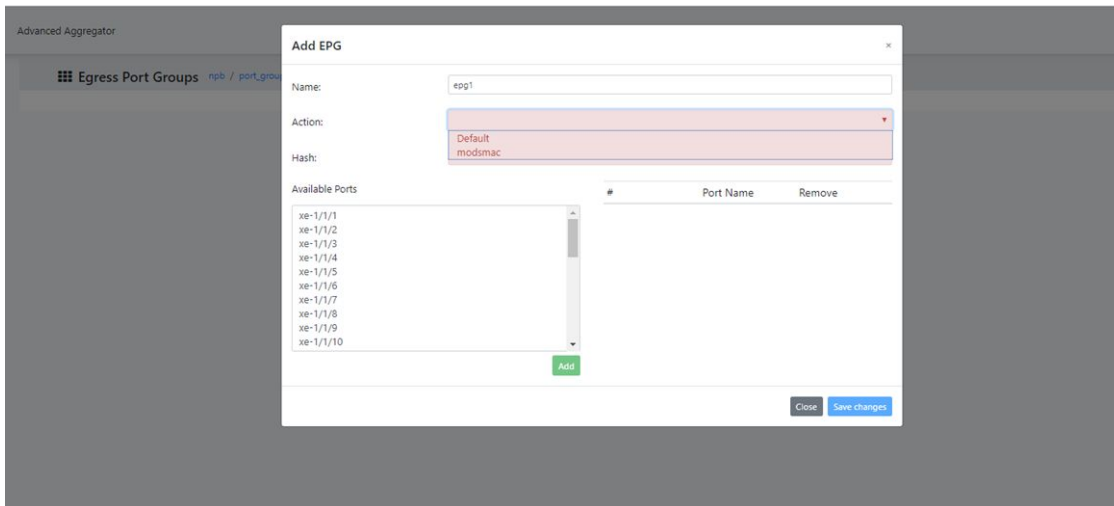
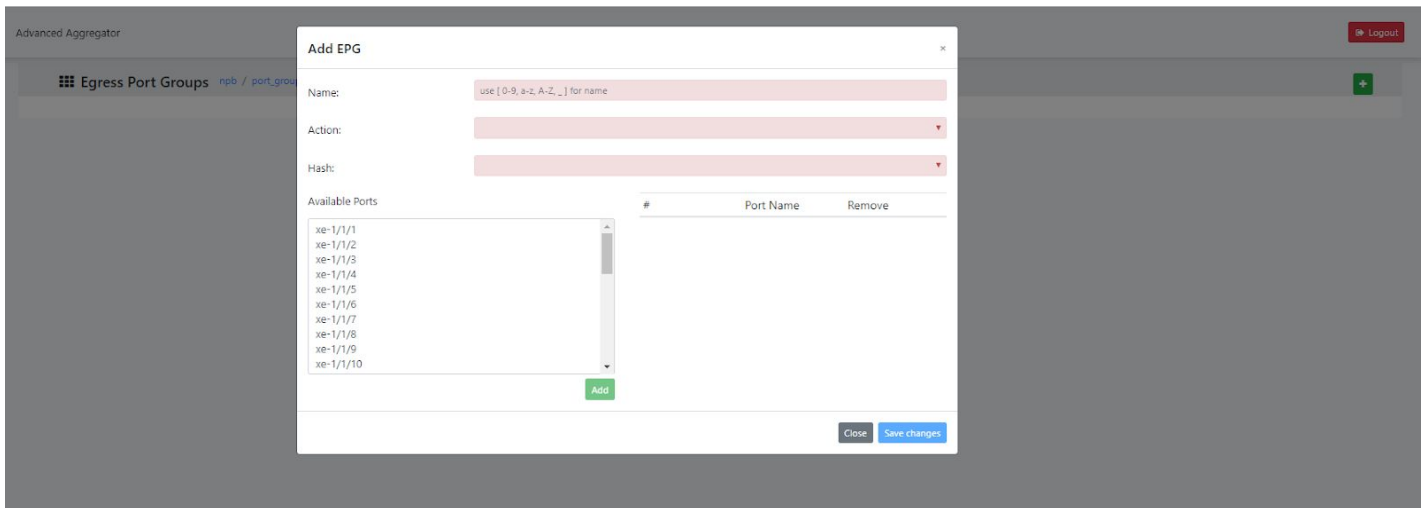
Step3: fill in egress port group name, choose one configured action and hash field; you can see the ports which you added, and click “X” to delete this port from group. Click “Save changes” to save the setting.

Step4: You can click the egress port group to see the details.

Click “X” to delete the setting.

Click “” to modify your setting.

Note: the egress port group_id range is 1-200.



Advanced Aggregator

Egress Port Groups [npb / port_group](#)

xe-1/1/1

xe-1/1/2

xe-1/1/3

xe-1/1/4

xe-1/1/5

xe-1/1/6

xe-1/1/7

xe-1/1/8

xe-1/1/9

xe-1/1/10

Add EPG

Name:

Action:

Hash:

Available Ports

Global LAG Hash

Local LAG Hash

smac

dmac

smacdmac

sip

dip

sipdip

resilient

Add

Close Save changes

Advanced Aggregator

Egress Port Groups [npb / port_group](#)

epg1

xe-1/1/4

xe-1/1/5

xe-1/1/6

xe-1/1/7

xe-1/1/8

xe-1/1/11

xe-1/1/12

xe-1/1/13

xe-1/1/14

xe-1/1/15

Edit EPG

Name:

Action:

Hash:

#	Port Name	Remove
0	xe-1/1/9	<input type="button" value="X"/>
1	xe-1/1/10	<input type="button" value="X"/>

Add

Close Save changes

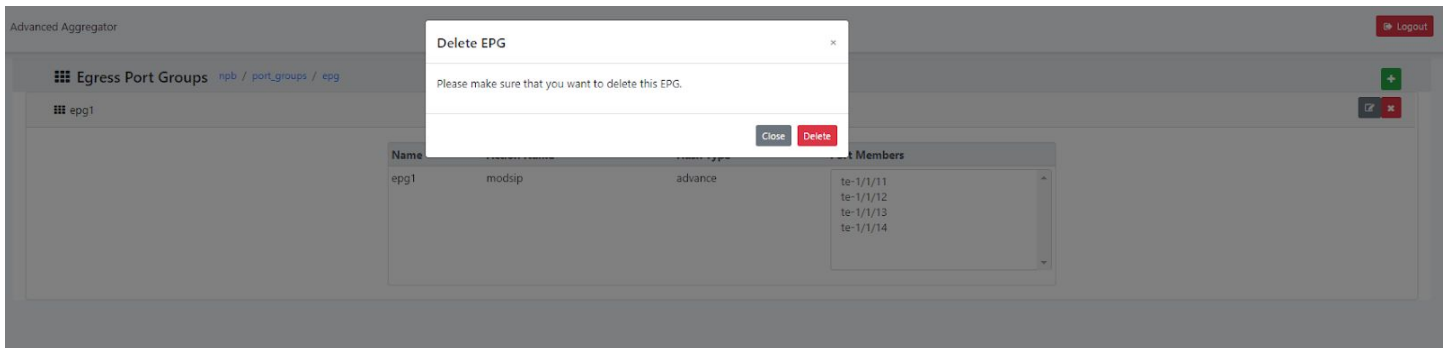
Advanced Aggregator

Egress Port Groups [npb / port_group / epg](#)

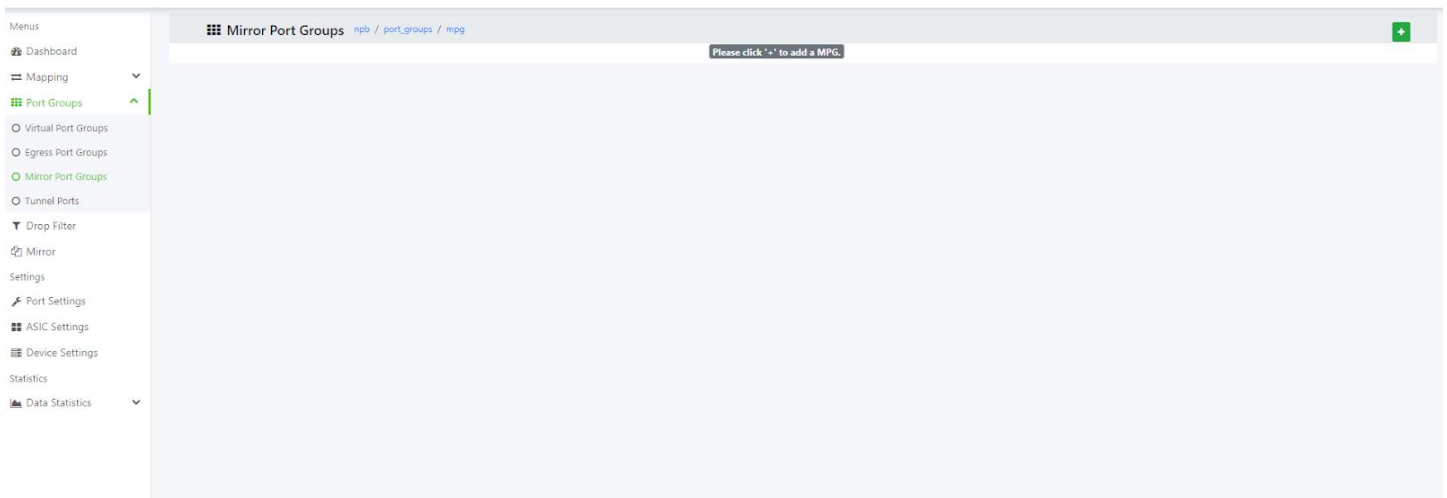
epg1

Name	Action Name	Hash Type	Port Members
epg1	modsmac	advance	<div> <div>xe-1/1/9</div> <div>xe-1/1/10</div> </div>

Delete:



3: Add Mirror Port Group_(MPG)




Step1: click “+” button to add lag port for mirror.

Step2: click “Add” button to add available port to mirror port group.

Step3: choose port number, lag type and hash field; also you can see the ports which you added, and click “X” to delete this port from group. Click “Save changes” to save the setting.

Step4: You can click the mirror port group to see the details.

Click “X” to delete the setting.

Click “” to modify your setting.

Note: the type of lag that you can choose: Static or LACP.

NOTE : the Maximum of MPG supported is 4.

Advanced Aggregator

Mirror Port Groups [npb / port_group](#)

Add MPG

Port Number:

LAG Type:

Hash:

Available Ports(Support Ports Counters <= 8)

xe-1/1/1
xe-1/1/2
xe-1/1/3
xe-1/1/4
xe-1/1/5
xe-1/1/6
xe-1/1/7
xe-1/1/8
xe-1/1/11
xe-1/1/12

Add

#	Port Name	Remove
---	-----------	--------

Close Save changes

Advanced Aggregator

Mirror Port Groups [npb / port_group](#)

Add MPG

Port Number: 1

LAG Type: Static LACP

Hash:

Available Ports(Support Ports Counters <= 8)

xe-1/1/1
xe-1/1/2
xe-1/1/3
xe-1/1/4
xe-1/1/5
xe-1/1/6
xe-1/1/7
xe-1/1/8
xe-1/1/11
xe-1/1/12

Add

#	Port Name	Remove
---	-----------	--------

Close Save changes

Advanced Aggregator

Mirror Port Groups [npb](#) / [port_group](#)

Port Number:

LAG Type:

Hash:

Available Ports(Support Ports Counters <= 8)

- xe-1/1/1
- xe-1/1/2
- xe-1/1/3
- xe-1/1/4
- xe-1/1/5
- xe-1/1/6
- xe-1/1/7
- xe-1/1/8
- xe-1/1/11
- xe-1/1/12

1

LACP

Global LAG Hash

Local LAG Hash

- smac
- dmac
- smacdmac
- sip
- dip
- sipdip
- resilient

Add

Close Save changes

Advanced Aggregator

Mirror Port Groups [npb](#) / [port_group](#)

Port Number:

LAG Type:

Hash:

Available Ports(Support Ports Counters <= 8)

- xe-1/1/5
- xe-1/1/6
- xe-1/1/7
- xe-1/1/8
- xe-1/1/11
- xe-1/1/16
- xe-1/1/17
- xe-1/1/18
- xe-1/1/19
- xe-1/1/20
- xe-1/1/21

1

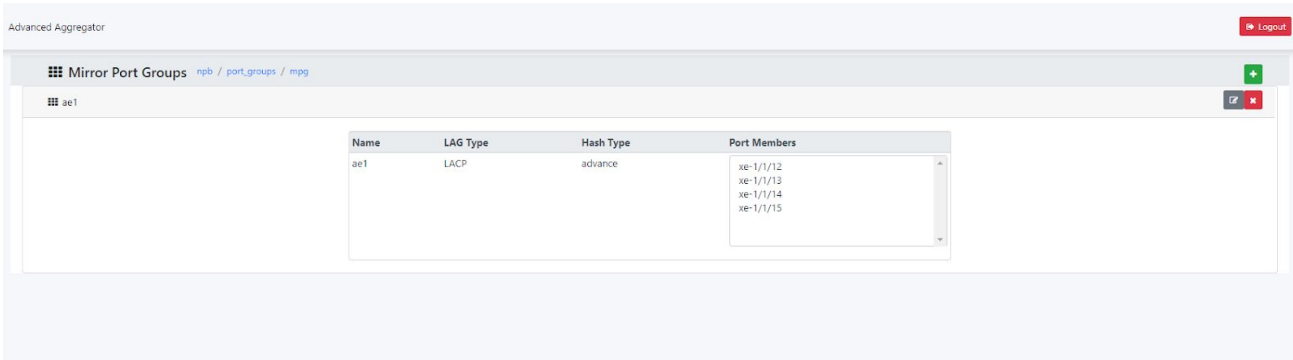
LACP

Global LAG Hash

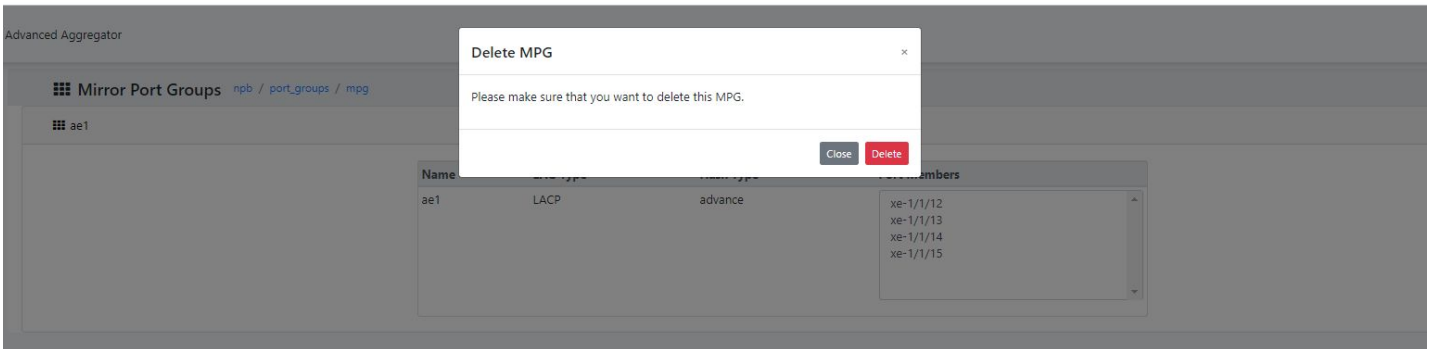
#	Port Name	Remove
0	xe-1/1/12	
1	xe-1/1/13	
2	xe-1/1/14	
3	xe-1/1/15	

Add

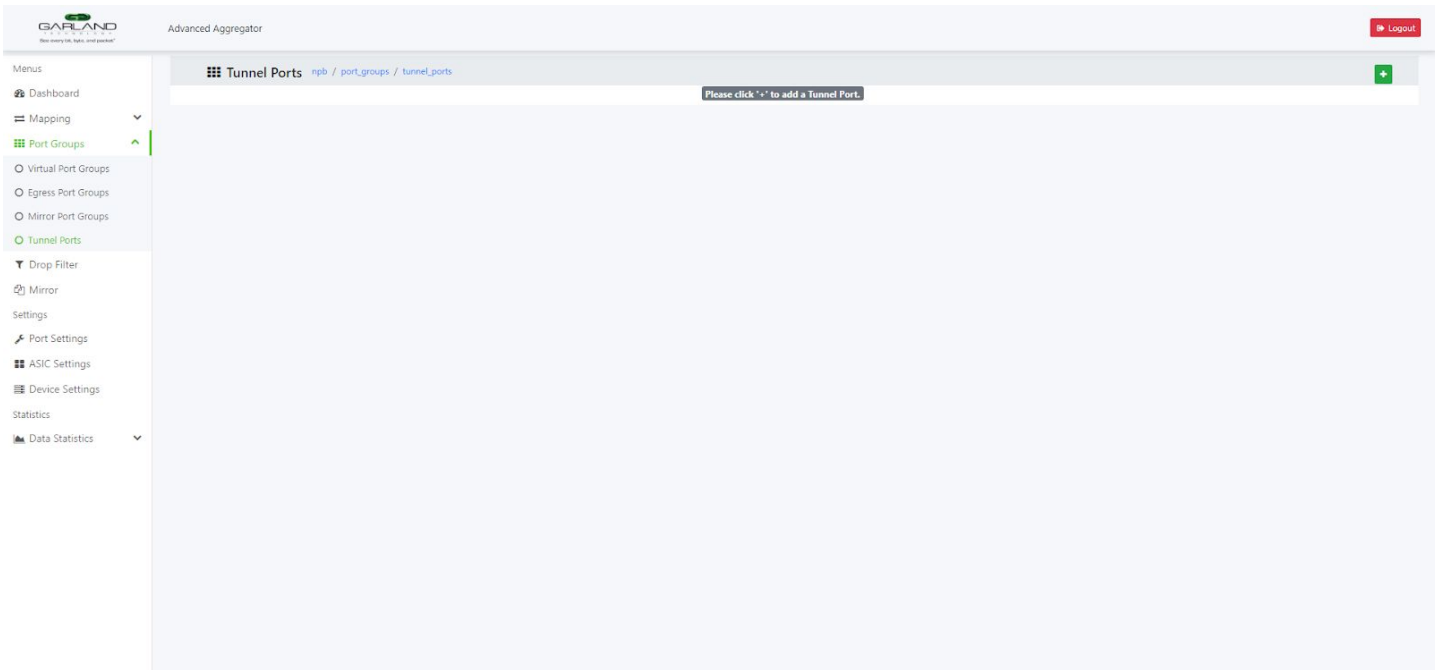
Close Save changes



Delete:



4: Add Tunnel Ports



Step1: click “+” button to add a Tunnel Port. Fill in the fields and click “Save changes” to save the setting.

Step2: You can click the Tunnel Port to see the details.

Click “X” to delete the setting.

Advanced Aggregator

Tunnel Ports [npb](#) / [port_groups](#) / [tunnel_ports](#)

Add Tunnel Port

Tunnel Port Type: GRE

Tunnel Port Num:

Remote IP: IP Address: 1.1.1.1

Local IP: IP Address: 2.2.2.2

Src MAC: Mac Address: 11:11:11:11:11:11

Dst MAC/ Dst MAC of First Hop: Mac Address: 22:22:22:22:22:22

Egress Port:

VLAN: 1-4094

Close Save changes

Eg1: Add a GRE Tunnel Port

Advanced Aggregator

Tunnel Ports [npb](#) / [port_groups](#) / [tunnel_ports](#)

Add Tunnel Port

Tunnel Port Type: GRE

Tunnel Port Num: 1

Remote IP: 12.1.1.1

Local IP: 13.1.1.1

Src MAC: 00:11:11:11:11:11

Dst MAC/ Dst MAC of First Hop: 00:11:11:11:11:22

Egress Port: xe-1/1/16

VLAN: 1000

Close Save changes

Advanced Aggregator Logout

Tunnel Ports [nbp](#) / [port_groups](#) / [tunnel_ports](#) +

gre1 -

Name	gre1
Remote IP	12.1.1.1
Local IP	13.1.1.1
Src MAC	00:11:11:11:11:11
Dst MAC/ Dst MAC of First Hop	00:11:11:11:11:22
Egress Port	xe-1/1/16
VLAN	1000

Eg2: Add a VXLAN Tunnel Port

Advanced Aggregator

Tunnel Ports [nbp](#) / [port_groups](#) / [tunnel_ports](#)

gre1

Name

Remote IP

Local IP

Src MAC

Dst MAC

Egress Port

VLAN

Add Tunnel Port ✕

Tunnel Port Type: VXLAN

Tunnel Port Num: 1

Remote IP: 15.1.1.1

Local IP: 16.1.1.1

Src MAC: 00:11:22:22:22:22

Dst MAC/ Dst MAC of First Hop: 00:11:22:22:22:33

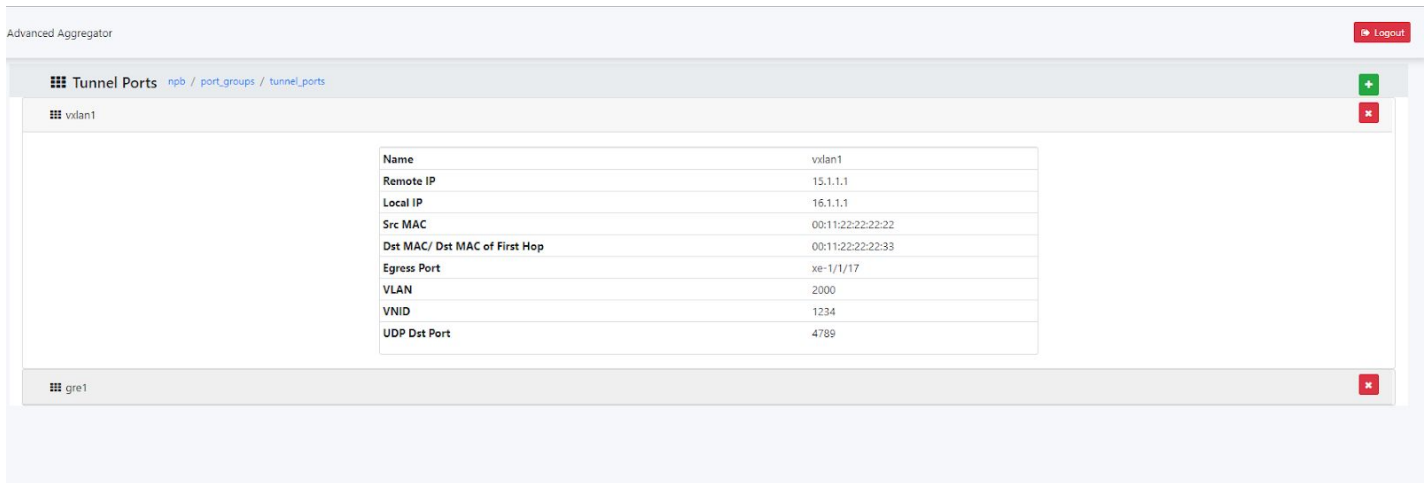
Egress Port: xe-1/1/17

VLAN: 2000

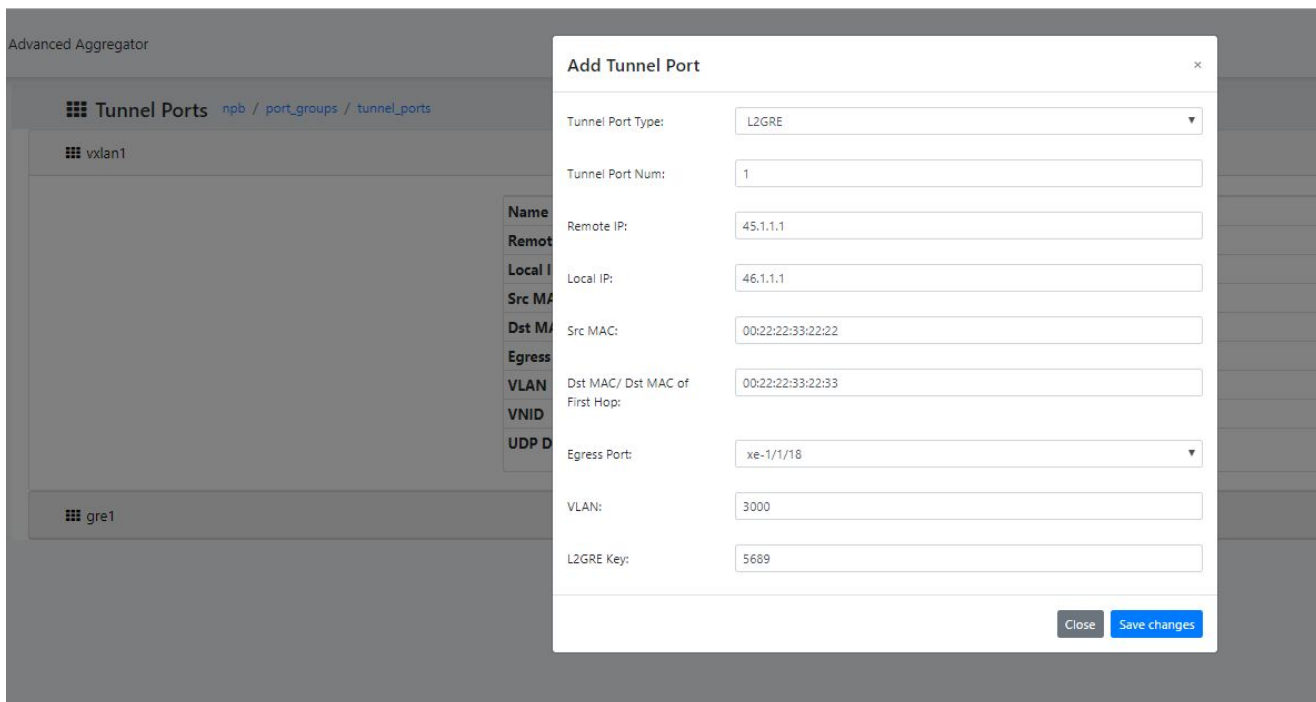
VNID: 1234

UDP Dst Port: 4789

Close
Save changes



Eg3: Add a L2GRE Tunnel Port



Advanced Aggregator Logout

Tunnel Ports [npl](#) / [port_groups](#) / [tunnel_ports](#)

vxlan1 ✕

l2gre1 ✕

Name	l2gre1
Remote IP	45.1.1.1
Local IP	46.1.1.1
Src MAC	00:22:22:33:22:22
Dst MAC/ Dst MAC of First Hop	00:22:22:33:22:33
Egress Port	xe-1/1/18
VLAN	3000
L2GRE KEY	5689

gre1 ✕

Delete:

Advanced Aggregator Logout

Tunnel Ports [npl](#) / [port_groups](#) / [tunnel_ports](#)

vxlan1 ✕

l2gre1 ✕

Delete Tunnel Port

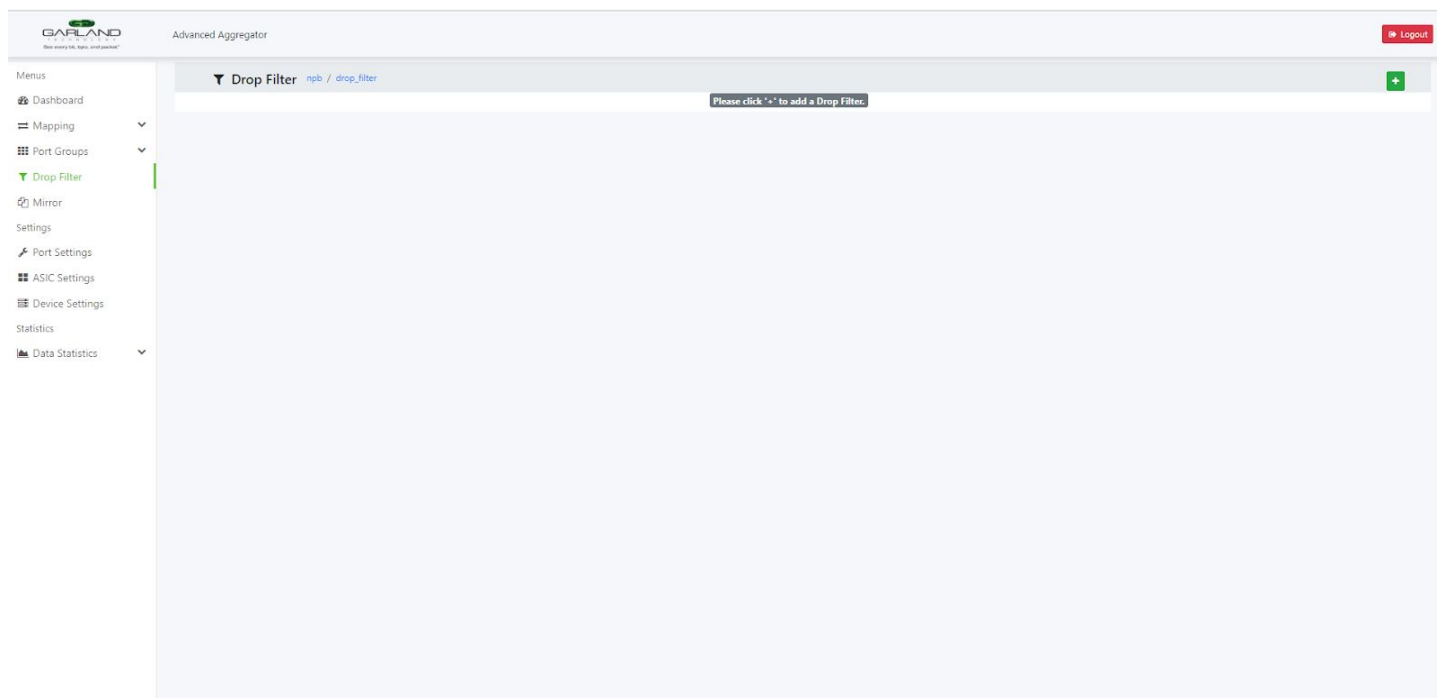
Please make sure that you want to delete this Tunnel Port.

Close Delete

Name	l2gre1
Remote IP	45.1.1.1
Local IP	46.1.1.1
Src MAC	00:22:22:33:22:22
Dst MAC/ Dst MAC of First Hop	00:22:22:33:22:33
Egress Port	xe-1/1/18
VLAN	3000
L2GRE KEY	5689

gre1 ✕

5 Drop Filter




Step1: Click “+” button to add a drop filter.

Step2: you can write the Drop filter name and choose match field or an Template. After setting the value, you can click “+” button to add one or more match fields and click “X”to delete one or more match fields on the Drop filter.Click “Save changes” to save the setting.

Note: the drop point can be ingress or egress; type is L2-L4 without match mode.

Step3 : After adding, you can click the name to show the details.

Click “X” to delete the setting.

Click “” to modify your setting.

eg1: add an ACL on ingress:

Advanced Aggregator

Drop Filter [npb / drop_filter](#)

Add Drop Filter

Name:
Name is required.use [0-9, a-z, A-Z, _] for name.

Drop Point:

Type:

Ingress Interfaces:

Template: MAC Address IPv4 IP Address MPLS ICMP ARP RARP

Match Field: Match Value:

Basic

- smac
- dmac
- sip
- dip
- dl_type
- dl_vlan
- tcp_src
- tcp_dst
- udp_src
- udp_dst
- vlan_tci
- nw_tos
- nw_proto
- icmp_type
- icmp_code
- arp_op
- dst_vif
- src_vif
- vn_tag

Advanced Aggregator

Drop Filter [npb](#) / [drop_filter](#)

Add Drop Filter

Name:

Drop Point:

Type:

Ingress Interfaces:

Template: MAC Address IPv4 IP Address MPLS ICMP ARP RARP

Match Field: Match Value:

Close Save changes

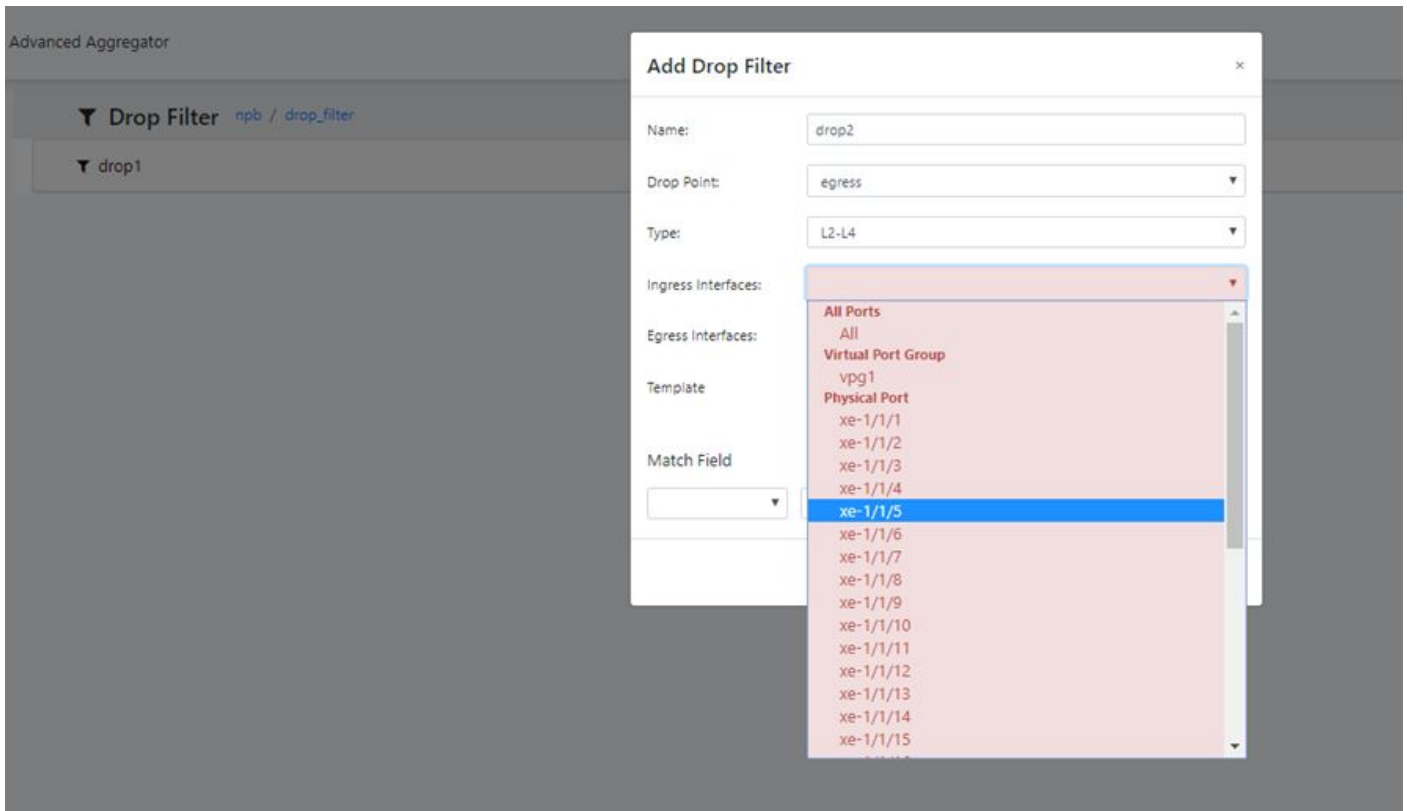
Advanced Aggregator Logout

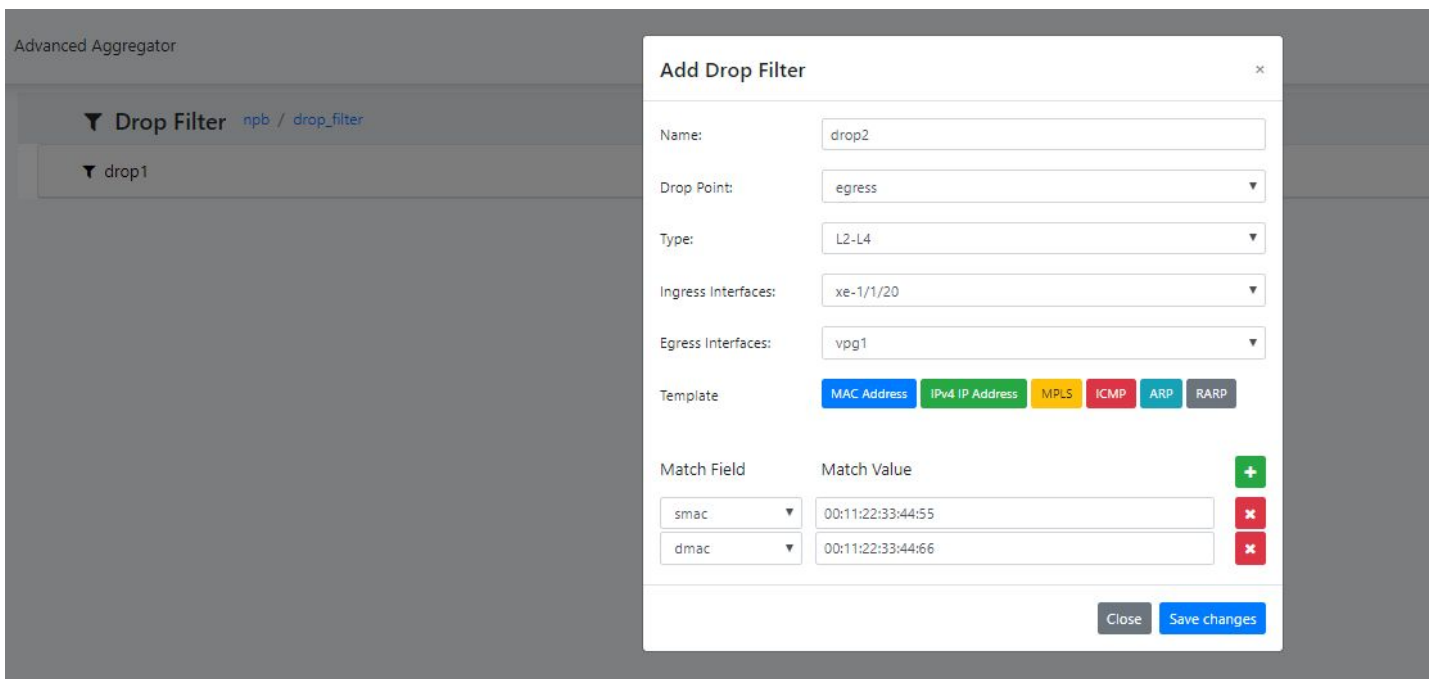
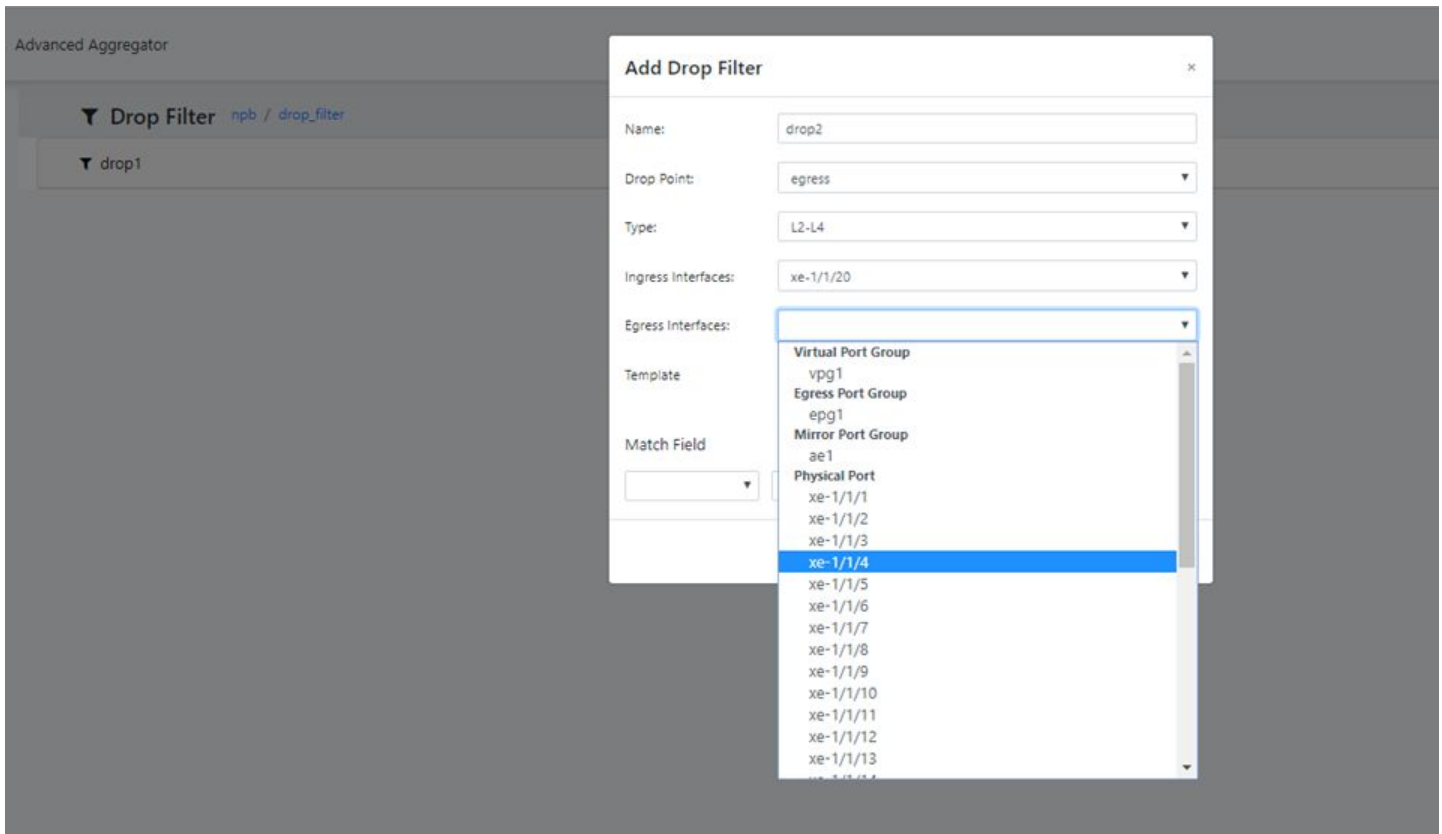
Drop Filter [npb](#) / [drop_filter](#)

drop1

Name	Ingress Interfaces	Drop Point	Type	Filter
drop1	xe-1/1/19 Physical Port	ingress	L2-L4	dl_vlan:2023

eg2: add an ACL on egress.





Advanced Aggregator Logout

Drop Filter [npb](#) / [drop_filter](#)

drop2 + ✕

Name	Ingress Interfaces	Egress Interfaces	Drop Point	Type	Filter
drop2	xe-1/1/20 Physical Port	vpg1 Virtual Port Group	egress	L2-L4	dmac00:11:22:33:44:66 smac00:11:22:33:44:55

drop1 + ✕

Delete:

Advanced Aggregator Logout

Drop Filter [npb](#) / [drop_filter](#)

drop2 + ✕

Delete Drop Filter ✕

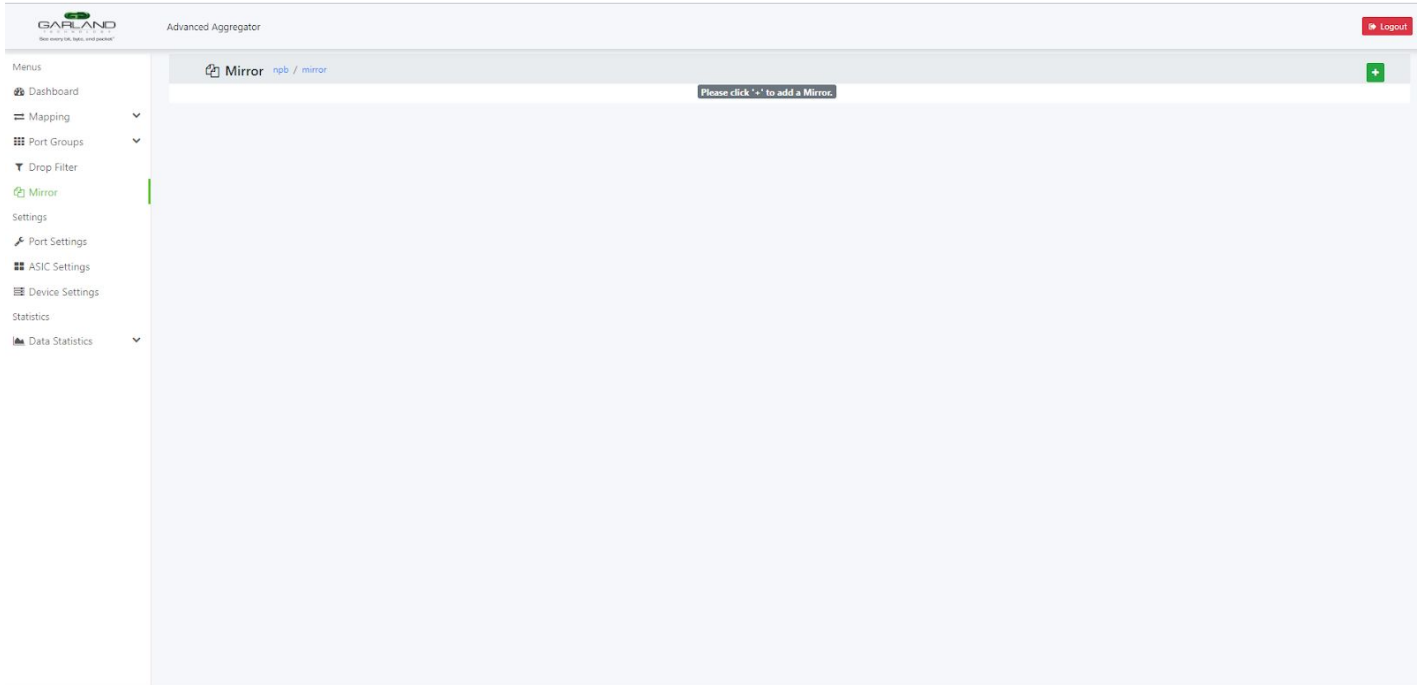
Please make sure that you want to delete this Drop Filter.

Close Delete

Name	Ingress Interfaces	Egress Interfaces	Drop Point	Type	Filter
drop2	xe-1/1/20 Physical Port	vpg1 Virtual Port Group	egress	L2-L4	dmac00:11:22:33:44:66 smac00:11:22:33:44:55

drop1 + ✕

6 Mirror




Step1: Click “+” button to add a mirror.

Step2: you can write the Mirror name and click “Add” to chose Available Ports for Port Rx or Tx. After setting the value, you can click “X”to delete one or more Ports on the Mirror,Then chose an MPG as an output Port. Click “Save changes” to save the setting.

Step3: After adding, you can click the name to show the details.

Click “X” to delete the setting.

Click “” to modify your setting.

Note: Currently the output of mirror only supports MPG(LAG).

Advanced Aggregator

Mirror npb / mirror

Add Mirror

Name:

↓ Input Ports

Available Ports for Port Rx

Egress Port Group

epg1

Physical Port

xe-1/1/1

xe-1/1/2

xe-1/1/3

xe-1/1/4

Add

#	Port Rx Name	Remove
1	vpg1 Virtual Port Group	✕

Available Ports for Port Tx

xe-1/1/18

xe-1/1/19

xe-1/1/21

xe-1/1/22

xe-1/1/23

xe-1/1/24

xe-1/1/25

xe-1/1/26

Add

#	Port Tx Name	Remove
1	xe-1/1/20 Physical Port	✕

↩ Output Port

MPG:

Mirror Port Group

ae1

Close Save changes

Advanced Aggregator Logout

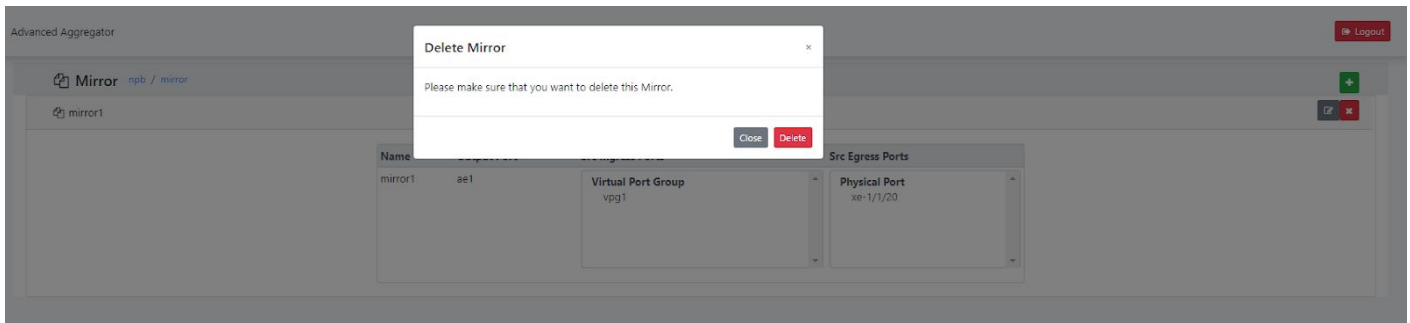
Mirror npb / mirror

mirror1

Name	Output Port	Src Ingress Ports	Src Egress Ports
mirror1	ae1	Virtual Port Group vpg1	Physical Port xe-1/1/20

Note : the maximum of mirror settings is 4.


Delete:




7 Port Settings

The status of all physical ports is displayed, and for each port, you can set its mode; you can also set VLAN Tag, UP Mode, Use FEC, Loopback, port speed and TPID.


1: setting “VLAN Tag”, “UP Mode”, “Use FEC”, “Loopback”, “Speed Settings”, “Tpid ingress” and “Tpid egress”

For each port, click “” and then choose the settings and click “Save Changes”, then the configuration will be set and saved.

1) VLAN Tag

Port Settings npb / settings / port_settings									
Port Name	VLAN Tag	UP Mode	Use FEC	Loopback	Speed Settings	TPID Ingress	TPID Egress	TPID Edit	
xe-1/1/1	10	OFF	OFF	OFF	auto	0x8100	0x8100	Edit	
xe-1/1/2	200	OFF	OFF	OFF	auto	0x8100	0x8100	Edit	
xe-1/1/3	56	OFF	OFF	OFF	auto	0x8100	0x8100	Edit	
xe-1/1/4	0	OFF	OFF	OFF	auto	0x8100	0x8100	Edit	
xe-1/1/5	0	OFF	OFF	OFF	auto	0x8100	0x8100	Edit	

2)UP Mode

Port Settings npb / settings / port_settings									
Port Name	VLAN Tag	UP Mode	Use FEC	Loopback	Speed Settings	TPID Ingress	TPID Egress	TPID Edit	
xe-1/1/1	0	ON	OFF	OFF	auto	0x8100	0x8100	Edit	
xe-1/1/2	0	OFF	OFF	OFF	auto	0x8100	0x8100	Edit	
xe-1/1/3	0	TX OFF	OFF	OFF	auto	0x8100	0x8100	Edit	
xe-1/1/4	0	OFF	OFF	OFF	auto	0x8100	0x8100	Edit	

3)Use FEC

Port Settings [npb / settings / port_settings](#)

[Port Mode](#) [Save Changes](#)

Port Name	VLAN Tag	UP Mode	Use FEC	Loopback	Speed Settings	TPID Ingress	TPID Egress	TPID Edit
xe-1/1/1	0	OFF	<input checked="" type="checkbox"/> ON	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit
xe-1/1/2	0	OFF	<input checked="" type="checkbox"/> ON	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit
xe-1/1/3	0	OFF	<input checked="" type="checkbox"/> ON	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit
xe-1/1/4	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit

4) Loopback

Port Settings [npb / settings / port_settings](#)

[Port Mode](#) [Save Changes](#)

Port Name	VLAN Tag	UP Mode	Use FEC	Loopback	Speed Settings	TPID Ingress	TPID Egress	TPID Edit
xe-1/1/1	0	OFF	<input type="checkbox"/> OFF	<input checked="" type="checkbox"/> ON	auto	0x8100	0x8100	Edit
xe-1/1/2	0	OFF	<input type="checkbox"/> OFF	<input checked="" type="checkbox"/> ON	auto	0x8100	0x8100	Edit
xe-1/1/3	0	OFF	<input type="checkbox"/> OFF	<input checked="" type="checkbox"/> ON	auto	0x8100	0x8100	Edit
xe-1/1/4	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit
xe-1/1/5	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit

5) Speed Settings

Port Settings [npb / settings / port_settings](#)

[Port Mode](#) [Save Changes](#)

Port Name	VLAN Tag	UP Mode	Use FEC	Loopback	Speed Settings	TPID Ingress	TPID Egress	TPID Edit
xe-1/1/1	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit
xe-1/1/2	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	100G	0x8100	0x8100	Edit
xe-1/1/3	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	40G	0x8100	0x8100	Edit
xe-1/1/4	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit

6) Tpid ingress and Tpid egress

Click “[Edit](#)”, Then choose Tpid ingress and Tpid egress value, click “save changes” to save settings.

Advanced Aggregator

Port Settings [npb / settings / port_settings](#)

[Port Mode](#) [Save Changes](#)

TPID

Ingress

☒ 0x8100

☐ 0x88a8

☐ 0x9100

☐ 0x9200

Egress

☒ 0x8100

☐ 0x88a8

☐ 0x9100

☐ 0x9200

[Close](#) [Save changes](#)

Port Name	VLAN Tag	UP Mode	Use FEC	Loopback	Speed Settings	TPID Ingress	TPID Egress	TPID Edit
xe-1/1/1	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit
xe-1/1/2	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	100G	0x8100	0x8100	Edit
xe-1/1/3	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	40G	0x8100	0x8100	Edit
xe-1/1/4	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit
xe-1/1/5	0	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> OFF	auto	0x8100	0x8100	Edit

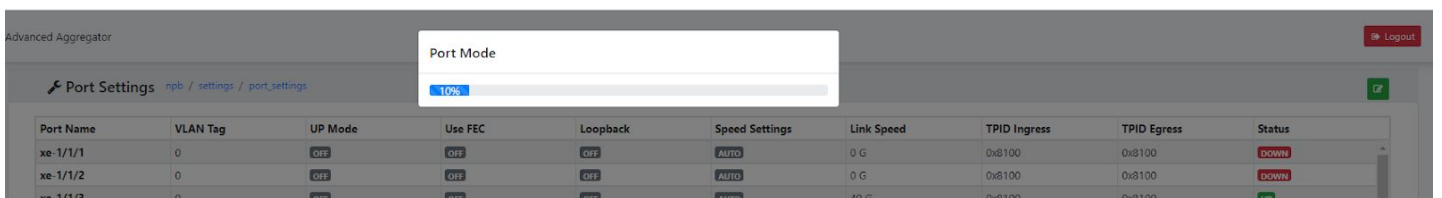
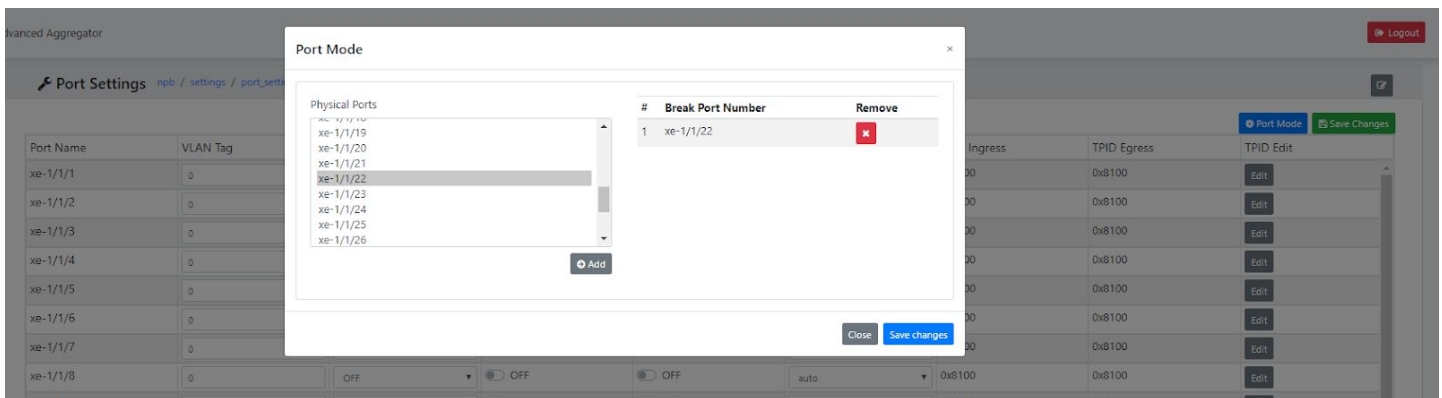
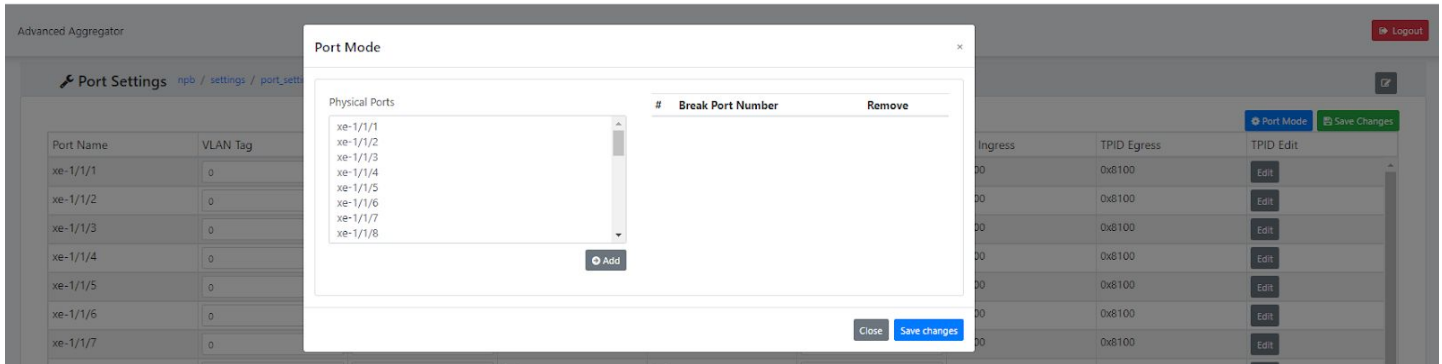
2: Port Mode setting

By default, the Port mode is “Flexible”, and you can choose the ports which you want to breakout into 4 ports.

Step1: Click “[Port Mode](#)” and click the “Port Mode” button.

Step2: Choose the ports to breakout, click the “Add” button, and then Click “Save Changes”.

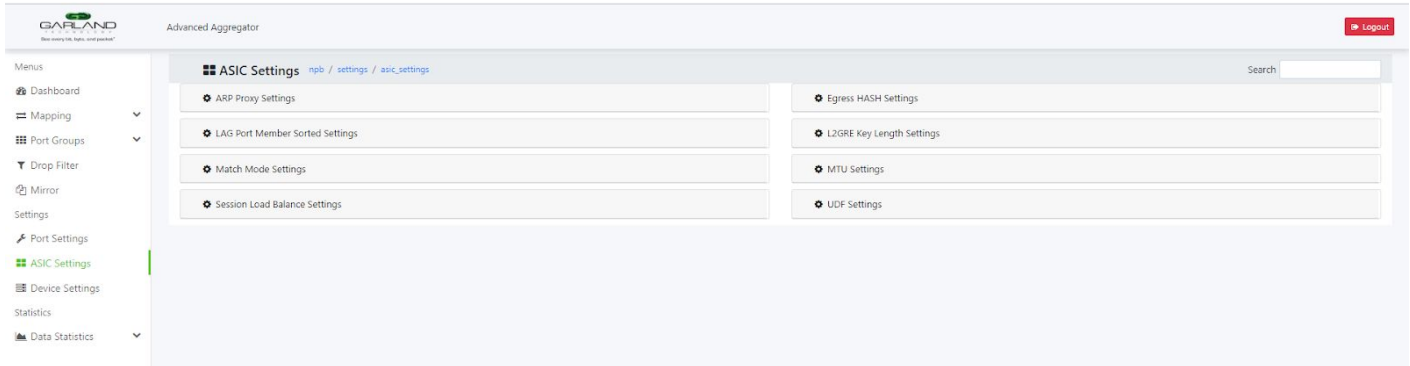
Change Port Mode must restart OVS, so you need to wait.




After system restart, you can see the breakout ports.

xe-1/1/20	0	OFF	OFF	OFF	AUTO	0 G	0x8100	0x8100	DOWN
xe-1/1/21	0	OFF	OFF	OFF	AUTO	0 G	0x8100	0x8100	DOWN
xe-1/1/22.1	0	OFF	OFF	OFF	AUTO	0 G	0x8100	0x8100	DOWN
xe-1/1/22.2	0	OFF	OFF	OFF	AUTO	0 G	0x8100	0x8100	DOWN
xe-1/1/22.3	0	OFF	OFF	OFF	AUTO	0 G	0x8100	0x8100	DOWN
xe-1/1/22.4	0	OFF	OFF	OFF	AUTO	0 G	0x8100	0x8100	DOWN
xe-1/1/23	0	OFF	OFF	OFF	AUTO	0 G	0x8100	0x8100	DOWN

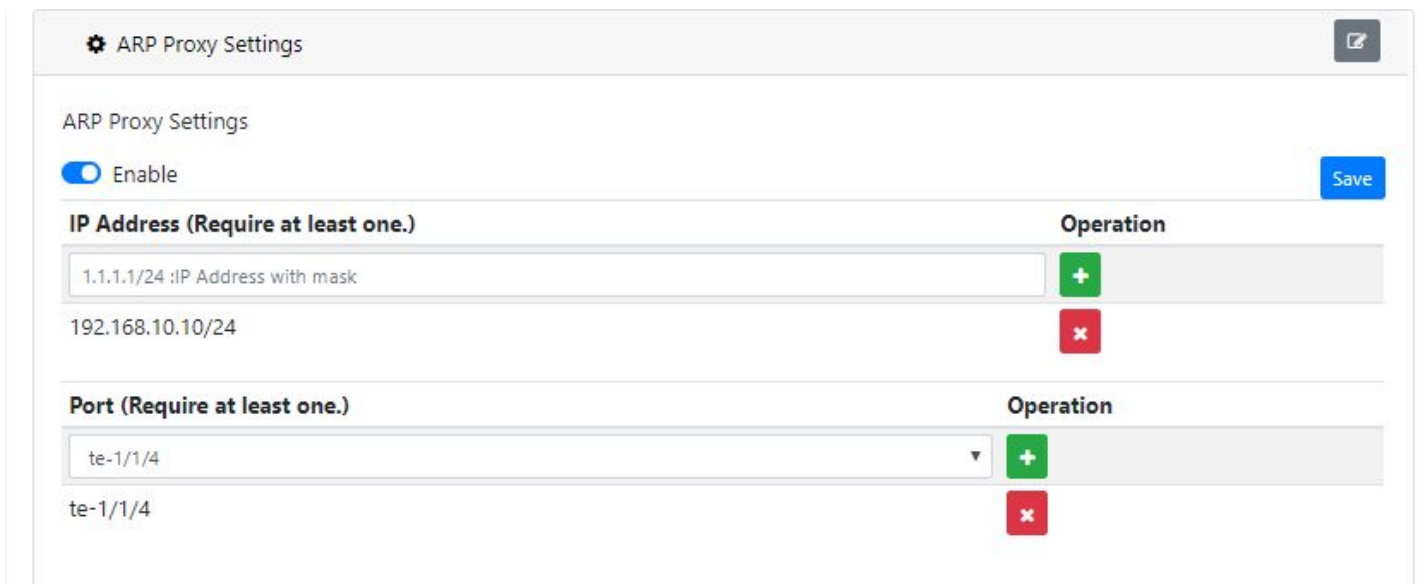
8 ASIC Settings




1: ARP Proxy Settings

Click “ARP Proxy Settings” and click “

Finally,click “save” to save your settings.



2: Lag Port Member Sorted Settings

Click “Lag Port Member Sorted Settings” and click “

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⚙️ LAG Port Member Sorted Settings
✎

LAG Port Member Sorted Settings

☒ Enable

Save

3: Match Mode Settings

Click “Match Mode Settings” and click “”, Then click “” to enable and click “save” to save your setting.

Following is the default match mode configuration

⚙️ Match Mode Settings
✎

☒ Enable

Save

L2-L4 Mode

1000
20100
-100

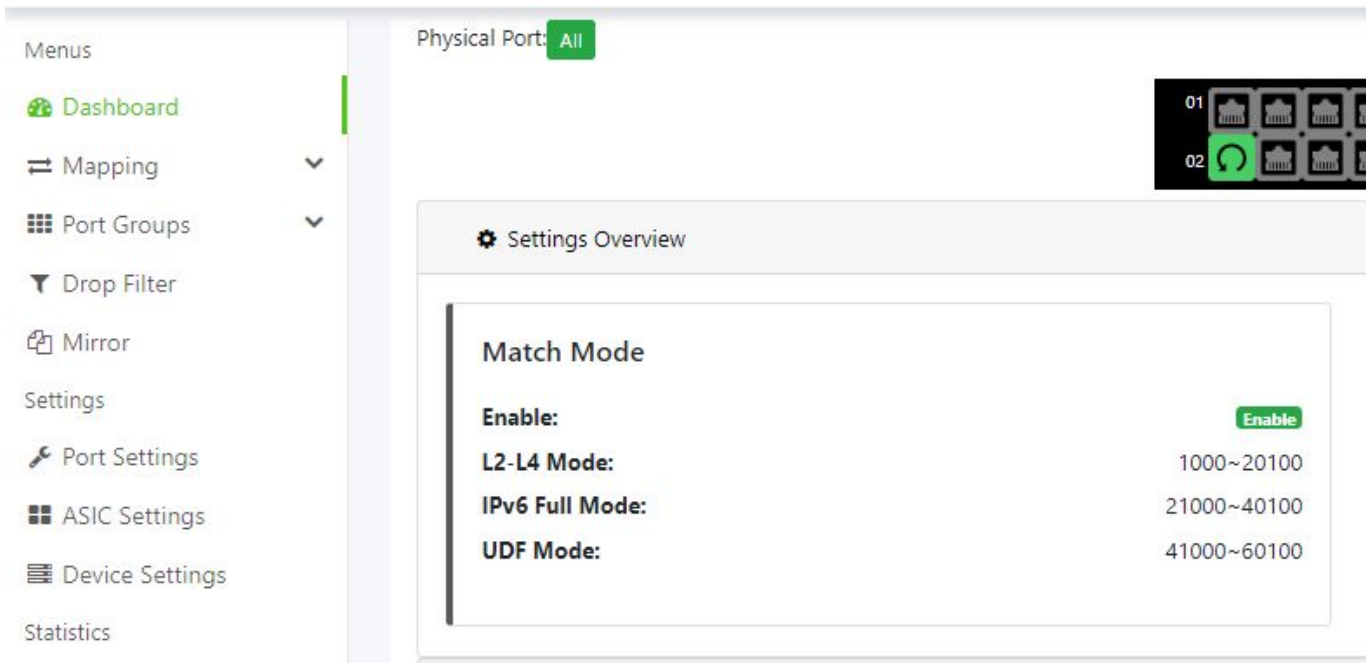
IPv6 Full Mode

21000
40100
-100



UDF Mode

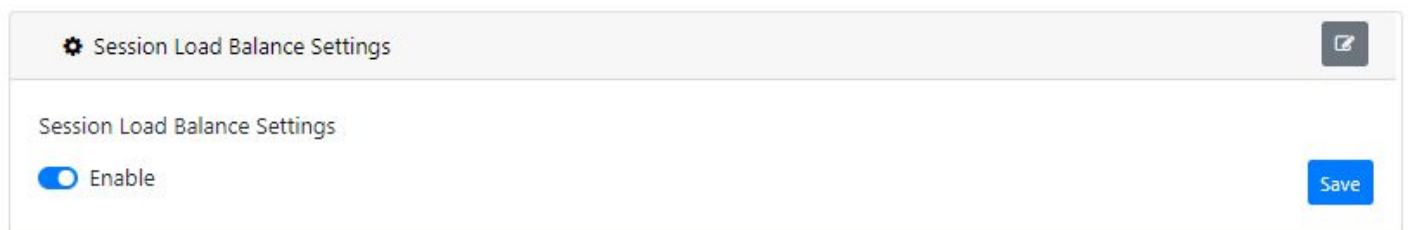
41000
60100
-100

After saving the setting, you can see the ranges DashBoard of GUI:




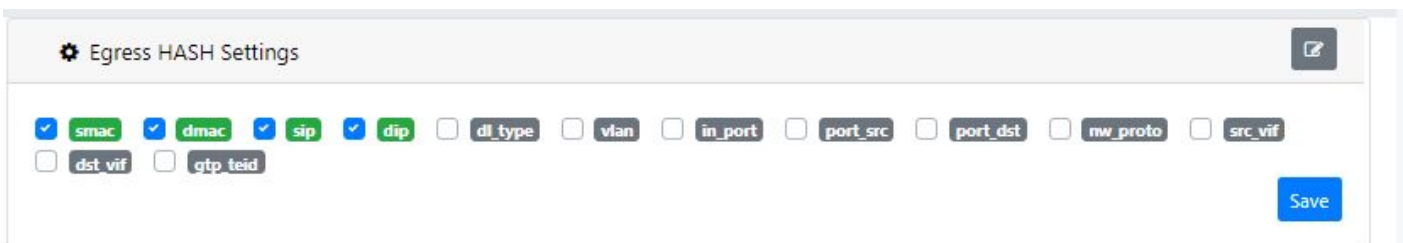
4: Session Load Balance Settings

Click “Session Load Balance Settings” and click “”, Then click “” to enable and click “save” to save your setting.




5: Egress HASH Settings

Click “Egress HASH Settings” and click “”, Then chose your settings and then click “Save” to save your setting.



6: L2GRE Key Length Settings

Click “L2GRE Key Length Settings” and click “”, Then chose your settings on drop downs menus and then click “Save” to save your setting.


 L2GRE Key Length Settings
 


Global L2GRE Key Length Settings

16 bits ▼

Save

7: MTU Settings

Click “MTU Settings” and click “”, Then enter the value and then click “Save” to save your setting.


 MTU Settings
 



Global MTU Settings

9212

Save

8: UDF Settings

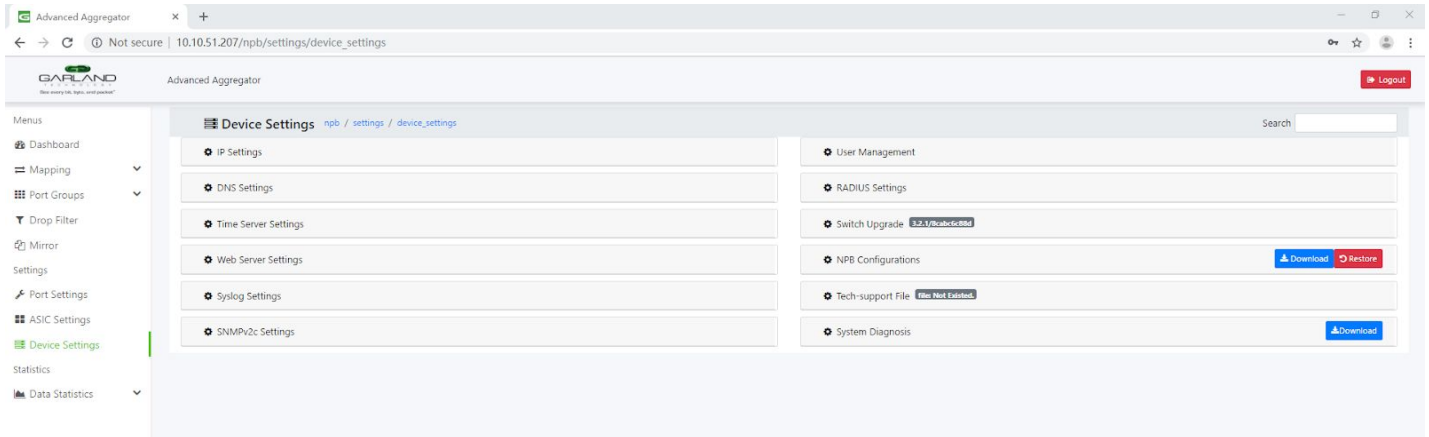
Click “UDF Settings” and click “”, Then chose your settings and then click “Save” to save your setting. Currently supports 4 UDF settings.

 UDF Settings
 


Remove All Save

Name	Base	Offset	Length
UDF0	L2 ▼	0 ▼	4 ▼
UDF1	L2 ▼	8 ▼	2 ▼
UDF2	L3 ▼	0 ▼	1 ▼
UDF3	L3 ▼	40 ▼	3 ▼

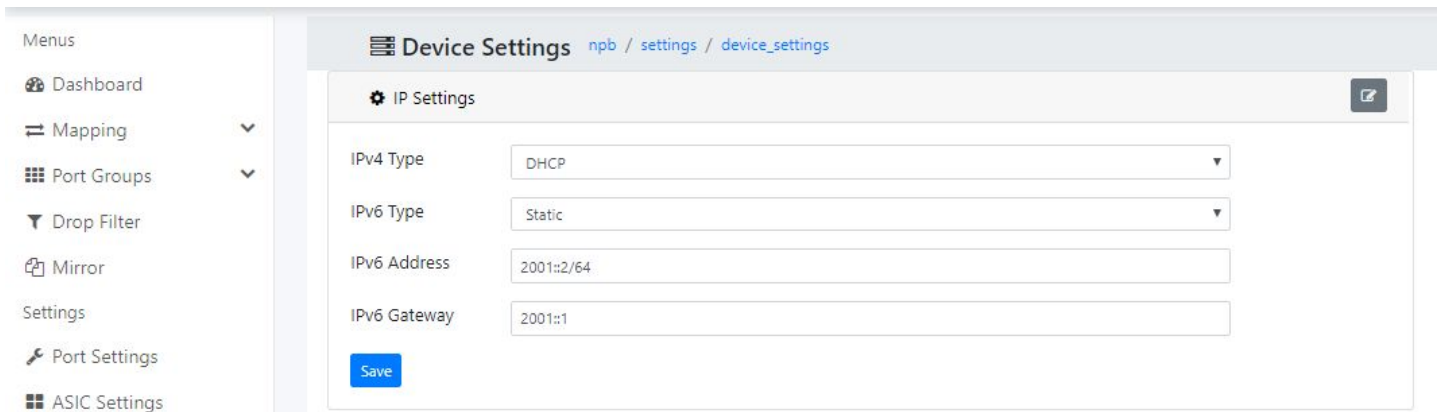
9 Device Settings




1: IP Settings

Click “IP Settings” and click “” to choose your setting, Then click “save” to save your setting.

Now it supports ipv4 and ipv6.




2: DNS Settings

Click “DNS Settings” and click “”, enter the IP address and then click “+” to add a new setting, and click “X” to delete the setting.

The screenshot shows the 'Advanced Aggregator' interface. On the left is a 'Menus' sidebar with options: Dashboard, Mapping, Port Groups, Drop Filter, Mirror, Settings, Port Settings, and ASIC Settings. The main content area is titled 'Device Settings' with a breadcrumb 'npb / settings / device_settings'. It contains two settings sections: 'IP Settings' and 'DNS Settings'. The 'DNS Settings' section has a table with the following data:

#	DNS Address	Operation
0	DNS IP Address	+
1	10.10.50.10	x
2	8.8.8.8	x


3: Time Server Settings

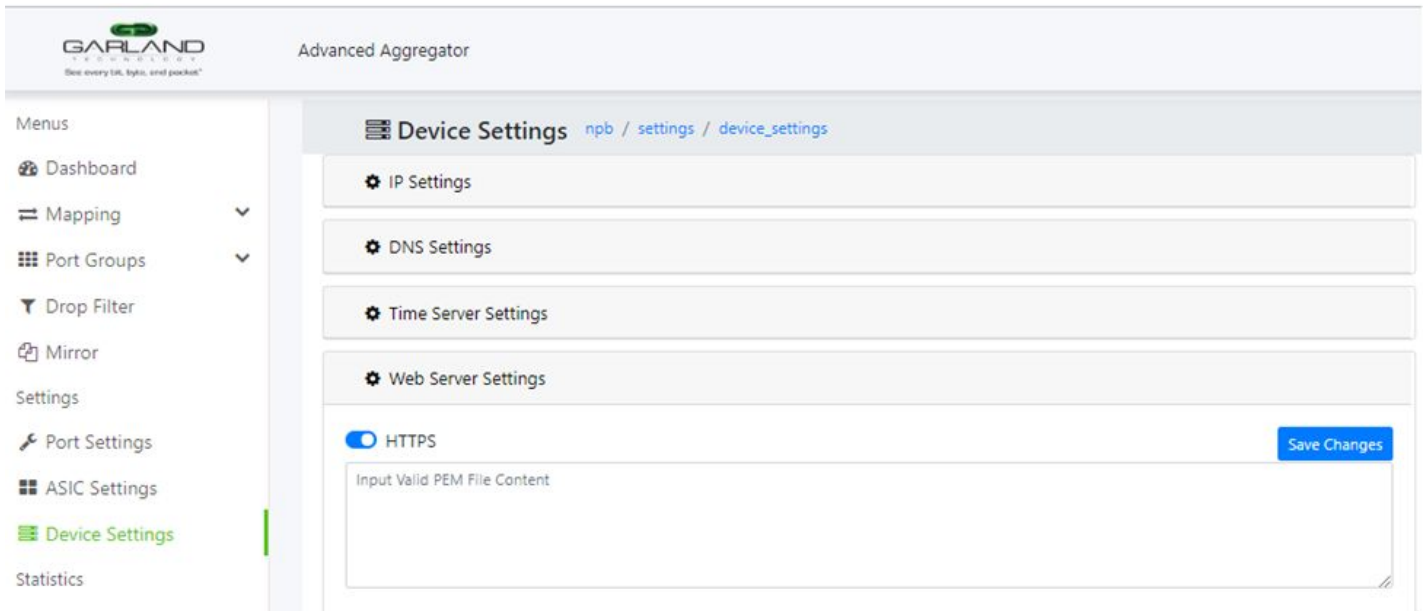
Click “Time Server Settings” and click “”, enter the IP address and then click “+” to add a new setting, and click “X” to delete the setting.

The screenshot shows the 'Advanced Aggregator' interface with the 'Time Server Settings' section expanded. The 'Device Settings' breadcrumb is still present. The 'Time Server Settings' section has a table with the following data:


IP Address	#
NTP Server IP Address	+
192.168.100.100	x

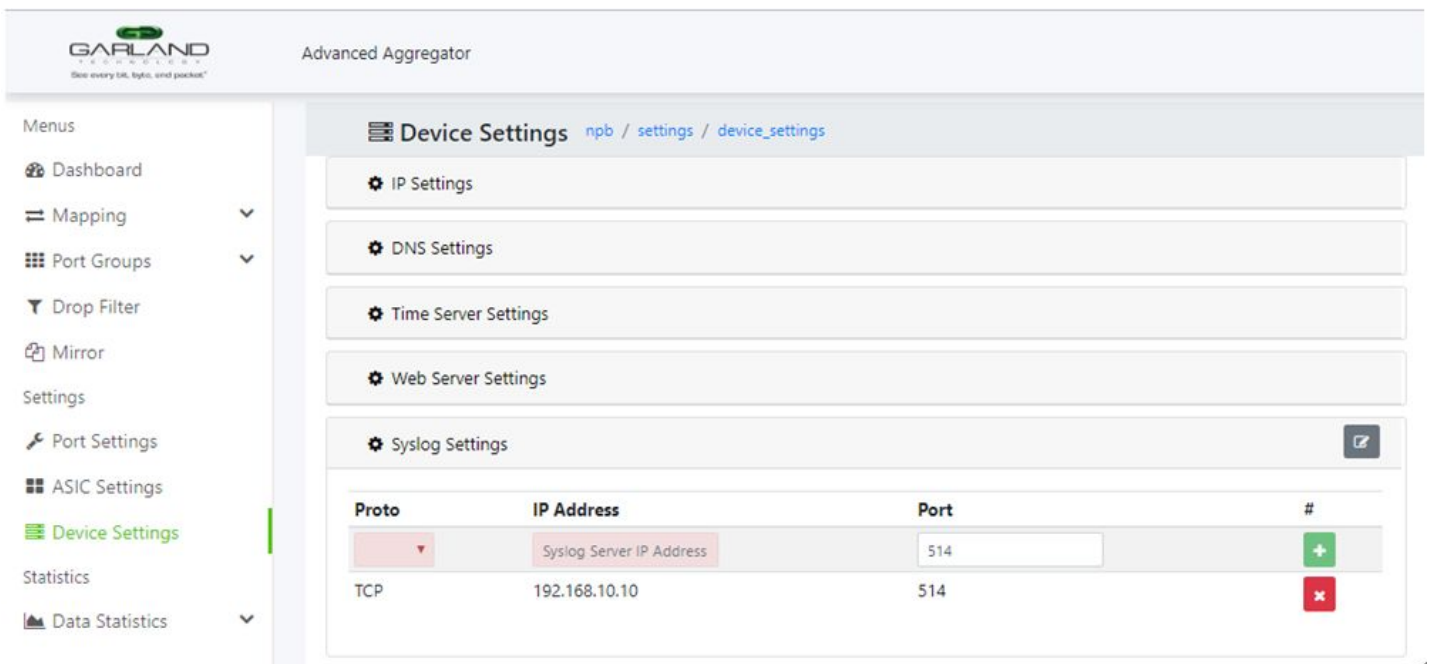
4: Web Server Settings

Click “Web Server Settings” and click “” to chose https, Then input valid PEM file content in text box and click “save changes” to save your setting. Use http by default.



5 : Syslog Settings

Click “Syslog Settings” and click “”, chose the proto ,enter the IP address ,input the port and then click “+” to add a new setting, and click “X” to delete the setting.



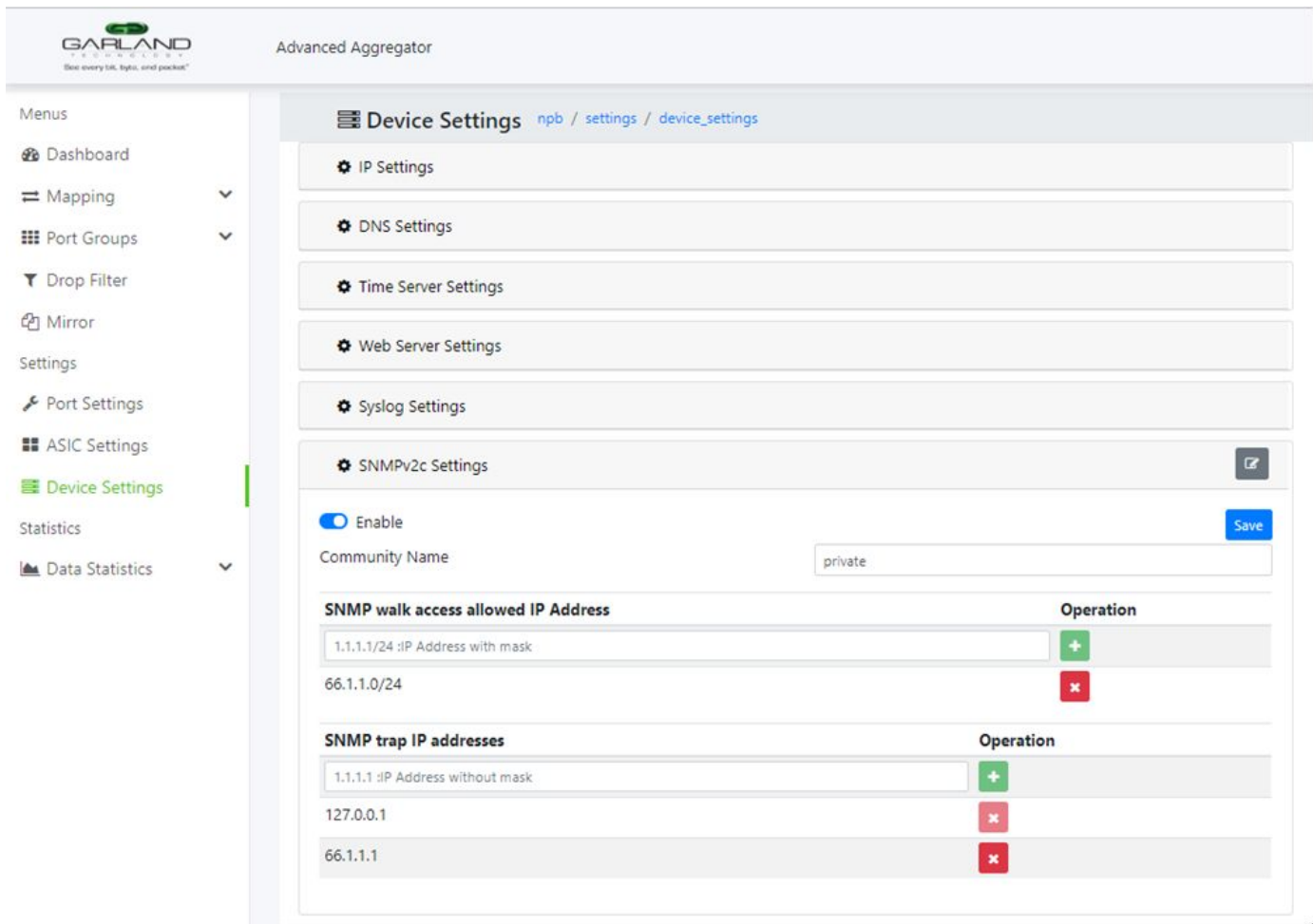
6: SNMPv2c Settings

Click “SNMPv2c Settings” and click “”, Then click “” to enable SNMP and modify the community name.

Enter the SNMP walk access allowed IP Address and click “+” to add a new setting, and click “X” to delete the setting.



Enter the SNMP trap IP Address and click “+” to add a new setting, and click “X” to delete the setting.




Finally, click “save” to save your settings.



The screenshot shows the 'Device Settings' page for 'npb / settings / device_settings'. The 'SNMPv2c Settings' section is expanded, showing the following configuration:

- Enable:** A toggle switch is turned on.
- Community Name:** A text input field contains the value 'private'.
- SNMP walk access allowed IP Address:** A table with two rows:

IP Address	Operation
1.1.1.1/24 :IP Address with mask	
66.1.1.0/24	
- SNMP trap IP addresses:** A table with three rows:

IP Address	Operation
1.1.1.1 :IP Address without mask	
127.0.0.1	
66.1.1.1	

A 'Save' button is located in the top right corner of the settings section.

7 : User Management

Click “User Management” and chose an UserName and input New Password , then click’update’ .you can change the password for the three pre-configured user logins.

User Management

UserName

logger

New Password


Input New Password

New Password Again

Input New Password Again

Update

8 : RADIUS Setting

Click “RADIUS Settings” and click “”, then click “+” to set server IP address and share key, and click “X” to delete the setting.

RADIUS Settings


IP Address	Share Key	#
Radius IP Address	use [0-9,a-z,A-Z]	
192.168.100.100	pica8	

9 : Switch Upgrade

Click “Switch Upgrade”, enter the URL of new version and then click Upgrade, to upgrade the switch software version.

Switch Upgrade
3.2.1/d33a9c60d5

URL

USB

URL: Support HTTP/HTTPS/TFTP/FILE
Upgrade

insert USB, chose upgrade.bin, click upgrade, to upgrade the switch software version.

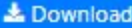
Switch Upgrade
3.2.1/d33a9c60d5

URL
USB

Please put the upgrade file in the USB root path and named it as "Upgrade.bin"

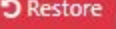
#	Available USB	Upgrade
	None	

10 : NPB Configurations:

Click “  Download ” to download current configurations to a local disk file.

NPB Configurations
Download
Restore

Choose File
Browse
Upload

Click “  Restore ” and click”save changes” to Restore to factory Default .

Restore To Factory Default

Please make sure that you want to restore the switch, this will clear all your Ports and Mappings.

Close
Save changes

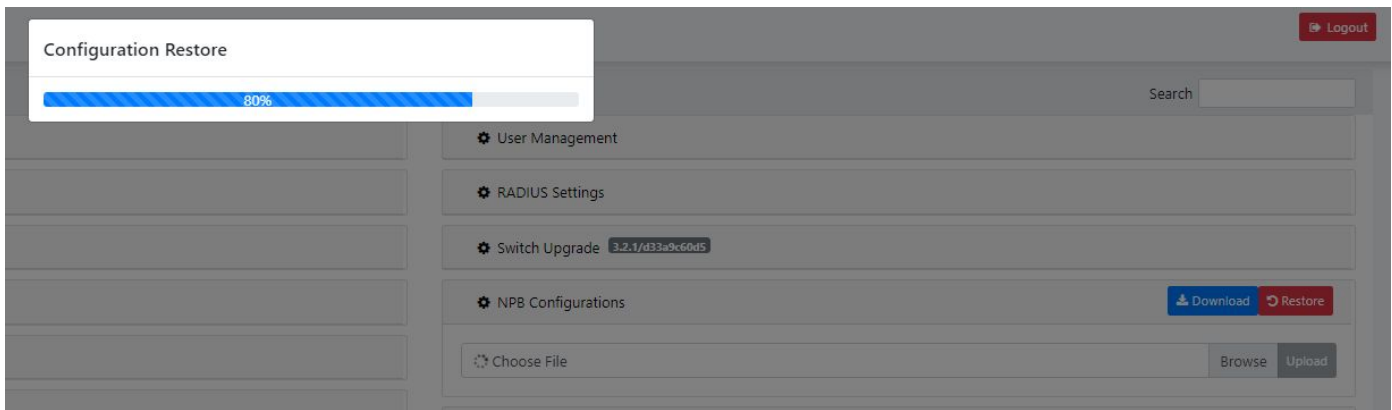
Logout

Search

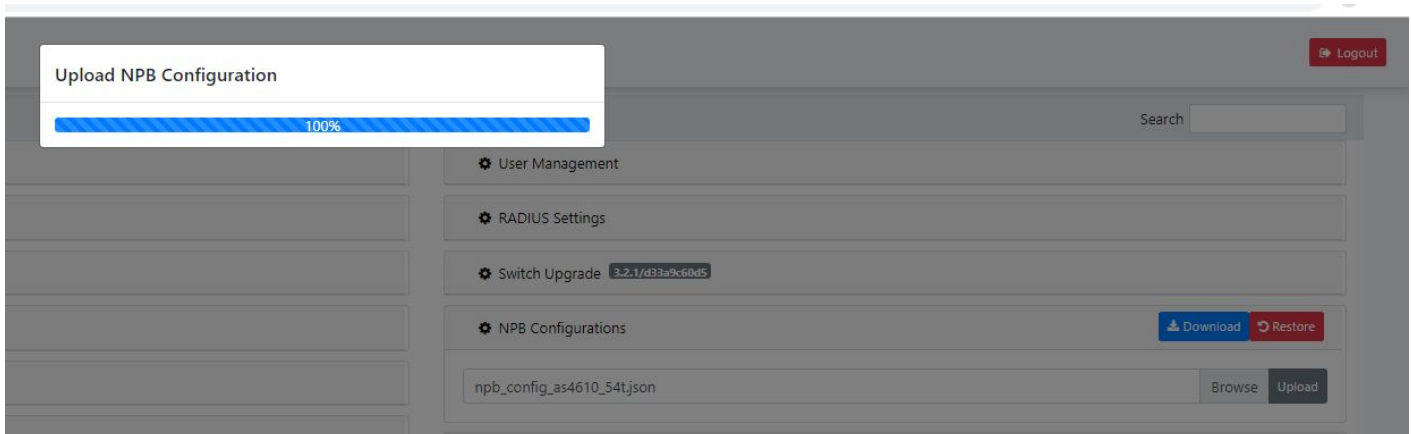
Switch Upgrade
3.2.1/d33a9c60d5

NPB Configurations
Download
Restore

Choose File
Browse
Upload



Click “Choose File” to choose the json file from the local disk and then click “Upload” to upload the configuration.



11 : Tech-support File:

Click “Tech-support File” and click “**Generate New Tech-Support File**” to generate new tech-support file, Then click “**Download**” to download this file to a local disk file.



12 : Syslog Diagnosis

Click “Syslog Diagnosis” and Then click “**Download**” to download to a local disk file.

System Diagnosis

Download

***** System Diagnosis Start *****

Date: Thu Jan 4 02:06:24 UTC 2001

Version:

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=====

Hardware Model : as7712_32x

Linux System Version/Revision : 3.2.1/8cab6c88d

Linux System Released Date : 07/31/2019

L2/L3 Version/Revision : 3.2.1/8cab6c88d

L2/L3 Released Date : 07/31/2019

10 Statistics

It can display the physical port, RMON, mapping flows, Mirror and drop filter statistics.

Click their button to select.

Advanced Aggregator

Logout


Menus

Dashboard
Mapping
Port Groups
Drop Filter
Mirror
Settings
Port Settings
ASIC Settings
Device Settings
Statistics
Data Statistics
Port Statistics
RMON Statistics
Mapping Statistics
Mirror Statistics
Drop Filter Statistics

Port Statistics

#	Status	Input Packets	Received Unicast Packets	Received Multicast Packets	Received Broadcast Packets	Received Discards	Received Errors	Output Packets	Transmitted Unicast Packets	Transmitted Multicast Packets	Transmitted Broadcast Packets	Transmitted Discards Packets	Transmitted Errors Packets
xe-1/1/1	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/2	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/3	UP	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/4	UP	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/5	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/6	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/7	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/8	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/9	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/10	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/11	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/12	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/13	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/14	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/15	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/16	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/17	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/18	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/19	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/20	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/21	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/22.1	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/22.2	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/22.3	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/22.4	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/23	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/24	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/25	DOWN	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/26	DOWN	0	0	0	0	0	0	0	0	0	0	0	0

1: Port Statistics

You can click “” to clear the statistics

Garland Technology Advanced Aggregator Logout														
Port Statistics nbg / statistics / port_statistics Clear														
#	Status	Input Packets	Received Unicast Packets	Received Multicast Packets	Received Broadcast Packets	Received Discards	Received Errors	Output Packets	Transmitted Unicast Packets	Transmitted Multicast Packets	Transmitted Broadcast Packets	Transmitted Discards Packets	Transmitted Errors Packets	
xe-1/1/1	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/2	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/3	UP	3767	3767	0	0	0	0	0	0	0	0	0	0	
xe-1/1/4	UP	0	0	0	0	0	0	7430	7430	0	0	0	0	
xe-1/1/5	UP	11145	11145	0	0	7430	0	11145	11145	0	0	0	0	
xe-1/1/6	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/7	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/8	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/9	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/10	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/11	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/12	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/13	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/14	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/15	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/16	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/17	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/18	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/19	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/20	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/21	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/22	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/23	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/24	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/25	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/26	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/27	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/28	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	
xe-1/1/29	DOWN	0	0	0	0	0	0	0	0	0	0	0	0	

2: RMON statistics


Garland Technology Advanced Aggregator Log

Menu: Dashboard, Mapping, Port Groups, Drop Filter, Mirror, Settings, Port Settings, ASIC Settings, Device Settings, Statistics, **Data Statistics**, Port Statistics, RMON Statistics, Mapping Statistics, Mirror Statistics, Drop Filter Statistics

RMON Statistics [npb / statistics / rmon_statistics](#)

#	Packets	Unicast packets	Broadcast Packets	Multicast Packets	Under Size Packets	Over Size Packets	Collisions	64 Octets	65-127 Octets	128-255 Octets	256-511 Octets	512-1023 Octets	1024-1518 Octets
xe-1/1/1	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/2	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/3	6015	6015	0	0	0	0	0	0	0	6015	0	0	0
xe-1/1/4	11926	11926	0	0	0	0	0	0	0	11926	0	0	0
xe-1/1/5	35778	35778	0	0	0	0	0	0	0	35778	0	0	0
xe-1/1/6	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/7	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/8	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/9	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/10	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/11	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/12	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/13	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/14	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/15	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/16	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/17	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/18	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/19	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/20	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/21	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/22	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/23	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/24	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/25	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/26	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/27	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/28	0	0	0	0	0	0	0	0	0	0	0	0	0
xe-1/1/29	0	0	0	0	0	0	0	0	0	0	0	0	0

3: Mapping statistics

You can click “” to clear the mapping rule statistics.

Garland Technology Advanced Aggregator Logout

Menu: Dashboard, Mapping, Port Groups, Drop Filter, Mirror, Settings, Port Settings, ASIC Settings, Device Settings, Statistics, **Data Statistics**, Port Statistics, RMON Statistics, **Mapping Statistics**, Mirror Statistics, Drop Filter Statistics

Mapping Statistics [npb / statistics / mapping_statistics](#)

Sequence	Ingress Port	Egress Port	Filter	Action	Packets Statistics	Clear Counters
1	gre1	xe-1/1/4	Default	ModSDmac	54650	

4: Mirror statistics

Garland

Blue energy 100, 1000, 10000 and 100000

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nph / statistics / mirror_statistics

Name	Rx	Tx	Output Port	Input Ports(Rx)	Input Ports(Tx)
mirror1	30414	30414	ae1	Physical Port 3	Physical Port 4

5: Drop Filter statistics

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Run every 10s, 1min, and 5min

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nph / statistics / drop_filter_statistics

Name	Inport	Drop Point	Filter	Packets Statistics
drop1	3 Physical Port	ingress	dl_src:C8:0A:A9:04:49:1A	326

For questions, please contact Garland Technology Support at:

8AM-9PM (CST) Monday - Friday (Except for observed US Holidays)

Tel: 716-242-8500

Online: garlandtechnology.com/support