AVCOMM Technologies Inc.

8028GX28 Industrial Ethernet Managed Switch

User Manual

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1. Introductions

1.1 System Description

8028GX28 Managed switches deliver high quality, wide operating temperature range, extended power input range, IP-30 design, and advanced VLAN & QoS features. It's ideal for harsh environments and mission critical applications.
8028GX28 Managed switches provides enterprise-class networking features to fulfill the needs of large network infrastructure and extreme environments.
8028GX28 Managed switches ease the effort to build a network infrastructure which offers a reliable, well managed and good QoS networking for any business requiring continuous and well-protected services in industrial environments. With the features such as Fast Failover ring protection, Ethernet OAM, IEEE 1588v2 / Sync-E and QoS, customers can ensure their network is qualified to deliver any real-time and high quality applications.

1.2 Using the Web Interface

The object of this document "8028GX28 Web Configuration Tool Guide" is to address the web feature, design layout and descript how to use the web interface.

1.2.1 Web Browser Support

IE 7 (or newer version) with the following default settings is recommended:

Language script	Latin based
Web page font	Times New Roman
Plain text font	Courier New
Encoding	Unicode (UTF-8)
Text size	Medium

Firefox with the following default settings is recommended:

Web page font	Times New Roman
Encoding	Unicode (UTF-8)
Text size	16

Google Chrome with the following default settings is recommended:

Web page font	Times New Roman
Encoding	Unicode (UTF-8)
Text size	Medium

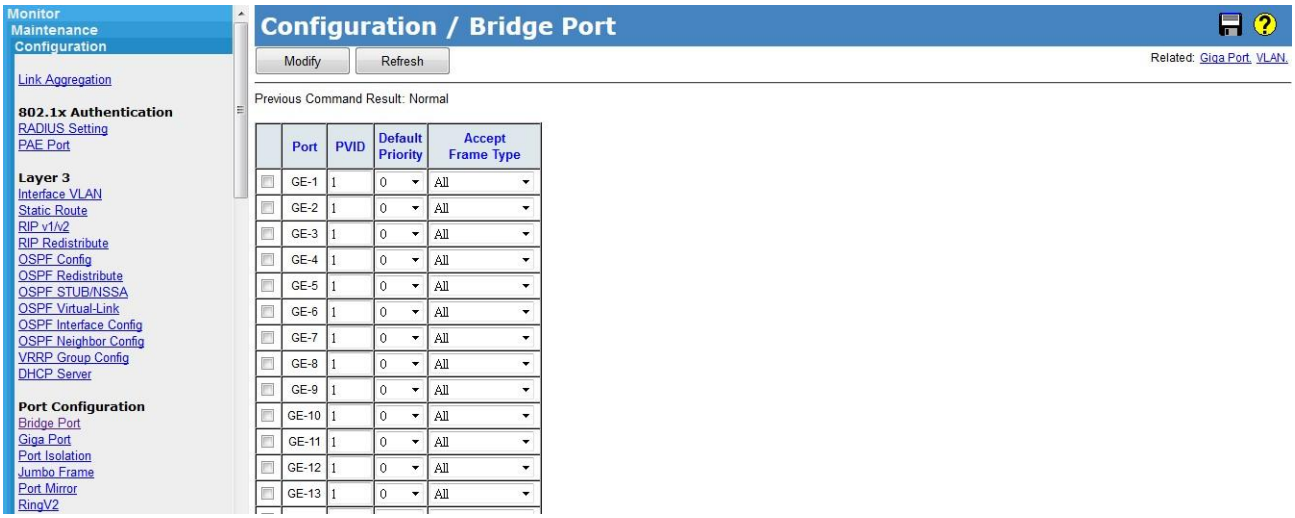
1.2.2 Navigation

All main screens of the web interface can be reached by clicking on hyperlinks in the four menu boxes on the left side of the screen:

- **Status** - Display statistics, status, and contents of memory.
- **Configuration** - Configure the system, interfaces, and filters.
- **System** - Display system information, download firmware, back up configurations, and modify users.

You can find the detailed information in section 2.2 Tree View.

1.2.3 Title Bar Icons



Help Button 

For more information about any screen, click on the Help button on the screen.
Help information is displayed in the same window.

Save Button 

If any unsaved change has been made to the *configuration* (by you during this or a prior session, or by any other administrator using the web interface or the Command Line Interface), a Save icon appears in the title line. To save the running configuration to the startup configuration:

1. Click on the Save icon. The System/Save and Restore screen appears.
2. Click on Submit next to Data Control Action drop-down list on top of System/Save and Restore screen.

1.2.4 Ending a Session

To end a session, close your web browser. This prevents an unauthorized user from accessing the system using your user name and password.

1.3 Using the Online Help

Each screen has a  Help button that invokes a page of information relevant to the particular screen. The Help is displayed in a new window.

Each web page of Configuration/Status/System functions has a corresponding help page.

2. Using the Web

2.1 Login

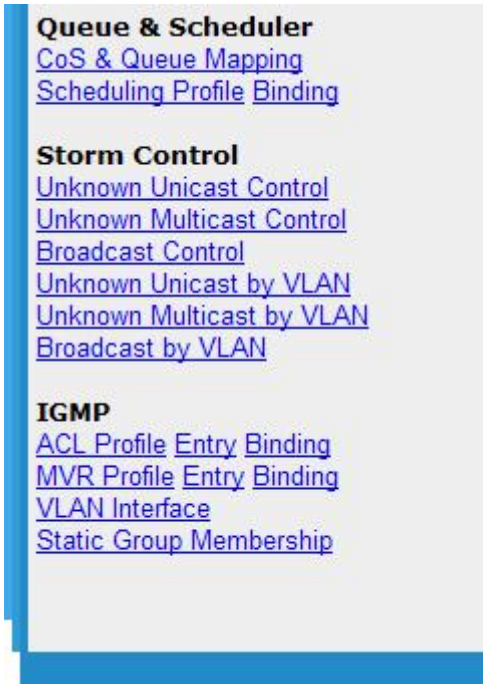
Operation	1. Fill Username and Password 2. Click “Sign in”
Field	Description
Username	Login user name. The maximum length is 32. Default: admin
Password	Login user password. The maximum length is 32. Default: admin

2.2 Tree View

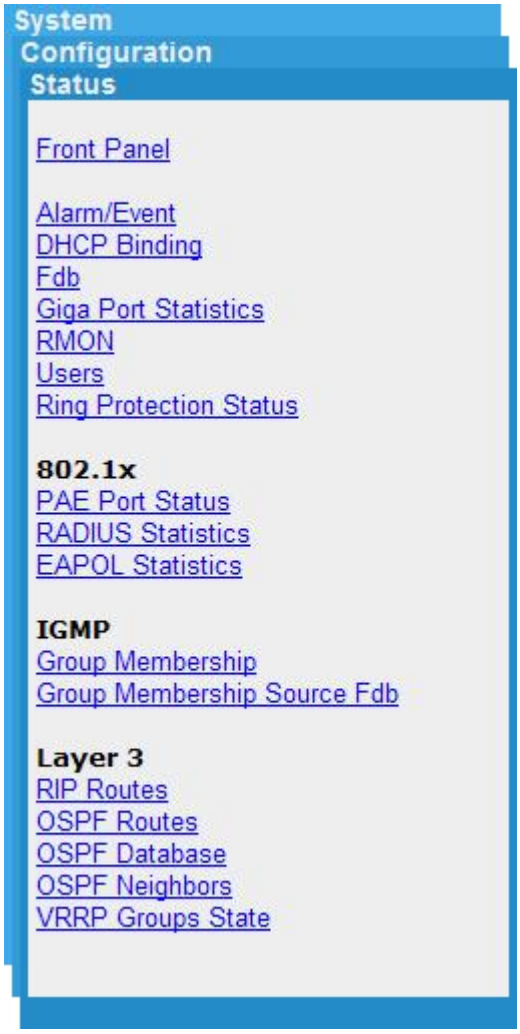
The tree view is a menu of the web. It offers user quickly to get the page for expected data or configuration.

2.2.1 Configuration Menu (8028GX28 shown)

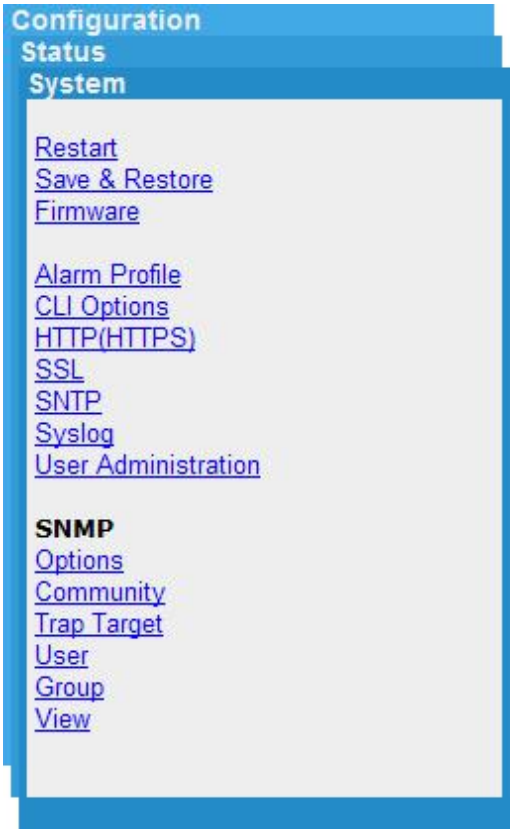

VLAN
Static VLAN
Protocol Based VLAN
VLAN Translation
VLAN Stacking
MAC Learning & Forwarding
Fdb Static
Aging Time
Spanning Tree Protocol (STP)
STP Bridge
STP Port
MSTP Bridge
MSTP Port
Policer
Policer Ingress Color
Policer Color Marking
Ingress Policer
ACL
Profile Entry Binding
Mirror Analyzer Port
Shaper
Port
Queue


Queue & Scheduler
CoS & Queue Mapping
Scheduling Profile Binding
Storm Control
Unknown Unicast Control
Unknown Multicast Control
Broadcast Control
Unknown Unicast by VLAN
Unknown Multicast by VLAN
Broadcast by VLAN
IGMP
ACL Profile Entry Binding
MVR Profile Entry Binding
VLAN Interface
Static Group Membership

2.2.2 Status Menu(8028GX28 shown)

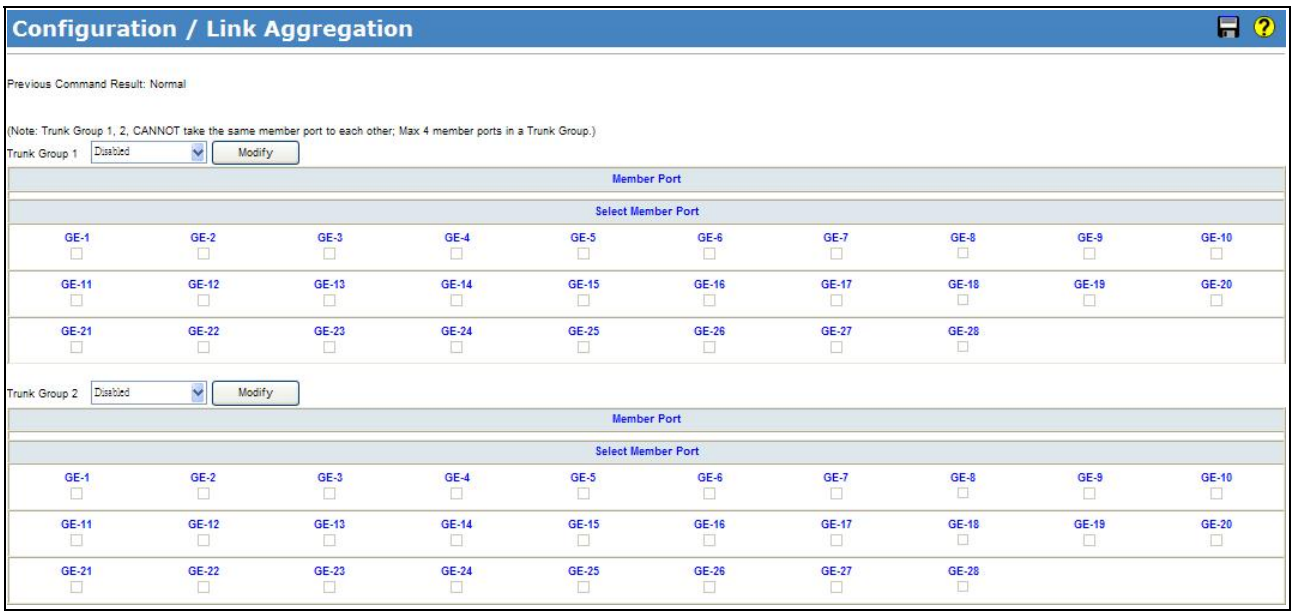


2.2.3 System Menu (8028GX28 shown)



2.3 Configuration

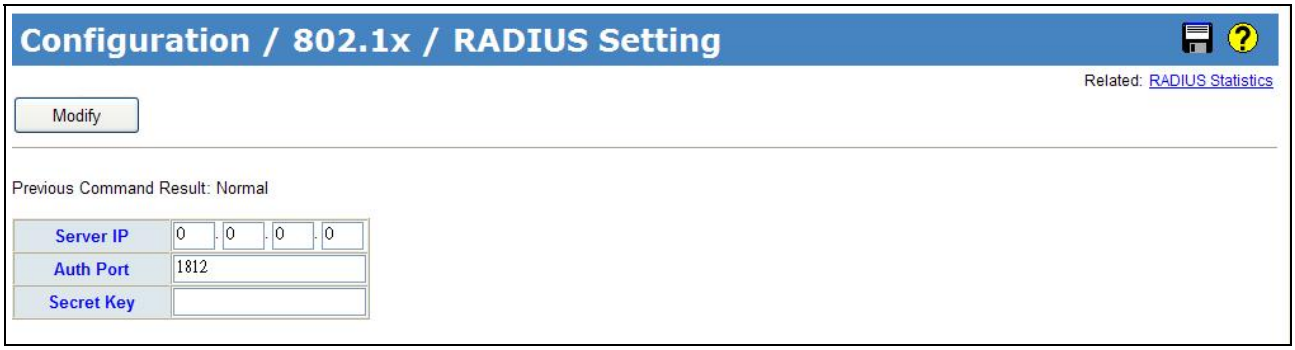
2.3.1 Link Aggregation



Operation	Modify: 1. Select port with check box from GE-1 ~ GE-xx (xx = 10~28). 2. Click Modify button.
Field	Description
Trunk Group	Trunk Group number. Note: Trunk Group 1 & 2 CANNOT take the member port that is already assigned to another Trunk Group; Max 4 member ports in a Trunk Group. Otherwise, the modification would be failed.
Member Port	Display current member port of Trunk Group.
Mode	To enable/disable Link Aggregation for Trunk Group.
GE-1~GE-xx (xx=10~28)	To select member ports for Trunk Group. If Link Aggregation mode is disabled, then the member port would be cleared, that represents no member port is assigned to Trunk Group.

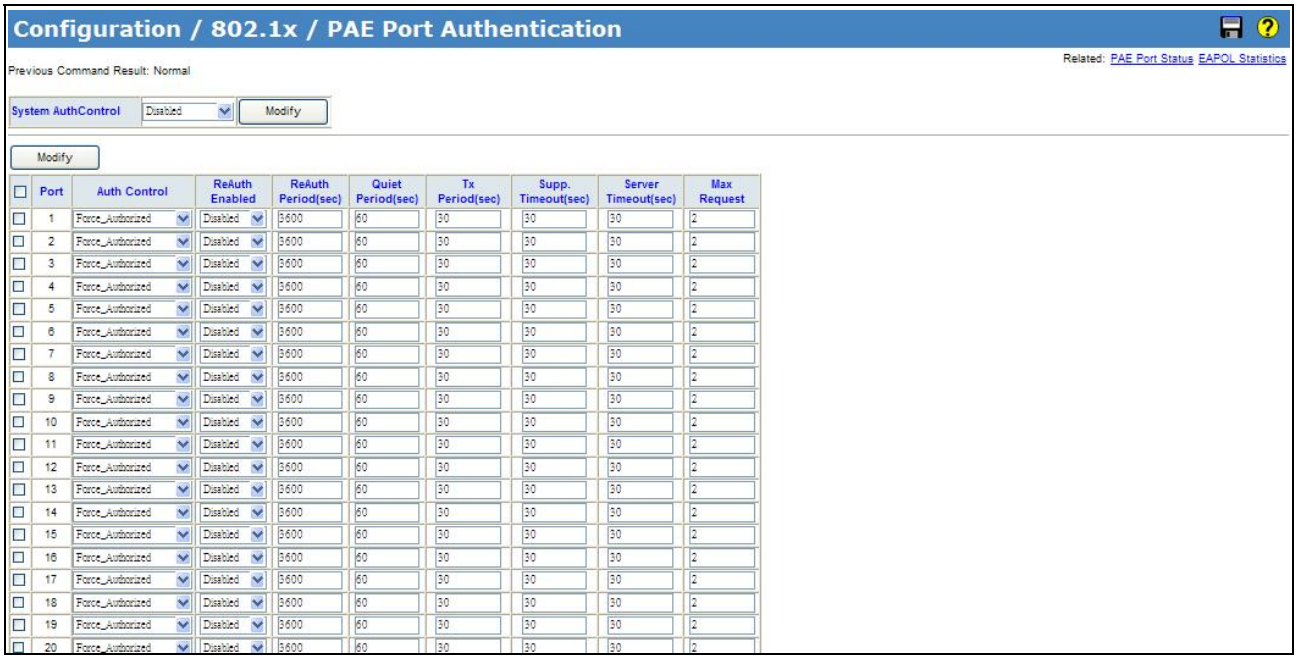
2.3.2 802.1x Authentication

2.3.2.1 RADIUS Setting



Operation	Modify: 1. Modify Server IP, Authentication Port and Secret Key fields. 2. Click "Modify" button to apply change.
Field	Description
Server IP	The IP address of RADIUS server. Allow IPv4 address. 0.0.0.0 means disable RADIUS. Default is 0.0.0.0.
Auth Port	The UDP port of RADIUS server for authentication. Range 1~65535. Default is 1812.
Secret Key	The key to be used between RADIUS server and Authenticator. Range 0~16 chars. Default is empty string.

2.3.2.2 PAE Port Authentication

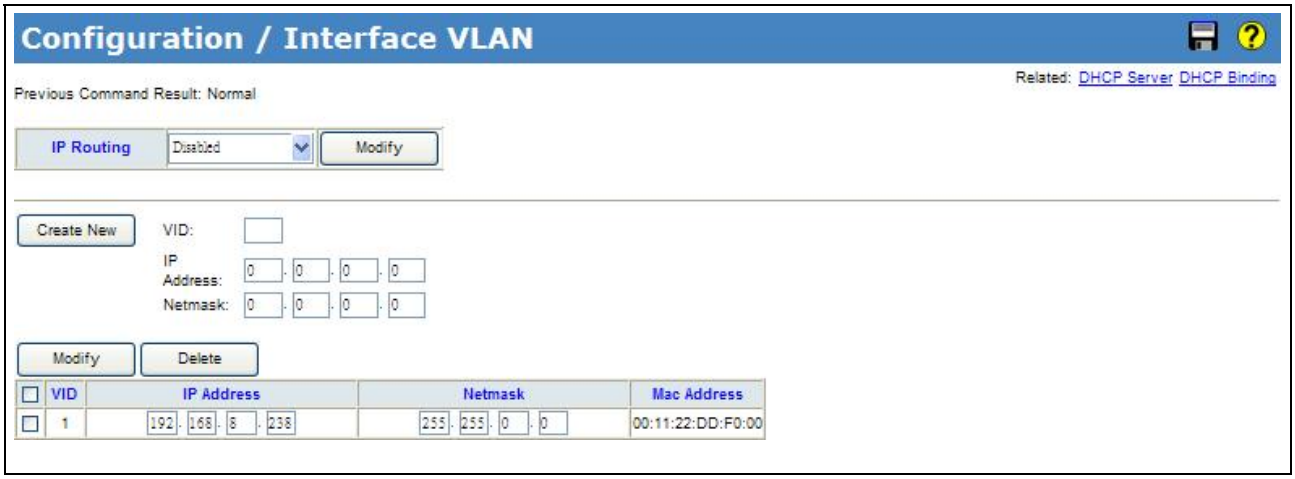


Operation	Modify System Auth. Control: 1. Select System Auth. Control. 2. Click "Modify" button to apply change. Modify PAE Port Authentication: 1. Update below fields. 2. Check up the port(s) to be changed. Click "Modify" button to modify PAE Port Authentication options.
Field	Description
System AuthControl	Enable/Disable system 802.1x authentication function. Default value is Disabled.
Port	PAE port: 1 ~ MAX Number of Port.
Auth Control	The authentication type of PAE port. Allow Force_Unauthorized/Force_Authorized/Auto. Default is Force_Authorized.
ReAuth Enabled	Enable/Disable re-authenticate of PAE port. Default is Disable.

ReAuth Period	The period of re-authenticant of PAE port. Range 1~3600 sec. Default is 3600 sec.
Quiet Period	The quiet period of PAE port. Range 1~255 sec. Default is 60 sec.
Tx Period	The timeout of authenticator waiting for EAP-Response/ Identity from supplication of PAE port. Range 1~255 sec. Default is 30 sec.
Supp. Timeout	The timeout of authenticator wait for EAP-Response (exclude EAP-Request/Identify) after sending EAP-Request. Range 1~255 sec. Default is 30 sec.
Server Timeout	The timeout time of Authenticator wait Access-Challenge/ Access-Accept/ Access-Reject after sending Access-Request. Range 1~255 sec. Default is 30 sec.
Max Request	The max times of backend Authenticator send EAP-Request to supplicant before restarting the authentication process. Range 1~10. Default is 2.

2.3.3 Layer 3 (Supported in 8028GX28 only)

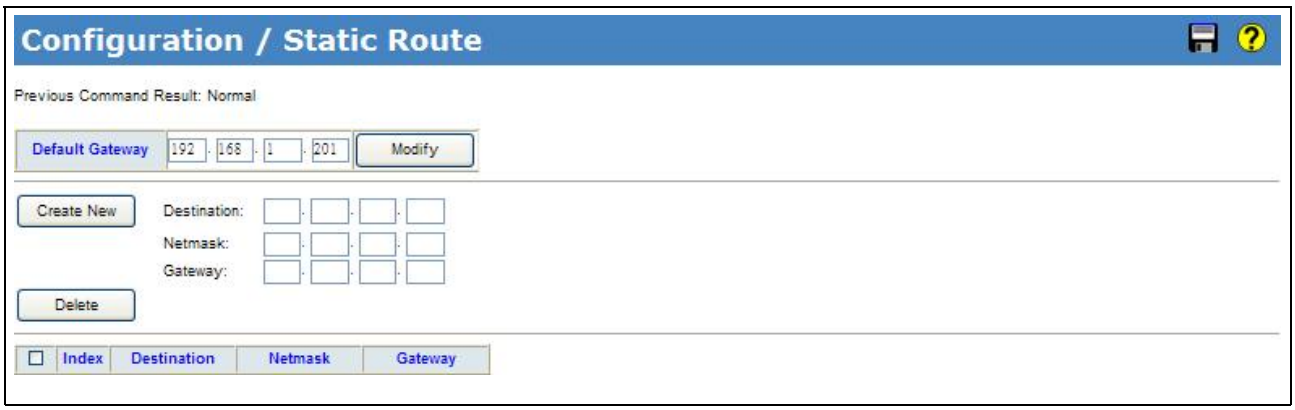
2.3.3.1 Interface VLAN



Operation	Modify the IP Routing: 1. Select IP Routing field. 2. Click "Modify" button to apply change. Create New: 1. Fill VID, IP Address and Netmask. 2. Click "Create New" button to create Interface VLAN. Delete: 1. Multi-select a row data in Interface VLAN table. 2. Click "Delete" button to delete Interface VLAN.
Field	Description
IP Routing	Layer 3 IP routing/forward. Allow Disabled/Enabled. Default value is Disabled.
VID	The identity for the RIP Interface. Range 1~4094. 1st RIP interface VLAN always exist for VLAN 1. (Only support set can't be deleted)
IP Address	IP address for the vlan interface. Range 0~255. Default value is 0.

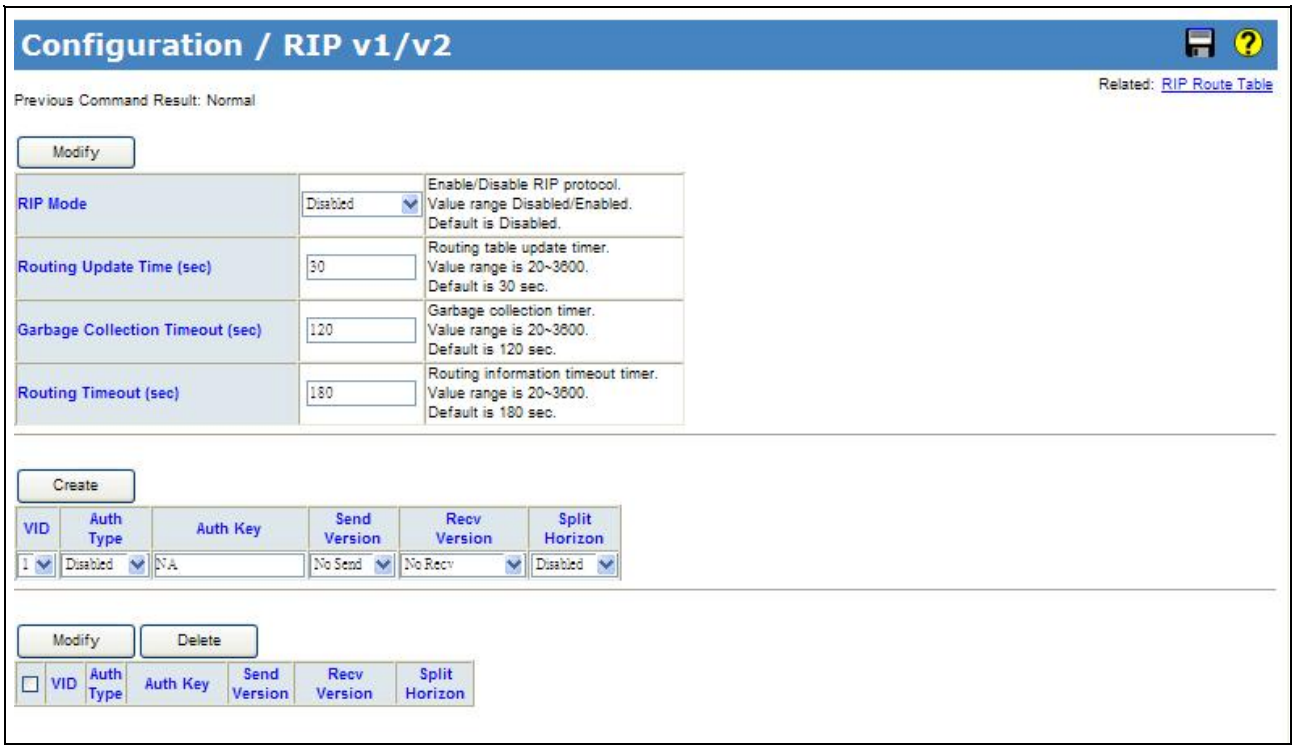
Netmask	Network subnet mask for the VLAN interface. Range 0~255. Default value is 0.
Mac Address	MAC address for the VLAN interface. Read only.

2.3.3.2 Static Route



Operation	Modify default gateway: Click "Modify" button to apply new gateway. Create new static route: 1. Fill Destination, Netmask and Gateway. 2. Click "Create New" button to create one static route. Delete static route: 1. Select static route entry(s). 2. Click "Delete" button to delete selection.
Field	Description
Default Gateway	Input default gateway IP address for management and Layer3 VLAN interface routing.
Destination	Destination network address of static route.
Netmask	Network subnet mask for the route.
Gateway	Next hop IP address for the destination network.
Index	The index of the static route.

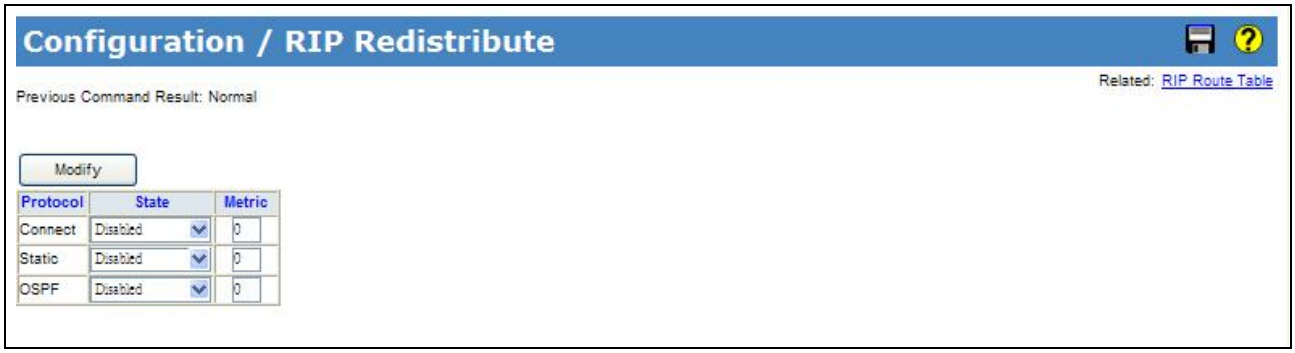
2.3.3.3 RIP v1/v2



Operation	Modify RIP settings: 1. Select RIP Mode, Routing Update Time, Garbage Collection Timeout and Routing Timeout. 2. Click "Modify" button to apply changes. Create RIP interface VLAN settings: 1. Create VID, RIP Mode, Auth Type, Auth Key, Send Version, Recv Version and Split Horizon. 2. Click "Modify" button to apply changes. Modify RIP interface VLAN settings: 1. Modify RIP Mode, Auth Type, Auth Key, Send Version, Recv Version and Split Horizon. 2. Click "Modify" button to apply changes.
Field	Description
RIP Mode	RIP protocol mode. Allow Disabled/Enabled. Default value is Disabled.

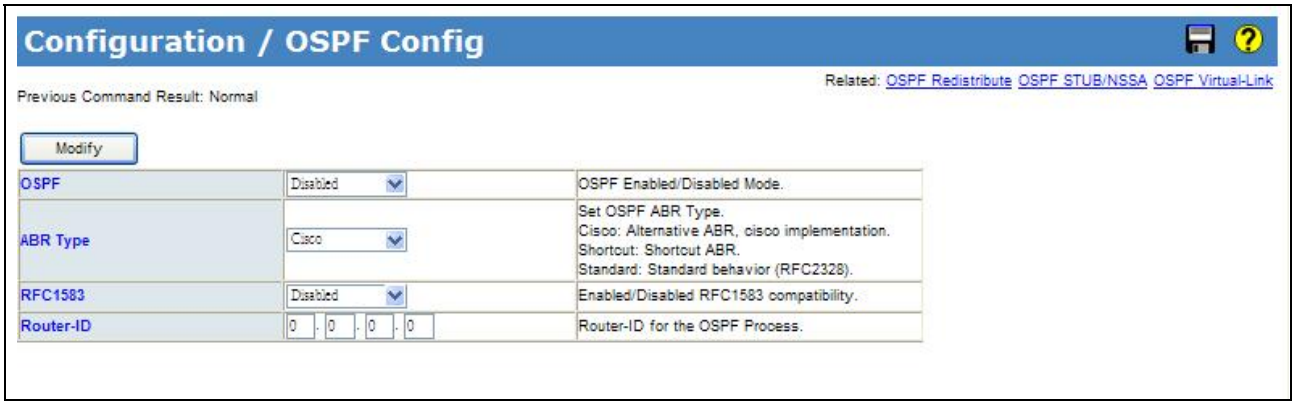
Routing Update Time	Routing table update timer. Range is 20~3600. Default value is 30 sec.
Garbage Collection Timeout	Garbage collection timer. Range is 20~3600. Default value is 120 sec.
Routing Timeout	Routing information timeout timer. Range is 20~3600. Default value is 180 sec.
VID	The identity for the RIP interface VLAN. Range 1~4094. 1st RIP interface VLAN always exists for VLAN 1. (Only support set can't be deleted)
RIP Mode	RIP Mode is used to enable RIP on an VLAN interface. Range Disabled/Enabled. Default value is Disabled.
Auth Type	Auth Type is the type of Authentication used on this interface. Range Disabled/Enabled. Default value is Disabled.
Auth Key	The Authentication Key. The max is 16 chars. The default value is empty string which is all nulls.
Send Version	Version of RIP packet sent from this interface. Range NoSend/RIP 1/RIP 2/ Both The default value is RIP1.
Recv Version	Version of RIP packet which will be received by this interface. Range NoRecv/RIP 1/RIP 2/ RIP 1 or RIP 2. Default value is RIP 1 or RIP 2.
Split Horizon	SplitHorizon is used to control split horizon routing update behavior. Range Disabled/ Simple /Poison. Default value is Simple.

2.3.3.4 RIP Redistribute



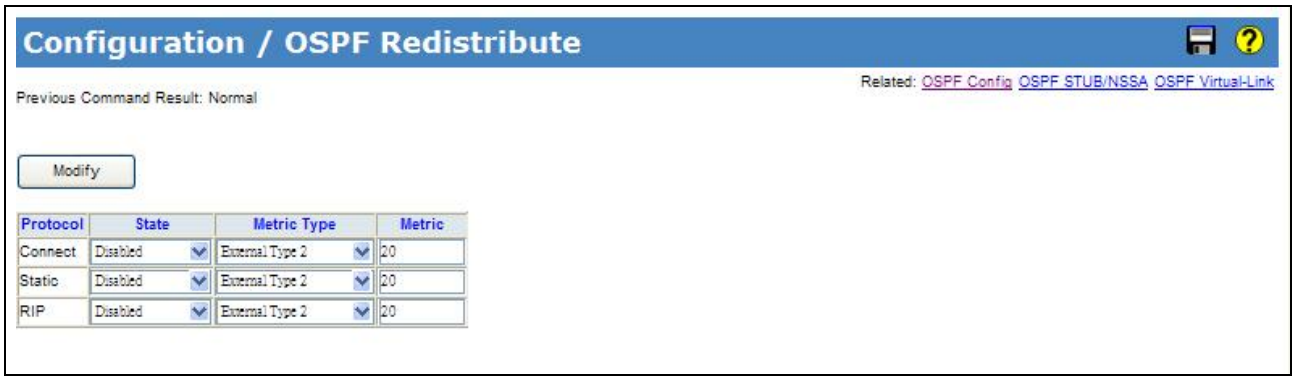
Operation	Modify: 1. Modify State, and Metric. 2. Click "Modify" button to apply changes.
Field	Description
Protocol	RIP Redistribute System support Connect, Static, OSPF Three entry Protocol.
State	Disabled / Enabled Protocol.
Metric	Range is 0~ 16. Default value is 0.

2.3.3.5 OSPF Config



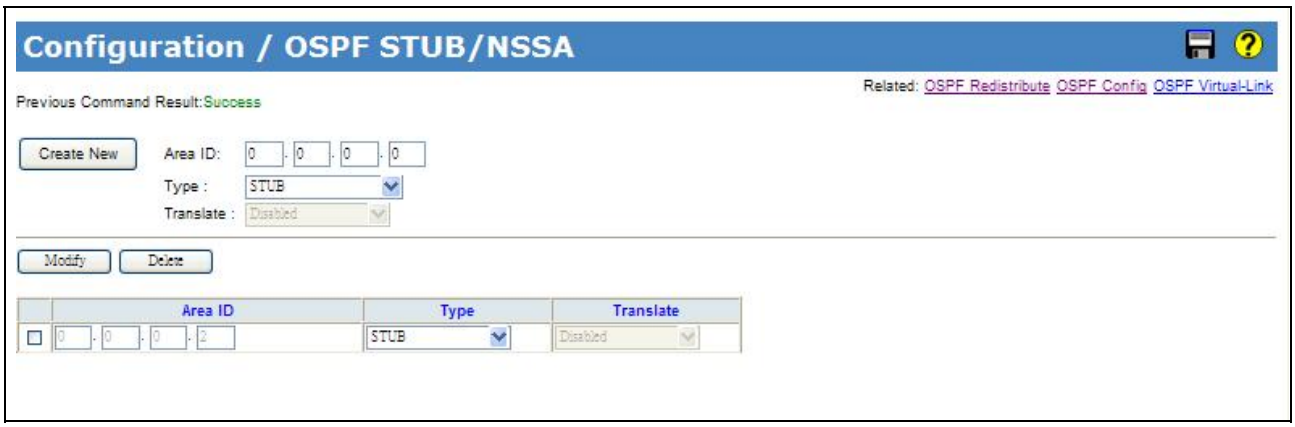
Operation	Modify: 1. Modify OSPF, ABR Type, RFC 1583, and Router-ID. 2. Click "Modify" button to apply changes.
Field	Description
OSPF	Value range Disabled/Enabled, default is Disabled.
ABR Type	Set OSPF ABR Type. Cisco: Alternative ABR, cisco implementation. Shortcut: Shortcut ABR. Standard: Standard behavior (RFC2328).
RFC 1583	Enabled/Disabled RFC1583 compatibility. Value range Disabled/Enabled, default is Disabled.
Route-ID	Router-ID for the OSPF Process.

2.3.3.6 OSPF Redistribute



Operation	Modify: 1. Modify State, Metric Type, and Metric of Protocols.. 2. Click "Modify" button to apply changes.
Field	Description
Protocol	OSPF Redistribute System supports Connect, Static, RIP Three entry Protocol.
State	Disabled / Enabled Protocol.
Metric Type	Select External Type1, External Type2, Default: External Type2.
Metric	Range is 0~ 16777214. Default value is 20.

2.3.3.7 OSPF STUB/NSSA

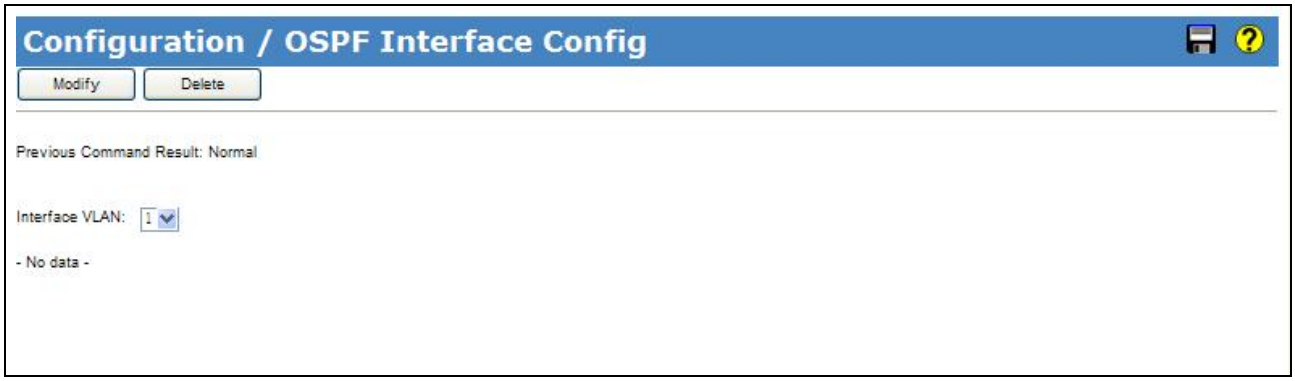


Operation	Create: 1. Fill the fields of Area ID, Type, and Translate. 2. Clink “Create New” to create a new Area ID. Modify: 1. Modify State, Metric Type, and Metric of Protocols.. 2. Click "Modify" button to apply changes. Delete: 1. To select checkbox. 2. Click "Delete" button to Delete OSPF STUB/NSSA.
Field	Description
Area ID	IP Address Format Range 0.0.0.1~ 255.255.255.255.
Type	1. STUB (No support Translate Function) 2. STUB NO SUMMARY (No support Translate Function) 3. NSSA 4. NSSA NO SUMMARY
Translate	Range: Disabled / Enabled. Default: Disabled.

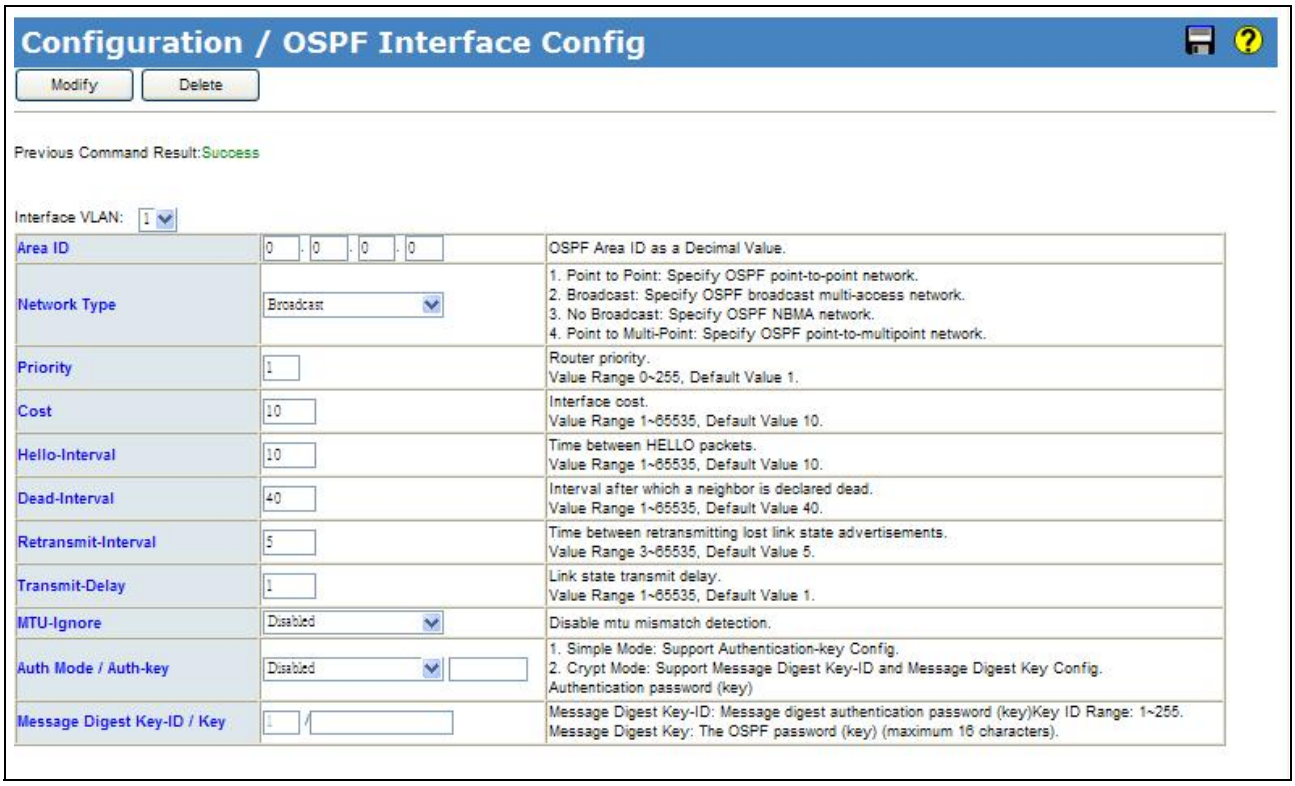
2.3.3.8 OSPF Virtual-Link

Operation	Create: 1. Fill the fields of Area ID, and Neighbor ID. 2. Clink “Create New” to create OSPF Virtual-Link. Delete: 1. To select checkbox. 2. Click "Delete" button to Delete OSPF Virtual-Link .
Field	Description
Area ID	IP Address Format Range 0.0.0.1~ 255.255.255.255.
Neighbor ID	IP Address Format Range 0.0.0.0~ 255.255.255.255.

2.3.3.9 OSPF Interface Config



Modify:



Operation	Modify: 1. To modify setting data 2. Click "Modify" button to modify OSPF Interface Config data. Delete: Click "Delete" button to delete OSPF Interface Config data..
Field	Description
Area ID	OSPF Area ID as a Decimal Value.
Network Type	1. Point to Point: Specify OSPF point-to-point network. 2. Broadcast: Specify OSPF broadcast multi-access network. 3. No Broadcast: Specify OSPF NBMA network. 4. Point to Multi-Point: Specify OSPF point-to-multipoint network.
Priority	Router priority. Value Range 0~255, Default Value 1.
Cost	Interface cost. Value Range 1~65535, Default Value 10.
Hello-Interval	Time between HELLO packets. Value Range 1~65535, Default Value 10.
Dead-Interval	Interval after which a neighbor is declared dead. Value Range 1~65535, Default Value 40.
Retransmit-Interval	Time between retransmitting lost link state advertisements. Value Range 3~65535, Default Value 5.
Transmit-Delay	Link state transmit delay. Value Range 1~65535, Default Value 1.
MTU-Ignore	Disable mtu mismatch detection.
Auth Mode / Auth-key	1. Simple Mode: Support Authentication-key Config. 2. Crypt Mode: Support Message Digest Key-ID and Message Digest Key Config. Authentication password (key)
Message Digest Key-ID / Key	Message Digest Key-ID: Message digest authentication password (key)Key ID Range: 1~255. Message Digest Key: The OSPF password (key) (maximum 16 characters).

2.3.3.10 OSPF Neighbor Config

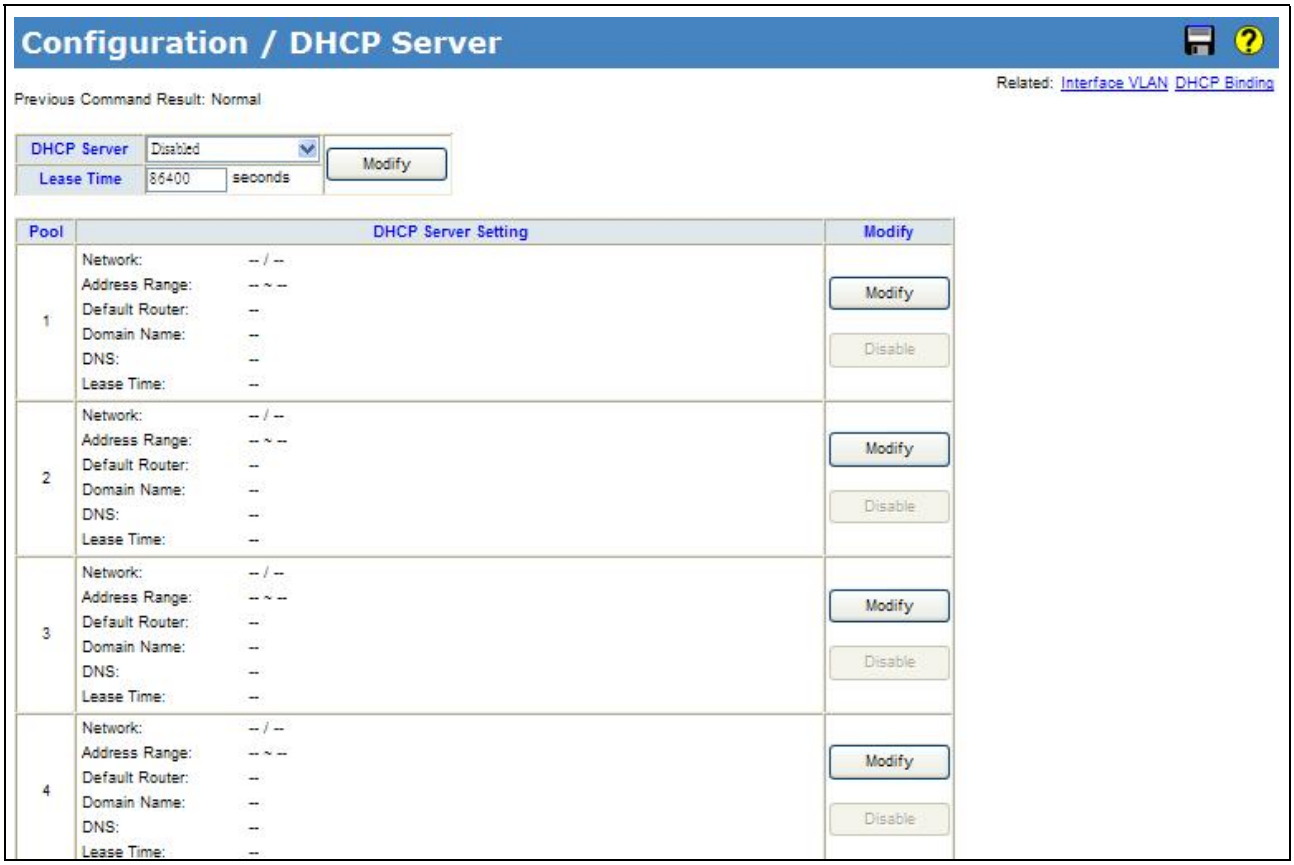
Operation	Create: 1. To fill Address, Poll-Interval and Priority 2. Click "Create New" button to create OSPF Neighbor Config. Modify: 1. To modify setting data 2. Select checkbox 3. Click "Modify" button to modify OSPF Neighbor Config data. Delete: 1. Select checkbox 2. Click "Delete" button to delete OSPF Neighbor Config data.
Field	Description
Address	IP Address Format Range 0.0.0.1~ 255.255.255.255.
Poll-Interval	Value Range 1~65535 second, Default Value 60.
Priority	Value Range 1~255, Default Value 0.

2.3.3.11 VRRP Group Config

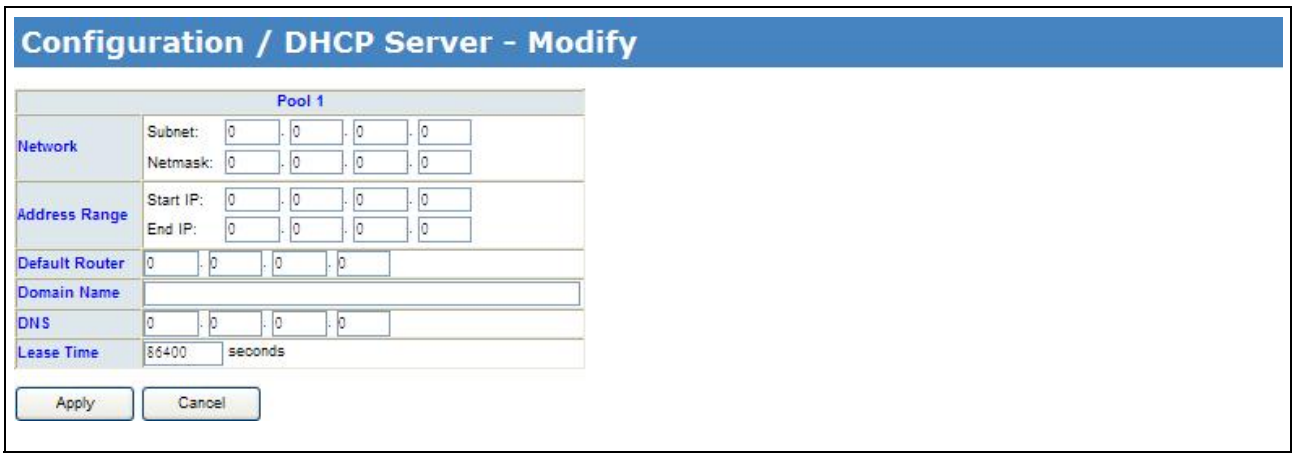
Operation	Modify (Create): 1. Fill first row data. 2. Click "Modify" button to Modify (Create) VRRP Group Config data. Modify: 1. Update setting data. 2. Select a row item selected. 3. Click "Modify" button to Modify VRRP Group Config data. Delete: 1. Select a row item selected. 2. Click "Delete" button to Delete VRRP Group Config data.
Field	Description
VLAN Interface	The identity for the VLAN Interface. Range 1~4094.
VRRP ID	VRRP group index identity.
Virtual Router Address	Virtual router IP should be in same subnet with VLAN interface. Different VRRP group should not have same virtual router IP.
Advertise-Interval (0.1sec)	Value Range 1~2550, Default Value 10. Value 10 stands for 1 second. (0.1s * 10 = 1s)
Priority	Value Range 1~254, Default Value 100.
Preemption	Range: Disabled / Enabled Default: Enabled.
Learn Master's adv-interval	Range: Disabled / Enabled

	Default: Disabled.
Auth Mode	Range: Disabled / Enabled Default: Disabled. Enabled Support VRRP Group Auth Data.

2.3.3.12 DHCP Server

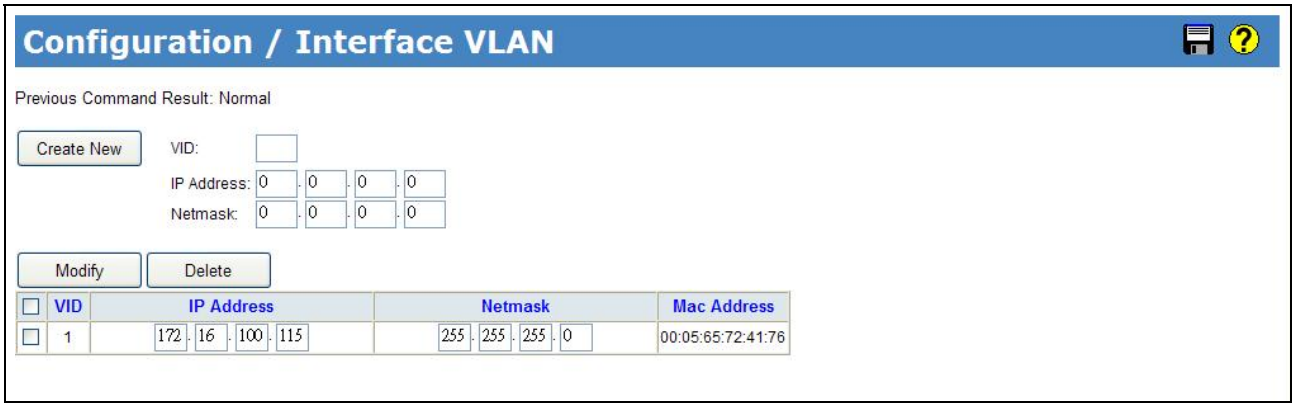


Modify:



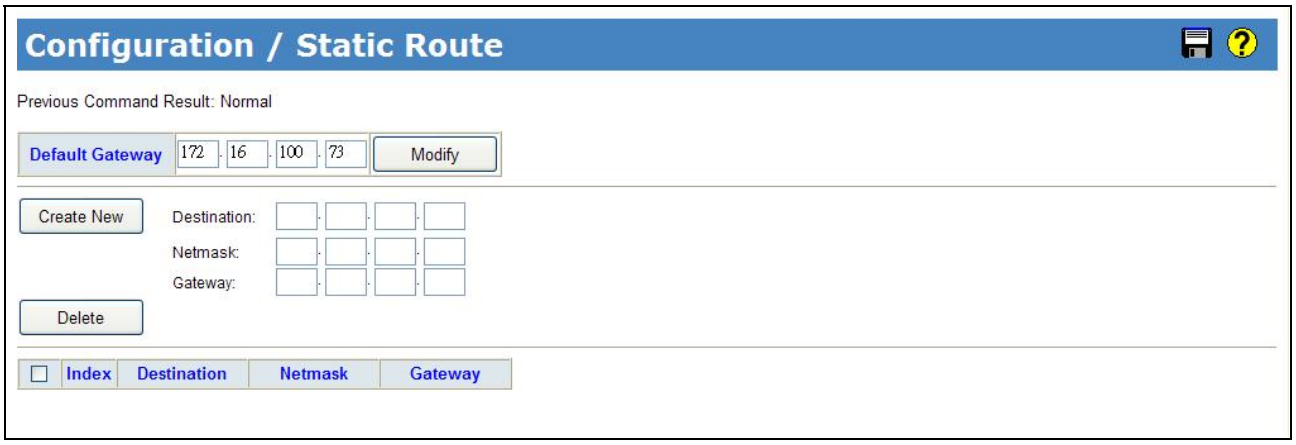
Operation	Modify: 1. Fill the fields of DHCP server and Lease time. 2. Click “Modify” to apply changes Modify (in pool of DHCP server Setting): 1. Click “Modify” button to enter “DHCP server - Modify” page. 2. Fill the data. 3. Click “Apply” to apply changes or Click “Cancel” to cancel and go back to main page of DHCP server. Disable: To disable the specific DHCP pool. DHCP server won't be closed, if any DHCP pool is still active.
Field	Description
Network	Network subnet and netmask. It should match IP address subnet of specific VLAN interface.
Address Range	It indicates available range of address for DHCP client. Both Start-IP and End-IP must in the same subnet of the network setting. And the Start-IP must smaller than End-IP. Max. DHCP Pool size is 1024 per system.
Default Router	Default-router in this network.
Domain Name	Domain name of this network. Max. length is 64 characters.
DNS	DNS server of this network.
Lease Time	Define the lease time for IP Address lease. (Range: 1 ~ 31536000 seconds)

2.3.4 Interface VLAN (Supported in IMP-5xx only)



Operation	Create: 1. Fill VID, IP Address and Netmask 2. Click "Create New" button to create Interface VLAN. Delete: 1. Multi-select a row data in Interface VLAN table. 2. Click "Delete" button to delete Interface VLAN.
Field	Description
VID	The identity for the RIP Interface. Range 1~4094. 1st RIP interface VLAN always exist for VLAN 1. (Only support set can't be deleted)
IP Address	IP address for the vlan interface. Range 0~255. Default value is 0.
Netmask	Network subnet mask for the VLAN interface. Range 0~255. Default value is 0.
Mac Address	MAC address for the VLAN interface. Readonly.

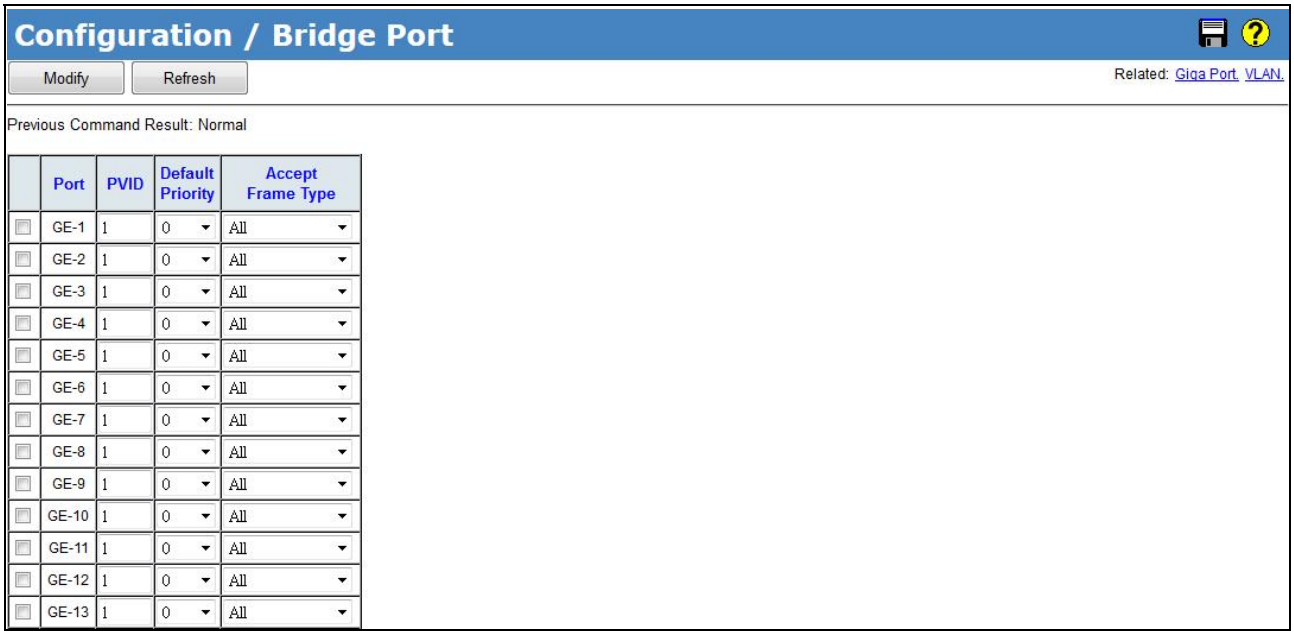
2.3.5 Static Route (Supported in IMP-5xx only)



Operation	Modify: Click "Modify" button to apply new gateway. Create: 1. Fill Destination, Netmask and Gateway. 2. Click "Create New" button to create one static route. Delete: 1. Select static route entry(s). 2. Click "Delete" button to delete selection.
Field	Description
Default Gateway	Input default gateway IP address for management and Layer3 VLAN interface routing
Destination	Destination network address of static route.
Netmask	Network subnet mask for the route.
Gateway	Next hop IP address for the destination network.
Index	The index of the static route.

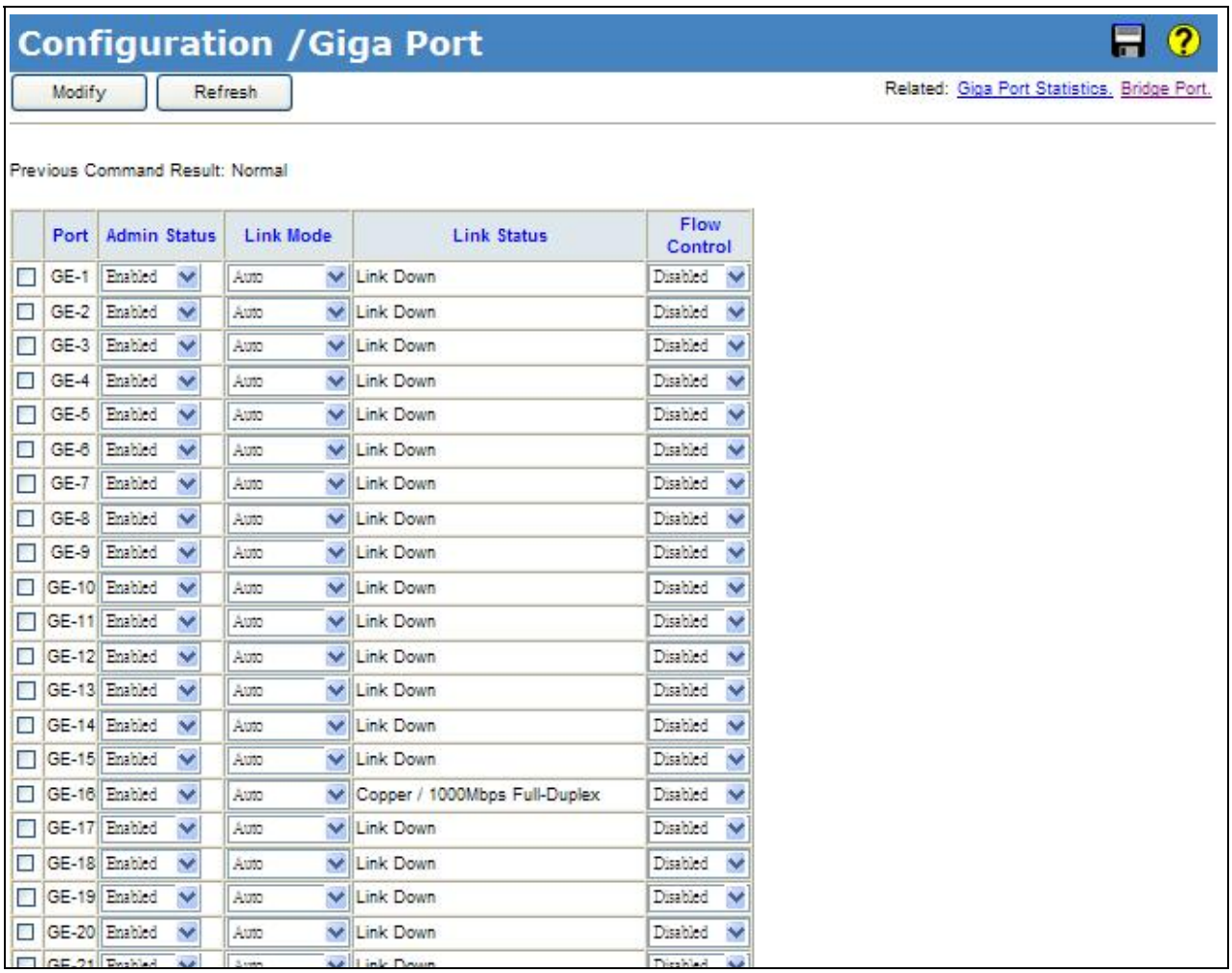
2.3.6 Port Configuration

2.3.6.1 Bridge Port



Operation	Modify: 1. Enter or select row by checking up check box. 2. Modify the configuration 3. Press “Modify” button to apply modification. Refresh: 1. Click “Refresh” button to get current data.
Field	Description
Port	Bridge port number
PVID	Value: 1~4094. Default value is 1.
Default Priority	Default Priority value: 0~7. Default is 0.
Accept Frame Type	Type: All/ OnlyVlanTagged/ Only Untagged. Default is All.

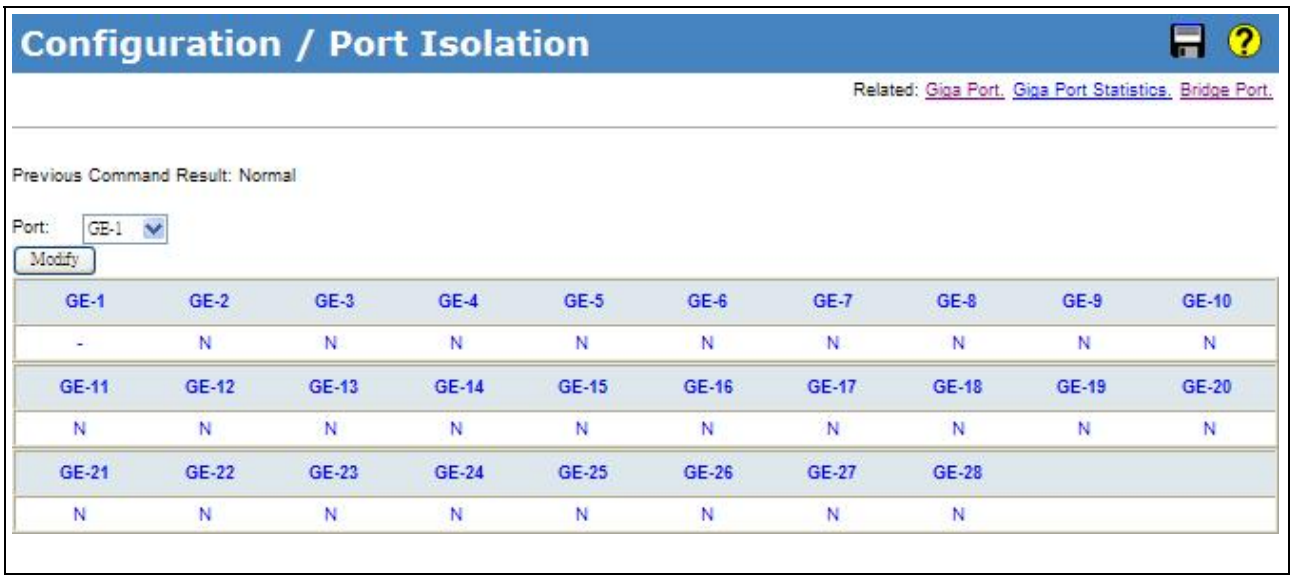
2.3.6.2 Giga Port



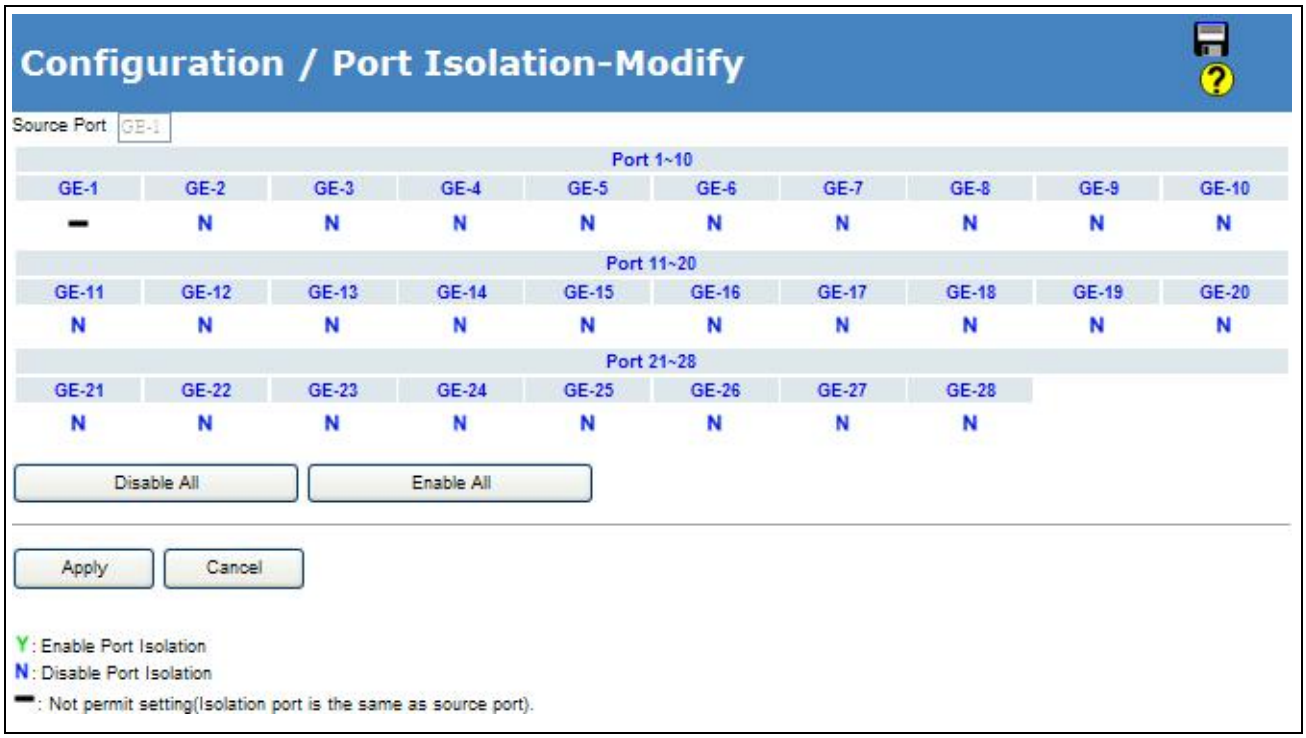
Operation	Modify: 1. Select a row item to selected 2. Set or select the following fields. 3. Click "Modify" button to modify.
Field	Description
Port	GE-1~ MAX Number of Port.
Admin Status	Enabled/Disabled, default=Enabled.
Link Mode	Configuration for Link Mode: Auto (default is Auto) 10Mbps Half/Full Duplex 100Mbps Half/Full Duplex 1000Mbps Full Duplex 2500Mbps Full Duplex (only in some model)

Link Status	Display Link type and speed Possible Type: Copper/ SFP Possible Status: 10Mbps Half-Duplex or Full-Duplex 100Mbps Half-Duplex or Full-Duplex 1000Mbps Full-Duplex 2500Mbps Full-Duplex (only in some model)
Copper/ SFP Priority	Only some model supports Copper/SFP combo port, default is SFP first.
Flow Control	Range: Enabled/Disabled, default=Disabled.

2.3.6.3 Port Isolation

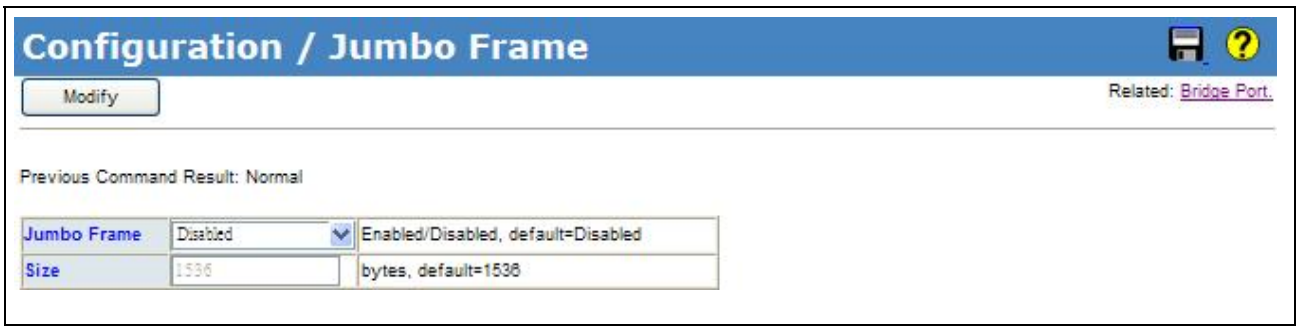


Port Isolation-Modify



Operation	Modify: Click “Modify” button to open modification page. Port Isolation - Modify: 1. Click “Disable All”, ”Enable All” or click on (Y/N/-) to change isolation setting by port. 2. Click “Apply” to apply change or Press “Cancel” to cancel and go back to main page of Isolation.
Field	Description
Source Port	GE-1 ~ MAX Number of Port.
Isolation Port	Option: Y/ N/ -. Y: Isolation is true N: Isolation is false -: Not permit setting (Isolation port is the same as source port)
Disable All	Disable Isolation to all ports
Enable All	Enable Isolation to all ports
Apply	Apply setting data.
Cancel	Cancel setting data.

2.3.6.4. Jumbo Frame

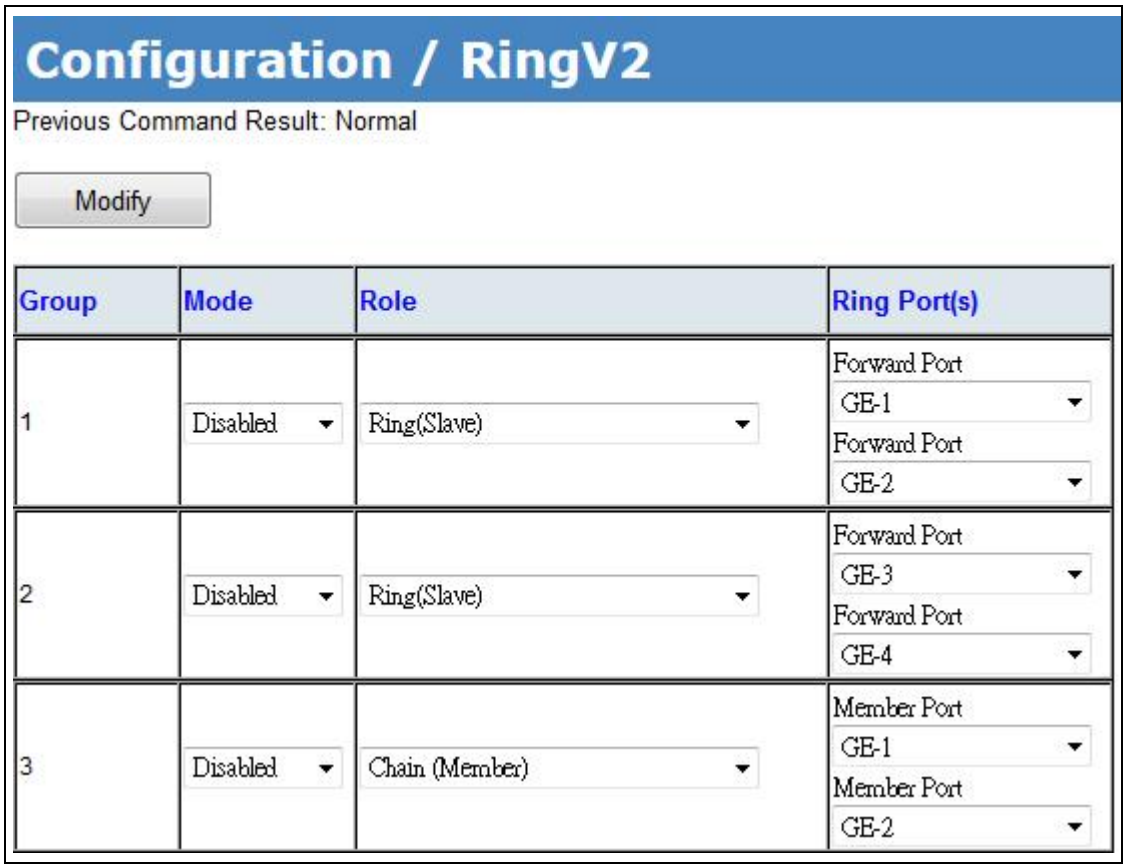


Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
Jumbo Frame	Option: Enabled/ Disabled, Default is Disabled.
Size	Range: 1536~9000 bytes, Default is 1536 bytes.

2.3.6.5 Port Mirror

Operation	Modify: 1. Modify the configuration 2. Click “Modify” button to apply change
Field	Description
Port Mirror	Enable/Disable Port Mirror function, default is Disabled.
Monitored Port	Value range is GE-1 ~ Port MAX Number, default is GE-1. Port to be monitored.
Tx Analyzer Port	Value range is GE-1 ~ Port MAX Number, default is GE-1. It monitors 'out' packet of monitored port.
Rx Analyzer Port	Value range is GE-1 ~ Port MAX Number, default is GE-1. It monitors 'in' packet of monitored port.

2.3.6.6 Ring Protection



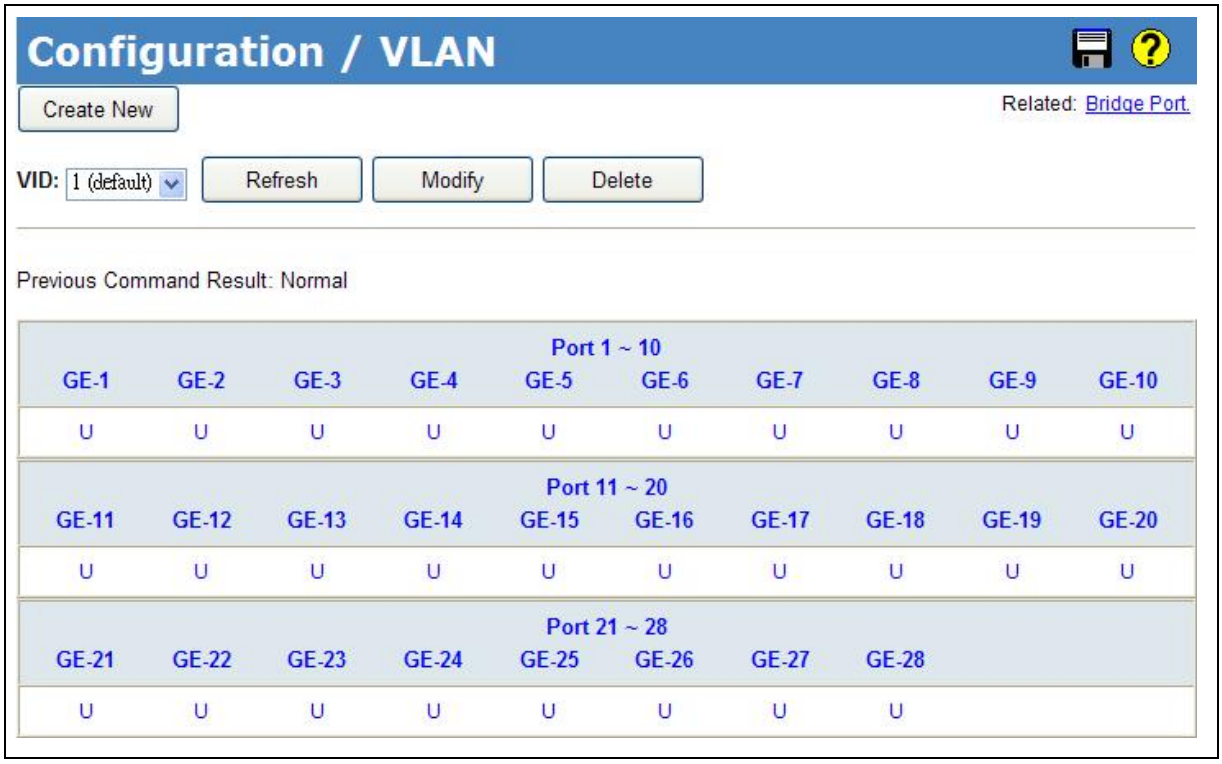
Group	The group index. This parameter is used for easy identifying the ring when user configure it. Group 1 - this group supports configuration of ring. Group 2 - this group supports configuration of ring, coupling and dual-homing. Group 3 - this group supports configuration of chain and balancing-chain.
Mode	Enable Ring on the specific group. # When Group 1 or 2 is enabled: All configuration of Group 3 will be reset to default. Group 3 all configuration options will be locked. # To configure Group 3: Both Group1 and 2 should be disabled first. When Group 3 is enabled, all configuration of Group1 and 2 will be reset to default. Group 1 and 2 all configuration options will be locked.

Role	Configure the Ring group on this switch as specific role. # Group 1 - support option of ring-master and ring-slave. Ring - it could be master or slave. # Group 2 - support configuration of the ring, coupling and dual-homing. Ring - it could be master or slave. Coupling - it could be primary or backup. Dual-Homing # Group 3 - support configuration of the chain and balancing-chain. Chain - it could be head, tail or member. Balancing Chain - it could be central-block, terminal-1/2 or member. Note 1 - Group 1 must be enabled before enable Group 2 to coupling. Note 2 - When Group 1 or 2 is enabled, the configuration of Group 3 will be disabled. Note 3 - When Group 3 is enabled, the configuration of Group 1 and 2 will be disabled.

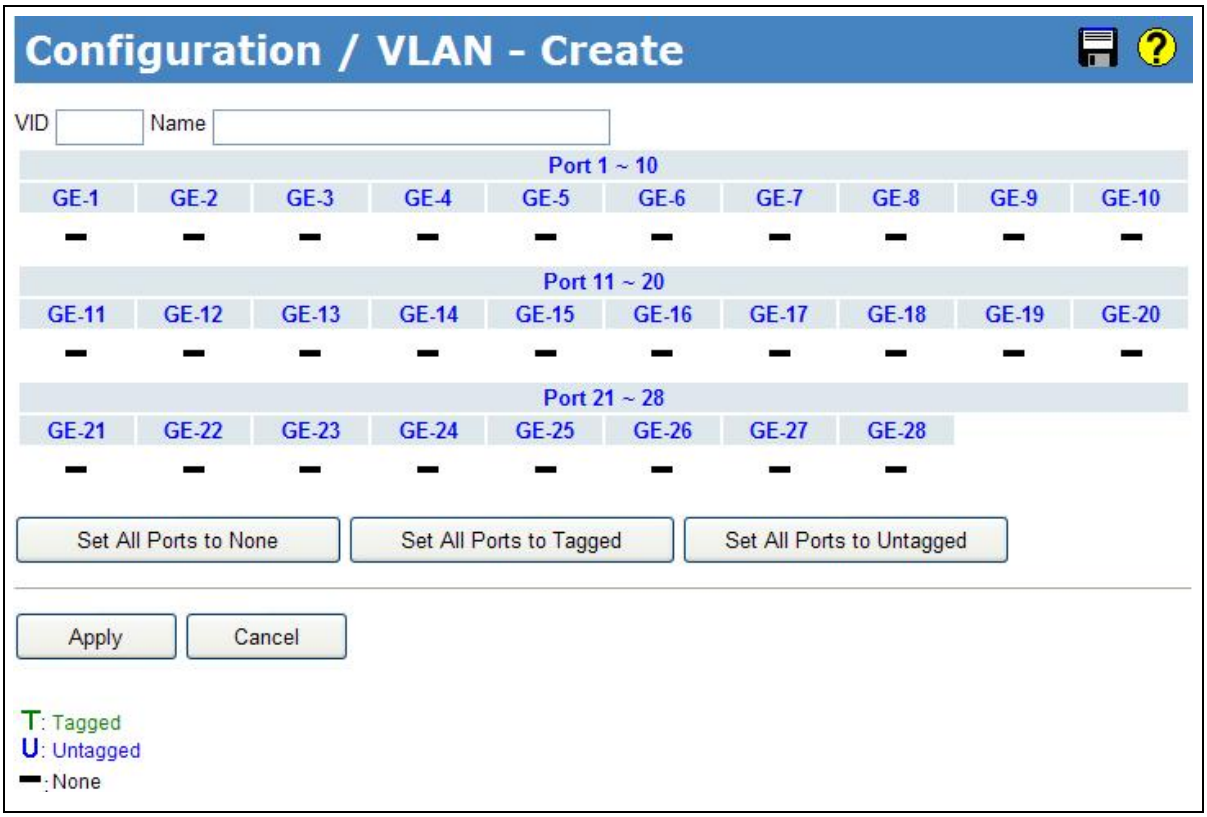
Ring Port(s)	Selecting ring port(s). Each ring port must be unique, CANNOT be configured in different groups; 2 ring ports between ring/chain CANNOT be the same. # When role is ring/master: One ring port is forward port and another is block port. The block port is redundant port; it is blocking port in normal state. # When role is ring/slave: Both ring ports are forward port. # When role is coupling/primary: Only need one ring port named primary port. # When role is coupling/backup: Only need one ring port named backup port. This backup port is redundant port; it is blocking port in normal state. # When role is dual-homing: One ring port is primary port and another is backup port. This backup port is redundant port; it is blocking port in normal state. # When role is chain/head: One ring port is member port and another is head port. Both ring ports are forwarding port in normal state. # When role is chain/tail: One ring port is member port and another is tail port. The tail port is redundant port; it is blocking port in normal state. # When role is chain/member: Both ring ports are member port. Both ring ports are forwarding port in normal state. # When role is balancing-chain/central-block: One ring port is member port and another is block port. The block port is redundant port; it is blocking port in normal state. # When role is balancing-chain/terminal-1/2: One ring port is member port and another is terminal port. Both ring ports are forwarding port in normal state. # When role is balancing-chain/member: Both ring ports are member port. Both ring ports are forwarding port in normal state.

2.3.7 VLAN

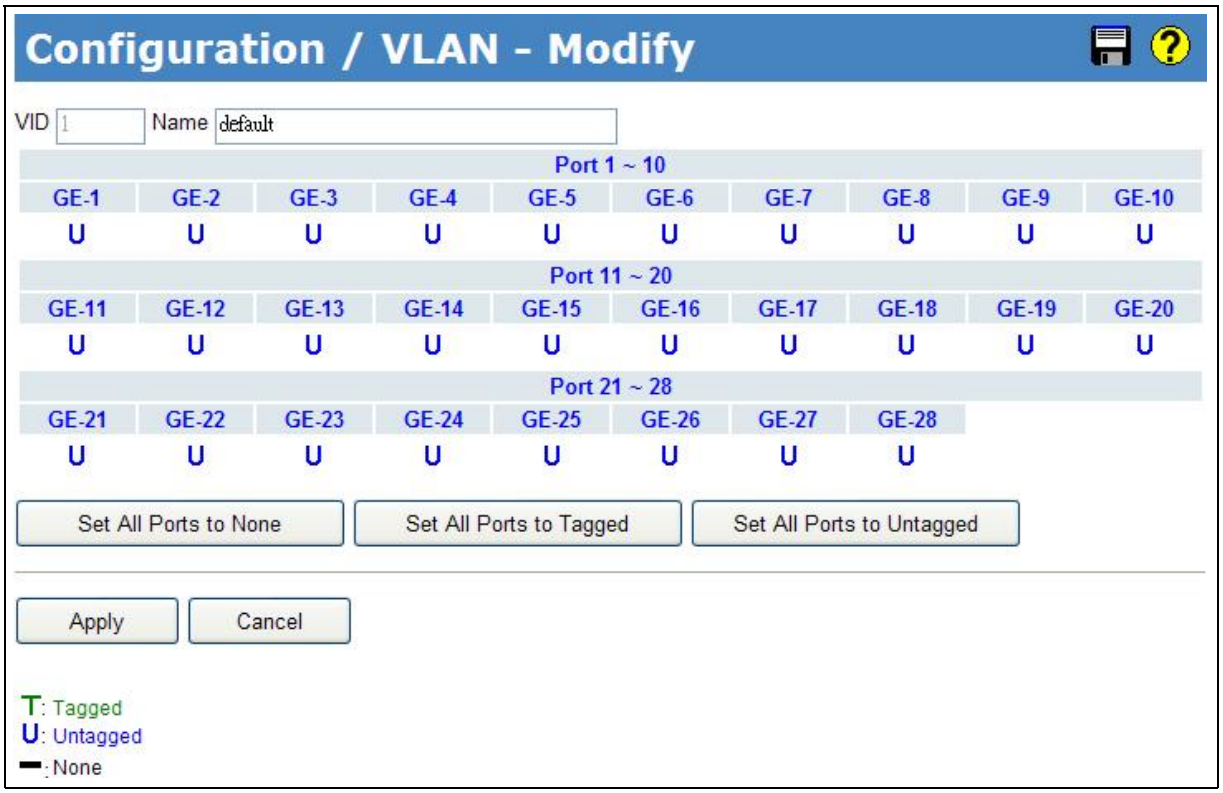
2.3.7.1 Static VLAN



Create New VLAN



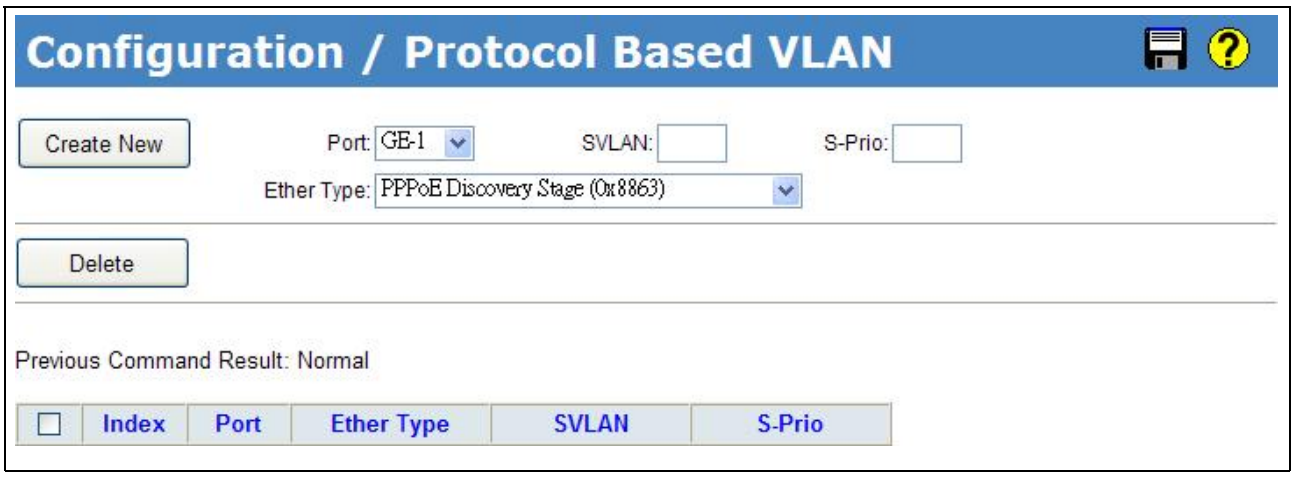
Modify VLAN



Operation	Create New: 1. Click “Create New” button to open “Create New” page. 2. Set VID and Name. 3. Click fields to change status. 4. Click “Apply” button to create, or click “Cancel” button to cancel. Modify: 1. Click “Modify” button to open “Modify” page. 2. Modify Name. 3. Click “Apply” button to modify, click “Cancel” button to cancel. Delete: 1. Choice VLANs checkbox to select. 2. Click “Delete” to delete all selected VLANs. Refresh: 1. Click “Refresh” button to get current data.

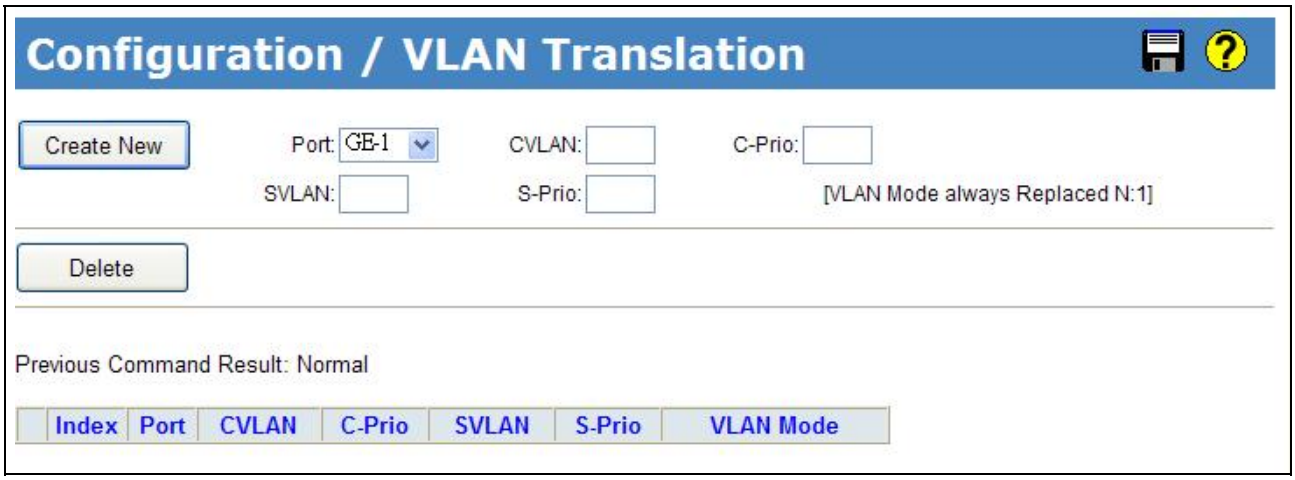
Field	Description
VID	Value: 1~4094. Default value is 1.
Name	Range:0~32 characters
Tagged	Range: T/ U/ －. T: Tagged U: Untagged －: None (not join this VLAN)
Set All Ports to None	Set all ports to None (no port join this VLAN) －
Set All Ports to Tagged	Set all ports join the VLAN as Tagged. T
Set All Ports to Untagged	Set all ports join the VLAN as Untagged. U

2.3.7.2 Protocol Based VLAN



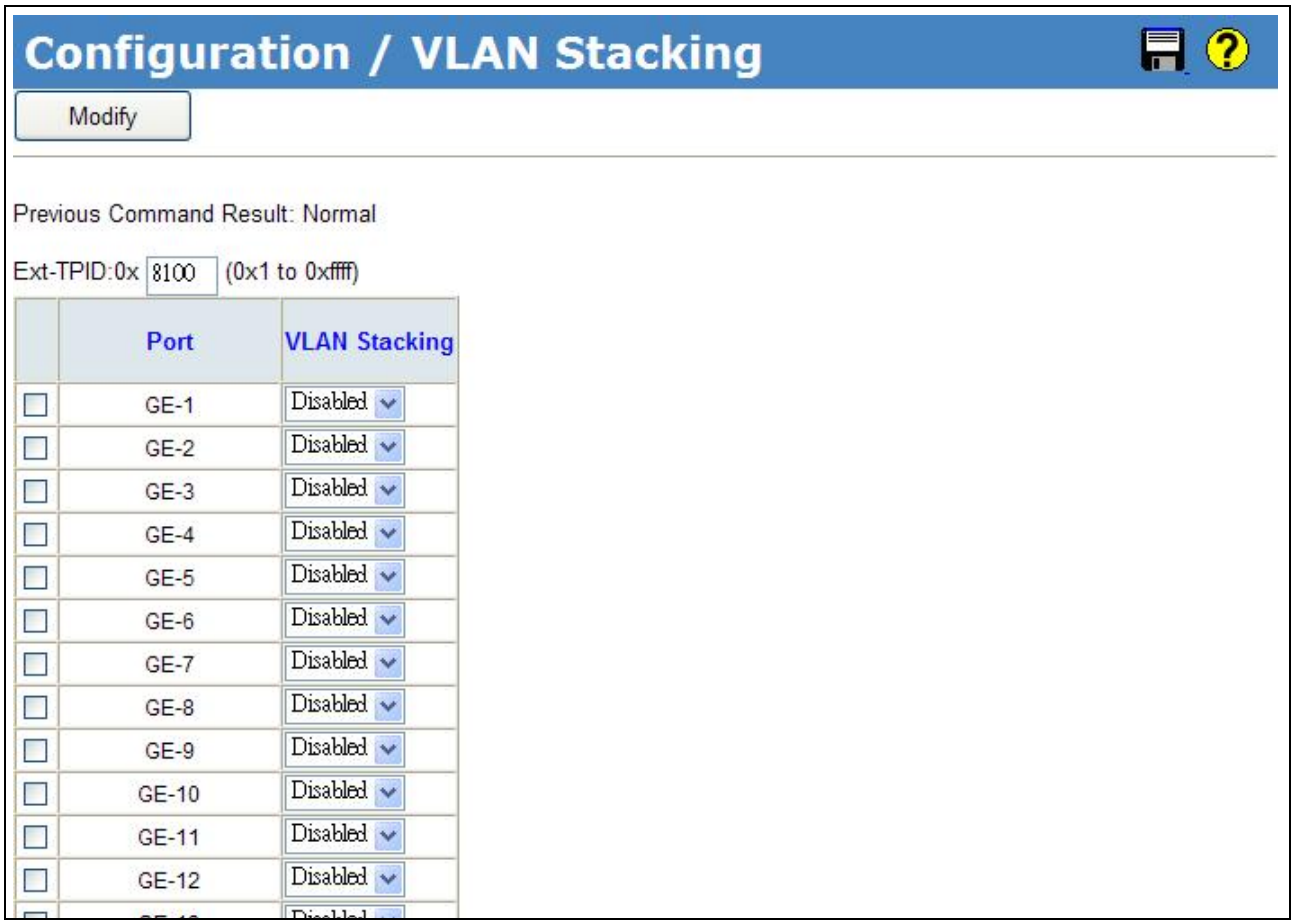
Operation	Create New: 1. Click "Create New" button to Create New page. 2. Set Port and Ether Type, input SVLAN and S-Prio. 3. Click Create New button. (Max entry: 10.) Delete: 1. Select Index with check box. Click "Delete" button to delete data.
Field	Description
Index	Index 1~10.
Port	Protocol-base VLAN config port number, Port range:1 ~ MAX Number of Port.
Ether Type	Select Ether Type: 1. PPPoE Discovery Stage (0x8863). 2. PPPoE Session Stage (0x8864). 3. Internet Protocol (0x0800). 4. Address Resolution Protocol (ARP) (0x0806). 5. Others (input ether type), Range 0000~FFFF.
SVLAN	Service VLAN ID, Range 1 ~ 4094
S-Prio	CoS of SVLAN: 0~7, 8:reserve

2.3.7.3 VLAN Translation



Operation	Create: 1. Select Port, fill CVLAN, C-Prio, SVLAN and S-Prio. 2. Click "Create New" button to create new entry. Click Delete button to delete selected entry(s).
Field	Description
Index	Index 1~10, max entry number: 10.
Port	VLAN translation port number: GE-1 ~ MAX Number of Port.
CVLAN	Customer VLAN ID: Range: 1 ~ 4094
C-Prio	CoS of CVLAN: Range: 0~7, 8: reserve
SVLAN	Service VLAN ID: Range: 1 ~ 4094
S-Prio	CoS of SVLAN: Range: 0~7, 8: reserve
VLAN Mode	Currently only supports: Replaced N to 1.

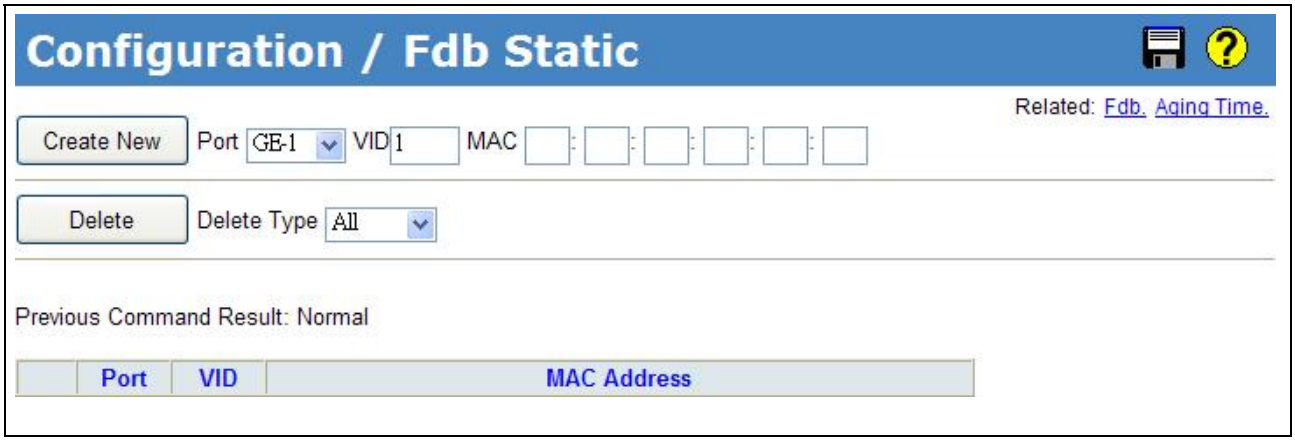
2.3.9.4 VLAN Stacking



Operation	Modify: 1. Select Port check box : 2. Select Select mode Disabled/ Enabled, click "Modify" button to apply change.
Field	Description
Ext-TPID (Hex)	The range is from 1~FFFF (0x1 to 0xffff) Default is 0x8100
VLAN Stacking Port	Port: GE-1 ~ MAX Number of Port.
VLAN Stacking	Enable/Disable VLAN Stacking (QinQ) mode. Default value is disable.

2.3.8 MAC Learning & Forwarding

2.3.8.1 Fdb Static



Operation	Create New: 1. Setting Port, VID and MAC Address 2. Click “Create New” to create a new data Delete: 1. Select a delete type “All/Port/VID/Selected” 2. If delete type is “Port”, then select a port from list. 3. If delete type is “VID”, then input a VID. 4. If delete type is “Selected”, then select row(s) to be deleted. 5. Click “Delete” button to delete.
Field	Description
Port	Giga Port: GE-1~MAX Number of Port
VID	Range: 1~4094. Default value is 1.
MAC Address	Format XX:XX:XX:XX:XX:XX

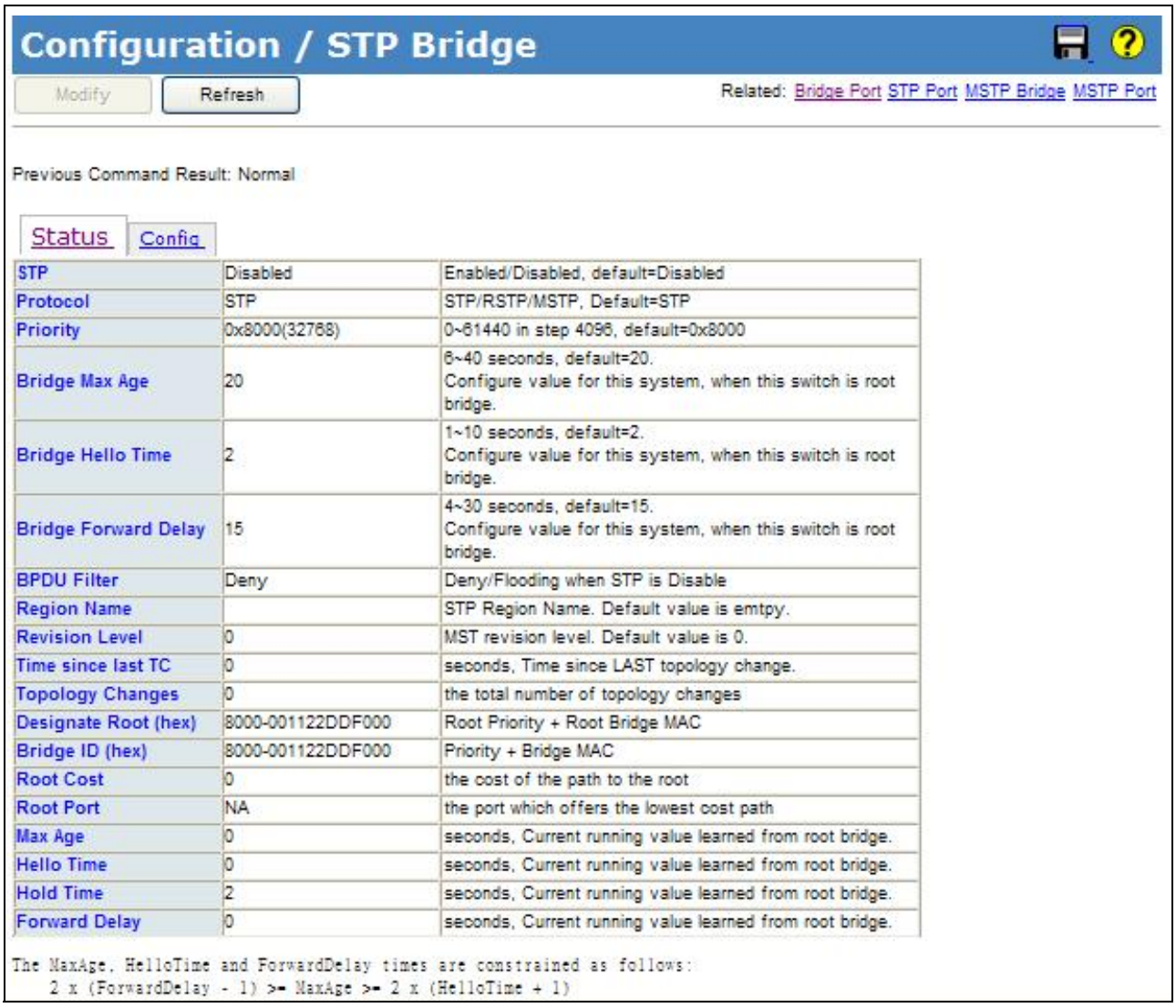
2.3.8.2 Aging Time

Operation	Modify: 1. Modify the configuration 2. Click “Modify” button to apply the change
Field	Description
Aging Time(Sec)	Range: 10~1000000, Default is 300 seconds.

2.3.9 Spanning Tree Protocol (STP)

2.3.9.1 STP Bridge

Status:



Configuration / STP Bridge

Modify | Refresh | Related: Bridge Port STP Port MSTP Bridge MSTP Port

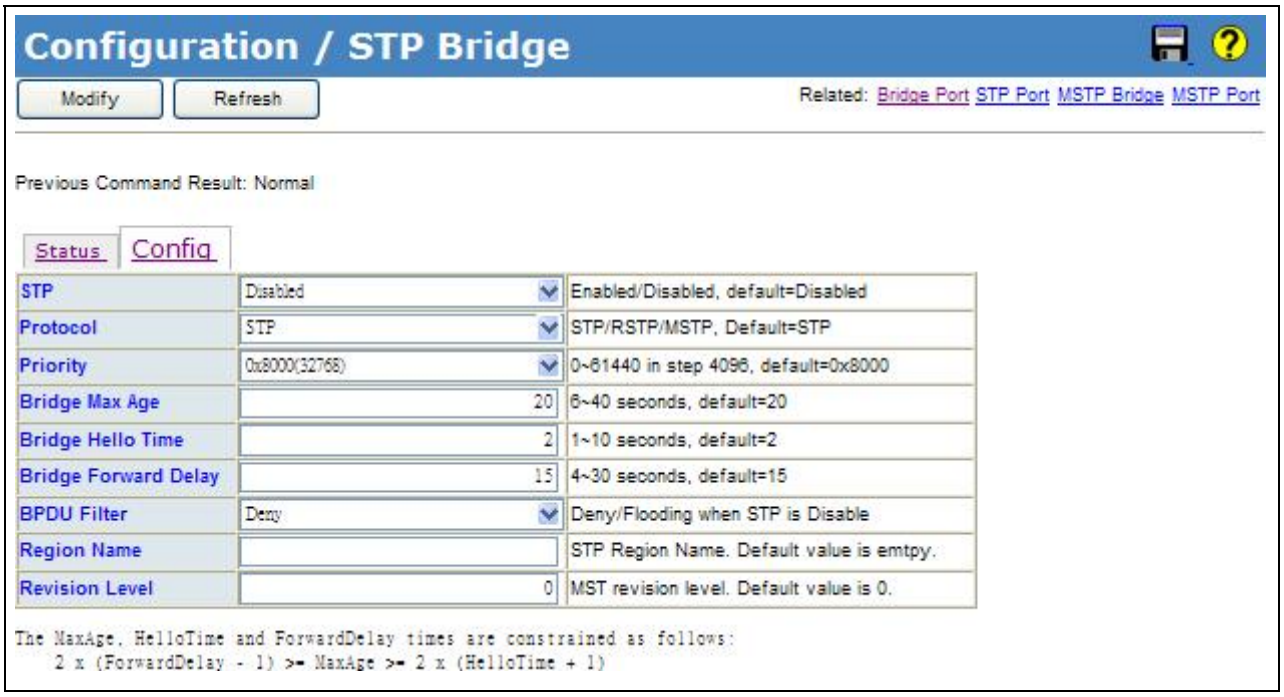
Previous Command Result: Normal

Status | Config

STP	Disabled	Enabled/Disabled, default=Disabled
Protocol	STP	STP/RSTP/MSTP, Default=STP
Priority	0x8000(32768)	0~61440 in step 4096, default=0x8000
Bridge Max Age	20	6~40 seconds, default=20. Configure value for this system, when this switch is root bridge.
Bridge Hello Time	2	1~10 seconds, default=2. Configure value for this system, when this switch is root bridge.
Bridge Forward Delay	15	4~30 seconds, default=15. Configure value for this system, when this switch is root bridge.
BPDU Filter	Deny	Deny/Flooding when STP is Disable
Region Name		STP Region Name. Default value is emtpy.
Revision Level	0	MST revision level. Default value is 0.
Time since last TC	0	seconds, Time since LAST topology change.
Topology Changes	0	the total number of topology changes
Designate Root (hex)	8000-001122DDF000	Root Priority + Root Bridge MAC
Bridge ID (hex)	8000-001122DDF000	Priority + Bridge MAC
Root Cost	0	the cost of the path to the root
Root Port	NA	the port which offers the lowest cost path
Max Age	0	seconds, Current running value learned from root bridge.
Hello Time	0	seconds, Current running value learned from root bridge.
Hold Time	2	seconds, Current running value learned from root bridge.
Forward Delay	0	seconds, Current running value learned from root bridge.

The MaxAge, HelloTime and ForwardDelay times are constrained as follows:
2 x (ForwardDelay - 1) >= MaxAge >= 2 x (HelloTime + 1)

Config:

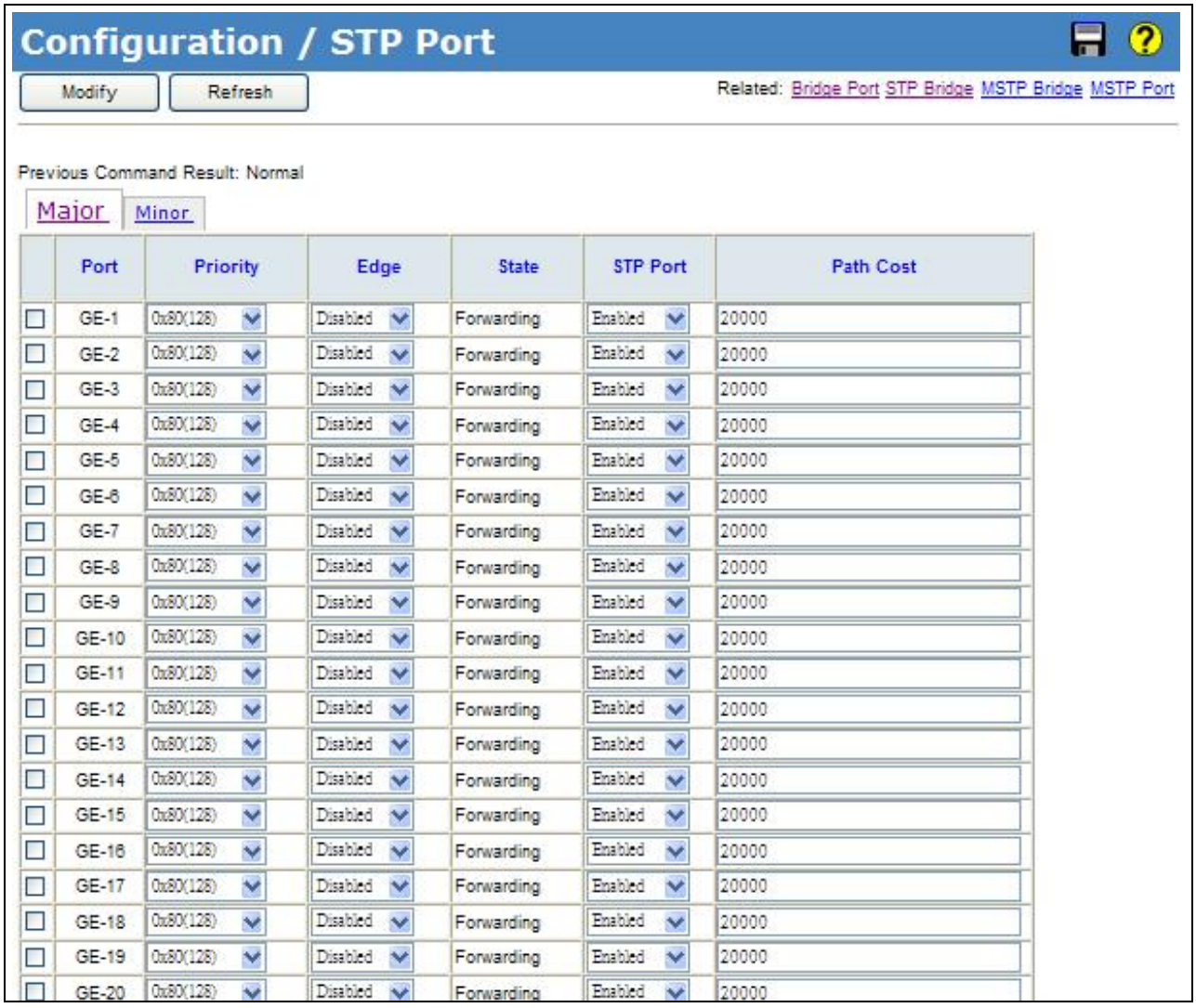


Operation	Modify: 1. Select “Config” page. 2. Modify the configuration. 3. Clicks “Modify” button to apply change. Refresh: Click “Refresh” button to get current data.
Field	Description
STP	Specify whether or not the system is to implement the spanning tree protocol. Range: Enabled/Disabled, default=Disabled.
Protocol	RSTP (IEEE 802.1W), STP (IEEE 802.1D) Option: STP/RSTP, Default=STP.
Priority	Sets the spanning tree protocol priority. The lower the priority number, the more significant the bridge becomes in protocol terms. Where two bridges have the same priority, their MAC address is compared and the smaller MAC address is treated as the most significant. Range: 0~61440 in step 4096, Default is default=0x8000(32768).

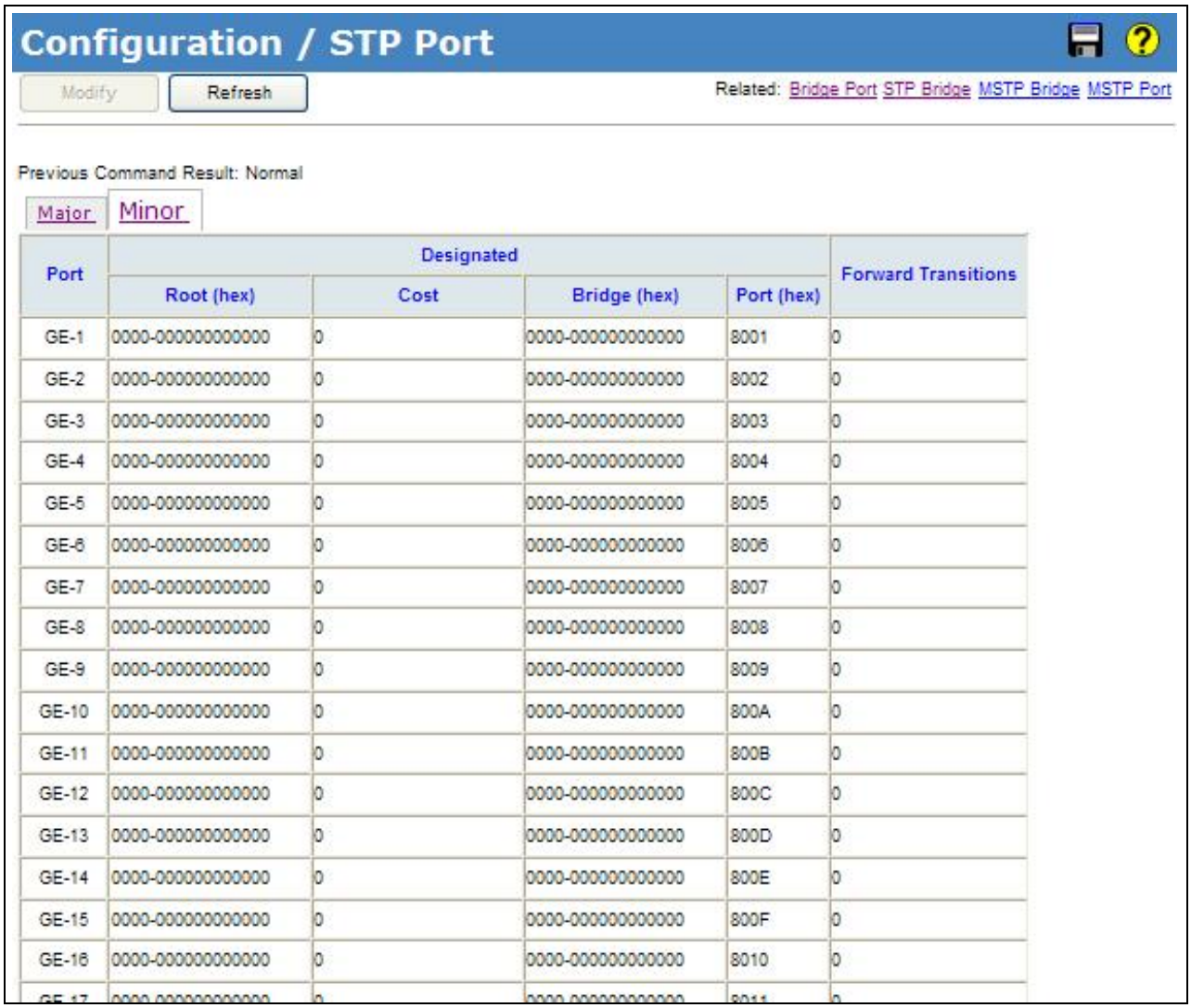
Bridge **MaxAge**	Sets the maximum age of received spanning tree protocol information before it is discarded. This is used when the bridge is or is attempting to become the root bridge. Range: 6~40 seconds, Default=20 seconds.
Bridge Hello Time	Sets the time after which the spanning tree process sends notification of topology changes to the root bridge. This is used when the bridge is or is attempting to become the root bridge. Range: 1~10 seconds, Default=2 seconds.
Bridge Forward Delay	Sets the time that the bridge spends in listening or learning states when the bridge is or is attempting to become the root bridge. Range: 4~30 seconds, Default=15 seconds. The maxage, hellotime and forwarddelay times are constrained as follows: 2 x (forwarddelay - 1) >= maxage maxage >= 2 x (hellotime + 1) For example, the default settings are: 2 x (15 - 1) >= 20 20 >= 2 x (2 + 1)
BPDU Filter	Deny/Flooding when STP is Disable.

2.3.9.2 STP Port

Major:



Minor:



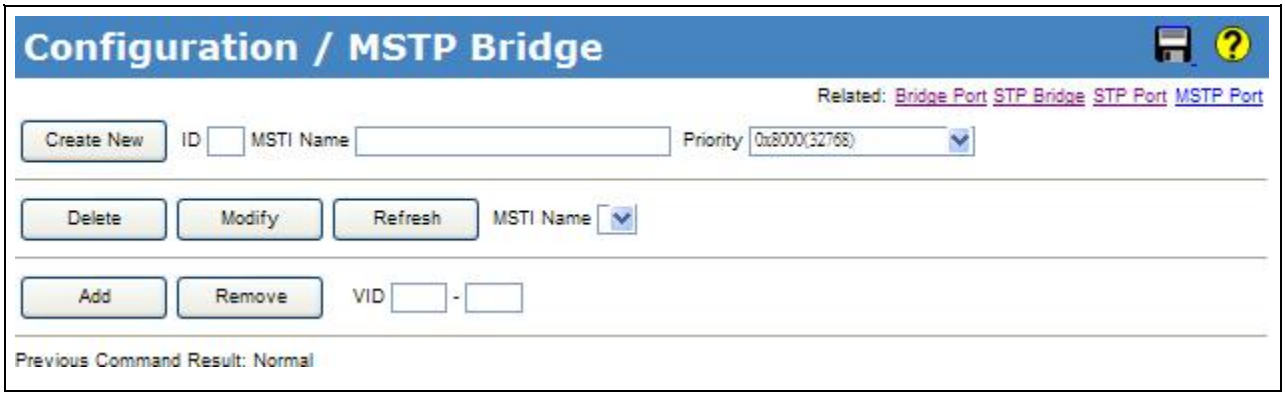
Port	Designated				Forward Transitions
	Root (hex)	Cost	Bridge (hex)	Port (hex)	
GE-1	0000-000000000000	0	0000-000000000000	8001	0
GE-2	0000-000000000000	0	0000-000000000000	8002	0
GE-3	0000-000000000000	0	0000-000000000000	8003	0
GE-4	0000-000000000000	0	0000-000000000000	8004	0
GE-5	0000-000000000000	0	0000-000000000000	8005	0
GE-6	0000-000000000000	0	0000-000000000000	8006	0
GE-7	0000-000000000000	0	0000-000000000000	8007	0
GE-8	0000-000000000000	0	0000-000000000000	8008	0
GE-9	0000-000000000000	0	0000-000000000000	8009	0
GE-10	0000-000000000000	0	0000-000000000000	800A	0
GE-11	0000-000000000000	0	0000-000000000000	800B	0
GE-12	0000-000000000000	0	0000-000000000000	800C	0
GE-13	0000-000000000000	0	0000-000000000000	800D	0
GE-14	0000-000000000000	0	0000-000000000000	800E	0
GE-15	0000-000000000000	0	0000-000000000000	800F	0
GE-16	0000-000000000000	0	0000-000000000000	8010	0

Operation	Modify: 1. Select “Major” page 2. Select row(s) to be changed by checking up checkbox 3. Modify the configuration 4. Click “Modify” button to apply change. Refresh: Click “Refresh” button to get current data.
Field	Description
Port	Range: GE-1 ~ MAX Number of Port

Priority	Range: 0~240 in step 16, Default is default=0x80(128). Default is default=0x80(128).
Edge	Range: Enabled/Disabled, default=Disabled.
State	*Range*: Disabled/ Blocking/ Listening/ Learning/ Forwarding/ Broken Disabled : For ports which are disabled (see dot1dStpPortEnable), this object will have a value of disabled. *Blocking*: The port will go into a blocking state at the time of selection process, when a switch receives a BPDU on a port that indicates a better path to the root switch, and if a port is not a root port or a designated port. *Listening*: After blocking state, a root port or a designated port will move to a listening state. All other ports will remain in a blocked state. During the listening state the port discards frames received from the attached network segment and it also discards frames switched from another port for forwarding. At this state, the port receives BPDUs from the network segment and directs them to the switch system module for processing. After a forward time delay (The default forward delay time is 15 seconds.), the switch port moves from the listening state to the learning state. *Learning*: A port changes to learning state after listening state. During the learning state, the port is listening for and processing BPDUs. In the listening state, the port begins to process user frames and start updating the MAC address table. But the user frames are not forwarded to the destination. After a forward time delay (The default forward delay time is 15 seconds), the switch port moves from the learning state to the forwarding state. *Forwarding*: A port in the forwarding state forwards frames across the attached network segment. In a forwarding state, the port will process BPDUs, update its MAC Address table with frames that it receives, and forward user traffic through the port. Forwarding State is the normal state. Data and configuration messages are passed through the port, when it is in forwarding state. *Broken*: If the bridge has detected a port that is malfunctioning it will place that port into the broken state.
STP Port	Range: Enabled/ Disabled, Default is Enabled.
Path Cost	Range: 1 ~ 200000000, Default is 20000.

Designated Root	The parameter is the unique Bridge Identifier of the Bridge recorded as the Root in the Configuration BPDUs transmitted by the Designated Bridge for the segment to which the port is attached. Format : Root bridge priority + Root Bridge MAC address
Designated Cost	The parameter is the path cost of the Designated Port of the segment connected to this port. This value is compared to the Root Path Cost field in received BPDUs.
Designated Bridge	The parameter is the Bridge Identifier of the bridge which this port considers to be the Designated Bridge for this port's segment. Format: Designated bridge priority + Designated Bridge MAC address. [0x8000-001122334455]
Designated Port	The parameter (dot1dStpPortDesignatedPort) is the Port Identifier of the port of the Designated Bridge for this port's segment. Format: Designated port priority + Designated Port ID. [0x8001]
Forward Transitions	Forward Transitions count.

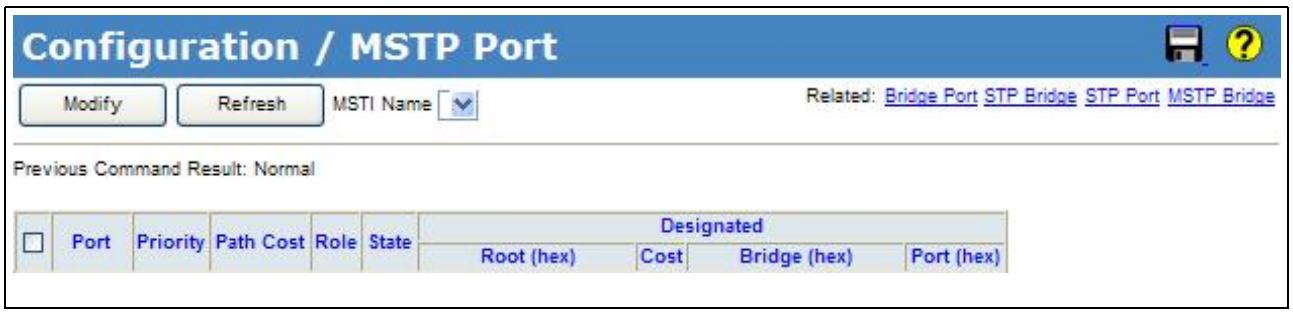
2.3.9.3 MSTP Bridge



Operation	Create New: 1. Fill "MSTI Name" and select "Priority" fields. (Default MSTI Name will be set when name is not input.) 2. Click "Create New" button to create new data. 3. Max MSTI number is 10. Delete: 1. Select "MSTI Name". 2. Click "Delete" button to the Instance. Modify: 1. Select "MSTI Name" from list. 2. Modify "MSTI Name", "VID" or select "Priority". 3. Click "Modify" button. Add or Remove VID: 1. Fill start VID and end VID. 2. Click "Add" or "Remove" button to edit VID range. Or input the VID range with the format in the VID cell.
Field	Description
ID	MSTI ID, value range is 1~10.
MSTI Name	MSTI Name, 1~30 characters. Can not be empty, if empty, system will give default name.
VID Start	VLAN ID, Range 1-4094.
VID End	VLAN ID, Range 1-4094.

VID	VLAN ID, Format: 2-5,7,100-4094. Accept number, space, dash and comma.
Priority	MSTI's priority. The lower the priority number, the more significant the bridge becomes in protocol terms. Where two bridges have the same priority, their MAC address is compared and the smaller MAC address is treated as the most significant. Range: 0~61440 in step 4096, Default is default=0x8000(32768).
Designated Root	The parameter is the unique Bridge Identifier of the Bridge recorded as the Root in the Configuration BPDUs transmitted by the Designated Bridge for the segment to which the port is attached. Format: MSTI's Root bridge priority + Root Bridge MAC address
Bridge ID	The parameter is the Bridge Identifier of the bridge which this port considers to be the Designated Bridge for this port's segment. Format: MSTI's priority + Bridge MAC address. [0x8000-001122334455]
Root Cost	The parameter is the path cost of the MSTI's Designated Port of the segment connected to this port. This value is compared to the Root Path Cost field in received BPDUs.
Root Port	The parameter is the MSTI's Port Identifier of the port of the Designated Bridge for this port's segment. [0x8001]

2.3.9.4 MSTP Port

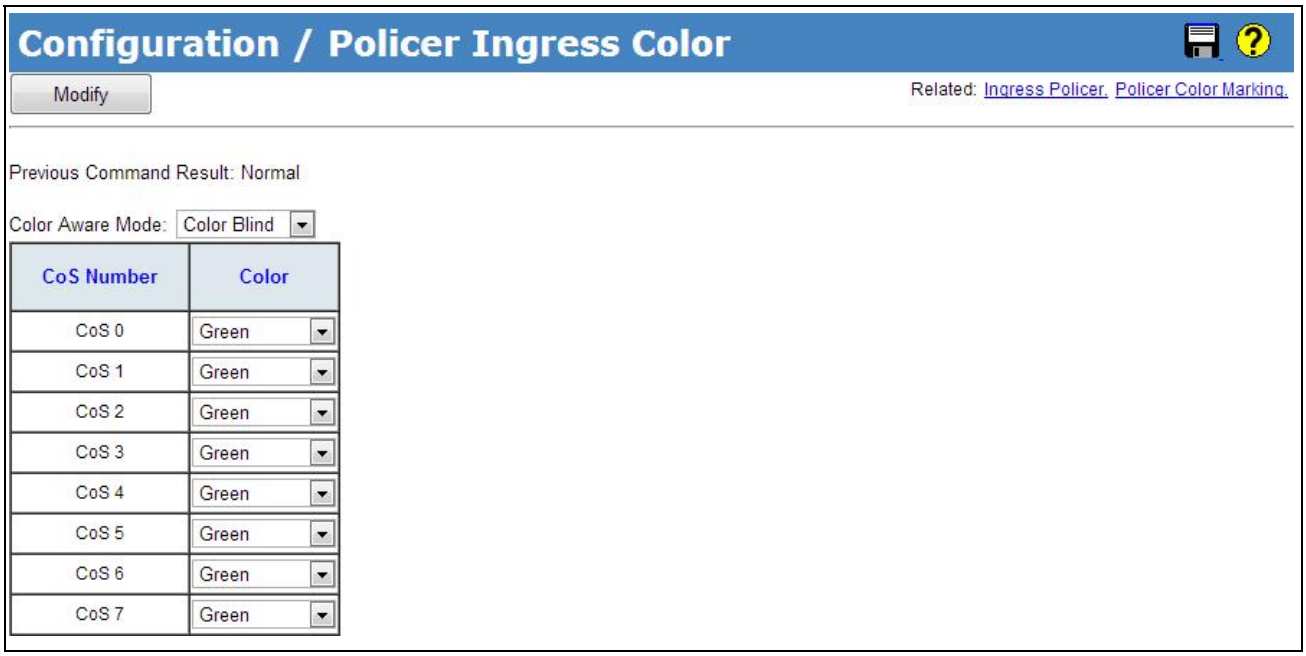


Operation	Modify: 1. Select a row item to selected 2. Set or select the following fields. 3. Click "Modify" button.
Field	Description
Port	Range: GE-1 ~ MAX Number of Port
Priority	Range: 0~240 in step 16, Default is default=0x80(128).
Path Cost	Range: 1 ~ 200000000, Default is 20000.
Role	Range: Disabled/ Root/ Designated/ Alternate/ Backup/ Master/ Unknown.
State	*Range*: Disabled/ Blocking/ Listening/ Learning/ Forwarding/ Broken *Disabled*: For ports which are disabled (see dot1dStpPortEnable), this object will have a value of disabled. *Blocking*: The port will go into a blocking state at the time of selection process, when a switch receives a BPDU on a port that indicates a better path to the root switch, and if a port is not a root port or a designated port. *Listening*: After blocking state, a root port or a designated port will move to a listening state. All other ports will remain in a blocked state. During the listening state the port discards frames received from the attached network segment and it also discards frames switched from another port for forwarding. At this state, the port receives BPDUs from the network segment and directs them to the switch system module for processing. After a forward time delay (The default forward delay time is 15 seconds.), the switch port moves from the listening state to the learning state. *Learning*: A port changes to learning state after listening state. During the learning state, the port is listening for and processing BPDUs. In the listening state, the port begins to process user frames and start updating the MAC address table. But the user

	frames are not forwarded to the destination. After a forward time delay (The default forward delay time is 15 seconds), the switch port moves from the learning state to the forwarding state. *Forwarding*: A port in the forwarding state forwards frames across the attached network segment. In a forwarding state, the port will process BPDUs, update its MAC Address table with frames that it receives, and forward user traffic through the port. Forwarding State is the normal state. Data and configuration messages are passed through the port, when it is in forwarding state. *Broken*: If the bridge has detected a port that is malfunctioning it will place that port into the broken state.
Designated Root	The parameter is the unique Bridge Identifier of the Bridge recorded as the Root in the Configuration BPDUs transmitted by the Designated Bridge for the segment to which the port is attached. Format : Root bridge priority + Root Bridge MAC address
Designated Cost	The parameter is the path cost of the Designated Port of the segment connected to this port. This value is compared to the Root Path Cost field in received BPDUs.
Designated Bridge	The parameter is the Bridge Identifier of the bridge which this port considers to be the Designated Bridge for this port's segment. Format: Designated bridge priority + Designated Bridge MAC address. [0x8000-001122334455]
Designated Port	The parameter (dot1dStpPortDesignatedPort) is the Port Identifier of the port of the Designated Bridge for this port's segment. Format: Designated port priority + Designated Port ID. [0x8001]

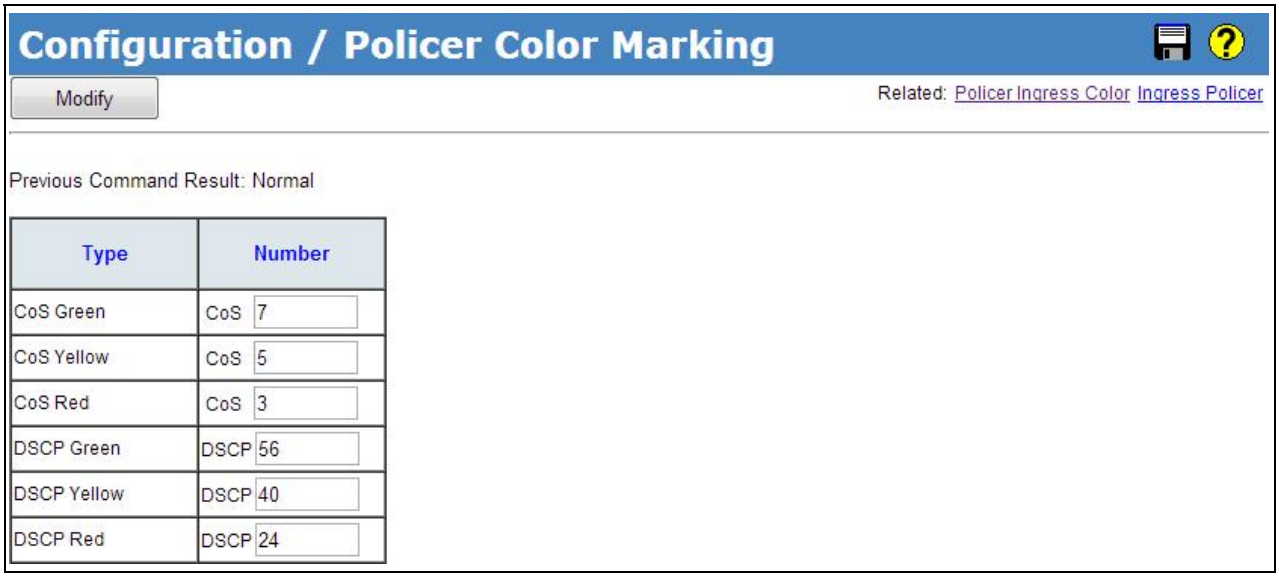
2.3.10 Policer

2.3.10.1 Policer Ingress Color



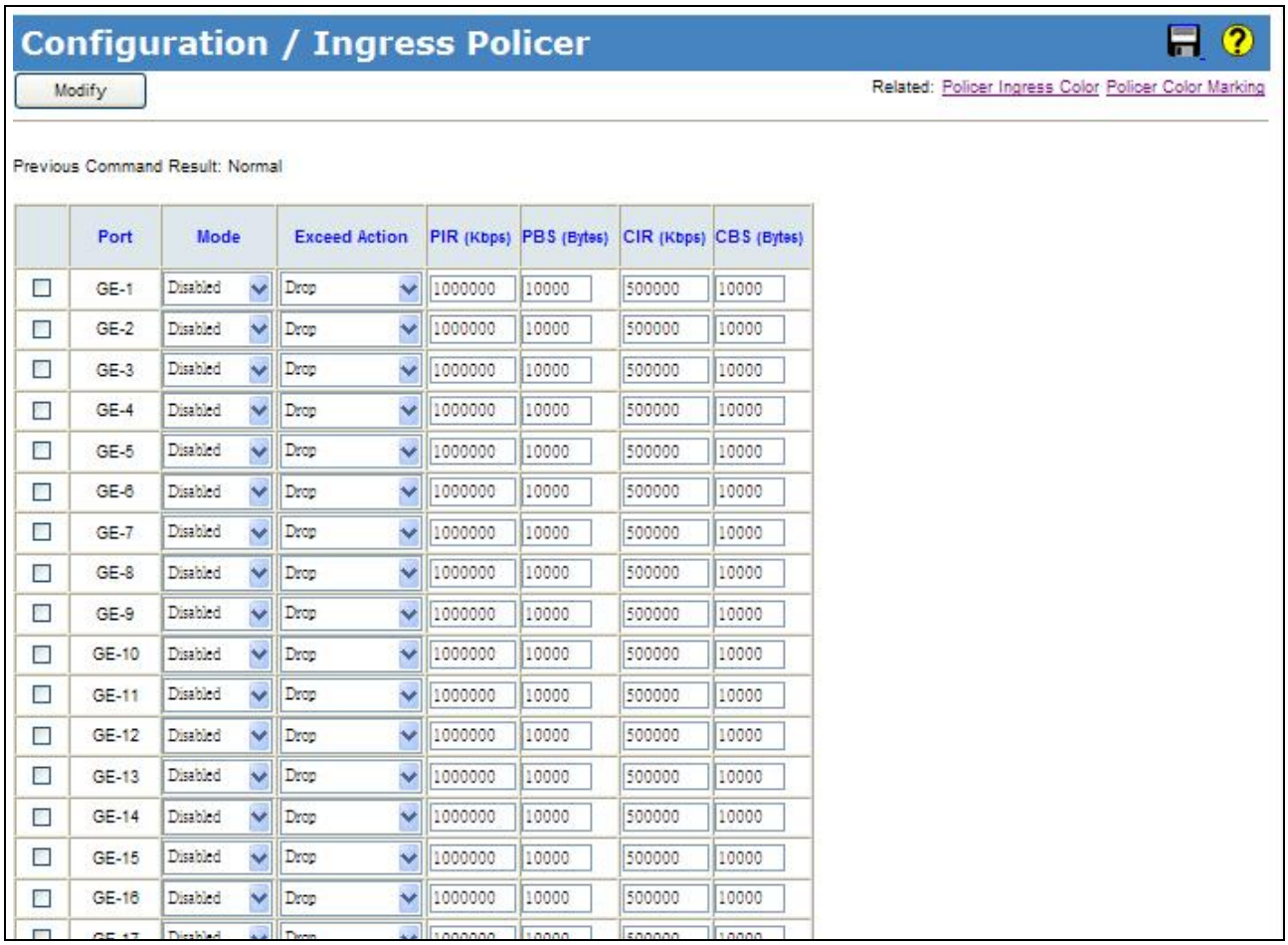
Operation	Modify: 1. Select “Color Blind” or “Color Aware” 2. Modify the configuration 3. Click “Modify” button to apply change
Field	Description
Color Aware Mode	Color Blind/ Color Aware. Default is Color Blind.
CoS 0	Green/Yellow/Red, default is green
CoS 1	Green/Yellow/Red, default is green
CoS 2	Green/Yellow/Red, default is green
CoS 3	Green/Yellow/Red, default is green
CoS 4	Green/Yellow/Red, default is green
CoS 5	Green/Yellow/Red, default is green
CoS 6	Green/Yellow/Red, default is green
CoS 7	Green/Yellow/Red, default is green

2.3.10.2 Policer Color Marking



Operation	Modify: 1. Modify the configuration 2. Click “Modify” button to apply change
Field	Description
Color Aware Mode	Color Blind/ Color Aware. Default is Color Blind.
CoS Green	Range: 0~7, Default is 7
CoS Yellow	Range: 0~7, Default is 5
CoS Red	Range: 0~7, Default is 3
DSCP Green	Range: 0~63, Default is 56
DSCP Yellow	Range: 0~63, Default is 40
DSCP Red	Range: 0~63, Default is 24

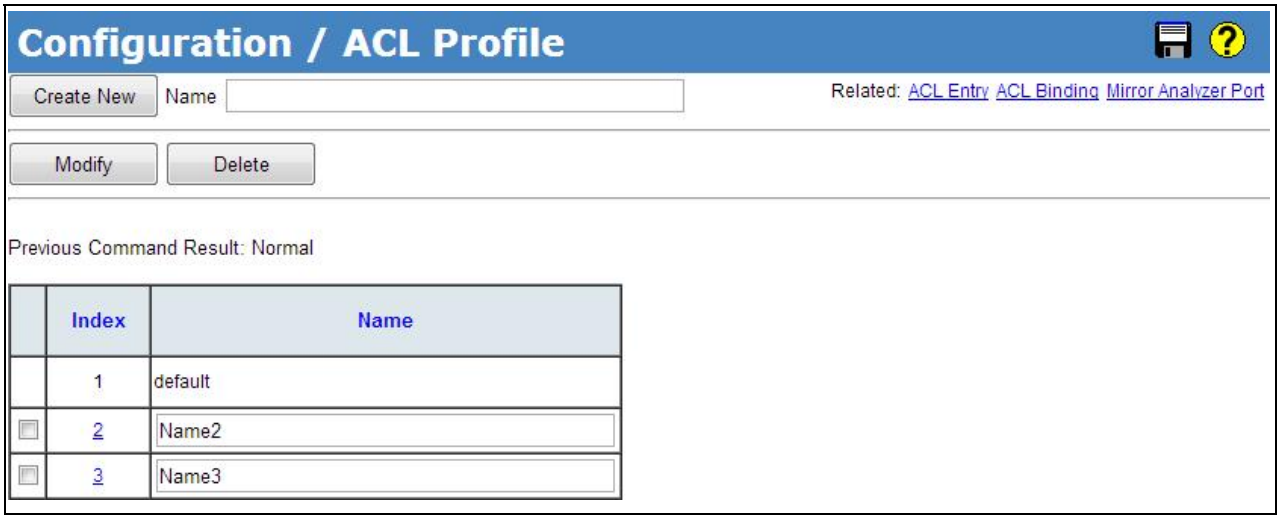
2.3.10.3 Ingress Policer



Operation	Modify: 1. Modify the configuration 2. Click “Modify” button to apply change
Field	Description
Port	Bridge port number. GE-1 ~ MAX Number of Port.
Mode	Ingress Policer Mode Enabled/Disabled, default is Disabled.
Exceed Action	Value range is Drop/CoS Mark/DSCP Mark, default is Drop.
PIR (Kbps)	Value range is 1~1000000 Kbps, default is 1000000 Kbps.
PBS (Bytes)	Value range is 1~65535 Bytes, default is 10000 Bytes.
CIR (Kbps)	Value range is 1~1000000 Kbps, default is 500000 Kbps.
CBS (Bytes)	Value range is 1~65535 Kbps, default is 10000 Kbps.

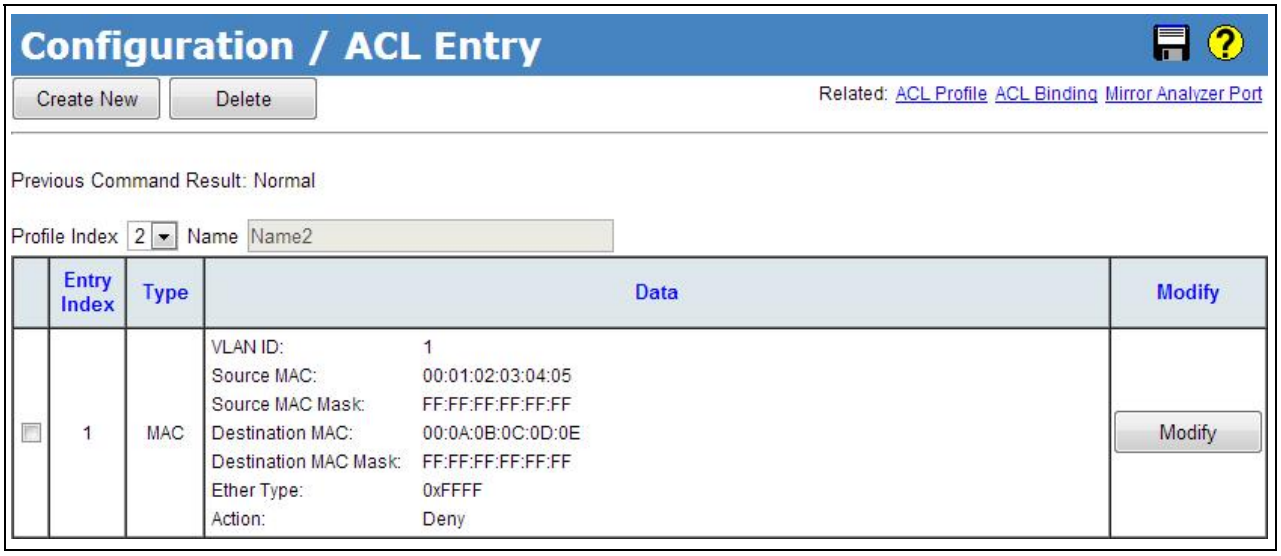
2.3.11 ACL

2.3.11.1 Profile

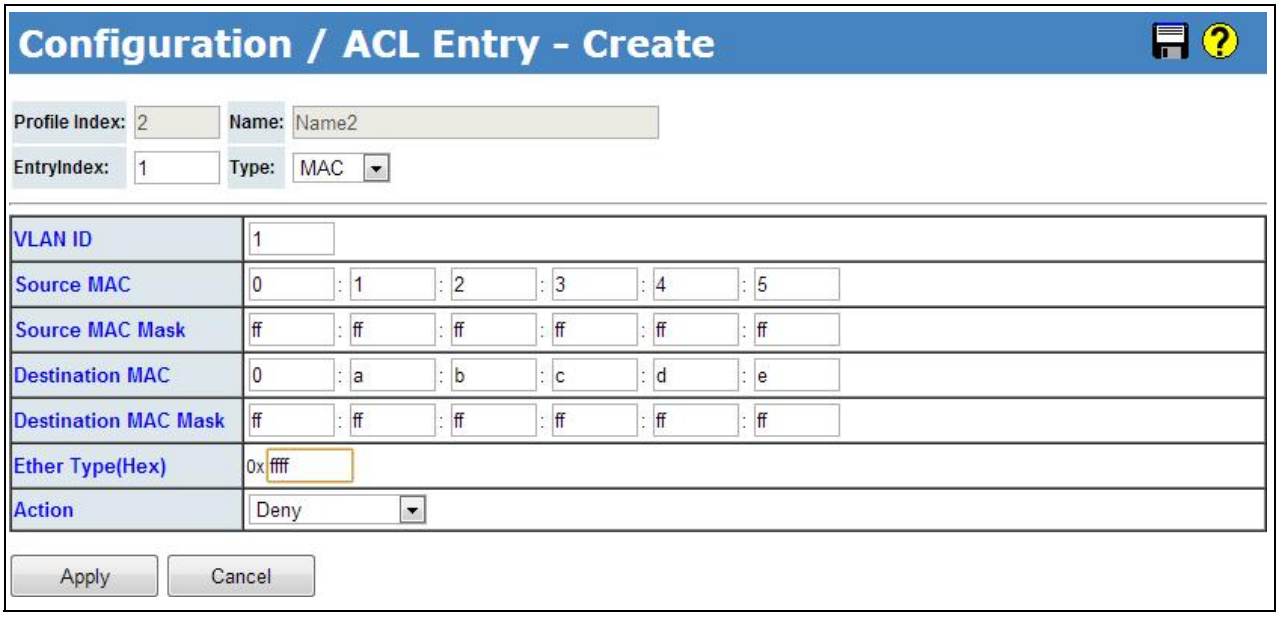


Operation	Create New: 1. Fill ACL Profile Name, the max length is 31. 2. Click “Create New” button to Create New ACL profile. Modify: 1. Select checkbox of profile to be changed. 2. Modify the “Name” of profile 3. Click “Modify” button to apply change Delete: 1. Select one row for delete 2. Click “Delete” button to delete data
Field	Description
Index	ACL Profile Index, range is 1 ~ MAX SIZE of profile, Profile 1 is a default profile, can not be modified
Name	ACL Profile Name, the max length 31 characters.

2.3.11.2 Entry



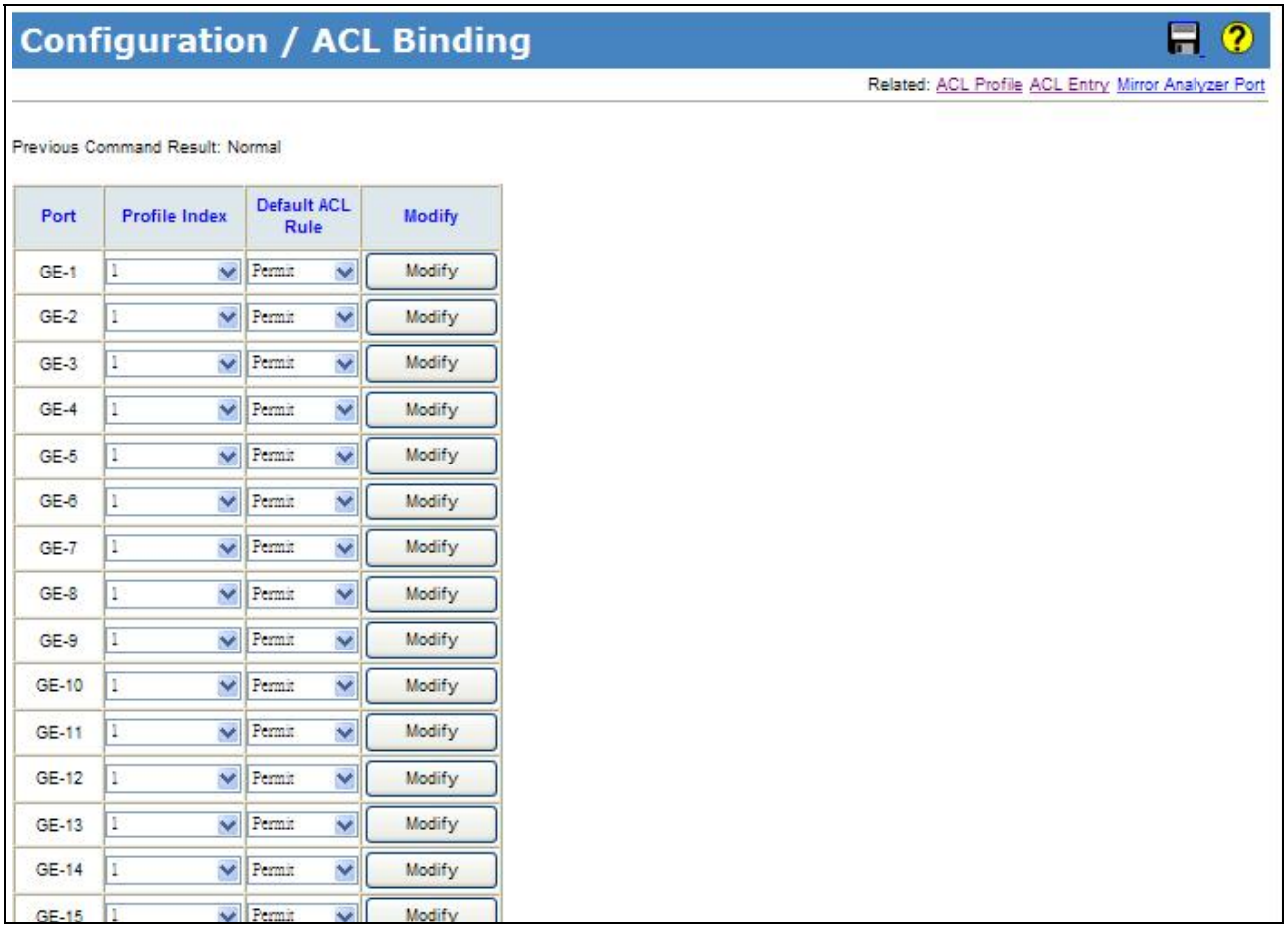
Create New



Operation	Create New: 1. Click “Create New” button to open page of Create New entry. 2. Fill ACL Entry Index field and select Type. 3. Fill fields and then click “Apply” to create or click “Cancel” to cancel. Modify: 1. Modify field data. 2. Click “Modify” button to open modification page. 3. Fill Entry Index field and select Type. 4. Fill fields and then click “Apply” to modify or click “Cancel” to cancel. Delete: 1. Select one row. 2. Click “Delete” button to delete data.
Field	Description
Profile Index	Range: 1~20
Entry Index	Range: 1~32
Type	MAC/IPV4/L4PORT/TOS
Type = MAC	
VLAN ID	ACL Profile VLAN ID, value range is 1~4094.
Source MAC	ACL Profile Source MAC format XX:XX:XX:XX:XX:XX, each field value range 0~FF
Source MAC Mask	ACL Profile Source MAC Mask format XX:XX:XX:XX:XX:XX, each field value range 0~FF
Destination MAC	ACL Profile Destination MAC format XX:XX:XX:XX:XX:XX, each field value range 0~FF
Destination MAC Mask	ACL Profile Destination MAC Mask format XX:XX:XX:XX:XX:XX, each field value range 0~FF
Ether Type (Hex)	Value range 0,05DD~FFFF,format XXXX
Action	Value range Deny/Permit/Queue Mapping/CoS Marking/Copy Frame.
Type = IPV4	
Source IP	Format XXX:XXX:XXX:XXX, each field value range 0~255.
Source IP Mask	Format XXX:XXX:XXX:XXX, each field value range 0~255.
Destination IP	Format XXX:XXX:XXX:XXX, each field value range 0~255.

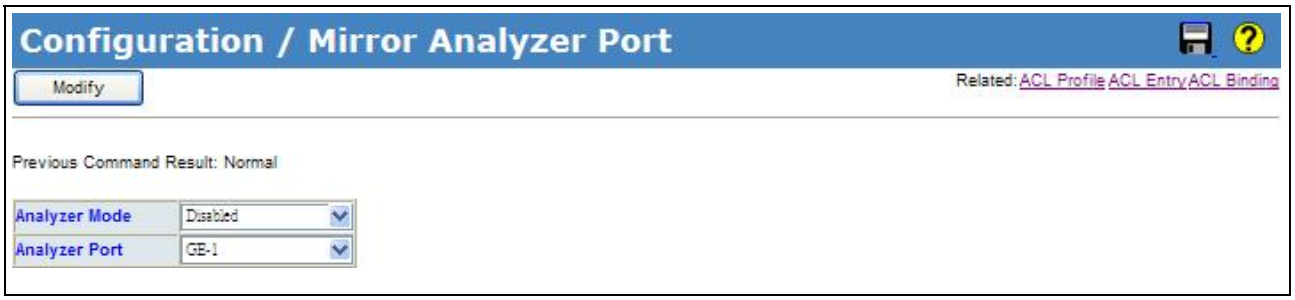
Destination IP Mask	Format XXX:XXX:XXX:XXX, each field value range 0~255.
Protocol	Value range 0~255.
Action	Value range Deny/Permit/Queue Mapping/CoS Marking/Copy Frame.
Type = L4PORT	
Protocol	Value range TCP/UDP.
Source IP	Format XXX:XXX:XXX:XXX, each field value range 0~255.
Source IP Mask	Format XXX:XXX:XXX:XXX, each field value range 0~255.
Port	Source IP Port, value range 0~65535.
Destination IP	Format XXX:XXX:XXX:XXX, each field value range 0~255.
Destination IP Mask	Format XXX:XXX:XXX:XXX, each field value range 0~255.
Port	Source IP Port, value range 0~65535.
Action	Value range Deny/Permit/Queue Mapping/CoS Marking/Copy Frame.
Type = ToS	
Source IP	Format XXX.XXX.XXX.XXX, each field value range 0~255.
Source IP Mask	Format XXX.XXX.XXX.XXX, each field value range 0~255.
Destination IP	Format XXX.XXX.XXX.XXX, each field value range 0~255.
Destination IP Mask	Format XXX.XXX.XXX.XXX, each field value range 0~255.
ToS Type	Value range Precedence/ToS/DSCP/Any,0~7 in Precedence,0~15 in ToS,0~63 in DSCP.
Action	Value range Deny/Permit/Queue Mapping/CoS Marking/Copy Frame.

2.3.11.3 Binding



Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
Port	Giga Port, GE-1 ~ MAX Number of Port.
Profile Index	ACL Profile Index, range is 1 ~ MAX SIZE of profile, default is 1.
Default ACL Rule	ACL Default Rule, could be Permit/Deny, default is Permit.

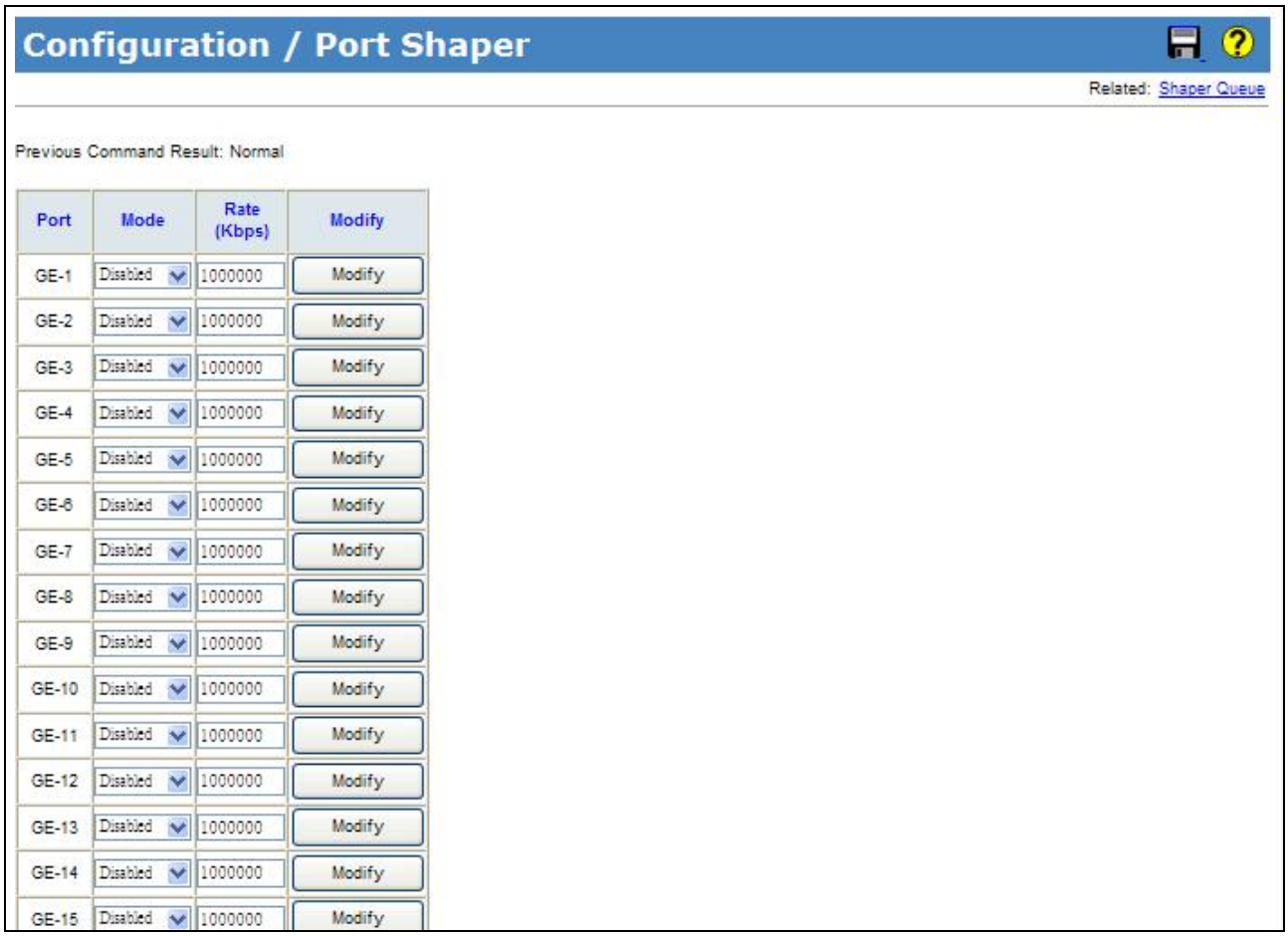
2.3.11.4 Mirror Analyzer Port



Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
Analyzer Mode	Enabled/Disabled, default is Disabled.
Analyzer Port	Giga Port GE-1 ~ MAX Number of Port, default is GE-1.

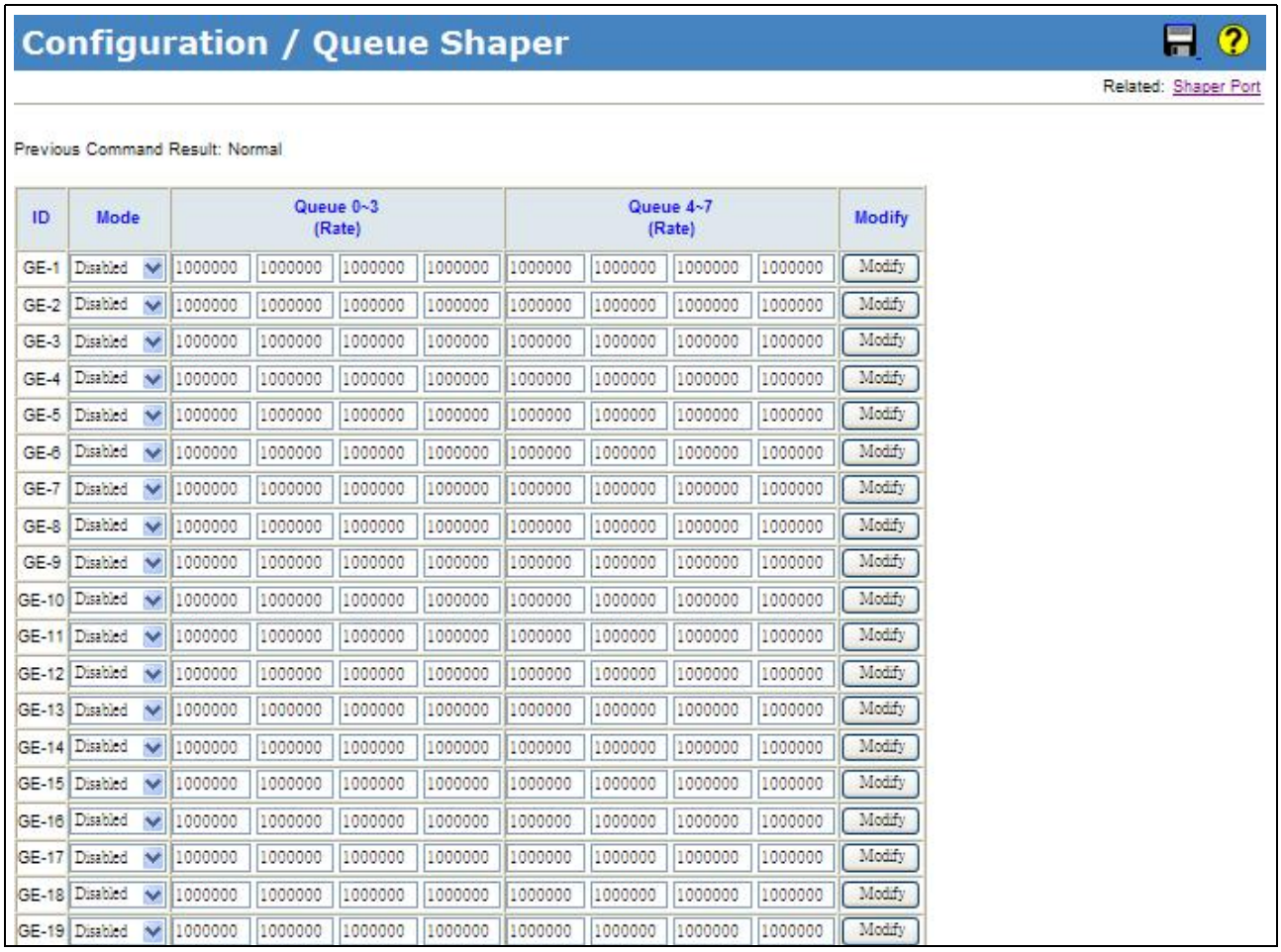
2.3.12 Shaper

2.3.12.1 Port Shaper



Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
Port	Bridge port, range is 1 ~ MAX Number of Port.
Mode	Enabled/Disabled, default is Disabled.
Rate (Kbps)	Rate range is 1~1000000 Kbps, default is 1000000 Kbps.

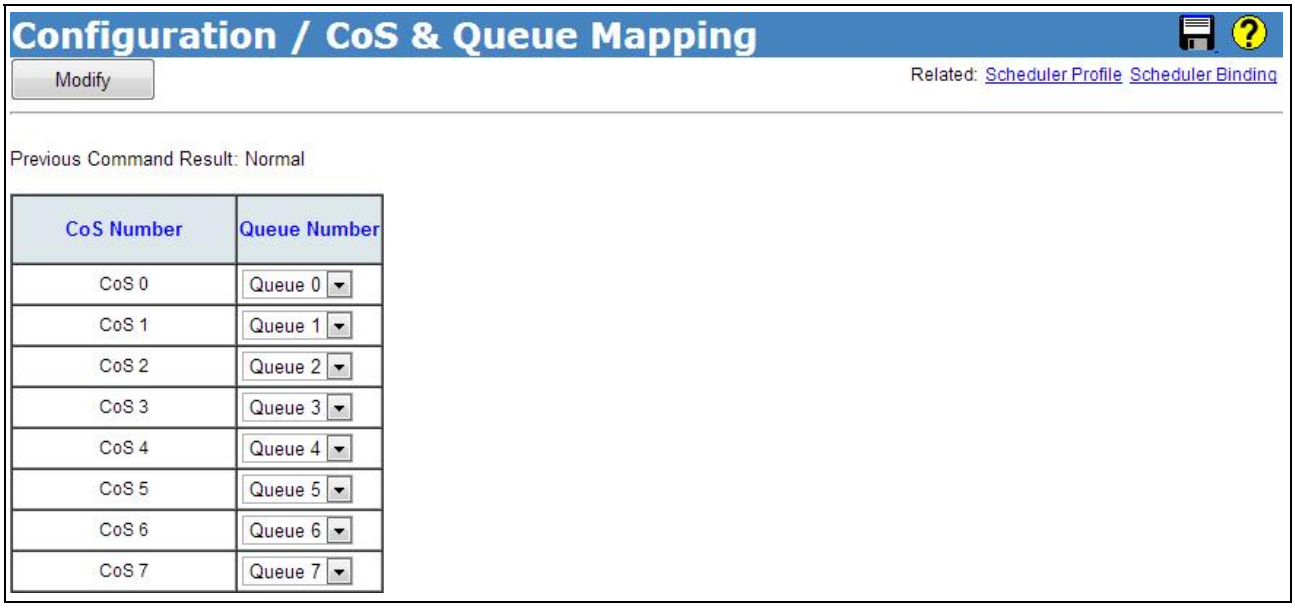
2.3.12.2 Queue Shaper



Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
ID	Bridge port, range is 1 ~ MAX Number of Port.
Mode	Option: Enabled/Disabled, default is Disabled.
Queue 0~3 (Rate)	Queue 0~3, rate range is 1~1000000 Kbps, default is 1000000 Kbps.
Queue 4~7 (Rate)	Queue 4~7, rate range is 1~1000000 Kbps, default is 1000000 Kbps.

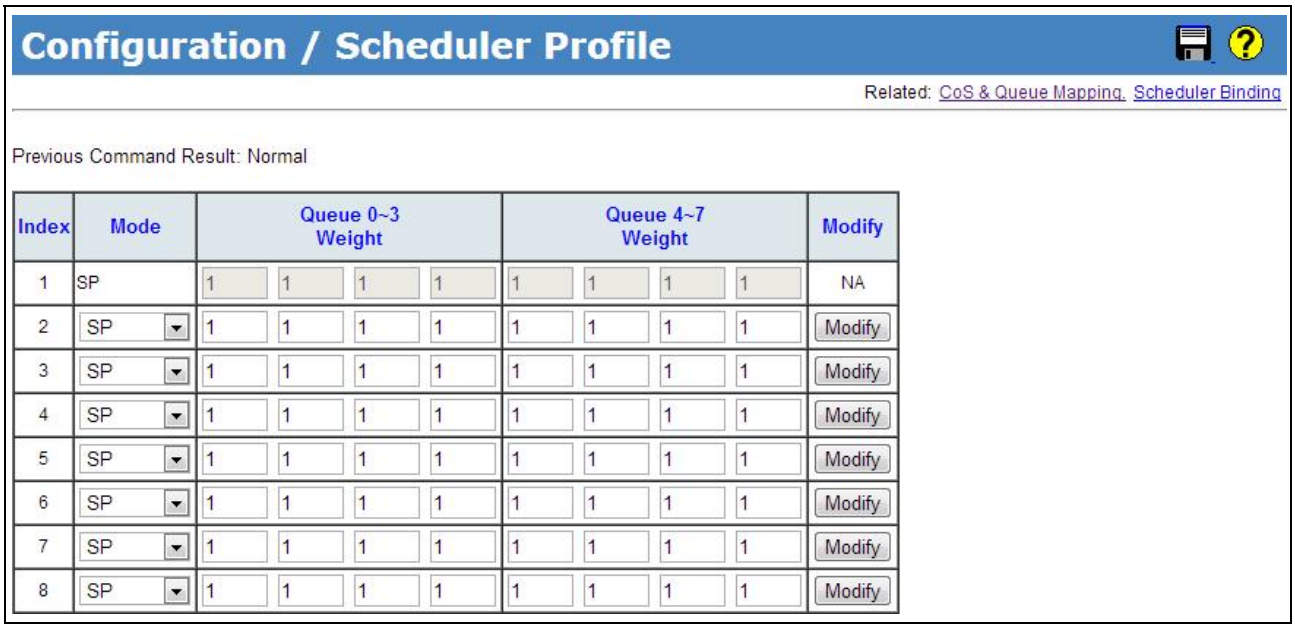
2.3.13 Queue & Scheduler

2.3.13.1 CoS & Queue Mapping



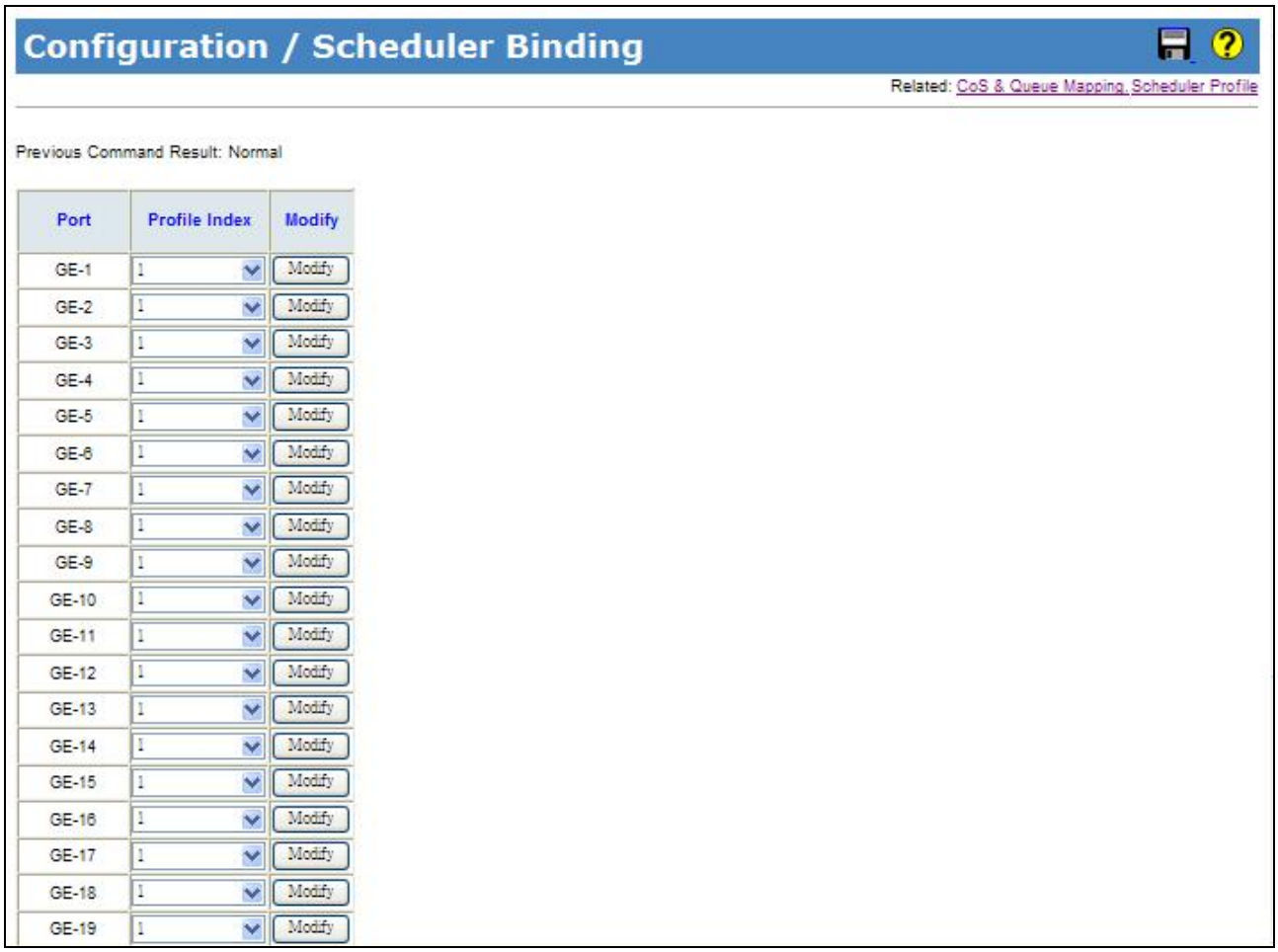
Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
CoS 0	Queue 0~7, default is Queue 0.
CoS 1	Queue 0~7, default is Queue 1.
CoS 2	Queue 0~7, default is Queue 2.
CoS 3	Queue 0~7, default is Queue 3.
CoS 4	Queue 0~7, default is Queue 4.
CoS 5	Queue 0~7, default is Queue 5.
CoS 6	Queue 0~7, default is Queue 6.
CoS 7	Queue 0~7, default is Queue 7.

2.3.13.2 Scheduler Profile



Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
Index	Value range is 1~8.
Mode	Option: SP/SPWRR/WRR, default is SP.
Queue 0~3 weight	Queue 0~3 Weight, range is 1~255, default is 1.
Queue 4~7 weight	Queue 4~7 Weight, range is 1~255, default is 1.

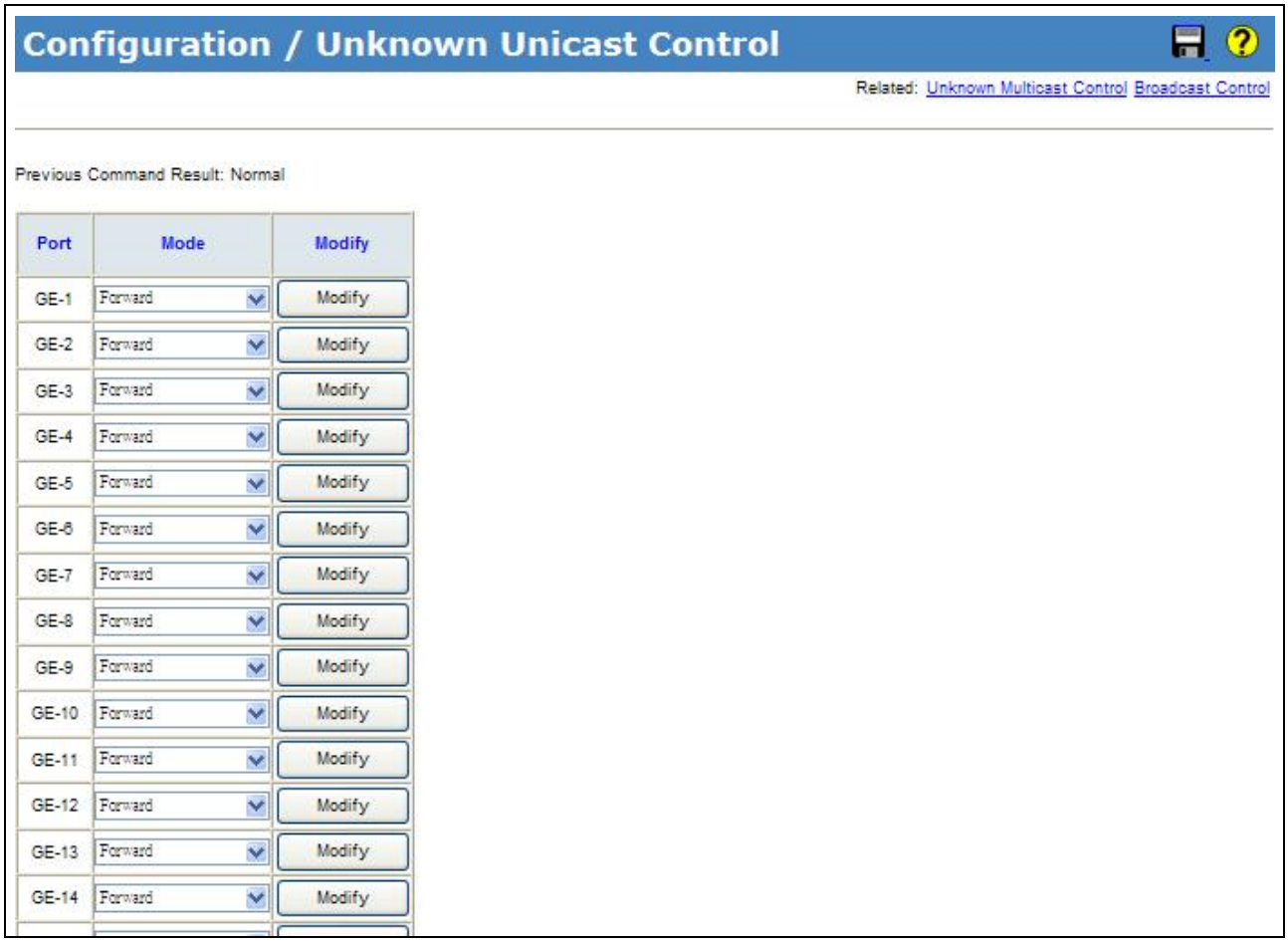
2.3.13.3 Binding



Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
Port	Giga Port GE-1 ~ MAX Number of Port.
Profile Index	Range is 1~8, default is 1.

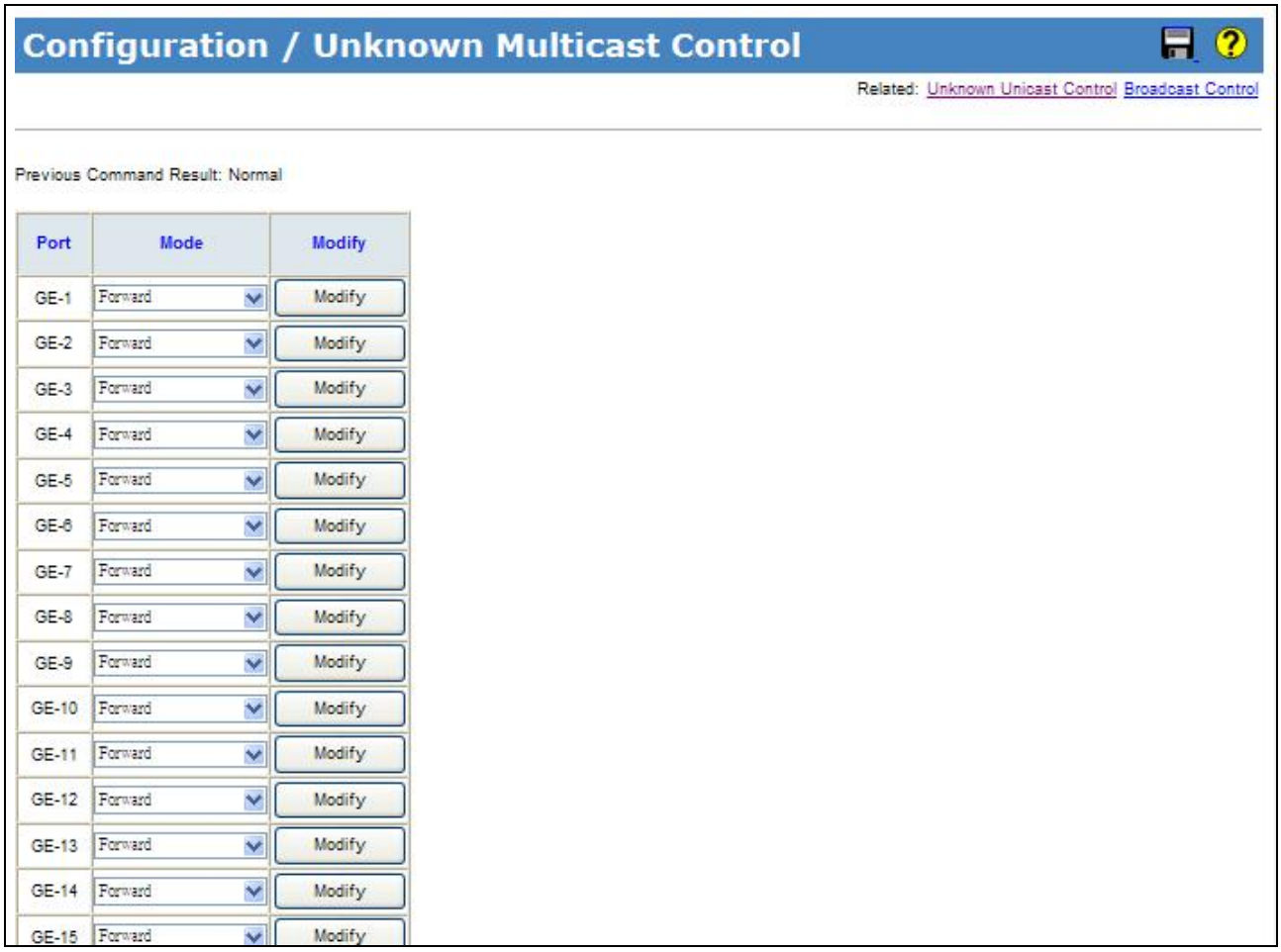
2.3.14 Storm Control

2.3.14.1 Unknown Unicast Control



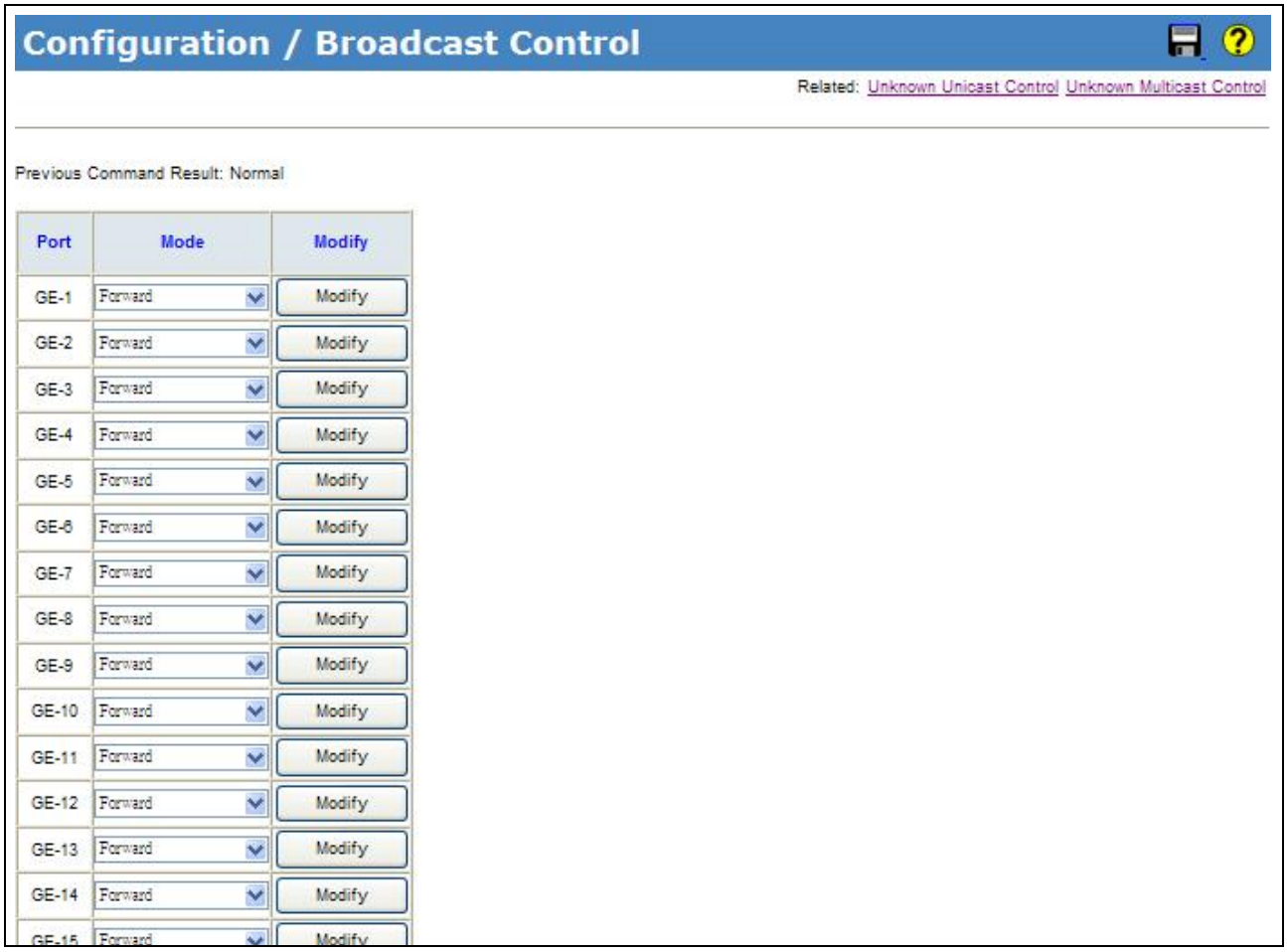
Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
Port	Giga Port GE-1 ~ MAX Number of Port.
Mode	Forward -> Forward unknown unicast packet (default) Block -> Block unknown unicast packet Rate limit -> Control rate. Rate range is 1~1000000 Kbps, default is 1000000 Kbps.

2.3.14.2 Unknown Multicast Control



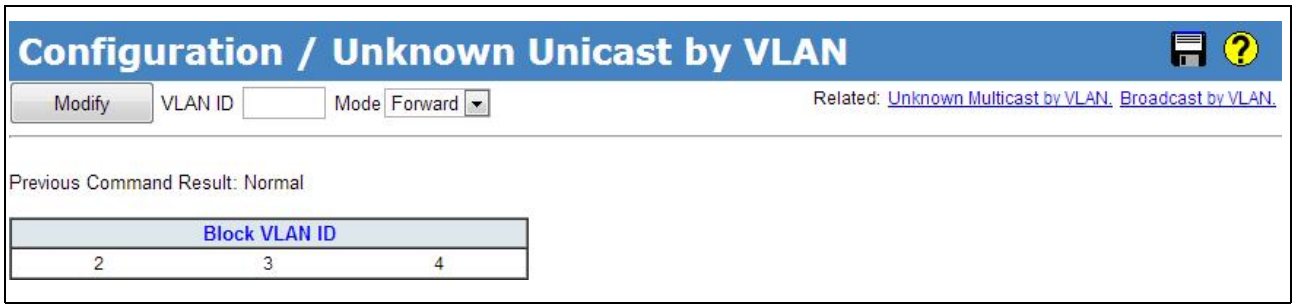
Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
Port	Giga Port GE-1 ~ MAX Number of Port.
Mode	Forward -> Forward unknown unicast packet (default) Block -> Block unknown unicast packet Rate limit -> Control rate. Rate range is 1~1000000 Kbps, default is 1000000 Kbps.

2.3.14.3 Broadcast Control



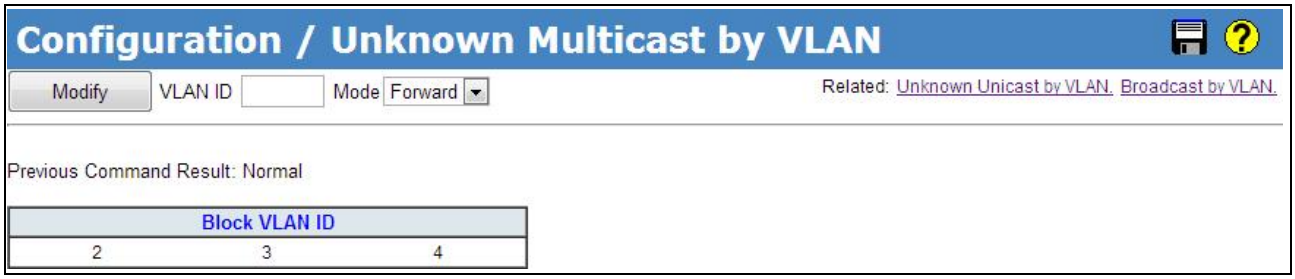
Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
Port	Giga Port GE-1 ~ MAX Number of Port.
Mode	Forward -> Forward broadcast packet (default) Block -> Block broadcast packet Rate limit -> Control rate. Rate range is 1~1000000 Kbps, default is 1000000 Kbps.

2.3.14.4 Unknown Unicast by VLAN



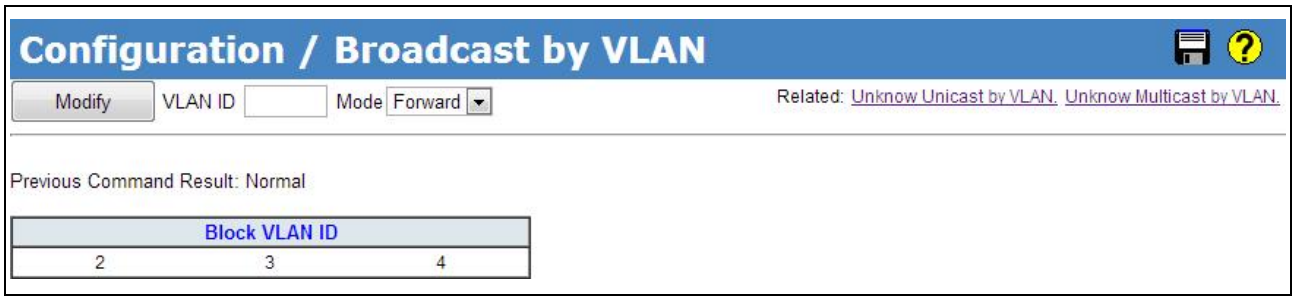
Operation	Modify: 1. Fill VLAN ID 2. Change Mode 3. Click “Modify” button to apply change
Field	Description
VLAN ID	Value range is 1~4094.
Mode	Forward -> Forward unicast packet (default). Block -> Block unicast packet.
Block VLAN ID	All blocked VLAN ID

2.3.14.5 Unknown Multicast by VLAN



Operation	Modify: 1. Fill VLAN ID 2. Change Mode 3. Click “Modify” button to apply change
Field	Description
VLAN ID	Value range is 1~4094.
Mode	Forward -> Forward unknown multicast packet (default). Block -> Block unknown multicast packet.
Block VLAN ID	All blocked VLAN ID

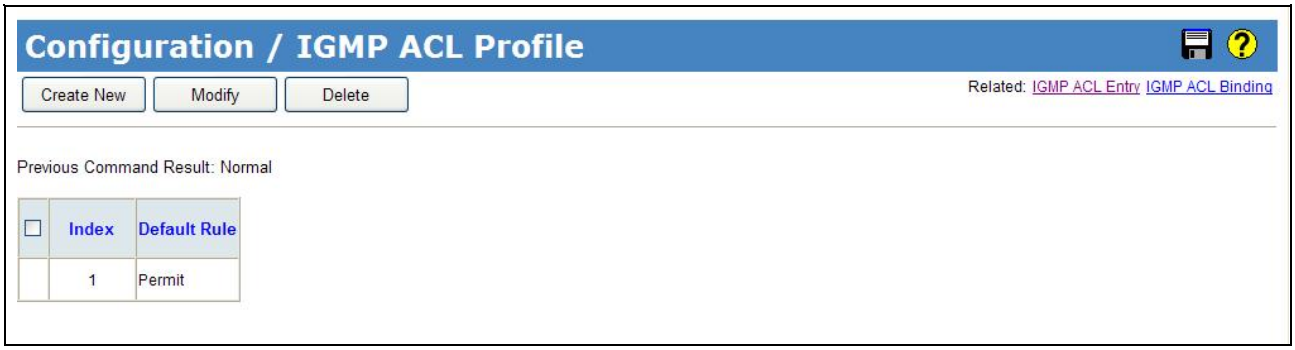
2.3.14.6 Broadcast by VLAN



Operation	Modify: 1. Fill VLAN ID 2. Change Mode 3. Click “Modify” button to apply change
Field	Description
VLAN ID	Value range is 1~4094.
Mode	Forward -> Forward broadcast packet (default). Block -> Block broadcast packet.
Block VLAN ID	All blocked VLAN ID

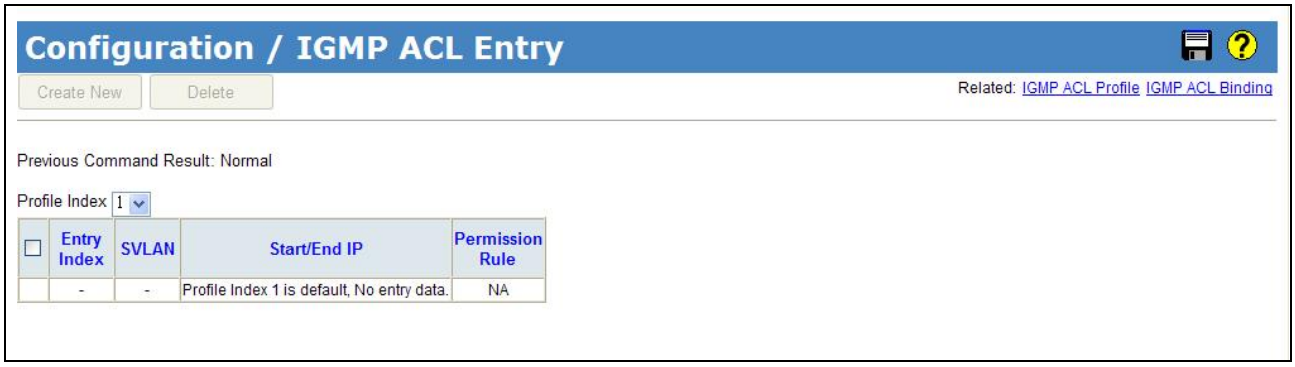
2.3.15 IGMP

2.3.15.1 ACL Profile



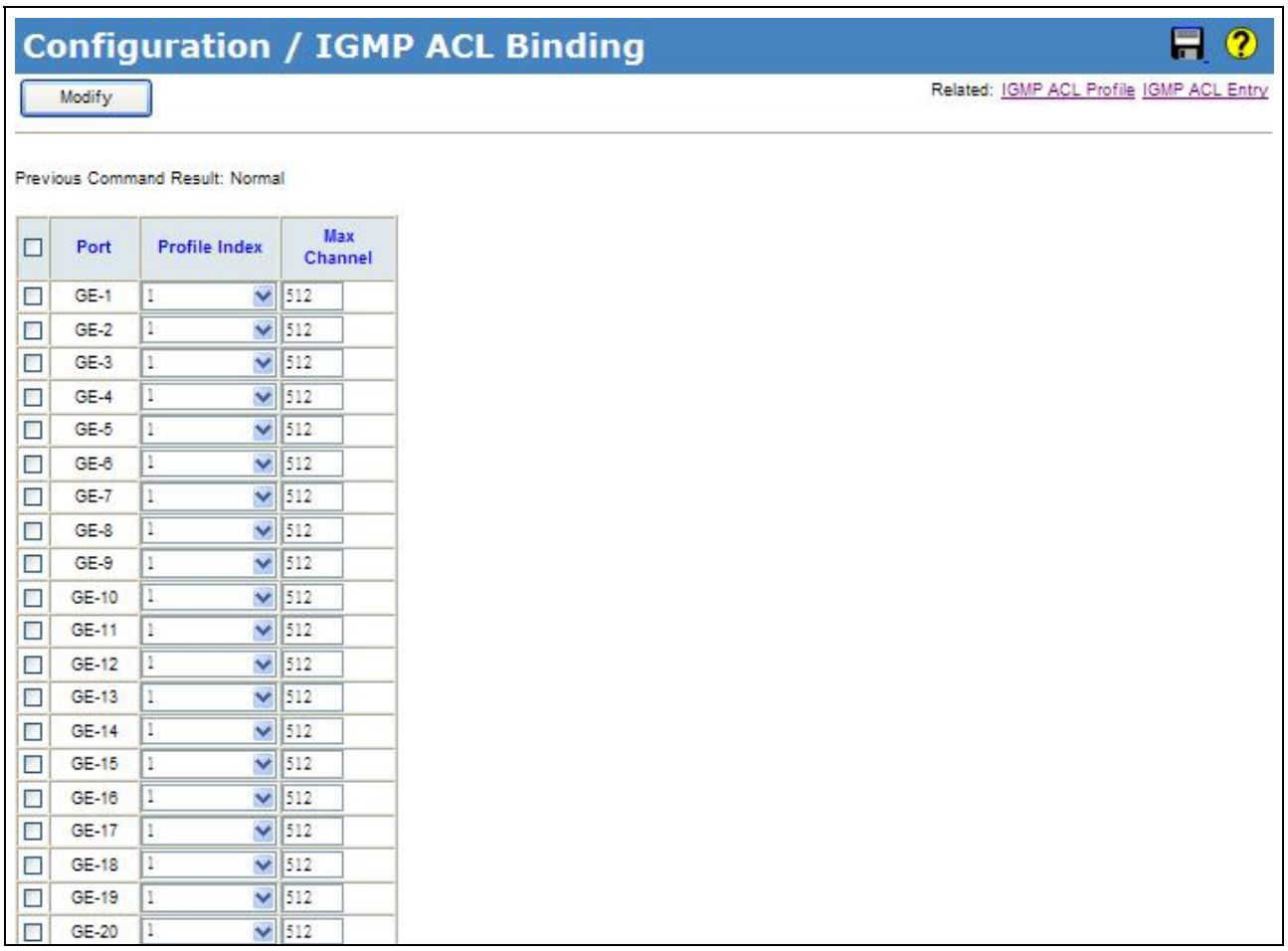
Operation	Create New: 1. Click "Create New" button to create a default profile. 2. Click "Modify" button to modify existing profile. Modify (allow multiple selection): 1. Check up Profile Index and select Default Rule for profile. 2. Click "Modify" button to modify IGMP ACL Profile. Delete: Click Delete button to delete profile. (also allow multiple delete) If profile is in use, delete action will be failed.
Field	Description
Profile Index	IGMP ACL Profile Index: 1~15, but profile 1 is default existing and read-only.
Default Rule	IGMP ACL Default rule: Permit/Deny. Default is permit.

2.3.15.2 ACL Entry



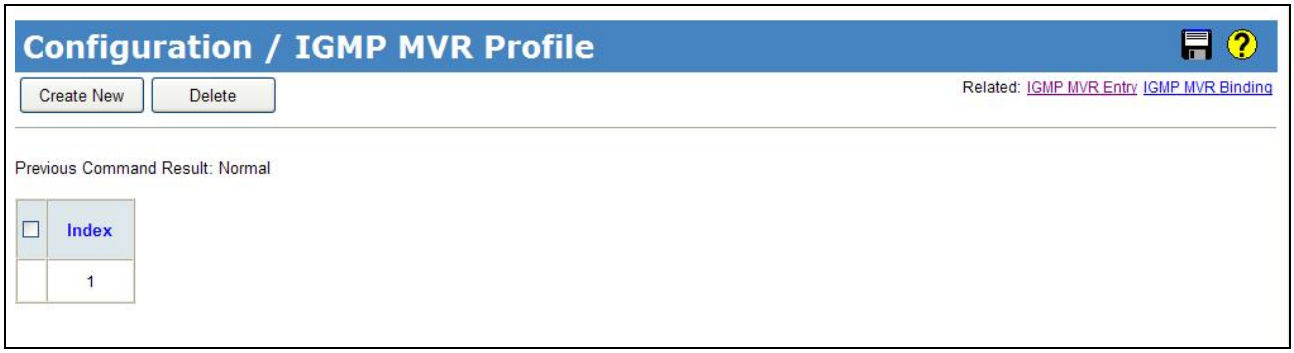
Operation	Create: 1. Click "Create New" button to open new page for create. 2. Fill Entry Index, SVLAN, Start IP, End IP and select Permission Rule. 3. Click "Apply" button to create IGMP ACL entry or click "Cancel" to cancel create. Delete: Check up target entry, click Delete button to delete them. (also allow multiple delete) Refresh: 1. Select Profile index. 2. Click "Refresh" button to refresh current IGMP ACL profile entry(s).
Field	Description
Profile Index	IGMP ACL profile index. Index range is 2~15.
Entry Index	IGMP ACL entry index. Range is 1~32.
SVLAN	IGMP ACL VLAN: VLAN to be Permitted/Denied, 0 is any VLAN.
Start IP ~ End IP	IGMP ACL Start IP address. Range: 224.0.1.0 - 239.255.255.255 Start IP address <= End IP address
Permission Rule	IGMP ACL entry parameter. Default is Permit.

2.3.15.3 ACL Binding



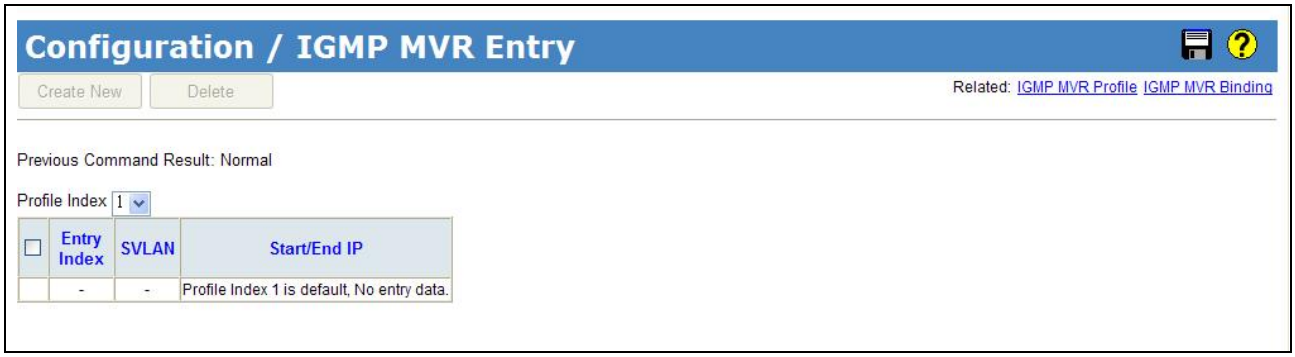
Operation	Modify: 1. Check up the rows to be modified, select ACL Profile and set Max channel. 2. Click "Modify" button to change IGMP ACL Binding.
Field	Description
Port	GE Port: 1 ~ MAX Number of Port.
Profile Index	IGMP ACL profile index: 1~15. Default is 1.
Max channel	Port Max channel. Range is 1~512. Default is 512.

2.3.15.4 MVR Profile



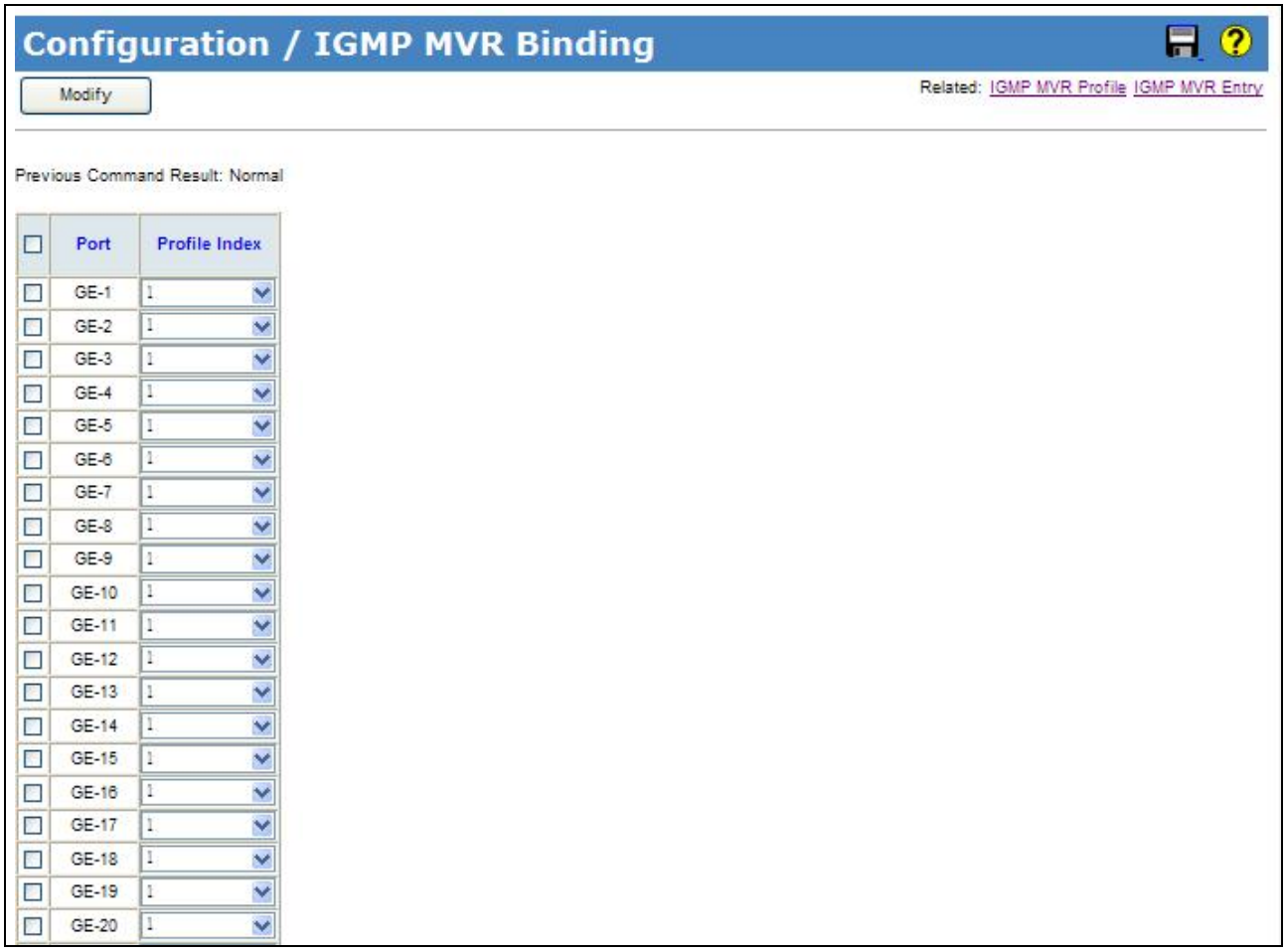
Operation	Create: 1. Click "Create New" button to create a new profile. Modify: 1. Check up Profile Index. 2. Click the Profile Index hyper link to open page for profile entry modification. [or click "Delete" delete Profile, allow multiple delete. If profile is in use, delete action will be failed.]
Field	Description
Profile Index	Profile 1 is default existing and read-only, IGMP MVR Profile 2~15 allow to create.

2.3.15.5 MVR Entry



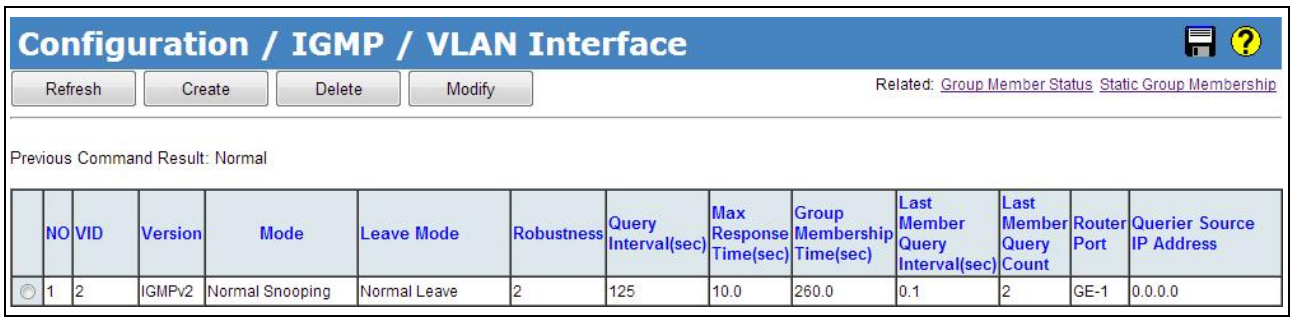
Operation	Create New: 1. Click "Create New" button to open new page for create. 2. Fill Entry Index, SVLAN, Start IP, End IP. 3. Click "Apply" button to create IGMP MVR entry or click "Cancel" to cancel create. Delete: Check up target entry, click Delete button to delete them. (also allow multiple delete) Refresh: 1. Change the Profile Index to refresh the data.
Field	Description
Profile Index	IGMP MVR profile index. Index range is 2~15.
Entry Index	IGMP MVR entry index. Range is 1~32.
SVLAN	IGMP MVR VLAN: VLAN to be Permitted/Denied, 0 is any VLAN..
Start IP ~ End IP	IGMP MVR Start IP address. Range: 224.0.1.0 - 239.255.255.255 Start IP address <= End IP address

2.3.15.6 MVR Binding

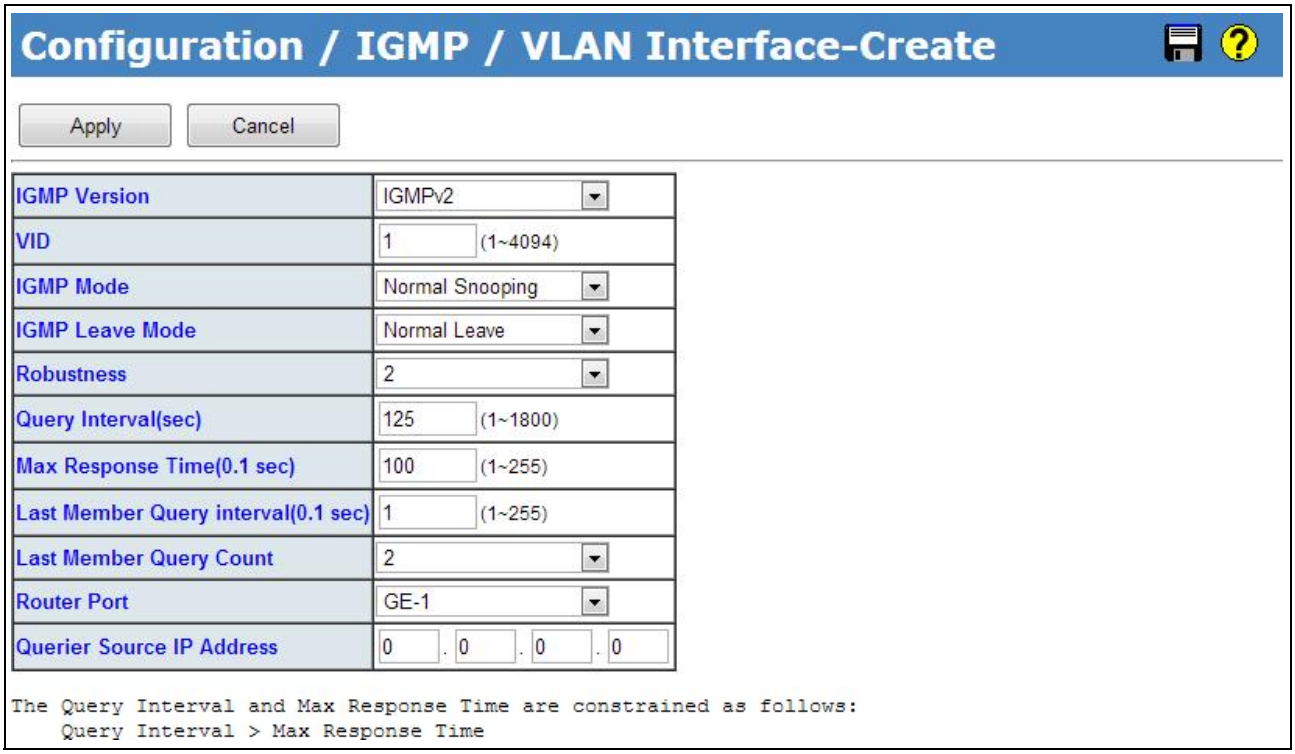


Operation	Modify: 1. Check up the rows to be modified, select MVR Profile. 2. Click "Modify" button to change IGMP MVR Binding.
Field	Description
Port	GE Port: 1 ~ MAX Number of Port
Profile Index	IGMP MVR profile index. Value range is 1~15. Default is 1.

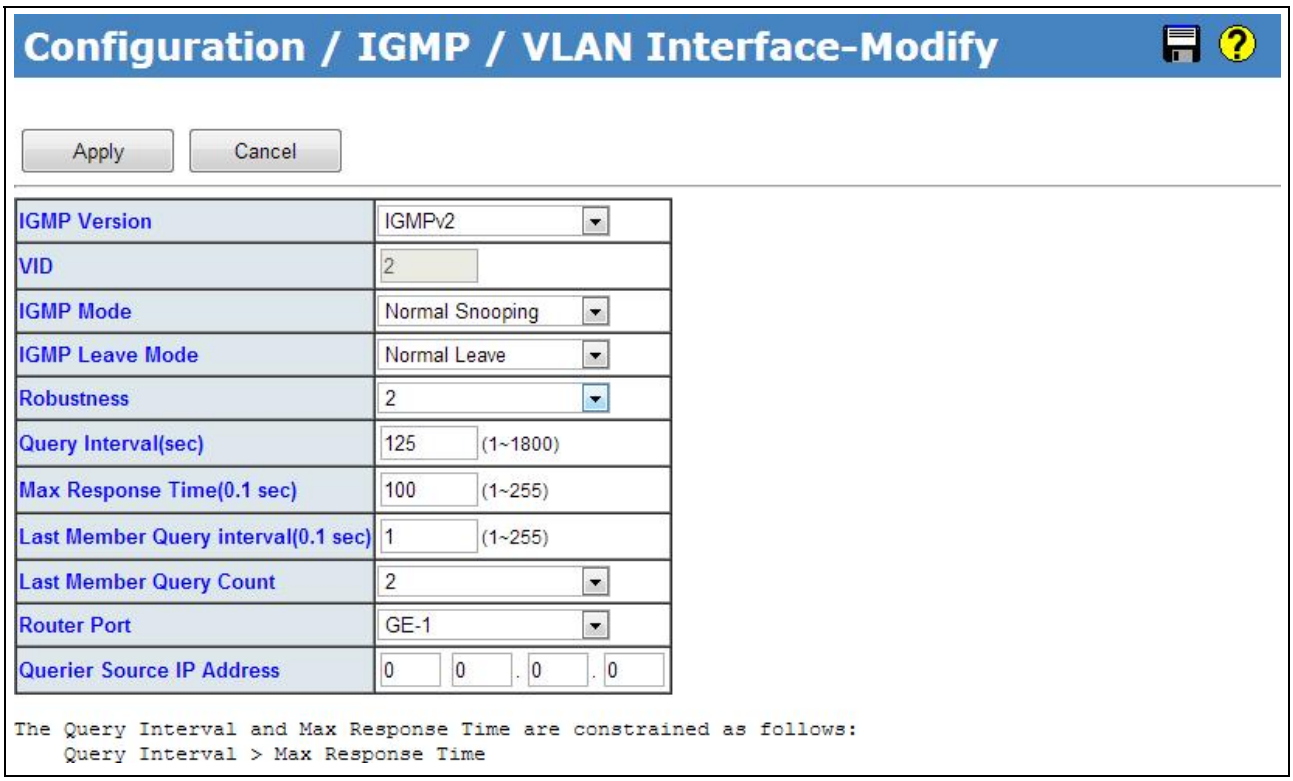
2.3.15.7 VLAN Interface



Create



Modify

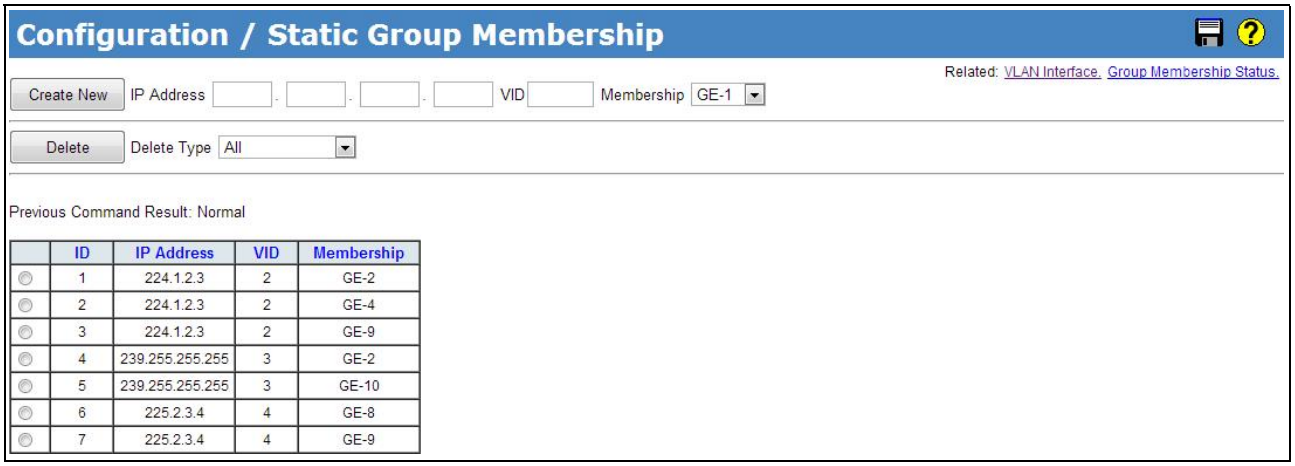


Operation	Refresh: Refresh to get current data. Create: 1. Into Create web page. 2. Setting data 3. Click “Apply” to setting data or click “Cancel” to cancel setting data. Delete: Delete current selected row data. Modify: 1. Into Modify web page. 2. Setting data Click “Apply” to setting data or click “Cancel” to cancel setting data.
Field	Description
NO	Entry Index, max 64.
VID	VLAN ID (1~4094)

Version	IGMP Version: IGMPv2 or IGMPv3.
Run Version	Current running IGMP version.
Mode	IGMP Access Mode: Normal Snooping (default) or Proxy.
Leave Mode	IGMP Leave Mode: Normal Leave (default) or Fast Leave.
Robustness	IGMP VLAN robustness variable. (1~3)
Robustness Run Value	Display QRV value or configured value: To support QRV and QQIC in IGMPv3 mode. Industrial Ethernet Switch support 2 parameters to represent the running Robustness Variable and running Query Interval. These 2 parameters is support for each IGMP VLAN interface. When IGMPv3 proxy mode, these 2 value will apply the value which get from IGMPv3 Query packet. In other mode, the value is applied the configured value.
Query Interval (sec)	IGMP VLAN query interval.(unit: sec) Default: 125 seconds Limitation: Query Interval>Max Response Time
Query Interval Run Value (sec)	Display QQIC value or configured value: To support QRV and QQIC in IGMPv3 mode. Industrial Ethernet Switch support 2 parameters to represent the running Robustness Variable and running Query Interval. These 2 parameters is support for each IGMP VLAN interface. When IGMPv3 proxy mode, these 2 value will apply the value which get from IGMPv3 Query packet. In other mode, the value is applied the configured value
Max Response Time	IGMP VLAN max response time. Default: 10.0 seconds. (Display in second, configure it with 0.1 second) The Query Interval and Max Response Time are constrained as follows: Query Interval > Max Response Time
Group Membership Time	IGMP Group Membership Time (Unit: sec) Read-only
Last Member Query Interval	IGMP VLAN last member query interval. (Display in second, configure it with 0.1 second) Default: 0.1 second
Last Member Query Count	IGMP VLAN last member query count, range 1~3. Default: 2
Router Port	IGMP VLAN interface: Bridge port:GE-1 ~ Port MAX Number. Default value is 1

V2 Present Time(sec)	Read-only, it can be tuned by (last RunQueryInterval *10*robustness + maxRespTime)
Querier Source IP Address	Querier Source IP Address. Default: 0.0.0.0

2.3.15.8 Static Group Membership

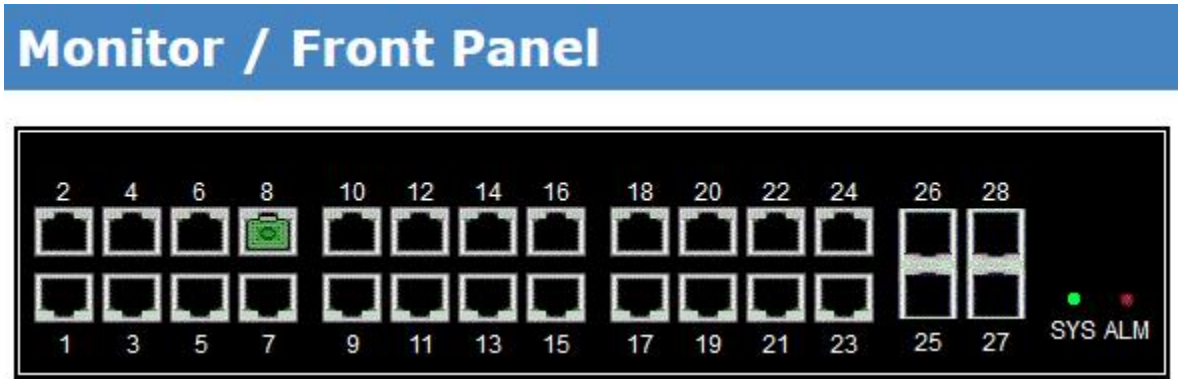


Operation	Create New: 1. Fill IP Address, VID and select Membership. 2. Click “Create New” button to create new data. Delete: 1. Select Delete Type "All/ Membership/ VID/ Selected" 2. If delete type is “Port”, then select a port 3. If delete type is "VID", then fill a VID 4. If delete type is "Selected", then select one row 5. Click “Delete” button to delete data.
Field	Description
ID	Entry Index, value range is 1~128.
IP Address	Group Membership IP Address, range is 224.0.0.0~239.255.255.255
VID	VLAN ID, range is 1 ~ 4094.
Membership	Giga Port, GE-1 ~ MAX Number of Port.

2.4 Status

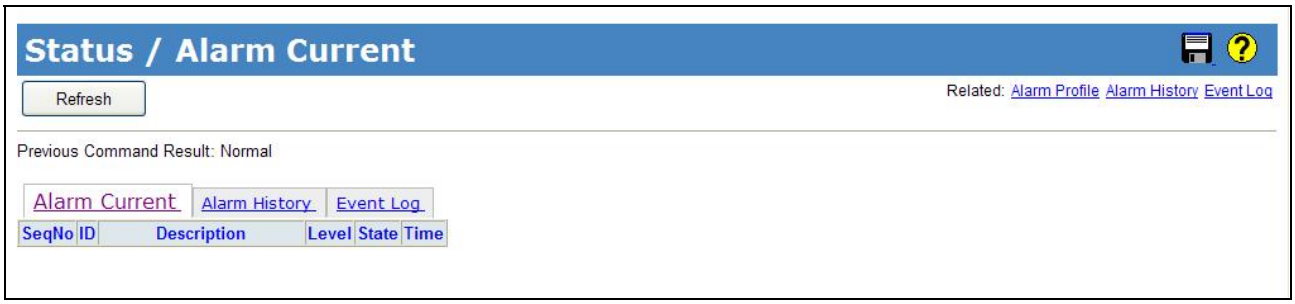
2.4.1 Front Panel

This page display the real status of system's panel.

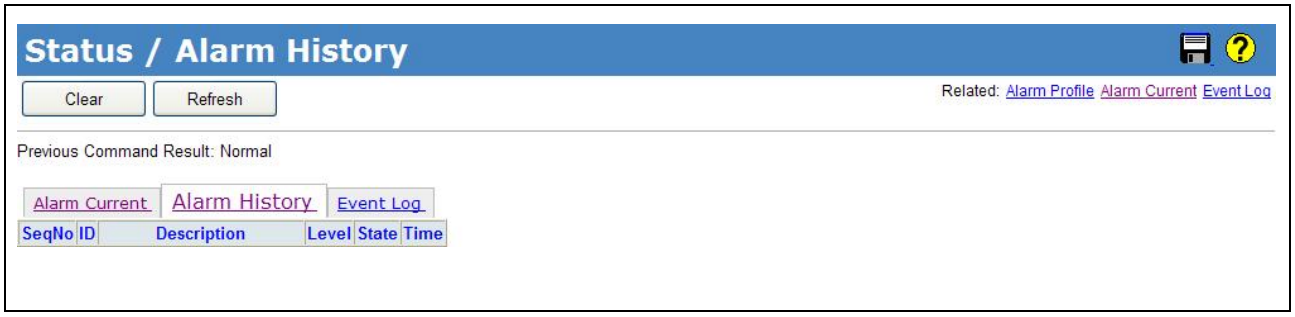


2.4.2 Alarm/Event

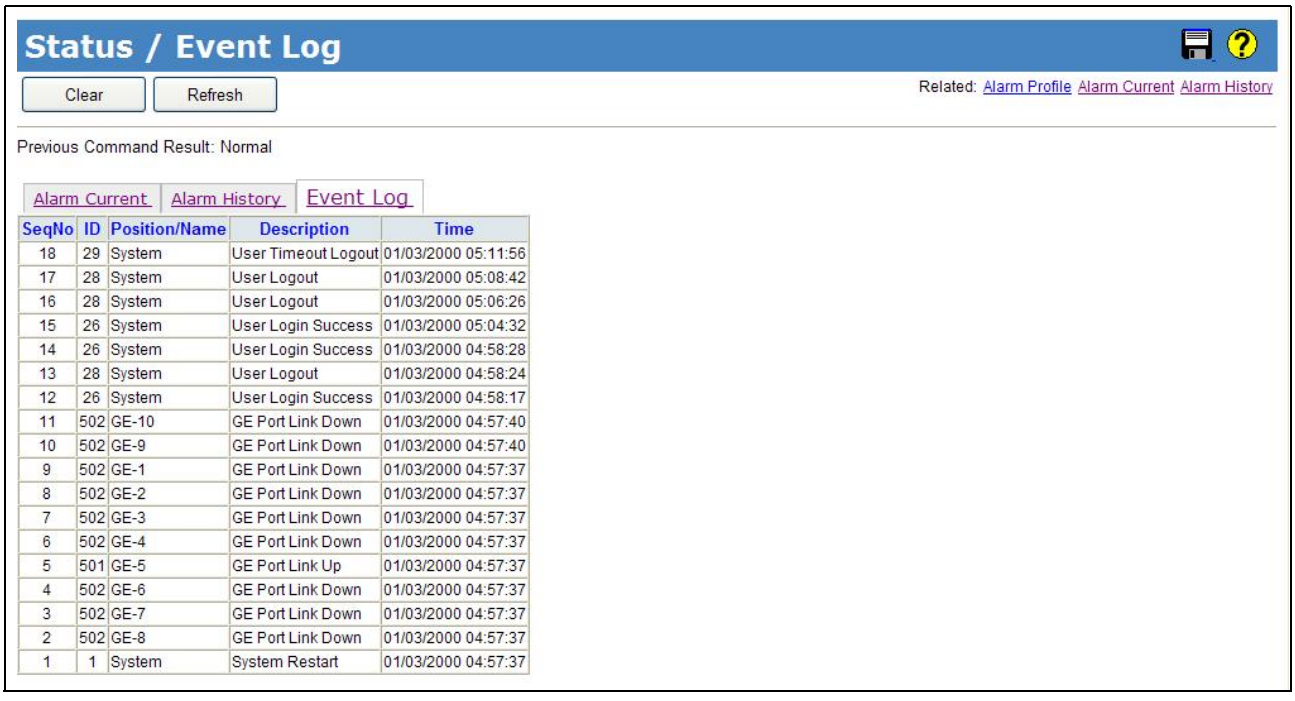
Alarm Current



Alarm History



Event Log



SeqNo	ID	Position/Name	Description	Time
18	29	System	User Timeout Logout	01/03/2000 05:11:56
17	28	System	User Logout	01/03/2000 05:08:42
16	28	System	User Logout	01/03/2000 05:06:26
15	26	System	User Login Success	01/03/2000 05:04:32
14	26	System	User Login Success	01/03/2000 04:58:28
13	28	System	User Logout	01/03/2000 04:58:24
12	26	System	User Login Success	01/03/2000 04:58:17
11	502	GE-10	GE Port Link Down	01/03/2000 04:57:40
10	502	GE-9	GE Port Link Down	01/03/2000 04:57:40
9	502	GE-1	GE Port Link Down	01/03/2000 04:57:37
8	502	GE-2	GE Port Link Down	01/03/2000 04:57:37
7	502	GE-3	GE Port Link Down	01/03/2000 04:57:37
6	502	GE-4	GE Port Link Down	01/03/2000 04:57:37
5	501	GE-5	GE Port Link Up	01/03/2000 04:57:37
4	502	GE-6	GE Port Link Down	01/03/2000 04:57:37
3	502	GE-7	GE Port Link Down	01/03/2000 04:57:37
2	502	GE-8	GE Port Link Down	01/03/2000 04:57:37
1	1	System	System Restart	01/03/2000 04:57:37

Operation	Refresh: 1. Click "Refresh" button to refresh data. Clear: 1. Click "Clear" to clear data.
Field	Description
SeqNo	Alarm/Event Sequential Number.
ID	Alarm/Event Type ID.
Description	Alarm/Event Type Description.
Position/Name	Event Position/Name.
Level	No matter alarm is major/minor, Alarm LED color always be red.
State	Alarm State. Value is Set/Cleared.
Time	Time.

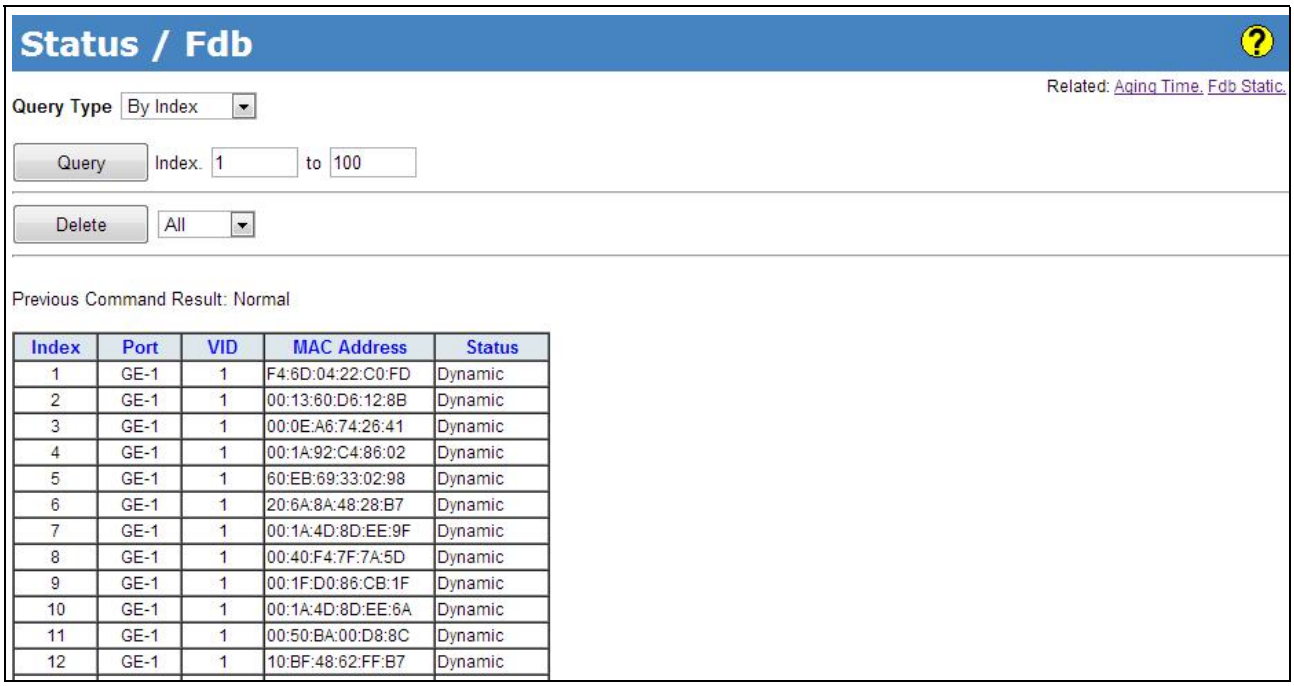
2.4.3 DHCP Binding (Supported in 8028GX28 only)

Use the Monitor / DHCP Binding screen to display DHCP Binding Table.

The DHCP binding table contains the IP address,
MAC address, start/end time and VLAN interface.

Select "Display All" to show all DHCP binding entries ,
or show specific binding per VLAN interface.

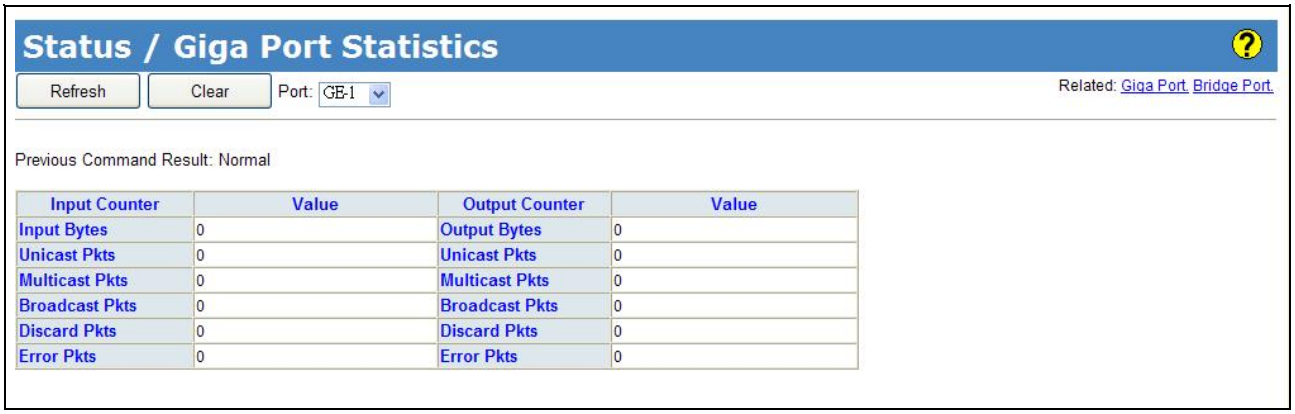
2.4.4 Fdb



Index	Port	VID	MAC Address	Status
1	GE-1	1	F4:6D:04:22:C0:FD	Dynamic
2	GE-1	1	00:13:60:D6:12:8B	Dynamic
3	GE-1	1	00:0E:A6:74:26:41	Dynamic
4	GE-1	1	00:1A:92:C4:86:02	Dynamic
5	GE-1	1	60:EB:69:33:02:98	Dynamic
6	GE-1	1	20:6A:8A:48:28:B7	Dynamic
7	GE-1	1	00:1A:4D:8D:EE:9F	Dynamic
8	GE-1	1	00:40:F4:7F:7A:5D	Dynamic
9	GE-1	1	00:1F:D0:86:CB:1F	Dynamic
10	GE-1	1	00:1A:4D:8D:EE:6A	Dynamic
11	GE-1	1	00:50:BA:00:D8:8C	Dynamic
12	GE-1	1	10:BF:48:62:FF:B7	Dynamic

Operation	Query: 1. Select a Query Type 2. Fill query condition 3. Modify query record range 4. Click “Query” button to query Delete: 1. Select delete type (All/ By VID/By Port) 2. Fill delete condition 3. Click “Delete” to delete data.
Field	Description
Port	GE-1 ~ MAX Number of Port or Trunk Group.
VID	VLAN ID: 1~4094
MAC Address	Format xx:xx:xx:xx:xx:xx
Status	Data type: Dynamic/ Static

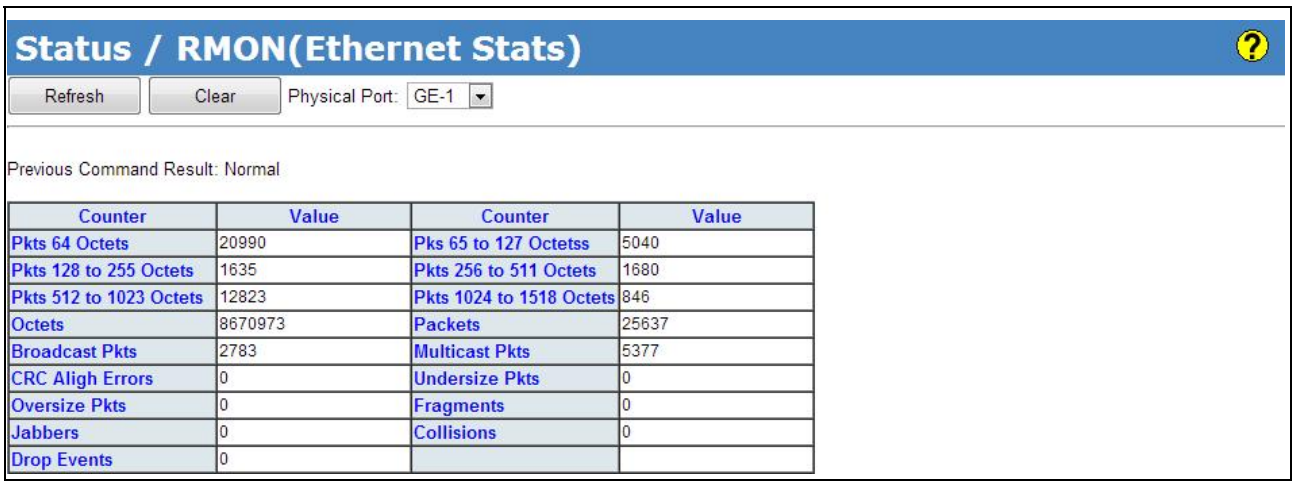
2.4.5 Giga Port Statistics



Operation	Refresh: 1. Fill query condition (Port) 2. Refresh current data. Clear: 1. Select clear port. 2. Click “Clear” to clear setting port data.
Field	Description
Port	Range: GE-1 ~Maximum Number of Port.
Input Bytes	The total number of octets received on the interface, including framing characters.
Input Unicast Pkts	The number of packets, delivered by this sub-layer to a higher (sub-) layer, which were not addressed to a multicast or broadcast address at this sub-layer.
Input Multicast Pkts	The number of packets, delivered by this sub-layer to a higher (sub-) layer, which were addressed to a multicast address at this sub-layer. For a MAC layer protocol, this includes both Group and Functional address.
Input Broadcast Pkts	The number of packets, delivered by this sub-layer to a higher (sub-) layer, which were addressed to a broadcast address at this sub-layer.
Input Discard Pkts	The number of inbound packets which were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol. One possible reason for discarding such a packet could be to free up buffer space.

Input Error Pkts	For packet-oriented interfaces, the number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol. For character-oriented or fixed-length interfaces, the number of inbound transmission units that contained errors preventing them from being deliverable to a higher-layer protocol.
Output Bytes	The total number of octets transmitted out of the interface, including framing characters.
Output Unicast Pkts	The total number of packets that higher-level protocols requested be transmitted, and which were not addressed to a multicast or broadcast address at this sub-layer, including those that were discarded or not sent.
Output Multicast Pkts	The total number of packets that higher-level protocols requested be transmitted, and which were addressed to a multicast address at this sub-layer, including those that were discarded or not sent. For a MAC layer protocol, this includes both Group and Functional address.
Output Broadcast Pkts	The total number of packets that higher-level protocol requested be transmitted, and which were addressed to a broadcast address at this sub-layer, including those that were discarded or not sent.
Output Discard Pkts	The number of outbound packets which were chosen to be discarded even though no errors had been detected to prevent their being transmitted. One possible reason for discarding such a packet could be to free up buffer space.
Output Error Pkts	For packet-oriented interfaces, the number of outbound packets that could not be transmitted because of errors. For character-oriented or fixed-length interfaces, the number of outbound transmission units that could not be transmitted because of errors.

2.4.6 RMON

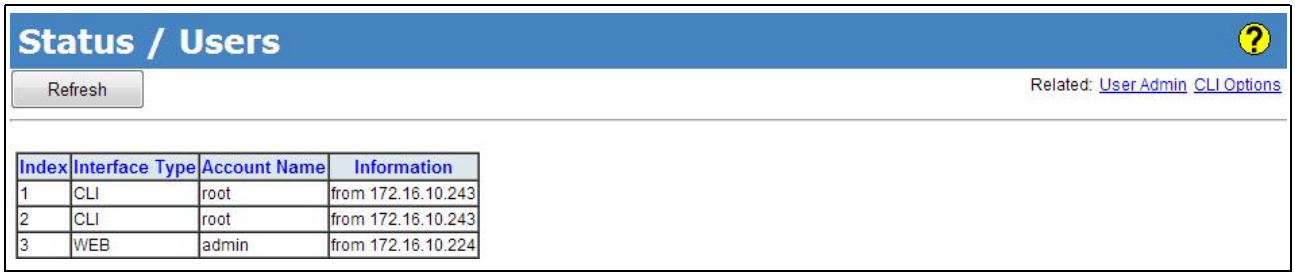


Counter	Value	Counter	Value
Pkts 64 Octets	20990	Pks 65 to 127 Octetss	5040
Pkts 128 to 255 Octets	1635	Pkts 256 to 511 Octets	1680
Pkts 512 to 1023 Octets	12823	Pkts 1024 to 1518 Octets	846
Octets	8670973	Packets	25637
Broadcast Pkts	2783	Multicast Pkts	5377
CRC Aligh Errors	0	Undersize Pkts	0
Oversize Pkts	0	Fragments	0
Jabbers	0	Collisions	0
Drop Events	0		

Operation	Refresh: Click “Refresh” button to refresh current data. Clear: 1. Select clear port. 2. Click “Clear” to clear setting physical port data.
Field	Description
Pkts 64 Octets	Total number of packets (including bad packets) received that were 64 octets in length.
Pkts 65 to 127 Octets	Total number of packets (including bad packets) received that were between 65 and 127 octets in length.
Pkts 128 to 255 Octets	Total number of packets (including bad packets) received that were between 128 and 255 octets in length.
Pkts 256 to 511 Octets	Total number of packets (including bad packets) received that were between 256 and 511 octets in length.
Pkts 512 to 1023 Octets	Total number of packets (including bad packets) received that were between 512 and 1023 octets in length.
Pkts 1024 to 1518 Octets	Total number of packets (including bad packets) received that were between 1024 and 1518 octets in length.
Octets	The total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).

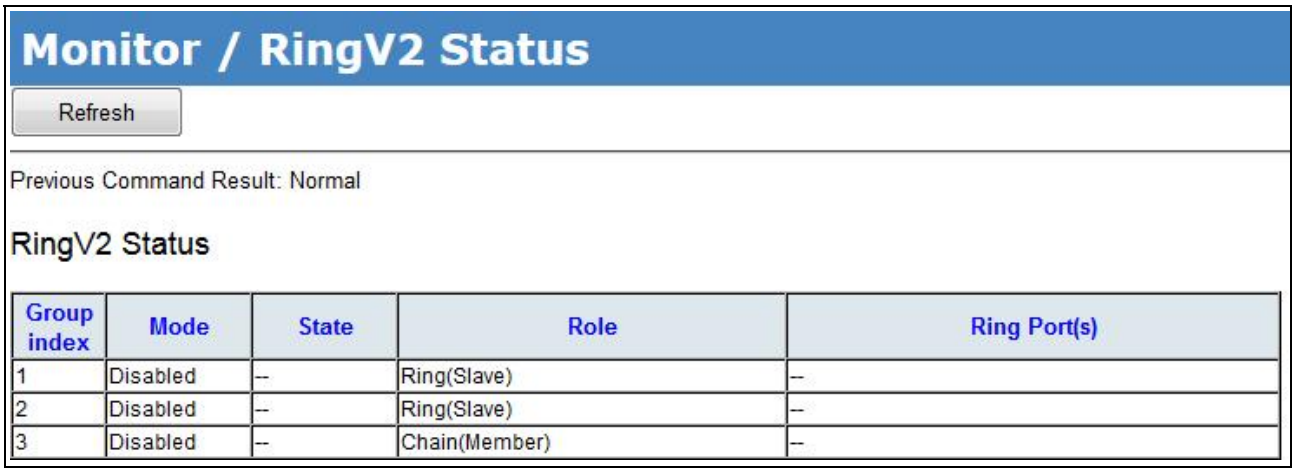
Packets	The total number of packets (including bad packets, broadcast packets, and multicast packets)received
Broadcast Pkts	The total number of good packets received that were directed to the broadcast address. Note that this does not include multicast packets
Multicast Pkts	The total number of good packets received that were directed to a multicast address. Note that this number does not include packets directed to the broadcast address.
CRC Align Errors	The total number of packets received that had a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets, inclusive, but had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
Undersize Pkts	The total number of packets received that were less than 64 octets long (excluding framing bits, but including FCS octets) and were otherwise well formed.
Oversize Pkts	The total number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed.
Fragments	The total number of packets received that were less than 64 octets in length (excluding framing bits but including FCS octets) and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
Jabbers	The total number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets), and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
Collisions	The best estimate of the total number of collisions on this Ethernet segment.
Drop Events	The total number of events in which packets were dropped by the probe due to lack of resources. Note that this number is not necessarily the number of packets dropped; it is just the number of times this condition has been detected.

2.4.7 Users



Operation	Refresh: Click “Refresh” button to refresh current data.
Field	Description
Index	Show the index of login user list.
Interface Type	Show the mode of access. Possible values Console, CLI, Web.
Account Name	Show the account name of the user.
Information	Show more information about the user, including IP address of the management host.

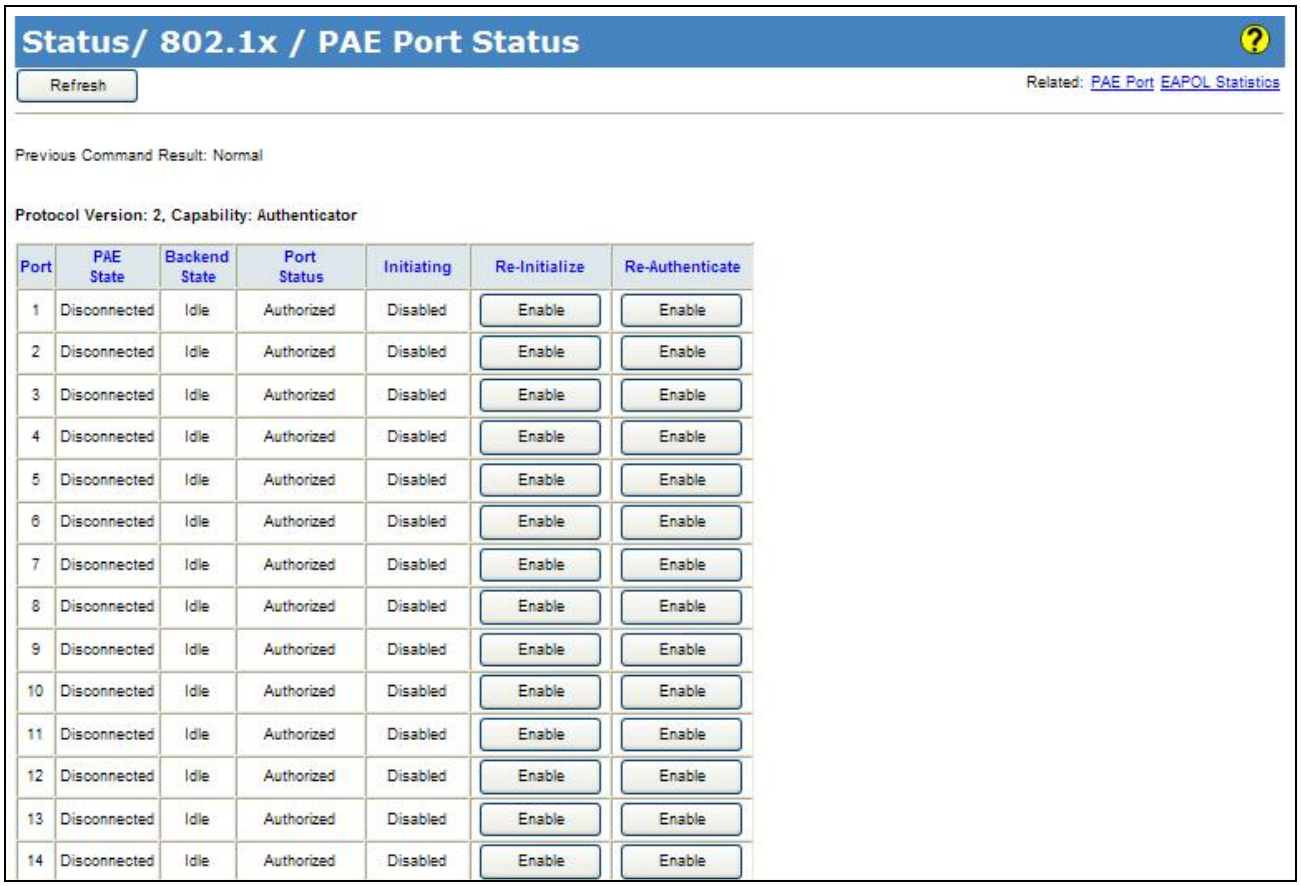
2.4.8 Ring Protection Status



Refresh	Refresh: Click “Refresh” button to refresh current data.
Group Index	The group index. This parameter is used for easy to identify the ring when user to configure it.
Mode	It indicates whether the group is enabled
Role	It indicates that the group is configured for what role
States	When ring is completeness, it will show "Normal". When ring is not completeness, at least one link is down, it will show "Fail"
Ring Port(s)	Describes current status of ring port(s)

2.4.9 802.1x

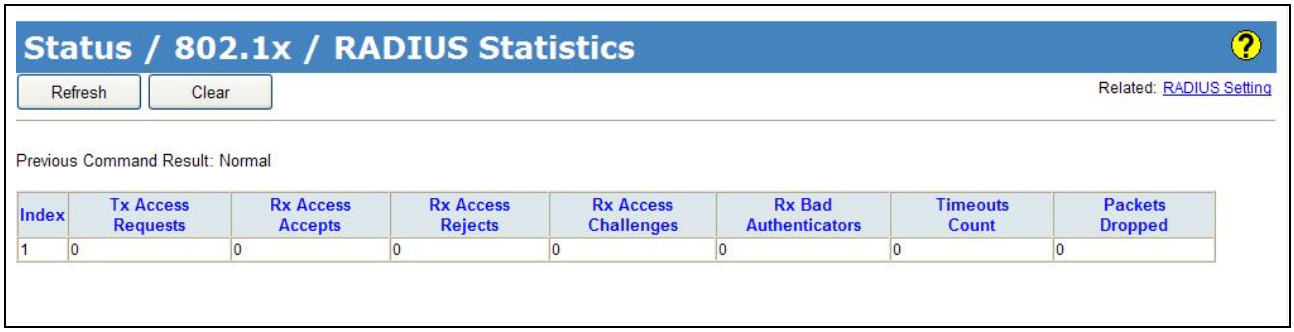
2.4.9.1 PAE Port Status



Operation	Refresh: Click “Refresh” button to refresh current data.
Field	**Description**
Port	The index of PAE Port: Value Range 1 ~ MAX Number of Port.
PAE State	The authenticator status of PAE port: Possible state: Initialize Disconnected Authenticating Authenticated Aborting

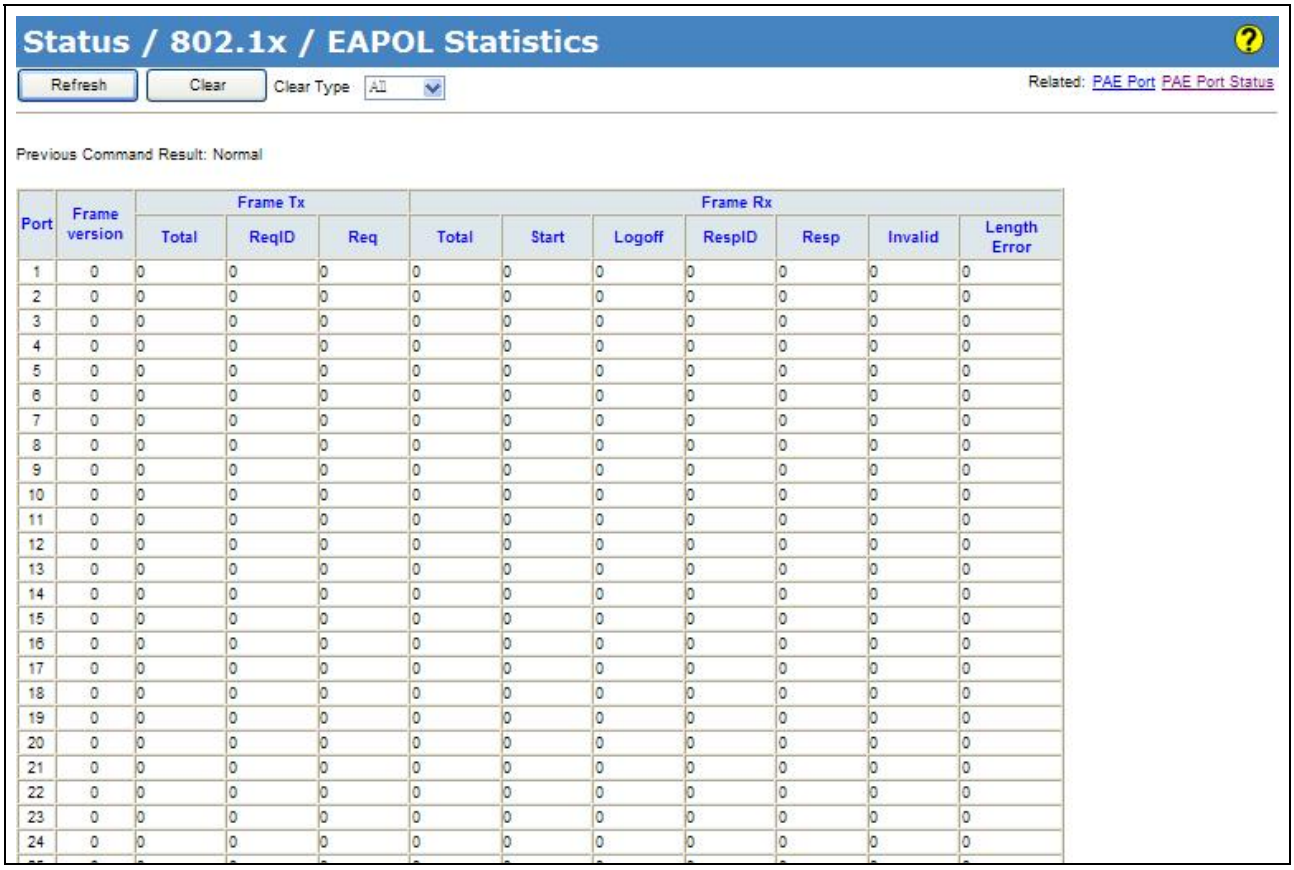
	Held Force Auth Force Unauth
Backend State	The number of RADIUS Access-Accept received from RADIUS server. Range: 0~65535.
Rejects	The backend authenticator status of PAE port. Possible state: Initialize Idle Request Response Success Fail Timeout Ignore
Port Status	The authentication status of PAE port. Possible state: Authorized/Unauthorized
Initiating	Enable for force PAE port re-initialize. Option: Disable
Re-Initialize	Set Enable to force PAE port re-initialize.
Re-Authenticate	Set Enable to force PAE port re-authenticate.

2.4.9.2 RADIUS Statistics



Operation	Refresh: Click “Refresh” button to refresh current data. Clear: Click "Clear" button to reset the counters.
Field	Description
Index	The index of RADIUS Server: Current only support 1 RADIUS server
Requests	The number of RADIUS Access-Request sent to RADIUS server Range 0~65535.
Accepts	The number of RADIUS Access-Accept received from RADIUS server: Range 0~65535.
Rejects	The number of RADIUS Access-Reject received from RADIUS server: Range 0~65535.
Challenges	The number of RADIUS Access-Challenge received from RADIUS server: Range 0~65535.
Bad Authenticators	The number of invalid RADIUS response packet received from RADIUS server: Range 0~65535.
Timeout	The number of server Timeout happens on Backend Authentication state machine: Range 0~65535
Packets Dropped	The number of packet from RADIUS server to be silent drop by Authenticator Range 0~65535

2.4.9.3 EAPOL Statistics



Operation	Clear: 1. Select "Clear Type". 2. If clear type is "Port", then select port number to be cleared. 3. Click "Clear" button.
Field	Description
Port	The index of PAE port: Value range 1 ~ MAX Number of port.
Protocol Version	The protocol version number carried in the most recently received EAPOL frame. Range 0~65535.
Frame Tx	The number of EAPOL frames of any type that has been transmitted. Range 0~65535.
Req Id Frame Tx	The number of EAP Req/Id frames that have been transmitted. Range 0~65535.

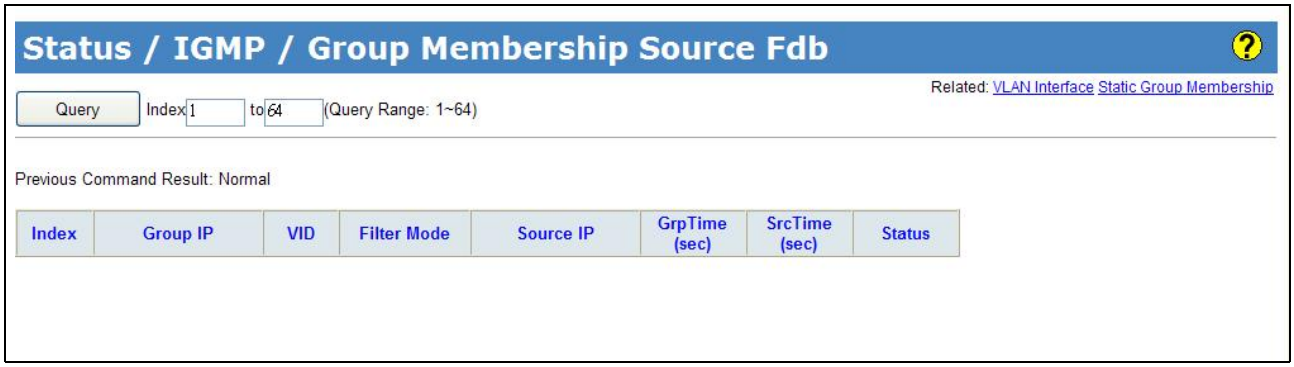
Req Frame Tx	The number of EAP Request frames (other than Req/Id frames) that have been transmitted. Range 0~65535.
Frame Rx	The number of valid EAPOL frames of any type that has been received. Range 0~65535.
Start Frame Rx	The number of EAPOL Start frames that have been received. Range 0~65535.
Logoff Frame Rx	The number of EAPOL Logoff frames that have been received. Range 0~65535.
Resp Id Frame Rx	The number of EAP Resp/Id frames that have been received. Range 0~65535.
Resp Frame Rx	The number of valid EAP Response frames(other than Resp/Id frames) that have been received. Range 0~65535.
Invalid Frame Rx	The number of EAPOL frames that have been received by this Authenticator in which the frame type is not recognized. Range 0~65535.
Length Error Frame Rx	The number of EAPOL frames that have been received by this Authenticator in which the Packet Body Length field is invalid. Range 0~65535.

2.4.10 IGMP

2.4.10.1 Group Membership

Operation	Query: 1. Select Query Type 2. Fill query condition 3. Modify query record range (Index range) 4. Click “Query” button to query data. Delete: 1. Select Delete Type 2. Fill VLAN ID when delete type is “By VID” 3. Select one membership when delete type is “By Membership” Click “Delete” button to delete data.
Field	Description
Index	Index, value range 1~512
IP Address	Group IP Address.
VID	VLAN ID, range 1~4094
Filter Mode	Multicast FDB entry Filter Mode.
Membership	Bridge Port ID, range GE-1 ~ MAX Number of Port.
Time (sec)	Remain Time, unit is second
Status	Group Membership status, Dynamic or Static.

2.4.10.2 Group Membership Source Fdb



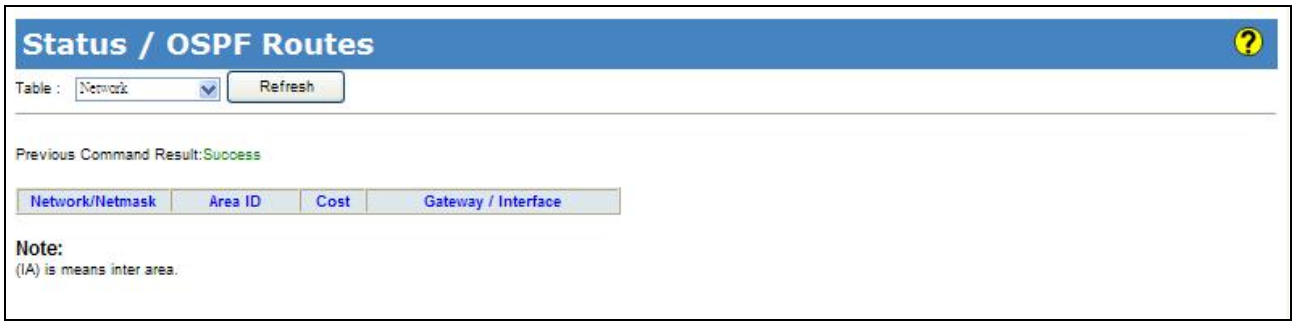
Operation	Query: 1. Select Query Type 2. Fill query condition (Index 1~64) 3. Click “Query” button to query data.
Field	Description
Index	Multicast Source FDB table. Max entry size: 64
Group IP	Multicast Source FDB group IP address.
VID	Multicast Source FDB VLAN ID, range 1~4094
Filter Mode	Multicast Source FDB Filter Mode: Include/Exclude In INCLUDE mode, the GroupRemainTime has no timeout. In EXCLUDE mode, the block list's source has no timeout.
Source IP	Source IP Address
GrpTime(sec)	Group Remain Time: if it show "--", represents time is 0.
SrcTime(sec)	Source Remain Time: if it show "--", represents time is 0.
Status	Multicast Source FDB entry type: Allow/Block

2.4.11 Layer 3 (Supported in 8028GX28 only)

2.4.11.1 RIP Routes

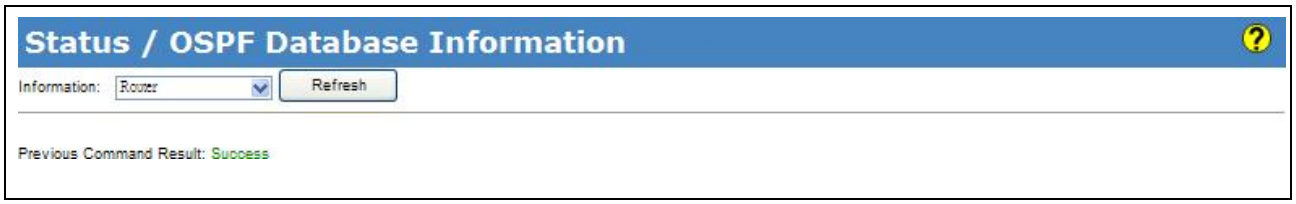
Operation	<u>To query RIP Route Table:</u> 1. Select Query Type to query by All or by VID. 2. Fill VID when query type is "by VID". <u>To delete RIP Route entry:</u> 1. Select RIP route entry(s). 2. Click "Delete" button to delete RIP Route entry.
Field	Description
Destination	The destination network address for the RIP route.
Netmask	The network subnet mask for the RIP route.
Gateway	The next hop gateway address of the RIP route.
VID	The VLAN ID which is the Route of the RIP packet comes from. Range is 1 ~ 4094.
Metric	The metric of the route. Range 1~16.
Aging Time	The timeout value of Routing information timeout timer or Garbage collection timer. Range 0~3600 seconds.

2.4.11.2 OSPF Routes



Operation	To query RIP Route Table: 1. Select Table type. 2. Click "Refresh" button to get OSPF Routes data.
Field	Description
Router	Router Address Area ID Cost Flag Gateway/Interface
Network	Network/Netmask Area ID Cost Gateway/Interface
External	Network/Netmask Area ID Cost/Ext Cost Gateway/Interface

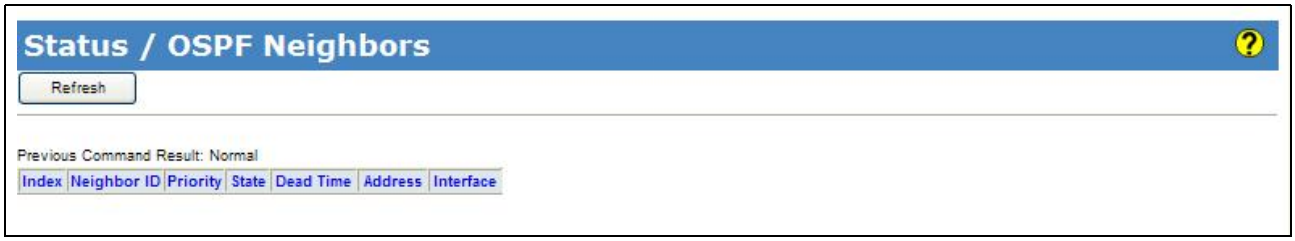
2.4.11.3 OSPF Database



Operation	To display OSPF Database data: 1. Select Information type. 2. Click "Refresh" button to get OSPF database information data.
Field	Description
Information	Router/Network/Summary/ASBRS Summary/ External/ NSSA External
Router	Index: max 16 Link Connected Link ID Link Data Number of TOS Metrics TOS 0 Metrics
Network	Network mask Attached Router
Summary	Network mask TOS Metric
ASBR Summary	Network mask TOS Metric
External	Network mask TOS Metric Forward Address External Route Tag
NSSA External	Network mask TOS Metric

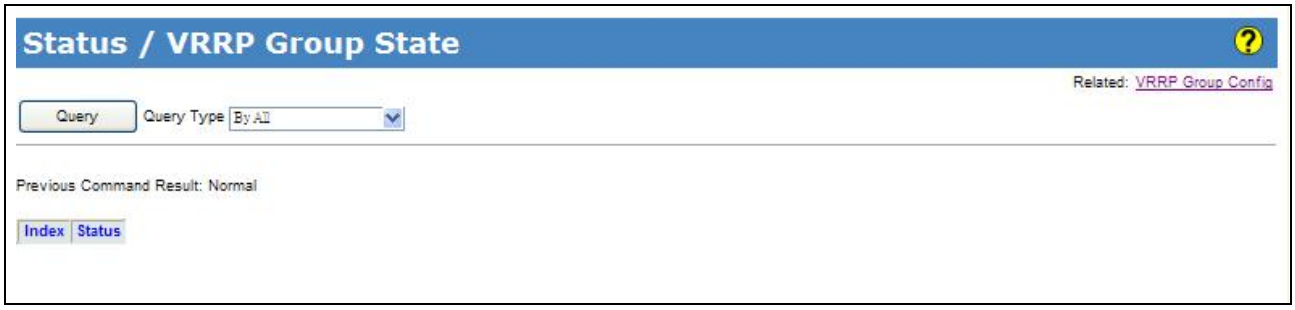
	Forward Address External Route Tag

2.4.11.4 OSPF Neighbors



Operation	To display OSPF Neighbor data: Click "Refresh" button to get OSPF neighbor information data.
Field	Description
Index	OSPF Neighbor Index.
Neighbor ID	OSPF Neighbor ID.
Priority	OSPF Neighbor Priority.
State	Display format NSM/ISM OSPF Neighbor NSM: DOWN/ Attempt/ Init/ To Way/ Exatart/ Loading/ Full OSPF Neighbor ISM: DOWN/ LoopBack/ Waiting/ Point to Point/ Drother/ Back Up/ DR
Dead Time	OSPF Neighbor Dead Timer.
Address	OSPF Neighbor Source.
Interface	OSPF Neighbor interface VLAN.

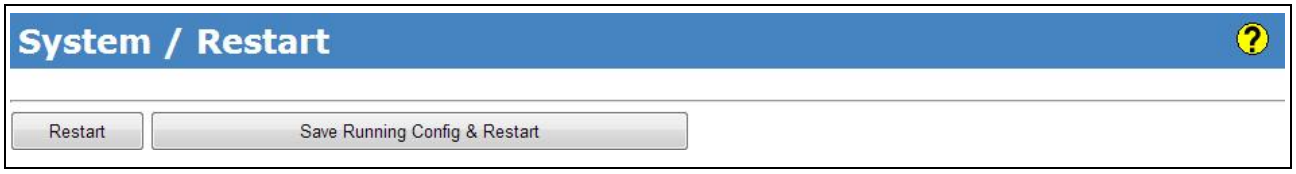
2.4.11.5 VRRP Groups State



Operation	Query by All: 1. Select Query type "By All" 2. Click "Query" button to query VRRP Group state. Query by VLAN Interface ID: 1. Select Query type "By VLAN Interface ID" 2. Select VLAN Interface. 3. Click "Query" button to Query VRRP Group state data. Query by VRRP Group ID: 1. Select Query type "By VRRP Group ID" 2. Select VRRP Group ID range. 3. Click "Query" button to Query VRRP Group state data.
Field	Description
Index	The index of VRRP.
Status	Display VRRP Group number on which VLAN interface and current VRRP State

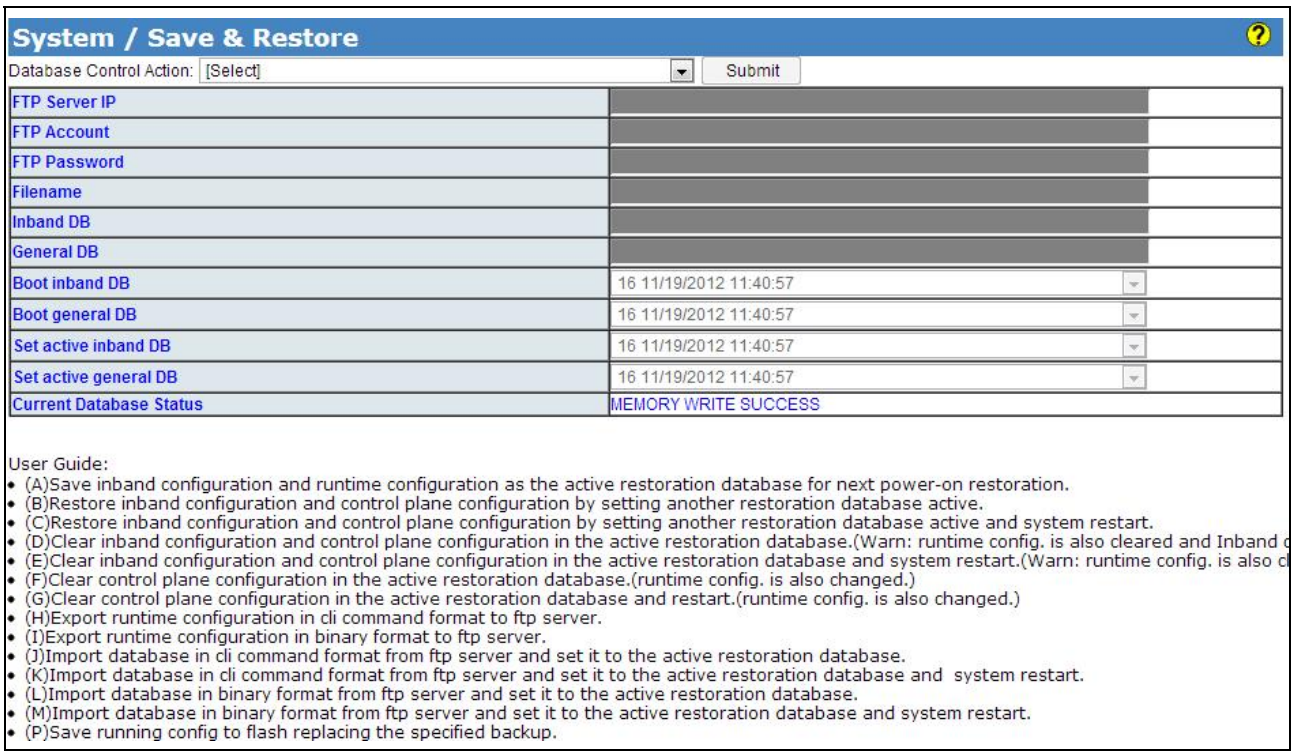
2.5 System

2.5.1 Restart



Operation	Restart: Click “Restart” button will restart the system Save Running Config & Restart: Click “ Save Running Config & Restart” button will redirect page to “Save & Restore”

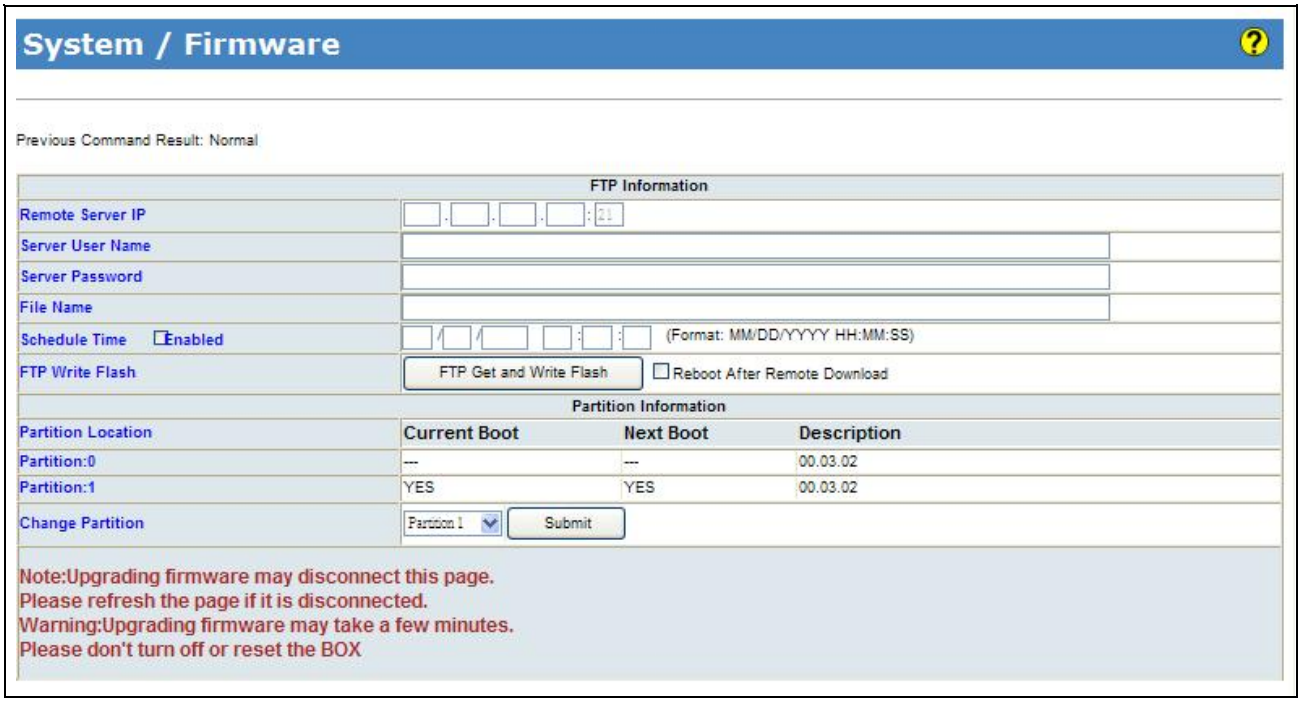
2.5.2 Save & Restore



Operation	Submit: 1. Select Control Action. 2. Fill necessary data for action. 3. Click “Submit” button to start the instruction.
Field	Description
Database Control action	Select Database control. (A) Save Inband configuration and runtime configuration as the active restoration database for next power-on restoration. (B) Restore Inband configuration and control plane configuration by setting another restoration database active. (C) Restore Inband configuration and control plane configuration by setting another restoration database active and system restart. (D) Clear Inband configuration and control plane configuration in the active restoration database.(Warn: runtime configuration is also cleared and Inband configuration is lost) (E) Clear Inband configuration and control plane configuration in the active restoration database and system restart.(Warn: runtime configuration is also cleared and Inband configuration. is lost)

	(F) Clear control plane configuration in the active restoration database. (runtime configuration. is also changed.) (G) Clear control plane configuration in the active restoration database and restart. (runtime configuration is also changed.) (H) Export runtime configuration in CLI command format to ftp server. (I)Export runtime configuration in binary format to ftp server. (J) Import database in CLI command format from ftp server and set it to the active restoration database. (K) Import database in CLI command format from ftp server and set it to the active restoration database and system restart. (L) Import database in binary format from ftp server and set it to the active restoration database. (M) Import database in binary format from ftp server and set it to the active restoration database and system restart. (P)Save running configure to flash replacing the specified backup.
FTP Server IP	Input FTP Server IP Address
FTP Account	Input FTP Name
FTP Password	Input FTP Password
Filename	Input File Name
Inband DB	Inband Backup Name (1 ~ 31 characters)
General DB	General Backup Name (1 ~ 31 characters)
Boot inband DB	Show runningcfg backup
Boot general DB	Show runningcfg backup
Set active inband DB	Show runningcfg backup
Set active general DB	Show runningcfg backup

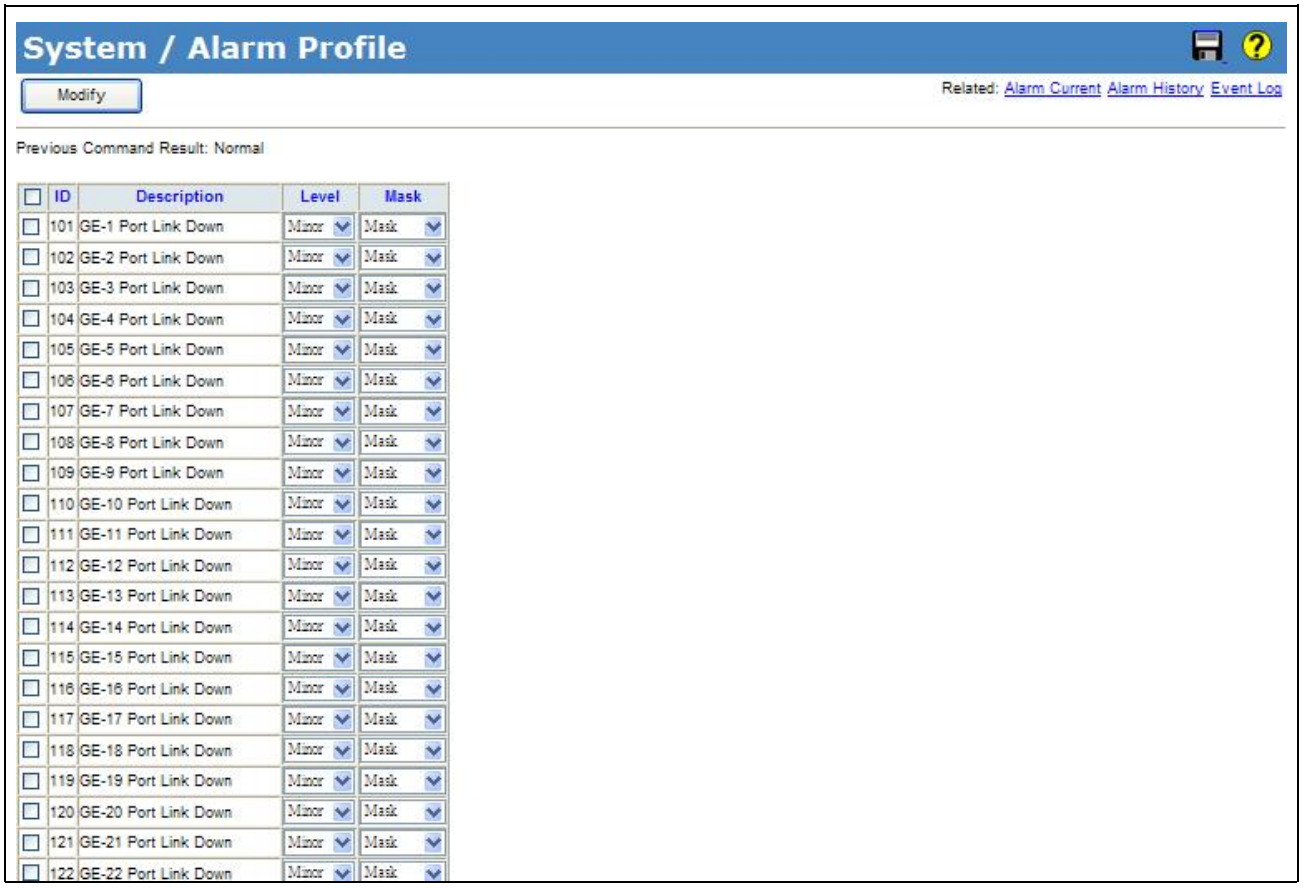
2.5.3 Firmware



Operation	FTP Get and Write Flash: 1. Select Schedule time checkbox to setting schedule 2. Fill schedule time 3. Click “FTP Get and Write Flash” button will load firmware from remote server IP, If the “Reboot After Remote Download” was selected it will restart system when the firmware was changed. Submit: Click “Submit” button will change the partition. The system will use this partition number when the system is restart.
Field	Description
Remote Server IP	Type in the IP address of the FTP server where the firmware is stored.
Server User Name	Type in a user name accepted by the FTP server.
Server Password	Type in a password accepted by the FTP server.
File Name	Type in the name of the firmware file (string length 1 ~ 64).
Schedule Time	Select Enable checkbox and type in the schedule time to update of the firmware file. The time format: MM/DD/YYYY HH:MM:SS

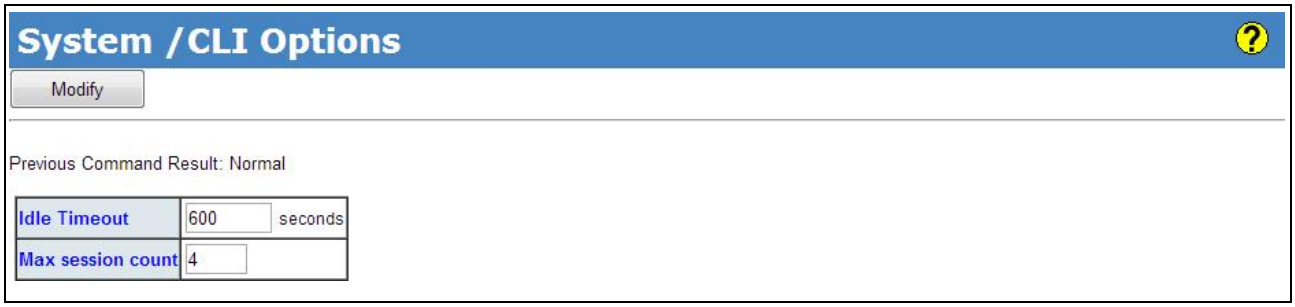
FTP Get and Write Flash	After you have entered the FTP server, user name, password and firmware file name, click on this button to start the firmware update process.
Reboot After Remote Download	Select the checkbox if you want the system reboot automatically once the firmware update is finished.

2.5.4 Alarm Profile



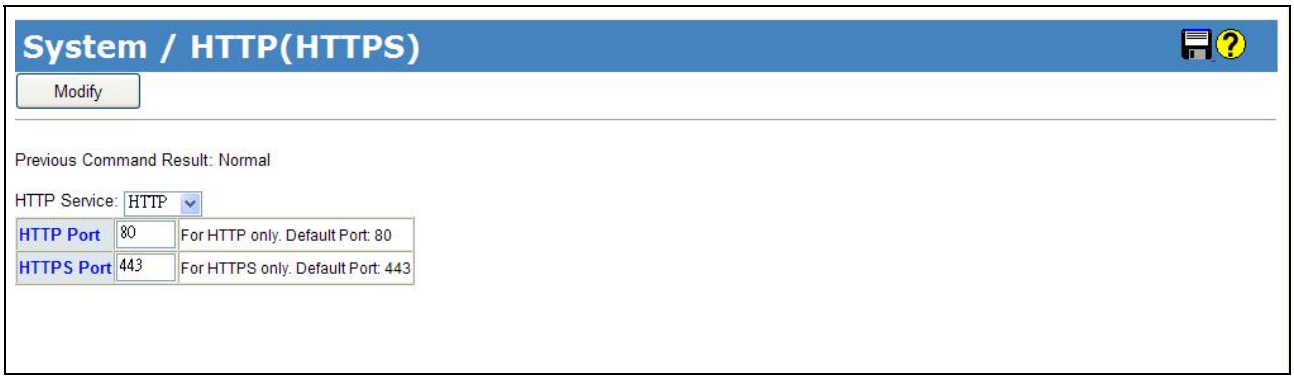
Operation	Modify: 1. Select Row data checkbox. 2. Modify Level and Mask. Note: When any alarm exists, the Alarm LED will be lit, and Alarm Output Relay will also be enabled. 3. Click "Modify" button to modify data.
Field	Description
ID	Alarm Type ID.
Description	Alarm Type Description.
Level	No matter alarm is major/minor, Alarm LED color always be red.
Mask	If alarm is masked, then alarm item will not be captured in alarm history/current; SNMP trap either. If specific alarm item is masked, then it will not trigger the Alarm LED on or off.

2.5.5 CLI Options



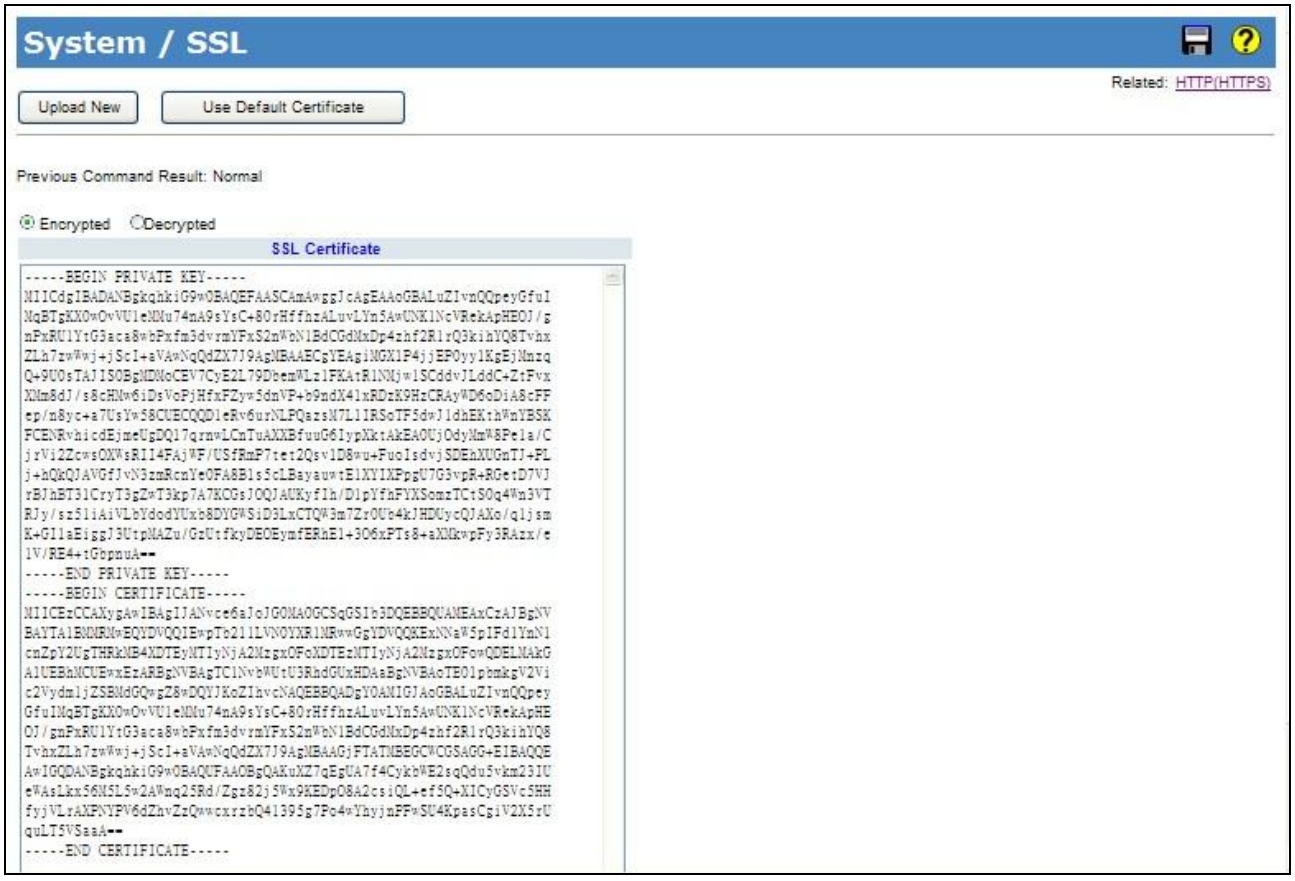
Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to apply change.
Field	Description
Idle Timeout	Specify the timeout seconds for the operational interface. The session will be closed once the idle time exceeds this timeout value. Value range is 60 ~ 65535. 0 means disable timeout.
Max session count	Specify the maximum allowed sessions for the CLI (command line interface): 1 ~ 10.

2.5.6 HTTP (HTTPS)



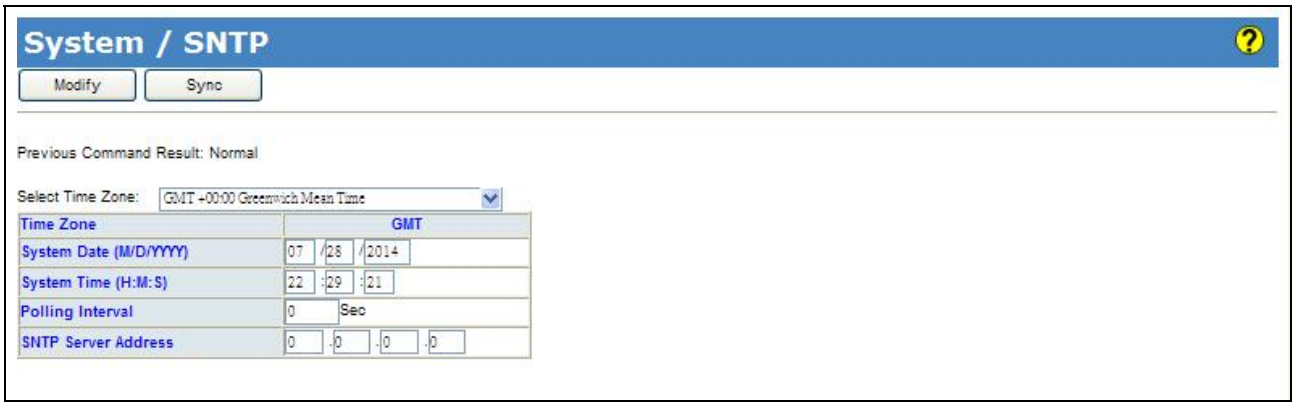
Operation	Modify: 1. Select HTTP or HTTPS. 2. Change the port number if necessary. 3. Click “Modify” button to apply the change.
Field	Description
HTTPS Service	HTTPS / HTTP. Default is HTTP (HTTPS disabled).
HTTPS Port	HTTPS service port. Range: 1~65535, Default Port: 443.
HTTP Port	HTTP service port. Range: 1~65535, Default Port: 80.

2.5.7 SLL (new)



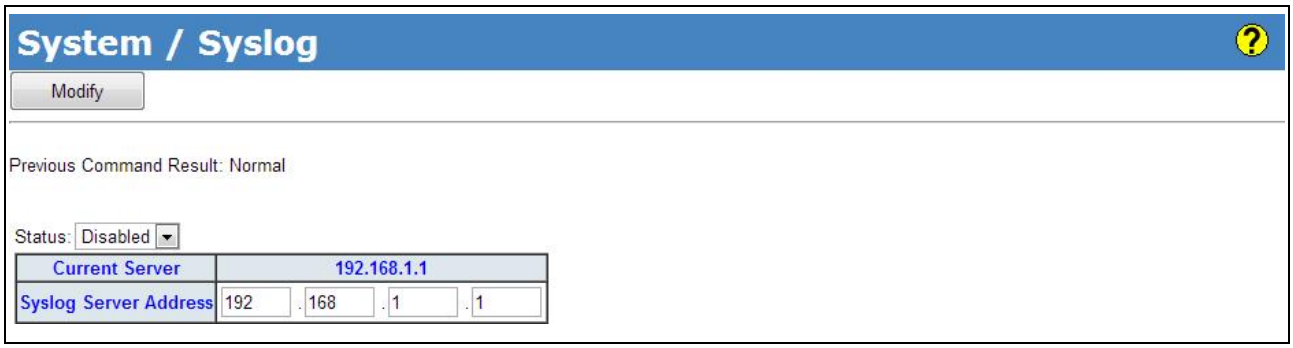
Operation	Use Default Certificate: 1. Click "Use Default Certificate" button. 2. System will delete uploaded certificate, if it's exist. 3. After delete success, it will show default SSL certificate. Upload New: 1. Click "Upload New" button. 2. Copy and Paste both Private Key (privatekey) and Self-Signed SSL Certificate (cert) in the input area. 3. The certificate must be in PEM format as the following, otherwise upload would be failed: **-----BEGIN RSA PRIVATE KEY-----** **....** **-----END RSA PRIVATE KEY-----** **-----BEGIN CERTIFICATE-----** **....** **-----END CERTIFICATE-----**

2.5.8 SNTP



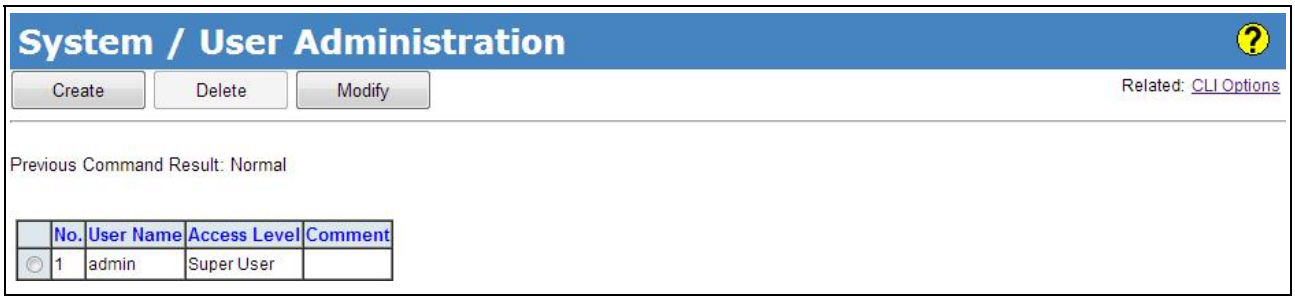
Operation	Modify: 1. Modify the configuration. 2. Click “Modify” button to modify data. Sync: Click “Sync” button to manual synchronize system time from SNTP server.
Field	Description
Select Time zone	Sets the local time zone with Time Zone list. Sixty-six of the world's time zones are presented (including those using standard time and summer/daylight savings time).
System Date	Sets system date (mm/dd/yyyy).
System Time	Sets system time (hh:mm:ss).
Polling Interval	Sets polling interval (seconds) that SNTP client will sync with designated SNTP server.
SNTP Server address	Sets SNTP server IP address for your system.

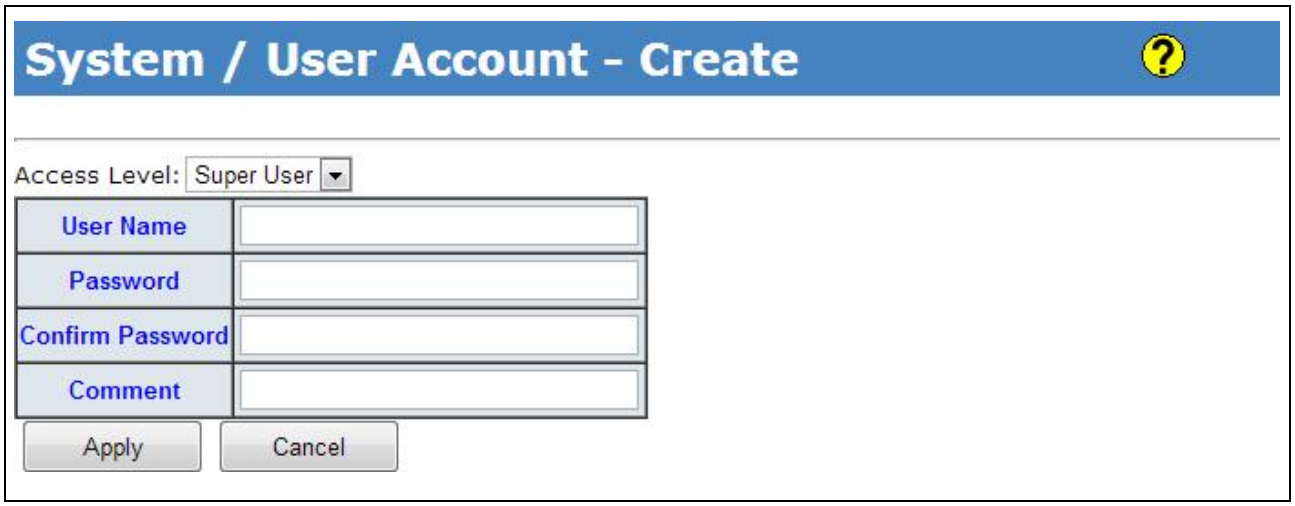
2.5.9 Syslog

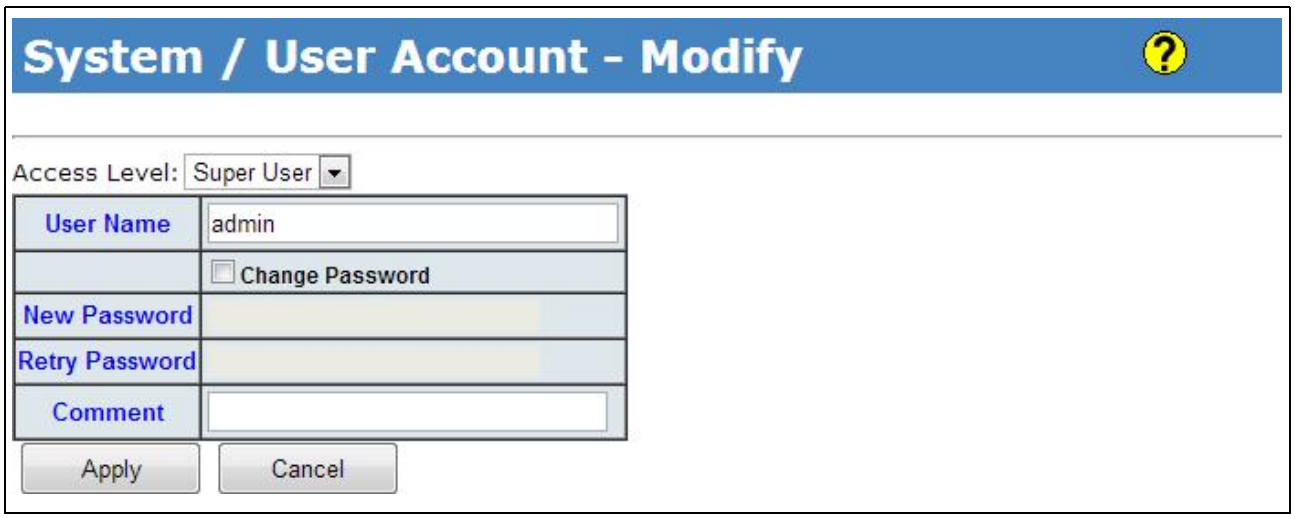


Operation	Modify: 1. Select Enabled/Disabled option and click Modify button to enable Syslog function. 2. Modify the configuration. 3. Click “Modify” button to modify data.
Field	Description
Status	Value is Enabled/Disabled, default is Disables. It will control the system log work or not.
Current Server	Current Syslog server IP address.
Syslog Server Address	New Syslog server IP address. The server must be a remote host.

2.5.9 User Administration





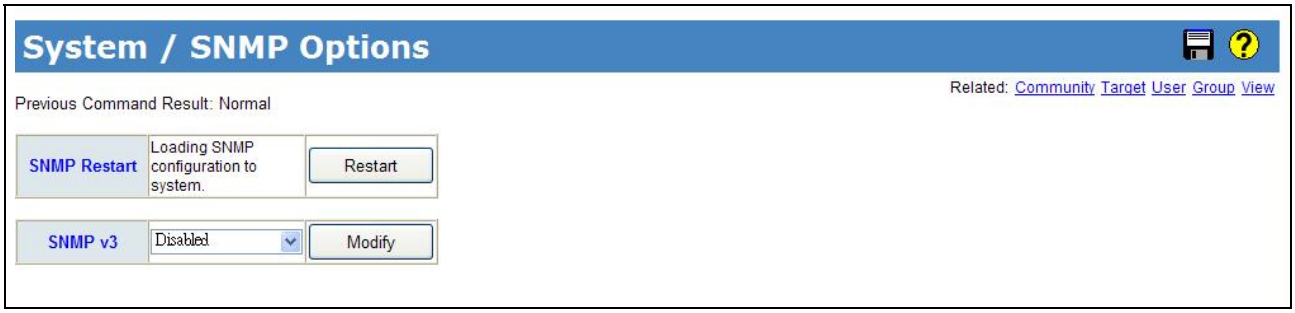


Operation	Create: 1. Click “Create” button to create page. 2. Fill user name, access level, password, confirm password and comment fields. 3. Click “Apply” to create setting data or click “Cancel” to cancel it.

	Delete: 1. Select one row data for delete. 2. Click “Delete” to delete selected data. Modify: 1. Click “Modify” button to modify page. 2. Select “Change Password” checkbox if you want to change password. 3. Fill user name, access level, New Password, Retry Password and comment fields. 4. Click “Apply” to apply change or click “Cancel” to cancel it.
Field	Description
User Name	Shows the user name (up to 32 characters).
Access Level	Show the access level of the user: Super User - The user can access to all functions. Engineer - The user can access to all functions except user account management. Guest - The user can access to basic display functions.
Password	Enter a login password of 1-31 characters.
Confirm Password	Enter the login password of previous field again.
Comment	Description of the user account (up to 31 characters).

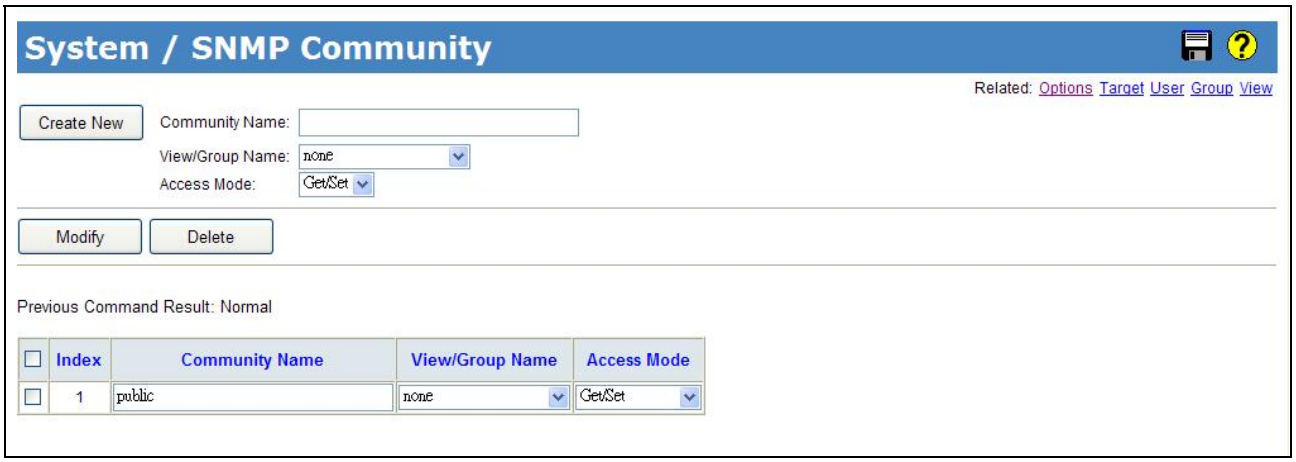
2.5.11 SNMP

2.5.11.1 SNMP Options



Operation	Restart: After any SNMP setting changed, only configuration is changed, but not apply to the system yet. All SNMP changed configuration could work after restart SNMP. It will not reboot system, but may take several seconds to load SNMP setting. Modify SNMP Version: This button is used to set whether snmp v3 is enable or not. If snmpV3 switch is set to disable, the system would use snmp v2c only. If snmpV3 switch is set to enable, the system would use snmp v3 setting. Changing this will restart SNMP automatically. The snmp v3 parameters would be valid only if snmp v3 is enabled.

2.5.11.2 SNMP Community

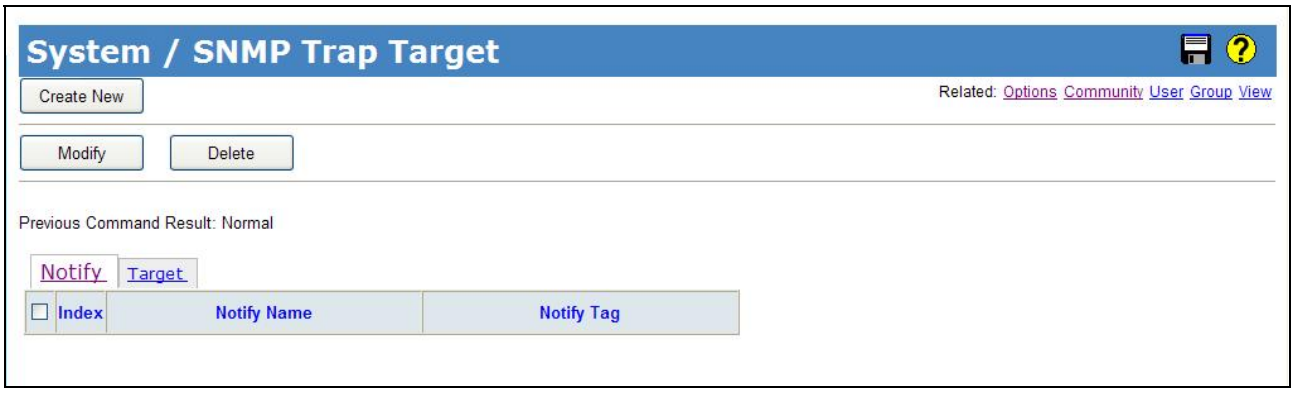


Operation	Create: 1. Fill the Community name. 2. Click "Create New" button to create new Community. Modify community entry: 1. Select entry by check up the check box 2. Modify field data: 3. Click "Modify" button to apply the change. Delete community entry: Select entry by check box, then click "Delete". Note: This page supports multi-selection, click one or more row items to delete. User also could click "select all" to delete all target items.
Field	Description
Index	SNMP Community index, The system supports up to 32 Community data.
Community Name	SNMP Community name, for SNMP v1/v2c. Only if community name match, the SNMP request would be received. Community Name max size is 31 characters.

View/Group Name	View and Group are used for SNMP v3 only. A community is allowed to bind one of the view or group name. If it does not take any group or view, it will be a v1/v2c community. If it takes a view or a group name, the community will be treated as a v3 community. The v2c and v3 communities could exit in the community table concurrently. It will display "unknown(name) when view/group name doesn't exist in view/group table.
Access Mode	Choice access right. Allow Get operation only, or allow both Get and Set.

2.5.11.3 Trap Target

SNMP Modify:

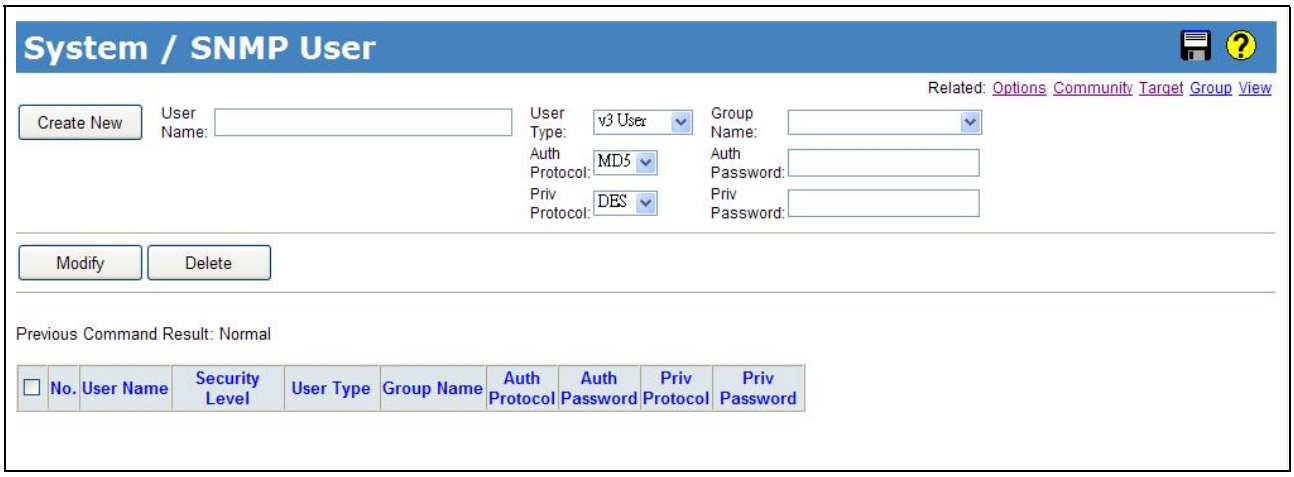


Operation	Create: 1. Click "Create New" button to create new notify tag. 2. Fill the notify name and notify tag. 3. Click "Apply" to create, "Cancel" to abort. Modify: 1. Select entry by check box 2. Modify field data 3. Click "Modify" button to apply change. Delete: 1. Select entry by check box 2. Click "Delete" button to delete Notify Tag item.
Field	Description
Index	SNMP notify tag index, The system supports up to 32 notify tags.
Notify Name	Name of Notify entry. Notify Name max size is 31 characters.
Notify Tag	Notify Tag string. If tag of Target entry matches any tag from tags of Notify Table, then SNMP trap function would work. Notify Tag max size is 31 characters.

SNMP Target:

Operation	Create: 1. Click "Create New" button to create new target data 2. Fill the target IP address, name, port number, and trap version. Give a new tag name or select a existing notify tag name as target name 3. Click "Apply" to create, "Cancel" to abort. Modify: Click row item "modify" button to modify existence target data. Delete: Select entry by check box, then click "Delete". Note: This page supports multi-selection, click one or more row items to delete. User also could click "select all" to delete all target items.
Field	Description
Index	SNMP target index, The system supports up to 32 target entries.
Target Address	Target IP address, the host IP address of trap receiver. Value range 0.0.0.0 ~ 255.255.255.255
Address Port	Target Address port number. TCP Port number of Trap receiver. Range: 0 ~ 65535, Default is 162
Target Name	Name of target. Target Name max size is 31 characters.
Target Tag	Add a target tag, or pick up existing notify tag from Notify Table.
Trap Version	Select SNMP trap version. Supports v1/v2c

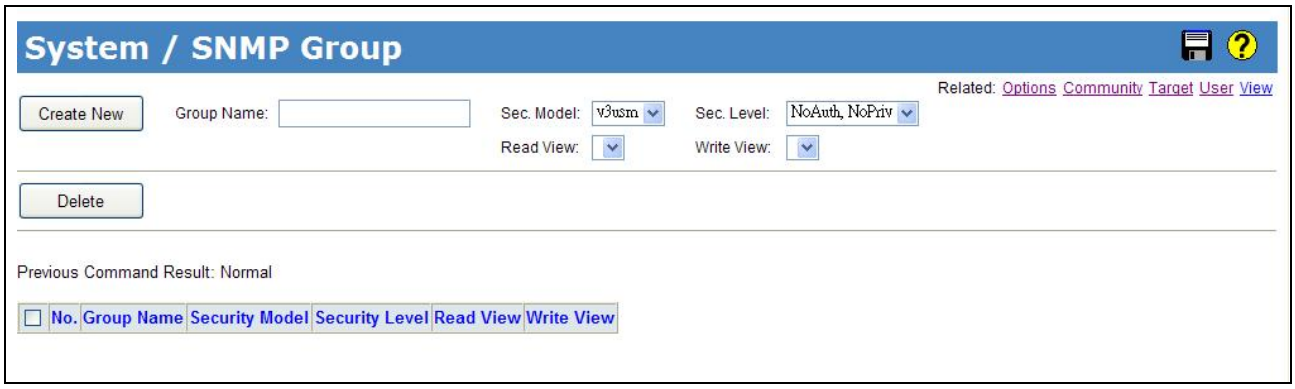
2.5.11.4 User



Operation	Create new: 1. Fill "User Name" and select "User Type", "Auth Protocol" and "Priv Protocol". 2. Click "Create New" button to create new user. Delete: 1. Select a row data in user account table (also support multi-select). 2. Click "Delete" button to delete user account.
Field	Description
User Name	User name, length 1~31. Accept any characters except space, quote mark and "?".
User Type	SNMPv3 user type. Options: 1. Read Only 2. Read Write 3. v3 User If "User type" is "v3 User", the "Group Name" should be provided. No matter which User Type is selected, the authentication and Privacy options are allowed.
Group Name	Access Group name, length 1~15. Accept any characters except space, quote mark and "?". If user type is "Read Only" or "Read Write", then this field is not needed.

Auth Protocol	User authentication protocol. Works only if SNMPv3 is enabled. Options: 1. None 2. MD5 3. SHA If "Auth Protocol" is "None", "Priv Protocol" always is "None". If "Auth Protocol" is MD5 or SHA, "Auth Password" should be input.
Auth Password	Authentication password, length 8~15. Works only if SNMPv3 is enabled. Accept any characters except space, quote mark and "?". If Authentication Protocol is "None", then Privacy options are not needed.
Priv Protocol	User Privacy protocol. Works only if SNMPv3 is enabled. If "Priv Protocol" is not "None", "Priv Password" should be input. Options: 1. None 2. DES
Priv Password	Privacy password, length 8~15. Works only if SNMPv3 is enabled. Accept any characters except space, quote mark and "?". If "Priv Protocol" is "None" the field not needed.

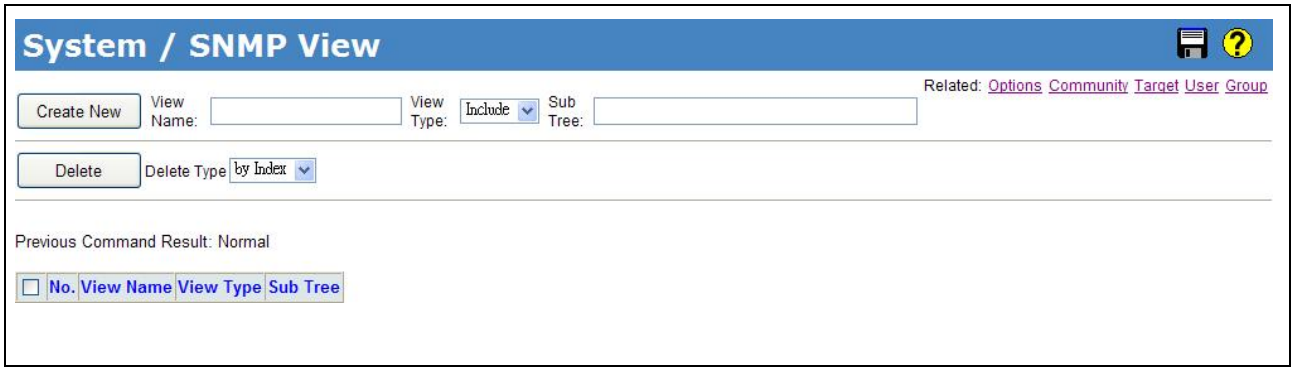
2.5.11.5 Group



Operation	Create new: 1. Fill "Group Name" and select "Sec. Model", "Sec. Level". 2. Click "Create New" button to create new group. Note: max group entry: 32 Delete : 1. Select a row data in VACM group table (also support multi-select). 2. Click "Delete" button to delete user account.
Field	Description
Group Name	Group name, length 1~15. Accept any characters except space, quote mark and "?".
Security Model	SNMP security model. Options: - v1 supports read/write view. - v2c supports read/write view. - v3usm supports read/write view & security level.

Security Level	User security level. If "Security Model" is "v1" or "v2c", the field is not used, it will be show as "--". States as below: - NoAuth, NoPriv (No authentication and no Privacy) - Auth, NoPriv (Authentication and no Privacy) - Auth, Priv (Authentication and Privacy)
Read View	Access View for Read (snmp-get) Select from the view list. If list is empty, create access view with page "SNMP View" first. It will display "unknown(xxxx) when the name of xxxx doesn't exist in view name.
Write View	Access View for Write (snmp-set) Select from the view list. If list is empty, create access view with page "SNMP View" first. It will display "unknown(xxxx) when the name of xxxx doesn't exist in view name.

2.5.11.6 SNMP View



Operation	Create new: 1. Fill "View Name", "Sub Tree" and select "View Type". 2. Click "Create New" button to create new view. Note: max group entry: 32 Delete: 1. Select a row data in VACM view table (also support multi-select). 2. Click "Delete" button to delete user account. VACM View can be delete by Name or by Index. Note that if delete by name, all entries with the same name would be deleted together.
Field	Description
View Name	View name, length 1~15. Accept any characters except space, quote mark and "?".

View Type	Accessible/Not accessible of object (SNMP OID). Select down list box: 1. Include, allow access the subtree/oid; 2. Exclude, doesn't allow access the subtree/oid. Note: the oid is a prefix, no need to match it exactly. For example: 1.3.6.1.2.1 (include), it means 1.3.6.1.2.1.* are accessible. For example: 1.3.6.1.2.1 (exclude), it means 1.3.6.1.2.1.* are NOT accessible. An example of wildcard(*): 1.3.6.1.*.1 (include), it means that 1.3.6.1.4.1.* are accessible and 1.3.6.1.2.1.* are accessible.
Sub Tree	SNMP OID or Object Name of MIB Input format is OID, char length 1~31. Accept MIB object name "iswitch", or wildcard (*). iswitch represents 1.3.6.1.4.1.5833.2012 For example: 1.3.6.1.2.1 1.3.6.1.4.1.5833.2012 iswitch.1 iswitch.2.6.1.1.*.4 (iswitch.2.6.1.1 is EthernetPort Entry, it means this view include/exclude the 4th port of the table.)