PicOS Routing and Switching Command Reference

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www.pica8.com

Pica8, Inc.
1032 Elwell Court, Suite 105
Palo Alto, CA. 94303
+1 (650) 614-5838

sales@pica8.com
support@pica8.com

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- protocols sflow header-len
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- protocols snmp v3 enable <boolean>
- protocols snmp v3 usm-user <text>
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- protocols snmp v3 group <text> notify-view <text>
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- protocols snmp v3 group group1 security-level
- protocols snmp v3 usm-user user1 authentication-mode <authentication-mode >
- protocols snmp v3 usm-user <text1> authentication-key <text2>

- protocols snmp v3 usm-user <text> privacy-mode <privacy-mode >
- protocols snmp v3 usm-user <text1> privacy-key <text2>
- protocols snmp v3 mib-view <text1> subtree <text2> mask <text3>
- protocols snmp v3 mib-view <text1> subtree <text2> type <type>
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> disable
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> interval
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> ip
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> preempt enable
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> priority
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> load-balance disable
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> load-balance virtual-mac time-interval

System Management Commands

- set cli idle-timeout
- set cli screen-length
- set cli terminal
- show system boot-messages
- show system connections
- show system core-dumps
- show system cpu-usage
- show system date
- show system fan
- show system memory-usage
- show system name
- show system ntp-status
- show system os
- show system processes brief
- show system processes detail
- show system rollback compare to
- show system rollback file
- show system rollback list
- show system rpsu
- show system serial-number
- show system temperature
- show system uptime
- show system users
- system aaa local disable
- system aaa radius accounting disable
- system aaa radius accounting server-ip
- system aaa radius accounting server-ip <IPV4> port
- system aaa radius accounting server-ip <IPV4> shared-key
- system aaa radius accounting server-ip <IPV4> timeout
- system aaa radius authorization disable
- system aaa radius authorization server-ip

- system aaa radius authorization server-ip <IPV4> port
- system aaa radius authorization server-ip <IPV4> shared-key
- system aaa radius authorization server-ip <IPV4> timeout
- system aaa tacacs-plus accounting
- system aaa tacacs-plus authorization
- system aaa tacacs-plus auth-type
- system aaa tacacs-plus disable
- system aaa tacacs-plus key
- system aaa tacacs-plus port-number
- system aaa tacacs-plus server-ip
- system hostname
- system inband enable
- system login-acl network
- system login announcement
- system login user
- system login user admin authentication plain-text-password
- system login user admin class
- system login user authentication plain-text-password
- system login user class
- system timezone
- system ntp-server-ip
- set interface gigabit-ethernet ptp mode
- system remote-config allow-client
- system services ssh connection-limit
- system services ssh disable
- system services ssh protocol-version v2
- system services ssh rate-limit
- system services ssh root-login
- system services telnet connection-limit
- system services telnet disable
- system services telnet rate-limit
- system snmp-acl network
- system syslog host
- system syslog local-file

- system syslog port-number
- system syslog port-protocol
- set system syslog server-ip <IP> source-interface <text>

VXLAN command

- vxlans source-interface <interface> address
- vxlans udp-port
- set vxlans vni <text> decapsulation mode
- vxlans vni <text> encapsulation mode
- vxlans vni <text> encapsulation vlan
- vxlans vni <text> flood vtep
- vxlans vni <text> flood vtep <ipv4-addr> bfd
- vxlans vni <text> flood vtep <ipv4-addr> mac-address
- vxlans vni <text> flood vtep <ipv4-addr> traffic-type
- vxlans vni <text> interface
- vxlans vni <text> interface <port> vlan <vlan-id>
- set vxlans vni <text> vlan
- set vxlans vni-map-vlan
- set vxlans tunnel-mac-leaning disable
- OVSDB VTEP command

OpenFlow Commands in CrossFlow Mode

Voice-Vlan Configuration Commands

- set interface gigabit-ethernet <port> voice-vlan mode <mode>
- set interface gigabit-ethernet <port> voice-vlan tagged
- set interface gigabit-ethernet <port> voice-vlan vlan-id <text>
- set vlans voice-vlan aging <text>
- set vlans voice-vlan dscp <text>
- set vlans voice-vlan local-priority <text>
- set vlans voice-vlan mac-address <macaddr1> mask <macaddr2>
- set vlans voice-vlan mac-address <macaddr> description <text>
- show vlans voice-vlan
- show vlans voice-vlan oui
- show vlans voice-vlan vlan-id <text>

Interface Configuration Commands

This section contains descriptions of the CLI commands that this chapter references.

- interface aggregate-balancing hash-mapping field ethernet-destination-address disable
- interface aggregate-balancing hash-mapping field ethernet-source-address disable
- interface aggregate-balancing hash-mapping field ethernet-type disable
- interface aggregate-balancing hash-mapping field ingress-interface disable
- interface aggregate-balancing hash-mapping field ip-destination disable
- interface aggregate-balancing hash-mapping field ip-protocol disable
- interface aggregate-balancing hash-mapping field ip-source disable
- interface aggregate-balancing hash-mapping field port-destination disable
- interface aggregate-balancing hash-mapping field port-source disable
- interface aggregate-balancing hash-mapping field vlan disable
- interface aggregate-ethernet <lag_name>
- interface aggregate-ethernet <lag_name> aggregated-ether-options flow-control
- interface aggregate-ethernet <lag_name> aggregated-ether-options lacp enable
- interface aggregate-ethernet <lag_name> aggregated-ether-options min-selected-port
- interface aggregate-ethernet <lag_name> aggregated-ether-options mlag disable
- interface aggregate-ethernet <lag_name> aggregated-ether-options mlag domain-id
- interface aggregate-ethernet <lag_name> aggregated-ether-options mlag hello-interval
- interface aggregate-ethernet <lag_name> aggregated-ether-options mlag peer <ipv4> peer-link
- interface aggregate-ethernet <lag_name> aggregated-ether-options mlag priority
- interface aggregate-ethernet <lag_name> aggregated-ether-options mlag system-id
- interface aggregate-ethernet <lag_name> backup-port delay
- interface aggregate-ethernet <lag_name> backup-port interface
- interface aggregate-ethernet <lag_name> backup-port mode
- interface aggregate-ethernet <lag_name> crossflow enable
- interface aggregate-ethernet <lag_name> crossflow local-control
- interface aggregate-ethernet <lag_name> description
- interface aggregate-ethernet <lag_name> disable
- interface aggregate-ethernet <lag_name> family ethernet-switching dot1q-tunneling egress
- interface aggregate-ethernet <lag_name> family ethernet-switching dot1q-tunneling ether-type
- interface aggregate-ethernet <lag_name> family ethernet-switching dot1q-tunneling ingress

- interface aggregate-ethernet <lag_name> family ethernet-switching dot1q-tunneling mode
- interface aggregate-ethernet <lag_name> family ethernet-switching native-vlan-id
- interface aggregate-ethernet <lag_name> family ethernet-switching port-mode
- interface aggregate-ethernet <lag_name> family ethernet-switching vlan members
- interface aggregate-ethernet <lag_name> hash-mapping mode
- interface aggregate-ethernet <lag_name> mtu
- interface aggregate-ethernet <lag_name> port-security block
- interface aggregate-ethernet <lag_name> port-security mac-address
- interface aggregate-ethernet <lag_name> port-security mac-limit
- interface aggregate-ethernet <lag_name> port-security sticky
- interface aggregate-ethernet <lag_name> port-security violation
- interface aggregate-ethernet <lag_name> snmp-trap
- interface aggregate-ethernet <lag_name> static-ethernet-switching mac-address <macaddr> vlan
- interface aggregate-ethernet <lag_name> storm-control <mode> pps
- interface bpdu-tunneling destination-mac
- interface cut-through-mode
- interface ecmp hash-mapping field ingress-interface disable
- interface ecmp hash-mapping field ip-destination disable
- interface ecmp hash-mapping field ip-protocol disable
- interface ecmp hash-mapping field ip-source disable
- interface ecmp hash-mapping field port-destination disable
- interface ecmp hash-mapping field port-source disable
- interface ecmp hash-mapping field vlan disable
- interface ecmp max-path
- interface ethernet-switching-options buffer queue-limit
- interface ethernet-switching-options mac-table-aging-time
- Interface ethernet-switching-options port-error-discard timeout
- interface gigabit-ethernet <port> backup-port delay
- interface gigabit-ethernet <port> backup-port interface
- interface gigabit-ethernet <port> backup-port mode
- interface gigabit-ethernet <port> breakout <value>
- interface gigabit-ethernet <port> crossflow enable
- interface gigabit-ethernet <port> crossflow local-control
- interface gigabit-ethernet <port> description

- interface gigabit-ethernet <port> disable
- interface gigabit-ethernet <port> ether-options 802.3ad
- interface gigabit-ethernet <port> ether-options flow-control
- interface gigabit-ethernet <port> family ethernet-switching bpdu-tunneling protocol
- interface gigabit-ethernet <port> family ethernet-switching dot1q-tunneling egress
- interface gigabit-ethernet <port> family ethernet-switching dot1q-tunneling ether-type
- interface gigabit-ethernet <port> family ethernet-switching dot1q-tunneling ingress
- interface gigabit-ethernet <port> family ethernet-switching dot1q-tunneling mode
- interface gigabit-ethernet <port> family ethernet-switching native-vlan-id
- interface gigabit-ethernet <port> family ethernet-switching port-mode
- interface gigabit-ethernet <port> family ethernet-switching vlan members
- interface gigabit-ethernet <port> family ethernet-switching vlan members <vlan-id> untagged
- interface gigabit-ethernet <port> fec <boolen>
- interface gigabit-ethernet <port> link-fault-signaling ignore-local-fault <boolean>
- interface gigabit-ethernet <port> link-fault-signaling ignore-remote-fault <boolean>
- interface gigabit-ethernet <port> mac-learning <boolean>
- interface gigabit-ethernet <port> mtu
- interface gigabit-ethernet <port> port-security block
- interface gigabit-ethernet <port> port-security mac-address
- interface gigabit-ethernet <port> port-security mac-limit
- interface gigabit-ethernet <port> port-security sticky
- interface gigabit-ethernet <port> port-security violation
- interface gigabit-ethernet <port> power-preemphasis-level
- interface gigabit-ethernet <port> rate-limiting <ingress/egress> kilobits
- interface gigabit-ethernet <port> snmp-trap
- interface gigabit-ethernet <port> speed
- interface gigabit-ethernet <port> static-ethernet-switching mac-address <mac-address> vlan <vlan-id>
- interface gigabit-ethernet <port> storm-control <mode> kbps
- interface gigabit-ethernet <port> storm-control <mode> pps
- interface gigabit-ethernet <port> storm-control <mode> ratio <value>
- interface gigabit-ethernet <port> up-mode <boolean>
- interface gigabit-ethernet <port> wred queue <value> drop_probability
- interface gigabit-ethernet <port> wred queue <value> ecn_thresh

- interface gigabit-ethernet <port> wred queue <value> enable
- interface gigabit-ethernet <port> wred queue <value> max_thresh
- interface gigabit-ethernet <port> wred queue <value> min_thresh
- interface max-acl-rule-limit <egress/ingress>
- interface max-route-limit
- interface qe-interface-mode
- set interface ethernet-switching-options analyzer input
- set interface ethernet-switching-options analyzer output
- show interface aggregate-ethernet <lag_name>
- show interface aggregate-ethernet <lag_name> dot1q-tunneling
- show interface bpdu-tunneling
- show interface brief
- show interface detail
- show interface diagnostics optics all
- show interface ecmp max-path
- show interface flexlink
- show interface gigabit-ethernet
- show interface gigabit-ethernet <interface>

interface aggregate-balancing hash-mapping field ethernet-destination-address disable

This command designates data packets to be forwarded via the ethernet-destination-address.

Command Syntax

Set interface aggregate-balancing hash-mapping field ethernet-destination-address disable **<true / false >**

To remove the configuration enter:
delete interface aggregate-balancing hash-mapping field ethernet-destination-address disable

Parameter

- **true**--disable ethernet-destination-address
- **false**--enable ethernet-destination-address

Example

This example enables data packets forwarded by ethernet-destination-address:

```
admin@XorPlus# set interface aggregate-balancing hash-mapping field
ethernet-destination-address disable false
admin@XorPlus# commit
```

interface aggregate-balancing hash-mapping field ethernet-source-address disable

This command designates data packets to be forwarded via ethernet-source-address.

Command Syntax

set interface aggregate-balancing hash-mapping field ethernet-source-address disable <**true** | **false**>

To remove the configuration enter:
delete interface aggregate-balancing hash-mapping field ethernet-source-address disable

Parameter

- **true**--disable ethernet-source-address
- **false**--enable ethernet-source-address

Example

This example enables data packets to be forwarded via ethernet-source-address:

```
admin@XorPlus# set interface aggregate-balancing hash-mapping field ethernet-source-address
disable false
admin@XorPlus# commit
```

interface aggregate-balancing hash-mapping field ethernet-type disable

This command designates data packets to be forwarded via the ethernet-type.

Command Syntax

set interface aggregate-balancing hash-mapping field ethernet-type disable <**true** | **false**>

To remove the configuration enter:
delete interface aggregate-balancing hash-mapping field ethernet-type disable

Parameter

- **true**--disable ethernet-type
- **false**--enable ethernet-type

Example

This example enables data packets to be forwarded via ethernet-type:

```
admin@XorPlus# set interface aggregate-balancing hash-mapping field ethernet-type disable
false
admin@XorPlus# commit
```

interface aggregate-balancing hash-mapping field ingress-interface disable

This command designates data packets to be forwarded via the ingress-interface.

Command Syntax

set interface aggregate-balancing hash-mapping field ingress-interface disable <**true** | **false**>

To remove the configuration enter:
delete interface aggregate-balancing hash-mapping field ingress-interface disable

Parameter

- **true--**disable ingress-interface
- **false--**enable ingress-interface

Example

This example enables ingress-interface:

```
admin@XorPlus# set interface aggregate-balancing hash-mapping field ingress-interface
disable false
admin@XorPlus# commit
```

interface aggregate-balancing hash-mapping field ip-destination disable

This command designates data packets to be forwarded via ip-destination.

Command Syntax

set interface aggregate-balancing hash-mapping field ip-destination disable <**true** | **false**>

To remove the configuration enter:
delete interface aggregate-balancing hash-mapping field ip-destination disable

Parameter

- **true**--disable ip-destination
- **false**--enable ip-destination

Example

This example enables data packet fowarded by ip-destination:

```
admin@XorPlus# set interface aggregate-balancing hash-mapping field ip-destination disable
false
admin@XorPlus# commit
```

interface aggregate-balancing hash-mapping field ip-protocol disable

This command designates data packets to be forwarded via the IP protocol.

Command Syntax

set interface aggregate-balancing hash-mapping field ip-protocol disable <**true** | **false**>

To remove the configuration enter:
delete interface aggregate-balancing hash-mapping field ip-protocol disable

Parameter

- **true**--disable ip-protocol
- **false**--enable ip-protocol

Example

This example enables forwarding of data packets via the ip-protocol:

```
admin@XorPlus# set interface aggregate-balancing hash-mapping field ip-protocol disable
false
admin@XorPlus# commit
```

interface aggregate-balancing hash-mapping field ip-source disable

This command designates data packets to be forwarded via the IP source.

Command Syntax

set interface aggregate-balancing hash-mapping field ip-source disable <**true** | **false**>

To return the configuration enter:
delete interface aggregate-balancing hash-mapping field ip-source disable

Parameter

- **true**--disable ip-source
- **false**--enable ip-source

Example

This example enables forwarding of data packets via ip-source:

```
admin@XorPlus# set interface aggregate-balancing hash-mapping field ip-source disable false
admin@XorPlus# commit
```

interface aggregate-balancing hash-mapping field port-destination disable

This command designates data packets to be forwarded via the port-destination.

Command Syntax

set interface aggregate-balancing hash-mapping field port-destination disable <**true** | **false**>

To return the configuration enter:
delete interface aggregate-balancing hash-mapping field port-destination disable

Parameter

- **true**--disable port-destination
- **false**--enable port-destination

Example

This example enables data packets to be forwarded via port-destination:

```
admin@XorPlus# set interface aggregate-balancing hash-mapping field port-destination
disable false
admin@XorPlus# commit
```

interface aggregate-balancing hash-mapping field port-source disable

This command designates data packets to be forwarded via the port-source.

Command Syntax

set interface aggregate-balancing hash-mapping field port-source disable <true | false>

To return the configuration enter:
delete interface aggregate-balancing hash-mapping field port-source disable

Parameter

- **true**--disable port-source
- **false**--enable port-source

Example

This example enables data packets to be forwarded via ip-source:

```
admin@XorPlus# set interface aggregate-balancing hash-mapping field port-source disable
false
admin@XorPlus# commit
```

interface aggregate-balancing hash-mapping field vlan disable

Use this command to enables aggregate load balancing hash map on the VLAN.

Command Syntax

set interface aggregate-balancing hash-mapping field vlan disable <true | false>

To return the configuration enter:
delete interface aggregate-balancing hash-mapping field vlan disable

Parameter

- **true**--disable vlan
- **false**--enable vlan

Example

This example is to enable ip-source:

```
admin@XorPlus# set interface aggregate-balancing hash-mapping field vlan disable false
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name>

Use this command to create a Link Aggregation Group (LAG) interface.

Command Syntax

set interface aggregate-ethernet *<lag_name>*

Parameter

<lag_name> Enter the name of the LAG interface.

NOTE:

Before PicOS 2.9.2, the maximum number of LAGs is 48 on all models, that is, PicOS supports to configure LAG as ae1 to ae48 on all models.

In PicOS 2.9.2 and the later versions, the maximum number of LAGs is equal to the maximum number of physical interfaces by each model from ae1.

The maximum number of LAGs supported by each model is as follows:

Model	Max Number of LAGs
ARCTICA4806XP	72
AS4610_30p	48
AS4610_54p	54
AS5712-54p	72
AS5812-54t	72
AS6701-32x	104
AS6712-32x	104
AS7712-32x	128
DCS7032Q28	128
MSH8920	70
PRONTO3290	52
PRONTO3295	52

Model	Max Number of LAGs
PRONTO3296	52
PRONTO3780	48
PRONTO3920	64
PRONTO3922	64
PRONTO3924	64
PRONTO3930	64
PRONTO5101	72
PRONTO5401	104
S4048	72
Z9100	128

Example

The example creates a LAG named **ae4**.

```
admin@XorPlus# set interface aggregate-ethernet ae4
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> description

Use this command to add a description to a logical port.

Command Syntax

set interface aggregate-ethernett *<lag_name>* **description** *<description>*

To delete the configuration enter:

delete interface aggregate-ethernet *<lag_name>* **description**

Parameter

- *<lag_name>* Name of LAG interface.
- *<description>* Add a human-readable description of the interface

Example

This example adds the description *hello* to port named ae1.

```
admin@XorPlus# set interface aggregate-ethernet ae1 description hello
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> disable

Enable or disable a logical interface.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **disable** <true | false>

To delete the configuration enter:

delete interfaceaggregate-ethernet *<lag_name>* **disable**

Parameter

- *<lag_name>* Name of LAG interface.
- true: disable a logical interface
- false: enable a logical interface

Example

This example disables the ae1 interface:

```
admin@XorPlus# set interface aggregate-ethernet ae1 disable true
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> aggregated-ether-options flow-control

Configure flow-control for a logical port .

Command Syntax

set interface aggregate-ethernet *<lag_name>* **aggregated-ether-options flow-control** <true | false>

To return the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **aggregated-ether-options flow-control**

Parameter

- *<lag_name>*--Enter the name of the configured LAG interface.
- true: enable flow control
- false: disable flow control

Example

This example enables flow-control on the LAG ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 aggregated-ether-options flow-control
true
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> aggregated-ether-options lacp enable

Creates a Link Aggregation Control Protocol (LACP) link aggregation group (LAG) on a specified logical port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **aggregated-ether-options lacp enable** <true | false>

To return the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **aggregated-ether-options lacp**

Parameter

- *<lag_name>* Enter the name of the LAG.
- true: enable LACP
- false: disable LACP

Example

This example configures LACP for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 aggregated-ether-options lacp enable
true
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> aggregated-ether-options min-selected-port

Configure min-selected-port for a specified logical port (LAG). Min-selected-port denotes that the LAG is up only when no fewer than the defined number of ports are up.

Command Syntax

set interface aggregate-ethernet *<lag_name>* ***a*ggregated-ether-options min-selected-port** *<port-id>*

To return to the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **aggregated-ether-options min-selected-port**

Parameter

<lag_name>: Specifies a configured LAG interface name.
<port-id>: Minimum number of selected ports (range: **1** through **8**)

Example

This example is to configure min-selected-port for ae1.

```
admin@XorPlus# set interface aggregate-ethernet ae1 aggregated-ether-options
min-selected-port 1
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> aggregated-ether-options mlag domain-id

The domain ID of MLAG for a logical port can be set. The *domain-id* assigns an MLAG ID to an aggregation interface. Neighbor switches form an MLAG when each switch configures the same MLAG-ID to an aggregation interface. Only one *domain-id* can be assigned to an aggregation interface.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **aggregated-ether-options mlag domain-id** *<domain-id>*

To delete the configuration enter:
***d*elete interface aggregate-ethernet** *<lag_name>* a**ggregated-ether-options mlag domain-id**

Parameter

- *<lag_name>* LAG interface name.
- *<domain-id>* The domain id of MLAG (range: **1** through **48**)

Example

This example is to set MLAG ID as 5 for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 aggregated-ether-options mlag domain-id
5
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> aggregated-ether-options mlag hello-interval

The command configures the interval of the hello message. The hello message is sent in both directions, between MLAG neighbors. If the neighbor switch doesn't receive any hello message after pinging four times, then MLAG neighbor switch revert to their independent state.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **aggregated-ether-options mlag hello-interval** *<value>*

To delete the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **aggregated-ether-options mlag hello-interval**

Parameter

- *<lag_name>* Name of a configured LAG interface.
- *<value>*The interval for sending hello message (range 1..60)

Example

This example is to set interval of hello messages to 5 for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 aggregated-ether-options mlag
hello-interval 3
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> aggregated-ether-options mlag peer <ipv4> peer-link

Use this command to specify IP address of MLAG neighbor switch. The synchronized messages are sent to neighbor switch by peer link.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **aggregated-ether-options mlag peer** *<ipv4_address>* **peer-link** *<text>*

To delete the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **aggregated-ether-options mlag peer** *<ipv4_address>* **peer-link**

Parameter

- *<lag_name>* Name of a configured LAG interface.
- *<ipv4_address>* The ip address of peer aggregated port.
- *<text>* The interface that connect to the peer.

Example

This example is to configure IP address of peer ae2:

```
admin@XorPlus# set interface aggregate-ethernet ae1 aggregated-ether-options mlag peer
10.0.0.1 peer-link "ae2"
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> aggregated-ether-options mlag priority

Set the MLAG priority. MLAG priority is used to negotiate a switch's role, including master or slave role.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **aggregated-ether-options mlag priority** *<value>*

To delete the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **aggregated-ether-options mlag priority**

Parameter

- *<lag_name>* Name of a configured LAG interface.
- *<value>* System priority for master selection (range is 0 to 32768).

Example

This example is to configure MLAG priority for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 aggregated-ether-options mlag priority
2
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> aggregated-ether-options mlag system-id

Users can set system id. This command specifies the local chassis system's MAC address for an MLAG domain and is used in LACP aggregation as source system MAC address.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **aggregated-ether-options mlag system-id** *<macaddr>*

To delete the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **aggregated-ether-options mlag system-id**

Parameter

- *<lag_name>* Name of a configured LAG interface.
- *<macaddr>* Enter the system MAC address in the format nn:nn:nn:nn:nn:nn .

Example

This example is to configure MLAG system id for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 aggregated-ether-options mlag system-id
22:00:00:00:00:00
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> backup-port delay

Set backup port delay time, in seconds, to a port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **backup-port delay** *<seconds>*

To return the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **backup-port delay**

Parameter

- *<lag_name>* Name of a configured LAG interface.
- *<seconds>* Preemption delay, in seconds (range: 0 through 300 seconds)

Example

This example is to set the delay time to 20 seconds:

```
admin@XorPlus# set interface aggregate-ethernet ae1 backup-port delay 20
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> backup-port interface

User can configure two physical ports or two LAGs as Flex Links or one physical port and one LAG as Flex Links.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **backup-port interface** *<interface_number>*

To return the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **backup-port interface**

Parameter

- *<lag_name>* Name of a configured LAG interface.
- *<interface_number>* Set backup port of an interface, which will disable RSTP/MSTP.

Example

This example is to set Flex links between a physical port and a LAG :

```
admin@XorPlus# set interface aggregate-ethernet ae1 backup-port interface ge-1/1/3
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> backup-port mode

User can set preemption mode of a logical port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **backup-port mode** <bandwidth / forced | Off>

To return to the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **backup-port mode**

Parameter

- *<lag_name>* Name of LAG interface.
- bandwidth: higher bandwidth interface preferred
- forced: active interface preferred,the default mode
- Off: turn off preemption

Example

This example is to set the port preemption mode to bandwidth:

```
admin@XorPlus# set interface aggregate-ethernet ae1 backup-port mode bandwidth
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> crossflow enable

Enable or disable the crossflow mode in a logical port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **crossflow enable** <true | false>

To delete the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **crossflow enable**

Parameter

- *<lag_name>* Name of LAG interface.
- true: enable crossflow
- false: disable crossflow

Example

This example enables crossflow in ae1 port:

```
admin@XorPlus# set interface aggregate-ethernet ae1 crossflow enable true
admin@XorPlus#commit
```

interface aggregate-ethernet <lag_name> crossflow local-control

Enable or disable local-control function of crossflow for a logical port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **crossflow local-control** <true / false**>**

To delete the configuration enter:
delete interface aggregate-ethernet *<lag_name>* **crossflow local-control**

Parameter

- *<lag_name>* Name of LAG interface.
- true: enable local control, this is the default mode.
- false: disable local control

Example

The example disables local-control function of crossflow on port ae1.

```
admin@XorPlus# set aggregate-ethernet ae1 crossflow local-control false
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> aggregated-ether-options mlag disable

Enable or disable MLAG for a logical port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **aggregated-ether-options mlag disable** <true | false>
delete interface aggregate-ethernet *<lag_name>* **disable**

Parameter

- *<lag_name>* Specifies a configured LAG interface.
- true: disable MLAG.
- false: enable MLAG.

Example

This example is to enable MLAG for the LAG named ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 aggregated-ether-options mlag disable
false
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> family ethernet-switching dot1q-tunneling egress

Configure or delete a Q-in-Q tunnel for outband traffic on a LAG.

Command Syntax
set interface aggregate-ethernet *<lag_name>* **family ethernet-switching dot1q-tunneling egress** *<text>*

To delete the configuration enter:
delete interface gigabit-ethernet *<lag_name>* **family ethernet-switching dot1q-tunneling egress** *<text>*

Parameter
• *<lag_name>* Name of LAG interface.
• *<text>Q-in-Q t*unneling foroutband traffic.

Example

This example is to configure a Q-in-Q tunnel for egress logical port:

```
admin@XorPlus# set interface aggregate-ethernet ae1 family ethernet-switching
dot1q-tunneling egress t2
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> family ethernet-switching dot1q-tunneling ether-type

Set or delete an EtherType value on Q-in-Q tunnel for a logical port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **family ethernet-switching dot1q-tunneling ether-type** *<value>*

To delete enter:

delete interface aggregate-ethernet *<lag_name>* **family ethernet-switching dot1q-tunneling ether-type** *<value>*

Parameter

<lag_name> Name of LAG interface.

<value> EtherType value:

- **0x8100**
- **0x88a8**
- **0x9100**
- **0x9200**

Example

This example is to select a Ethertype value on Q-in-Q tunnel for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 family ethernet-switching
dot1q-tunneling ether-type 0x8100
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> family ethernet-switching dot1q-tunneling ingress

Users can configure/delete a Q-in-Q tunnel for inbound traffic on a logical port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **family ethernet-switching dot1q-tunneling ingress** *<text>*

delete interface aggregate-ethernet *<lag_name>* **family ethernet-switching dot1q-tunneling ingress** *<text>*

Parameter

- *<lag_name>* Name of LAG interface.
- *<text>*Tunneling for entering traffic

Example

- This example is to configure a Q-in-Q tunnel for inbound traffic on ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 family ethernet-switching
dot1q-tunneling ingress t2
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> family ethernet-switching dot1q-tunneling mode

Users can configure a Q-in-Q tunnel mode for a logical port. By default, the mode is none.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **family ethernet-switching dot1q-tunneling mode** *<mode>*

Parameter

- *<lag_name>* Name of LAG interface.
- *[mode]* Q-in-Q tunnel mode.
  - external: customer mode
  - internal: service provider mode
  - none: Disable tunneling mode,default mode

Example

- This example is to set Q-in-Q tunnel mode for ae1 port:

```
admin@XorPlus# set interface aggregate-ethernet ae1 family ethernet-switching
dot1q-tunneling mode internal
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> family ethernet-switching native-vlan-id

The native VLANID is the ID of the default VLAN (usually vlan 1) in which the port belonged to. User can change the native VLANID for port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **family ethernet-switching native-vlan-id** *<vlan-id>*
delete interface aggregate-ethernet *<lag_name>* **family ethernet-switching native-vlan-id** *<vlan-id>*

Parameter

• *<lag>* Name of LAG interface.

• *<vlan_id>* The native-vlan-id ,VLAN identifier to associate with untagged packets .The valid VLAN number range is 1-4094.

Example

• This example creates VLAN 3 and puts ae1 on this VLAN:

```
admin@XorPlus# set vlans vlan-id 3
admin@XorPlus# set interface aggregate-ethernet ae1 family ethernet-switching
native-vlan-id 3
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> family ethernet-switching port-mode

By default the port mode is access, user can configure trunk ports belong to more than one VLAN including the native VLAN.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **family ethernet-switching port-mode** *<port-mode>*
delete interface aggregate-ethernet *<lag_name>* **family ethernet-switching port-mode**

Parameter

• *<lag_name>* Name of LAG interface.

• *<port-mode>* Configure a LAG as access or trunk port mode. Required select include:

- **access** access port mode, the **default** mode
- **trunk** trunk port mode

Example

• This example sets ae1 port mode to trunk:

```
admin@XorPlus# set interface aggregate-ethernet ae1 family ethernet-switching port-mode
trunk
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> family ethernet-switching vlan members

This command is to add a vlan member to the trunk lag, vlan members range from 1 to 4094. The default of this command is that packets are tagged when the packets go out from this interface.

Note: If this interface's native-vlan-id is identical to vlan-member, packets will be encapsulated with vlan tag because the " tagged" is the default configuration of vlan-member.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **family ethernet-switching vlan members** *<vlan-id>*
delete interface aggregate-ethernet *<lag_name>* **family ethernet-switching vlan members** *<vlan-id>*

Parameter

• *<lag_name>* Name of a LAG interface.

• *<vlan-id>* Configure the VLANs for which the interface can carry traffic,vlan members range from 1 to 4094.

Example

• This example is adding a vlan member to a trunk lag(ae1):

```
admin@XorPlus# set interface aggregate-ethernet ae1 family ethernet-switching vlan members
5
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> hash-mapping mode

This command is to control the data packets to forward on a specified LAG .

Command Syntax

set interface aggregate-ethernet *<lag_name>* **hash-mapping mode** *<mode>*

delete interface aggregate-ethernet *<lag_name>* **hash-mapping mode**

Parameter

• *<lag_name>* Name of LAG interface.

•*<mode>* Configure hash mapping mode. The default value is **ethernet-source-destination**.

- **advance** Use global advanced configure as hash-key
- **advanced-resilient** Use resilient hashing with advanced configure as key
- **ethernet-destination-only** Use destination mac as hash-key
- **ethernet-source-destination** Use source and destination mac as hash-key
- **ethernet-source-only** Use source mac as hash-key
- **ip-destination-only** Use destination ip as hash-key
- **ip-source-destination** Use source and destination ip as hash-key
- **ip-source-only** Use source ip as hash-key

Example

• This example is configure hash mapping mode to ethernet-destination-only advance for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 hash-mapping mode
ethernet-destination-only
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> mtu

Users can set maximum transmit packet size for a specified LAG.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **mtu** *<value>*

delete interface aggregate-ethernet *<lag_name>* **mtu**

Parameter

- *<lag_name>* Name of LAG interface.
- *<value>* maximum transmit packet size identifier(in octets),value is between 64 to 9216.

Example

- This example sets MTU to 1024 for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 mtu 1024
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> port-security block

Port security can be configured to take one of five block actions.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **port-security block** *<action>*
delete interface aggregate-ethernet *<lag_name>* **port-security block**

Parameter

- *<lag_name>* Name of LAG interface.
- *<action>*Disable forwarding unknow uni/multi cast addresses
    - **all** Block broadcast and unknow addresses
    - **broadcast** Block broadcast address
    - **multicast** Block unknow multicast addresses
    - **uni-multi-cast** Block unknow uni/multi cast addresses
    - **unicast** Block unknow unicast addresses

Example

- This example configure ae1 in block broadcast mode:

```
admin@XorPlus# set interface aggregate-ethernetae1 port-security block broadcast
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> port-security mac-address

Users can use port security with static MAC addresses to restrict a port's ingress traffic by limiting the MAC addresses that are allowed to send traffic into the port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **port-security mac-address** *<madaddr>*
delete interface aggregate-ethernet *<lag_name>* **port-security mac-address** *<madaddr>*

Parameter

• *<lag_name>* Name of LAG interface.

•*<madaddr>* secure mac address identifier(eg:22:00:00:00:00:00)

Example

• This example configure MAC address for ae1 :

```
admin@XorPlus#set interface aggregate-ethernet ae1 port-security mac-address
22:00:00:00:00:00
admin@XorPlus#commit
```

interface aggregate-ethernet <lag_name> port-security mac-limit

User can use port security with static MAC addresses to restrict a port's ingress traffic by limiting the MAC addresses that are allowed to send traffic into the port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **port-security mac-limit** *<value>*

delete interface aggregate-ethernet *<lag_name>* **port-security mac-limit**

Parameter

• *<lag_name>* Name of LAG interface.

•*<value>* The maximum number of dynamic mac address on this port, [0..1024]

Example

• This example configure the maximum number of dynamic mac address as 10 for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 port-security mac-limit 10
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> port-security sticky

Port security with sticky MAC addresses retains dynamically learned MAC addresses when the link is down, and restores the MAC addresses when the link ups.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **port-security sticky** *<bool>*

delete interface aggregate-ethernet *<lag_name>* **port-security sticky**

Parameter

• *<lag_name>* Name of LAG interface.

•*<bool>* Sticky mac address

- **true** enable sticky mac address
- **false** disable sticky mac address

Example

• This example configure sticky MAC address for ae2

```
admin@XorPlus# set interface aggregate-ethernet ae2 port-security sticky true
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> port-security violation

Users can configuring Port Security Violation Mode on a Port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **port-security violation** *<action>*

delete interface aggregate-ethernet *<lag_name>* **port-security violation**

Parameter

• *<lag_name>* Name of LAG interface.

•*<action>* the violation action.

- **protect** Drop packets with unknown source addresses
- **restrict** Drop packets with unknown source addresses and log violation
- **shutdown** Disable interface
- **shutdown-temp** Disable interface temporarily(20 seconds for the default)

Example

• This example configures the violation mode for ae1

```
admin@XorPlus# set interface aggregate-ethernet ae1 port-security violation restrict
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> snmp-trap

Users can eable or disable snmp trap when necessary.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **snmp-trap** *<bool>*

delete interface aggregate-ethernet *<lag_name>* **snmp-trap**

Parameter

• *<lag_name>* Name of LAG interface.

•*<bool>* Snmp trap when port link up and down

- **true** enable snmp-trap
- **false** disable snmp-trap

Example

• This example enable snmp-trap for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 snmp-trap true
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> static-ethernet-switching mac-address <macaddr> vlan

Users can add static mac address for a specific LAG.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **static-ethernet-switching mac-address** *<macaddr>* **vlan** *<vlan-id>*

delete interface aggregate-ethernet *<lag_name>* **static-ethernet-switching mac-address** *<macaddr>* **vlan** *<vlan-id>*

Parameter

- *<lag_name>* Name of LAG interface.
- *<macaddr>* static mac address.
- *<vlan-id>* vlan identifier, the range is between 1 to 4094.

Example

- This example is to configure mac-addr 12:11:11:11:11:11 for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 static-ethernet-switching mac-address
12:11:11:11:11:11 vlan 1
admin@XorPlus# commit
```

interface aggregate-ethernet <lag_name> storm-control <mode> pps

Users can set storm control mode for a specified port.

Command Syntax

set interface aggregate-ethernet *<lag_name>* **storm-control** *<mode>* **pps** *<value>*

delete interface aggregate-ethernet *<lag_name>* **storm-control broadcast pps**

Parameter

- *<lag_name>* Name of LAG interface.
- *<mode>* packets forwarding mode
  - **broadcast** Storm control for broadcast traffic
  - **multicast** Storm control for multicast traffic
  - **unicast** Storm control for unicast traffic
- *<value>* Packets per second, [0..30000000]

Example

- This example set broadcast storm control for ae1:

```
admin@XorPlus# set interface aggregate-ethernet ae1 storm-control broadcast pps 1000
admin@XorPlus# commit
```

interface bpdu-tunneling destination-mac

Users can set the destination-mac of BPDU

Command Syntax

set interface bpdu-tunneling destination-mac *<macaddr>*

Parameter

• *<macaddr>*The destination MAC address rewritten, e.g. xx:xx:xx:xx:xx:xx

Example

• This example sets the destination-mac of BPDU 01:0E:00:00:00:01

```
admin@XorPlus# set interface bpdu-tunneling destination-mac 01:0E:00:00:00:01
admin@XorPlus# commit
```

interface cut-through-mode

Pica8 switch has two switching modes. One is store and-forward mode another is cut-through mode.

By default, the switch forwards the packets in store and forward mode. Users can configure the switch to cut-through mode .

Command Syntax

set interface cut-through-mode *<bool>*
delete interface cut-through-mode

Parameter

• *<bool>* forwarding mode identifier

- **true** interface is in cut-through mode
- **false** interface is in store and forward mode

Example

• This example is to configure the interface in store and forward mode

```
admin@XorPlus# set interface cut-through-mode false
admin@XorPlus# commit
Merging the configuration.
Commit OK.
Save done.
XorPlus#
```

interface ecmp hash-mapping field ingress-interface disable

In the default setting, all fields are hashed by"ip-source," "port-destination," "port-source," and "vlan." Users can also enable additional fields like ingress-interface.

Command Syntax

set interface ecmp hash-mapping field ingress-interface disable *<bool>*
delete interface ecmp hash-mapping field ingress-interface disable

Parameter

•*<bool>* disable including the field

- **true** disable ingress-interface
- **false** enable ingress-interface

Example

• This example is to enable ingress interface:

```
admin@XorPlus# set interface ecmp hash-mapping field ingress-interface disable false
admin@XorPlus# commit
```

interface ecmp hash-mapping field ip-destination disable

In the default setting, all fields are hashed by"ip-source," "port-destination," "port-source," and "vlan." Users can also enable additional fields like ip-destination.

Command Syntax

set interface ecmp hash-mapping field ip-destination disable *<bool>*
delete interface ecmp hash-mapping field ip-destination disable

Parameter

•*<bool>* disable including the field

- **true** disable ip-destination
- **false** enable ip-destination

Example

• This example is to enable ip-destination:

```
admin@XorPlus# set interface ecmp hash-mapping field ip-destination disable false
admin@XorPlus# commit
```

interface ecmp hash-mapping field ip-protocol disable

In the default setting, all fields are hashed by"ip-source," "port-destination," "port-source," and "vlan." Users can also enable additional fields like ip-protocol.

Command Syntax

set interface ecmp hash-mapping field ip-protocol disable *<bool>*
delete interface ecmp hash-mapping field ip-protocol disable

Parameter

•*<bool>* disable including the field

- **true** disable ip-protocol
- **false** enable ip-protocol

Example

• This example is to enable ip-protocol:

```
admin@XorPlus# set interface ecmp hash-mapping field ip-protocol disable false
admin@XorPlus# commit
```

interface ecmp hash-mapping field ip-source disable

In the default setting, all fields are hashed by"ip-source," "port-destination," "port-source," and "vlan." Users can also enable additional fields like ip-source

Command Syntax

set interface ecmp hash-mapping field ip-source disable *<bool>*

delete interface ecmp hash-mapping field ip-source disable

Parameter

•*<bool>* disable including the field

- **true** disable ip-source
- **false** enable ip-source

Example

• This example is to enable ip-source:

```
admin@XorPlus# set interface ecmp hash-mapping field ip-source disable false
admin@XorPlus# commit
```

interface ecmp hash-mapping field port-destination disable

In the default setting, all fields are hashed by"ip-source," "port-destination," "port-source," and "vlan." Users can also enable additional fields like port-destination

Command Syntax

set interface ecmp hash-mapping field port-destination disable *<bool>*

delete interface ecmp hash-mapping field port-destination disable

Parameter

•*<bool>* disable including the field

- **true** disable port-destination
- **false** enable port-destination

Example

• This example is to enable port-destination:

```
admin@XorPlus# set interface ecmp hash-mapping field port-destination disable false
admin@XorPlus# commit
```

interface ecmp hash-mapping field port-source disable

In the default setting, all fields are hashed by"ip-source," "port-destination," "port-source," and "vlan." User can also enable additional fields like port-source.

Command Syntax

set interface ecmp hash-mapping field port-source disable *<bool>*

delete interface ecmp hash-mapping field port-source disable

Parameter

•*<bool>* disable including the field

- **true** disable port-source
- **false** enable port-source

Example

• This example is to enable port-source:

```
admin@XorPlus# set interface ecmp hash-mapping field port-source disable false
admin@XorPlus# commit
```

interface ecmp hash-mapping field vlan disable

In the default setting, all fields are hashed by"ip-source," "port-destination," "port-source," and "vlan." User can also enable additional fields like vlan

Command Syntax

set interface ecmp hash-mapping field vlan disable *<bool>*

delete interface ecmp hash-mapping field vlan disable

Parameter

•*<bool>* disable including the field

- **true** disable vlan
- **false** enable vlan

Example

• This example is to enable vlan:

```
admin@XorPlus# set interface ecmp hash-mapping field vlan disable false
admin@XorPlus# commit
```

interface ecmp max-path

This command is to set max counter of ecmp path.

Command Syntax

set interface ecmp max-path *<value>*

delete interface ecmp max-path

Parameter

• *<value>* Max of ecmp path

- **2**
- **4**
- **8**
- **16**
- **32**

Example

• This example is to set max of ecmp path 2:

```
admin@XorPlus# set interface ecmp max-path 2
admin@XorPlus# commit
```

interface ethernet-switching-options buffer queue-limit

interface ethernet-switching-options buffer queue-limit

User can set the limit value of queue buffer.

Command Syntax

set interface ethernet-switching-options buffer queue-limit *<value>*

delete interface ethernet-switching-options buffer queue-limit

Parameter

• *<value>*the queue-limit values indentifier,ranges from 0 to 20000

Example

• This example is to configure the buffer queue limit:

```
admin@XorPlus# set interface ethernet-switching-options buffer queue-limit 0
admin@XorPlus# delete interface ethernet-switching-options buffer queue-limit
admin@XorPlus#commit
```

interface ethernet-switching-options mac-table-aging-time

Users can configure the aging time of mac table

Command Syntax

set interface ethernet-switching-options mac-table-aging-time *<value>*

Delete interface ethernet-switching-options mac-table-aging-time

Parameter

• *<value>* Aging time in seconds, the range is [60..1000000].

Example

• This example is to configure the aging time (60)of mac table :

```
admin@XorPlus# set interface ethernet-switching-options mac-table-aging-time 60
admin@XorPlus# commit
```

Interface ethernet-switching-options port-error-discard timeout

Users can set the time of port recover from error-discard state automatically

Command Syntax

set interface ethernet-switching-options port-error-discard timeout *<value>*

delete interface ethernet-switching-options port-error-discard timeout

Parameter

• *<value>* Time(in seconds) of port recover from error-discard state automatically.The range is [10..300],default is 20

Example

• This example is to set the 10 as the time of port-error-discard :

```
admin@XorPlus# set interface ethernet-switching-options port-error-discard timeout 10
admin@XorPlus#commit
admin@XorPlus# delete interface ethernet-switching-options port-error-discard timeout
admin@XorPlus#commit
```

interface gigabit-ethernet <port> backup-port delay

User can set backup port delay time to a port.

Command Syntax

set interface gigabit-ethernet *<port>* backup-port delay *<seconds>*

Parameter

• *<port>* ethernet switching port identifier,the valid ports range 1-52.

•*<seconds>* preemption delay in seconds,range is [0..300]

Example

• This example is to set the delay time to 20s:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 backup-port delay 20
admin@XorPlus# commit
```

interface gigabit-ethernet <port> backup-port interface

User can configure two physical ports or two LAGs as Flex Links, or one physical port and one LAG as Flex Links.

Command Syntax

set interface gigabit-ethernet *<port>* backup-port interface *<text>*

delete interface gigabit-ethernet *<port>* backup-port interface

Parameter

• *<port>* ethernet switching port identifier,the valid ports range 1-52.

•*<text>* Set backup port of an interface, which will disable rstp/mstp

Example

• This example is to set Flex links between a physical port and a LAG :

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 backup-port interface ae1
admin@XorPlus# commit
```

interface gigabit-ethernet <port> backup-port mode

User can set preemption mode of a port.

Command Syntax

set interface gigabit-ethernet *<port>* backup-port mode *<mode>*

delete interface gigabit-ethernet *<port>* backup-port mode

Parameter

• *<port>* ethernet switching port identifier,the valid ports range 1-52.

•*<mode>* Set preemption mode.

- **bandwidth** higher bandwidth interface preferred
- **forced** active interface preferred,the **default** mode
- **Off** turn off preemption

Example

• This example is to set the port preemption mode to bandwidth:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 backup-port mode bandwidth
admin@XorPlus# commit
```

interface gigabit-ethernet <port> crossflow enable

User can configure a specified port in crossflow mode or not.

Command Syntax

set interface gigabit-ethernet *<port>* crossflow enable *<bool>*

delete interface gigabit-ethernet *<port>* crossflow enable

Parameter

• *<port>* a physical port or a LAG

• *<bool>* Enable crossflow

- **true** enable crossflow
- **false** disable crossflow

Example

• This example is to configure ge-1/1/3 port in croosflow port:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 crossflow enable true
admin@XorPlus#commit
```

interface gigabit-ethernet <port> crossflow local-control

User can configure a crossflow port in local-control mode or not.

Command Syntax

set interface gigabit-ethernet *<port>* crossflow local-control *<bool>*

delete interface gigabit-ethernet *<port>* crossflow local-control

Parameter

- *<port>* a physical port or a LAG
- *<bool>* set local control
  - **true** enable local control,**default** mode
  - **false** disable local control

Example

- This example is to configure a croosflow port ge-1/1/3 not in local control:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 crossflow local-control false
admin@XorPlus# commit
```

interface gigabit-ethernet <port> description

Users can add a description to a port.

Command Syntax

set interface gigabit-ethernet *<port>* description *<text>*

delete interface gigabit-ethernet *<port>* description

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52
- *<text>* Add a human-readable description of the interface

Example

- This example is to add description "hello" to ge-1/1/3.

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 description hello
admin@XorPlus# commit
```

interface gigabit-ethernet <port> disable

User can enable or disable an interface.

Command Syntax

set interface gigabit-ethernet *<port>* disable *<bool>*

delete interface gigabit-ethernet *<port>* disable

Parameter

• *<bool>* up/down an interface

- **true** disable an interface
- **false** enable an interface

Example

• This example is to disable ge-1/1/3 interface:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 disable true
admin@XorPlus# commit
```

interface gigabit-ethernet <port> ether-options 802.3ad

Users can add a specified port to a LAG.

Command Syntax

set interface gigabit-ethernet *<port>* ether-options 802.3ad *<lag>*

delete interface gigabit-ethernet *<port>* ether-options 802.3ad

Parameter

• *<port>* ethernet switching port identifier,the valid ports range 1-52

• *<lag>* Join an aggregated Ethernet interface LAG.

Example

• This example is to add ge-1/1/3 to ae1:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 ether-options 802.3ad ae1
admin@XorPlus#commit
```

interface gigabit-ethernet <port> ether-options flow-control

Users can configure a specified port in flow control.

Command Syntax

set interface gigabit-ethernet *<port>* ether-options flow-control *<bool>*

delete interface gigabit-ethernet *<port>* ether-options flow-control

Parameter

• <port> ethernet switching port identifier,the valid ports range 1-52

• *<bool>* enable flow control

- **true** enable flow control
- **false** disable flow control. This is default configuration.

Example

• This example is to configure ge-1/1/3 port in flow control:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 ether-options flow-control true
admin@XorPlus# commit
```

interface gigabit-ethernet <port> family ethernet-switching bpdu-tunneling protocol

This command is to configure Layer 2 protocol to be tunneled on a bpdu tunneling to a port on the interface.

Command Syntax

set interface gigabit-ethernet *<port>* family ethernet-switching bpdu-tunneling protocol *<stp>*

Parameter

• *<port>* ethernet switching port identifier,the valid ports range 1-52.

• *<stp>* Spanning Tree Protocol

Example

• This example is to configure bpdu tunnel protocol:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/4 family ethernet-switching
bpdu-tunneling protocol stp
admin@XorPlus# commit
```

interface gigabit-ethernet <port> family ethernet-switching dot1q-tunneling egress

Users can configure/delete a Q-in-Q tunnel for exiting traffic on a port.

Command Syntax

set interface gigabit-ethernet *<port>* family ethernet-switching dot1q-tunneling egress *<text>*

delete interface gigabit-ethernet *<port>* family ethernet-switching dot1q-tunneling egress *<text>*

Parameter

• *<port>* ethernet switching port identifier,the valid ports range 1-52.

• <*text*>Tunneling for existing traffic

Example

• This example is to configure a Q-in-Q tunnel for existing traffic:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/4 family ethernet-switching
dot1q-tunneling egress t2
admin@XorPlus# commit
```

interface gigabit-ethernet <port> family ethernet-switching dot1q-tunneling ether-type

Users can set/delete a Ethertype value on Q-in-Q tunnel for a port.

Command Syntax

set interface gigabit-ethernet *<port>* family ethernet-switching dot1q-tunneling ether-type *<value>*
delete interface gigabit-ethernet *<port>* family ethernet-switching dot1q-tunneling ether-type *<value>*

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52.
- <value> Ethertype value
  - **0x8100**
  - **0x88a8**
  - **0x9100**
  - **0x9200**

Example

- This example is to select a Ethertype value on Q-in-Q tunnel for ge-1/1/3 port:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching
dot1q-tunneling ether-type 0x8100
admin@XorPlus# commit
```

interface gigabit-ethernet <port> family ethernet-switching dot1q-tunneling ingress

Users can configure/delete a Q-in-Q tunnel for entering traffic on a port.

Command Syntax

set interface gigabit-ethernet *<port>* family ethernet-switching dot1q-tunneling ingress *<text>*
delete interface gigabit-ethernet *<port>* family ethernet-switching dot1q-tunneling ingress *<text>*

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52.
- <*text*>Tunneling for entering traffic

Example

- This example is to configure a Q-in-Q tunnel for entering traffic:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/4 family ethernet-switching
dot1q-tunneling ingress t2
admin@XorPlus# commit
```

interface gigabit-ethernet <port> family ethernet-switching dot1q-tunneling mode

Users can configure a Q-in-Q tunnel mode for a port. By default, the mode is NONE.

Command Syntax

set interface gigabit-ethernet *<port>* family ethernet-switching dot1q-tunneling mode *[mode]*

Parameter

• *<port>* ethernet switching port identifier,the valid ports range 1-52.

• *[mode]* Q-in-Q tunnel mode.

- **internal** Flexible QinQ: service provider internal mode
- **external** Basic QinQ: customer to service provider mode
- **none** Disable tunneling mode,the **default** mode

Example

• This example is to set Q-in-Q tunnel mode for ge-1/1/3 port:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching
dot1q-tunneling mode internal
admin@XorPlus# commit
```

interface gigabit-ethernet <port> family ethernet-switching native-vlan-id

The native VLANID is the ID of the default VLAN (usually vlan-id 1) in which the the port belongs. User can change the native VLANID for port.

Command Syntax

set interface gigabit-ethernet *<port>* family ethernet-switching native-vlan-id <*vlan-id*>

delete interface gigabit-ethernet *<port>* family ethernet-switching native-vlan-id <*vlan-id*>

Parameter

• <*port*> Gigabit Ethernet IEEE 802.3z or 802.3ae. e.g. ge-1/1/1.

• <*vlan_id*> The native-vlan-id ,VLAN identifier to associate with untagged packets .the valid VLAN numbers range 1-4094.

Example

• This example creates VLAN 3 and puts ge-1/1/3 port on this VLAN:

```
admin@XorPlus# set vlans vlan-id 3
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching
native-vlan-id 3
admin@XorPlus# commit
```

interface gigabit-ethernet <port> family ethernet-switching port-mode

By default the port mode is access, user can configure trunk ports belong to more than one VLAN including the native VLAN.

Command Syntax

set interface gigabit-ethernet *<port>* family ethernet-switching port-mode *<port-mode>*
delete interface gigabit-ethernet *<port>* family ethernet-switching port-mode

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52.
- *<port-mode>* Configure port as access or trunk port mode. Required select include:
  - **access** access port mode, the **default** mode
  - **trunk** trunk port mode

Example

- This example sets ge-1/1/3 port mode to trunk:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching port-mode
trunk
admin@XorPlus# commit
```

interface gigabit-ethernet <port> family ethernet-switching vlan members

This command is to add a vlan member to this trunk port with tagged packet, vlan members range from 1 to 4094. The default of this command is that packets are tagged when the packets go out from this interface.

Note: If this interface's native-vlan-id is identical to vlan-member, packets will be encapsulated with vlan tag because tagged packet is the default configuration of vlan-member.

Command Syntax

set interface gigabit-ethernet *<port>* family ethernet-switching vlan members *<vlan-id>*
delete interface gigabit-ethernet *<port>* family ethernet-switching vlan members *<vlan-id>*

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52.
- *<members>* Configure the VLANs for which the interface can carry traffic,eg:2,3...

Example

- This example is adding a trunk port(ge-1/1/3) to a vlan:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching vlan
members 5
admin@XorPlus# commit
```

interface gigabit-ethernet <port> mtu

Users can set maximum transmit packet size for a specified port.

Command Syntax

set interface gigabit-ethernet *<port>* mtu *<value>*
delete interface gigabit-ethernet *<port>* mtu

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52
- *<value>* maximum transmit packet size identifier(in octets),value is between [64..9216]

Example

- This example sets MTU 1024 for ge-1/1/3:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 mtu 1024
admin@XorPlus# commit
```

interface gigabit-ethernet <port> port-security block

Port security can be configured to take one of five block actions.

Command Syntax

set interface gigabit-ethernet *<port>* port-security block *<action>*
delete interface gigabit-ethernet *<port>* port-security block

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52
- *<action>*Disable forwarding unknow uni/multi cast addresses
  - **all** Block broadcast and unknow addresses
  - **broadcast** Block broadcast address
  - **multicast** Block unknow multicast addresses
  - **uni-multi-cast** Block unknow uni/multi cast addresses
  - **unicast** Block unknow unicast addresses

Example

- This example configure ge-1/1/1 in block broadcast mode:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 port-security block broadcast
admin@XorPlus# commit
```

interface gigabit-ethernet <port> port-security mac-address

Users can use port security with static MAC addresses to restrict a port's ingress traffic by limiting the MAC addresses that are allowed to send traffic into the port.

Command Syntax

set interface gigabit-ethernet *<port>* port-security mac-address *<madaddr>*
delete interface gigabit-ethernet *<port>* port-security mac-address *<madaddr>*

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52
- *<madaddr>* secure mac address identifier(eg:22:00:00:00:00:00)

Example

- This example configure MAC address for ge-1/1/2 :

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 port-security mac-address
22:00:00:00:00:00 vlan 1
admin@XorPlus# commit
```

interface gigabit-ethernet <port> port-security mac-limit

Users can use port security with static MAC addresses to restrict a port's ingress traffic by limiting the MAC addresses that are allowed to send traffic into the port.

Command Syntax

set interface gigabit-ethernet *<port>* port-security mac-limit *<value>*
delete interface gigabit-ethernet *<port>* port-security mac-limit

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52
- *<value>* The maximum number of dynamic mac address on this port, [0..1024]

Example

- This example configure the maximum number of dynamic mac address as 10 for ge-1/1/1:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 port-security mac-limit 10
admin@XorPlus# commit
```

interface gigabit-ethernet <port> port-security sticky

Port security with sticky MAC addresses retains dynamically learned MAC addresses when the link is down, and restores the MAC addresses when the link ups.

Command Syntax

set interface gigabit-ethernet *<port>* port-security sticky *<bool>*
delete interface gigabit-ethernet *<port>* port-security sticky

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52
- *<bool>* Sticky mac address
    - **true** enable sticky mac address
    - **false** disable sticky mac address

Example

• This example configure sticky MAC address for ge-1/1/2

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 port-security sticky true
admin@XorPlus# commit
```

interface gigabit-ethernet <port> port-security violation

Users can configuring Port Security Violation Mode on a Port.

Command Syntax

set interface gigabit-ethernet *<port>* port-security violation *<action>*

delete interface gigabit-ethernet *<port>* port-security violation

Parameter

• *<port>* ethernet switching port identifier,the valid ports range 1-52

•*<action>* the violation action identifier.

- **protect** Drop packets with unknown source addresses
- **restrict** Drop packets with unknown source addresses and log violation
- **shutdown** Disable interface
- **shutdown-temp** Disable interface temporarily(20 seconds for the default)

Example

• This example configures the violation mode for ge-1/1/1

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 port-security violation restrict
admin@XorPlus# commit
```

interface gigabit-ethernet <port> power-preemphasis-level

Users can set power-preemphasis-level for a port .

Command Syntax

set interface gigabit-ethernet *<port>* power-preemphasis-level *<value>*

delete interface gigabit-ethernet *<port>* power-preemphasis-level

Parameter

• *<port>*ethernet switching port identifier,the valid ports range 1-52

• *<value>*the level identifier, [0..15]

Example

• This example set preemphasis-level 3 for ge-1/1/1:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 power-preemphasis-level 3
admin@XorPlus# commit
```

interface gigabit-ethernet <port> rate-limiting <ingress/egress> kilobits

Users can limit rate of a ingress/egress port.

Command Syntax

set interface gigabit-ethernet *<port>* rate-limiting *<ingress/egress>* kilobits < *kilobits-ps>*
delete interface gigabit-ethernet *<port>* rate-limiting egress kilobits

Parameter

• *<port>* ethernet switching port identifier,the valid ports range 1-52
• *<ingress/egress>* port mode

- **ingress** port mode for input traffic
- **egress** port mode for output traffic

• < *kilobits-ps>* kilobits per second, [0..10000000]maximum of 1000000 for ge-1/1/1...48, 10000000 for te-1/1/49...52

Example

• This example configure 1000 kilobits for an egress port ge-1/1/4:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/4 rate-limiting egress kilobits 1000
admin@XorPlus# commit
```

interface gigabit-ethernet <port> snmp-trap

Users can eable or disable snmp trap when necessary.

Command Syntax

set interface gigabit-ethernet *<port>* snmp-trap *<bool>*
delete interface gigabit-ethernet *<port>* snmp-trap

Parameter

• *<port>*ethernet switching port identifier,the valid ports range 1-52
•*<bool>* Snmp trap when port link up and down

- **true** enable snmp-trap
- **false** disable snmp-trap

Example

• This example enable snmp-trap for ge-1/1/1:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 snmp-trap true
admin@XorPlus# commit
```

interface gigabit-ethernet <port> speed

Users can set the port speed according to their own needs. If users first plugin a 40G optical module then set port speed to 100G, the port status will be down. But if users set speed 100G and then plugin a 40G optical module, the port will be up.

Command Syntax

set interface gigabit-ethernet *<port>* speed *<speed-value>*
delete interface gigabit-ethernet *<port>* speed

Parameter

• *<port>* ethernet switching port identifier, the valid ports range is: 1-52
•*<speed-value>* port speed identifier,values are as follows:

- **10** 10M speed
- **100** 100M speed
- **1000** 1G speed
- **10000** 10G speed
- 40000 40G speed
- 100000 100G speed
- **auto** auto negotiation

Example

• This example configures the port ge-1/1/4 speed to 1000:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/4 speed 1000
admin@XorPlus# commit
```

interface gigabit-ethernet <port> static-ethernet-switching mac-address <mac-address> vlan <vlan-id>

User can configure a mac address for port belong to more than one vlan.

Command Syntax

set interface gigabit-ethernet <*port*> static-ethernet-switching mac-address <*mac-address*> vlan <*vlan-id*>

Parameter

• <*port*> GigabitEthernet IEEE 802.3z or 802.3ae. e.g. ge-1/1/1.
• <*mac-address*> Add static mac address for a specific interface.
• <*vlan-id*> VLAN tag identifier, the valid VLAN numbers range 1-4094, can create specify a range of VLAN numbers, e.g. 2,3,5-100.

Example

• This example configures a mac address for port belong to vlan 1.

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 static-ethernet-switching
mac-address 22:11:11:11:11:11 vlan 1
admin@XorPlus# commit
```

interface gigabit-ethernet <port> storm-control <mode> pps

Users can set storm control mode for a specified port.

Command Syntax

set interface gigabit-ethernet *<port>* storm-control *<mode>* pps *<value>*

delete interface gigabit-ethernet *<port>* storm-control [*<mode>* / **pps**]

Parameter

- *<port>*ethernet switching port identifier,the valid ports range 1-52
- *<mode>* packets forwarding mode
  - **broadcast** Storm control for broadcast traffic
  - **multicast** Storm control for multicast traffic
  - **unicast** Storm control for unicast traffic
- *<value>* Packets per second, [0..30000000]

Example

- This example set broadcast storm control for ge-1/1/1:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 storm-control broadcast pps 1000
admin@XorPlus# commit
```

interface gigabit-ethernet <port> wred queue <value> drop_probability

Users can set drop_probability.

Command Syntax

set interface gigabit-ethernet *<port>* wred queue *<value>* drop_probability *<int>*

delete interface gigabit-ethernet <port> wred queue *<value>* drop_probability

Parameter

- *<port>*ethernet switching port identifier,the valid ports range 1-52
- *<value>* The queue number,[0..7]
- *<int>* The probability identifier,[0...100]

Example

- This example sets wred queue drop probability for ge-1/1/3:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 wred queue 2 drop_probability 10
admin@XorPlus# commit
```

interface gigabit-ethernet <port> wred queue <value> ecn_thresh

Users can set ecn_thresh.

Command Syntax

set interface gigabit-ethernet *<port>* wred queue *<value>* ecn_thresh *<int>*

delete interface gigabit-ethernet *<port>* wred queue 2 ecn_thresh

Parameter

• *<port>*ethernet switching port identifier,the valid ports range 1-52

•*<value>* The queue number,[0..7]

•*<int>* The threshold identifier,[0..1],0 stands for disable ecn,1 stands for enable ecn.

Example

• This example sets ecn_thresh for ge-1/1/3:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 wred queue 2 ecn_thresh 0
admin@XorPlus# commit
```

interface gigabit-ethernet <port> wred queue <value> enable

Users can set wred queue when necessary.

Command Syntax

set interface gigabit-ethernet *<port>* wred queue *<value>* enable *<bool>*

delete interface gigabit-ethernet *<port>* wred queue *<value> enable*

Parameter

• *<port>*ethernet switching port identifier,the valid ports range 1-52

•*<value>* The queue number,[0..7]

•*<bool>* Set enable

- **true** enable wred
- **false** disable wred

Example

• This example sets wred queue for ge-1/1/3:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 wred queue 2 enable true
admin@XorPlus# commit
```

interface gigabit-ethernet <port> wred queue <value> max_thresh

Users can set max thresh.

Command Syntax

set interface gigabit-ethernet *<port>* wred queue *<value>* max_thresh *<int>*

delete interface gigabit-ethernet *<port>* wred queue *<value>* max_thresh

Parameter

• *<port>*ethernet switching port identifier,the valid ports range 1-52

•*<value>* The queue number,[0..7]

•*<int>* The threshold identifier,[0..8000]

Example

• This example sets max thresh for ge-1/1/3:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 wred queue 2 max_thresh 100
admin@XorPlus# commit
```

interface gigabit-ethernet <port> wred queue <value> min_thresh

Users can set max thresh.

Command Syntax

set interface gigabit-ethernet *<port>* wred queue *<value>* min_thresh *<int>*

delete interface gigabit-ethernet *<port>* wred queue *<value>* min_thresh

Parameter

• *<port>*ethernet switching port identifier,the valid ports range 1-52

•*<value>* The queue number,[0..7]

•*<int>* The threshold identifier,[0..8000]

Example

• This example sets max thresh for ge-1/1/3:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 wred queue 2 min_thresh 1
admin@XorPlus# commit
```

interface max-acl-rule-limit <egress/ingress>

This command is to set max acl rule counter .

Command Syntax

set interface max-acl-rule-limit *<egress/ingress>* <acl-counter>

delete interface max-acl-rule-limit egress

delete interface max-acl-rule-limit ingress

Parameter

• *<egress/ingress>* the in/out mode of a port

- **egress** Set max egress acl rule count
- **ingress** Set max ingress acl rule count

•*<acl-counter>* max egress or ingress acl counter identifier. Egress:,the counter is [0..256].ingress:[0..896]

Example

• This example is to max ingress ACL counter is 400

```
admin@XorPlus# set interface max-acl-rule-limit ingress 400
admin@XorPlus# commit
```

interface max-route-limit

This command is to set max route count .

Command Syntax

set interface max-route-limit *<counter>*

delete interface max-route-limit

Parameter

•*<counter>* Max Route Counter,range is [0..12000]

Example

• This example is to set max route counter 12 and delete it:

```
admin@XorPlus# set interface max-route-limit 12
admin@XorPlus# delete interface max-route-limit
admin@XorPlus# commit
```

interface qe-interface-mode

This command is to change the qe-interface-mode. After changing the mode with this command, user should reboot the system to make it work.

Command Syntax

set interface qe-interface-mode <QSFP | SFP | FLEX>

delete interface qe-interface-mode

Parameter

- QSFP -- QSFP mode. The default is this mode.
- SFP -- 10G*4/25G*4 breakout mode. All 40G/100G are broken to 10G*4/25G*4 ports.
- FLEX -- Enable flexible mode. In this mode, to break some 40G/100G ports as required, but not all 40G/100G ports.
  At the same time, all interface names will change to xe-1/1/? or xe-1/1/?.1 if changing mode from QSFP to FLEX; all interface names will change to xe-1/1/? or xe-1/1/?.1, xe-1/1/?.2, xe-1/1/?.3, xe-1/1/?.4 if changing mode from SFP to FLEX.
  The following table is an example changing from QSFP to FLEX mode and from SFP to FLEX mode:

QSFP	SFP	FLEX From QSFP	FLEX From SFP
te-1/1/1	te-1/1/1	xe-1/1/1	xe-1/1/1
qe-1/1/49	te-1/1/49 te-1/1/50 te-1/1/51	xe-1/1/49.1	xe-1/1/49.1 xe-1/1/49.2 xe-1/1/49.3

QSFP	SFP	FLEX From QSFP	FLEX From SFP
	te-1/1/52		xe-1/1/49.4
He-1/1/1	te-1/1/1 te-1/1/2 te-1/1/3 te-1/1/4	xe-1/1/1.1	xe-1/1/1.1 xe-1/1/1.2 xe-1/1/1.3 xe-1/1/1.4
ge-1/1/1		xe-1/1/1	

- MAKE SURE to delete all the configurations associated to the unavailable interfaces, Otherwise loading startup configure will fail and then the system will load the default configuration file.
- There isn't command to come back QSPF or SFP mode in FLEX mode. The Only method is to remove /pica/config/pica_startup.boot file and then reboot system. Please Must make your configuration copy before removing /pica/config/pica_startup.boot. The default configuration file will be loaded after pica_startup.boot is removed and restarting system.

Example

This example enables SFP mode in QSFP mode. In the QSPF modeas below, te-1/1/1 ~ te-1/1/48 are 10G ports. qe-1/1/49 ~ qe-1/1/54 are 40G ports. In the SFP mode, te-1/1/49 ~ te-1/1/52 are 10G *4 ports after 40G qe-1/1/49 breakout.

```
admin@XorPlus# run show interface qe-interface-mode
qe-interface-mode:QSFP
admin@XorPlus# run show interface brief
Interface   Management  Status  Flow Control  Duplex  Speed    Description
----------  ----------  ------  ------------  ------  -------
------------------------------
te-1/1/1    Enabled     Down    Disabled      Full    Auto
te-1/1/2    Enabled     Up      Disabled      Full    100Mb/s
te-1/1/3    Enabled     Up      Disabled      Full    100Mb/s
te-1/1/4    Enabled     Down    Disabled      Full    Auto
te-1/1/5    Enabled     Down    Disabled      Full    Auto
te-1/1/6    Enabled     Down    Disabled      Full    Auto
te-1/1/7    Enabled     Down    Disabled      Full    Auto
te-1/1/8    Enabled     Down    Disabled      Full    Auto
te-1/1/9    Enabled     Down    Disabled      Full    Auto
te-1/1/10   Enabled     Down    Disabled      Full    Auto
te-1/1/11   Enabled     Down    Disabled      Full    Auto
te-1/1/12   Enabled     Down    Disabled      Full    Auto
te-1/1/13   Enabled     Down    Disabled      Full    Auto
te-1/1/14   Enabled     Down    Disabled      Full    Auto
te-1/1/15   Enabled     Down    Disabled      Full    Auto
te-1/1/16   Enabled     Down    Disabled      Full    Auto
te-1/1/17   Enabled     Down    Disabled      Full    Auto
te-1/1/18   Enabled     Down    Disabled      Full    Auto
te-1/1/19   Enabled     Down    Disabled      Full    Auto
te-1/1/20   Enabled     Down    Disabled      Full    Auto
te-1/1/21   Enabled     Down    Disabled      Full    Auto
te-1/1/22   Enabled     Down    Disabled      Full    Auto
te-1/1/23   Enabled     Down    Disabled      Full    Auto
te-1/1/24   Enabled     Down    Disabled      Full    Auto
te-1/1/25   Enabled     Down    Disabled      Full    Auto
te-1/1/26   Enabled     Down    Disabled      Full    Auto
te-1/1/27   Enabled     Down    Disabled      Full    Auto
te-1/1/28   Enabled     Down    Disabled      Full    Auto
te-1/1/29   Enabled     Down    Disabled      Full    Auto
te-1/1/30   Enabled     Down    Disabled      Full    Auto
te-1/1/31   Enabled     Down    Disabled      Full    Auto
```

```
te-1/1/32   Enabled     Down    Disabled      Full    Auto
te-1/1/33   Enabled     Down    Disabled      Full    Auto
te-1/1/34   Enabled     Down    Disabled      Full    Auto
te-1/1/35   Enabled     Down    Disabled      Full    Auto
te-1/1/36   Enabled     Down    Disabled      Full    Auto
te-1/1/37   Enabled     Down    Disabled      Full    Auto
te-1/1/38   Enabled     Down    Disabled      Full    Auto
te-1/1/39   Enabled     Down    Disabled      Full    Auto
te-1/1/40   Enabled     Down    Disabled      Full    Auto
te-1/1/41   Enabled     Down    Disabled      Full    Auto
te-1/1/42   Enabled     Down    Disabled      Full    Auto
te-1/1/43   Enabled     Down    Disabled      Full    Auto
te-1/1/44   Enabled     Down    Disabled      Full    Auto
te-1/1/45   Enabled     Up      Disabled      Full    100Mb/s
te-1/1/46   Enabled     Down    Disabled      Full    Auto
te-1/1/47   Enabled     Down    Disabled      Full    Auto
te-1/1/48   Enabled     Down    Disabled      Full    Auto
qe-1/1/49   Enabled     Down    Disabled      Full    Auto
qe-1/1/50   Enabled     Down    Disabled      Full    Auto
qe-1/1/51   Enabled     Up      Disabled      Full    40Gb/s
qe-1/1/52   Enabled     Up      Disabled      Full    40Gb/s
qe-1/1/53   Enabled     Down    Disabled      Full    Auto
qe-1/1/54   Enabled     Down    Disabled      Full    Auto
admin@XorPlus# set interface qe-interface-mode SFP
admin@XorPlus# commit
Merging the configuration.
Commit OK.
Save done.
Qe interface mode changes, please reboot system to make it effective!
MAKE SURE to delete all the configurations associated to the unavailable interfaces,
Otherwise loading startup configure will FAIL.
admin@XorPlus#exitadmin@XorPlus> exit
admin@XorPlus$
admin@XorPlus$sudo service picos restart
[ ok ] Stopping: PicOS L2/L3...................
[ ok ] Starting: PicOS L2/L3...............................................
admin@XorPlus$cli
Synchronizing configuration...OK.
Pica8 PicOS Version 2.8.0
Welcome to PicOS on XorPlus
admin@XorPlus> co
Entering configuration mode.
User admin is also in configuration mode.
admin@XorPlus#
admin@XorPlus# run show interface qe-interface-mode
qe-interface-mode:SFP
admin@XorPlus# run show interface brief
Interface   Management  Status  Flow Control  Duplex  Speed    Description
----------  ----------  ------  ------------  ------  -------
------------------------------
te-1/1/1    Enabled     Down    Disabled      Full    Auto
te-1/1/2    Enabled     Up      Disabled      Full    100Mb/s
te-1/1/3    Enabled     Up      Disabled      Full    100Mb/s
te-1/1/4    Enabled     Down    Disabled      Full    Auto
te-1/1/5    Enabled     Down    Disabled      Full    Auto
te-1/1/6    Enabled     Down    Disabled      Full    Auto
te-1/1/7    Enabled     Down    Disabled      Full    Auto
te-1/1/8    Enabled     Down    Disabled      Full    Auto
te-1/1/9    Enabled     Down    Disabled      Full    Auto
te-1/1/10   Enabled     Down    Disabled      Full    Auto
te-1/1/11   Enabled     Down    Disabled      Full    Auto
te-1/1/12   Enabled     Down    Disabled      Full    Auto
te-1/1/13   Enabled     Down    Disabled      Full    Auto
te-1/1/14   Enabled     Down    Disabled      Full    Auto
te-1/1/15   Enabled     Down    Disabled      Full    Auto
te-1/1/16   Enabled     Down    Disabled      Full    Auto
te-1/1/17   Enabled     Down    Disabled      Full    Auto
te-1/1/18   Enabled     Down    Disabled      Full    Auto
te-1/1/19   Enabled     Down    Disabled      Full    Auto
te-1/1/20   Enabled     Down    Disabled      Full    Auto
```

```
te-1/1/21   Enabled     Down    Disabled      Full    Auto
te-1/1/22   Enabled     Down    Disabled      Full    Auto
te-1/1/23   Enabled     Down    Disabled      Full    Auto
te-1/1/24   Enabled     Down    Disabled      Full    Auto
te-1/1/25   Enabled     Down    Disabled      Full    Auto
te-1/1/26   Enabled     Down    Disabled      Full    Auto
te-1/1/27   Enabled     Down    Disabled      Full    Auto
te-1/1/28   Enabled     Down    Disabled      Full    Auto
te-1/1/29   Enabled     Down    Disabled      Full    Auto
te-1/1/30   Enabled     Down    Disabled      Full    Auto
te-1/1/31   Enabled     Down    Disabled      Full    Auto
te-1/1/32   Enabled     Down    Disabled      Full    Auto
te-1/1/33   Enabled     Down    Disabled      Full    Auto
te-1/1/34   Enabled     Down    Disabled      Full    Auto
te-1/1/35   Enabled     Down    Disabled      Full    Auto
te-1/1/36   Enabled     Down    Disabled      Full    Auto
te-1/1/37   Enabled     Down    Disabled      Full    Auto
te-1/1/38   Enabled     Down    Disabled      Full    Auto
te-1/1/39   Enabled     Down    Disabled      Full    Auto
te-1/1/40   Enabled     Down    Disabled      Full    Auto
te-1/1/41   Enabled     Down    Disabled      Full    Auto
te-1/1/42   Enabled     Down    Disabled      Full    Auto
te-1/1/43   Enabled     Down    Disabled      Full    Auto
te-1/1/44   Enabled     Down    Disabled      Full    Auto
te-1/1/45   Enabled     Up      Disabled      Full    100Mb/s
te-1/1/46   Enabled     Down    Disabled      Full    Auto
te-1/1/47   Enabled     Down    Disabled      Full    Auto
te-1/1/48   Enabled     Down    Disabled      Full    Auto
te-1/1/49   Enabled     Down    Disabled      Full    Auto
te-1/1/50   Enabled     Down    Disabled      Full    Auto
te-1/1/51   Enabled     Down    Disabled      Full    Auto
te-1/1/52   Enabled     Down    Disabled      Full    Auto
te-1/1/53   Enabled     Down    Disabled      Full    Auto
te-1/1/54   Enabled     Down    Disabled      Full    Auto
te-1/1/55   Enabled     Down    Disabled      Full    Auto
te-1/1/56   Enabled     Down    Disabled      Full    Auto
te-1/1/57   Enabled     Up      Disabled      Full    10Gb/s
te-1/1/58   Enabled     Up      Disabled      Full    10Gb/s
te-1/1/59   Enabled     Up      Disabled      Full    10Gb/s
te-1/1/60   Enabled     Up      Disabled      Full    10Gb/s
te-1/1/61   Enabled     Up      Disabled      Full    10Gb/s
te-1/1/62   Enabled     Up      Disabled      Full    10Gb/s
te-1/1/63   Enabled     Up      Disabled      Full    10Gb/s
te-1/1/64   Enabled     Up      Disabled      Full    10Gb/s
te-1/1/65   Enabled     Down    Disabled      Full    Auto
te-1/1/66   Enabled     Down    Disabled      Full    Auto
te-1/1/67   Enabled     Down    Disabled      Full    Auto
te-1/1/68   Enabled     Down    Disabled      Full    Auto
te-1/1/69   Enabled     Down    Disabled      Full    Auto
te-1/1/70   Enabled     Down    Disabled      Full    Auto
te-1/1/71   Enabled     Down    Disabled      Full    Auto
te-1/1/72   Enabled     Down    Disabled      Full    Auto
```

The second example enables FLEX mode in SFP mode. As below, xe-1/1/1~xe-1/1/48 are 10G copper ports. xe-1/1/49.1~xe-1/1/49.4 are 10G*4 ports.

```
admin@XorPlus# run show interface qe-interface-mode
qe-interface-mode:SFP
admin@XorPlus# set interface qe-interface-mode FLEX
admin@XorPlus# commit
Merging the configuration.
Commit OK.
Save done.
Qe interface mode changes, please reboot system to make it effective!
MAKE SURE to delete all the configurations associated to the unavailable interfaces,
Otherwise loading startup configure will FAIL.
admin@XorPlus#exit
```

```
admin@XorPlus> exit
admin@XorPlus$
admin@XorPlus$sudo service picos restart
[ ok ] Stopping: PicOS L2/L3..................
[ ok ] Starting: PicOS L2/L3..............................................
admin@XorPlus$cli
Synchronizing configuration...OK.
Pica8 PicOS Version 2.8.0
Welcome to PicOS on XorPlus
admin@XorPlus> co
Entering configuration mode.
User admin is also in configuration mode.
admin@XorPlus#
admin@XorPlus# run show interface brief
Interface   Management  Status  Flow Control  Duplex  Speed    Description
----------  ----------  ------  ------------  ------  -------
------------------------------
xe-1/1/1    Enabled     Down    Disabled      Full    Auto
xe-1/1/2    Enabled     Up      Disabled      Full    100Mb/s
xe-1/1/3    Enabled     Up      Disabled      Full    100Mb/s
xe-1/1/4    Enabled     Down    Disabled      Full    Auto
xe-1/1/5    Enabled     Down    Disabled      Full    Auto
xe-1/1/6    Enabled     Down    Disabled      Full    Auto
xe-1/1/7    Enabled     Down    Disabled      Full    Auto
xe-1/1/8    Enabled     Down    Disabled      Full    Auto
xe-1/1/9    Enabled     Down    Disabled      Full    Auto
xe-1/1/10   Enabled     Down    Disabled      Full    Auto
xe-1/1/11   Disabled    Down    Disabled      Full    Auto
xe-1/1/12   Enabled     Down    Disabled      Full    Auto
xe-1/1/13   Enabled     Down    Disabled      Full    Auto
xe-1/1/14   Enabled     Down    Disabled      Full    Auto
xe-1/1/15   Enabled     Down    Disabled      Full    Auto
xe-1/1/16   Enabled     Down    Disabled      Full    Auto
xe-1/1/17   Enabled     Down    Disabled      Full    Auto
xe-1/1/18   Enabled     Down    Disabled      Full    Auto
xe-1/1/19   Enabled     Down    Disabled      Full    Auto
xe-1/1/20   Enabled     Down    Disabled      Full    Auto
xe-1/1/21   Enabled     Down    Disabled      Full    Auto
xe-1/1/22   Enabled     Down    Disabled      Full    Auto
xe-1/1/23   Enabled     Down    Disabled      Full    Auto
xe-1/1/24   Enabled     Down    Disabled      Full    Auto
xe-1/1/25   Enabled     Down    Disabled      Full    Auto
xe-1/1/26   Enabled     Down    Disabled      Full    Auto
xe-1/1/27   Enabled     Down    Disabled      Full    Auto
xe-1/1/28   Enabled     Down    Disabled      Full    Auto
xe-1/1/29   Enabled     Down    Disabled      Full    Auto
xe-1/1/30   Enabled     Down    Disabled      Full    Auto
xe-1/1/31   Enabled     Down    Disabled      Full    Auto
xe-1/1/32   Enabled     Down    Disabled      Full    Auto
xe-1/1/33   Enabled     Down    Disabled      Full    Auto
xe-1/1/34   Enabled     Down    Disabled      Full    Auto
xe-1/1/35   Enabled     Down    Disabled      Full    Auto
xe-1/1/36   Enabled     Down    Disabled      Full    Auto
xe-1/1/37   Enabled     Down    Disabled      Full    Auto
xe-1/1/38   Enabled     Down    Disabled      Full    Auto
xe-1/1/39   Enabled     Down    Disabled      Full    Auto
xe-1/1/40   Enabled     Down    Disabled      Full    Auto
xe-1/1/41   Enabled     Down    Disabled      Full    Auto
xe-1/1/42   Enabled     Down    Disabled      Full    Auto
xe-1/1/43   Enabled     Down    Disabled      Full    Auto
xe-1/1/44   Enabled     Down    Disabled      Full    Auto
xe-1/1/45   Enabled     Up      Disabled      Full    100Mb/s
xe-1/1/46   Enabled     Down    Disabled      Full    Auto
xe-1/1/47   Enabled     Down    Disabled      Full    Auto
xe-1/1/48   Enabled     Down    Disabled      Full    Auto
xe-1/1/49.1 Enabled     Down    Disabled      Full    Auto
xe-1/1/49.2 Enabled     Down    Disabled      Full    Auto
xe-1/1/49.3 Enabled     Down    Disabled      Full    Auto
xe-1/1/49.4 Enabled     Down    Disabled      Full    Auto
xe-1/1/50.1 Enabled     Down    Disabled      Full    Auto
```

```
xe-1/1/50.2 Enabled     Down    Disabled      Full    Auto
xe-1/1/50.3 Enabled     Down    Disabled      Full    Auto
xe-1/1/50.4 Enabled     Down    Disabled      Full    Auto
xe-1/1/51.1 Enabled     Up      Disabled      Full    10Gb/s
xe-1/1/51.2 Enabled     Up      Disabled      Full    10Gb/s
xe-1/1/51.3 Enabled     Up      Disabled      Full    10Gb/s
xe-1/1/51.4 Enabled     Up      Disabled      Full    10Gb/s
xe-1/1/52.1 Enabled     Up      Disabled      Full    10Gb/s
xe-1/1/52.2 Enabled     Up      Disabled      Full    10Gb/s
xe-1/1/52.3 Enabled     Up      Disabled      Full    10Gb/s
xe-1/1/52.4 Enabled     Up      Disabled      Full    10Gb/s
xe-1/1/53.1 Enabled     Down    Disabled      Full    Auto
xe-1/1/53.2 Enabled     Down    Disabled      Full    Auto
xe-1/1/53.3 Enabled     Down    Disabled      Full    Auto
xe-1/1/53.4 Enabled     Down    Disabled      Full    Auto
xe-1/1/54.1 Enabled     Down    Disabled      Full    Auto
xe-1/1/54.2 Enabled     Down    Disabled      Full    Auto
xe-1/1/54.3 Enabled     Down    Disabled      Full    Auto
xe-1/1/54.4 Enabled     Down    Disabled      Full    Auto
```

The third example is how to come back QSPF/SFP mode.

```
admin@XorPlus$rm /pica/config/pica_startup.boot
admin@XorPlus$sudo service picos restart
[ ok ] Stopping: PicOS L2/L3...................
[ ok ] Starting: PicOS L2/L3...............................................
admin@XorPlus$cli
Synchronizing configuration...OK.
Pica8 PicOS Version 2.8.0
Welcome to PicOS on XorPlus
admin@XorPlus> co
Entering configuration mode.
User admin is also in configuration mode.
admin@XorPlus#
admin@XorPlus# run show interface qe-interface-mode
qe-interface-mode:QSFP
```

set interface ethernet-switching-options analyzer input

Port mirroring, is the duplication of traffic from a set of source ports onto a destination port. User can configure port mirroring to monitor and analyze source port traffic.

The **set interface ethernet-switching-options analyzer input** command configures source port, traffics of which need to be monitored. User can use the **set interface ethernet-switching-options analyzer output** command configure destination port.

Command Syntax

set interface ethernet-switching-options analyzer *<string>* **input** <**ingress | egress**> *<port>*

delete interface ethernet-switching-options analyzer *<string>* **input** <**ingress | egress**> *<port>*

Parameter

Parameter	Description
<string>	Specifies the name of a mirror, should consist of letters and/or numerals.
<**ingress	egress**>	Specifies the traffic direction of a source port.

<port>	Specifies ethernet switching port identifier of the source port.

NOTE

- For Tomahawk platform switches, port mirroring can not be applied on both direction of the same source interface, that is, you can configure either ingress or egress traffic on the same source interface.
- A switch supports a maximum of 4 observing ports.

Example

• Configure ge-1/1/3 as the mirrored port, and ge-1/1/4 as the observing port.

```
admin@XorPlus# set interface ethernet-switching-options analyzer 111 input ingress ge-1/1/3
admin@XorPlus# set interface ethernet-switching-options analyzer 111 input egress ge-1/1/3
admin@XorPlus# set interface ethernet-switching-options analyzer 111 output ge-1/1/4
admin@XorPlus# commit
```

show interface aggregate-ethernet <lag_name>

This command is to show information about the specified LAG interface.

Command Syntax

run show interface aggregate-ethernet *<lag_name> [text]*

Parameter

•*<lag_name>* Name of LAG interface.

• [*text*] The special information. Options include:

- **brief** Show brief information
- **detail** Show detail information

Example

• This example is to show information of ae1:

```
admin@XorPlus# run show interface aggregate-ethernet ae1
Physical interface: ae1, Enabled, error-discard False, Physical link is Down
Interface index: 53
Description:
Link-level type: Ethernet, MTU: 1514, Speed: Auto, Duplex: Auto
Source filtering: Disabled, Flow control: Disabled, Auto-negotiation: Enabled
Interface flags: Hardware-Down SNMP-Traps Internal: 0x0
Current address: 08:9e:01:a8:00:49, Hardware address: 08:9e:01:a8:00:49
Traffic statistics:
5 sec input rate 0 bits/sec, 0 packets/sec
5 sec output rate 0 bits/sec, 0 packets/sec
Input Packets.............................0
Output Packets............................0
Input Octets..............................0
Output Octets.............................0
Aggregated link protocol: STATIC
Minimum number of selected ports: 1
Members Status Port Speed
--------- ---------- ----------
```

show interface aggregate-ethernet <lag_name> dot1q-tunneling

This command is to show dot1q-tunneling on a specified LAG.

Command Syntax

run show interface aggregate-ethernet *<lag_name>* dot1q-tunneling

Parameter

• *<lag_name>* Name of LAG interface.

Example

• This example is to show bpdu tunneling:

```
admin@XorPlus# run show interface aggregate-ethernet ae1 dot1q-tunneling
Dot1q Tunneling Mode: internal, Ether Type: 0x8100
```

show interface bpdu-tunneling

This command is to show bpdu tunneling on all interface.

Command Syntax

run show interface bpdu-tunneling

Example

• This example is to show bpdu tunneling:

```
admin@XorPlus# run show interface bpdu-tunneling
Destination Mac: 1:e:0:0:0:1
```

show interface brief

This command show interface brief information ,this information includes Interface , Management,Status, Flow Control, Duplex ,Speed ,Description.

Command Syntax

run show interface brief

Example

• This example is to show brief information of interface :

```
admin@XorPlus# run show interface brief
Interface Management Status Flow Control Duplex Speed Description
---------- ---------- ------ ------------ ------ ------- -------------------------------
ge-1/1/1 Enabled Up Disabled Full 100Mb/s
ge-1/1/2 Enabled Up Disabled Full 100Mb/s
ge-1/1/3 Enabled Down Disabled Full Auto
ge-1/1/4 Enabled Up Disabled Full 100Mb/s
ge-1/1/5 Enabled Down Disabled Full Auto
ge-1/1/6 Enabled Down Disabled Full Auto
ge-1/1/7 Disabled Down Disabled Full Auto
ge-1/1/8 Disabled Down Disabled Full Auto
ge-1/1/9 Disabled Down Disabled Full Auto
```

```
ge-1/1/10 Disabled Down Disabled Full Auto
ge-1/1/11 Disabled Down Disabled Full Auto
-More-
```

show interface detail

This command show interface detail information.

Command Syntax

run show interface detail

Example

• This example is to show detail information of interface :

```
admin@XorPlus# run show interface detail
Physical interface: ge-1/1/1, Enabled, error-discard False, Physical link is Up
Interface index: 1, SFP type: Unknown
Description:
Link-level type: Ethernet, MTU: 1514, Speed: 100Mb/s, Duplex: Full
Source filtering: Disabled, Flow control: Disabled, Auto-negotiation: Enabled
Interface flags: Hardware-Down SNMP-Traps Internal: 0x0
Interface rate limit ingress:100, egress:100
Current address: 08:9e:01:a8:00:49, Hardware address: 08:9e:01:a8:00:49
Traffic statistics:
5 sec input rate 0 bits/sec, 0 packets/sec
5 sec output rate 392 bits/sec, 0 packets/sec
Input Packets.............................99114129
Output Packets............................57388
Input Octets..............................6343304256
Output Octets............................7021889
Transmit:
Unicast packets.........................0
Multicast packets.......................57388
Broadcast packets.......................0
Packets 64 Octets.......................0
Packets 65-127 Octets..................55264
Packets 128-255 Octets.................2124
Packets 256-511 Octets.................0
Packets 512-1023 Octets................0
Packets 1024-1518 Octets...............0
Oversize Packets........................0
Total Packets Without Errors...........57388
Discarded Packets.......................0
Total Packets With Errors..............0
Single Collision Frames................0
Multiple Collision Frames..............0
Deferred Frames.........................0
Late Collisions.........................0
Excessive Collisions....................0
Pause Frames............................0
Receive:
Unicast packets........................99114129
-More-
```

show interface diagnostics optics all

This command is to show diagnostics informations of all interface or a specified interface.

Command Syntax

run show interface diagnostics optics all

Example

• This example is to show diagnostics informations of all interface:

```
admin@XorPlus# run show interface diagnostics optics all
Interface Temp(C) Voltage(V) Bias(mA) Tx Power(dBm) Rx Power(dBm) Module Type
---------- ------- ---------- -------- ------------- ------------- -----------
```

show interface flexlink

This command is to show flexlink information.

Command Syntax

run show interface flexlink

Example

• This example is to show flexlink on all interfaces:

```
admin@XorPlus# run show interface flexlink
Active Interface Backup Interface Mode Delay(seconds)
---------------- ---------------- --------- --------------
ge-1/1/1(up) ge-1/1/2(standby) off 0
```

show interface gigabit-ethernet

This command is to show information about the specified gigabit-ethernet interface

Command Syntax

run show interface gigabit-ethernet *<interface>*

Parameter

•*<interfce>* a specified interface identifier,[ge-1/1/1...ge-1/1/48],[te-1/1/49...te-1/1/52]

Example

• This example is to show information of ge-1/1/1:

```
admin@XorPlus# run show interface gigabit-ethernet ge-1/1/1
Physical interface: ge-1/1/1, Enabled, error-discard False, Physical link is Up
Interface index: 1, SFP type: Unknown
Description:
Link-level type: Ethernet, MTU: 1514, Speed: 100Mb/s, Duplex: Full
Source filtering: Disabled, Flow control: Disabled, Auto-negotiation: Enabled
Interface flags: Hardware-Down SNMP-Traps Internal: 0x0
Interface rate limit ingress:100, egress:100
Current address: 08:9e:01:a8:00:49, Hardware address: 08:9e:01:a8:00:49
Traffic statistics:
5 sec input rate 0 bits/sec, 0 packets/sec
5 sec output rate 0 bits/sec, 0 packets/sec
Input Packets.............................99114129
Output Packets............................83553
Input Octets..............................6343304256
Output Octets............................10240184
```

show interface gigabit-ethernet <interface>

This command is to show brief,detail or dot1q-tunneling information of a specified port.

Command Syntax

run show interface gigabit-ethernet *<interface> [text]*

Parameter

•*<interfce>* a specified interface identifier,[ge-1/1/1...ge-1/1/48],[te-1/1/49...te-1/1/52]

•*[text]* The special information.

- **brief** Show interface brief information
- **detail** Show interface detail information
- **dot1q-tunneling** Show dot1q tunneling information about the specified interface

Example

• This example is to show detail information on ge-1/1/3:

```
admin@XorPlus# run show interface gigabit-ethernet ge-1/1/3 detail
Physical interface: ge-1/1/3, Enabled, error-discard False, Physical link is Up
Interface index: 3, SFP type: Unknown
Description:
Link-level type: Ethernet, MTU: 1514, Speed: 100Mb/s, Duplex: Full
Source filtering: Disabled, Flow control: Disabled, Auto-negotiation: Enabled
Interface flags: Hardware-Down SNMP-Traps Internal: 0x0
Interface rate limit ingress:0, egress:0
Current address: 08:9e:01:a8:00:49, Hardware address: 08:9e:01:a8:00:49
Traffic statistics:
5 sec input rate 0 bits/sec, 0 packets/sec
5 sec output rate 392 bits/sec, 0 packets/sec
Input Packets.............................10000
Output Packets............................186601
Input Octets..............................640000
Output Octets............................15763131
Transmit:
Unicast packets.........................91800
Multicast packets.......................64781
Broadcast packets.......................30020
Packets 64 Octets.......................121822
Packets 65-127 Octets..................64777
Packets 128-255 Octets.................2
Packets 256-511 Octets.................0
Packets 512-1023 Octets................0
Packets 1024-1518 Octets...............0
Oversize Packets........................0
Total Packets Without Errors...........186601
Discarded Packets.......................0
Total Packets With Errors...............0
Single Collision Frames................0
Multiple Collision Frames..............0
Deferred Frames.........................0
Late Collisions.........................0
Excessive Collisions....................0
Pause Frames............................0
Receive:
Unicast packets........................10000
Multicast packets.......................0
Broadcast packets.......................0
Packets 64 Octets......................10000
Packets 65-127 Octets..................0
Packets 128-255 Octets.................0
```

```
Packets 256-511 Octets.................0
Packets 512-1023 Octets................0
Packets 1024-1518 Octets...............0
Oversize Packets.......................0
Total Packets Without Errors...........10000
Discarded Packets......................0
Total Packets With Errors..............0
Alignment Errors.......................0
FCS Errors.............................0
Collisions.............................0
Pause Frames...........................0
```

interface gigabit-ethernet <port> family ethernet-switching vlan members <vlan-id> untagged

This command is to add a vlan member to the trunk port with untagged packet, vlan members range from 1 to 4094. When packets go out from this interface, the field of vlan tag will be removed from the packet.

Command Syntax

set interface gigabit-ethernet *<port>* family ethernet-switching vlan members *<vlan-id> untagged*
delete interface gigabit-ethernet *<port>* family ethernet-switching vlan members *<vlan-id>*

Parameter

- *<port>* ethernet switching port identifier,the valid ports range 1-52.
- *<vlan-id>* Configure vlan id for which the interface can carry traffic,eg:2,3...

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching vlan
members 5 untagged
admin@XorPlus# commit
```

interface gigabit-ethernet <port> link-fault-signaling ignore-local-fault <boolean>

A fiber has two links, TX and RX. When RX link failure occurs, local fault messages are generated by PHY layer to RS layer. As soon as RS receives a local fault message, it will generate Remote fault messages and transmit Remote fault messages to remote RS through TX link. RS is the only layer that can generate Remote fault messages.

This command determines if local RS would ignore local fault message to generate Remote fault messages when RX link failure occurs. This command generally coordinates with another command of interface gigabit-ethernet <port> up-mode <boolean> when RX link of fiber breaks. If the two commands are configured together, TX link can still transmit traffic.

Command Syntax

set interface gigabit-ethernet <port> link-fault-signaling ignore-local-fault <boolean>

Parameter

- *<port>* Ethernet port, now only support 10GE, 40GE, 100GE port .
- *<boolean> Vaule is* false or true. Default value is false.

Example

• This example is how to configure this command:

```
admin@XorPlus# set interface gigabit-ethernet te-1/1/1 link-fault-signaling
ignore-local-fault true
admin@XorPlus# commit
```

interface gigabit-ethernet <port> link-fault-signaling ignore-remote-fault <boolean>

When local RS receive remote fault messages, local RS will inhibit transmission of frames.

These commands determine if local RS would ignore remote fault messages to permit transmission of frames when receiving remote fault messages.

Command Syntax

set interface gigabit-ethernet <port> link-fault-signaling ignore-remote-fault <boolean>.

Parameter

<port> Ethernet physical interface, now only support 10GE, 40GE, 100GE port .

<boolean> Vaule is false or true. Default value is false.

Example

This example is how to configure this command:

```
admin@XorPlus# set interface gigabit-ethernet te-1/1/1 link-fault-signaling
ignore-remote-fault true
admin@XorPlus# commit
```

interface gigabit-ethernet <port> up-mode <boolean>

This command makes a local MAC layer to keep up status. This command generally coordinates with another command of interface gigabit-ethernet <port> link-fault-signaling ignore-local-fault <boolean> when RX link of fiber breaks. If the two commands are configured together, TX link can still transmit traffic.

Command Syntaxset

interface gigabit-ethernet <port> up-mode <boolean>

Parameter

<port> Ethernet port, now only support 10GE, 40GE, 100GE port .

<boolean> vaule is false or true. Default value is false.

Example

This example is how to configure this command:

```
admin@XorPlus# set interface gigabit-ethernet te-1/1/1 up-mode true
admin@XorPlus# commit
```

interface gigabit-ethernet <port> breakout <value>

This command is only used in FLEX mode. According to need, users can break out a 40G or 100G port to 10G*4 or 25G*4 ports in FLEX mode.

Command Syntax

set interface gigabit-ethernet *<port> breakout <value>*
delete interface gigabit-ethernet *<port> breakout*

Parameter

- *<port> 40G or 100G port can be broken out to be 10Gx4 or 25Gx4 ports.*
- 10g-4x Enables the breakout of 40G or 100G port into 4 X 10G ports.
- 25g-4x Enables the breakout of 100G port into 4 X 25G ports.
- donot Disable the breakout of this interface.

> ⚠ MAKE SURE to delete all the configurations associated to the unavailable interfaces, Otherwise loading startup configure will FAIL. Please remember to make your configuration copy before restarting picos.

Example

• This example is to enable 40G port breakout into 4 X 10G ports

```
admin@XorPlus# set interface gigabit-ethernet xe-1/1/53.1 breakout 10g-4x
admin@XorPlus# co
Commit OK.
Save done.
Interface breakout setting changes, please reboot system to make it effective!
MAKE SURE to delete all the configurations associated to the unavailable interfaces,
Otherwise loading startup configure will FAIL.
admin@XorPlus# exit
admin@XorPlus> request system reboot
```

This example is to to disable the breakout of this interface.

```
admin@XorPlus# set interface gigabit-ethernet xe-1/1/53.1 breakout donot
admin@XorPlus# co
Commit OK.
Save done.
Interface breakout setting changes, please reboot system to make it effective!
MAKE SURE to delete all the configurations associated to the unavailable interfaces,
Otherwise loading startup configure will FAIL.
admin@XorPlus# exit
admin@XorPlus> request system reboot
```

interface gigabit-ethernet <port> storm-control <mode> ratio <value>

Users can set storm control mode for a specified port. The storm control function can control the rate of ingress traffic on the physical port. The ratio value is the percentage of the physical link speed.

Command Syntax

set interface gigabit-ethernet *<port>* storm-control *<mode>ratio <value>*
delete interface gigabit-ethernet *<port>* storm-control broadcast ratio

Parameter

• *<port>* ethernet port
• *<mode>* packets forwarding mode

- **broadcast** Storm control for broadcast traffic
- **multicast** Storm control for all multicast traffic
- **unicast** Storm control for unknown unicast traffic

•*<value> range is* [0..100]. This value is percentage of the physical link speed.

Example

• This example set broadcast, multicast, unicast storm control for ge-1/1/1:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 storm-control broadcast ratio 10
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 storm-control multicast ratio 20
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 storm-control unicast ratio 30
admin@XorPlus# commit
Commit OK.
Save done.
admin@XorPlus#
```

interface gigabit-ethernet <port> fec <boolen>

Users can enable or disable forward error correction on ports. Fec works if the follow conditions are satisfied at the same time.

- 100G modules plugged in
- not breakout into 4 ports
- speed auto or 100Gb/s

The ports can link up when the two connected ports both enable or disable fec at the same time.

Command Syntax

set interface gigabit-ethernet <port> fec <boolen>

Parameter

• *<port>* ethernet switching port identifier
•*<boolen>* port speed identifier,values are as follows:

- **true** enable forward error correction(default)
- **false** disable forward error correction on the port

Example

• This example disables forward error correction on port he-1/1/1:

```
root@XorPlus# set interface gigabit-ethernet he-1/1/1 fec false
root@XorPlus# commit
```

show interface ecmp max-path

This command is to show max counter of ecmp path.

Example

• This example is to show max counter of ecmp path:

```
admin@XorPlus# run show interface ecmp max-path
max-path:   4
```

interface gigabit-ethernet <port> mac-learning <boolean>

This command function is setting if the port could learn the source mac address of ingress packet.

Command Syntax

set interface gigabit-ethernet *<port>* mac-learning *<boolean>*

delete interface gigabit-ethernet *<port>* mac-learning

Parameter

• *<port>* Ethernet switching port identifier

•*<boolean>* True or False. The default value is true. False value is the port can't learn the source mac address when packet is enterring the port. True value is the port can learn the source mac address.

Example

• This example configures the port ge-1/1/1 mac-learning false:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 mac-learning false
admin@XorPlus# commit
```

interface gigabit-ethernet <port> storm-control <mode> kbps

Users can set storm control mode for a specified port.

Command Syntax

set interface gigabit-ethernet *<port>* **storm-control** *<mode>* **kbps** *<value>*

delete interface gigabit-ethernet *<port>* **storm-control** [*<mode>* | **kbps**]

Parameter

• *<port>*ethernet switching port identifier,the valid ports range 1-52

• *<mode>* packets forwarding mode

- **broadcast** Storm control for broadcast traffic
- **multicast** Storm control for multicast traffic

- **unicast** Storm control for unicast traffic

• *<value>* Kilo bits per second, [0..10000000]

Example

• This example set broadcast storm control for ge-1/1/1:

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 storm-control broadcast kbps 1000
admin@XorPlus# commit
```

set interface ethernet-switching-options analyzer output

Port mirroring, is the duplication of traffic from a set of source ports onto a destination port. User can configure port mirroring to monitor and analyze source port traffic.

The **set interface ethernet-switching-options analyzer output** command configures destination port, as the observing port of port mirroring. User can use the **set interface ethernet-switching-options analyzer input** command configure source port.

Command Syntax

set interface ethernet-switching-options analyzer *<string>* **output** *<port>*
delete interface ethernet-switching-options analyzer *<string>* **output** *<port>*

Parameter

Parameter	Description
<string>	Specifies the name of a mirror, should consist of letters and/or numerals.
<port>	Specifies ethernet switching port identifier of the destination port.

NOTE

- For Tomahawk platform switches, port mirroring can not be applied on both direction of the same source interface, that is, you can configure either ingress or egress traffic on the same source interface.
- A switch supports a maximum of 4 observing ports.

Example

• Configure ge-1/1/3 as the mirrored port, and ge-1/1/4 as the observing port.

```
admin@XorPlus# set interface ethernet-switching-options analyzer 111 input ingress ge-1/1/3
admin@XorPlus# set interface ethernet-switching-options analyzer 111 input egress ge-1/1/3
admin@XorPlus# set interface ethernet-switching-options analyzer 111 output ge-1/1/4
admin@XorPlus# commit
```

VLAN Configuration Commands

This section contains descriptions of the CLI commands that this chapter references.

- vlan-interface interface <interface-name> router-advertisement disable
- vlan-interface interface vif address prefix-length
- vlan-interface interface vif description
- vlan-interface loopback address <ip-address> prefix-length
- vlans dot1q-tunneling egress from
- vlans dot1q-tunneling egress then action
- vlans dot1q-tunneling egress then service-vlan
- vlans dot1q-tunneling ingress from double-tag service-vlan
- vlans dot1q-tunneling ingress from one-tag customer-vlan-list
- vlans dot1q-tunneling ingress from untag enabled
- vlans dot1q-tunneling ingress then
- vlans vlan-id
- vlans vlan-id description
- vlans vlan-id l3-interface
- vlans vlan-id vlan-name
- show vlan-interface
- show vlan-interface interface
- show vlans
- run clear vlan-interface statistics loopback
- vlan-interface interface <interface-name> dhcp <boolean>

vlan-interface interface <interface-name> router-advertisement disable

User can manually enable IPv6 router advertisement messages.

Command Syntax

set vlan-interface interface *<interface-name>* router-advertisement disable *<bool>*

Parameter

•*<interface-name>* Tunneling description for existing traffic.

•*<bool>* Configure whether to enable the IPv6 router advertisement messages. Required select include:

- **true** Enable the IPv6 router advertisement messages
- **False** Disable the IPv6 router advertisement messages

Example

• This example manually enables configuration of IPv6 router advertisement messages.

```
admin@XorPlus# set vlan-interface interface vlan2 router-advertisement disable false
admin@XorPlus# commit
```

vlan-interface interface vif address prefix-length

To configure an IPv4 or IPv6 address for an L3 interface, use the **set vlan-interface interface vif address prefix-length** command in L2/L3 configuration mode. To remove an L3 interface, use the **delete** form of the command.

Command Syntax

set vlan-interface interface *interface-name* **vif** *vif-name* **address** *address* **prefix-length** *number*
delete vlan-interface interface *interface-name*

Parameters

interface-name	Interface name.
vif-name	L3 interface name.
address	IPv4 or IPv6 address.
number	The network prefix length. The range is 4-32 for IPv4 addresses, and 1-128 for IPv6 addresses.

Example

The following example configures the IPv4 address for the *vlan10* L3 interface and then removes the L3 interface:

```
admin@Switch# set vlan-interface interface vlan10 vif vlan10 address 192.168.1.1
prefix-length 24
admin@Switch# commit
admin@Switch# delete vlan-interface interface vlan10
```

The following example configures the IPv6 address for the *vlan20* L3 interface and then removes the L3 interface:

```
admin@Switch# set vlan-interface interface vlan20 vif vlan20 address 2001:1:1::1
prefix-length 64
admin@Switch# commit
admin@Switch# delete vlan-interface interface vlan20
```

vlan-interface interface vif description

To add description for a VLAN interface, use the **set vlan-interface interface vif description** command in L2/L3 configuration mode. To remove the description, use the **delete** form of the command.

Command Syntax

set vlan-interface interface *interface-name* **vif** *vif-name* **description** *description*

delete vlan-interface interface *interface-name* **vif** *vif-name* **description**

Parameters

interface-name	Interface name.
vif-name	L3 interface name.
description	Description of the interface in free text.

Example

The following example configures a description for the *vlan20* interface and then removes the description:

```
admin@Switch# set vlan-interface interface vlan20 vif vlan20 description "My VLAN"
admin@Switch# commit
admin@Switch# delete vlan-interface interface vlan20 vif vlan20 description
```

vlan-interface loopback address <ip-address> prefix-length

User can configure one or more address for the vlan interface.

Command Syntax

set vlan-interface loopback address *<ip-address>* prefix-length *<int>*
delete vlan-interface loopback address *<ip-address>*

Parameter

• *<ip-address>* Ipv4 or Ipv6 address.

- Ipv4 default value: 127.0.0.1
- Ipv6 default value: ::1

• *<int>* the ipv4 network prefix length is 32.
the ipv6 network prefix length is 128

Example

• This example configure the lookback ipv4 and ipv6 address :

```
admin@XorPlus# set vlan-interface loopback address 202.115.114.2 prefix-length 32
admin@XorPlus# set vlan-interface loopback address 2201:00:: prefix-length 128
admin@XorPlus# commit
admin@XorPlus# delete vlan-interface loopback address 202.115.114.2
admin@XorPlus# delete vlan-interface loopback address 2201:00::
admin@XorPlus# commit
```

vlans dot1q-tunneling egress from

To configure tunneling for egress traffic, use the **set vlans dot1q-tunneling egress from** command in L2/L3 configuration mode. If the customer VLAN or service VLAN tag frame is specified, it can pass through the port.

Command Syntax

set vlans dot1q-tunneling egress *tunnel-id* **then** { **customer-vlan** | **service-vlan** } *vlan-id*

Parameters

tunnel-id	Tunnel identifier.
customer-vlan	The customer VLAN identifier.
service-vlan	The service VLAN identifier.
vlan-id	VLAN identifier. The range is 0-4094.

Examples

This example configures tunneling *T0*, such that if the customer tag frame is 10 and the service tag frame is 100, the packet can pass through the port:

```
admin@Switch# set vlans dot1q-tunneling egress T0 from customer-vlan 10
admin@Switch# set vlans dot1q-tunneling egress T0 from service-vlan 100
```

vlans dot1q-tunneling egress then action

To configure tunneling for egress traffic, use the **set vlans dot1q-tunneling egress then action** command in L2/L3 configuration mode. If a packet can pass through the port, it needs to be modified by the action.

Command Syntax

set vlans dot1q-tunneling egress *tunnel-id* **then action** { **change** | **none** | **one** | **two** }

Parameters

tunnel-id	Tunnel identifier.
change	Change the service VLAN tag.
none	Strip both the customer and service VLAN tags.
one	Retain the customer VLAN tag.
two	Retain both the customer and service VLAN tag.

Examples

This example explains how to configure the tunneling t5. If the packet can pass the port, the packet does not need to be changed.

```
the service and customer tag frame of the packet need not to be removed
```

```
admin@XorPlus# set vlans dot1q-tunneling egress t5 then action none
```

```
the outside service tag frame of the packet need to be removed
```

```
admin@XorPlus# set vlans dot1q-tunneling egress t5 then action one
```

```
the service and customer tag frame of the packet need to be removed
```

```
admin@XorPlus# set vlans dot1q-tunneling egress t5 then action two
```

```
the service tag frame of the packet need to be replaced by 200
```

```
admin@XorPlus# set vlans dot1q-tunneling egress t5 then action change
admin@XorPlus# set vlans dot1q-tunneling egress t5 then service-vlan 200
admin@XorPlus# commit
```

vlans dot1q-tunneling egress then service-vlan

To configure tunneling for egress traffic, use the **set vlans dot1q-tunneling egress then service-vlan** command in L2/L3 configuration mode. If a packet passes through the port, the service tag of the packet needs to be changed.

Command Syntax

set vlans dot1q-tunneling egress *tunnel-id* **then service-vlan** *vlan-id*

Parameters

tunnel-id	Tunnel identifier.
vlan-id	VLAN identifier.

Examples

The following example shows how to configure *T0* tunneling. If a packet wants to pass through the port, the service tag of the packet needs to be replaced by 300:

```
admin@Switch# set vlans dot1q-tunneling egress T0 then service-vlan 300
```

vlans dot1q-tunneling ingress from double-tag service-vlan

To configure tunneling for ingress traffic at a port, use the **set vlans dot1q-tunneling ingress from double-tag service-vlan** command in L2/L3 configuration mode. If a packet has double tags and service vlan is specified, the packet can pass through the port.

Command Syntax

set vlans dot1q-tunneling ingress *tunnel-id* **from double-tag service-vlan** *vlan-id*

Parameters

tunnel-id	Tunnel identifier.
vlan-id	VLAN identifier. The range is 0-4094.

Examples

The following example configures T0 tunneling for ingress traffic. If the packet has double tags and service vlan is 100, it can pass through the port:

```
admin@Switch# set vlans dot1q-tunneling ingress T0 from double-tag service-vlan 100
```

vlans dot1q-tunneling ingress from one-tag customer-vlan-list

To configure tunneling for ingress traffic at a port, use the **set vlans dot1q-tunneling ingress from one-tag customer-vlan-list** command in L2/L3 configuration mode. If the packet has a single tag and customer VLAN is specified, it can pass through the port.

Command Syntax

set vlans dot1q-tunneling ingress *tunnel-id* **from one-tag customer-vlan-list** *vlan-id*

Parameters

tunnel-id	Tunnel identifier.
vlan-id	VLAN identifier.

Examples

The following example configures the tunneling *T1* for ingress traffic. If the packet has a single tag and customer VLAN is 10, it can pass through the port.

```
admin@Switch# set vlans dot1q-tunneling ingress T1 from one-tag customer-vlan-list 10
```

vlans dot1q-tunneling ingress from untag enabled

To configure tunneling for untagged ingress traffic use the **set vlans dot1q-tunneling ingress from untag enabled** command in L2/L3 configuration mode.

Command Syntax

set vlans dot1q-tunneling ingress *tunnel-id* **from untag enabled** { **true** | **false** }

Parameters

tunnel-id	Tunnel identifier.
true	Enable matching untagged traffic.
false	Disable matching untagged traffic.

Examples

The following configuration checks if untagged frames are received by the port or not:

```
admin@Switch# set vlans dot1q-tunneling ingress T1 from untag enabled true
admin@Switch# set vlans dot1q-tunneling ingress T1 from untag enabled false
```

vlans dot1q-tunneling ingress then

To configure tunneling for ingress traffic received at a port and adding customer or service tag to frames, use the **set vlans dot1q-tunneling ingress then** command in L2/L3 configuration mode.

Command Syntax

set vlans dot1q-tunneling ingress *tunnel-id* **then** { **customer-vlan** | **service-vlan** } *vlan-id*

Parameters

tunnel-id	Tunnel identifier.
customer-vlan	The new customer VLAN identifier.
service-vlan	The new service VLAN identifier.
vlan-id	VLAN identifier. The range is 0-4094.

Examples

The following example configures the T0 tunneling to add customer tag 10 and service tag 100 to frames:

```
admin@Switch# set vlans dot1q-tunneling ingress T0 then customer-vlan 10
admin@Switch# set vlans dot1q-tunneling ingress T0 then service-vlan 100
```

vlans vlan-id

Vlan-id 1 exists by default. User can add a new vlan-id and delete it.

Command Syntax

set vlans vlan-id <*vlan-id*>
delete vlans vlan-id <*vlan-id*>

Parameter

• <*vlan_id*> VLAN tag identifier. The valid VLAN numbers range 1-4094. User can specify a range of VLAN numbers, e.g. 2,3,5-100.

Example

• This example creates VLAN 10:

```
admin@XorPlus# set vlans vlan-id 10
admin@XorPlus# commit
```

vlans vlan-id description

To add description for a VLAN, use the **set vlans vlan-id description** command in L2/L3 configuration mode.

Command Syntax

set vlans vlan-id *vlan-id* **description** *description*
delete vlans vlan-id *vlan-id* **description**

Parameters

vlan-id	VLAN identifier. The range of values is from 1 to 4094. A range of VLAN identifiers can be specified, for example, 2,3,5-100.
description	VLAN description in free text format.

Example

The following example creates description for VLAN 10:

```
admin@Switch# set vlans vlan-id 10 description "My Favorite VLAN"
```

vlans vlan-id l3-interface

To associate a Layer 3 interface with a VLAN, use the **set vlans vlan-id l3-interface** command. To remove the Layer 3 interface, use the **delete** form of the command.

Command Syntax

set vlans vlan-id *vlan-id* **l3-interface** *interface-name*
delete vlans vlan-id *vlan-id* **l3-interface**

Parameters

vlan-id	VLAN identifier. The range of allowed VLAN identifiers is 1-4094. A range of VLAN identifiers can be used, for example, 2,3,4,5-100.
interface-name	Name of the Layer 3 interface.

Example

This example associates a Layer 3 interface vlan-1 with VLAN 10 and then removes the Layer 3 interface from the VLAN:

```
admin@Switch# set vlans vlan-id 10 l3-interface vlan-1
admin@Switch# commit
admin@Switch# delete vlans vlan-id 10 l3-interface
admin@Switch# commit
```

vlans vlan-id vlan-name

To create a VLAN, use the **set vlans vlan-id** command in L2/L3 configuration mode. To give a name to the VLAN, use the optional **vlan-name** keyword. To remove a VLAN, use the **delete** form of the command.

Command Syntax

set vlans vlan-id *vlan-id* [**vlan-name** *vlan-name*]
delete vlans vlan-id *vlan-id*

Parameters

vlan-id	VLAN identifier. The range is from 1 to 4094. A range of VLAN identifiers can be specified, for example, 2,3,5-100.
vlan-name	VLAN name. Up to 32 alphanumeric characters in length.

Example

This example creates VLAN 10 and names it MyVLAN:

```
admin@Switch# set vlans vlan-id 10 vlan-name MyVLAN
```

show vlan-interface

This command displays information about all vlan interfaces.

Command Syntax

run show vlan-interface <*text*>

Parameter

• <*text*> The special information. Options include:

- **brief** Show all vlan-interface briefly
- **default**: none: Show all vlan-interface

Example

• This example shows vlan-interface briefly:

```
admin@XorPlus# run show vlan-interface brief
Interface     Vlan ID     Status     Addr
---------     -------     ------     ------------------
loopback      4095        UP         127.0.0.1/32
                                     ::1/128
```

```
                                        fe80::ca0a:a9ff:104:4928/64
vlan4001     4001       UP              192.168.10.1/24
                                        fe80::ca0a:a9ff:204:4928/64
vlan4003     4003       UP              192.168.30.1/24
                                        fe80::ca0a:a9ff:304:4928/64
```

show vlan-interface interface

To display information about a VLAN or loopback interface, use the **show vlan-interface interface** command in L2/L3 operation mode.

Command Syntax

show vlan-interface interface *interface-name*

Parameters

interface-name	The VLAN interface name. Use **loopback** to display information about the loopback interface.

Example

The following example displays information about **vlan20**:

```
admin@Switch> show vlan-interface interface vlan20
vlan20      Hwaddr 48:6E:73:02:03:A1, Vlan:20, State:UP
            Inet addr: 10.10.2.1/24
                       fe80::4a6e:73ff:302:3a1/64
            Traffic statistics:
              5 sec input rate IPv4 0 packets/sec, IPv6 0 packets/sec
              5 sec forwarding rate IPv4 0 packets/sec, IPv6 0 packets/sec
              IPv4 Input Packets.............................0
              IPv4 Forwarding Packets........................0
              IPv6 Input Packets.............................0
              IPv6 Forwarding Packets........................0
```

The following example displays information about the loopback interface:

```
admin@Switch> show vlan-interface interface loopback
loopback     Hwaddr 48:6E:73:02:03:A1, Vlan:4095, State:UP
            Inet addr: fe80::4a6e:73ff:102:3a1/64
            Traffic statistics:
              5 sec input rate IPv4 0 packets/sec, IPv6 0 packets/sec
              5 sec forwarding rate IPv4 0 packets/sec, IPv6 0 packets/sec
              IPv4 Input Packets.............................0
              IPv4 Forwarding Packets........................0
              IPv6 Input Packets.............................0
              IPv6 Forwarding Packets........................0
```

show vlans

The **show vlans** command displays information about VLANs configured on a switch. With the command display VLANID, Tag, and Interface by default, user can display the brief, detail or special VLANID information.

Command Syntax

run show vlans <*text*>

Parameter

• <*text*> The specific information, options include:

- **brief** Show vlan brief information
- **detail** Show vlan detail information
- **vlan-id** ***<vlan-id>*** Show specific vlan detail information

Example

• This example shows VLAN 10:

```
admin@XorPlus# run show vlans
VlanID Tag Interfaces
------ -------- ---------------------------------------------------------
1 untagged ge-1/1/2, ge-1/1/3, ge-1/1/4, ge-1/1/5, ge-1/1/6
ge-1/1/7, ge-1/1/8, ge-1/1/9, ge-1/1/10, ge-1/1/11
ge-1/1/12, ge-1/1/13, ge-1/1/14, ge-1/1/15, ge-1/1/16
ge-1/1/17, ge-1/1/18, ge-1/1/19, ge-1/1/20, ge-1/1/21
ge-1/1/22, ge-1/1/23, ge-1/1/24, ge-1/1/25, ge-1/1/26
ge-1/1/27, ge-1/1/28, ge-1/1/29, ge-1/1/30, ge-1/1/31
ge-1/1/32, ge-1/1/33, ge-1/1/34, ge-1/1/35, ge-1/1/36
ge-1/1/37, ge-1/1/38, ge-1/1/39, ge-1/1/40, ge-1/1/41
ge-1/1/42, ge-1/1/43, ge-1/1/44, ge-1/1/45, ge-1/1/46
ge-1/1/47, ge-1/1/48, te-1/1/49, te-1/1/50, te-1/1/51
te-1/1/52
tagged
10 untagged ge-1/1/1
tagged
admin@XorPlus# run show vlans vlan-id 10
VLAN ID: 10
VLAN Name: aaa
Description: myvlan
vlan-interface:
Number of member ports: 0
Untagged port: None
Tagged port: None
```

run clear vlan-interface statistics loopback

This command clears the statistics information of loopback interface.

Command Syntax

run clear vlan-interface statistics loopback

Example

• This example clears the statistics information of loopback interface:

```
admin@XorPlus# run clear vlan-interface statistics loopback
admin@XorPlus# commit
```

vlan-interface interface <interface-name> dhcp <boolean>

DHCP can be enable or disable on this vlan-interface as dhcp client. The vlan-interface will get ip address by DHCP server if dhcp is enable on this vlan-interface.

Command Syntax

set vlan-interface interface *<interface-name> dhcp <boolean>*

Parameter

•*<interface-name> Vlan interface name is defined*.

•*<boolean> enable or disable dhcp on vlan-interface as client*. The value include:

- **true** Enable dhcp client on this vlan interface.
- **False** Default configuration. Disable dhcp client on this vlan interface.

Example

• This example manually enables dhcp on the vlan interface

```
admin@XorPlus#set vlan-interface interface vlan2 dhcp true
admin@XorPlus# commit
```

Firewall Configuration Commands

This section contains descriptions of the ACL commands that this chapter references.

- firewall filter description
- firewall filter input interface
- Firewall Filter Input vlan-interface
- firewall filter output interface
- firewall filter output vlan-interface
- firewall filter sequence description
- firewall filter sequence from destination-address-ipv4
- firewall filter sequence from destination-address-ipv6
- firewall filter sequence from destination-mac-address
- firewall filter sequence from destination-port
- firewall filter sequence from ether-type
- firewall filter sequence from ip trust-mode
- firewall filter sequence from ip value
- firewall filter sequence from protocol icmp
- firewall filter sequence from protocol igmp
- firewall filter sequence from protocol ip
- firewall filter sequence from protocol ospf
- firewall filter sequence from protocol others
- firewall filter sequence from protocol tcp
- firewall filter sequence from protocol tcp flags
- firewall filter sequence from protocol udp
- firewall filter sequence from source-address-ipv4
- firewall filter sequence from source-address-ipv6
- firewall filter sequence from source-mac-address
- firewall filter sequence from source-port
- firewall filter sequence from vlan
- Firewall Filter Sequence Log Interval
- firewall filter sequence then action
- firewall system-output disable
- show filter

- firewall policer if-exceeding rate-limit
- firewall policer if-exceeding burst-limit
- firewall policer then action
- firewall filter sequence then policer

firewall filter description

To configure the filter description, use the **set firewall filter description** command in L2/L3 configuration mode. To remove the filter desctiption, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **description** *filter-description*

delete firewall filter *fileter-name* **description**

Parameters

filter-name	Filter name.
filter-description	Filter description.

Example

The following example configures the filter named *MyFilter* with the description *It's a test filter*.

```
admin@Switch# set firewall filter MyFilter description "It's a test filter"
```

The folowing example removes the description of the filter *MyFilter*. Note that only the description is removed. The filter itself is not deleted by this command.

```
admin@Switch# delete firewall filter MyFilter description
Deleting:
>   description: "\"It's a test filter\""
OK
```

firewall filter input interface

To apply the filter to incoming packets at an interface, use the **set firewall filter input interface** command in L2/L3 configuration mode. To remove the input interface from the filter, use the **delete** form of the command.

Command Syntax

set firewall filter *filer-name* **input interface** *interface-name*
delete firewall filter *filter-name* **input interface** *interface-name*

Parameters

filter-name	Filter name.
interface-name	Interface name.

Example

The following example applies the *MyFilter* filter to input packets at the *ge-1/1/1* interface:

```
admin@Switch# set firewall filter MyFilter input interface ge-1/1/1
```

Firewall Filter Input vlan-interface

To apply the filter to ingress packets on a VLAN interface, use the **set firewall filter input vlan-interface** command in L2/L3 configuration mode. To remove the filter from ingress packets on a VLAN interface, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **input vlan-interface** *vlan-interface-name*
delete firewall filter *filter-name* **input vlan-interface** *vlan-interface-name*

Parameters

filter-name	Filter name.
vlan-interface-name	VLAN interface name.

Example

The following example applies the *MyFilter* filter to ingress packets at the *vlan2* interface:

```
admin@Switch# set firewall filter MyFilter input vlan-interface vlan2
```

The following example removes the *MyFilter* filter from ingress packets at the *vlan2* interface:

```
admin@Switch# delete firewall filter MyFilter input vlan-interface vlan2
Deleting:
```

```
>   vlan2
OK
```

firewall filter output interface

To apply a filter to egress packets at an interface, use the **set firewall filter output interface** command in L2/L3 configuration mode. To remove the filter from an egress interface, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **output interface** *interface-name*
delete firewall filter *filter-name* **output interface** *interface-name*

Parameters

filter-name	Filter name.
interface-name	Interface name.

Example

The following example applies the *MyFilter* filter to egress packets on the *ge-1/1/2* interface:

```
admin@Switch# set firewall filter MyFiler output interface ge-1/1/2
```

The following example removes the *MyFilter* filter from egress packets on the *ge-1/1/2* interface:

```
admin@Switch# delete firewall filter MyFiler output interface ge-1/1/2
Deleting:
>   ge-1/1/2
OK
```

firewall filter output vlan-interface

To apply a filter to egress packets at a VLAN interface, use the **set firewall filter output vlan-interface** command in L2/L3 configuration mode. To remove the filter, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **output vlan-interface** *vlan-interface-name*
delete firewall filter *filter-name* **output vlan-interface** *vlan-interface-name*

Parameters

filter-name	Filter name.
vlan-interface-name	VLAN interface name.

Example

This example applies the *MyFilter* filter to egress packets at the VLAN interface *vlan2*:

```
admin@Switch# set firewall filter MyFilter output vlan-interface vlan2
```

This example removes the *MyFilter* filter from egress packets at the VLAN interface *vlan2*:

```
admin@Switch# delete firewall filter MyFilter output vlan-interface vlan2
Deleting:
>   vlan2
OK
```

firewall filter sequence description

To configure the filter sequence description, use the **set firewall filter sequence description** command in L2/L3 configuration mode. To remove the filter sequence description, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** sequence-*number* **description** *sequence-description*
delete firewall filter *filter-name* **sequence** *number* **description**

Parameters

filter-name	Filter name.
sequence-number	The sequence number, smaller values representing higher priorities. The range is 0-9999.
sequence-description	The sequence description.

Example

The following example configures the description for sequence 10 of the *MyFilter* filter:

```
admin@Switch# set firewall filter MyFilter sequence 10 description "My filter sequence"
```

The following example removes the description for sequence 10 of the *MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 10 description
Deleting:
>   description: "My filter sequence"
OK
```

firewall filter sequence from destination-address-ipv4

To filter packets with a specific destination IP address, use the **set firewall filter sequence from destination-address-ipv4** command in L2/L3 configuration mode. To remove the filter sequence, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *sequence-number* **from destination-address-ipv4** *address/mask*
delete firewall filter *filter-name* **sequence** *sequence-number* **from destination-address-ipv4**

Parameters

filter-name	Filter name.
sequence-number	Filter sequence number. The range is 0-9999.
address/mask	IPv4 subnet and subnet mask. For example, 10.1.1.0/24.

Example

The following example configures sequence 1 of the *MyFilter* filter to drop packets to the destination IP address 192.168.1.1:

```
admin@Switch# set firewall filter MyFilter sequence 1 from destination-address-ipv4
192.168.1.1/32
```

The following example prevents sequence 1 of the *MyFilter* filter from dropping packets based on destination IP packets:

```
admin@Switch# delete firewall filter MyFilter sequence 1 from destination-address-ipv4
Deleting:
>   destination-address-ipv4: 192.168.1.1/32
OK
```

firewall filter sequence from destination-address-ipv6

To configure a filter sequence to match packets based on the destination IPv6 address, use the **set firewall filter sequence from destination-address-ipv6** command in L2/L3 configuration mode. To remove the destination IPv6 address, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from destination-address-ipv6** *ipv6-address/mask*
delete firewall filter *filter-name* **sequence** *number* **from destination-address-ipv6**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
ipv6-address/mask	IPv6 address and prefix length.

Example

The following example configures sequence 2 of the *MyFilter* filter to match packets with IPv6 destination address 2001::1/32:

```
admin@Switch# admin@XorPlus# set firewall filter MyFilter sequence 2 from
destination-address-ipv6 2001::1/128
```

The following example removes IPv6 destination address 2001::1/32 from sequence 2 of the *MyFilter* filter:

```
admin@XorPlus# delete firewall filter MyFilter sequence 2 from destination-address-ipv6
Deleting:
>   destination-address-ipv6: 2001::1/128
OK
```

firewall filter sequence from destination-mac-address

To configure a filter sequence to match packets based on destination MAC address, use the **set firewall filter sequence from destination-mac-address** command in L2/L3 configuration mode. To remove the destination MAC address, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from destination-mac-address** *<mac-address>*
delete firewall filter *filter-name* **sequence** *number* **from destination-mac-address**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
mac-address	Destination MAC address.

Example

The following example configures sequence 2 of the *MyFilter* filter to match packets with destination MAC address 44:44:44:44:44:44:

```
admin@XorPlus# set firewall filter MyFilter sequence 2 from destination-mac-address
44:44:44:44:44:44
```

The following example removes the destination MAC address 44:44:44:44:44:44 from sequence 2 of the *MyFilter* filter:

```
admin@XorPlus# delete firewall filter MyFilter sequence 2 from destination-mac-address
Deleting:
>   destination-mac-address: 44:44:44:44:44:44
OK
```

firewall filter sequence from destination-port

To configure a filter sequence to match packets based on destination port, use the **set firewall filter sequence from destination-port** command in L2/L3 configuration mode. To remove the destination port, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from destination-port** *port*
delete firewall filter *filter-name* **sequence** *number* **from destination-port**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
port	Destination port number. The range is 0-65535.

Example

The following example configures sequence 2 of the *MyFilter* filter to match packets, which destination ports are in the 100-200 range:

```
admin@Switch# set firewall filter MyFilter sequence 2 from destination-port 100..200
```

The following example removes the 100-200 port range from sequence 2 of the *MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 2 from destination-port
Deleting:
>   destination-port: 100..200
OK
```

firewall filter sequence from ether-type

To configure a filter sequence to match packets based on the EtherType field in the Ethernet frame, use the **set firewall filter sequence from ether-type** command in L2/L3 configuration mode. To remove the EtherType field from the filter sequence, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from ether-type** *ether-type*
delete firewall filter *filter-name* **sequence** *number* **from ether-type**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
ether-type	EtherType value in decimal form. The range is 0-65535.

Example

The following example configures sequence 2 of the *MyFilter* filter to match frames with EtherType value 0x0800 (2048 decimal):

```
admin@XorPlus# set firewall filter MyFilter sequence 2 from ether-type 2048
```

The following example removes the EtherType value from sequence 2 of the *MyFilter* filter:

```
admin@XorPlus# delete firewall filter MyFilter sequence 2 from ether-type
Deleting:
>   ether-type: 2048
OK
```

firewall filter sequence from ip trust-mode

To configure a filter sequence to trust DSCP or IP Precendence in the packet header, use the **set firewall filter sequence from ip trust-mode** command in L2/L3 coniguration mode. To prevent a filter sequence from trusting DSCP or IP Precendence, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from ip trust-mode** { **dscp** | **inet-precendence** }
delete firewall filter *filter-name* **sequence** *number* **from ip trust-mode**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
dscp	Set the trust mode of the filter sequence to DSCP (differentiated services code point).
inet-precendence	Set the trust mode of the filter sequence to IP Precedence.

Examples

The following example configures sequence 2 of the *MyFilter* filter to trust DSCP value in the packet header:

```
admin@Switch# set firewall filter MyFilter sequence 2 from ip trust-mode dscp
```

The following example removes the DSCP value from sequence 2 of the *MyFilter* filter:

```
admin@XorPlus# delete firewall filter MyFilter sequence 2 from ip trust-mode
Deleting:
>   trust-mode: "dscp"
OK
```

firewall filter sequence from ip value

To configure a filter sequence to match packets based on DSCP or IP Precendence values, use the **set firewall filter sequence from ip value** command in L2/L3 configuration mode.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from ip value** *value*

delete firewall filter *filter-name* **sequence** *number* **from ip**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
value	DSCP or IP Precendence value, according to the trust mode configured with the set firewall filter sequence from ip trust-mode command. The range is 0-7 for IP Precedence, and 0-63 for DSCP.

Examples

The following example configures the trust mode for sequence 2 of *MyFilter* filter to DSCP. The DSCP value used to match packets is then set to 2.

```
admin@Switch# set firewall filter MyFilter sequence 2 from ip trust-mode dscp
admin@Switch# set firewall filter MyFilter sequence 2 from ip value 2
```

The following example removes the trust mode and DSCP value from sequence 2 of *MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 2 from ip
Deleting:
>   ip {
>       trust-mode: "dscp"
>       value: 2
>   }
OK
```

firewall filter sequence from protocol icmp

To configure a filter sequence to match ICMP (Internet Control Message Protocol) packets, use the **set firewall filter sequence from protocol icmp** command in L2/L3 configuration mode.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from protocol icmp** [**type** *type* | **code** *code*]
delete firewall filter f*ilter-name* **sequence** *number* **from protocol icmp** [**type** | **code**]

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
type	ICMP type. The range is 0-254.
code	ICMP code. The range is 0-254.

Examples

The following example configures sequence 10 of the *MyFilter* filter to match packets with 0 as the ICMP code and 24 as the ICMP type:

```
admin@Switch# set firewall filter MyFilter sequence 10 from protocol icmp code 0
admin@Switch# set firewall filter MyFilter sequence 10 from protocol icmp type 24
```

The following example removes the match conditions from sequence 10 of the *MyFilter* filter:

```
admin@XorPlus# delete firewall filter MyFilter sequence 10 from protocol icmp code
Deleting:
>   code: 0
OK
admin@XorPlus# delete firewall filter MyFilter sequence 10 from protocol icmp type
Deleting:
>   type: 24
OK
```

firewall filter sequence from protocol igmp

To configure a filter sequence to match packets encapsulating IGMP as the Layer 4 protocol, use the **set firewall filter sequence from protocol igmp** command in L2/L3 configuration mode.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from protocol igmp**

delete firewall filter *filter-name* **sequence** *number* **from protocol**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.

Examples

The following example configures sequence 10 of the filter named *MyFilter* to match packets with IGMP as the Layer 4 protocol:

```
admin@Switch# set firewall filter MyFilter sequence 10 from protocol igmp
```

firewall filter sequence from protocol ip

To configure a filter sequence to match IP (Internet Porotocol) packets, use the **set firewall filter sequence from protocol ip** command in L2/L3 configuration mode. To remove IP packet matching from the filter sequence, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from protocol ip**
delete firewall filter *filter-name* **sequence** *number* **from protocol**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.

Examples

The following example configures sequence 10 of the *MyFilter* filter to match IP packets:

```
admin@Switch# set firewall filter MyFilter sequence 10 from protocol ip
```

The following example removes the condition that matches IP packets from sequence 10 of the *MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 10 from protocol
Deleting:
>   protocol {
>       ip {
>       }
>   }
OK
```

firewall filter sequence from protocol ospf

To configure a filter sequence to match OSPF (Open Shortest Path First) protocol packets, use the **set firewall filter sequence from protocol ospf** command in L2/L3 configuration mode. To remove the condition from the filter sequence, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from protocol ospf**
delete firewall filter *filter-name* **sequence** *number* **from protocol**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.

Examples

The following example configures sequence 10 of the *MyFilter* filter to match OSPF protocol packets:

```
admin@Switch# set firewall filter MyFilter sequence 10 from protocol ospf
```

The following example removes the condition from sequence 10 of the *MyFilter* fitler:

```
admin@Switch# delete firewall filter MyFilter sequence 10 from protocol
Deleting:
>   protocol {
>       ospf {
>       }
>   }
OK
```

firewall filter sequence from protocol others

To configure a filter sequence to match packets with the specified Layer 4 protocol number, use the **set firewall filter sequence from protocol others** command in L2/L3 configuration mode. To remove the condition from the filter sequence, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from protocol others** *protocol-number*
delete firewall filter *filter-name* **sequence** *number* **from protocol**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range s 0-9999.
protocol-number	Layer 4 protocol number. The range is 0-255.

Examples

This example configures sequence 10 of the *MyFilter* filter to match packets carrying Layer 4 protocol number 21:

```
admin@Switch# set firewall filter MyFilter sequence 10 from protocol others 21
```

The following example removes the condition from sequence 10 of the *MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 10 from protocol
```

firewall filter sequence from protocol tcp

To configure a filter sequence to match packets with TCP (Transmission Control Protocol) as the Layer 4 protocol, use the **set firewall filter sequence from protocol tcp** command in L2/L3 configuration mode. To remove the condition from the filter sequence, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from protocol tcp**
delete firewall filter *filter-name* **sequence** *number* **from protocol**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.

Examples

The following example configures sequence 10 of the *MyFilter* filter to match packets carrying TCP as the Layer 4 protocol:

```
admin@Switch# set firewall filter MyFilter sequence 10 from protocol tcp
```

The following example removes the condition from sequence 10 of the *MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 10 from protocol
Deleting:
>   protocol {
>       tcp {
>       }
>   }
OK
```

firewall filter sequence from protocol tcp flags

To configure a filter sequence to match packets with TCP as Layer 4 protocol and the specified TCP flag type, use the **set firewall filter sequence from protocol tcp flags** command in L2/L3 configuration mode.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from protocol tcp flags** *type* { **true** | **false** }
delete firewall filter *filter-name* **sequence** *number* **from protocol tcp flags** *type*

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
type	TCP flag type. Possible values are: **ack** **fin** **psh** **rst** **syn** **tcp-established** **tcp-initial urg**
true	The flag is set (1).
false	The flag is not set (0).

Examples

The following example configures sequence 10 of the *MyFilter* filter to match packets with TCP as the Layer 4 protocol and specified values for TCP flags:

```
admin@Switch# set firewall filter MyFilter sequence 1 from protocol tcp flags ack true
admin@Switch# set firewall filter MyFilter sequence 1 from protocol tcp flags psh false
```

The following example removes both match conditions from sequence 1 of the *MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 1 from protocol tcp flags ack
Deleting:
>   ack: true
OK
admin@Switch# delete firewall filter MyFilter sequence 1 from protocol tcp flags psh
Deleting:
>   psh: false
OK
```

firewall filter sequence from protocol udp

To configure a filter sequence to match packets with UDP (User Datagram Protocol) as Layer 4 protocol, use the **set firewall filter sequence from protocol udp** command in L2/L3 configuration mode. To remove the condition from the filter sequence, use the **delete** from of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from protocol udp**

delete firewall filter *filter-name* **sequence** *number* **from protocol**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.

Examples

The following example configures sequence 10 of the *MyFilter* filter to match packets carrying UDP as Layer 4 protocol:

```
admin@Switch# set firewall filter MyFilter sequence 10 from protocol udp
```

The following example removes the condition from sequence 10 of the *MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 10 from protocol
Deleting:
>   protocol {
>       udp {
>       }
>   }
OK
```

firewall filter sequence from source-address-ipv4

To configure a filter sequence to match packets with specified source IP address, use the **set firewall filter sequence from source-address-ipv4** command in L2/L3 configuration mode. To remove the condition from the filter sequence, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from source-address-ipv4** *address/prefix-length*
delete firewall filter *filter-name* **sequence** *number* **from source-address-ipv4**

Parameters

filter-name	Filter name.
number	The filter sequence number. The range is 0-9999.
address/prefix-length	IPv4 address / prefix length

Examples

The following example configures sequence 1 of the *MyFilter* filter to match packets with source address 192.168.1.1:

```
admin@Switch# set firewall filter MyFilter sequence 1 from source-address-ipv4
192.168.1.1/32
```

The following example removes the condition from sequence 1 of the *MyFilter* filter:

```
admin@XorPlus# delete firewall filter MyFilter sequence 1 from source-address-ipv4
Deleting:
>   source-address-ipv4: 192.168.1.1/32
OK
```

firewall filter sequence from source-address-ipv6

To configure a filter sequence to match packets with specified destination IPv6 address, use the **set firewall filter sequence from source-address-ipv6** command in L2/L3 configuration mode. To remove the condition, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from source-address-ipv6** *address/prefix-length*
delete firewall filter *filter-name* **sequence** *number* **from source-address-ipv6**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
address/prefix-length	IPv6 address / prefix length.

Examples

The following example configures sequence 2 of the *MyFilter* filter to match packets with source IPv6 address is 2001::1:

```
admin@Switch# set firewall filter MyFilter sequence 2 from source-address-ipv6 2001::1/128
```

The following example removes the match condition from sequence 2 of the *MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 2 from source-address-ipv6
Deleting:
>   source-address-ipv6: 2001::1/128
OK
```

firewall filter sequence from source-mac-address

To configure a filter sequence to match packets with the specified source MAC address, use the **set firewall filter sequence from source-mac-address** command in L2/L3 configuration mode.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from source-mac-address** *mac-address*
delete firewall filter *filter-name* **sequence** *number* **from source-mac-address**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
mac-address	Source MAC address.

Examples

The following example configures seqence 2 of the *MyFilter* filter to match packets with the source MAC address 11:22:33:44:55:66:

```
admin@Switch# set firewall filter MyFilter sequence 2 from source-mac-address
11:22:33:44:55:66
```

The following example removes the match condition from sequence 2 of the *MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 2 from source-mac-address
Deleting:
>   source-mac-address: 11:22:33:44:55:66
OK
```

firewall filter sequence from source-port

To configure a filter sequence to match packets with the specified source port, use the **set firewall filter sequence from source-port** command in L2/L3 configuration mode. To remove the match condition from the filter sequence, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from source-port** *port-number*
delete firewall filter *filter-name* **sequence** *number* **from source-port**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
port-number	Source port number. The range is 0-65535.

Examples

The following example configures sequence 2 of the *MyFilter* filter to match packets with source port in the 100-234 range:

```
admin@XorPlus# set firewall filter MyFilter sequence 2 from source-port 100..234
```

The following example removes the **souce-port** match condition from sequence 2 of the *MyFilter* filter:

```
admin@XorPlus# delete firewall filter MyFilter sequence 2 from source-port
Deleting:
>   source-port: 100..234
OK
```

firewall filter sequence from vlan

To configure a filer sequence to filter packets in a specific VLAN, use the **set firewall filter sequence from vlan** command in L2/L3 configuration mode.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **from vlan** *vlan-id*
delete firewall filter *filter-name* **sequence** *number* **from vlan**

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
vlan-id	VLAN identifier. The range is 1-4094.

Example

The following example applies sequence 2 of *MyFilter* filter to VLAN 3:

```
admin@Switch# set firewall filter MyFilter sequence 2 from vlan 3
admin@Switch# commit
admin@Switch# delete firewall filter MyFilter sequence 2 from vlan
admin@Switch# commit
```

Firewall Filter Sequence Log Interval

To configure the log interval for a filter sequence, use the **set firewall filter sequence log interval** in L2/L3 configuration mode. To remove the log interval, use the **delete** form of the command.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **log interval** *time*
delete firewall filter *filter-name* **sequence** *number* **log interval**

Parameters

filter-name	Filter name
number	Sequence number. The range is 0-9999.
time	Log interval in seconds.

Example

The following example configures sequence 10 of the *MyFilter* filter to record the log every 15 seconds:

```
admin@Switch# set firewall filter MyFilter sequence 10 log interval 15
```

The following example removes the log interval from sequence 10 of *the MyFilter* filter:

```
admin@Switch# delete firewall filter MyFilter sequence 10 log interval
Deleting:
>   interval: 15
OK
```

firewall filter sequence then action

To configure the next action for a filter sequence, use the **set firewall filter sequence then action** command in L2/L3 configuration mode.

Command Syntax

set firewall filter *filter-name* **sequence** *number* **then action** { **discard** | **forward** }

Parameters

filter-name	Filter name.
number	Filter sequence number. The range is 0-9999.
discard	Discard packets that meet all match conditions.
forward	Forward packets that meet all match conditions.

Examples

The following example configures sequence 1 and 2 of the *MyFilter* filter to forward and discard matching packets, respectively.

```
admin@Switch# set firewall filter MyFilter sequence 1 then action forward
admin@Switch# set firewall filter MyFilter sequence 2 then action discard
```

firewall system-output disable

To prevent the switch from filtering packets originating from the switch itself, use the **set firewall system-output disable** command in L2/L3 configuration mode.

Command Syntax

set firewall system-out disable { **true** | **false** }

Parameters

true	Do not apply output filters to traffic from the system itself.
false	Apply output filters to traffic from the system itself.

Example

This example configures the firewall to filter packets originating from the system:

```
admin@Switch# set firewall system-output disable true
```

show filter

The command displays information about all filter

Command Syntax

run show filter *[text]*

Parameter

• *[text]* The special information. Options include:

- *<text>* Show specified filter
- Default value: none

Example

• This example shows all filter information:

```
admin@XorPlus# run show filter
Filter: f1
Description: asa
Input interface: ge-1/1/1
Filter: f2
Description:
Input interface: vlan2
Filter: f3
Description:
Output interface: ge-1/1/2
Filter: f4
Description:
Output interface: vlan2
• Show filter f1
XorPlus# run show filter f1
Filter: f1
Description: asa
Input interface: ge-1/1/1
```

firewall policer if-exceeding rate-limit

To configure rate limits for firewall policer, use the **set firewall policer if-exceeding rate-limit** command in L2/L3 configuration mode.

Command Syntax

set firewall policer *policer-name* **if-exceeding rate-limit** *number*

Parameters

policer-name	Policer name.
number	The rate limiting value in packets per second. The range is 1-1000.

Example

The following example configures rate limiting for the *MyPolicer* policer to 100 pps (packets per second):

```
admin@Switch# set firewall policer MyPolicer if-exceeding rate-limit 100
```

firewall policer if-exceeding burst-limit

To configure burst limit for firewall policer, use the **set firewall policer if-exceeding burst-limit** command in L2/L3 configuration mode.

Command Syntax

set firewall policer *policer-name* **if-exceeding burst-limit** *limit*

Parameters

policer-name	Policer name.
limit	The maximum burst size in packets. The range is 1-1000.

Example

This example configures the burst size as 100 for the *MyPolicer* policer:

```
admin@Switch# set firewall policer MyPolicer if-exceeding burst-limit 100
```

firewall policer then action

To configure policer action for firewall policer, use the **set firewall policer then action** command in L2/L3 configuration mode.

Command Syntax

set firewall policer *policer-name* **then action discard**

Parameters

policer-name	Policer name.

Example

The following example configures the *MyPolicer* policer to discard packets exceeding the configured rate limit for the policer:

```
admin@Switch# set firewall policer MyPolicer then action discard
```

firewall filter sequence then policer

To configure the policer for packets matching a filter sequence, use the **set firewall filter sequence then policer** command in L2/L3 configuration mode.

Command Syntax

set firewall filter *filter-name* **sequence** *sequence-number* **then policer** *policer-name*

Parameters

filter-name	Filter name.
sequence-number	Sequence number. The range is 0-9999.
policer-name	Name of the policer to use for rate limiting traffic.

Example

This example configures the *MyPolicer* policer to be applied to packets matching sequence 10 of the *MyFilter* filter:

```
admin@Switch# set firewall filter MyFilter sequence 10 then policer MyPolicer
```

QoS Configuration Commands

This section contains descriptions of the Layer2 and Layer3 QoS configuration commands that this chapter references.

- class-of-service classifier <classifier-name>
- class-of-service classifier <classifier-name> forwarding-class <forwarding-class-name> code-point <code-point>
- class-of-service classifier <classifier-name> trust-mode <trust-mode>
- class-of-service forwarding-class <forwarding-class-name> local-priority <local-priority>
- class-of-service interface <port> classifier <classifier-name>
- class-of-service scheduler <scheduler-name> guaranteed-rate <guaranteed-rate>
- class-of-service scheduler <scheduler-name> mode SP
- class-of-service scheduler <scheduler-name> mode WFQ
- class-of-service scheduler <scheduler-name> mode WRR
- class-of-service scheduler <scheduler-name> weight <weight-id>
- class-of-service scheduler-profile <scheduler-profile-name> forwarding-class <forwarding-class-name> schedule <schedule-name>
- show class-of-service <text>
- class-of-service interface <port> scheduler-profile <scheduler-profile-name>
- class-of-service interface <port> default-priority <default-priority-type> <default-priority-int>
- class-of-service pfc-profile <profile-name> code-point <code-point> drop <boolean>
- class-of-service interface <port> pfc-profile <profile-name>

class-of-service classifier <classifier-name>

User can configure classifier-name for a classifier, and the name is optionally implemented.

Command Syntax

set class-of–service classifier <*classifier-name*>

delete class-of–service classifier c1

Parameter

• <*classifier-name* > Classifier configuration,it is optionally implemented.

Example

• This example creates classifier c1:

```
admin@XorPlus# set class-of-service classifier c1
admin@XorPlus# commit
```

class-of-service classifier <classifier-name> forwarding-class <forwarding-class-name> code-point <code-point>

User can configure a name for a classifier. This name can be applied in an input interface.

Command Syntax

set class-of–service forwarding-class <*forwarding-class-name*> local-priority <*int*>

delete class-of–service classifier c1 forwarding-class f1 code-point 6

Parameter

<*forwarding-class-name*> Name of forwarding class.

<*int*> code-point , the valid range is 0~7 for ieee-802.1 and inet-precedence, 0~63 for dscp.

Example

This example creates a classifier c1 with forwarding-class f1 and code-point 3

```
admin@XorPlus# set class-of-service classifier c1 forwarding-class f1 code-point 3
admin@XorPlus# commit
```

class-of-service classifier <classifier-name> trust-mode <trust-mode>

User can configure classifier-name for a classifier, and the name is optionally implemented.
The value of trust-mode can be DSCP, IEEE 802.1p, or inet-precedence.

Command Syntax

set class-of–service classifier <*classifier-name*> trust-mode <*trust-mode*>
delete class-of–service classifier c1 trust-mode

Parameter

- <*classifier-name* > Classifier configuration. It is optionally implemented.
- <*trust-mode* > Priority based. The value of trust-mode can be DSCP, IEEE 802.1p, or inet-precedence.

Example

- This example creates classifier c1 based on the trust-mode of DSCP:

```
admin@XorPlus# set class-of-service classifier c1 trust-mode dscp
admin@XorPlus# commit
```

- This example creates classifier c2 based on the trust-mode of IEEE 802.1p:

```
admin@XorPlus# set class-of-service classifier c2 trust-mode ieee 802.1p
admin@XorPlus# commit
```

• This example creates classifier c3 based on the trust-mode of inet-precedence:

```
admin@XorPlus# set class-of-service classifier c3 trust-mode inet-precedence
admin@XorPlus# commit
```

class-of-service forwarding-class <forwarding-class-name> local-priority <local-priority>

User can configure the local-priority for a special forwarding-class. The name of a forwarding-class is optionally implemented.

Command Syntax

set class-of–service forwarding-class <*forwarding-class-name*> local-priority <*int*>
delete class-of–service forwarding-class f1 local-priority
delete class-of-service forwarding-class f1

Parameter

• <*forwarding-class-name*> Name of forwarding class.
• <*int*> Local priority,the valid local priority numbers range 0-7.

- Default value: 0

Example

• This example creates a forwarding-class f1and the local priority is 1.

```
admin@XorPlus# set class-of-service forwarding-class f1 local-priority 1
admin@XorPlus# commit
```

class-of-service interface <port> classifier <classifier-name>

User can configure a classifier for port.

Command Syntax

set class-of–service interface <*port*> classifier <*classifier-name*>
delete class-of–service interface ge-1/1/1

Parameter

• <*port*> GigabitEthernet IEEE 802.3z or 802.3ae. e.g. ge-1/1/1.
• <*classifier-name*> Classifier configuration. It is optionally implemented.

Example

• This example creates classifier for port ge-1/1/1.

```
admin@XorPlus# set class-of-service interface ge-1/1/1 classifier c1
admin@XorPlus# commit
```

class-of-service scheduler <scheduler-name> guaranteed-rate <guaranteed-rate>

User can configure the minimum guaranteed bandwith for WFQ queue.

Command Syntax

set class-of–service scheduler <*scheduler-name*> guaranteed-rate <*guaranteed-rate*>

delete class-of–service scheduler s1 guaranteed-rate

Parameter

<*schedule-name*> Queue scheduler configuration, it is optionally implemented.

<*guaranteed-rate*> The minimum guaranteed bandwidth, only for WFQ. The valid guaranteed-rate range 8-40000000.

Example

This example creates scheduler s1 with the minimum guaranteed bandwitdth 100.

```
admin@XorPlus# set class-of-service scheduler s1 guaranteed-rate 100
admin@XorPlus# commit
```

class-of-service scheduler <scheduler-name> mode SP

User can configure a scheduler with SP queue.

Command Syntax

set class-of–service scheduler <*scheduler-name*> mode SP

delete class-of–service scheduler s1

Parameter

<*scheduler-name*> Queue scheduler configuration. It is optionally implemented.

Example

This example creates scheduler s1 with SP queue.

```
admin@XorPlus# set class-of-service scheduler s1 mode SP
admin@XorPlus# commit
```

class-of-service scheduler <scheduler-name> mode WFQ

User can configure the scheduling mode of associated queues and schedule with WFQ queue.

Command Syntax

set class-of–service scheduler <*scheduler-name*> mode WFQ

delete class-of–service scheduler s1

Parameter

<*scheduler-name*> Queue schedule configuration. It is optionally implemented.

Example

This example creates scheduler s1 with WFQ queue.

```
admin@XorPlus# set class-of-service scheduler s1 mode WFQ
admin@XorPlus# commit
```

class-of-service scheduler <scheduler-name> mode WRR

User can configure a scheduler with WRR queue.

Command Syntax

set class-of–service scheduler <*scheduler-name*> mode WRR

delete class-of–service scheduler s1

Parameter

<*schedule-name*> Queue scheduler configuration. It is optionally implemented.

Example

This example creates scheduler s1 with WRR queue.

```
admin@XorPlus# set class-of-service scheduler s1 mode WRR
admin@XorPlus# commit
```

class-of-service scheduler <scheduler-name> weight <weight-id>

User can configure a scheduling weight of associated queues.

Command Syntax

set class-of–service scheduler <*scheduler-name*> weight <*weight-id*>

delete class-of–service scheduler s1 weight

Parameter

<*schedule-name*> Queue scheduler configuration. It is optionally implemented.

<*weight-id*> The scheduling weight of associated queues. The valid weight numbers range 0-15.

Example

This example creates a scheduling weight of associated queues.

```
admin@XorPlus# set class-of-service scheduler s1 weight 3
admin@XorPlus# commit
```

class-of-service scheduler-profile <scheduler-profile-name> forwarding-class <forwarding-class-name> schedule <schedule-name>

User can configure a schedule of queue and a forwarding class for a special scheduler-profile. This scheduler-profile can be applied on an interface.

Command Syntax

set class-of–service scheduler-profile <scheduler-profile-name> forwarding-class <forwarding-class-name> schedule <schedule-name>

delete class-of–service classifier c1 forwarding-class f1 schedule

Parameter

<scheduler-profile-name> Name of scheduler profile.

<forwarding-class-name> Name of forwarding class.

<schedule-name> Queue schedule configuration.

Example

This example creates a scheduler-profile p1 with the forwarding-class f1 and the schedule s1.

```
admin@XorPlus# set class-of-service scheduler-profile p1 forwarding-class f1 schedule s1
admin@XorPlus# commit
```

show class-of-service <text>

The **show class-of-service** command displays information about QoS configured on switch. User can display the interface, trust-mode, local-priority, queue-schedule, and the code-point information. The default queue-schedule is SP.

Command Syntax

run show class-of-service <*text*>

Parameter

• <*text*> The special information. Options include:

- **Interface:** Show class of service on specified interface

Example

• This example shows class-of-service:

```
admin@XorPlus# run show class-of-service
Interface Trust-mode Local-priority Queue-Schedule Code-points
---------- --------------- -------------- ------------------ -----------
ge-1/1/1 ieee-802.1 3 WRR,5 3
```

class-of-service interface <port> scheduler-profile <scheduler-profile-name>

User can configure a scheduler profile for port. This scheduler profile works in flow out from the interface.

Command Syntax

set class-of–service interface <*port*> scheduler-profile *<scheduler-profile-name>*

delete class-of–service interface ge-1/1/1

Parameter

<*port*> GigabitEthernet IEEE 802.3z or 802.3ae. e.g. ge-1/1/1.

<scheduler-profile-name> scheduler profile, it is optionally implemented.

Example

This example configures scheduler-profile p1 for port ge-1/1/1.

```
admin@XorPlus# set class-of-service interface ge-1/1/1 scheduler-profile p1
admin@XorPlus# commit
```

class-of-service interface <port> default-priority <default-priority-type> <default-priority-int>

User can configure a default priority for incoming packets on a port. The default-priority acts on incoming packets without a special field which is dscp, ieee-802.1 or inet-precedence.

For example, when trust mode is dscp on an interface, if the incoming packets can‘t match dscp field, these packets will be transmitted by default-priority configured in the interface. Otherwise, these packets will be transmitted by dscp value.

Traffic class for default priority:

	Untrusted	CoS Trusted	ToS Trusted	DSCP Trusted
Untagged Non-IP	Default CoS (port)	Default CoS (port)	Default ToS (port)	Default DSCP (port)
Untagged IP	Default CoS (port)	Default CoS (port)	ToS (packet)	DSCP (packet)
Tagged Non-IP	Default CoS (port)	CoS (packet)	Default ToS (port)	Default DSCP (port)
Tagged IP	Default CoS (port)	CoS (packet)	ToS (packet)	DSCP (packet)

Command Syntax

set class-of–service interface *<port>* default-priority *<default-priority-type> <default-priority-int>*

delete class-of–service interface ge-1/1/1 default-priority

Parameter

<port> Gigabit Ethernet Interface. e.g. ge-1/1/1.

<default-priority-type> the type of default priority, which can be dscp, ieee 802.1p or inet-precedence. The default value is ieee 802.1p.

<default-priority-int> the value of default priority, the valid range is 0~7 for ieee-802.1 and inet-precedence, 0~63 for dscp. The default value is 0 for dscp, ieee 802.1p or inet-precedence.

Example

When not configuring any trust mode, configure default priority dscp 16 on ge-1/1/1.

```
admin@XorPlus# set class-of-service interface ge-1/1/1 default-priority dscp 16
admin@XorPlus# commit
Commit OK.
Save done.
admin@XorPlus# run show class-of-service interface ge-1/1/1
Interface : ge-1/1/1
```

```
trust mode : no-trust
Default ieee-802.1 : 0
Default dscp : 16
Default inet-precedence : 0
Local-priority   Queue-Schedule                    Code-points
--------------   --------------------------   ------------------------------
0                SP,0kbps
1                SP,0kbps
2                SP,0kbps
3                SP,0kbps
4                SP,0kbps
5                SP,0kbps
6                SP,0kbps
7                SP,0kbps
```

When trust mode is dscp, configure default priority dscp 16 on ge-1/1/2.

```
admin@XorPlus# set class-of-service classifier c1 trust-mode dscp
admin@XorPlus# set class-of-service interface te-1/1/2 classifier c1
admin@XorPlus# commit
Commit OK.
Save done.
admin@XorPlus# run show class-of-service interface te-1/1/2
Interface : te-1/1/2
trust mode : dscp
Default ieee-802.1 : 0
Default dscp : 16
Default inet-precedence : 0
Local-priority   Queue-Schedule                  Code-points
--------------   --------------------------   ------------------------------
0                SP,0kbps                       0,1,2,3,4,5,6,7
1                SP,0kbps                       8,9,10,11,12,13,14,15
2                SP,0kbps                       16,17,18,19,20,21,22,23
3                SP,0kbps                       24,25,26,27,28,29,30,31
4                SP,0kbps                       32,33,34,35,36,37,38,39
5                SP,0kbps                       40,41,42,43,44,45,46,47
6                SP,0kbps                       48,49,50,51,52,53,54,55
7                SP,0kbps                       56,57,58,59,60,61,62,63
```

class-of-service pfc-profile <profile-name> code-point <code-point> drop <boolean>

The full name of pfc is priority flow control. This command defines pfc works on the specified code point.

Note: Lag interface doesn't support pfc, but it supports flow control now. If lag interface has enabled flow control, and its member port has enabled pfc, pfc is valid and flow control is invalid on this member port because pfc has higher priority than flow control.

Command Syntax

set class-of–service pfc-profile <profile-name> code-point <code-point> drop <boolean>
delete class-of–service pfc-profile <profile-name> code-point <code-point> drop

Parameter

- <profile-name> Profile name, string type.

- <code-point> 0~7 value, only match ieee802.1p field.
- <boolean> Value is true or false. Default value is false. If value is false, priority flow control function is enabled on this code point. Otherwise, priority flow control function is disabled on this code point.

Example

• This example creates a pfc profile without any code point configuration. The default is that pfc is enabled on 0~7 code point.

```
admin@XorPlus# set class-of-service pfc-profile pfc1
admin@XorPlus# set class-of-service interface ge-1/1/1 pfc-profile pfc1
admin@XorPlus# commit
Commit OK.
Save done.
admin@XorPlus# run show class-of-service interface ge-1/1/1
Interface : ge-1/1/1
802.1P         Priority Flow Control
-----------    ---------------------
0              true
1              true
2              true
3              true
4              true
5              true
6              true
7              true
trust mode : no-trust
Default ieee-802.1 : 0
Default dscp : 0
Default inet-precedence : 0
Local-priority   Queue-Schedule           Code-points
---------------   --------------------------   ------------------------------
0                SP,0kbps
1                SP,0kbps
2                SP,0kbps
3                SP,0kbps
4                SP,0kbps
5                SP,0kbps
6                SP,0kbps
7                SP,0kbps
```

• This example creates a pfc profile with code point 2 drop true.

```
admin@XorPlus# set class-of-service pfc-profile pfc2 code-point 2 drop true
admin@XorPlus# set class-of-service pfc-profile pfc2 code-point 4 drop true
admin@XorPlus# set class-of-service interface ge-1/1/2 pfc-profile pfc2
admin@XorPlus# commit
Commit OK.
Save done.

admin@XorPlus# run show class-of-service interface ge-1/1/2
Interface : ge-1/1/2
802.1P         Priority Flow Control
-----------    ---------------------
0              true
1              true
2              false
3              true
4              false
5              true
```

```
6               true
7               true
trust mode : no-trust
Default ieee-802.1 : 0
Default dscp : 0
Default inet-precedence : 0
Local-priority   Queue-Schedule           Code-points
--------------   --------------------------   ------------------------------
0                SP,0kbps
1                SP,0kbps
2                SP,0kbps
3                SP,0kbps
4                SP,0kbps
5                SP,0kbps
6                SP,0kbps
7                SP,0kbps
```

class-of-service interface <port> pfc-profile <profile-name>

The full name of pfc is priority flow control. This command define pfc is applied in a specified port. Pfc acts on packets entering the port, similar to flow control. But flow control only works on the port. It can't work on the code point.

When flow control has been configured on the port, configure pfc. Because pfc has higher priority than flow control, flow control will become invalid on the port.

Command Syntax

set class-of–service interface <port> pfc-profile <profile-name>

delete class-of–service interface <port> pfc-profile

Parameter

- <port> Physical interface.
- <profile-name> pfc profile name, which has been defined in class-of-service pfc-profile in advance.

Example

This example of a pfc profile applied in a port.

```
admin@XorPlus# set class-of-service interface ge-1/1/1 pfc-profile pfc1
admin@XorPlus# commit
Commit OK.
Save done.
```

Multicast Commands

- multicast-interface interface <text> vif <text> disable
- show multicast interface

multicast-interface interface <text> vif <text> disable

Users can enable or disable multicast_interface. You should enable the multicast interface before enabling the IGMP interface.

Command Syntax

set multicast-interface interface *<text_n>* vif *<text_v>* disable *<bool>*
delete multicast-interface interface *<text_n>* vif *<text_v>* disable

Parameter

•*<text_n>* Configure IPv4 MFEA on a network interface.
•*<text_v>* Configure IPv4 MFEA on a virtual interface
•*<bool>* Disable or enable IPv4 multicast-interface on an interface

- **true** disable multicast_interface
- **false** enable multicast_interface

Example

• This example is to enable multicast interface::

```
admin@XorPlus# set vlans vlan-id 2 l3-interface vlan2
admin@XorPlus# set vlans vlan-id 3 l3-interface vlan3
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching
native-vlan-id 2
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching
native-vlan-id 3
admin@XorPlus# set vlan-interface interface vlan2 vif vlan2 address 10.10.60.10
prefix-length 24
admin@XorPlus# set vlan-interface interface vlan3 vif vlan3 address 10.10.61.10
prefix-length 24
admin@XorPlus# commit
admin@XorPlus# set multicast-interface interface vlan2 vif vlan2 disable false
admin@XorPlus# set multicast-interface interface vlan3 vif vlan3 disable false
admin@XorPlus# commit
```

show multicast interface

Command Syntax

run show multicast interface *[addr]*

Parameter

•*[addr]* Display information about addresses of multicast IPv4 interfaces

Example

• This example is to show multicast interface address:

```
admin@XorPlus# run show multicast interface address
Interface Addr Subnet Broadcast P2Paddr
loopback 127.0.0.1 127.0.0.1/32 0.0.0.0 0.0.0.0
vlan-2 192.168.1.1 192.168.1.0/24 0.0.0.0 0.0.0.0
vlan-3 192.168.2.1 192.168.2.0/24 0.0.0.0 0.0.0.0
admin@XorPlus#
admin@XorPlus# run show multicast interface
Interface State Vif/PifIndex Addr Flags
vlan4 UP 3/264 10.10.60.10 MULTICAST BROADCAST KERN_UP
vlan5 UP 4/266 10.10.61.10 MULTICAST BROADCAST KERN_UP
```

Protocol Configuration Commands

- protocols arp aging-time
- protocols arp interface <interface> address <ipv4-addr> mac-address
- protocols arp interface <interface> inspection disable
- protocols arp interface <interface> proxy disable
- protocols bfd interface <interface> detect-multiplier
- protocols bfd interface <interface> disable
- protocols bfd interface <interface> min-echo-receive-interval
- protocols bfd interface <interface> min-receive-interval
- protocols bfd interface <interface> min-transmit-interval
- protocols bfd mode
- protocols bgp aggregate <network> <IPV?net> suppress-detail
- protocols bgp aggregate network4 <IPV4net> brief-mode
- protocols bgp auto-summary
- protocols bgp bgp-id
- protocols bgp confederation disable
- protocols bgp confederation identifier
- protocols bgp damping disable
- protocols bgp damping half-life
- protocols bgp damping max-suppress
- protocols bgp damping reuse
- protocols bgp damping suppress
- protocols bgp enable-4byte-as-numbers
- protocols bgp export
- protocols bgp fast-external-fallover disable
- protocols bgp import
- protocols bgp local-as
- protocols bgp local-preference
- protocols bgp med
- protocols bgp multipath disable
- protocols bgp multipath path-relax
- protocols bgp network4 <ipv4net>

- protocols bgp network6 <ipv6net>
- protocols bgp peer <text> advertise community disable
- protocols bgp peer <text> advertise community-ext disable
- protocols bgp peer <text> allow-as-loop
- protocols bgp peer <text> as
- protocols bgp peer <text> bfd disable
- protocols bgp peer <text> client
- protocols bgp peer <text> confederation-member
- protocols bgp peer <text> default-route-advertise disable
- protocols bgp peer <text> delay-open-time
- protocols bgp peer <text> disable
- protocols bgp peer <text> export
- protocols bgp peer <text> holdtime
- protocols bgp peer <text> import
- protocols bgp peer <text> ipv4-multicast
- protocols bgp peer <text> ipv4-unicast
- protocols bgp peer <text> ipv6-multicast
- protocols bgp peer <text> ipv6-unicast
- protocols bgp peer <text> local-ip
- protocols bgp peer <text> md5-password
- protocols bgp peer <text> next-hop-self
- protocols bgp peer <text> prefix-limit maximum
- protocols bgp peer <text> public-as-only
- protocols bgp route-reflector cluster-id
- protocols bgp route-reflector disable
- protocols bgp synchronization
- protocols dhcp option82 disable
- protocols dhcp relay port circuit-id
- protocols dhcp relay vlan-interface
- protocols dhcp relay vlan-interface disable
- protocols dhcp snooping binding file
- protocols dhcp snooping binding timeout
- protocols dhcp snooping disable
- protocols dhcp snooping port trust

- protocols dhcp snooping vlan
- protocols igmp disable
- protocols igmp interface <text> vif <text> disable
- protocols igmp interface <text> vif <text> enable-ip-router-alert-option-check
- protocols igmp interface <text> vif <text> query-interval
- protocols igmp interface <text> vif <text> query-last-member-interval
- protocols igmp interface <text> vif <text> query-response-interval
- protocols igmp interface <text> vif <text> robust-count
- protocols igmp interface <text> vif <text> version
- protocols igmp-snooping enable
- protocols igmp-snooping last-member-query-count
- protocols igmp-snooping last-member-query-interval
- protocols igmp-snooping max-response-time
- protocols igmp-snooping query-interval
- protocols igmp-snooping report-suppression
- protocols igmp-snooping robustness-variable
- protocols igmp-snooping vlan-id <id> enable
- protocols igmp-snooping vlan-id <id> fast-leave
- protocols igmp-snooping vlan-id <id> mrouter interface
- protocols igmp-snooping vlan-id <id> querier address
- protocols igmp-snooping vlan-id <id> querier enable
- protocols igmp-snooping vlan-id <id> querier other-querier-timer
- protocols igmp-snooping vlan-id <id> querier version
- protocols igmp-snooping vlan-id <id> static group <IPv4> interface
- protocols lacp interface <interface> priority
- protocols lacp priority
- protocols ospf4 area interface vif address neighbor router-id
- protocols ospf4 area <area-id1> virtual-link <router-id> transmit-area
- protocols ospf4 area <area-id> area-range <ip-address/netmask> advertise
- protocols ospf4 area <area-id> area-type
- protocols ospf4 area <area-id> default-lsa disable
- protocols ospf4 area <area-id> default-lsa metric
- protocols ospf4 area interface link-type
- protocols ospf4 area interface vif address

- protocols ospf4 area interface vif address authentication md5 end-time
- protocols ospf4 area interface vif address authentication md5 max-time-drift
- protocols ospf4 area interface vif address authentication md5 password
- protocols ospf4 area interface vif address authentication md5 simple-password
- protocols ospf4 area interface vif address bfd disable
- protocols ospf4 area interface vif address disable
- protocols ospf4 area interface vif address hello-interval
- protocols ospf4 area interface vif address interface-cost
- protocols ospf4 area interface vif address passive disable
- protocols ospf4 area interface vif address priority
- protocols ospf4 area interface vif address retransmit-interval
- protocols ospf4 area interface vif address router-dead-interval
- protocols ospf4 area interface vif address transmit-delay
- protocols ospf4 area interface vif address authentication md5 start-time
- protocols ospf4 area interface vif address passive host
- protocols ospf4 area <area-id> summaries disable
- protocols ospf4 area <area-id> virtual-link <router-id> authentication md5 <int> end-time
- protocols ospf4 area <area-id> virtual-link <router-id> authentication md5 <int> max-time-drift
- protocols ospf4 area <area-id> virtual-link <router-id> authentication md5 <int> password
- protocols ospf4 area <area-id> virtual-link <router-id> authentication md5 <int> simple-password
- protocols ospf4 area <area-id> virtual-link <router-id> authentication md5 <int> start-time
- protocols ospf4 area <area-id> virtual-link <router-id> hello-interval
- protocols ospf4 area <area-id> virtual-link <router-id> retransmit-interval
- protocols ospf4 area <area-id> virtual-link <router-id> router-dead-interval
- protocols ospf4 area <area-id> virtual-link <router-id> transmit-delay
- protocols ospf4 export
- protocols ospf4 import
- protocols ospf4 ip-router-alert
- protocols ospf4 rfc1583-compatibility
- protocols ospf4 router-id
- protocols ospf6 area interface vif neighbor router-id
- protocols ospf6 area <area-id1> virtual-link <router-id> transmit-area
- protocols ospf6 area <area-id> area-range <ip-address/netmask> advertise
- protocols ospf6 area <area-id> area-type

- protocols ospf6 area <area-id> default-lsa disable
- protocols ospf6 area <area-id> default-lsa metric
- protocols ospf6 area interface link-type
- protocols ospf6 area interface vif address disable
- protocols ospf6 area interface vif bfd disable
- protocols ospf6 area interface vif disable
- protocols ospf6 area interface vif hello-interval
- protocols ospf6 area interface vif interface-cost
- protocols ospf6 area interface vif passive
- protocols ospf6 area interface vif priority
- protocols ospf6 area interface vif retransmit-interval
- protocols ospf6 area interface vif router-dead-interval
- protocols ospf6 area interface vif transmit-delay
- protocols ospf6 area <area-id> summaries disable
- protocols ospf6 area <area-id> virtual-link <router-id> hello-interval
- protocols ospf6 area <area-id> virtual-link <router-id> retransmit-interval
- protocols ospf6 area <area-id> virtual-link <router-id> router-dead-interval
- protocols ospf6 area <area-id> virtual-link <router-id> transmit-delay
- protocols ospf6 export
- protocols ospf6 import
- protocols ospf6 instance-id
- protocols ospf6 ip-router-alert
- protocols ospf6 router-id
- protocols rip export
- protocols rip import
- protocols rip interface vif address accept-default-route
- protocols rip interface vif address accept-non-rip-requests
- protocols rip interface vif address advertise-default-route
- protocols rip interface vif address authentication md5 end-time
- protocols rip interface vif address authentication md5 password
- protocols rip interface vif address authentication md5 start-time
- protocols rip interface vif address authentication simple-password
- protocols rip interface vif address deletion-delay
- protocols rip interface vif address disable

- protocols rip interface vif address horizon
- protocols rip interface vif address interpacket-delay
- protocols rip interface vif address metric
- protocols rip interface vif address passive
- protocols rip interface vif address request-interval
- protocols rip interface vif address route-timeout
- protocols rip interface vif address triggered-delay
- protocols rip interface vif address triggered-jitter
- protocols rip interface vif address update-interval
- protocols rip interface vif address update-jitter
- protocols sflow agent-id
- protocols sflow collector <IPv4> udp-port
- protocols sflow disable
- protocols sflow header-len
- protocols sflow interface <port> disable
- protocols sflow interface <port> header-len
- protocols sflow interface <port> polling-interval
- protocols sflow interface <port> sampling-rate egress
- protocols sflow interface <port> sampling-rate ingress
- protocols sflow polling-interval
- protocols sflow sampling-rate egress
- protocols sflow sampling-rate ingress
- protocols sflow source-address
- protocols snmpv3 trap-group targets <IPv4> security-name <text>
- protocols snmp trap-group version <version>
- protocols snmp v3 enable <boolean>
- protocols snmp v3 usm-user <text>
- protocols snmp v3 usm-user <text> group <text>
- protocols snmp v3 group <text> notify-view <text>
- protocols snmp v3 group <text> read-view <text>
- protocols snmp v3 group <text> write-view <text>
- protocols snmp v3 group group1 security-level
- protocols snmp v3 usm-user user1 authentication-mode <authentication-mode >
- protocols snmp v3 usm-user <text1> authentication-key <text2>

- protocols snmp v3 usm-user <text> privacy-mode <privacy-mode >
- protocols snmp v3 usm-user <text1> privacy-key <text2>
- protocols snmp v3 mib-view <text1> subtree <text2> mask <text3>
- protocols snmp v3 mib-view <text1> subtree <text2> type <type>
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> disable
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> interval
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> ip
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> preempt enable
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> priority
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> load-balance disable
- protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> load-balance virtual-mac time-interval

protocols arp aging-time

Users can set arp aging time.In the default setting, the ARP aging time is 1200 seconds.

Command Syntax

set protocols arp aging-time *<seconds>*
delete protocols arp aging-time

Parameter

•*<seconds>* Aging time in seconds,[300..14400]

Example

• This example is to set arp aging time to 400:

```
admin@XorPlus# set protocols arp aging-time 400
admin@XorPlus# commit
```

protocols arp interface <interface> address <ipv4-addr> mac-address

Users can set arp interface.

Command Syntax

set protocols arp interface *<interface>* address *<ipv4-addr>* mac-address *<mac-addr>*
delete protocols arp interface vlan4 address *<ipv4-addr>*

Parameter

•*<interface>* The vlan interface, e.g. vlan20
•*<ipv4-addr>*The IPv4 address
•*<mac-addr>*The mac address

Example

• This example is to set vlan4 address to 10.10.60.1,mac-address to 22:11:11:11:11:11:

```
admin@XorPlus# set protocols arp interface vlan4 address 10.10.60.1 mac-address
22:11:11:11:11:11
admin@XorPlus# commit
```

protocols arp interface <interface> inspection disable

Users can enable or disable dynamic ARP Inspection(DAI).

Command Syntax

set protocols arp interface *<interface>* inspection disable *<bool>*

delete protocols arp interface*<interface>* inspection disable

Parameter

•*<interface>*The vlan interface, e.g. vlan20

•*<bool>* Disable dynamic arp inspection

- **true** disable DAI
- **false** enable DAI

Example

• This example is to disable DAI for vlan4 :

```
admin@XorPlus# set protocols arp interface vlan4 inspection disable true
admin@XorPlus# commit
```

protocols arp interface <interface> proxy disable

Users can set arp interface proxy.

Command Syntax

set protocols arp interface *<interface>* proxy disable *<bool>*

delete protocols arp interface *<interface>* proxy disable

Parameter

•*<interface>*The vlan interface, e.g. vlan20

•*<bool>* Disable proxy arp

- **true** disable proxy arp
- **false** enable proxy arp

Example

• This example is to enable proxy arp for vlan4:

```
admin@XorPlus# set protocols arp interface vlan4 proxy disable false
admin@XorPlus# commit
```

protocols bfd interface <interface> detect-multiplier

Users can configure detect-multiplier.

Command Syntax

set protocols bfd interface *<interface>* detect-multiplier *<value>*

delete protocols bfd interface *<interface>* detect-multiplier

Parameter

•*<interface>*The vlan interface, e.g. vlan20

•*<value>* Detection time multiplier,[3..100]

Example

• This example configures bfd detect-multiplier for vlan4:

```
admin@XorPlus# set protocols bfd interface vlan4 detect-multiplier 5
admin@XorPlus# commit
```

protocols bfd interface <interface> disable

Users can disable or enable bfd interface.

Command Syntax

set protocols bfd interface *<interface>* disable *<bool>*

Parameter

•*<interface>*The vlan interface, e.g. vlan20

•*<bool>* Disable bfd interface.

- **true** disable bfd interface
- **false** enable bfd interface

Example

• This example is to enable bfd detect-multiplier for vlan4:

```
admin@XorPlus# set protocols bfd interface vlan4 disable false
admin@XorPlus# commit
```

protocols bfd interface <interface> min-echo-receive-interval

Users can set min-echo-receive-interval.

Command Syntax

set protocols bfd interface *<interface>* min-echo-receive-interval *<uint>*

delete protocols bfd interface *<interface>* min-echo-receive-interval

Parameter

•*<interface>*The vlan interface, e.g. vlan20

•*<uint>* Required Mininum Echo RX Interval

Example

• This example configures min-echo-receive-interval to 2 for vlan4:

```
admin@XorPlus# set protocols bfd interface vlan4 min-echo-receive-interval 2
admin@XorPlus# commit
```

protocols bfd interface <interface> min-receive-interval

Users can set min-receive-interval to a value between 500 and 10000.

Command Syntax

set protocols bfd interface *<interface>* min-receive-interval *<value>*

delete protocols bfd interface *<interface>* min-receive-interval

Parameter

•*<interface>*The vlan interface, e.g. vlan20

•*<value>* Required Mininum RX Interval, ms,[500..10000]

Example

• This example configures min-receive-interval to 600 for vlan4:

```
admin@XorPlus# set protocols bfd interface vlan4 min-receive-interval 600
admin@XorPlus# commit
```

protocols bfd interface <interface> min-transmit-interval

Users can set min-transmit-interval to a value between 500 and 10000.

Command Syntax

set protocols bfd interface *<interface>* min-transmit-interval *<value>*

delete protocols bfd interface *<interface>* min-transmit-interval

Parameter

•*<interface>*The vlan interface, e.g. vlan20

•*<value>* Required Mininum TX Interval, ms,[500..10000]

Example

• This example configures min-transmit-interval to 1000 for vlan4:

```
admin@XorPlus# set protocols bfd interface vlan4 min-transmit-interval 1000
admin@XorPlus# commit
```

protocols bfd mode

Users can configure the BFD mode.

Command Syntax

set protocols bfd mode *<mode>*

delete protocols bfd mode

Parameter

•*<mode>* BFD mode.

- **active** Send BFD Control packets, regardless of whether it has received any BFD packets
- **passive** Don't begin sending BFD packets until it has received a BFD packet

Example

• This example configures bfd mode as active mode:

```
admin@XorPlus# set protocols bfd mode active
admin@XorPlus# commit
```

protocols bgp aggregate <network> <IPV?net> suppress-detail

Users can configure the aggregate route to suppress-detail.

Command Syntax

set protocols bgp aggregate *<network>* *<IPV?net>* suppress-detail *<bool>*

Parameter

•*<network>*network4 or network6

•*<IPV?net>* Aggregate routes of ipv4 or ipv6

•*<bool>* Do not generate AS_SETs for the aggregate route

- **true** enable suppress detail
- **false** disable suppress detail

Example

• This example configures aggregate route to suppress-detail:

```
admin@XorPlus# set protocols bgp aggregate network4 192.168.1.0/24 suppress-detail true
admin@XorPlus# commit
```

protocols bgp aggregate network4 <IPV4net> brief-mode

Users can configure the aggregate route to the brief mode.

Command Syntax

set protocols bgp aggregate network4 *<IPV4net>* brief-mode *<bool>*

Parameter

•*<IPV4net>* Aggregate routes of ipv4

•*<bool>* Do not generate AS_SETs for the aggregate route

- **true** enable brief mode
- **false** disable brief mode

Example

• This example configures aggregate route to brief-mode:

```
admin@XorPlus# set protocols bgp aggregate network4 192.168.1.0/24 brief-mode true
admin@XorPlus# commit
```

protocols bgp auto-summary

BGP supports automatic route summarization and manual route summarization. Manual route summarization takes precedence over automatic route summarization.Users can set automatic summarization of routes.

Command Syntax

set protocols bgp auto-summary *<bool>*

Parameter

•*<bool>*Automatic summarization of routes

- **true** enable auto summary
- **false** disable auto summary

Example

• This example configures aggregate route to auto summary:

```
admin@XorPlus# set protocols bgp auto-summary true
admin@XorPlus# commit
```

protocols bgp bgp-id

Users can configure the bgp-id for aggregate route.

Command Syntax

set protocols bgp bgp-id *<IPv4>*

delete protocols bgp bgp-id

Parameter

•*<IPv4>* Set the BGP identifier (must be an IPv4 address)

Example

• This example configures bgp-id to 1.1.1.1 for aggregate route :

```
admin@XorPlus# set protocols bgp bgp-id 1.1.1.1
admin@XorPlus# commit
```

protocols bgp confederation disable

Users can set bgp confederation.

Command Syntax

set protocols bgp confederation disable *<bool>*

delete protocols bgp confederation disable

Parameter

•*<bool>* disable confederations

- **true** disable confederations
- **false** enable confederations

Example

• This example is to disable confederations:

```
admin@XorPlus# set protocols bgp confederation disable true
admin@XorPlus# commit
```

protocols bgp confederation identifier

Users can set bgp confederation identifier.

Command Syntax

set protocols bgp confederation identifier *<text>*

delete protocols bgp confederation identifier

Parameter

•*<text>*AS number used to non confederation peers, <int> or <int>.<int>

Example

• This example sets bgp confederation identifier to 1000:

```
admin@XorPlus# set protocols bgp confederation identifier 1000
admin@XorPlus# commit
```

protocols bgp damping disable

Users can enable or disable bgp damping.

Command Syntax

set protocols bgp damping disable *<bool>*

Parameter

•*<bool>* disable damping

- **true** disable damping
- **false** enable damping

Example

• This example is to disable bgp damping:

```
admin@XorPlus# set protocols bgp damping disable true
admin@XorPlus# commit
```

protocols bgp damping half-life

Users can set half life time for bgp-damping.

Command Syntax

set protocols bgp damping half-life *<time>*

Parameter

• *<time>* Decay half-life in minutes,[1..45]

Example

• This example is to set bgp-damping to 3:

```
admin@XorPlus# set protocols bgp damping half-life 3
admin@XorPlus# commit
```

protocols bgp damping max-suppress

Users can set max-suppress time for bgp-damping.

Command Syntax

set protocols bgp damping max-suppress *<time>*

delete protocols bgp damping max-suppress

Parameter

• *<time>* Maximum hold-down time in minutes, [1..720]

Example

• This example is to set max-suppress of bgp-damping to 10:

```
admin@XorPlus# set protocols bgp damping max-suppress 10
admin@XorPlus# commit
```

protocols bgp damping reuse

Users can reuse bgp damping.

Command Syntax

set protocols bgp damping reuse *<value>*

delete protocols bgp damping reuse

Parameter

• *<value>* Reuse threshold,[1..20000]

Example

• This example is to set reuse threshold to 1000:

```
admin@XorPlus# set protocols bgp damping reuse 1000
admin@XorPlus# commit
```

protocols bgp damping suppress

Users can cut off (suppression) threshold.

Command Syntax

set protocols bgp damping suppress *<value>*

delete protocols bgp damping suppress

Parameter

•*<value>* Cutoff threshold, [1..20000]

Example

• This example is to cut off threshold to 1000:

```
admin@XorPlus# set protocols bgp damping suppress 1000
admin@XorPlus# commit
```

protocols bgp enable-4byte-as-numbers

Users can enable extended AS numbers.

Command Syntax

set protocols bgp enable-4byte-as-numbers *<bool>*

delete protocols bgp enable-4byte-as-numbers

Parameter

•*<bool>* enable extended AS numbers

- **true** enable extended AS numbers
- **false** disable extended AS numbers

Example

• This example is to enable extended AS numbers:

```
admin@XorPlus# set protocols bgp enable-4byte-as-numbers true
admin@XorPlus# commit
```

protocols bgp export

Users can export an policy.

Command Syntax

set protocols bgp export *<text>*

delete protocols bgp export

Parameter

•*<text>* policy identifier,Export policy.

Example

• This example is to export direct-to-top policy:

```
admin@XorPlus# set protocols bgp export direct-to-bgp
admin@XorPlus# commit
```

protocols bgp fast-external-fallover disable

Users can set the ability that resetting the session of a external peer immediately after the link goes down.

Command Syntax

set protocols bgp fast-external-fallover disable *<bool>*

Parameter

•*<bool>* Disable fast external fallover

- **true** disable fast external fallover
- **false** enable fast external fallover

Example

• This example is to enable fast external fallover:

```
admin@XorPlus# set protocols bgp fast-external-fallover disable false
admin@XorPlus# commit
```

protocols bgp import

Users can import an policy.

Command Syntax

set protocols bgp import *<text>*

delete protocols bgp import

Parameter

•*<text>* policy identifier,import policy.

Example

• This example is to import direct-to-top policy:

```
admin@XorPlus# set protocols bgp import direct-to-bgp
admin@XorPlus# commit
```

protocols bgp local-as

Users can set the Autonomous System (AS) number for this domain.

Command Syntax

set protocols bgp local-as *<value>*

delete protocols bgp local-as

Parameter

•*<value>* Set the Autonomous System (AS) number for this domain, <int> or <int>.<int>

Example

• This example sets AS number as 5:

```
admin@XorPlus# set protocols bgp local-as 5
admin@XorPlus# commit
```

protocols bgp local-preference

Users can set bgp local preference value.

.**Command Syntax**

set protocols bgp local-preference *<value>*

delete protocols bgp local-preference

Parameter

•*<value>* Local preference value,[0..4294967295]

Example

• This example sets bgp local preference value as 0:

```
admin@XorPlus# set protocols bgp local-preference 0
admin@XorPlus# commit
```

protocols bgp med

The multi-exit discriminator (MED) helps determine the optimal route for the incoming traffic of an AS, and is similar to the metric used in IGP. When a BGP device obtains multiple routes to the same destination address but with different next hops from EBGP peers, the BGP device selects the route with the smallest MED value as the optimal route.

Command Syntax

set protocols bgp med *<value>*

delete protocols bgp med

Parameter

•*<value>* Med value,[0..4294967295]

Example

• This example sets bgp med value as 1:

```
admin@XorPlus# set protocols bgp med 1
admin@XorPlus# commit
```

protocols bgp multipath disable

Users can make this router supports the ECMP(Equal-CostMultipathRouting).

Command Syntax

set protocols bgp multipath disable *<bool>*

delete protocols bgp multipath disable

Parameter

•*<bool>* Disable the ECMP

- **true** Disable the ECMP
- **false** enable the ECMP

Example

• This example enable ECMP:

```
admin@XorPlus# set protocols bgp multipath disable false
admin@XorPlus# commit
```

protocols bgp multipath path-relax

BGP will not load balance across multiple paths by default. This is acceptable if users are multi-homed to a single AS. If users are multi-homed to different AS paths, users cannot load balance across theoretically equal paths, so the multipath-relax path is needed.

Command Syntax

set protocols bgp multipath path-relax *<bool>*
delete protocols bgp multipath path-relax

Parameter

•*<bool>* enable or disable the multipath-relax

- **true** enable the multipath-relax
- **false** disable the multipath-relax

Example

• This example is to enable multipath-relax:

```
admin@XorPlus# set protocols bgp multipath path-relax true
admin@XorPlus# commit
```

protocols bgp network4 <ipv4net>

Users can set network of BGP.

Command Syntax

set protocols bgp network4 <ipv4net>
delete protocols bgp network4 <ipv4net>

Parameter

•<ipv4net> Advertise IPv4 route

Example

• This example is to set IPV4 net as 192.168.1.0/.24:

```
admin@XorPlus# set protocols bgp network4 192.168.1.0/24
admin@XorPlus# commit
```

protocols bgp network6 <ipv6net>

Users can set network of BGP.

Command Syntax

set protocols bgp network6 <ipv6net>

delete protocols bgp network6 <ipv6net>

Parameter

•<ipv6net> Advertise IPv6 route

Example

• This example is to set IPV6 net as 2001::0/64

```
admin@XorPlus# set protocols bgp network6 2001::0/64
admin@XorPlus# commit
Merging the configuration.
Commit OK.
Save done.
```

protocols bgp peer <text> advertise community disable

Users can advertise known community or not.

Command Syntax

set protocols bgp peer *<text>* advertise community disable *<bool>*

delete protocols bgp peer *<text>* advertise community disable

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*Disable to advertise known community

- **true** disable to advertise known community
- **false** enable to advertise known community

Example

• This example is to enable to advertise known community:

```
admin@XorPlus# set protocols bgp peer 192.168.1.2 advertise community disable false
admin@XorPlus# commit
```

protocols bgp peer <text> advertise community-ext disable

Users can advertise unknown community or not.

Command Syntax

set protocols bgp peer *<text>* advertise community-ext disable *<bool>*

delete protocols bgp peer *<text>* advertise community-ext disable

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*Disable to advertise unknown community

- **true** disable to advertise unknown community
- **false** enable to advertise unknown community

Example

• This example is to enable to advertise unknown community:

```
admin@XorPlus# set protocols bgp peer 192.168.1.2 advertise community-ext disable false
admin@XorPlus# commit
```

protocols bgp peer <text> allow-as-loop

Users can configure the peer to ignore the loop of AS path.

Command Syntax

set protocols bgp peer *<text>* allow-as-loop *<bool>*

delete protocols bgp peer *<text>* allow-as-loop

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*Ignore the loop of as path

- **true** Ignore the loop of as path
- **false** Don't ignore the loop of as path

Example

• This example is to ignore the loop of as path:

```
admin@XorPlus# set protocols bgp peer 192.168.2.1 allow-as-loop true
admin@XorPlus# commit
```

protocols bgp peer <text> as

Users can configure a peering session with another router

Command Syntax

set protocols bgp peer *<text>* as *<value>*

delete protocols bgp peer *<text>* as

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<value>*AS number identifier,set the AS number of this peer, <int> or <int>.<int>

Example

• This example is to configure session with that router (192.168.10.2)and this router belongs to AS 200:

```
admin@XorPlus# set protocols bgp peer 192.168.1.2 as 200
admin@XorPlus# commit
```

protocols bgp peer <text> bfd disable

Users can enable or disable bfd on the peer.

Command Syntax

set protocols bgp peer *<text>* bfd disable *<bool>*

delete protocols bgp peer *<text>* bfd disable

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*disable or enable bfd on the peer

- **true** disable bfd on the peer
- **false** enable bfd on the peer

Example

• This example is to disable bfd on the peer 192.168.2.1:

```
admin@XorPlus# set protocols bgp peer 192.168.2.1 bfd disable true
admin@XorPlus# commit
```

protocols bgp peer <text> client

Users can treat peer as a route reflector client.

Command Syntax

set protocols bgp peer *<text>* client *<bool>*

delete protocols bgp peer *<text>* client

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*treat peer as a route reflector client or not

- **true** treat peer as a route reflector client
- **false** don't treat peer as a route reflector client

Example

• This example is to treat peer(192.168.2.1) as a route reflector client:

```
admin@XorPlus# set protocols bgp peer 192.168.2.1 client true
admin@XorPlus# commit
```

protocols bgp peer <text> confederation-member

If the peer is a confederation member, users should set this parameter to true.

Command Syntax

set protocols bgp peer *<text>* confederation-member *<bool>*

delete protocols bgp peer *<text>* confederation-member

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*set peer to a confederation member or not

- **true** set peer to a confederation member
- **false** don't set peer to a confederation member

Example

• This example is to treat peer(192.168.2.1) as a confederation member:

```
admin@XorPlus# set protocols bgp peer 192.168.2.1 confederation-member true
admin@XorPlus# commit
```

protocols bgp peer <text> default-route-advertise disable

Users can enable or disable to advertise default route to the peer.

Command Syntax

set protocols bgp peer *<text>* default-route-advertise disable *<bool>*

delete protocols bgp peer *<text>* default-route-advertise disable

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*advertise default route to the peer or not

- **true** don't advertise default route to the peer
- **false** advertise default route to the peer

Example

• This example is to advertise default route to the peer(192.168.2.1) :

```
admin@XorPlus# set protocols bgp peer 192.168.2.1 default-route-advertise disable false
admin@XorPlus# commit
```

protocols bgp peer <text> delay-open-time

Users can set the delay time to send open message.

Command Syntax

set protocols bgp peer *<text>* delay-open-time *<time>*

delete protocols bgp peer *<text>* delay-open-time

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<time>* Delay time to send open message,[0..30]

Example

• This example is to set delay time of sending open message to 15 for the peer(192.168.2.1) :

```
admin@XorPlus# set protocols bgp peer 192.168.2.1 delay-open-time 15
admin@XorPlus# commit
```

protocols bgp peer <text> disable

Users can disable this peering.

Command Syntax

set protocols bgp peer *<text>* disable *<bool>*

delete protocols bgp peer *<text>* disable

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*enable or disable this peering

- **true** disable this peering
- **false** enable this peering

Example

• This example is to disable this peering:

```
admin@XorPlus# set protocols bgp peer 192.168.2.1 disable true
admin@XorPlus# commit
```

protocols bgp peer <text> export

Users can export a policy to the peer.

Command Syntax

set protocols bgp peer *<text>* export *<policy>*

delete protocols bgp peer *<text>* export

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<policy>*policy identifier.Name of a exported policy

Example

• This example is to export the policy of send-network to peer 192.168.10.2:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 export send-network
admin@XorPlus# commit
```

protocols bgp peer <text> holdtime

Users can set the time waiting for peer.When the time is 0,that means disabling the peer.

Command Syntax

set protocols bgp peer *<text>* holdtime *<time>*

delete protocols bgp peer *<text>* holdtime

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<time>*Time to wait for peer,[3..65535]

Example

• This example is to set holdtime to 30 for peer 192.168.10.2:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 holdtime 30
admin@XorPlus# commit
```

protocols bgp peer <text> import

Users can import a policy to the peer.

Command Syntax

set protocols bgp peer *<text>* import *<policy>*

delete protocols bgp peer *<text>* import

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<policy>*policy identifier.Name of an imported policy

Example

• This example is to import the policy of send-network to peer 192.168.10.2:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 import send-network
admin@XorPlus# commit
```

protocols bgp peer <text> ipv4-multicast

Users can configure the peer to send ipv4-multicast route or not. When users set this parameter to true, the peer will send ipv4-multicast route.

Command Syntax

set protocols bgp peer *<text>* ipv4-multicast *<bool>*

delete protocols bgp peer *<text>* ipv4-multicast

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*send or don't send ipv4-multicast route

- **true** send ipv4-multicast route
- **false** don't send ipv4-multicast route

Example

• This example is to set peer 192.168.10.2 to send ipv4-multicast route:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 ipv4-multicast true
admin@XorPlus# commit
```

protocols bgp peer <text> ipv4-unicast

Users can configure the peer to send ipv4-unicast route or not. When users set this parameter to true, the peer will send ipv4-unicast route.

Command Syntax

set protocols bgp peer *<text>* ipv4-uniicast *<bool>*

delete protocols bgp peer *<text>* ipv4-unicast

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*send or don't send ipv4-unicast route

- **true** send ipv4-unicast route
- **false** don't send ipv4-unicast route

Example

• This example is to set peer 192.168.10.2 to send ipv4-unicast route:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 ipv4-unicast true
admin@XorPlus# commit
```

protocols bgp peer <text> ipv6-multicast

Users can configure the peer to send ipv6-multicast route or not. When users set this parameter to true, the peer will send ipv6-multicast route.

Command Syntax

set protocols bgp peer *<text> ipv6-multicast <bool>*

delete protocols bgp peer *<text> ipv6-multicast*

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*send or don't send ipv6-multicastt route

- **true** send ipv6-multicast route
- **false** don't send ipv6-multicast route

Example

• This example is to set peer 192.168.10.2 to send ipv6-multicast route:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 ipv6-multicast true
admin@XorPlus# commit
```

protocols bgp peer <text> ipv6-unicast

Users can configure the peer to send ipv6-unicast route or not. When users set this parameter to true, the peer will send ipv6-unicast route.

Command Syntax

set protocols bgp peer *<text> ipv6-unicast <bool>*
delete protocols bgp peer *<text> ipv6-unicast*

Parameter

•*<text>*router identifier,(eg:192.168.10.2)
•*<bool>*send or don't send ipv6-unicast route

- **true** send ipv6-unicast route
- **false** don't send ipv6-unicast route

Example

• This example is to set peer 192.168.10.2 to send ipv6-unicast route:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 ipv6-unicast true
admin@XorPlus# commit
```

protocols bgp peer <text> local-ip

Users can build a session between local router and peer, so setting IP address of local router is necessary.

Command Syntax

set protocols bgp peer *<text>* local-ip *<ip-addr>*
delete protocols bgp peer *<text>* local-ip

Parameter

•*<text>*router identifier,(eg:192.168.10.2)
•*<ip-addr>* ip address identifier,eg:192.168.20.1)

Example

• This example is to set a session between 192.168.20.1 and peer 192.168.10.2:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 local-ip 192.168.20.1
admin@XorPlus# commit
```

protocols bgp peer <text> md5-password

Configure Message Digest5 (MD5) authentication on a TCP connection between two BGP peers. The two peers must have the same configured password to establish TCP connections.

Command Syntax

set protocols bgp peer *<text>* md5-password *<pwd>*
delete protocols bgp peer *<text>* md5-password

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<pwd>* the identifier of md5-password,eg:pica8

Example

• This example is to set md5-password to pcia8:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 md5-password pica8
admin@XorPlus# commit
```

protocols bgp peer <text> next-hop-self

Users can enable or disable next-hop-self to rewrite the nexthop as the local-self.

Command Syntax

set protocols bgp peer *<text>* next-hop-self *<bool>*

delete protocols bgp peer *<text>* next-hop-self

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<bool>*enable or disable next-hop-self

- **true** enable next-hop-self
- **false** disable next-hop-self

Example

• This example is to enable next-hop-self on peer 192.168.10.2:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 next-hop-self true
admin@XorPlus# commit
```

protocols bgp peer <text> prefix-limit maximum

Users can set maximum number of prefixes that can be accepted.

Command Syntax

set protocols bgp peer *<text>* prefix-limit maximum *<value>*

delete protocols bgp peer *<text>* prefix-limit maximum

Parameter

•*<text>*router identifier,(eg:192.168.10.2)

•*<value>* Maximum number of prefixes, [1..12000]

Example

• This example is to set maximum prefix to 1200 on peer 192.168.10.2:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 prefix-limit maximum 1200
admin@XorPlus# commit
```

protocols bgp peer <text> public-as-only

Private autonomous system (AS) numbers that range from 64512 to 65535 are used to conserve globally unique AS numbers. BGP can remove private AS numbers from updates to a peer.

Command Syntax

set protocols bgp peer *<text>* public-as-only *<bool>*
delete protocols bgp peer *<text>* public-as-only

Parameter

•*<text>*router identifier,(eg:192.168.10.2)
•*<bool>*enable or disable public-as-only

- **true** enable public-as-only
- **false** public-as-only

Example

• This example is to enable public-as-only on peer 192.168.10.2:

```
admin@XorPlus# set protocols bgp peer 192.168.10.2 public-as-only true
admin@XorPlus# commit
```

protocols bgp route-reflector cluster-id

A cluster ID can help prevent routing loops between multiple RRs within a cluster, and between clusters. When a cluster has multiple RRs, the same cluster ID must be configured for all RRs within the cluster.

Command Syntax

set protocols bgp route-reflector cluster-id *<IPv4>*
delete protocols bgp route-reflector cluster-id

Parameter

•*<IPv4>*CLUSTER_ID for this route reflector

Example

• This example is to set cluster_id for route-reflector:

```
admin@XorPlus# set protocols bgp route-reflector cluster-id 16.16.16.16
admin@XorPlus# commit
```

protocols bgp route-reflector disable

Users can enable or disable route reflector.

Command Syntax

set protocols bgp route-reflector disable *<bool>*
delete protocols bgp route-reflector disable

Parameter

•*<bool>* disable this router reflector

- **true** Disable the router reflector
- **false** enable the router reflector

Example

• This example is to enable route-reflector:

```
admin@XorPlus# set protocols bgp route-reflector disable false
admin@XorPlus# commit
```

protocols bgp synchronization

Users can enable synchronization.

Command Syntax

set protocols bgp synchronization *<bool>*

delete protocols bgp synchronization

Parameter

•*<bool>* enable synchronization

- **true** enable synchronization
- **false** disable synchronization

Example

• This example is to enable synchronization:

```
admin@XorPlus# set protocols bgp synchronization true
admin@XorPlus# commit
```

protocols dhcp option82 disable

Option82 is a relay agent used to specify the DHCP client location information. The DHCP option82 is disabled by default. To enable option82, use the disable false option**.**

Command Syntax

set protocols dhcpoption82 disable *<bool>*

Parameter

• *<bool>*Enable option82.Required select include:

- **true**
- **false**

Example

• This example enable the option82 option.

```
admin@XorPlus# set protocolsdhcp option82 disable false
admin@XorPlus# commit
```

protocols dhcp relay port circuit-id

DHCP snooping is a security feature that validates DHCP messages received from untrusted sources and filters out invalid messages. To enable DHCP snooping on a DHCP relay port, use the **set protocols dhcp relay port circuit-id** command in L2/L3 configuration mode.

Command Syntax

set protocols dhcp relay port *port-name* **circuit-id** *circuit-id*

Parameters

port-name	Port name.
circuit-id	Circuit identifier.

Examples

The following example configures the circuit-id v100 for port ge-1/1/1:

```
admin@Switch# set protocols dhcp relay port ge-1/1/1 circuit-id v100
```

protocols dhcp relay vlan-interface

To configure DHCP relay agent on a VLAN interface, use the **set protocols dhcp relay vlan-interface** command in L2/L3 configuration mode.

Command Syntax

set protocols dhcp relay vlan-interface *vlan-interface-name* { **dhcp-server-address1** *address* | **dhcp-server-address2** *address* | **dhcp-server-address3** *address* | **dhcp-server-address4** *address* }

Parameters

vlan-interface-name	VLAN interface name.
address	IP address of the DHCP server.

Example

The following example configures DHCP relay agent for the VLAN interface *vlan100*:

```
admin@Switch# set protocols dhcp relay vlan-interface vlan100 dhcp-server-address1
192.168.2.1
```

protocols dhcp relay vlan-interface disable

To enable the dhcp-relay service, use the **set protocols dhcp relay vlan-interface disable** command in L2/L3 configuration mode.

Command Syntax

set protocols dhcp relay vlan-interface *interface-name* **disable** { **true** | **false** }

Parameters

interface-name	VLAN interface name.
true	Disable DHCP relay service.
false	Enable DHCP relay service.

Examples

The following example enables the DHCP relay service for the *vlan100* interface:

```
admin@Switch# set protocols dhcp relay vlan-interface vlan100 disable false
```

protocols dhcp snooping binding file

Users can configure the DHCP snooping binding file.

Command Syntax

set protocols dhcp snooping binding file *<file>*

Parameter

- *<file>* Specify a file to save the snooping bindings.

Example

- This example configurethe dhcp snooping binding file.

```
admin@XorPlus# set protocols dhcp snooping binding file /tmp/run/dhcp_bind
admin@XorPlus# commit
```

protocols dhcp snooping binding timeout

Users can configure the DHCP snooping binding file timeout.

Command Syntax

set protocols dhcp snooping binding timeout *<time>*

Parameter

- *<time>* Specify a timeout value to save snooping bindings.

Example

• This example configure the timeout 8.

```
admin@XorPlus# set protocols dhcp snooping binding timeout 8
admin@XorPlus# commit
```

protocols dhcp snooping disable

DHCP snooping creates a mapping tablewhich includes the IP address, the MAC address, and the port number. DHCP snooping is disabled by default. Users can enable the DHCP snooping.

Command Syntax

set protocols dhcp snooping disable*<bool>*

Parameter

• *<bool>* Enable/Disable dhcp-snooping service.Required select include:

- **true**
- **false**

Example

• This example enable the DHCP snooping.

```
admin@XorPlus# set protocols dhcp snooping disable false
admin@XorPlus# commit
```

protocols dhcp snooping port trust

To configure a port as trusted for DHCP snooping, use the **set protocols dhcp snooping port trust** command in L2/L3 configuration mode. By default, a port is not trusted.

Command Syntax

set protocols dhcp snooping port *interface-name* **trust** { **true** | **false** }

Parameters

interface-name	Interface name.

NOTEThe DHCP snooping trusted interface can not be a LAG interface.

Example

The following example configures the ge-1/1/1 port as trusted:

```
admin@Switch# set protocols dhcp snooping port ge-1/1/1 trust true
```

protocols dhcp snooping vlan

The **set protocols dhcp snooping vlan** command enables the DHCP snooping function on a pecified VLAN or all VLANs.

Command Syntax

set protocols dhcp snooping vlan {<*vlan-id*> | **all**}

Parameter

Parameter	Description
vlan-id	VLAN tag identifier, numeric type, range from 1-4094.
all	Indicates all DHCP packets are allowed to be snooped.

When **set protocols dhcp snooping vlan** <*vlan-id*> is configured**,** that means DHCP packets are allowed to be snooped in the specified VLAN. Generally, the VLAN that enables DHCP snooping should be configured as the VLAN to which the interface connected to the host.

When **set protocols dhcp snooping vlan all** is configured, that means DHCP packets of all VLANs are allowed to be snooped.

Example

Enable DHCP snooping on VLAN 100.

```
admin@XorPlus#set protocols dhcp snooping vlan 100
```

protocols igmp disable

Users can enable IGMP protocol but should enable the multicast interface before enabling the IGMP interface.

Command Syntax

set protocols igmp disable *<bool>*
delete protocols igmp disable

Parameter

•*<bool>*enable or disable igmp protocol

- **true** disable igmp protocol
- **false** enable igmp protocol

Example

• This example is to enable igmp protocol:

```
admin@XorPlus# set protocols igmp disable false
admin@XorPlus# commit
```

protocols igmp interface <text> vif <text> disable

Users can configure IGMP on a network interface.

Command Syntax

set protocols igmp interface *<text>* vif *<text>* disable *<bool>*
delete protocols igmp interface *<text>* vif *<text>* disable

Parameter

•*<text>*network interface or virtual interface
•*<bool>*enable or disable igmp protocol on a specified interface

- **true** disable igmp protocol on a specified interface
- **false** configure igmp protocol on a specified interface

Example

• This example is to configure igmp protocol on vlan2:

```
admin@XorPlus# set protocols igmp interface vlan2 vif vlan2 disable false
admin@XorPlus# commit
```

protocols igmp interface <text> vif <text> enable-ip-router-alert-option-check

Users can enable alert option check of the ip router on a specified interface which allow the IGMP protocol.

Command Syntax

set protocols igmp interface *<text>* vif *<text>* enable-ip-router-alert-option-check *<bool>*
delete protocols igmp interface *<text>* vif *<text>* enable-ip-router-alert-option-check

Parameter

•*<text>*network interface or virtual interface
•*<bool>*enable or disable alert option check of the ip router

- **true** enable alert option check of the ip router
- **false** disable alert option check of the ip router

Example

• This example is to configure IGMP protocol on vlan2:

```
admin@XorPlus#set protocols igmp interface vlan2 vif vlan2
enable-ip-router-alert-option-check true
admin@XorPlus# commit
```

protocols igmp interface <text> vif <text> query-interval

Users can set the time interval for querying.

Command Syntax

set protocols igmp interface *<text>* vif *<text>* query-interval *<value>*

*d*elete protocols igmp interface *<text>* vif *<text>* query-interval

Parameter

- *<text>*network interface or virtual interface
- *<value>* The query interval (in seconds),[1..1024]

Example

- This example is to set query interval to 4 on vlan2:

```
admin@XorPlus# set protocols igmp interface vlan2 vif vlan2 query-interval 4
admin@XorPlus# commit
```

protocols igmp interface <text> vif <text> query-last-member-interval

Users can set the time interval for querying last member.

Command Syntax

set protocols igmp interface *<text>* vif *<text>* query-last-member-interval *<value>*

delete protocols igmp interface *<text>* vif *<text>* query-last-member-interval

Parameter

- *<text>*network interface or virtual interface
- *<value>* The last member query interval (in seconds),[1..1024]

Example

- This example is to set query interval to 10 on vlan2:

```
admin@XorPlus# set protocols igmp interface vlan2 vif vlan2 query-last-member-interval 10
admin@XorPlus# commit
```

protocols igmp interface <text> vif <text> query-response-interval

Users can set query response interval for a specified interface.

Command Syntax

set protocols igmp interface *<text>* vif *<text>* query-response-interval *<value>*

delete protocols igmp interface *<text>* vif *<text>* query-response-interval

Parameter

- *<text>*network interface or virtual interface
- *<value>* The query response interval (in seconds),[1..1024]

Example

- This example is to set query response interval to 3 on vlan2:

```
admin@XorPlus# set protocols igmp interface vlan2 vif vlan2 query-response-interval 3
admin@XorPlus# commit
```

protocols igmp interface <text> vif <text> robust-count

Users can set robustness variable count for a specified interface. By default, the value is 2.

Command Syntax

set protocols igmp interface *<text>* vif *<text>* robust-count *<count>*

delete protocols igmp interface *<text>* vif *<text>* robust-count

Parameter

- *<text>*network interface or virtual interface
- *<count>* robustness variable count,[2..10]

Example

- This example is to set robustness variable count to 9 on vlan2:

```
admin@XorPlus# set protocols igmp interface vlan2 vif vlan2 robust-count 9
admin@XorPlus# commit
```

protocols igmp interface <text> vif <text> version

Users can configure protocol version for a specified interface.

Command Syntax

set protocols igmp interface *<text>* vif *<text>* version *<number>*

delete protocols igmp interface *<text>* vif *<text>* version

Parameter

- *<text>*network interface or virtual interface
- *<number>*The IGMP protocol version, [1..2]

Example

- This example is to set IGMP protocol version to 2 on vlan2:

```
admin@XorPlus# set protocols igmp interface vlan2 vif vlan2 version 2
admin@XorPlus# commit
```

protocols igmp-snooping enable

In the default setting, the switch disables IGMP snooping. Users should globally enable IGMP per VLAN.

Command Syntax

set protocols igmp-snooping enable *<bool>*

delete protocols igmp-snooping enable

Parameter

- *<bool>*enable or disable igmp snooping
  - **true** enable igmp snooping

- **false** disable igmp snooping

Example

• This example is to enable IGMP snooping :

```
admin@XorPlus# set protocols igmp-snooping enable true
admin@XorPlus# commit
```

protocols igmp-snooping last-member-query-count

Users can query member count of interface belonging to this multicast group.

Command Syntax

set protocols igmp-snooping last-member-query-count *<count>*

delete protocols igmp-snooping last-member-query-count

Parameter

•*<count>* Last member query count,[1..7]

Example

• This example is to configure last member query count to 3:

```
admin@XorPlus# set protocols igmp-snooping last-member-query-count 3
admin@XorPlus# commit
```

protocols igmp-snooping last-member-query-interval

Users can set query-interval of last-member belonging to this multicast group.

Command Syntax

set protocols igmp-snooping last-member-query-interval *<value>*

delete protocols igmp-snooping last-member-query-count

Parameter

•*<value>* Interval (sec), [1..32]

Example

• This example is to configure last member query interval to 30:

```
admin@XorPlus# set protocols igmp-snooping last-member-query-interval 30
admin@XorPlus# commit
```

protocols igmp-snooping max-response-time

Users can set max response time that igmp router.

Command Syntax

set protocols igmp-snooping max-response-time *<time>*

delete protocols igmp-snooping max-response-time

Parameter

•*<time>* IGMP querier maximum response time (sec), [1..25]

Example

• This example is to set maximum response time to 10:

```
admin@XorPlus# set protocols igmp-snooping max-response-time 9
admin@XorPlus# commit
```

protocols igmp-snooping query-interval

Users can set the interval of querying.

Command Syntax

set protocols igmp-snooping query-interval *<time>*
delete protocols igmp-snooping query-interval

Parameter

•*<time>* IGMP querier query interval (sec), [1..18000]

Example

• This example is to set query interval time to 100:

```
admin@XorPlus# set protocols igmp-snooping query-interval 100
admin@XorPlus# commit
```

protocols igmp-snooping report-suppression

Users can enable report suppression to control. When the IGMP report suppression function is enabled, only the report of first member which belongs to one multicast group will be forwarded to the L3 device, instead of forwarding every report of other members belonging to the same multicast group. So, this can reduce the number of network packets.

Command Syntax

set protocols igmp-snooping report-suppression *<bool>*
delete protocols igmp-snooping report-suppression

Parameter

•*<bool>*enable or disable report-suppression

- **true** enable report-suppression
- **false** disable report-suppression

Example

• This example is to enable report-suppression:

```
admin@XorPlus# set protocols igmp-snooping report-suppression true
admin@XorPlus# commit
```

protocols igmp-snooping robustness-variable

Users can set robustness variable number to judge whether drop the report when host have no response over the time(time = robustness variable number * query interval).

Command Syntax

set protocols igmp-snooping robustness-variable *<value>*
delete protocols igmp-snooping robustness-variable

Parameter

•*<value>*Robustness Variable number,[2..4].

Example

• This example is to set robustness variable number to 3:

```
admin@XorPlus# set protocols igmp-snooping robustness-variable 3
admin@XorPlus# commit
```

protocols igmp-snooping vlan-id <id> enable

Users can enable IGMP snooping in a VLAN.

Command Syntax

set protocols igmp-snooping vlan-id *<id>* enable *<bool>*
delete protocols igmp-snooping vlan-id *<id>* enable

Parameter

•*<id>* vlan-id identifier
•*<bool>*enable or disable igmp snooping in a VLAN

- **true** enable igmp snooping in a VLAN
- **false** disable igmp snooping in a VLAN

Example

• This example is to enable igmp snooping in vlan-id 2:

```
admin@XorPlus# set protocols igmp-snooping vlan-id 2 enable true
admin@XorPlus# commit
```

protocols igmp-snooping vlan-id <id> fast-leave

Users can enable fast leave function of a port. After this configuration is made, the switch will delete this port from forwarding table and not forward data to the port again when the switch receive query report of a certain group.

Command Syntax

set protocols igmp-snooping vlan-id *<id>* fast-leave *<bool>*
delete protocols igmp-snooping vlan-id *<id>* fast-leave

Parameter

•*<id>* vlan-id identifier

•*<bool>*enable or disable fast leave function in a VLAN

- **true** enable fast leave function in a VLAN
- **false** disable fast leave function in a VLAN

Example

• This example is to enable fast leave function in vlan-id 2:

```
admin@XorPlus# set protocols igmp-snooping vlan-id 2 fast-leave true
admin@XorPlus# commit
```

protocols igmp-snooping vlan-id <id> mrouter interface

Users can set the interface which will be used to receive message of multicast source.

Command Syntax

set protocols igmp-snooping vlan-id *<id>* mrouter interface *<interface>*

delete protocols igmp-snooping vlan-id *<id>* mrouter interface *<interface>*

Parameter

•*<id>* vlan-id identifier

•*<interface>* Configure the mrouter port,(eg:ge-1/1/1)

Example

• This example is to configure the mrouter port to ge-1/1/3 in vlan-id 2:

```
admin@XorPlus# set protocols igmp-snooping vlan-id 2 mrouter interface ge-1/1/3
admin@XorPlus# commit
```

protocols igmp-snooping vlan-id <id> querier address

Users can set the address for query.

Command Syntax

set protocols igmp-snooping vlan-id *<id>* querier address *<IPv4>*

delete protocols igmp-snooping vlan-id *<id>* querier address

Parameter

•*<id>* vlan-id identifier

•*<IPv4>* Configure the IP address of the igmp-querier

Example

• This example is to configure the IP address of the igmp-querier to 192.168.10.2 in vlan-id 2:

```
admin@XorPlus# set protocols igmp-snooping vlan-id 2 querier address 192.168.10.2
admin@XorPlus# commit
```

protocols igmp-snooping vlan-id <id> querier enable

Users can enable querier on a VLAN port.

Command Syntax

set protocols igmp-snooping vlan-id *<id>* querier enable *<bool>*

Parameter

•*<id>* vlan-id identifier

•*<bool>*Enable or disable the igmp-querier

- **true** enable the igmp-querier
- **false** disable the igmp-querier

Example

• This example is to enable the igmp-querier on vlan-id 2:

```
admin@XorPlus# set protocols igmp-snooping vlan-id 2 querier enable true
admin@XorPlus# commit
```

protocols igmp-snooping vlan-id <id> querier other-querier-timer

Users can configure the other-querier-timer.

Command Syntax

set protocols igmp-snooping vlan-id *<id>* querier other-querier-timer *<time>*

delete protocols igmp-snooping vlan-id *<id>* querier other-querier-timer

Parameter

•*<id>* vlan-id identifier

•*<time>*IGMP querier other querier time out (sec), [1..1000]

Example

• This example is to configure other querier timer to 12 on vlan-id 2:

```
admin@XorPlus# set protocols igmp-snooping vlan-id 2 querier other-querier-timer 12
admin@XorPlus# commit
```

protocols igmp-snooping vlan-id <id> querier version

Users can set the IGMP version on a specified port which allows igmp-snooping.

Command Syntax

set protocols igmp-snooping vlan-id *<id>* querier version *<number>*

delete protocols igmp-snooping vlan-id *<id>* querier version

Parameter

•*<id>* vlan-id identifier

•*<number>*the version number of IGMP,[1..2]

Example

• This example is to configure IGMP version to 1 on vlan-id 2 :

```
admin@XorPlus# set protocols igmp-snooping vlan-id 2 querier version 1
admin@XorPlus# commit
```

protocols igmp-snooping vlan-id <id> static group <IPv4> interface

Users can configure a static igmp-snooping group.

Command Syntax

set protocols igmp-snooping vlan-id *<id>* static group *<IPv4>* interface *<interface>*
delete protocols igmp-snooping vlan-id *<id>* static group *<IPv4>* interface *<interface>*

Parameter

•*<id>* vlan-id identifier
•*<IPv4>*ipv4 address identifier
•*<interface>* interface identifier(eg:ge-1/1/3)

Example

• This example is to configure a static igmp-snooping group to 224.0.0.1 for ge-1/1/3 on vlan-id 2

```
admin@XorPlus# set protocols igmp-snooping vlan-id 2 static group 224.0.0.1 interface
ge-1/1/3
admin@XorPlus# commit
```

protocols lacp interface <interface> priority

Users can set link aggregation option of gigabit-ethernet interface.

Command Syntax

set protocols lacp interface *<interface>* priority *<value>*
delete protocols lacp interface *<interface>* priority

Parameter

•*<interface>* Link aggregation option of gigabit-ethernet interface (e.g. ge-1/1/1)
•*<value>* Priority value, [0..65535]

Example

• This example is to set lacp priority of ge-1/1/1 to 3000 :

```
admin@XorPlus# set protocols lacp interface ge-1/1/1 priority 3000
admin@XorPlus# commit
```

protocols lacp priority

Users can configure the lacp priority of system.

Command Syntax

set protocols lacp priority *<value>*

delete protocols lacp priority

Parameter

• *<value>* Priority value, [0..65535]

Example

• This example is to set priorit of system to 1000:

```
admin@XorPlus# set protocols lacp priority 1000
admin@XorPlus# commit
```

protocols ospf4 area interface vif address neighbor router-id

To configure an OSPF neighbor, use the **set protocols ospf4 area interface vif address neighbor router-id** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *local-ip-address* **neighbor** *remote-ip-address* **router-id** *remote-router-id*

Parameters

area-id	OSPF area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
local-ip-address	Virtual interface IP address on this device used for OSPF.
remote-ip-address	IP address of the OSPF neighbor.
remote-router-id	OSPF router identifier of the OSPF neighbor.

Example

This example configures an OSPF neighbor with IP address 10.2.2.2 and OSPF router ID 2.2.2.2.

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
neighbor 10.2.2.2 router-id 2.2.2.2
```

protocols ospf4 area <area-id1> virtual-link <router-id> transmit-area

The single backbone area (area 0.0.0.0) cannot be disconnected, or certain areas of the Autonomous System will become unreachable. To establish and maintain connectivity of the backbone, virtual links can be configured through non-backbone areas. Virtual links serve to connect physically separate components of the backbone.

Command Syntax

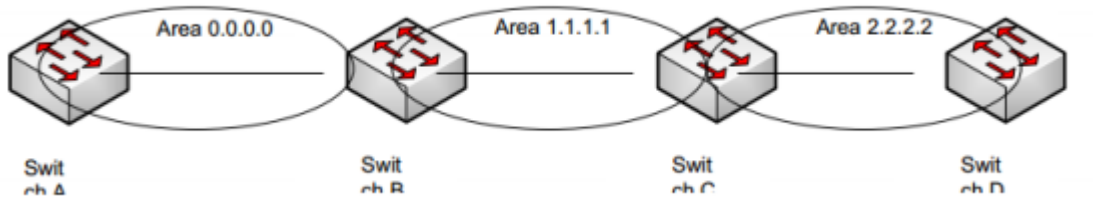
set protocols ospf4 area *<area-id1>* virtual-link *<router-id>* transmit-area *<area-id2>*

Parameter

- *<area-id1>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<area-id2>* Area through which to transmit.

Example

This example configure the virtual link on the Area Border Router switch B(4.4.4.4) and Switch C(3.3.3.3), After this step, there will be a route entry from the backbone area, 0.0.0.0, to area 2.2.2.2.




```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 4.4.4.4 transmit-area 1.1.1.1
admin@XorPlus# commit
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 3.3.3.3 transmit-area 1.1.1.1
admin@XorPlus# commit
```

protocols ospf4 area <area-id> area-range <ip-address/netmask> advertise

OSPF should aggregate the route entries from the backbone area into a non-backbone area, or from a non-backbone area into the backbone area. Users use the advertise disable parameter to restrain ABR route aggregation.

Command Syntax

set protocols ospf4 area *<area-id>* area-range *<ip-address/network>* advertise *<bool>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<ip-address/netmask>* Area range for generating summaries
- *<bool>* Advertise or DoNotAdvertise.Required select include:
    - **true**

- **false**

Example

• This example configure the area-range on ABR.

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 area-range 192.168.1.0/24 advertise true
admin@XorPlus# commit
```

protocols ospf4 area <area-id> area-type

User can configure type of area which the switch in.

Command Syntax

set protocols ospf4 area *<area-id>* area-type *<type>*

Parameter

• *<area-id>* The OSPF area to which the attached network belongs.
• *<type>* Type of area.Required select include:

- **normal** OSPF normal area
- **nssa** OSPF not-so-stubby area
- **stub** OSPF stubby area

Example

• This example configure the area type is normal.

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 area-type normal
admin@XorPlus# commit
```

protocols ospf4 area <area-id> default-lsa disable

Users can configure whether the switch originates the default route into stub and not-so-stubby areas.

Command Syntax

set protocols ospf4 area *<area-id>* default-lsa disable *<bool>*

Parameters

<area-id> The OSPF area to which the attached network belongs.

<bool> Enable or disable the origination of default route. The following options are available:

- **true**
- **false**

Example

The following example configures the switch to originate the default route.

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 default-lsa disable false
admin@XorPlus# commit
```

protocols ospf4 area <area-id> default-lsa metric

User can configure metric of default route of the switch interface.

Command Syntax

set protocols ospf4 area *<area-id>* default-lsa metric *<uint>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<uint>* Metric of default route

Example

- This example configure the metric 6 of default route of the switch interface.

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 default-lsa metric 6
admin@XorPlus# commit
```

protocols ospf4 area interface link-type

To configure the OSPF network type for an interface, use the **set protocols ospf4 area interface link-type** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **link-type** { **broadcast** | **p2m** | **p2p** }

Parameters

area-id	OSPF area identifier to which the interface belongs.
interface-name	Interface name.
broadcast	Broadcast.
p2m	Point-to-multipoint.
p2p	Point-to-point.

Example

This example configures point-to-point as the OSPF network type for the interface.

```
set protocols ospf4 area 0.0.0.0 interface vlan2 link-type p2p
```

protocols ospf4 area interface vif address

To enable OSPF on an interface and assign the interface to an area, use the **set protocols ospf4 area interface vif address** command in L2/L3 configuration mode. The interface will send and accept OSPF LSAs (link-state advertisements).

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address*

Parameters

area-id	OSPF area identifier. Use the dotted decimal notation. For example, use 0.0.0.0 for area 0.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for OSPF.

Example

The following example assigns interfaces *vlan2* and *vlan3* to OSPF area 0:

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan3 vif vlan3 address 10.3.3.1
```

protocols ospf4 area interface vif address authentication md5 end-time

To configure the deadline of an MD5 authentiction key for OSPF packets, use the **set protocols ospf4 area interface vif address authentication md5 end-time** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **authentication md5** *key-id* **end-time** *time*

Parameters

area-id	OSPF area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for OSPF.
key-id	MD5 authentication key identifier. The range is 0-255.
time	Expiry time for the MD5 authentication key. The format is YYYY-MM-DD.HH:MM.

Example

This example configures the end time for MD5 authentication of OSPF packets using the key ID 1.

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
authentication md5 1 end-time 2015-10-18.23:24
```

protocols ospf4 area interface vif address authentication md5 max-time-drift

To configure the maximum time drift for the MD5 authentication key of an interface, use the **set protocols ospf4 area interface vif address authentication md5 max-time-drift** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **authentication md5** *key-id* **max-time-drift** *time*

Parameters

area-id	OSPF area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address, used for OSPF.
key-id	MD5 authentication key identifier. The range is 0-255.
time	The maximum time drift among all routers, in seconds. The range is 0-65535. For maximum time drift, use 65535.

Example

This example configure the maximum time drift of the OSPF interface MD5 authentication as 20 seconds.

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
authentication md5 1 max-time-drift 20
```

protocols ospf4 area interface vif address authentication md5 password

To configure the key used for MD5 authentiction of OSPF packets, use the **set protocols ospf4 area interface vif address authentication md5 password** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **authentication md5** *key-id* **password** *key*

Parameters

area-id	OSPF area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for OSPF.
key-id	MD5 authentication key identifier. The range is 0-255.
key	MD5 authentication key.

Example

This example sets the key used for MD5 authentication of OSPF packets to *pica8.*

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
authentication md5 1 password pica8
```

protocols ospf4 area interface vif address authentication md5 simple-password

To configure the simple password OSPF authentication, use the **set protocols ospf4 area interface vif address authentication md5 simple-password** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **authentication md5** *key-id* **simple-password** *password*

Parameters

area-id	OSPF area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for OSPF.
key-id	MD5 authentication key identifier. The range is 0-255.
password	Simple password for authentication.

Example

The following example configures simple password key for OSPF authentication on **vlan2** interface:

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
authentication md5 1 simple-password pica8
```

protocols ospf4 area interface vif address bfd disable

To configure BFD (Bidirectional Forwarding Detection) on an OSPF interface, use the **set protocols ospf4 area interface vif address bfd disable** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **bfd disable** { **true** | **false** }

Parameters

area-id	OSPF area identifier. Use the dotted decimal notation. For example, use 0.0.0.0 for area 0.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	IP address of the virtual interface used for OSPF.
true	Disable BFD on the OSPF interface.
false	Do not disable BFD on the OSPF interface.

Example

The following example leaves BFD enabled on the OSPF interface:

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
bfd disable false
```

protocols ospf4 area interface vif address disable

To enable or disable OSPF for an address, use the **set protocols ospf4 area interface vif address disable** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **disable** { **true** | **false** }

Parameters

area-id	OSPF area identifier. Use dotted decimal notation. For example, use 0.0.0.0 for area 0.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for OSPF.
true	Disable OSPF on the interface.
false	Do not disable OSPF on the virtual interface.

Example

The following example disables OSPF on a virtual interface IP address:

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
disable true
```

protocols ospf4 area interface vif address hello-interval

To configure the interval between two OSPF hello messages sent by an interface, use the **set protocols ospf4 area interface vif address hello-interval** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **hello-interval** *time*

Parameters

area-id	OSPF area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for OSPF.
time	The OSPF hello interval in seconds. The range is 1-65535.

Example

The following example sets the OSPF hello interval to 20 seconds:

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
hello-interval 20
```

protocols ospf4 area interface vif address interface-cost

To configure the cost of an OSPF interface, use the **set protocols ospf4 area interface vif address interface-cost** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **interface-cost** *cost*

Parameters

area-id	OSPF area identifier. Use the dotted decimal notation. For exmaple, use 0.0.0.0 for area 0.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for OSPF.
cost	OSPF cost. The range is 1-65,535.

Example

The following example sets the interface cost for address *10.2.2.1* to *3*:

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
interface-cost 3
```

protocols ospf4 area interface vif address passive disable

To make an OSPF interface passive, use the **set protocols ospf4 area interface vif address passive disable** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **passive disable** { **true** | **false** }

Parameters

area-id	OSPF area identifier. Use the dotted decimal notation. For example, use 0.0.0.0 for area 0.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address.
true	Do not make the OSPF interface passive.
false	Make the OSPF interface passive.

Example

The following example makes the OSPF interface passive:

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
passive disable false
```

protocols ospf4 area interface vif address priority

To configure the OSPF interface priority used in DR election, use the **set protocols ospf4 area interface vif address priority** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **priority** *level*

Parameters

area-id	OSPF area identifier. Use the dotted decimal notation. For example, use 0.0.0.0 for area 0.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address for OSPF.
level	The OSPF interface priority used in the DR (Designated Router) election. The range is 0-255.

Example

The following example configures the OSPF interface the priority 8 in DR election.

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
priority 8
```

protocols ospf4 area interface vif address retransmit-interval

OSPF must send acknowledgment of each newly received LSA (link-state adevertisement). An LSA that is not acknowledged must be retransmitted over and over again until it is acknowledged. The link-state retransmit interval defines the time between retransmissions. To configure the OSPF retransmit interval, use the **set protocols ospf4 area interface vif address retransmit-interval** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **retransmit-interval** *time*

Parameters

area-id	OSPF area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for OSPF.
time	OSPF retransmit interval in seconds. The range is 1-65535.

Example

This example sets the OSPF retransmit interval to 20 seconds:

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
retransmit-interval 10
```

protocols ospf4 area interface vif address router-dead-interval

If a switch does not receive an OSPF hello packet from a neighbor within a fixed amount of time, the switch concludes that the neighbor is not operational. The OSPF dead interval specifies the length of time, in seconds, that the switch waits before declaring that a neighboring device is unavailable. This is an interval during which the switch receives no hello packets from the neighbor. To confgure the OSPF dead interval, use the **set protocols ospf4 area** *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **router-dead-interval** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **router-dead-interval** *time*

Parameters

area-id	OSPF area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for OSPF.
time	The OSPF dead interval in seconds. The range is 1-4294967295.

Example

This example sets the OSPF dead interval to 60 seconds:

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
router-dead-interval 60
```

protocols ospf4 area interface vif address transmit-delay

To set the estimated time needed to send an OSPF LSA update packet, u se the **set protocols ospf4 area interface vif address transmit-delay** command in L2/L3 configuration mode. OSPF increments the LSA age by the transmit delay amount before transmitting the LSA update.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **transmit-delay** *time*

Parameters

area-id	OSPF area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for OSPF.
time	OSPF transmit delay in seconds. The range is 1-3600.

Example

This example sets the OSPF transmist delay to 2 seconds.

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
transmit-delay 2
```

protocols ospf4 area interface vif address authentication md5 start-time

To configure the start time for MD5 authentication of OSPF packets, use the **set protocols ospf4 area interface vif address authentication md5 start-time** in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **authentication md5** *key-id* **start-time** *time*

Parameters

area-id	OSPF area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address.
key-id	MD5 authentication key identifier. The range is 0-255.
time	MD5 authentication start time. The format is YYYY-MM-DD.HH:MM.

Example

This example configures the start time for MD5 authentication of OSPF packets.

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
authentication md5 1 start-time 2014-3-18.23:24
```

protocols ospf4 area interface vif address passive host

To make OSPF advertise host route, use the **set protocols ospf4 area interface vif address passive host** in L2/L3 configuration mode.

Command Syntax

set protocols ospf4 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **passive host** { **true** | **false** }

Parameters

area-id	OSPF area identifier. Use dotted decimal notation. For example, use 0.0.0.0 for area 0.
interface-name	Interface name
vif-name	Virtual interface name.
ip-address	Virtual interface IP address.
true	Advertise host route.
false	Do not advertise host route.

Example

The following example makes the OSPF interface advertise host route:

```
admin@Switch# set protocols ospf4 area 0.0.0.0 interface vlan2 vif vlan2 address 10.2.2.1
passive host true
```

protocols ospf4 area <area-id> summaries disable

User can disable the summary function on ABR.

Command Syntax

set protocols ospf4 area *<area-id>* summaries disable *<bool>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<bool>* Disable summaries into stub or not-so-stubby areas.Required select include:
    - **true**
    - **false**

Example

• This example disable the summary function on area 1.1.1.1.

```
admin@XorPlus# set protocols ospf4 area 1.1.1.1summaries disable true
admin@XorPlus# commit
```

protocols ospf4 area <area-id> virtual-link <router-id> authentication md5 <int> end-time

User can configure the deadline of virtual link OSPF interface md5 ID authentication.

Command Syntax

set protocols ospf4 area *<area-id>* virtual-link *<router-id>* authentication md5 *<int>* end-time *<time>*

Parameter

• *<area-id>* The OSPF area to which the attached network belongs.
• *<router-id>* A unique 32-bit identifier within this AS.
• *<int>* The MD5 authentication key ID range 0-255
• *<time>* Authentication end time (YYYY-MM-DD.HH:MM)

Example

• This example configure the deadline of the virtual link OSPF interface md5 key ID authentication

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 4.4.4.4 authentication md5 23
end-time 2014-3-20.23:21
admin@XorPlus# commit
```

protocols ospf4 area <area-id> virtual-link <router-id> authentication md5 <int> max-time-drift

User can configure the virtual link OSPF interface md5 authentication ID and the max time drift among all routers.

Command Syntax

set protocols ospf4 area *<area-id>* virtual-link *<router-id>* authentication md5 *<int>* max-time-drift *<time>*

Parameter

• *<area-id>* The OSPF area to which the attached network belongs.
• *<router-id>* A unique 32-bit identifier within this AS.
• *<int>* The MD5 authentication key ID range 0-255
• *<time>* Maximum time drift (in seconds) among all routers.Required select include:

- **0-65534** The maximum time drift
- **65535** Unlimited time drift

Example

• This example configure the max time drift 20 seconds of the virtual link OSPF interface md5 key ID 23 authentication

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 4.4.4.4 authentication md5 23
max-time-drift 20
admin@XorPlus# commit
```

protocols ospf4 area <area-id> virtual-link <router-id> authentication md5 <int> password

User can configure the password of virtual link OSPF interface md5 ID authentication.

Command Syntax

set protocols ospf4 area *<area-id>* virtual-link *<router-id>* authentication md5 *<int>* password *<pw>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<int>* The MD5 authentication key ID range 0-255
- *<pw>* Authentication password

Example

- This example configure the password of the virtual link OSPF interface md5 key ID authentication

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 4.4.4.4 authentication md5 23
password pica8
admin@XorPlus# commit
```

protocols ospf4 area <area-id> virtual-link <router-id> authentication md5 <int> simple-password

Users can configure the simple password key of virtual link OSPF interface md5 ID authentication.

Command Syntax

set protocols ospf4 area *<area-id>* virtual-link *<router-id>* authentication md5 *<int>* simple-password *<pd>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<int>* The MD5 authentication key ID range 0-255
- *<pd>* Simple password authentication key.

Example

- This example configure the simple password key of the virtual link OSPF interface md5 key ID authentication

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 4.4.4.4 authentication md5 23
simple-password pica8
admin@XorPlus# commit
```

protocols ospf4 area <area-id> virtual-link <router-id> authentication md5 <int> start-time

Users can configure the start time of virtual link OSPF interface md5 ID authentication.

Command Syntax

set protocols ospf4 area *<area-id>* virtual-link *<router-id>* authentication md5 *<int>* start-time *<time>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<int>* The MD5 authentication key ID range 0-255
- *<time>* Authentication start time (YYYY-MM-DD.HH:MM)

Example

- This example configure the start time of the virtual link OSPF interface md5 key ID authentication

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 4.4.4.4 authentication md5 23
start-time 2014-3-20.23:21
admin@XorPlus# commit
```

protocols ospf4 area <area-id> virtual-link <router-id> hello-interval

Users can configure the interval time of virtual link OSPF interface sending hello packets.

Command Syntax

set protocols ospf4 area *<area-id>* virtual-link *<router-id>* hello-interval *<time>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<time>* The Hello packets interval range 1-65535.

Example

- This example configurethe interval time 20 seconds of virtual link OSPF interface sending hello packets.

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 4.4.4.4 hello-interval 20
admin@XorPlus# commit
```

protocols ospf4 area <area-id> virtual-link <router-id> retransmit-interval

Users can configure the interval time of virtual link OSPF interface retransmitting the OSPF route.

Command Syntax

set protocols ospf4 area *<area-id>* virtual-link *<router-id>* retransmit-interval *<time>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<time>* The retransmit interval range 1-65535.

Example

- This example configurethe interval time 20 seconds of virtual link OSPF interface retransmitting the OSPF route

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 4.4.4.4 retransmit-interval 20
admin@XorPlus# commit
```

protocols ospf4 area <area-id> virtual-link <router-id> router-dead-interval

User can configurethe waiting interval time before virtual link OSPF interface considering a neighbor dead.

Command Syntax

set protocols ospf4 area *<area-id>* virtual-link *<router-id>* router-dead-interval *<time>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<time>* The neighbor router dead interval range 1-4294967295.

Example

- This example configurethe waiting interval time 20 seconds before virtual link OSPF interface considering a neighbor dead

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 4.4.4.4 router-dead-interval
20
admin@XorPlus# commit
```

protocols ospf4 area <area-id> virtual-link <router-id> transmit-delay

User can configurethe time to transmit an LSA on this address of the virtual link OSPF interface.

Command Syntax

set protocols ospf4 area *<area-id>* virtual-link *<router-id>* transmit-delay *<time>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<time>* The extra addition to age field of all transmitted LSAs range 1-3600.

Example

• This example configurethe time 2 seconds to transmit an LSA on this address of the virtual link OSPF interface.

```
admin@XorPlus# set protocols ospf4 area 0.0.0.0 virtual-link 4.4.4.4 transmit-delay 2
admin@XorPlus# commit
```

protocols ospf4 export

User can configure the switch to export the policy to the neighbor switch.

Command Syntax

set protocols ospf export*<text>*

Parameter

• *<text>*export policy name(s)

Example

• This example configure the switch to export the policy "static" to the neighbor switch:

```
admin@XorPlus# set protocols static route 192.168.6.0/24 next-hop 172.25.150.245
admin@XorPlus# commit
admin@XorPlus# set policy policy-statement static term 1 from protocol static
admin@XorPlus# set policy policy-statement static then accept
admin@XorPlus# commit
admin@XorPlus# set protocols ospf4 export static
admin@XorPlus# commit
```

protocols ospf4 import

Users can configure the switch to import a policy exported by the neighboring switch.

Command Syntax

set protocols ospf4 import *<text>*

Parameters

<text> import policy name(s)

Example

The following example configures the switch to import a policy named "static" exported by the neighboring switch:

```
admin@XorPlus# set protocols ospf4 import static
admin@XorPlus# commit
```

protocols ospf4 ip-router-alert

User can configure the switch whether to send the IP router alert option in packets.

Command Syntax

set protocols ospf4ip-router-alert *<bool>*

Parameter

• *<bool>*Send the IP router alert option in packets.Required select include:

- **true**
- **false**

Example

• This example configure the switch to send the IP router alert option in packets.

```
admin@XorPlus# set protocols ospf4ip-router-alert true
admin@XorPlus# commit
```

protocols ospf4 rfc1583-compatibility

User can configure the switch whether to use criteria for handling AS external routes.

Command Syntax

set protocols ospf4rfc1583-compatibility*<bool>*

Parameter

• *<bool>*Criteria for handling AS external routesRequired select include:

- **true**
- **false**

Example

• This example configure the switch to use criteria for handling AS external routes.

```
admin@XorPlus# set protocols ospf4rfc1583-compatibility true
admin@XorPlus# commit
```

protocols ospf4 router-id

The router ID should be configured first for the switch when users configure OSPF. The router ID is a string similar to the IP address, and should be unique in the OSPF domain. Users should not change the router ID after completing the configuration.

Command Syntax

set protocols ospf4 router-id *<router-id>*

Parameter

• *<router-id>*A unique 32-bit identifier within this AS.

Example

• This example configure router ID for the switch.

```
admin@XorPlus# set protocols ospf4 router-id 1.1.1.1
admin@XorPlus# commit
```

protocols ospf6 area interface vif neighbor router-id

To configure an OSPFv6 neighbor, use the **set protocols ospf6 area interface vif neighbor router-id** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *vif-name* **neighbor** *ip-address* **router-id** *area-id*

Parameters

area-id	OSPFv6 area identifier.
interface-name	Interface name.
vif	Virtual interface name.
ip-address	IP address of the directly connected interface of OSPFv6 neighbor.
router-id	Router ID of the OSPFv6 neighbor.

Example

The following example configures an OSPFv6 neighbor with interface IPv6 address 2001::1 and router identifier 1.1.1.1:

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan2 vif vlan2 neighbor 2001::1
router-id 1.1.1.1
```

protocols ospf6 area <area-id1> virtual-link <router-id> transmit-area

Thesinglebackbone area (area 0.0.0.0) cannot be disconnected,or certain areas of the Autonomous System will become unreachable. To establish and maintain connectivity of the backbone, virtual links can be configured through non-backbone areas. Virtual links serve to connect physically separate components of the backbone.

Command Syntax

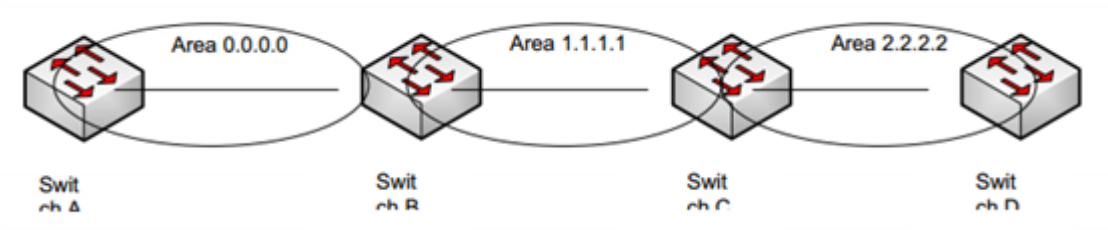
set protocols ospf6 area *<area-id1>* virtual-link *<router-id>* transmit-area *<area-id2>*

Parameter

- *<area-id1>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<area-id2>* Area through which to transmit.

Example

This example configurethe virtual link on the Area Border Router switch B(4.4.4.4) and Switch C(3.3.3.3), After this step, there will be aroute entry from the backbone area, 0.0.0.0, to area 2.2.2.2.




```
admin@XorPlus# set protocols ospf6 area 0.0.0.0 virtual-link 4.4.4.4 transmit-area 1.1.1.1
admin@XorPlus# commit
admin@XorPlus# set protocols ospf6 area 0.0.0.0 virtual-link 3.3.3.3 transmit-area 1.1.1.1
admin@XorPlus# commit
```

protocols ospf6 area <area-id> area-range <ip-address/netmask> advertise

OSPFv3 should aggregate the route entries from the backbone area into a non-backbone area, or from a non-backbone area into the backbone area. Users can use the advertise disable parameter to restrain ABR route aggregation.

Command Syntax

set protocols ospf6 area *<area-id>* area-range *<ip-address/netmask>* advertise *<bool>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<ip-address/netmask>* Area range for generating summaries
- *<bool>* Advertise or DoNotAdvertise.Required select include:
  - **true**
  - **false**

Example

- This example configure the area-range on ABR.

```
admin@XorPlus# set protocols ospf6 area 0.0.0.0 area-range 2001:1:1:1::/64 advertise true
admin@XorPlus# commit
```

protocols ospf6 area <area-id> area-type

User can configure type of area which the switch in.

Command Syntax

set protocols ospf6 area *<area-id>* area-type *<type>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<type>* Type of area.Required select include:
  - **normal** OSPF normal area
  - **nssa** OSPF not-so-stubby area
  - **stub** OSPF stubby area

Example

- This example configure the area type is normal.

```
admin@XorPlus# set protocols ospf6 area 1.1.1.1 area-type nssa
admin@XorPlus# commit
```

protocols ospf6 area <area-id> default-lsa disable

User can configure the switch interface whether to originate the default route in stub or not-so-stubby areas.

Command Syntax

set protocols ospf6 area *<area-id>* default-lsa disable *<bool>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<bool>* Disable the origination of the default route.Required select include:
  - **true**
  - **false**

Example

- This example configure the switch interface to originate the default route.

```
admin@XorPlus# set protocols ospf6 area 0.0.0.0 default-lsa diaable false
admin@XorPlus# commit
```

protocols ospf6 area <area-id> default-lsa metric

User can configure metric of default route of the switch interface.

Command Syntax

set protocols ospf6 area *<area-id>* default-lsa metric *<uint>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<uint>* Metric of default route

Example

- This example configure the metric 6 of default route of the switch interface.

```
admin@XorPlus# set protocols ospf6 area 0.0.0.0 default-lsa metric 6
admin@XorPlus# commit
```

protocols ospf6 area interface link-type

To configure the OSPFv3 network type for an interface, use the **set protocols ospf6 area interface link-type** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **link-type** { **broadcast** | **p2m** | **p2p** }

Parameters

area-id	OSPFv3 area identifier for the area to which the interface belongs.
interface-name	Interface name.
broadcast	Broadcast.
p2m	Point-to-multipoint.
p2p	Point-to-point.

Examples

The following example configures the OSPFv3 network type to point-to-point:

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan2 link-type p2p
```

protocols ospf6 area interface vif address disable

To enable OSPFv3 on an IP address, use the **set protocols ospf6 area interface vif address disable** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *vif-name* **address** *ip-address* **disable** { **true** | **false** }

Parameters

area-id	OSPFv3 area identifier for the area to which the attached network belongs.
interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IPv6 address.
true	Disable OSPFv6.
false	Enable OSPFv6.

Example

The following example configures OSPF for an IPv6 address.

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan1 vif vlan1 address 2001::1
disable false
```

protocols ospf6 area interface vif bfd disable

To configure BFD (Bidirectional Forwarding Detection) on the OSPFv3 interface, use the **set protocols ospf6 area interface vif bfd disable** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *vif-name* **bfd disable** { **true** | **false** }

Parameters

area-id	OSPFv6 area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
true	DIsable BFD.
false	Enable BFD.

Example

The following example configures BFD on an OSPFv3 interface:

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan2 vif vlan2 bfd disable false
```

protocols ospf6 area interface vif disable

To enable OSPFv3 on an interface and assign it to an area, use the **set protocols ospf6 area interface vif disable** command.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *vif-name* **disable** { **true** | **false** }

Parameters

area-id	The OSPFv3 area to which the attached network belongs. Use dotted decimal notation, for example, 0.0.0.0 for area 0.
interface-name	Interface name.
vif-name	Virtual interface name.

Example

The following example configures assigns virtual inteface *vlan2* to area 0:

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan2 vif vlan2 disable false
```

protocols ospf6 area interface vif hello-interval

To configure the OSPFv3 hello interval on an interface, use the **set protocols ospf6 area interface vif hello-interval** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *name* **hello-interval** *time*

Parameters

area-id	The OSPF area to which the attached network belongs.
interface-name	Interface name to be included in the OSPFv3 area specified by *area-id*.
time	The time between two consecutive Hello messaged. The range is 1-65535.

Example

The following example configures an OSPFv3 hello interval of 20 seconds on the vlan2000 interface:

```
admin@XorPlus# set protocols ospf6 area 0.0.0.0 interface vlan2000 vif vlan2000
hello-interval 20
```

protocols ospf6 area interface vif interface-cost

To configure the cost of an OSPFv6 interface, use the **set protocols ospf6 area interface vif interface-cost** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *vif-name* **interface-cost** *cost*

Parameters

area-id	OSPFv3 area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
cost	OSPFv3 cost. The range is 1-65535.

Example

The following example configures the OSPFv3 cost of **vlan2** interface as 3:

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan2 vif vlan2 interface-cost 3
```

protocols ospf6 area interface vif passive

To make an OSPFv3 interface passive, use the **set protocols ospf6 area interface vif passive** command. Passive interfaces accept routing updates, but do not send them.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *vif-name* **passive** { **true** | **false** }

Parameters

area-id	OSPFv3 area identifier. Use the dotted decimal notation, for example, 0.0.0.0 for area 0.
interface-name	Interface name.
vif-name	Virtual interface name.
true	Make the interface passive. The interface accepts routing updates, but does not send them
false	The interface is not passive. The interface both accepts and sends routing updates.

Example

The following example makes the interface *vlan2* passive:

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan2 vif vlan2 passive true
```

protocols ospf6 area interface vif priority

To configure the priority of an OSPFv3 interface for DR election, use the **protocols ospf6 area interface vif priority** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *vif-name* **priority** *level*

Parameters

area-id	OSPFv3 area identifier. Use the dotted decimal notation. For example, 0.0.0.0 for area 0.
interface-name	Interface name.
vif-name	Virtual interface name.
level	The priority used in OSPFv3 DR (designated router) election. The range is 0-255. The 0 priority means the interface cannot become DR.

Example

The following example set the priority of OSPFv3 interface *vlan2* as 8:

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan2 vif vlan2 priority 8
```

protocols ospf6 area interface vif retransmit-interval

To specify the time between LSA (link-state advertisement) retransmissions for adjacencies belonging to the interface, use the **set protocols ospf6 area interface vif retransmit-interval** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *vif-name* **retransmit-interval** *time*

Parameters

area-id	OSPFv6 area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
time	The retransmit interval in seconds. The rangeis 1-65535.

Example

The following example sets the retransmit interval to 20 seconds:

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan2 vif vlan2
retransmit-interval 20
```

protocols ospf6 area interface vif router-dead-interval

To set the interval during which at least one OSPFv3 hello packet must be received from a neighbor before the router declares that neighbor as down, use the **set protocols ospf6 area interface vif router-dead-interval** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *vif-name* **router-dead-interval** *time*

Parameters

area-id	OSPFv3 area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
time	Interval (in seconds) during which the router must receive at least one hello packet from a neighbor or that neighbor adjacency is removed. The range is 1-4294967295.

Example

The following example configures the OSPFv6 dead interval to 20 seconds:

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan2 vif vlan2
router-dead-interval 20
```

protocols ospf6 area interface vif transmit-delay

To set the estimated time needed to send an OSPFv3 LSA update packet, use the **set protocols ospf6 area interface vif transmit-delay** command in L2/L3 configuration mode.

Command Syntax

set protocols ospf6 area *area-id* **interface** *interface-name* **vif** *vif-name* **transmit-delay** *time*

Parameters

area-id	OSPFv3 area identifier.
interface-name	Interface name.
vif-name	Virtual interface name.
time	The estimated time to send and LSA to a neighbor. The range is 0-3600.

Example

The following example configures OSPFv3 transmit delay to 2 seconds:

```
admin@Switch# set protocols ospf6 area 0.0.0.0 interface vlan2 vif vlan2 transmit-delay 2
```

protocols ospf6 area <area-id> summaries disable

User can disable the summary function on ABR.

Command Syntax

set protocols ospf6 area *<area-id>* summaries disable *<bool>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<bool>* Disable summaries into stub or not-so-stubby areas.Required select include:
  - **true**
  - **false**

Example

- This example disable the summary function on area 1.1.1.1.

```
admin@XorPlus# set protocols ospf6 area 1.1.1.1summaries disable true
admin@XorPlus# commit
```

protocols ospf6 area <area-id> virtual-link <router-id> hello-interval

User can configurethe interval time of virtual link OSPF interface sending hello packets.

Command Syntax

set protocols ospf6 area *<area-id>* virtual-link *<router-id>* hello-interval *<time>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<time>* The Hello packets interval range 1-65535.

Example

- This example configurethe interval time 20 seconds of virtual link OSPF interface sending hello packets.

```
admin@XorPlus# set protocols ospf6 area 0.0.0.0 virtual-link 4.4.4.4 hello-interval 20
admin@XorPlus# commit
```

protocols ospf6 area <area-id> virtual-link <router-id> retransmit-interval

User can configurethe interval time of virtual link OSPF interface retransmitting the OSPF route.

Command Syntax

set protocols ospf6 area *<area-id>* virtual-link *<router-id>* retransmit-interval *<time>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<time>* The retransmit interval range 1-65535.

Example

- This example configurethe interval time 20 seconds of virtual link OSPF interface retransmitting the OSPF route

```
admin@XorPlus# set protocols ospf6 area 0.0.0.0 virtual-link 4.4.4.4 retransmit-interval 20
admin@XorPlus# commit
```

protocols ospf6 area <area-id> virtual-link <router-id> router-dead-interval

User can configurethe waiting interval time before virtual link OSPF interface considering a neighbor dead.

Command Syntax

set protocols ospf6 area *<area-id>* virtual-link *<router-id>* router-dead-interval *<time>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<time>* The neighbor router dead interval range 1-4294967295.

Example

- This example configurethe waiting interval time 20 seconds before virtual link OSPF interface considering a neighbor dead

```
admin@XorPlus# set protocols ospf6 area 0.0.0.0 virtual-link 4.4.4.4 router-dead-interval
20
admin@XorPlus# commit
```

protocols ospf6 area <area-id> virtual-link <router-id> transmit-delay

User can configurethe time to transmit an LSA on this address of the virtual link OSPF interface.

Command Syntax

set protocols ospf6 area *<area-id>* virtual-link *<router-id>* transmit-delay *<time>*

Parameter

- *<area-id>* The OSPF area to which the attached network belongs.
- *<router-id>* A unique 32-bit identifier within this AS.
- *<time>* The extra addition to age field of all transmitted LSAs range 0-3600.

Example

• This example configurethe time 2 seconds to transmit an LSA on this address of the virtual link OSPF interface.

```
admin@XorPlus# set protocols ospf6 area 0.0.0.0 virtual-link 4.4.4.4 transmit-delay 2
admin@XorPlus# commit
```

protocols ospf6 export

User can configure the switch to export the policy to the neighbor switch.

Command Syntax

set protocols ospf6 export*<text>*

Parameter

• *<text>*export policy name(s)

Example

• This example configure the switch to export the policy "static" to the neighbor switch:

```
admin@XorPlus# set protocols static route 2001:1::/32 next-hop 2002:2::
admin@XorPlus# commit
admin@XorPlus# set policy policy-statement static term 1 from protocol static
admin@XorPlus# set policy policy-statement static then accept
admin@XorPlus# commit
admin@XorPlus# set protocols ospf6 export static
admin@XorPlus# commit
```

protocols ospf6 import

User can configure the switch to import the policy which is exported by the neighbor switch.

Command Syntax

set protocols ospf6import*<text>*

Parameter

• *<text>*import policy name(s)

Example

• This example configure the switch to import the policy "static" exported by the neighbor switch:

```
admin@XorPlus# set protocols ospf6import static
admin@XorPlus# commit
```

protocols ospf6 instance-id

Every interface is assigned an Instance ID. This should default to 0. It is only necessary to assign a value other than 0 on those links that will contain multiple separate communities of OSPF routers. For example, suppose that there are two communities of routers on a given ethernet segment that users wish to keep separate. The first community is assigned an Instance ID of 0 and all the routers in the first community will be assigned 0 as the Instance ID for interfaces connected to the ethernet segment. An Instance ID of 1 is assigned to the other routers' interfaces connected to the ethernet segment.

Command Syntax

set protocols ospf6 instance-id *<instance-id>*

Parameter

• *<router-id>*The instance ID.

Example

• This example configure instance ID 1 for the switch.

```
admin@XorPlus# set protocols ospf6 instance-id1
admin@XorPlus# commit
```

protocols ospf6 ip-router-alert

User can configure the switch whether to send the IP router alert option in packets.

Command Syntax

set protocols ospf6 ip-router-alert

Parameter

• *<bool>*Send the IP router alert option in packets.Required select include:

- **true**
- **false**

Example

• This example configure the switch to send the IP router alert option in packets.

```
admin@XorPlus# set protocols ospf6ip-router-alert true
admin@XorPlus# commit
```

protocols ospf6 router-id

The router ID should be configured first for the switch when users configure OSPFv3.The router ID is a string similar to the IP address, and should be unique in the OSPFv3 domain. Users should not change the router ID after completing the configuration.

Command Syntax

set protocols ospf6 router-id *<router-id>*

Parameter

• *<router-id>*A unique 32-bit identifier within this AS.

Example

• This example configure router ID for the switch.

```
XorPlus# set protocols ospf6 router-id 1.1.1.1
XorPlus# commit
```

protocols rip export

User can configure the switch to export the policy to the neighbor switch.

Command Syntax

set protocols rip export*<text>*

Parameter

• *<text>*export policy name(s)

Example

• This example configure the switch to export the policy "connected-to-rip" to the neighbor switch:

```
XorPlus# set policy policy-statement connected-to-rip term export from protocol connected
XorPlus# set policy policy-statement connected-to-rip term export then metric 0
XorPlus# commit
XorPlus# set protocols rip export "connected-to-rip"
XorPlus# commit
```

protocols rip import

User can configure the switch to import the policy which is exported by the neighbor switch.

Command Syntax

set protocols rip import*<text>*

Parameter

• *<text>*import policy name(s)

Example

• This example configure the switch to import the policy "connected-to-rip"exported by the neighbor switch:

```
XorPlus# set protocols rip import "connected-to-rip"
XorPlus# commit
```

protocols rip interface vif address accept-default-route

To configure the switch to accept default route from a RIP neighbor, use the **set protocols rip interface vif address accept-default-route** in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **accept-default-route** { **true** | **false** }

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address for RIP.
true	The switch accepts the default route from RIP neighbor.
false	The switch does not accept default route from RIP neighbor.

Example

The following example configures the switch to accept default route from a RIP neighbor:

```
admin@Switch# set protocols rip interface vlan2 vif vlan2 address 192.168.1.1
accept-default-route true
```

protocols rip interface vif address accept-non-rip-requests

To accept RIP requests from non-RIP interfaces, use the **set rip interface vif address accept-non-rip-requests** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **accept-non-rip-requests** { **true** | **false** }

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address for RIP.
true	Accept RIP requests from non-RIP interface.
false	Do not accept RIP requests from non-RIP interface.

Example

This example configures the switch to accept RIP requests from a non-RIP port:

```
admin@Switch# set protocols rip interface vlan2 vif vlan2 address 192.168.1.1
accept-non-rip-requests true
```

protocols rip interface vif address advertise-default-route

To advertise default route to RIP neighbors, use the **set protocols rip interface vif address advertise-default-route** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **advertise-default-route** { **true** | **false** }

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address for RIP.
true	Advertise a default route to RIP neighbors.
false	Do not advertise a default route to RIP neighbors.

Example

This example configures the switch to advertise a default route to RIP neighbors:

```
admin@Switch# set protocols rip interface vlan2 vif vlan2 address 192.168.1.1
advertise-default-route true
```

protocols rip interface vif address authentication md5 end-time

To configure the expiry time (and date) for MD5 authentication of RIP packets, use the **set protocols rip interface vif address authentication md5 end-time** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **authentication md5** *key-id* **end-time** *time*

Parameter

interface-name	Interface name
vif-name	Virtual interface name.
ip-address	Virtual interface IP address for RIP.
key-id	MD5 authentication key identifier. The range is 0-255.
time	Authentication end time (and date). The format to be used is YYYY-MM-DD.HH:MM.

Example

This example configures the deadline for the MD5 authentication key used for authentication:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1 authentication
md5 1 end-time 2014-3-31.21:21
```

protocols rip interface vif address authentication md5 password

To configure the MD5 key to authenticate RIP packets, use the **set protocols rip interface vif address authentication md5 password** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **authentication md5** *key-id* **password** *key*

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for RIP.
key-id	The MD5 authentication key identifier. The range is 0-255.
key	The alphanumeric key for MD5 authentication of RIP packets.

Example

This example configures the MD5 key to authenticate RIP packets:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1 authentication
md5 1 password pica8
```

protocols rip interface vif address authentication md5 start-time

To configure the start time (and date) for MD5 authentication of RIP packets, use the **set protocols rip interface vif address authentication md5 start-time** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **authentication md5** *key-id* **start-time** *time*

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address for RIP.
key-id	MD5 authentication key identifier. The range is 0-255.
time	Authentication start time (and date). The format to be used is YYYY-MM-DD.HH:MM.

Example

This example configures the start time (and date) for MD5 authentication of RIP packets:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1 authentication
md5 1 start-time 2014-3-31.21:21
```

protocols rip interface vif address authentication simple-password

To configure the password for simple authentication of RIP packets, use the **set protocols rip interface vif address authentication simple-password** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **authentication simple-password** *password*

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address for RIP.
password	Password for simple authentication.

Example

This example configures a password for simple authentication of RIP packets:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1 authentication
simple-password pica8
```

protocols rip interface vif address deletion-delay

To configure the time for a switch to delete a route, use the **set protocols rip interface vif address deletion-delay** command.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-interface* **address** *ip-address* **deletion-delay** *time*

Parameters

interface-name	Interface name.
vif-interface	Virtual network interface name.
ip-address	IP address of the interface for RIP.
time	Time in seconds of deletion route. The range is 10-180,000

Example

The following example configures 10 seconds as the time for the switch to delete a route:

```
admin@Switch# set protocols rip interface vlan20 vif vlan20 address 10.1.1.1 deletion-delay
100
```

protocols rip interface vif address disable

To disable or enable RIP for an interface address, use the **set protocols rip interface vif address disable** command.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **disable** { **true** | **false** }

Parameter

interface-name	Interface name.
vif-name	L3 interface name.
ip-address	IP address of the interface used for RIP.

Example

The following example configures the switch to disable RIP for an interface address:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1 disable true
```

protocols rip interface vif address horizon

To set the horizon type applied to announced routes, use the **set protocols rip interface vif address horizon** in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **horizon** { **none** | **split-horizon** | **split-horizon-poison-reverse** }

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Interface IP address used for RIP.
none	No horizon type.
split-horizon	Split horizon.
split-horizon-poison-reverse	Split horizon with poison reverse.

Example

The following example sets the horizon type applied to announced routes to **none**:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1 horizon none
```

protocols rip interface vif address interpacket-delay

To configure the minimum delay between outbound RIP packets, use the **set protocols rip interface vif address interpacket-delay** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **interpacket-delay** *time*

Parameters

interface-name	Interface name
vif-name	Virtual interface name.
ip-address	Virtual interface IP address for RIP.
time	Minimum delay between outbound RIP packets, in ms (milliseconds).

Example

This example configures 10 ms as the minimum delay between outbound RIP packets:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1
interpacket-delay 10
```

protocols rip interface vif address metric

To add an arbitrary cost to received RIP routes, use the **set protocols rip interface vif address metric** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **metric** *cost*

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Interface IP address used for RIP.
cost	Cost assigned to routes received. The range is 0-16.

Example

The following example configures 1 as the cost added to routes received by RIP:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1 metric 1
```

protocols rip interface vif address passive

To prevent a interface IP address from sending RIP packets, use the **set protocols rip interface vif address passive** in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **passive** { **true** | **false** }

Parameters

interface-name	Interface name.
vif-name	L3 interface name.
ip-address	Interface IP address used for RIP.

Example

The following example prevents RIP packets from being sent:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1 passive true
```

protocols rip interface vif address request-interval

To configure the RIP request interval when the switch has no known neighbors, use the **set protocols rip interface vif address request-interval** in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **request-interval** *time*

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for RIP.
time	RIP request interval when there are no known neighbors. The valid range is 1-10,000. Use 0 to disable periodic RIP requests.

Example

This example configures the RIP request interval to 10 seconds, when the switch has no known neighbors:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1
request-interval 10
```

protocols rip interface vif address route-timeout

To configure the route expiration time of the switch, use the **set protocols rip interface vif address route-timeout** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **route-timeout** *time*

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for RIP.
time	Route timeout in seconds. The range is 60-360.

Example

This example configures 80 seconds as the route expiration time of the switch:

```
admin@LEAF-A# set protocols rip interface vlan100 vif vlan100 address 10.1.1.1
route-timeout 80
```

protocols rip interface vif address triggered-delay

To configure the delay before sending repeated triggered updates, use the **set protocols rip interface vif address triggered-delay** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip*-address **triggered-delay** *time*

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address for RIP.
time	Trigger delay time in seconds. The range is 1-180.

Example

The following example configures 10 seconds as the delay before sending repeated triggered update:

```
admin@Switch$set protocols rip interface vlan10 vif vlan10 address 10.1.1.1 triggered-delay
10
```

protocols rip interface vif address triggered-jitter

To configure the jitter of repeated triggered update, use the **set protocols rip interface vif address triggered-jitter** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip*-address **triggered-jitter** *percent*

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for RIP.
percent	Jitter as a percentage of **triggered-delay**. The range is 0-100.

Example

The following example configures jitter for repeated triggered update delay as 10 percent of the **triggered-delay**:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1
triggered-jitter 10
```

protocols rip interface vif address update-interval

To configure the interval between regular RIP updates, use the **set protocols rip interface vif address update-interval** command in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **address** *ip-address* **update-interval** *time*

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address for RIP.
time	RIP update interval in seconds. The range is 10-60.

Example

The following example sets the RIP update interval to 10 seconds:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1
update-interval 10
```

protocols rip interface vif address update-jitter

To configure jitter for regular RIP update interval, use the **set protocols rip interface vif address update-jitter** in L2/L3 configuration mode.

Command Syntax

set protocols rip interface *interface-name* **vif** *vif-name* **adress** *ip-address* **update-jitter** *percent*

Parameters

interface-name	Interface name.
vif-name	Virtual interface name.
ip-address	Virtual interface IP address used for RIP.
percent	Jitter as a percentage of RIP **update-interval**. The range is 0-100.

Example

The following example configures jitter as 10 percent of the RIP **update-interval**:

```
admin@Switch# set protocols rip interface vlan10 vif vlan10 address 10.1.1.1 update-jitter
10
```

protocols sflow agent-id

Users can set agent-id for sflow interface.

Command Syntax

set protocols sflow agent-id *<IPv4>*

Parameter

•*<IPv4>*A unique 32-bit identifier of the agent

Example

• This example is to set agent-id to 10.10.50.248:

```
admin@XorPlus# set protocols sflow agent-id 10.10.50.248
admin@XorPlus# commit
```

protocols sflow collector <IPv4> udp-port

Users can set collector IPv4 id .

Command Syntax

set protocols sflow collector *<IPv4>* udp-port *<port>*
delete protocols sflow collector *<IPv4>*

Parameter

•*<IPv4>*Configure the collector
•*<port>* The udp port of the collector, 6343 by default

Example

• This example is to configure the collector as 10.10.50.221,udp-port is 6343:

```
admin@XorPlus# set protocols sflow collector 10.10.50.221 udp-port 6343
admin@XorPlus#commit
```

protocols sflow disable

By default, sFlow is disabled. Users can enable sFlow and configure its' parameters.

Command Syntax

set protocols sflow disable *<bool>*

delete protocols sflow disable

Parameter

•*<bool>* Disable sflow on all interfaces by default

- **true** Disable sflow
- **false** enable sflow

Example

• This example is to enable sflow on all interface:

```
admin@XorPlus# set protocols sflow disable false
admin@XorPlus# commit
```

protocols sflow header-len

Users can set the length of sampled packet in bytes.

Command Syntax

set protocols sflow header-len *</len>*

delete protocols sflow header-len

Parameter

•*</len>*the Length of sampled packet in bytes

Example

• This example is to set length of sampled packet to 1024:

```
admin@XorPlus# set protocols sflow header-len 1024
admin@XorPlus# commit
```

protocols sflow interface <port> disable

Users can configure a specified interface to sflow protocol.

Command Syntax

set protocols sflow interface *<port>* disable *<bool>*

delete protocols sflow interface *<port>* disable

Parameter

•*<port>* ethernet switching port identifier,the valid ports range 1-52

•*<bool>*Disable or enable sflow on a specified interface

- **true** Disable sflow on a specified interface
- **false** enable sflow on a specified interface

Example

• This example is to enable sflow on ge-1/1/3:

```
admin@XorPlus# set protocols sflow interface ge-1/1/3 disable false
admin@XorPlus# commit
```

protocols sflow interface <port> header-len

Users can set the Length of sampled packet in bytes.

Command Syntax

set protocols sflow interface *<port>* header-len *<value>*

delete protocols sflow interface *<port>* header-len

Parameter

•*<port>* ethernet switching port identifier,the valid ports range 1-52

•*<value>* The length identifier, [14..9216]

Example

• This example is to set header length sampled packets to 15 on ge-1/1/3:

```
admin@XorPlus# set protocols sflow interface ge-1/1/3 header-len 15
admin@XorPlus#
```

protocols sflow interface <port> polling-interval

Users can set the polling interval for a specified interface.

Command Syntax

set protocols sflow interface *<port>* polling-interval *<seconds>*

*d*elete protocols sflow interface *<port>* polling-interval

Parameter

•*<port>* ethernet switching port identifier,the valid ports range 1-52

•*<seconds>* Number of seconds, [0..3600]

Example

• This example is to set polling interval to 300 on ge-1/1/3:

```
admin@XorPlus# set protocols sflow interface ge-1/1/3 polling-interval 300
admin@XorPlus# commit
```

protocols sflow interface <port> sampling-rate egress

Users can set the sampling rate of sflow agent.

Command Syntax

set protocols sflow interface *<port>* sampling-rate egress *<value>*

delete protocols sflow interface *<port>* sampling-rate egress

Parameter

•*<value>*the rate at which exiting packets must be sampled, 2000 by default,[0..1048576]

Example

• This example is to set sampling rate of egress to 1000:

```
admin@XorPlus# set protocols sflow interface ge-1/1/3 sampling-rate egress 1000
admin@XorPlus# commit
```

protocols sflow interface <port> sampling-rate ingress

Users can set the sampling rate of sflow agent.

Command Syntax

set protocols sflow interface *<port>* sampling-rate ingress *<value>*

delete protocols sflow interface *<port>* sampling-rate ingress

Parameter

•*<value>*the rate at which exiting packets must be sampled, 2000 by default,[0..1048576]

Example

• This example is to set sampling rate of ingress to 1000:

```
admin@XorPlus# set protocols sflow interface ge-1/1/3 sampling-rate ingress 1000
admin@XorPlus# commit
```

protocols sflow polling-interval

Users can set polling interval the sflow agent polls interfaces in seconds.

Command Syntax

set protocols sflow polling-interval *<time>*

Parameter

•*<time>* Number of seconds, how often the sflow agent polls interfaces in seconds, 30 by default

Example

• This example is to set polling interval to 60:

```
admin@XorPlus# set protocols sflow polling-interval 60
admin@XorPlus# commit
```

protocols sflow sampling-rate egress

Users can set the sampling rate of sflow agent.

Command Syntax

set protocols sflow sampling-rate egress *<value>*

delete protocols sflow sampling-rate egress

Parameter

• *<value>*the rate at which exiting packets must be sampled, 2000 by default,[0..1048576]

Example

• This example is to set sampling rate of egress to 1000:

```
admin@XorPlus# set protocols sflow sampling-rate egress 1000
admin@XorPlus# commit
```

protocols sflow sampling-rate ingress

Users can set the sampling rate of sflow agent.

Command Syntax

set protocols sflow sampling-rate ingress *<value>*

delete protocols sflow sampling-rate ingress

Parameter

• *<value>*the rate at which exiting packets must be sampled, 2000 by default,[0..1048576]

Example

• This example is to set sampling rate of ingress to 1000:

```
admin@XorPlus# set protocols sflow sampling-rate ingress 1000
admin@XorPlus# commit
```

protocols sflow source-address

Users can set the source address as the source in packets transmitted to collectors.

Command Syntax

set protocols sflow source-address *<IPv4>*

Parameter

• *<IPv4>*source address as the source in packets transmitted to collectors

Example

• This example is to set source-address to 10.10.50.248:

```
admin@XorPlus# set protocols sflow source-address 10.10.50.248
admin@XorPlus# commit
```

protocols snmpv3 trap-group targets <IPv4> security-name <text>

Users can designate NMS to which trap messages are sent

Please note trap-messages can be actually sent out only if the concerning user, group and notify-view have been configured.

Command Syntax

set protocols snmp trap-group targets <IPv4> security-name <text>

delete protocols snmp trap-group targets <IPv4> security-name <text>

Parameter

• <IPv4> IP of the NMS

• <text> name of one of the users you have created

Example

•This example configures a NMS to which trap messages are sent

```
admin@XorPlus# set protocols snmp trap-group targets 10.10.51.42 security-name user1
admin@XorPlus# commit
```

protocols snmp trap-group version <version>

Users can set version of the trap messages.The default version is v2.

Command Syntax

set protocols snmp trap-group version <version>

delete protocols snmp trap-group version <version>

Parameter

•<version> version of the trap messages

• **v1** version 1

• **v2** version 2

• **v3** version 3

Example

•This example configures version 3 to the trap messages

```
admin@XorPlus# set protocols snmp trap-group version v3
admin@XorPlus# commit
```

protocols snmp v3 enable <boolean>

Users can enable or disable SNMPv3.The default version of the SNMP is v2.

Command Syntax

set protocols snmp v3 enable <boolean>

Parameter

•<boolean> enable or disable SNMPv3

• **true** enable SNMPv3

• **false** disable SNMPv3

Example

•This example enables SNMPv3

```
admin@XorPlus# set protocols snmp v3 enable true
admin@XorPlus# commit
```

protocols snmp v3 usm-user <text>

Users can configure a user name

Command Syntax

set protocols snmp v3 usm-user <text>

delete protocols snmp v3 usm-user <text>

Parameter

•<text> define a name of the user

Example

•This example configures a user user1 without adding to any groups

> ⚠ A user without adding to any groups only can be read all the OIDs by NMS (could not be written or send trap-messages).

```
admin@XorPlus# set protocols snmp v3 usm-user user1
admin@XorPlus# commit
```

protocols snmp v3 usm-user <text> group <text>

> ⚠ if you add a user to a group, you have to configure the read-view, write-view or notify-view for the group. Or NMS will have no authority (writing, reading, being notified) operated on the user.

A user can be added to a group

Command Syntax

set protocols snmp v3 usm-user <text1> group <text2>

delete protocols snmp v3 usm-user <text1> group

Parameter

•<text1> the name of the user

•<text2> the name of the group

Example

•This example adds user1 to group1

```
admin@XorPlus# set protocols snmp v3 usm-user user1 group group1
admin@XorPlus# commit
```

protocols snmp v3 group <text> notify-view <text>

Users can configure a notify-view for a group

> ⚠ Some OIDs which are capable of sending trap-messages can be added to the notify-view optionally. If not doing so, the user will not send trap-messages initiatively.

Command Syntax

set protocols snmp v3 group <text1> notify-view <text2>

delete protocols snmp v3 group <text1> notify-view

Parameter

•<text1> the name of the user

•<text2> the name of the notify-view

Example

•This example configures a notify-name for a group

```
admin@XorPlus# set protocols snmp v3 group group1 notify-view view1
admin@XorPlus# commit
```

protocols snmp v3 group <text> read-view <text>

Users can configure a read-view for a group

> ⚠ A user in the group which is configured with read-view only can be read by NMS while cannot be written or send trap-messages. Writing and notifying authority can be gained by NMS only after you configure the corresponding view.

Command Syntax

set protocols snmp v3 group <text1> read-view <text2>

delete protocols snmp v3 group <text1> read-view

Parameter

•<text1> the name of the user

•<text2> the name of the read-view

Example

•This example configures a read-view name for a group

```
admin@XorPlus# set protocols snmp v3 group group1 read-view view1
admin@XorPlus# commit
```

protocols snmp v3 group <text> write-view <text>

Users can configure a write-view for a group

> A user in the group which is configured with write-view only can be written by NMS while cannot be read or send trap-messages initiatively. Read and notify authority can be gained when you configure the corresponding views.

Command Syntax

set protocols snmp v3 group <text1> write-view <text2>

delete protocols snmp v3 group <text1> write-view

Parameter

•<text1> the name of the user

•<text2> the name of the write-view

Example

•This example configures a write-view name for a group

```
admin@XorPlus# set protocols snmp v3 group group1 write-view view1
admin@XorPlus# commit
```

protocols snmp v3 group group1 security-level

Users can configure security-level for a group

> When the security-level of a group is AuthNoPriv or AuthPriv,the user in that group should be configured with Authentication-mode, Authentication-key even as well as privacy-mode and privacy-key.

Command Syntax

set protocols snmp v3 group <text> security-level <security-level >

delete protocols snmp v3 group <text> security-level

Parameter

•<text> the name of the group

•<security-level > security-level of a group

• **AuthNoPriv** Authentication and no privacy

• **AuthPriv** Authentication and privacy

• **NoAuthNoPriv** No authentication and no privacy

Example

•This example configures group1 with AuthPriv

```
admin@XorPlus# set protocols snmp v3 group group1 security-level AuthPriv
admin@XorPlus# commit
```

protocols snmp v3 usm-user user1 authentication-mode <authentication-mode >

Users can configure authentication-mode for a group. If authentication-mode is configured, authentication-key also needs to follow up.

Command Syntax

set protocols snmp v3 usm-user <text> authentication-mode <authentication-mode >

delete protocols snmp v3 group <text> security-level

Parameter

•<text> the name of the user

•<authentication-mode > authentication-mode for the user

• **md5**

• **none**

• **sha**

Example

•This example configures md5 for user1

```
admin@XorPlus# set protocols snmp v3 usm-user user1 authentication-mode md5
admin@XorPlus# commit
```

protocols snmp v3 usm-user <text1> authentication-key <text2>

Users can configure a authentication-key for a user

Command Syntax

set protocols snmp v3 usm-user <text1> authentication-key <text2>

delete protocols snmp v3 usm-user <text1> authentication-key

Parameter

•<text1> the name of the user

•<text2> authentication-key for the user

Example

•This example configures a authentication-key for a user

```
admin@XorPlus# set protocols snmp v3 usm-user user1 authentication-key u1111key
admin@XorPlus# commit
```

protocols snmp v3 usm-user <text> privacy-mode <privacy-mode >

Users can configure privacy-mode for a group.If you configure privacy-mode for a user, privacy-key also needs to follow up.

Command Syntax

set protocols snmp v3 usm-user <text> privacy-mode <privacy-mode >

delete protocols snmp v3 usm-user <text> privacy-mode

Parameter

•<text> the name of the user

<privacy-mode >privacy-modefor the user

• **3des**

• **aes128**

• **des**

• **none**

Example

•This example configures des for user1

```
admin@XorPlus# set protocols snmp v3 usm-user user1 privacy-mode des
admin@XorPlus# commit
```

protocols snmp v3 usm-user <text1> privacy-key <text2>

Users can configure a privacy-key for a user

Command Syntax

set protocols snmp v3 usm-user <text1> privacy-key <text2>

delete protocols snmp v3 usm-user <text1> privacy-key

Parameter

•<text1> the name of the user

•<text2> privacy-key for the user

Example

•This example configures a privacy-key for a user

```
admin@XorPlus# set protocols snmp v3 usm-user user1 privacy-key u1111key
admin@XorPlus# commit
```

protocols snmp v3 mib-view <text1> subtree <text2> mask <text3>

Users can configure a mib-view which is used as a view of a group. And users can just set up a mib-view without mask.

Command Syntax

set protocols snmp v3 mib-view <text1> subtree <text2> mask <text3>

delete protocols snmp v3 mib-view <text1> subtree <text2> mask

Parameter

• <text1> the name of the mib-view

• <text2> a dotted numeric oid

• <text3> Subtree mask in hexadecimal format with an even character

Example

•This example configures a mib-view view1 with mask ff

```
admin@XorPlus# set protocols snmp v3 mib-view view1 subtree 1.3.6.1.2.1 mask ff
admin@XorPlus# commit
```

protocols snmp v3 mib-view <text1> subtree <text2> type <type>

Users can configure type of a mib-view

Command Syntax

set protocols snmp v3 mib-view <text1> subtree <text2> type <type>

delete protocols snmp v3 mib-view <text1> subtree <text2> type

Parameter

•<text1> the name of the mib-view

•<text2> a dotted numeric oid

•<type> include or exclude a subtree

• **excluded** exclude the subtree

• **included** include the subtree

Example

•This example includes1.3.6.1.2.1 in the view1

```
admin@XorPlus# set protocols snmp v3 mib-view view1 subtree 1.3.6.1.2.1 type included
admin@XorPlus# commit
```

protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> disable

This command is used for disable or enable the vrrp for the vlan-interface and vif.

Command Syntax

protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> disable <**true** | **false**>

To remove the configuration enter:
delete protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> disable

Parameter

interface-name	Vlan-Interface name.
vif-name	Vlan-interface vif name.
virtual-id	Virtual router ID, the range from 1 to 254.
true	diable the vrrp for the vlan-interface and vif
false	enable the vrrp for the vlan-interface and vif

Example

This example disables vrrp for the vlan-interface vlan-100 and vif vlan-100, the default is enable:

```
admin@XorPlus# set protocols vrrp interface vlan-100 vif vlan-100 vrid 3 disable true
admin@XorPlus# commit
```

protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> interval

This command is used for configuring VRRP advertisements interval times.

Command Syntax

protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> interval <*value*>

To remove the configuration enter:
delete protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> interval

Parameter

interface-name	Vlan-Interface name.
vif-name	Vlan-interface vif name.
virtual-id	Virtual router ID, the range from 1 to 254.
value	The Vrrp advertisements interval, t he unit is second.the range from 1 to 255

Example

This example to configure Vrrp advertisements interval 2s for the vlan-interface vlan-100 and vif vlan-100:

```
admin@XorPlus# set protocols vrrp interface vlan-100 vif vlan-100 vrid 3 interval 2
admin@XorPlus# commit
```

protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> ip

This command is used for configuring virtual ip for VRRP.

Command Syntax

set protocols vrrp interface <*interface-name*> **vif** <*vif-name*> **vrid** <*virtual-id*> **ip** <ip-address>

To remove the configuration enter:
delete protocols vrrp interface <*interface-name*> **vif** <*vif-name*> **vrid** <*virtual-id*>

Parameter

interface-name	Vlan-Interface name.
vif-name	Vlan-interface vif name.
virtual-id	Virtual router ID, the range from 1 to 254.
ip-address	IPv4 address

Example

This example configures VRRP virtual ip 192.168.1.1 for virtual id 3.

```
admin@XorPlus# set protocols vrrp interface vlan-100 vif vlan-100 vrid 3 ip 192.168.1.1
admin@XorPlus# commit
```

protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> preempt enable

This command is used for configuring preempt mode for vrrp.

Command Syntax

protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> preempt enable <**true** | **false**>

To remove the configuration enter:
delete protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> preempt

Parameter

interface-name	Vlan-Interface name.
vif-name	Vlan-interface vif name.
virtual-id	Virtual router ID, the range from 1 to 254.
true	default value, enable preempt mode
false	disable preempt mode

Example

This example configure disable preempt mode for virtual id 3, ,the default value is enable preempt mode:

```
admin@XorPlus# set protocols vrrp interface vlan-100 vif vlan-100 vrid 3 preempt enable
false
admin@XorPlus# commit
```

protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> priority

This command is used for configuring priority for vrrp, the higher priority will be choose master.

Command Syntax

protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> priority <number>

To remove the configuration enter:
delete protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> priority

Parameter

interface-name	Vlan-Interface name.
vif-name	Vlan-interface vif name.
virtual-id	Virtual router ID, the range from 1 to 254.
number	Priority value, the default value is 100, range from 1 to 254

Example

This example configure that vrrp priotity is 150 for virtual id 3, the default priority is 100:

```
admin@XorPlus# set protocols vrrp interface vlan-100 vif vlan-100 vrid 3 priority 150
admin@XorPlus# commit
```

protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> load-balance disable

This command is used for configuring Active-Active-VRRP.

Command Syntax

protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> load-balance disable <**true** | **false**>

To remove the configuration enter:
delete protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> load-balance

Parameter

interface-name	Vlan-Interface name.
vif-name	Vlan-interface vif name.
virtual-id	Virtual router ID, the range from 1 to 254.
true	Normal VRRP, default value
false	Enable Active-Active-VRRP

Example

This example configure that enable Active-Active-VRRP:

```
admin@XorPlus# set protocols vrrp interface vlan-100 vif vlan-100 vrid 3 load-balance
disable false
admin@XorPlus# commit
```

protocols vrrp interface <interface-name> vif <vif-name> vrid <virtual-id> load-balance virtual-mac time-interval

This command is used for configuring time intervals of sending virtual mac update message.

Command Syntax

protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> load-balance virtual-mac time-interval <*number*>

To remove the configuration enter:
delete protocols vrrp interface <*interface-name*> vif <*vif-name*> vrid <*virtual-id*> load-balance virtual-mac time-interval

Parameter

interface-name	Vlan-Interface name.
vif-name	Vlan-interface vif name.
virtual-id	Virtual router ID, the range from 1 to 254.
number	The time intervals of sending virtual mac update message, the default value is 60s, range from 60s to 14400s

Example

This example configure that time intervals of sending virtual mac update message is 120s:

```
admin@XorPlus# set protocols vrrp interface vlan-100 vif vlan-100 vrid 3 load-balance
virtual-mac time-interval 120
admin@XorPlus# commit
```

System Management Commands

- set cli idle-timeout
- set cli screen-length
- set cli terminal
- show system boot-messages
- show system connections
- show system core-dumps
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- system aaa local disable
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- system aaa radius accounting server-ip
- system aaa radius accounting server-ip <IPV4> port
- system aaa radius accounting server-ip <IPV4> shared-key
- system aaa radius accounting server-ip <IPV4> timeout
- system aaa radius authorization disable
- system aaa radius authorization server-ip

- system aaa radius authorization server-ip <IPV4> port
- system aaa radius authorization server-ip <IPV4> shared-key
- system aaa radius authorization server-ip <IPV4> timeout
- system aaa tacacs-plus accounting
- system aaa tacacs-plus authorization
- system aaa tacacs-plus auth-type
- system aaa tacacs-plus disable
- system aaa tacacs-plus key
- system aaa tacacs-plus port-number
- system aaa tacacs-plus server-ip
- system hostname
- system inband enable
- system login-acl network
- system login announcement
- system login user
- system login user admin authentication plain-text-password
- system login user admin class
- system login user authentication plain-text-password
- system login user class
- system timezone
- system ntp-server-ip
- set interface gigabit-ethernet ptp mode
- system remote-config allow-client
- system services ssh connection-limit
- system services ssh disable
- system services ssh protocol-version v2
- system services ssh rate-limit
- system services ssh root-login
- system services telnet connection-limit
- system services telnet disable
- system services telnet rate-limit
- system snmp-acl network
- system syslog host
- system syslog local-file

- system syslog port-number
- system syslog port-protocol
- set system syslog server-ip <IP> source-interface <text>

set cli idle-timeout

To set the maximum idle time before the current session is terminated, use the **set cli idle-timeout** command in L2/L3 operation mode.

Command Syntax

set cli idle-timeout *time*

Parameters

time	The maximum idle time before the terminal session is terminated. The range is from 0 to 2,000,000 seconds.

Examples

This example demonstrates how to set the maximum idle time to 900 seconds (15 minutes):

```
admin@Switch> set cli idle-timeout 900
```

set cli screen-length

To set the number of lines of output to display on the terminal screen for the current session before pausing , use the **set cli screen-length** command in L2/L3 operation mode.

Command Syntax

set cli screen-length *lines*

Parameters

lines	Number of lines to display. The range is from 0 to 10,000. Use 0 to not pause while displaying output.

Examples

This example shows how to set the number of lines of command output to display on the terminal before pausing:

```
admin@Switch> set cli screen-length 25
```

set cli terminal

To specify the type of terminal for the current session, use the **set cli terminal** command in L2/L3 operation mode.

Command Syntax

set cli terminal { **ansi** | **linux** | **vt100** | **xterm** }

Examples

This example shows how to set the terminal type to **linux** for the current session:

```
admin@Switch> set cli terminal linux
```

show system boot-messages

The **show system boot-message** command displays information about boot time messages. The command displays copyright, up time, revision, using MPC85 xx CDS machine description, etc.

Command Syntax

run show system boot-messages

Example

• This example demonstrates how to show system boot-messages:

```
admin@XorPlus# run show system boot-messages
Copyright (c) 2009-2014 Pica8 Inc.
All rights reserved.
Up time: 13:03:50
revision: 2.6.27
Using MPC85xx CDS machine description
Memory CAM mapping: CAM0=256Mb, CAM1=256Mb, CAM2=0Mb residual: 0Mb
Linux version 2.6.27 (root@dev-18) (gcc version 4.2.2) #49 Fri Apr 25 11:19:13 CST 2014
Found legacy serial port 0 for /soc8541@e0000000/serial@4500
  mem=e0004500, taddr=e0004500, irq=0, clk=330000000, speed=0
console [udbg0] enabled
Found FSL PCI host bridge at 0x00000000e0008000. Firmware bus number: 0->0
PCI host bridge /pci@e0008000 (primary) ranges:
 MEM 0x0000000080000000..0x000000009fffffff -> 0x0000000080000000
  IO 0x00000000e2000000..0x00000000e20fffff -> 0x0000000000000000
Top of RAM: 0x20000000, Total RAM: 0x20000000
Memory hole size: 0MB
Zone PFN ranges:
  DMA      0x00000000 -> 0x00020000
  Normal   0x00020000 -> 0x00020000
  HighMem  0x00020000 -> 0x00020000
Movable zone start PFN for each node
early_node_map[1] active PFN ranges
    0: 0x00000000 -> 0x00020000
On node 0 totalpages: 131072
free_area_init_node: node 0, pgdat c03cc4d4, node_mem_map c0404000
  DMA zone: 130048 pages, LIFO batch:31
Built 1 zonelists in Zone order, mobility grouping on.  Total pages: 130048
Kernel command line: root=/dev/hda1 rw noinitrd console=ttyS0,115200
mpic: Setting up MPIC " OpenPIC  " version 1.2 at e0040000, max 1 CPUs
```

```
mpic: ISU size: 56, shift: 6, mask: 3f
mpic: Initializing for 56 sources
PID hash table entries: 2048 (order: 11, 8192 bytes)
time_init: decrementer frequency = 41.250000 MHz
time_init: processor frequency   = 825.000000 MHz
clocksource: timebase mult[60f83e1] shift[22] registered
clockevent: decrementer mult[a8f] shift[16] cpu[0]
Console: colour dummy device 80x25
Dentry cache hash table entries: 65536 (order: 6, 262144 bytes)
Inode-cache hash table entries: 32768 (order: 5, 131072 bytes)
High memory: 0k
Memory: 515456k/524288k available (3764k kernel code, 8648k reserved, 132k data, 162k bss,
168k init)
SLUB: Genslabs=12, HWalign=32, Order=0-3, MinObjects=0, CPUs=1, Nodes=1
Calibrating delay loop... 82.43 BogoMIPS (lpj=164864)
 --More--
```

show system connections

The **show system connections** command displays information about the system connection activity. It includes servers and established. The command displays Proto, .Recv-q, Send-Q, Local Address, Foreign Address, State, User, and Inode.

Command Syntax

run show system connections

Example

• This example demonstrates how to show system connections:

```
admin@XorPlus# run show system connections
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       User
Inode
tcp        0      0 127.0.0.1:44992         0.0.0.0:*               LISTEN      11
34882
tcp        0      0 127.0.0.1:41248         0.0.0.0:*               LISTEN      0
1458
tcp        0      0 127.0.0.1:56961         0.0.0.0:*               LISTEN      11
7095
tcp        0      0 127.0.0.1:42946         0.0.0.0:*               LISTEN      0
2614
tcp        0      0 127.0.0.1:43938         0.0.0.0:*               LISTEN      0
1406
tcp        0      0 127.0.0.1:50436         0.0.0.0:*               LISTEN      0
2653
tcp        0      0 127.0.0.1:51622         0.0.0.0:*               LISTEN      0
2620
tcp        0      0 127.0.0.1:54214         0.0.0.0:*               LISTEN      0
2618
tcp        0      0 127.0.0.1:47143         0.0.0.0:*               LISTEN      0
4411
tcp        0      0 127.0.0.1:36455         0.0.0.0:*               LISTEN      0
1462
tcp        0      0 127.0.0.1:39592         0.0.0.0:*               LISTEN      0
1466
tcp        0      0 127.0.0.1:53512         0.0.0.0:*               LISTEN      0
1319
tcp        0      0 127.0.0.1:57354         0.0.0.0:*               LISTEN      0
4257
tcp        0      0 127.0.0.1:33197         0.0.0.0:*               LISTEN      0
4400
tcp        0      0 127.0.0.1:58765         0.0.0.0:*               LISTEN      0
1460
```

```
tcp        0      0 127.0.0.1:55985         0.0.0.0:*               LISTEN      0
1456
tcp        0      0 127.0.0.1:56564         0.0.0.0:*               LISTEN      0
2577
tcp        0      0 127.0.0.1:44756         0.0.0.0:*               LISTEN      0
1464
tcp        0      0 127.0.0.1:51957         0.0.0.0:*               LISTEN      0
1468
tcp        0      0 127.0.0.1:44086         0.0.0.0:*               LISTEN      11
66976
tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN      0
3364
tcp        0      0 127.0.0.1:51222         0.0.0.0:*               LISTEN      0
2575
tcp        0      0 127.0.0.1:53208         0.0.0.0:*               LISTEN      0
4252
tcp        0      0 127.0.0.1:56441         0.0.0.0:*               LISTEN      0
2616
tcp        0      0 127.0.0.1:37210         0.0.0.0:*               LISTEN      0
4286
tcp        0      0 127.0.0.1:29595         0.0.0.0:*               LISTEN      0
1316
tcp        0      0 127.0.0.1:38492         0.0.0.0:*               LISTEN      0
1454
tcp        0      0 127.0.0.1:52988         0.0.0.0:*               LISTEN      0
1452
tcp        0      0 127.0.0.1:50206         0.0.0.0:*               LISTEN      0
1450
tcp        0      0 127.0.0.1:29595         127.0.0.1:45862         ESTABLISHED 0
2637
tcp        0      0 127.0.0.1:55985         127.0.0.1:34260         ESTABLISHED 0
4295
tcp        0      0 127.0.0.1:57004         127.0.0.1:50206         ESTABLISHED 0
1629
tcp        0      0 127.0.0.1:38841         127.0.0.1:57354         ESTABLISHED 0
4264
tcp        0      0 127.0.0.1:41248         127.0.0.1:33787         ESTABLISHED 0
4271
tcp        0      0 127.0.0.1:29595         127.0.0.1:45845         ESTABLISHED 0
1485
tcp        0      0 127.0.0.1:59503         127.0.0.1:50436         ESTABLISHED 0
2696
tcp        0      0 127.0.0.1:29595         127.0.0.1:45854         ESTABLISHED 0
2579
tcp        0      0 127.0.0.1:54304         127.0.0.1:44086         ESTABLISHED 0
67026
tcp        0      0 127.0.0.1:57039         127.0.0.1:50206         ESTABLISHED 0
4266
tcp        0      0 127.0.0.1:44118         127.0.0.1:43938         ESTABLISHED 0
2222
tcp        0      0 127.0.0.1:43938         127.0.0.1:44162         ESTABLISHED 0
4418
tcp        0      0 127.0.0.1:29595         127.0.0.1:45879         ESTABLISHED 0
4254
tcp        0      0 127.0.0.1:41078         127.0.0.1:37210         ESTABLISHED 0
4292
tcp        0      0 127.0.0.1:41077         127.0.0.1:37210         ESTABLISHED 0
4289
tcp        0      0 127.0.0.1:55264         127.0.0.1:33197         ESTABLISHED 0
27675
tcp        0      0 127.0.0.1:42946         127.0.0.1:59983         ESTABLISHED 0
4441
tcp        0      0 127.0.0.1:50436         127.0.0.1:59503         ESTABLISHED 0
2697
tcp        0      0 127.0.0.1:50436         127.0.0.1:43906         ESTABLISHED 0
7121
tcp        0      0 127.0.0.1:50206         127.0.0.1:57027         ESTABLISHED 0
2678
tcp        0      0 127.0.0.1:33197         127.0.0.1:55264         ESTABLISHED 0
27676
```

```
tcp        0      0 127.0.0.1:29595         127.0.0.1:33590         ESTABLISHED 0
34884
tcp        0      0 127.0.0.1:57887         127.0.0.1:33197         ESTABLISHED 0
4432
tcp        0      0 127.0.0.1:36773         127.0.0.1:56441         ESTABLISHED 0
2641
tcp        0      0 127.0.0.1:57354         127.0.0.1:38841         ESTABLISHED 0
4265
tcp        0      0 127.0.0.1:29595         127.0.0.1:40818         ESTABLISHED 0
67021
tcp        0      0 127.0.0.1:29595         127.0.0.1:45889         ESTABLISHED 0
4288
tcp        0      0 127.0.0.1:45894         127.0.0.1:29595         ESTABLISHED 0
4412
tcp        0      0 127.0.0.1:57883         127.0.0.1:33197         ESTABLISHED 0
4413
tcp        0      0 127.0.0.1:29595         127.0.0.1:45836         ESTABLISHED 0
1323
tcp        0      0 127.0.0.1:35592         127.0.0.1:50436         ESTABLISHED 11
34907
tcp        0      0 127.0.0.1:29595         127.0.0.1:45881         ESTABLISHED 0
4259
tcp        0      0 127.0.0.1:45839         127.0.0.1:29595         ESTABLISHED 0
1469
tcp        0      0 127.0.0.1:59990         127.0.0.1:42946         ESTABLISHED 0
5128
tcp        0      0 127.0.0.1:45854         127.0.0.1:29595         ESTABLISHED 0
2578
tcp        0      0 127.0.0.1:29595         127.0.0.1:45860         ESTABLISHED 0
2632
tcp        0      0 10.10.50.150:22         10.10.50.16:42504       ESTABLISHED 0
6553
tcp        0      0 127.0.0.1:44104         127.0.0.1:43938         ESTABLISHED 0
1409
tcp        0      0 127.0.0.1:42946         127.0.0.1:59988         ESTABLISHED 0
4592
tcp        0      0 127.0.0.1:33590         127.0.0.1:29595         ESTABLISHED 11
34883
tcp        0      0 127.0.0.1:36916         127.0.0.1:51222         ESTABLISHED 0
2680
tcp        0      0 127.0.0.1:45841         127.0.0.1:29595         ESTABLISHED 0
1472
tcp        0      0 127.0.0.1:33197         127.0.0.1:57892         ESTABLISHED 0
4579
tcp        0      0 127.0.0.1:45889         127.0.0.1:29595         ESTABLISHED 0
4287
tcp        0      0 127.0.0.1:57019         127.0.0.1:50206         ESTABLISHED 0
2639
tcp        0      0 127.0.0.1:44239         127.0.0.1:36455         ESTABLISHED 0
2684
tcp        0      0 127.0.0.1:29595         127.0.0.1:45837         ESTABLISHED 0
1408
tcp        0      0 127.0.0.1:45848         127.0.0.1:29595         ESTABLISHED 0
1479
tcp        0      0 127.0.0.1:38492         127.0.0.1:39516         ESTABLISHED 0
2226
tcp        0      0 127.0.0.1:59953         127.0.0.1:42946         ESTABLISHED 0
2675
tcp        0      0 127.0.0.1:60034         127.0.0.1:53512         ESTABLISHED 0
2669
tcp        0      0 127.0.0.1:29595         127.0.0.1:45868         ESTABLISHED 0
2668
tcp        0      0 127.0.0.1:50206         127.0.0.1:57052         ESTABLISHED 0
4427
tcp        0      0 127.0.0.1:59983         127.0.0.1:42946         ESTABLISHED 0
4440
tcp        0      0 127.0.0.1:45861         127.0.0.1:29595         ESTABLISHED 0
2633
tcp        0      0 127.0.0.1:45837         127.0.0.1:29595         ESTABLISHED 0
1407
```

```
tcp        0      0 127.0.0.1:45893         127.0.0.1:29595         ESTABLISHED 0
4401
tcp        0      0 127.0.0.1:44251         127.0.0.1:36455         ESTABLISHED 0
4273
tcp        0      0 127.0.0.1:29595         127.0.0.1:45893         ESTABLISHED 0
4402
tcp        0      0 127.0.0.1:43938         127.0.0.1:44104         ESTABLISHED 0
1410
tcp        0      0 127.0.0.1:44136         127.0.0.1:43938         ESTABLISHED 0
2672
tcp        0      0 127.0.0.1:33197         127.0.0.1:57883         ESTABLISHED 0
4414
tcp        0      0 127.0.0.1:57037         127.0.0.1:50206         ESTABLISHED 0
4262
tcp        0      0 127.0.0.1:52988         127.0.0.1:47257         ESTABLISHED 0
4590
tcp        0      0 127.0.0.1:29595         127.0.0.1:45839         ESTABLISHED 0
1470
tcp        0      0 127.0.0.1:29595         127.0.0.1:48610         ESTABLISHED 0
7097
tcp        0      0 127.0.0.1:53208         127.0.0.1:35345         ESTABLISHED 0
4269
tcp        0      0 127.0.0.1:59949         127.0.0.1:42946         ESTABLISHED 0
2645
tcp        0      0 127.0.0.1:42946         127.0.0.1:59949         ESTABLISHED 0
2646
tcp        0      0 127.0.0.1:29595         127.0.0.1:45847         ESTABLISHED 0
1487
tcp        0      0 127.0.0.1:39517         127.0.0.1:38492         ESTABLISHED 0
2221
tcp        0      0 127.0.0.1:47252         127.0.0.1:52988         ESTABLISHED 0
4434
tcp        0      0 127.0.0.1:36902         127.0.0.1:51222         ESTABLISHED 0
2606
tcp        0      0 127.0.0.1:53512         127.0.0.1:43904         ESTABLISHED 0
67023
tcp        0      0 127.0.0.1:35345         127.0.0.1:53208         ESTABLISHED 0
4268
tcp        0      0 127.0.0.1:50206         127.0.0.1:57057         ESTABLISHED 0
4571
tcp        0      0 127.0.0.1:29595         127.0.0.1:45840         ESTABLISHED 0
1480
tcp        0      0 127.0.0.1:36359         127.0.0.1:50436         ESTABLISHED 11
67115
tcp        0      0 127.0.0.1:45881         127.0.0.1:29595         ESTABLISHED 0
4258
tcp        0      0 127.0.0.1:50206         127.0.0.1:57019         ESTABLISHED 0
2640
tcp        0      0 127.0.0.1:45862         127.0.0.1:29595         ESTABLISHED 0
2634
tcp        0      0 127.0.0.1:44705         127.0.0.1:53512         ESTABLISHED 11
34885
tcp        0      0 127.0.0.1:38492         127.0.0.1:39517         ESTABLISHED 0
2227
tcp        0      0 127.0.0.1:34256         127.0.0.1:55985         ESTABLISHED 0
4278
tcp        0      0 127.0.0.1:45846         127.0.0.1:29595         ESTABLISHED 0
1477
tcp        0      0 127.0.0.1:50206         127.0.0.1:57004         ESTABLISHED 0
2224
tcp        0      0 127.0.0.1:55985         127.0.0.1:34244         ESTABLISHED 0
2687
tcp        0      0 127.0.0.1:57027         127.0.0.1:50206         ESTABLISHED 0
2677
tcp        0      0 127.0.0.1:29595         127.0.0.1:45844         ESTABLISHED 0
1484
tcp        0      0 127.0.0.1:29595         127.0.0.1:45856         ESTABLISHED 0
2585
tcp        0      0 127.0.0.1:44992         127.0.0.1:36015         ESTABLISHED 11
34890
```

```
tcp        0      0 127.0.0.1:56441         127.0.0.1:36773         ESTABLISHED 0
2642
tcp        0      0 127.0.0.1:48610         127.0.0.1:29595         ESTABLISHED 11
7096
tcp        0      0 127.0.0.1:53208         127.0.0.1:35369         ESTABLISHED 0
5131
tcp        0      0 127.0.0.1:41248         127.0.0.1:33775         ESTABLISHED 0
2683
tcp        0      0 127.0.0.1:43906         127.0.0.1:50436         ESTABLISHED 11
7120
tcp        0      0 127.0.0.1:53208         127.0.0.1:35340         ESTABLISHED 0
4260
tcp        0      0 127.0.0.1:50436         127.0.0.1:36359         ESTABLISHED 0
67116
tcp        0      0 127.0.0.1:50206         127.0.0.1:57037         ESTABLISHED 0
4263
tcp        0      0 127.0.0.1:29595         127.0.0.1:45861         ESTABLISHED 0
2636
tcp        0      0 127.0.0.1:36015         127.0.0.1:44992         ESTABLISHED 0
34889
tcp        0      0 127.0.0.1:36455         127.0.0.1:44251         ESTABLISHED 0
4274
tcp        0      0 127.0.0.1:50436         127.0.0.1:59528         ESTABLISHED 0
4577
tcp        0      0 127.0.0.1:57010         127.0.0.1:50206         ESTABLISHED 0
2582
tcp        0      0 127.0.0.1:56564         127.0.0.1:46496         ESTABLISHED 0
2596
tcp        0      0 127.0.0.1:50206         127.0.0.1:57012         ESTABLISHED 0
2594
tcp        0      0 127.0.0.1:36455         127.0.0.1:44239         ESTABLISHED 0
2685
tcp        0      0 127.0.0.1:43938         127.0.0.1:44118         ESTABLISHED 0
2223
tcp        0      0 127.0.0.1:51222         127.0.0.1:36916         ESTABLISHED 0
2681
tcp        0      0 127.0.0.1:35369         127.0.0.1:53208         ESTABLISHED 0
5130
tcp        0      0 127.0.0.1:46496         127.0.0.1:56564         ESTABLISHED 0
2595
tcp        0      0 127.0.0.1:39592         127.0.0.1:46164         ESTABLISHED 0
2689
tcp        0      0 127.0.0.1:50206         127.0.0.1:57039         ESTABLISHED 0
4267
tcp        0      0 127.0.0.1:43279         127.0.0.1:47143         ESTABLISHED 0
4428
tcp        0      0 127.0.0.1:45845         127.0.0.1:29595         ESTABLISHED 0
1476
tcp        0      0 127.0.0.1:43904         127.0.0.1:53512         ESTABLISHED 11
67022
tcp        0      0 127.0.0.1:42946         127.0.0.1:59990         ESTABLISHED 0
5129
tcp        0      0 127.0.0.1:45844         127.0.0.1:29595         ESTABLISHED 0
1475
tcp        0      0 10.10.50.150:22         10.10.50.18:48041       ESTABLISHED 0
34818
tcp        0      0 127.0.0.1:57012         127.0.0.1:50206         ESTABLISHED 0
2593
tcp        0      0 127.0.0.1:51222         127.0.0.1:36902         ESTABLISHED 0
2607
tcp        0      0 127.0.0.1:57008         127.0.0.1:50206         ESTABLISHED 0
2225
tcp        0      0 10.10.50.150:22         10.10.50.16:42536       ESTABLISHED 0
66886
tcp        0      0 127.0.0.1:45860         127.0.0.1:29595         ESTABLISHED 0
2631
tcp        0      0 127.0.0.1:29595         127.0.0.1:45863         ESTABLISHED 0
2638
tcp        0      0 127.0.0.1:44132         127.0.0.1:43938         ESTABLISHED 0
2643
```

```
tcp        0      0 127.0.0.1:45868         127.0.0.1:29595         ESTABLISHED 0
2667
tcp        0      0 127.0.0.1:39516         127.0.0.1:38492         ESTABLISHED 0
2220
tcp        0      0 127.0.0.1:29595         127.0.0.1:45842         ESTABLISHED 0
1482
tcp        0      0 127.0.0.1:46164         127.0.0.1:39592         ESTABLISHED 0
2688
tcp        0      0 127.0.0.1:57895         127.0.0.1:33197         ESTABLISHED 0
4596
tcp        0      0 127.0.0.1:44859         127.0.0.1:53512         ESTABLISHED 11
7098
tcp        0      0 127.0.0.1:37210         127.0.0.1:41078         ESTABLISHED 0
4293
tcp        0      0 127.0.0.1:50206         127.0.0.1:57010         ESTABLISHED 0
2583
tcp        0      0 127.0.0.1:53512         127.0.0.1:44859         ESTABLISHED 0
7099
tcp        0      0 127.0.0.1:34260         127.0.0.1:55985         ESTABLISHED 0
4294
tcp        0      0 127.0.0.1:29595         127.0.0.1:45894         ESTABLISHED 0
4415
tcp        0      0 127.0.0.1:57892         127.0.0.1:33197         ESTABLISHED 0
4578
tcp        0      0 127.0.0.1:43938         127.0.0.1:44132         ESTABLISHED 0
2644
tcp        0      0 127.0.0.1:56961         127.0.0.1:34647         ESTABLISHED 11
7103
tcp        0      0 127.0.0.1:43938         127.0.0.1:44136         ESTABLISHED 0
2673
tcp        0      0 127.0.0.1:44086         127.0.0.1:54304         ESTABLISHED 11
67027
tcp        0      0 127.0.0.1:34244         127.0.0.1:55985         ESTABLISHED 0
2686
tcp        0      0 127.0.0.1:57057         127.0.0.1:50206         ESTABLISHED 0
4570
tcp        0      0 127.0.0.1:50436         127.0.0.1:35592         ESTABLISHED 0
35094
tcp        0      0 127.0.0.1:57052         127.0.0.1:50206         ESTABLISHED 0
4426
tcp        0      0 127.0.0.1:59988         127.0.0.1:42946         ESTABLISHED 0
4591
tcp        0      0 127.0.0.1:45836         127.0.0.1:29595         ESTABLISHED 0
1322
tcp        0      0 127.0.0.1:45843         127.0.0.1:29595         ESTABLISHED 0
1474
tcp        0      0 127.0.0.1:45842         127.0.0.1:29595         ESTABLISHED 0
1473
tcp        0      0 127.0.0.1:33197         127.0.0.1:57895         ESTABLISHED 0
4597
tcp        0      0 127.0.0.1:52988         127.0.0.1:47252         ESTABLISHED 0
4435
tcp        0      0 127.0.0.1:53512         127.0.0.1:44705         ESTABLISHED 0
34886
tcp        0      0 127.0.0.1:45840         127.0.0.1:29595         ESTABLISHED 0
1471
tcp        0      0 127.0.0.1:50206         127.0.0.1:57008         ESTABLISHED 0
2228
tcp        0      0 127.0.0.1:33787         127.0.0.1:41248         ESTABLISHED 0
4270
tcp        0      0 127.0.0.1:29595         127.0.0.1:45846         ESTABLISHED 0
1486
tcp        0      0 127.0.0.1:45879         127.0.0.1:29595         ESTABLISHED 0
4253
 --More--
```

show system core-dumps

The **show system core-dumps** command displays information about the system core files.

Command Syntax

run show system core-dumps

Example

• This example demonstrates how to show system core-dumps:

```
admin@XorPlus# run show system core-dumps
total 0
```

show system cpu-usage

The **show system cpu-usage** command displays information about the cpu usage.

Command Syntax

run show system cpu-usage

Example

• This example demonstrates how to show system connections:

```
admin@XorPlus# run show system cpu-usage
CPU usage: 7%
```

show system date

The **show system date** command displays information about the system current date.

Command Syntax

run show system date

Example

• This example demonstrates how to show system date:

```
admin@XorPlus# run show system date
Thu Nov 10 23:55:38 UTC 2005
```

show system fan

The **show system fan** command displays information about the system status of fan.

Command Syntax

run show system fan

Example

• This example demonstrates how to show system fan:

```
admin@XorPlus# run show system fan
Sensor Temperature:
Sensor 1 Temperature : 45 C / 113.00 F
Sensor 2 Temperature : 42 C / 107.60 F
Sensor 3 Temperature : 47 C / 116.60 F
Sensor 4 Temperature : 38 C / 100.40 F
Fan Status:
Fan 1 speed = 9747 RPM, PWM = 59, Forward
Fan 2 speed = 9836 RPM, PWM = 59, Forward
Fan 3 speed = 9782 RPM, PWM = 59, Forward
```

show system memory-usage

The **show system memory-usage** command displays information about memory usage.

Command Syntax

run show system memory-usage

Example

• This example demonstrates how to show system memory-usage:

```
admin@XorPlus# run show system memory-usage
total used free shared buffers cached
Mem: 515808 200528 315280 0 3048 60864
-/+ buffers/cache: 136616 379192
Swap: 0 0 0
```

show system name

The **show system name** command displays information about the host name.

Command Syntax

run show system name

Example

• This example demonstrates how to show system name:

```
admin@XorPlus# run show system name
admin@XorPlus
```

show system ntp-status

The **show system ntp-status** command displays information about the switch NTP status.

Command Syntax

run show system ntp-status

Example

• This example demonstrates how to show system ntp-status:

```
admin@XorPlus# run show system ntp-status
NTP Server information:
server 192.168.10.100
```

```
NTP Server Sync information:
ntp_gettime() returns code 0 (OK)
  time d709f74e.9b523000  Tue, Apr 29 2014 10:02:54.606, (.606723),
  maximum error 6016 us, estimated error 16 us, TAI offset 0
ntp_adjtime() returns code 0 (OK)
  modes 0x0 (),
  offset 0.000 us, frequency 0.000 ppm, interval 1 s,
  maximum error 6016 us, estimated error 16 us,
  status 0x1 (PLL),
  time constant 7, precision 1.000 us, tolerance 500 ppm,
     remote           refid      st t when poll reach   delay   offset  jitter
==============================================================================
 192.168.10.100  .INIT.          16 u    -   64    0    0.000    0.000   0.000
```

show system os

The **show system os** command displays information about operating system details.

Command Syntax

run show system os

Example

• This example demonstrates how to show system os:

```
admin@XorPlus# run show system os
Linux XorPlus 2.6.27 #1 Mon Mar 3 20:40:05 CST 2014 ppc GNU/Linux
```

show system processes brief

The **show system processes brief** command displays processes in a brief format.

Command Syntax

run show system processes brief

Example

• This example demonstrates how to show system processes succinctly:

```
admin@XorPlus# run show system processes brief
PID TTY STAT TIME COMMAND
1 ? Ss 0:01 init [2]
2 ? S< 0:00 [kthreadd]
3 ? S< 0:01 [ksoftirqd/0]
4 ? S< 0:00 [watchdog/0]
5 ? S< 0:14 [events/0]
6 ? S< 0:00 [khelper]
48 ? S< 0:00 [kblockd/0]
55 ? S< 0:00 [ata/0]
56 ? S< 0:00 [ata_aux]
58 ? S< 0:00 [kseriod]
99 ? S 0:00 [pdflush]
100 ? S 0:00 [pdflush]
101 ? S< 0:00 [kswapd0]
147 ? S< 0:00 [aio/0]
156 ? S< 0:00 [nfsiod]
831 ? S< 0:00 [ftld]
853 ? S< 0:00 [rpciod/0]
857 ? S< 0:00 [kjournald]
2338 ? Ss 0:00 /usr/sbin/cron -L 0
2370 ? Ss 0:00 /usr/sbin/xinetd -pidfile /var/run/xinetd.pid -stayalive -inetd_compat
```

```
-inetd_ipv6
2483 ? S 0:18 pica_cardmgr
2485 ? S 6:14 pica_sif
2631 ? S 0:32 pica_lacp
2648 ? Sl 102:22 pica_lcmgr
2654 ? S 0:29 pica_login
3405 ? S 3:10 pica_mstp
3409 ? S 0:18 xorp_policy
3411 ? Ss 8:12 /pica/bin/xorp_rtrmgr -d -L local0.info -P /var/run/xorp_rtrmgr.pid
3450 ? S 0:57 pica_dhcp
3466 ? S 0:36 xorp_static_routes
3474 ? S 0:37 xorp_ospfv2
3511 tty1 Ss+ 0:00 /sbin/getty 38400 tty1
3518 tty2 Ss+ 0:00 /sbin/getty 38400 tty2
3519 tty3 Ss+ 0:00 /sbin/getty 38400 tty3
3816 ? Ss 0:00 dhclient eth0
4880 ? Ss 0:00 in.telnetd: 10.10.50.47
4881 pts/0 Ss 0:00 login -h 10.10.50.47 -p
4882 pts/0 S+ 0:00 -bash
4891 pts/0 S+ 0:02 /pica/bin/pica_sh
9021 pts/0 R 0:00 ps ax
15109 ? Ss 0:00 in.telnetd: 10.10.50.47
15110 pts/1 Ss 0:00 login -h 10.10.50.47 -p
15111 pts/1 S+ 0:00 -bash
15120 pts/1 S+ 0:17 /pica/bin/pica_sh
15327 ? Ss 0:00 in.telnetd: 10.10.50.47
15328 pts/2 Ss 0:00 login -h 10.10.50.47 -p
15342 pts/2 S+ 0:00 -bash
15351 pts/2 S+ 0:26 /pica/bin/pica_sh
15869 ttyS0 Ss 0:00 /bin/login -
15870 ttyS0 S+ 0:00 -bash
15881 ttyS0 S+ 0:17 /pica/bin/pica_sh
21746 ? Ss 0:00 in.telnetd: 10.10.50.153
21747 pts/3 Ss 0:00 login -h 10.10.50.153 -p
21748 pts/3 S+ 0:00 -bash
21757 pts/3 S+ 0:10 /pica/bin/pica_sh
27523 ? Sl 0:00 /usr/sbin/rsyslogd -c5
31989 ? S 0:00 radvd
31990 ? Ss 0:01 radvd
```

show system processes detail

The **show system processes detail** command displays processes in a detailed format.

Command Syntax

run show system processes detail

Example

• This example demonstrates how to show system processes detail:

```
admin@XorPlus# run show system processes detail
USER    PID    %CPU    %MEM    VSZ    RSS    TTY    STAT   START    TIME     COMMAND
root    1       0.0    0.1    2400    856     ?      Ss    Nov09    0:01     init [2]
root    2       0.0    0.0     0       0      ?      S<    Nov09    0:00    [kthreadd]
root    3       0.0    0.0     0       0      ?      S<    Nov09    0:01    [ksoftirqd/0]
root    4       0.0    0.0     0       0      ?      S<    Nov09    0:00    [watchdog/0]
root    5       0.0    0.0     0       0      ?      S<    Nov09    0:14    [events/0]
root    6       0.0    0.0     0       0      ?      S<    Nov09    0:00    [khelper]
root    48      0.0    0.0     0       0      ?      S<    Nov09    0:00    [kblockd/0]
root    55      0.0    0.0     0       0      ?      S<    Nov09    0:00    [ata/0]
root    56      0.0    0.0     0       0      ?      S<    Nov09    0:00    [ata_aux]
root    58      0.0    0.0     0       0      ?      S<    Nov09    0:00    [kseriod]
root    99      0.0    0.0     0       0      ?      S     Nov09    0:00    [pdflush]
root    100     0.0    0.0     0       0      ?      S     Nov09    0:00    [pdflush]
```

```
root   101    0.0   0.0    0      0     ?     S<   Nov09   0:00   [kswapd0]
root   147    0.0   0.0    0      0     ?     S<   Nov09   0:00   [aio/0]
root   156    0.0   0.0    0      0     ?     S<   Nov09   0:00   [nfsiod]
root   831    0.0   0.0    0      0     ?     S<   Nov09   0:00   [ftld]
root   853    0.0   0.0    0      0     ?     S<   Nov09   0:00   [rpciod/0]
root   857    0.0   0.0    0      0     ?     S<   Nov09   0:00   [kjournald]
root   2338   0.0   0.1   2768   852    ?     Ss   Nov09   0:00   /usr/sbin/cron -L 0
root   2370   0.0   0.1   3656   1020   ?     Ss   Nov09   0:00   /usr/sbin/xinetd -pidfile
/var/run/xinetd.pid -stayalive -inetd_compat -inetd_ipv6
root   2483   0.0   1.4   22660  7532   ?     S    Nov09   0:18   pica_cardmgr
root   2485   0.4   4.5   43000  23444  ?     S    Nov09   6:16   pica_sif
root   2631   0.0   1.6   26504  8620   ?     S    Nov09   0:32   pica_lacp
root   2648   6.6   5.6   108136 29188  ?     Sl   Nov09   103:00 pica_lcmgr
root   2654   0.0   2.4   30596  12688  ?     S    Nov09   0:30   pica_login
root   3405   0.2   2.7   32244  14200  ?     S    Nov09   3:11   pica_mstp
root   3409   0.0   1.3   18624  7100   ?     S    Nov09   0:18   xorp_policy
root   3411   0.5   3.4   40304  17772  ?     Ss   Nov09   8:16   /pica/bin/xorp_rtrmgr -d
-L local0.info -P /var/run/xorp_rtrmgr.pid
root   3450   0.0   1.8   27524  9488   ?     S    Nov09   0:58   pica_dhcp
root   3466   0.0   1.4   18060  7284   ?     S    Nov09   0:36   xorp_static_routes
root   3474   0.0   1.4   19816  7600   ?     S    Nov09   0:37   xorp_ospfv2
root   3511   0.0   0.1   2672   916   tty1   Ss+  Nov09   0:00   /sbin/getty 38400 tty1
root   3518   0.0   0.1   2672   916   tty2   Ss+  Nov09   0:00   /sbin/getty 38400 tty2
root   3519   0.0   0.1   2672   916   tty3   Ss+  Nov09   0:00   /sbin/getty 38400 tty3
root   3816   0.0   0.4   5128   2336   ?     Ss   Nov09   0:00   dhclient eth0
root   4880   0.0   0.2   2784   1084   ?     Ss   Nov10   0:00   in.telnetd: 10.10.50.47
root   4881   0.0   0.2   3492   1268  pts/0  Ss   Nov10   0:00   login -h 10.10.50.47 -p
admin  4882   0.0   0.2   3500   1544  pts/0  S+   Nov10   0:00   -bash
admin  4891   0.0   2.1   38396  11308 pts/0  S+   Nov10   0:02   /pica/bin/pica_sh
admin  9436   0.0   0.2   3208   1112  pts/0  R    00:31   0:00   ps aux
root   15109  0.0   0.2   2784   1084   ?     Ss   Nov10   0:00   in.telnetd: 10.10.50.47
root   15110  0.0   0.2   3492   1268  pts/1  Ss   Nov10   0:00   login -h 10.10.50.47 -p
admin  15111  0.0   0.2   3500   1544  pts/1  S+   Nov10   0:00   -bash
admin  15120  0.0   2.4   40068  12536 pts/1  S+   Nov10   0:17   /pica/bin/pica_sh
root   15327  0.0   0.2   2784   1092   ?     Ss   Nov10   0:00   in.telnetd: 10.10.50.47
root   15328  0.0   0.2   3492   1268  pts/2  Ss   Nov10   0:00   login -h 10.10.50.47 -p
admin  15342  0.0   0.2   3500   1544  pts/2  S+   Nov10   0:00   -bash
admin  15351  0.0   2.6   41480  13684 pts/2  S+   Nov10   0:27   /pica/bin/pica_sh
root   15869  0.0   0.2   3492   1268  ttyS0  Ss   Nov10   0:00   /bin/login -
admin  15870  0.0   0.3   3540   1696  ttyS0  S+   Nov10   0:00   -bash
admin  15881  0.0   2.6   41272  13908 ttyS0  S+   Nov10   0:17   /pica/bin/pica_sh
root   21746  0.0   0.2   2784   1084    ?    Ss   Nov10   0:00   in.telnetd: 10.10.50.153
root   21747  0.0   0.2   1268          pts/3  Ss   Nov10   0:00   login -h 10.10.50.153 -p
admin  21748  0.0   0.2   3500   1544  pts/3  S+   Nov10   0:00   -bash
admin  21757  0.0   2.2   39704  11652 pts/3  S+   Nov10   0:10   /pica/bin/pica_sh
root   27523  0.0   0.3   28488  1736   ?     Sl   Nov10   0:00   /usr/sbin/rsyslogd -c5
root   31989  0.0   0.0   2448   368    ?     S    Nov10   0:00   radvd
root   31990  0.0   0.0   2448   508    ?     Ss   Nov10   0:01   radvd
```

show system rollback compare to

The **show system rollback compare to** command shows the difference between tow rolled back configurations.

Command Syntax

run show system rollback compare to <other-config>

Parameter

•<other-config>Show the difference between rolled back configuration [1-49] and current configuration.

Example

• This example demonstrates how to show system rollback compare to 02:

```
admin@XorPlus# run show system rollback compare to 02
3c3
< /*Last commit     : Tue Apr 29 10:02:42 2014 by admin*/
---
> /*Last commit     : Tue Apr 29 09:38:47 2014 by admin*/
23c23
<             code-point 32
---
>             code-point 0
1254d1253
<     ntp-server-ip 192.168.10.100
```

show system rollback file

The **show system rollback file** command shows rolled back configuration file.

Command Syntax

run show system rollback file <rollback>

Parameter

•<other-config>Show rolled back configuration, range is [01, 02, 03, ... 49].

Example

• This example demonstrates how to show system rollback file 01:

```
admin@XorPlus# run show system rollback file 01
/*XORP Configuration File, v1.0*/
/* Copyright (C) 2009-2013 Pica8, Inc.*/
/*Last commit     : Fri Nov 11 15:17:55 2005 by root*/
/*PicOS Version   : 2.0.6*/
/*Version Checksum: 6165f4a04921d24410b9bf2780b0a960*/
interface {
    ecmp {
        max-path: 4
        hash-mapping {
            field {
                ingress-interface {
                    disable: true
                }
                vlan {
                    disable: true
                }
                ip-protocol {
                    disable: true
                }
                ip-source {
                    disable: false
                }
                ip-destination {
                    disable: false
                }
                port-source {
                    disable: false
                }
                port-destination {
                    disable: false
                }
            }
        }
    }
    aggregate-balancing {
        hash-mapping {
            field {
                ingress-interface {
```

```
                    disable: false
                }
                ethernet-source-address {
                    disable: false
                }
                ethernet-destination-address {
                    disable: false
                }
                ethernet-type {
                    disable: false
                }
                vlan {
                    disable: false
                }
                ip-protocol {
                    disable: false
                }
                ip-source {
                    disable: false
                }
                ip-destination {
                    disable: false
                }
                port-source {
                    disable: false
                }
                port-destination {
                    disable: false
                }
 --More--
```

show system rollback list

The **show system rollback list** command shows rolled back file list.

Command Syntax

run show system rollback list

Example

• This example demonstrates how to show system rollback list:

```
admin@XorPlus# run show system rollback list
-rw-rw-r-- 1 admin xorp 14003 Nov 11 15:43 /pica/config/pica.conf
-rw-rw-r-- 1 admin xorp 14003 Nov 11 15:42 /pica/config/pica.conf.01
-rw-rw-r-- 1 root  xorp 13878 Nov 11 15:17 /pica/config/pica.conf.02
```

show system rpsu

The **show system rpsu** command shows the status of Redundant Power Supply Unit.

Command Syntax

run show system rpsu

Example

• This example demonstrates how to show system rpsu:

```
admin@XorPlus# run show system rpsu
RPSU is not supported for Pronto3290
```

show system serial-number

The **show system serial-number** command shows the serial number of Motherboard, RPSU, and SFP module.

Command Syntax

run show system serial-number

Example

• This example demonstrates how to show system serial-number:

```
admin@XorPlus# run show system serial-number
MotherBoard Serial Number : QTFCA63170013
SFP te-1/1/49 :
Vendor Name : AOI
Serial Number : 074613E0076
Module Type : SR/850nm
Cable Length : 0m
SFP te-1/1/50 :
Vendor Name : AOI
Serial Number : 074613E0054
Module Type : SR/850nm
Cable Length : 0m
```

show system temperature

The **show system temperature** command shows the switch temperature.

Command Syntax

run show system temperature

Example

• This example demonstrates how to show system temperature:

```
admin@XorPlus# run show system temperature
Temperature: 41 C / 105 F
```

show system uptime

The **show system uptime** command shows the time since system and processes started.

Command Syntax

run show system uptime

Example

• This example demonstrates how to show system uptime:

```
admin@XorPlus# run show system uptime
16:01:44 up 53 min, 3 users, load average: 0.09, 0.07, 0.09
```

show system users

The **show system users** command shows users who are currently logging in.

Command Syntax

run show system users

Example

• This example demonstrates how to show system users:

```
admin@XorPlus# run show system users
admin pts/0 Nov 11 15:35 (10.10.50.47)
admin ttyS0 Nov 11 15:18
admin pts/1 Nov 11 15:38 (10.10.50.47)
```

system aaa local disable

User can configure the local log-in or delete it.

Command Syntax

Set system aaa local disable <*bool*>

delete system aaa local disable

Parameter

• <*bool*> The effective value is true/false. When the value is true, users cannot log in the switch with a local account.

Example

• This example demonstrates how to show the local authentication:

```
admin@XorPlus# set system aaa local disable true
admin@XorPlus# commit
```

system aaa radius accounting disable

User can configure radius accounting disable or enable. User can also can delete it.

Command Syntax

set system aaa radius accounting disable <*bool*>

delete system aaa radius accounting disable

Parameter

• <*bool*> The effective value is true/false. When the value is true,the radius accounting is disable.When the value is false,the radius accounting is enable.

Example

• This example demonstrates how to configure the radius enable:

```
admin@XorPlus# set system aaa radius accounting disable false
admin@XorPlus# commit
```

system aaa radius accounting server-ip

User can configure radius accounting server IP and delete it.

Command Syntax

set system aaa radius accounting server-ip <*IPV4*>

delete system aaa radius accounting server-ip <*IPV4*>

Parameter

• <*IPV4*> The effective value is radius accounting server IP.

Example

• This example demonstrates how to configure the radius accounting server IP:

```
admin@XorPlus# set system aaa radius accounting server-ip 10.10.50.41
admin@XorPlus# commit
```

system aaa radius accounting server-ip <IPV4> port

User can configure radius accounting server IP and port.

Command Syntax

set system aaa radius accounting server-ip <*IPV4*> port <*uint*>

delete system aaa radius accounting server-ip <*IPV4*> port

Parameter

• <*IPV4*> The effective value is radius accounting server IP.

• <*uint*> The effective value is uint.

Example

• This example demonstrates how to configure the radius accounting IP and the radius server port:

```
admin@XorPlus# set system aaa radius accounting server-ip 10.10.50.41 port 2
admin@XorPlus# commit
```

system aaa radius accounting server-ip <IPV4> shared-key

User can configure radius accounting server IP and the shared-key. User can also delete it.

Command Syntax

set system aaa radius accounting server-ip <*IPV4*> shared-key <*text*>

delete system aaa radius accounting server-ip <*IPV4*> shared-key

Parameter

• <*IPV4*> The effective value is radius accounting server IP.

• <*text*> The effective value is text,it stands for shared key.

Example

• This example demonstrates how to configure the radius accounting IP and the radius server shared key:

```
admin@XorPlus# set system aaa radius accounting server-ip 10.10.50.41 shared-key test123
admin@XorPlus# commit
```

system aaa radius accounting server-ip <IPV4> timeout

User can configure radius accounting IP and radius accounting server timeout or delete it.

Command Syntax

set system aaa radius accounting server-ip <*IPV4*> timeout <*uint*>

delete system aaa radius accounting server-ip <*IPV4*> timeout

Parameter

• <*IPV4*> The effective value is radius accounting server IP.

• <*uint* >The effective value is uint.

Example

• This example demonstrates how to configure the radius accounting IP and the radius server timeout:

```
admin@XorPlus# set system aaa radius accounting server-ip 10.10.50.41 timeout 5
admin@XorPlus# commit
```

system aaa radius authorization disable

User can disable/enable radius authorization. User can also delete it.

Command Syntax

set system aaa radius authorization disable <*bool*>

delete system aaa radius authorization disable

Parameter

• <*bool*>The effective value is true/false. When the value is true, the radius authorization is disabled. When the value is false, the radius authorization is enabled.

Example

• This example demonstrates how to enable the radius authorization:

```
admin@XorPlus# set system aaa radius authorization disable false
admin@XorPlus# commit
```

system aaa radius authorization server-ip

User can configure radius authorization server-ip or delete it.

Command Syntax

set system aaa radius authorization server-ip <*IPV4*>

delete system aaa radius authorization server-ip <*IPV4*>

Parameter

• <*IPV4*> The effective value is radius authorization server IP.

Example

• This example demonstrates how to set the radius authorization server-ip as 10.10.50.41:

```
admin@XorPlus# set system aaa radius authorization server-ip 10.10.50.41
admin@XorPlus# commit
```

system aaa radius authorization server-ip <IPV4> port

User can configure radius authorization server IP and port or delete it.

Command Syntax

set system aaa radius authorization server-ip <*IPV4*> port <*uint*>

delete system aaa radius authorization server-ip <*IPV4*> port

Parameter

• <*IPV4*> The effective value is radius authorization server IP.

• <*uint*> The effective value is uint.

Example

• This example demonstrates how to configure the radius authorization IP and the radius server port:

```
admin@XorPlus# set system aaa radius authorization server-ip 10.10.50.41 port 2
admin@XorPlus# commit
```

system aaa radius authorization server-ip <IPV4> shared-key

User can configure radius authorization server IP and the shared-key or delete it.

Command Syntax

set system aaa radius authorization server-ip <IPV4> shared-key <text>

delete system aaa radius authorization server-ip <IPV4> shared-key

Parameter

• <*IPV4*>The effective value is radius authorization server IP.

• <*text*> The effective value is text,it refers to shared-key.

Example

• This example demonstrates how to configure the radius authorization IP and the radius server shared key:

```
admin@XorPlus# set system aaa radius authorization server-ip 10.10.50.41 shared-key test123
admin@XorPlus# commit
```

system aaa radius authorization server-ip <IPV4> timeout

User can configure radius authorization IP and radius authorization server timeout or delete it.

Command Syntax

set system aaa radius authorization server-ip <*IPV4*> timeout <*uint*>

delete system aaa radius authorization server-ip <*IPV4*> timeout

Parameter

• <*IPV4*> The effective value is radius authorization server IP.

• <*uint* > The effective value is uint.

Example

• This example demonstrates how to configure the radius authorization IP and the radius server timeout:

```
admin@XorPlus# set system aaa radius authorization server-ip 10.10.50.41 timeout 5
admin@XorPlus# commit
```

system aaa tacacs-plus accounting

User can enable/disable the tacacs+ accounting or delete it.

Command Syntax

set system aaa tacacs-plus accounting <*bool*>

delete system aaa tacacs-plus accounting

Parameter

• <*bool*>The effective value is true/false. When the value is true, tacacs+ accounting is enabled. When the value is false, tacacs+ accounting is disabled.

Example

• This example demonstrates how to enable the tacacs+ accounting:

```
admin@XorPlus# set system aaa tacacs-plus accounting true
admin@XorPlus# commit
```

system aaa tacacs-plus authorization

User can enable/disable the tacacs+ authorization or delete it.

Command Syntax

set system aaa tacacs-plus authorization <*bool*>

delete system aaa tacacs-plus authorization

Parameter

• <*bool*> The effective value is true/false. When the value is true, tacacs+ authorization is enabled. When the value is false, the tacacs+ authorization is disabled.

Example

• This example demonstrates how to configure enable tacacs+ authentication:

```
admin@XorPlus# set system aaa tacacs-plus authorization true
admin@XorPlus# commit
```

system aaa tacacs-plus auth-type

User can configure tacacs+ authentication type or delete it.

Command Syntax

set system aaa tacacs-plus auth-type <*type*>
delete system aaa tacacs-plus auth-type

Parameter

• <*type*> Configure tacacs+ authentication type as ascii,chap or pap. Required select include:

- **ascii** ascii authentication type
- **chap** chap authentication type
- **pap** pap authentication type

Example

• This example demonstrates how to configure ascii authentication type as ascii authentication type:

```
admin@XorPlus# set system aaa tacacs-plus auth-type ascii
admin@XorPlus# commit
```

system aaa tacacs-plus disable

User can enable/disable the tacacs+ or delete the acacs+.

Command Syntax

set system aaa tacacs-plus disable <*bool*>
delete system aaa tacacs-plus disable

Parameter

• <*bool*> The effective value is true/false. When the value is true, tacacs+ is disabled. When the value is false, tacacs+ is enabled.

Example

• This example demonstrates how to enable the tacacs+:

```
admin@XorPlus# set system aaa tacacs-plus disable false
admin@XorPlus# commit
```

system aaa tacacs-plus key

User can configure the tacacs+ server key or delete it.

Command Syntax

set system aaa tacacs-plus key <*text*>
delete system aaa tacacs-plus key

Parameter

• <*text*> The effective value is text. The value is the tacacs+ server shared key.

Example

• This example demonstrates how to configure the tacacs+ key as pica8:

```
admin@XorPlus# set system aaa tacacs-plus key pica8
admin@XorPlus# commit
```

system aaa tacacs-plus port-number

User can configure the tacacs+ server port number or delete it.

Command Syntax

set system aaa tacacs-plus port-number <*uint*>
delete system aaa tacacs-plus port-number

Parameter

• <*uint*> The effective value is uint. The value is the tacacs+ server port number.

Example

• This example demonstrates how to configure the tacacs+ port number:

```
admin@XorPlus# set system aaa tacacs-plus port-number 3
admin@XorPlus# commit
```

system aaa tacacs-plus server-ip

User can configure the tacacs+ server ip address or delete it.

Command Syntax

set system aaa tacacs-plus server-ip <*IPV4*>
delete system aaa tacacs-plus server-ip <*IPV4*>

Parameter

• <*IPV4*> The effective value is the tacacs+ server ip address.

Example

• This example demonstrates how to configure the tacacs+ server ip address as 10.10.53.53:

```
admin@XorPlus# set system aaa tacacs-plus server-ip 10.10.53.53
admin@XorPlus# commit
```

system hostname

To specify or modify the hostname for the switch, use the **set system hostname** command in L2/L3 configuration mode. To reset the hostname to default, use the **delete** form of this command.

Command Syntax

set system hostname *hostname*
delete system hostname

Parameters

hostname	New hostname for the switch. The maximum length is 63.

Example

This example demonstrates how to configure the system's network name to 123.

```
admin@Switch# set system hostname 123
admin@Switch# commit
Commit OK.
Save done.
admin@123#
```

system inband enable

User can allow/not allow the inband service or delete it.

Command Syntax

set system inband enable <*bool*>
delete system inband enable

Parameter

• <*bool*> The effective value is true/false. The default value is false. When the value is true, the inband service is enabled. When the value is false, the inband service is disabled.

Example

• This example demonstrates how to allow the inband service:

```
admin@XorPlus# set system inband enable true
admin@XorPlus# commit
```

system login-acl network

User can configure the ACL to control whether remote hosts within specified subnetworks are allowed to log in the system. User can set ipv4-address/netmask or ipv6-address/netmask to configure remote hosts from both subnetworks log in. User can also delete them.

Command Syntax

set system login-acl network <*IPV4Net*>
set system login-acl network <*IPV6Net*>
delete system login-acl network <*IPV4Net*>
delete system login-acl network <*IPV6Net*>

Parameter

• <*IPV4Net*> It stands ipv4 address and netmask.
• <*IPV6Net*> It stands ipv6 address and netmask.

Example

• This example demonstrates how to configure the login ACL attributes is ipv4-address and netmask:

```
admin@XorPlus# set system login-acl network 192.168.1.0/24
admin@XorPlus# commit
```

• This example demonstrates how to configure the login ACL attributes is ipv6-address and netmask:

```
admin@XorPlus# set system login-acl network 2001:1:1:1::/64
admin@XorPlus# commit
```

system login announcement

User can configure a system announcement message (displayed after login).

Command Syntax

set system login announcement <*text*>
delete system login announcement

Parameter

• <*text*> VLAN tag identifier. The effective value type is text.

Example

• This example demonstrates how to configure the system announcement message after login:

```
admin@XorPlus# set system login announcement "welcome the switch-1101"
admin@XorPlus# commit
```

system login user

To configure a user account, use the **set system login user** command in L2/L3 configuration mode. To remove a user account, use the **delete** form of the command.

Command Syntax

set system login user *username*
delete system login user *username*

Parameter

username	The username for the new user.

Example

This example demonstrates how to create a new user account named pica8:

```
admin@Switch# set system login user pica8
```

system login user admin authentication plain-text-password

User can configure a password for the user admin or delete it.

Command Syntax

set system login user admin authentication plain-text-password <*text*>

delete system login user admin authentication plain-text-password

Parameter

• <*text*> The effective value type is text.

Example

• This example demonstrates how to create a password for the user admin:

```
admin@XorPlus# set system login user admin authentication plain-text-password pica8
admin@XorPlus# commit
```

system login user admin class

User can configure the user admin is a read-only account. The newly created user account, by default, is read-only.

Command Syntax

set system login user admin class <limit>

delete system login user admin class

Parameter

<*limit*> Configure the permission as read-only or super-user. Required select include:

- **read-only** permissions[view]
- **super-user** permission[all]
- Default value: read-only

Example

• This example demonstrates how to configure the user admin as super-user:

```
admin@XorPlus# set system login user admin class super-user
admin@XorPlus# commit
```

system login user authentication plain-text-password

To create the password for a user account, use the **set system login user authentication plain-text-password** command in L2/L3 configuration mode. To remove the password for a user, use the delete form of the command.

Command Syntax

set system login user *username* **authentication plain-text-password** *password*
delete system login user *username* **authentication plain-text-password**

Parameters

username	Name of user.
password	User's password. By default, the password length must be at least 6 characters.

Example

The following example sets the password for user *alpha*; if the username does not already exist, the command will also create it.

```
admin@Switch# set system login user alpha authentication plain-text-password mypica8
```

system login user class

To set permissions for a user, use the **system login user class** command in L2/L3 configuration mode. By default, a newly created user account is **read-only**. To delete a user, use the **delete** form of the command.

Command Syntax

set system login user *username* **class** [**read-only** | **super-user**]
delete system login user *username* **class**

Parameters

username	The name of the user.
read-only	(Optional) This keyword gives view-only or read-only permissions to user. This is the default option.
super-user	(Optional) This keyword gives all permissions to user. The default option is **read-only**.

Example

The following example configures a **super-user** account named alpha:

```
admin@Switch# set system login user alpha class super-user
```

system timezone

User can configure local time zone or delete it.

Command Syntax

set system syslog timezone <time-zone>

delete system syslog timezone

Parameter

•<*time-zone*>The effective value is a time zone.

Example

• This example demonstrates how to set local time zone to Shanghai:

```
admin@XorPlus# set system timezone Asia/Shanghai
admin@XorPlus# commit
```

system ntp-server-ip

User can configure the NTP server IP address or delete it. The L2/L3 switch synchronizes with the NTP server only when the configuration commands are committed using the commit command.

Command Syntax

set system ntp-server-ip <*IPV4*>

delete system ntp-server-ip <*IPV4*>

Parameter

• <*IPV4*> It refer to ipv4 address.

Example

• This example demonstrates how to change the NTP server's IP address:

```
admin@XorPlus# set system ntp-server-ip 192.168.10.100
admin@XorPlus# commit
```

set interface gigabit-ethernet ptp mode

The **set interface gigabit-ethernet ptp mode** command configures the device interface as the E2ETC node type, and enables the PTP function on the interface.

Command Syntax

set interface gigabit-ethernet *<port>* **ptp mode** {e2etransparent | none}

Parameter

Parameter	Description
port	Ethernet switching port identifier, the valid ports range: 1-52.
ptp mode {e2etransparent | none}	Configure the PTP mode on a switch interface: • e2etransparent: configures the device interface as the E2ETC node type and enables the PTP function on the interface. • none: disable the PTP function on the interface.

Note: the PTP function can only be configured on the physical interface.

Example

• Configure the port te-1/1/25 that receiving PTP messages and the port te-1/1/26 that sends PTP packets as E2ETC node.

```
admin@Xorplus# set interface gigabit-ethernet te-1/1/25 ptp mode e2etransparent
admin@Xorplus# set interface gigabit-ethernet te-1/1/26 ptp mode e2etransparent
```

system remote-config allow-client

User can remotely configure client IPV4 address and netmask or delete it.

Command Syntax

set system remote-config allow-client *<IPV4Net>*
delete system remote-config allow-client *<IPV4Net>*

Parameter

• *<IPV4Net>* It stands ipv4 address and netwask.

Example

• This example demonstrates how to remotely configure client IPV4 address and netmask as 192.168.1.0/24:

```
admin@XorPlus# set system remote-config allow-client 192.168.1.0/24
admin@XorPlus# commit
```

system services ssh connection-limit

User can configure the SSH connection limit or delete it.

Command Syntax

set system services ssh connection-limit *<int>*
delete system services ssh connection-limit

Parameter

• <*int*>It is the maximum number of allowed connections,the valid number range 1-250.

Example

• This example demonstrates how to configure the SSH maximum number of connections as 5:

```
admin@XorPlus# set system services ssh connection-limit 5
admin@XorPlus# commit
```

system services ssh disable

User can configure the permission of the SSH login or delete the permission.

Command Syntax

set system services ssh disable <*bool*>

delete system services ssh disable

Parameter

•<*bool*>The effective value is true/false. If the value is true, SSH login is disabled. If value is false, SSH login is enabled.

Example

• This example demonstrates how to configure SSH login as permission:

```
admin@XorPlus# set system services ssh disable false
admin@XorPlus# commit
```

system services ssh protocol-version v2

This command refers to which specific ssh protocol version is supported. User can configure it or delete it.

Command Syntax

set system services ssh protocol-version v2

delete system services ssh protocol-version

Example

• This example demonstrates how to set the specific ssh protocol versions supported to v2:

```
admin@XorPlus# set system services ssh protocol-version v2
admin@XorPlus# commit
```

system services ssh rate-limit

User can configure the maximum number of connections per minute or delete the configuration.

Command Syntax

set system services ssh rate-limit <*int*>

delete system services ssh rate-limit

Parameter

•<*int*>The effective value type is int. The valid number range 1-20.

Example

• This example demonstrates how to set the maximum number of connections per minute to 2:

```
admin@XorPlus# set system services ssh rate-limit 2
admin@XorPlus# commit
```

system services ssh root-login

User can configure allow or deny root access via ssh or delete the limits of authority.

Command Syntax

set system services ssh root-login <*limit*>

delete system services ssh root-login

Parameter

• <*limit*> Configure allow or deny root access via ssh. Required select include:

- **allow** allow root access via ssh
- **deny** do not allow root access via ssh

Example

• This example demonstrates how to allow the root access via ssh:

```
admin@XorPlus# set system services ssh root-login allow
admin@XorPlus# commit
```

system services telnet connection-limit

User can configure the maximum number of allowed connections or delete the configuration.

Command Syntax

set system services telnet connection-limit <*int*>

delete system services telnet connection-limit

Parameter

• <*int*>It is the maximum number of allowed connections,the valid number range 1-250.

Example

• This example demonstrates how to set the maximum number of allowed connections to 100:

```
admin@XorPlus# set system services telnet connection-limit 100
admin@XorPlus# commit
```

system services telnet disable

User can configure to disable or enable telnet login or delete the configuration.

Command Syntax

set system services telnet disable <*bool*>

delete system services telnet disable

Parameter

•<*bool*>The effective value is true/false. If the value is true, telnet login is disabled. If the value is false, telnet login is enabled.

Example

• This example demonstrates how to demonstrate how to configure to enable telnet login:

```
admin@XorPlus# set system services telnet disable false
admin@XorPlus# commit
```

system services telnet rate-limit

User can configure the maximum number of connections per minute or delete it.

Command Syntax

set system services telnet rate-limit <*int*>

delete system services telnet rate-limit

Parameter

•<*int*>The effective value type is int. The valid number range 1-20.

Example

• This example demonstrates how to set the maximum number of connections per minute to 2:

```
XorPlus# set system services telnet rate-limit 2
XorPlus# commit
```

system snmp-acl network

By default, all hosts allow snmp walk the information of the switch. User can configure an SNMP ACL to control which hosts within the subnetwork enable snmp walk the switch. User can also delete the configuration.

Command Syntax

set system snmp-acl network <*IPV4Net*>

delete system snmp-acl network <*IPV4Net*>

Parameter

•<*IPV4Net*> it stands ipv4 address and netmask.

Example

• This example demonstrates how to configure the network 2.2.2.0/24, which enables snmp walk the switch:

```
admin@XorPlus# set system snmp-acl network 2.2.2.0/24
admin@XorPlus# commit
```

system syslog host

User can configure the syslog host ip address or delete the configuration. After user configures the syslog server IP address, the log files will be sent to the syslog server.

Command Syntax

set system syslog host <*IPV4*>

delete system syslog host

Parameter

•<*IPV4*> it stands ipv4 address.

Example

• This example demonstrates how to set the syslog host ip address to 192.168.1.1:

```
admin@XorPlus# set system host 192.168.1.1
admin@XorPlus# commit
```

system syslog local-file

User can configure the system logging local output location. The syslog messages can be stored in RAM or in a local SD card. The user can delete the configuration.

Command Syntax

set system syslog local-file <*log-storage*>

delete system syslog local-file

Parameter

•<*log-storage*> Configure the place of the log storage.Required select include:

- **disk** log storage in disk
- **ram** log storage in ram

Example

• This example demonstrates how to set the log storage as disk:

```
admin@XorPlus# set system syslog local-file disk
admin@XorPlus# commit
```

system syslog port-number

User can configure the syslog host port number or delete the configuration.

Command Syntax

set system syslog port-number <*uint*>

delete system syslog port-number

Parameter

•<*uint*>The effective value type is uint. It refers to the syslog host port number.

Example

• This example demonstrates how to set the syslog host port number to 2:

```
XorPlus# set system syslog port-number 2
XorPlus# commit
```

system syslog port-protocol

User can configure the syslog host port transport protocol. The protocol can be tcp or udp. User can also delete the configuration.

Command Syntax

set system syslog port-protocol <*trans-protocol*>
delete system syslog port-protocol

Parameter

•<*trans-protocol*> Configure transport protocol.Required select include:

- **tcp** tcp syslog transmission
- **udp** udp syslog transmission

Example

• This example demonstrates how to set the syslog host transport protocol as tcp:

```
admin@XorPlus# set system syslog port-protocol tcp
admin@XorPlus# commit
```

set system syslog server-ip <IP> source-interface <text>

This command is only for Verizon-ITNUC. User can configure source interface and then syslog message will use this IP address of this interface as the source IP address after it is routed. The source interface includes eth0, Loopback, vlan interface.

If you configure several IP addresses to loopback or vlan-interface, and then configure source-interface, syslog will choose the smallest IP address as source IP address. But if syslog has used a ip address of source interface and then configure smaller ip address for source interface, this address won't work.

Command Syntax

set system syslog server-ip <IP> source-interface <text>
delete system syslog server-ip <IP> source-interface

Parameter

<IP> Configure syslog server ipv4 address.

- <IPv4> Remote syslog server

<text> Configure an existing network interface, e.g. vlan20, eth0 or loopback

```
This command use the IP address of the source interface as source IP in the IP header
after syslog message is routed.
```

```
If syslog uses TCP protocol, source-interface can't be configured at the same time.
```

Example

• This example demonstrates how to configure source-interface eth0 for a certain syslog server ip address:

```
admin@XorPlus# set system syslog server-ip 10.10.50.176 source-interface eth0
admin@XorPlus# commit
```

• This example demonstrates how to configure source-interface loopback for a certain syslog server ip address:

```
admin@XorPlus# set vlan-interface loopback address 66.66.66.66 prefix-length 32
admin@XorPlus# set system syslog server-ip 10.10.50.176 source-interface loopback
admin@XorPlus# commit
```

• This example demonstrates how to configure source-interface vlan-interface for a certain syslog server ip address:

```
admin@XorPlus# set vlan-interface interface vlan3333 vif vlan3333 address 125.100.75.50
prefix-length 24
admin@XorPlus# set system syslog server-ip 10.10.50.176 source-interface vlan3333
admin@XorPlus# commit
```

VXLAN command

- vxlans source-interface <interface> address
- vxlans udp-port
- set vxlans vni <text> decapsulation mode
- vxlans vni <text> encapsulation mode
- vxlans vni <text> encapsulation vlan
- vxlans vni <text> flood vtep
- vxlans vni <text> flood vtep <ipv4-addr> bfd
- vxlans vni <text> flood vtep <ipv4-addr> mac-address
- vxlans vni <text> flood vtep <ipv4-addr> traffic-type
- vxlans vni <text> interface
- vxlans vni <text> interface <port> vlan <vlan-id>
- set vxlans vni <text> vlan
- set vxlans vni-map-vlan
- set vxlans tunnel-mac-leaning disable
- OVSDB VTEP command
    - set protocols ovsdb controller <controller-name> address
    - set protocols ovsdb controller <controller-name> inactivity-probe-duration 30000
    - set protocols ovsdb controller <controller-name> maximum-backoff-duration
    - set protocols ovsdb controller <controller-name> port
    - set protocols ovsdb controller c1 protocol
    - set protocols ovsdb interface
    - set protocols ovsdb management-ip
    - set protocols ovsdb ssl bootstrap
    - set protocols ovsdb ssl ca-cert
        - set protocols ovsdb ssl certificate
    - set protocols ovsdb ssl private-key
    - set vxlans ovsdb-managed

vxlans source-interface <interface> address

User can configure vxlan source interface ip address .

Command Syntax

set vxlans source-interface *<interface>* address *<ipv4-addr>*

delete vxlans source-interface *<interface>* address *<ipv4-addr>*

Parameter

•*<interface>* The vlan interface, e.g. loopback or vlan10
•*<ipv4-addr>*The IPv4 address

Example

• This example demonstrates how to configure the vxlan to use the IP address 10.10.10.1 as the source address in the encapsulation fields of outbound VXLAN frames.

```
XorPlus# set vxlans source-interface loopback address 10.10.10.1
  XorPlus# commit
```

vxlans udp-port

To configure the UDP destination port number for VXLAN, use the **set vxlans udp-port** command in L2/L3 configuration mode. The default VXLAN UDP port number is 4789.

Command Syntax

set vxlans udp-port *number*

Parameters

number	VXLAN UDP port number. The range of values is from 1024 to 65535.

Example

This example demonstrates how to configure the VXLAN UDP port association to 5000:

```
admin@XorPlus# set vxlans udp-port 5000
```

set vxlans vni <text> decapsulation mode

User can configure decapsulation mode for vxlan vni.

Command Syntax

set vxlans vni *<text>* decapsulation mode *<decapsulation-mode>*

Parameter

• *<text>* VXLAN segment ID, decimal format ranges 1-16777215 or notation dotted format 100.100.200
• *<decapsulation-mode>* Configure vxlan tunnel encapsulation mode. Required select*ion* include:

- **none**: Nothing will change, untagged packets will stay untagged, tagged packets will stay tagged.

- **service-vlan-add**: From network ports to access ports, add 802.1Q tag for both untagged/tagged packets. If the access port is matched by port & vlan, the vlan id of the tag been added will be that vlan, otherwise will be PVID of that port.
- **service-vlan-add-delete**: From network ports to access ports, add 802.1Q tag for both untagged/tagged packets. If the access port is matched by port & vlan, the vlan id of the tag been added will be that vlan. Otherwise, it will be PVID of that port. From access to access, delete tag for tagged packets.
- **service-vlan-add-replace**: From network ports to access ports, add 802.1Q tag for both untagged/tagged packets. If the access port is matched by port & vlan, the vlan id of the tag been added will be that vlan, otherwise will be PVID of that port. From access to access, replace tag for tagged packets. This is default value.
- **service-vlan-delete**: From access to access, delete tag for tagged packets.
- **service-vlan-replace**: From access to access, replace tag for tagged packets

Example

• This example demonstrates how to configure the VXLAN tunnel decapsulation mode for the VNI 10010.

```
admin@XorPlus# set vxlans vni 10010 decapsulation mode none
admin@XorPlus# commit
```

vxlans vni <text> encapsulation mode

User can configure encapsulation mode for vxlan vni.

Command Syntax

set vxlans vni *<text>* encapsulation mode *<encapsulation-mode>*

Parameter

• *<text>* VXLAN segment ID, decimal format ranges 1-16777215 or notation dotted format 100.100.200
• *<encapsulation-mode>* Configure vxlan tunnel encapsulation mode. Required select include:

- **none**: Nothing will change, untagged packets will stay untagged, tagged packets will stay tagged.
- **service-vlan-add**: Add 802.1Q tag for untagged packets, and nothing changed with tagged packets. Encapsulation vlan is required.
- **service-vlan-add-delete**: Add 802.1Q tag for untagged packets, and delete tag for tagged packets. Encapsulation vlan is required.
- **service-vlan-add-replace**: Add 802.1Q tag for untagged packets, and replace tag for tagged packets. Encapsulation vlan is required.
- **service-vlan-delete**: Delete 802.1Q tag for tagged packets, and nothing changed with untagged packets. This is default value according to RFC 7348.
- **service-vlan-replace**: Replace vlan id of 802.1Q tag for tagged packets, and nothing changed with untagged packets. Encapsulation vlan is required

Example

• This example demonstrates how to configure the VXLAN tunnel encapsulation mode for the VNI 10010.

```
admin@XorPlus# set vxlans vni 10010 encapsulation mode none
admin@XorPlus# commit
```

vxlans vni <text> encapsulation vlan

User can configure flood vtep address for vxlan vni.

Command Syntax

set vxlans vni *<text>* encapsulation vlan *<vlan-id>*

Parameter

- *<text>* VXLAN segment ID, decimal format ranges 1-16777215 or notation dotted foramt 100.100.200
- *<vlan-id>* Add vlan id for vxlan tunnel encapsulation mode. Required select include:

Example

- This example demonstrates how to configure the VXLAN tunnel encapsulation mode add vlan id for the VNI 10010.

```
admin@XorPlus# set vxlans vni 10010 encapsulation vlan 100
admin@XorPlus# commit
```

vxlans vni <text> flood vtep

User can configure flood vtep address for vxlan vni.

Command Syntax

set vxlans vni *<text>* flood vtep *<ipv4-addr>*

Parameter

- *<text>* VXLAN segment ID, decimal format ranges 1-16777215 or notation dotted foramt 100.100.200
- *<ipv4-addr>* IPv4 address of vxlan vtep.

Example

- This example demonstrates how to configure the VXLAN head-end replication flood lists for the VNI 10010.

```
XorPlus# set vxlans vni 10010 flood vtep 20.20.20.1
   XorPlus# set vxlans vni 10010 flood vtep 30.30.30.1
   XorPlus# commit
```

vxlans vni <text> flood vtep <ipv4-addr> bfd

User can configure the flood vtep address enable or disable bfd for vxlan vni.

Command Syntax

set vxlans vni *<text>* flood vtep *<ipv4-addr>* bfd *<bool>*

Parameter

- *<text>* VXLAN segment ID, decimal format ranges 1-16777215 or notation dotted foramt 100.100.200
- *<ipv4-addr>* IPv4 address of vxlan vtep.
- *<bool>* Eanble bfd address.

- **true** Enable bfd address

- **false** Disable bfd address

Example

- This example demonstrates how to configure the VXLAN flood vtep address enable bfd for the VNI 10010

```
XorPlus# set vxlans vni 10010 flood vtep 20.20.20.1 bfd true
     XorPlus# commit
```

vxlans vni <text> flood vtep <ipv4-addr> mac-address

User can configure the flood vtep address set static mac address for vni.

Command Syntax

set vxlans vni *<text>* flood vtep *<ipv4-addr>* mac-address *<macaddr>*

delete vxlans vni *<text>* flood vtep *<ipv4-addr>* mac-address *<macaddr>*

Parameter

- *<text>* VXLAN segment ID, decimal format ranges 1-16777215 or notation dotted foramt 100.100.200
- *<ipv4-addr>* IPv4 address of vxlan vtep.
- *< macaddr>* Static mac address identifier

Example

- This example demonstrates how to configure the VXLAN flood vtep address set static mac address is 00:e0:fc:00:0a:0b for the VNI

```
XorPlus# set vxlans vni 10010 flood vtep 20.20.20.1 mac-address 00:e0:fc:00:0a:0b
XorPlus# commit
```

vxlans vni <text> flood vtep <ipv4-addr> traffic-type

User can configure the flood vtep address set forwarding traffic type for vni .

Command Syntax

set vxlans vni *<text>* flood vtep *<ipv4-addr>* traffic-type *< type-mode >*

delete vxlans vni *<text>* flood vtep *<ipv4-addr> traffic-type*

Parameter

- *<text>* VXLAN segment ID, decimal format ranges 1-16777215 or notation dotted foramt 100.100.200
- *<ipv4-addr>* IPv4 address of vxlan vtep.
- *<type-mode>* Forwarding traffic type mode. Required select include:

• **BUM** Transport BUM(broadcast, unknow unicast and multicast) traffic only

• **all** Transport all traffic through this vtep, the default mode

• **unicast** Transport known unicast traffic only

Example

• This example demonstrates how to configure the VXLAN flood vtep address set forwarding traffic type is BUM for the VNI 10010

```
XorPlus# set vxlans vni 10010 flood vtep 20.20.20.1 traffic-type BUM
XorPlus# commit
```

vxlans vni <text> interface

User can configure the interface permitted to pass through the vxlan tunnel. This interface should be assigned in the host side. All packets enterring this interface can be transmitted in the vxlan, no matter the tagged or untagged packet.

Command Syntax

set vxlans vni *<text>* interface *<port>*

delete vxlans vni *<text>* interface *<port>*

Parameter

• *<text>* VXLAN segment ID, decimal format ranges 1-16777215 or notation dotted foramt 100.100.200
• *<port>* port identifier,the valid ports range 1-52.

Example

• This example demonstrates how to configure the interface te-1/1/29 add to vxlan VNI 10010

```
XorPlus# set vxlans vni 10010 interface te-1/1/29
XorPlus# commit
```

vxlans vni <text> interface <port> vlan <vlan-id>

User can configure one or more vlans of interface permitted to pass through the vxlan tunnel. This interface should be assigned in the host side. This command is used to enforce the fact that an ingress packets must have the VLAN ID before it enters the switch. If the packet is not tagged with the VLAN ID before enterring the switch, that packet will not be able to pass through that VXLAN.

Command Syntax

set vxlans vni *<text>* interface *<port> vlan <vlan-id>*

delete vxlans vni *<text>* interface *<port> vlan <vlan-id>*

Parameter

• *<text>* VXLAN segment ID, decimal format ranges 1-16777215 or notation dotted foramt 100.100.200
• *<port>* port identifier,the valid ports range 1-52.

• *<vlan-id>* VLAN tag identifier, the valid VLAN numbers range 1-4094. The ingress packet must be tagged with this VLAN ID.

Example

• This example demonstrates how to configure the interface te-1/1/29 vlan 10 add to vxlan VNI 10010

```
XorPlus# set vxlans vni 10010 interface te-1/1/29 vlan 10
XorPlus# commit
```

set vxlans vni <text> vlan

User can configure map the vlan to VNI.

Command Syntax

set vxlans vni *<text>* vlan *<vlan-id>*

delete vxlans vni *<text> vlan <vlan-id>*

Parameter

• *<text>* VXLAN segment ID, decimal format ranges 1-16777215 or notation dotted foramt 100.100.200

• *<vlan-id>* VLAN tag identifier, the valid VLAN numbers range 1-4094.

Example

• This example demonstrates how to configure map the vlan 100 to vxlan VNI 10010

```
admin@XorPlus# set vxlans vni 10010 vlan 100
admin@XorPlus# commit
```

set vxlans vni-map-vlan

User can configure enable VXLAN map vlan to VNI.

Command Syntax

set vxlans vni-map-vlan *<boolean>*

delete set vxlans vni-map-vlan

Parameter

•*<boolean>*enable or disable vxlan map vlan to VNI.

- **true** enable vxlan map vlan to VNI
- **false** disable vxlan map vlan to VNI

Example

• This example demonstrates how to configure enable vxlan map vlan to VNI.

```
admin@XorPlus# set vxlans vni-map-vlan true
admin@XorPlus# commit
```

set vxlans tunnel-mac-leaning disable

User can configure disable VXLAN tunnels interface mac learning.

Command Syntax

set vxlans tunnel-mac-leaning disable *<boolean>*

delete set vxlans tunnel-mac-leaning disable

Parameter

•*<boolean>* enable or disable VXLAN tunnels interface mac learning.

- **true** disable VXLAN tunnels interface mac learning
- **false** enable VXLAN tunnels interfaces mac learning

Example

• This example demonstrates how to configure disable VXLAN tunnels interface mac learning.

```
admin@XorPlus# set vxlans tunnel-mac-leaning disable true
admin@XorPlus# commit
```

OVSDB VTEP command

- set protocols ovsdb controller <controller-name> address
- set protocols ovsdb controller <controller-name> inactivity-probe-duration 30000
- set protocols ovsdb controller <controller-name> maximum-backoff-duration
- set protocols ovsdb controller <controller-name> port
- set protocols ovsdb controller c1 protocol
- set protocols ovsdb interface
- set protocols ovsdb management-ip
- set protocols ovsdb ssl bootstrap
- set protocols ovsdb ssl ca-cert
    - set protocols ovsdb ssl certificate
- set protocols ovsdb ssl private-key
- set vxlans ovsdb-managed

set protocols ovsdb controller <controller-name> address

User can configure ovsdb vtep to establish an active OVSDB tcp/ssl connection to a controller .

Command Syntax

set protocols ovsdb controller <controller-name> address *<ip-addr>*

delete protocols ovsdb controller <controller-name> address

Parameter

- *<controller-name>* controller name.
- *<ip-address>* Specifies the destination IPv4/IPv6 address for the tcp/ssl connection.

Example

• This example demonstrates how to configure a tcp/ssl connection to port 6632 at 10.10.50.220.

```
admin@XorPlus# set protocols ovsdb controller c1 address 10.10.50.220
admin@XorPlus# commit
```

set protocols ovsdb controller <controller-name> inactivity-probe-duration 30000

User can configure ovsdb vtep tcp/ssl connection inactivity probe duration.

Command Syntax

set protocols ovsdb controller *<controller-name>* inactivity-probe-duration *<uint>*

delete protocols ovsdb controller *<controller-name>* inactivity-probe-duration

Parameter

- *<controller-name>* controller name.
- *<uint>* Number of milliseconds the connection can be inactive before an inactivity probe is sent.

Example

• This example demonstrates how to configure a tcp/ssl connection inactivity probe duration.

```
admin@XorPlus# set protocols ovsdb controller c1 inactivity-probe-duration 30001
admin@XorPlus# commit
```

set protocols ovsdb controller <controller-name> maximum-backoff-duration

User can configure ovsdb vtep tcp/ssl connection maximum backoff duration.

Command Syntax

set protocols ovsdb controller *<controller-name>* maximum-backoff-duration *<uint>*

delete protocols ovsdb controller *<controller-name>* maximum-backoff-duration

Parameter

- *<controller-name>* controller name.
- *<uint>* Number of milliseconds OVSDB server waits before it re-attempts to connect with an controller, the valid VLAN numbers range 1000-4294967295.

Example

• This example demonstrates how to configure a tcp/ssl connection maximum backoff duration.

```
admin@XorPlus# set protocols ovsdb controller c1 maximum-backoff-duration 1001
admin@XorPlus# commit
```

set protocols ovsdb controller <controller-name> port

User can configure ovsdb vtep tcp/ssl connection port number.

Command Syntax

set protocols ovsdb controller *<controller-name>* port *<port-number>*

delete protocols ovsdb controller *<controller-name>* port

Parameter

- *<controller-name>* controller name.
- *<port-number>* Specifies the destination port or listen port for the tcp/ssl connection. The value range for the port-number argument is 0 to 65535. .

Example

This example demonstrates how to configure an tcp/ssl connection port.

```
admin@XorPlus# set protocols ovsdb controller c1 port 6632
admin@XorPlus# commit
```

set protocols ovsdb controller c1 protocol

User can configure ovsdb vtep establish connection with protocol.

Command Syntax

set protocols ovsdb controller *<controller-name>* protocol *<protocol-mode>*

delete protocols ovsdb controller *<controller-name>* protocol

Parameter

- *<controller-name>* controller name.
- *<protocol-mode>* Configure establish an OVSDB SSL or TCP connection with a one controller or listen for OVSDB SSL or TCP connection requests:
    - **pssl** Listening for SSL connection requests from controllers
    - **ptcp** Listening for TCP connection requests from controllers
    - **ssl** Establishing an active SSL connection to a controller
    - **tcp** Establishing an active TCP connection to a controller

Example

This example demonstrates how to configure ovsdb vtep establish connection protocol with ptcp

```
admin@XorPlus# set protocols ovsdb controller c1 protocol ptcp
admin@XorPlus# commit
```

set protocols ovsdb interface

User can configure ovsdb vtep access port.

Command Syntax

set protocols ovsdb interface *<port>*

delete protocols ovsdb interface

Parameter

• *<port>* port identifier,the valid ports range 1-52.

Example

• This example demonstrates how to configure specify te-1/1/1 as a ovsdb vtep access port.

```
admin@XorPlus# set protocols ovsdb interface te-1/1/1
admin@XorPlus# commit
```

set protocols ovsdb management-ip

User can configure ovsdb vtep access port.

Command Syntax

set protocols ovsdb management-ip *<ipv4/ipv6>*

delete protocols ovsdb management-ip

Parameter

• *<ipv4/ipv6>* ipv4 or ipv6 address, configuring the OVSDB VTEP’s management IP for controller .

Example

• This example demonstrates how to configure the VTEP’s management IP .

```
admin@XorPlus# set protocols ovsdb management-ip 10.10.51.157
admin@XorPlus# commit
```

set protocols ovsdb ssl bootstrap

User can configure obtain the CA certificate from the SSL peer.

Command Syntax

set protocols ovsdb SSL bootstrap *<boolean>*

delete protocols ovsdb ssl bootstrap

Parameter

•*<boolean>*enable or disable ssl bootstrap.

- **true** enable ssl bootstrap, the ca certificate automatically downloaded from ssl peer.
- **false** disable ssl bootstrap, the ca certificate m anually copy to the /ovs/var/lib/openvswitch/pki directory

Example

• This example demonstrates how to configure ovsdb ssl bootstrap.

```
admin@XorPlus# set protocols ovsdb SSL bootstrap true
admin@XorPlus# commit
```

set protocols ovsdb ssl ca-cert

User can configure CA certificate file for ssl connected.

Command Syntax

set protocols ovsdb ssl ca-cert *<file>*

delete protocols ovsdb ssl ca-cert

Parameter

• *<file>* Specifies ssl connect with CA certificate file name.

Example

• This example demonstrates how to configure CA certificate file name for ssl connected.

```
admin@XorPlus# set protocols ovsdb ssl ca-cert
"/ovs/var/lib/openvswitch/pki/controller.cacert"
admin@XorPlus# commit
```

- set protocols ovsdb ssl certificate

set protocols ovsdb ssl certificate

User can configure certificate file for ssl connected.

Command Syntax

set protocols ovsdb SSL certificate *<file>*

delete protocols ovsdb ssl certificate

Parameter

• *<file>* Specifies ssl connect with certificate file name.

Example

• This example configure certificate file name for ssl connected.

```
admin@XorPlus# set protocols ovsdb ssl certificate
"/ovs/var/lib/openvswitch/pki/pica8-cert.pem"
admin@XorPlus# commit
```

set protocols ovsdb ssl private-key

User can configure a private key file for ssl connected.

Command Syntax

set protocols ovsdb ssl private-key *<file>*

delete protocols ovsdb ssl private-key

Parameter

• *<file>* Specifies ssl connect with private key file name.

Example

• This example demonstrates how to configure private key file name for ssl connected.

```
admin@XorPlus# set protocols ovsdb ssl private-key
"/ovs/var/lib/openvswitch/pki/pica8-privkey.pem"
admin@XorPlus# commit
```

set vxlans ovsdb-managed

User can configure enable vxlan ovsdb managed.

Command Syntax

set vxlans ovsdb-managed *<boolean>*

delete vxlans ovsdb-managed

Parameter

• *<boolean>*enable or disable vxlan ovsdb managed.

- **true** enable vxlan ovsdb managed
- **false** disable vxlan ovsdb managed

Example

• This example demonstrates how to configure enable vxlan ovsdb managed.

```
admin@XorPlus# set vxlans ovsdb-managed true
admin@XorPlus# commit
```

OpenFlow Commands in CrossFlow Mode

To use the hybrid mode of the Openflow switch, enable the xovs mode in XorPlus system. Next, configure the interfaces to be used in XorPlus system. Then, exit to Linux system to add the flows required.

Commands

set xovs enable ***<true | false>***

set interface gigabit-ethernet ge-1/1/1 crossflow enable true

set interface gigabit-ethernet ge-1/1/1 crossflow local-control false

set vlans vlan-id ***<vlan-id>***

delete xovs

set interface gigabit-ethernet ge-1/1/1 family ethernet-switching port-mode trunk

set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members ***<vlan-id>***

Voice-Vlan Configuration Commands

- set interface gigabit-ethernet <port> voice-vlan mode <mode>
- set interface gigabit-ethernet <port> voice-vlan tagged
- set interface gigabit-ethernet <port> voice-vlan vlan-id <text>
- set vlans voice-vlan aging <text>
- set vlans voice-vlan dscp <text>
- set vlans voice-vlan local-priority <text>
- set vlans voice-vlan mac-address <macaddr1> mask <macaddr2>
- set vlans voice-vlan mac-address <macaddr> description <text>
- show vlans voice-vlan
- show vlans voice-vlan oui
- show vlans voice-vlan vlan-id <text>

set interface gigabit-ethernet <port> voice-vlan mode <mode>

Users can configure voice-vlan mode on a physical port.

Command Syntax

set interface gigabit-ethernet <port> voice-vlan mode <mode>

Parameter

•*<port>* ethernet port on the switch

•*<mode>* manual or auto, default is auto

Example

• This example is to configure voice-vlan mode manual on ge-1/1/1::

```
admin@XorPlus# set vlans vlan-id 10
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching port-mode
trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 voice-vlan vlan-id 10
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 voice-vlan mode manual
admin@XorPlus# commit
```

set interface gigabit-ethernet <port> voice-vlan tagged

Configure the Voice VLAN in which outgoing packet from the interface will be tagged with voice-vlan id of the interface.

Command Syntax

set interface gigabit-ethernet <port> voice-vlan tagged

Parameter

•*<port>* ethernet port on the switch

Example

• This example is to configure outgoing packet tagged of ge-1/1/1::

```
admin@XorPlus# set vlans vlan-id 10
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching port-mode
trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 voice-vlan vlan-id 10
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 voice-vlan tagged
admin@XorPlus# commit
```

set interface gigabit-ethernet <port> voice-vlan vlan-id <text>

Users can configure voice-vlan on ethernet port.

Command Syntax

set interface gigabit-ethernet <port> voice-vlan vlan-id <text>

Parameter

•*<port>* ethernet port on the switch, must be trunk mode if you want to configure voice-vlan on it

•*<text>* voice-vlan id, can't be the same with PVID or vlan-member of the port

Example

• This example is to configure voice-vlan 10 on ge-1/1/1::

```
admin@XorPlus# set vlans vlan-id 10
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching port-mode
trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 voice-vlan vlan-id 10
admin@XorPlus# commit
```

set vlans voice-vlan aging <text>

Users can configure voice-vlan aging time. This works for all the voice-vlans on the switch.

You should make sure that voice-vlan works in auto mode because aging only works in auto mode.

Voice-vlan begins to age after the oui mac-address ages from the fdb table.

Command Syntax

set vlans voice-vlan aging <text>

Parameter

•*<text>* Configure voice-vlan aging time, range:[5..43200], the unit is minutes. Default value is 1440 minutes.

Example

• This example is to configure voice-vlan aging time 10 minutes::

```
admin@XorPlus# set vlans voice-vlan aging 10
admin@XorPlus# commit
```

set vlans voice-vlan dscp <text>

Users can set voice-vlan dscp value. This works for all the voice-vlans in the switch.

Command Syntax

set vlans voice-vlan dscp <text>

Parameter

• *<text>* Configure voice-vlan dscp value, range:[0..63]. Default value is 46.

Example

• This example is to configure voice-vlan dscp value 63::

```
admin@XorPlus# set vlans voice-vlan dscp 63
admin@XorPlus# commit
```

set vlans voice-vlan local-priority <text>

Users can configure voice-vlan local-priority. This works for all the voice-vlans on the switch.

Command Syntax

set vlans voice-vlan local-priority <text>

Parameter

• *<text>* Configure voice-vlan local-priority value, range:[0..7]. Default value is 6.

Example

• This example is to configure voice-vlan local-priority 5::

```
admin@XorPlus# set vlans voice-vlan local-priority 5
admin@XorPlus# commit
```

set vlans voice-vlan mac-address <macaddr1> mask <macaddr2>

Users can configure voice-vlan OUI mac-address and mask. User defined OUI mac-address can't overlap with the default OUI mac-address.

Command Syntax

set vlans voice-vlan mac-address <macaddr1> mask <macaddr2>

Parameter

<macaddr1> Configure voice-vlan OUI mac-address, must be unicast.

<macaddr2> Configure voice-vlan OUI mac-address mask.

Example

This example is to configure voice-vlan OUI mac-address 22:22:22:00:00:00 mask ff:ff:ff:00:00:00 ::

```
admin@XorPlus# set vlans voice-vlan mac-address 22:22:22:00:00:00 mask ff:ff:ff:00:00:00
admin@XorPlus# commit
```

set vlans voice-vlan mac-address <macaddr> description <text>

Users can configure voice-vlan OUI mac-address and description. User defined OUI mac-address can't overlap with the default OUI mac-address.

Command Syntax

set vlans voice-vlan mac-address <macaddr> description <text>

Parameter

<macaddr> Configure voice-vlan OUI mac-address, must be unicast.

<text> Configure voice-vlan OUI mac-address description.

Example

This example is to configure voice-vlan OUI mac-address 22:22:22:00:00:00 description user1 ::

```
admin@XorPlus# set vlans voice-vlan mac-address 22:22:22:00:00:00 description user1
admin@XorPlus# commit
```

show vlans voice-vlan

Show voice vlan detail information.

Command Syntax

show vlans voice-vlan

Description

Generally speaking, what the command shows contains two logical parts.

1.OUI

This part shows all the oui addresses and their mask and description.

```
Oui_Address          Mask                 Description
0:1:e3:0:0:0         ff:ff:ff:0:0:0       Siemens phone
0:3:6b:0:0:0         ff:ff:ff:0:0:0       Cisco phone
0:4:d:0:0:0          ff:ff:ff:0:0:0       Avaya phone
0:60:b9:0:0:0        ff:ff:ff:0:0:0       Philips/NEC phone
```

```
0:d0:1e:0:0:0        ff:ff:ff:0:0:0       Pingtel phone
0:e0:75:0:0:0        ff:ff:ff:0:0:0       Polycom phone
0:e0:bb:0:0:0        ff:ff:ff:0:0:0       3com phone
```

2.Specified voice-vlan id

The following example contains 4 voice-vlans. Let's take voice-vlan id:10 for example.

```
Voice Vlan ID:10
Voice Vlan local priority:6
Voice Vlan dscp:46
Voice Vlan aging time:1440 minutes
Current voice vlan enabled port mode:
Port           Mode      Tagged    Mac_Address      Status
-------------------------------------------------------------------
ge-1/1/1       auto      false                      Aging:86274sec
```

- Voice Vlan ID: 10 means the voice-vlan id is 10
- The following 3 items is global parameters, local priority, dscp and aging time is the same in all the 4 voice-vlans

```
Voice Vlan local priority:6
Voice Vlan dscp:46
Voice Vlan aging time:1440 minutes
```

- Port means the ports below are configured this voice-vlan id.
- Mode means voice-vlan mode of the port: auto or manual.
- Tagged means the outgoing packets with OUI source Mac-address from the port will be tagged of not. It has two values: true and false. True means tagged and false means untagged.
- Mac_address displays OUI source Mac-address the port has learned. It shows the result of Oui_Address AND mask.
- Status shows the voice-vlan working status of the port.

Status of Voice Vlan	Description
Aging:<text>sec	Only auto mode has this status. This port won't be in this vlan after <text> seconds.
Working	Voice vlan is working on the port. The port is in the vlan(voice-vlan id).
Idle	Only auto mode has this status, voice vlan is not working on the port.

Example

• This example is to show voice-vlan detail information, ge-1/1/1 is auto mode and aging, ge-1/1/2 is auto mode and working, ge-1/1/3 is auto mode but not working, ge-1/1/4 is manual mode

```
admin@XorPlus# run show vlans voice-vlan
Oui_Address          Mask                 Description
```

```
0:1:e3:0:0:0          ff:ff:ff:0:0:0       Siemens phone
0:3:6b:0:0:0          ff:ff:ff:0:0:0       Cisco phone
0:4:d:0:0:0           ff:ff:ff:0:0:0       Avaya phone
0:60:b9:0:0:0         ff:ff:ff:0:0:0       Philips/NEC phone
0:d0:1e:0:0:0         ff:ff:ff:0:0:0       Pingtel phone
0:e0:75:0:0:0         ff:ff:ff:0:0:0       Polycom phone
0:e0:bb:0:0:0         ff:ff:ff:0:0:0       3com phone
Voice Vlan ID:10
Voice Vlan local priority:6
Voice Vlan dscp:46
Voice Vlan aging time:1440 minutes
Current voice vlan enabled port mode:
Port            Mode      Tagged    Mac_Address      Status
-------------------------------------------------------------------
ge-1/1/1        auto      false                      Aging:86274sec
Voice Vlan ID:20
Voice Vlan local priority:6
Voice Vlan dscp:46
Voice Vlan aging time:1440 minutes
Current voice vlan enabled port mode:
Port            Mode      Tagged    Mac_Address      Status
-------------------------------------------------------------------
ge-1/1/2        auto      false     0:1:e3:0:0:0     Working
Voice Vlan ID:30
Voice Vlan local priority:6
Voice Vlan dscp:46
Voice Vlan aging time:1440 minutes
Current voice vlan enabled port mode:
Port            Mode      Tagged    Mac_Address      Status
-------------------------------------------------------------------
ge-1/1/3        auto      false                      Idle
Voice Vlan ID:40
Voice Vlan local priority:6
Voice Vlan dscp:46
Voice Vlan aging time:1440 minutes
Current voice vlan enabled port mode:
Port            Mode      Tagged    Mac_Address      Status
-------------------------------------------------------------------
ge-1/1/4        manual    false                      Working
```

show vlans voice-vlan oui

Show voice vlan oui detail information, including default oui, static oui and oui learned from LLDP packet.

Command Syntax

show vlans voice-vlan oui

Default OUI as below

```
Oui_Address           Mask                  Description
0:1:e3:0:0:0          ff:ff:ff:0:0:0        Siemens phone
0:3:6b:0:0:0          ff:ff:ff:0:0:0        Cisco phone
0:4:d:0:0:0           ff:ff:ff:0:0:0        Avaya phone
0:60:b9:0:0:0         ff:ff:ff:0:0:0        Philips/NEC phone
0:d0:1e:0:0:0         ff:ff:ff:0:0:0        Pingtel phone
0:e0:75:0:0:0         ff:ff:ff:0:0:0        Polycom phone
0:e0:bb:0:0:0         ff:ff:ff:0:0:0        3com phone
```

OUI Learned from LLDP packet as below

```
LLDP_Oui_Address      Mask
22:22:22:22:22:33     ff:ff:ff:ff:ff:ff
22:22:22:22:22:44     ff:ff:ff:ff:ff:ff
```

> ⚠ LLDP are deployed between pica8 switch and IP phone. This command can't show LLDP OUI address when switch doesn't receive any LLDP packet from IP phone.

Example

• This example is to show voice-vlan oui detail information::

```
admin@XorPlus# run show vlans voice-vlan oui
Oui_Address           Mask                  Description
0:1:e3:0:0:0          ff:ff:ff:0:0:0        Siemens phone
0:3:6b:0:0:0          ff:ff:ff:0:0:0        Cisco phone
0:4:d:0:0:0           ff:ff:ff:0:0:0        Avaya phone
0:60:b9:0:0:0         ff:ff:ff:0:0:0        Philips/NEC phone
0:d0:1e:0:0:0         ff:ff:ff:0:0:0        Pingtel phone
0:e0:75:0:0:0         ff:ff:ff:0:0:0        Polycom phone
0:e0:bb:0:0:0         ff:ff:ff:0:0:0        3com phone
22:33:44:0:0:0        ff:ff:ff:0:0:0        user1

LLDP_Oui_Address      Mask
22:22:22:22:22:33     ff:ff:ff:ff:ff:ff
22:22:22:22:22:44     ff:ff:ff:ff:ff:ff
```

show vlans voice-vlan vlan-id <text>

Show special voice vlan id detail information.

Command Syntax

show vlans voice-vlan vlan-id <text>

Parameter

•<text> voice-vlan id, can't be the same with pvid or vlan-member

Example

• This example is to show voice-vlan detail information::

```
1.ge-1/1/1 is in suto mode and aging.
admin@XorPlus#  run show vlans voice-vlan vlan-id 10
Voice Vlan ID:10
Voice Vlan local priority:6
Voice Vlan dscp:46
Voice Vlan aging time:1440 minutes
Current voice vlan enabled port mode:
Port            Mode       Tagged     Mac_Address      Status
-----------------------------------------------------------------
ge-1/1/1        auto       false                       Aging:86143sec

2.ge-1/1/2 is in auto mode and working.
admin@XorPlus# run show vlans voice-vlan vlan-id 20
Voice Vlan ID:20
Voice Vlan local priority:6
Voice Vlan dscp:46
```

```
Voice Vlan aging time:1440 minutes
Current voice vlan enabled port mode:
Port           Mode      Tagged    Mac_Address      Status
-------------------------------------------------------------------
ge-1/1/2       auto      false     0:1:e3:0:0:0     Working

3.ge-1/1/3 is in auto mode and not working.
admin@XorPlus# run show vlans voice-vlan vlan-id 30
Voice Vlan ID:30
Voice Vlan local priority:6
Voice Vlan dscp:46
Voice Vlan aging time:1440 minutes
Current voice vlan enabled port mode:
Port           Mode      Tagged    Mac_Address      Status
-------------------------------------------------------------------
ge-1/1/3       auto      false                      Idle

4.ge-1/1/4 is in manual mode. It can't display any mac-addresses and status will always be
working in this mode.
admin@XorPlus# run show vlans voice-vlan vlan-id 40
Voice Vlan ID:40
Voice Vlan local priority:6
Voice Vlan dscp:46
Voice Vlan aging time:1440 minutes
Current voice vlan enabled port mode:
Port           Mode      Tagged    Mac_Address      Status
-------------------------------------------------------------------
ge-1/1/4       manual    false                      Working
```