System Management

alarm all-packets

To enable alarms on all ports, use the **alarm all-packets** command in global configuration mode.

To enable alarms on a specific port, use the **alarm all-packets** command in interface configuration mode.

alarm all-packets

no alarm all-packets

Command Modes

Global configuration (config)

Interface configuration (config-if)

Examples

The following example shows how to enable alarms on all ports of the device:

```
Device> enable
Device# configure terminal
Device(config)# alarm all-packets
Enable port alarm successfully.
```

alarm all-packets threshold

To configure the port threshold information for alarms, use the **alarm all-packets threshold** command in interface configuration mode.

alarm all-packets threshold {**normal** *normal-value* | **exceed** *exceed-value*}

Syntax Description

normal *normal-value*	Sets the minimum port bandwidth utilization threshold for the port.
exceed *exceed-value*	Sets the maximum port bandwidth utilization threshold for the port.

Command Modes

Interface configuration mode (config-if)

Examples

The following example shows how to set the port thresholds using the **alarm all-packets threshold** command:

```
Device> enable
Device# configure terminal
Device(config)# interface gpon 0/1
Device(config-if-gpon-0/1)# alarm all-packets threshold exceed 34 normal 4
```

alarm cpu

To enable CPU alarms, use the **alarm cpu** command in global configuration mode.

alarm cpu
no alarm cpu

Command Modes

Global configuration mode (config)

Examples

The following example shows how to enable CPU alarms:

```
Device> enable
Device# configure terminal
Device(config)# alarm cpu
```

alarm cpu threshold

To configure the threshold information for CPU alarms, use the **alarm cpu threshold** command in global configuration mode.

alarm cpu threshold {**busy** *busy-value* | **unbusy** *unbusy-value*}

Syntax Description

busy *busy-value*	Sets the minimum CPU utilization threshold.
unbusy *unbusy-value*	Sets the maximum CPU utilization threshold.

Command Modes

Global configuration mode (config)

Examples

The following example shows how to set the CPU thresholds using the **alarm cpu threshold** command:

```
Device> enable
Device# configure terminal
Device(config)# alarm cpu threshold busy 63 unbusy 20
```

buildrun mode

To configure the file execution mode, use the **buildrun mode** command in privileged EXEC mode.

buildrun mode {**continue** | **stop**}

Syntax Description

continue	Sets the execution mode to non-interruptible.
stop	Sets the execution mode to interruptible.

Command Modes

Privileged EXEC (#)

Examples

The following is an example of the **buildrun mode stop** command:

```
Device> enable
Device# buildrun mode stop
```

clear startup-config

To clear the startup configuration, use the **clear startup-config** command in privileged EXEC mode.

clear startup-config

Command Modes

Privileged EXEC (#)

Examples

The following is an example of the **clear startup-config**command:

```
Device> enable
Device# clear startup-config
```

clock timezone

To configure the system time zone, use the **clock timezone** command in global configuration mode.

clock timezone *timezone-name hours-offset minutes-offset*
no clock timezone

Syntax Description

timezone-name	Specifies the timezone to the SNTP client.
hours-offset minutes-offset	Specifies the hours and minutes offset from the timezone to the SNTP client.

Command Modes

Global configuration mode (config)

Examples

The following example shows how to configure a timezone on the SNTP client using the **clock timezone** command:

```
Device> enable
Device# configure terminal
Device(config)# clock timezone ch 3 43
```

copy running-config startup-config

To copy the current configuration to the flash config file, use the **copy running-config startup-config** command in privileged EXEC mode.

copy running-config startup-config

Command Modes

Privileged EXEC (#)

Examples

The following is an example of the **copy running-config startup-config** command:

```
Device> enable
Device# copy running-config startup-config
Startup config in flash will be updated, are you sure(y/n)? [n]
```

copy startup-config running-config

To copy the startup configuration from the flash config file to the current configuration, use the **copy startup-config running-config** command in privileged EXEC mode.

copy startup-config running-config

Command Modes

Privileged EXEC (#)

Examples

The following is an example of the **copy startup-config running-config** command:

```
Device> enable
Device# copy startup-config running-config
Running config will be updated, are you sure(y/n)? [n]
```

load ftp

To download a file with the FTP server, use the **load ftp** command in privileged EXEC mode.

load {**application** | **configuration** | **edfa** | **epld** | **keyfile**{**private** | **public**} | **ont-image** | **whole-bootrom**}**ftp** {**inet** | **inet6**}*ftp-server-ip-address file-name ftp-username ftp-password*

Syntax Description

application	Specifies the host file.
configuration	Specifies the configuration file.
edfa	Specifies the EDFA file.
epld	Specifies the EPLD file.
keyfile	Specifies the SSH keyfile.
private	Specifies the SSH private keyfile.
public	Specifies the SSH public keyfile.
ont-image	Specifies the ONT image file.
whole-bootrom	Specifies the whole bootrom file.
inet	Specifies IPv4 address family.
inet6	Specifies IPv6 address family.
ftp-server-ip-address	Specifies the IP address of the FTP server.
file-name	Specifies the name of the file to be uploaded.
ftp-username	Specifies the user name of the FTP server.
ftp-password	Specifies the password of the FTP server.

Command Modes

Privileged EXEC (#)

Examples

The following example shows how to download a whole bootrom file with an FTP server using the **load ftp** command:

```
Device> enable
Device# load whole-bootrom tftp inet 10.23.13.1 bootrom1.bin
```

load tftp

To download a file with the TFTP server, use the **load tftp** command in privileged EXEC mode.

load {**application** | **configuration** | **edfa** | **epld** | **keyfile**{**private** | **public**} | **ont-image** | **whole-bootrom**}**tftp** {**inet** | **inet6**}*tftp-server-ip-address file-name*

Syntax Description

application	Specifies the host file.
configuration	Specifies the configuration file.
edfa	Specifies the EDFA file.
epld	Specifies the EPLD file.
keyfile	Specifies the SSH keyfile.
private	Specifies the SSH private keyfile.
public	Specifies the SSH public keyfile.
ont-image	Specifies the ONT image file.
whole-bootrom	Specifies the whole bootrom file.
inet	Specifies IPv4 address family.
inet6	Specifies IPv6 address family.
tftp-server-ip-address	Specifies the IP address of the TFTP server.
file-name	Specifies the name of the file to be uploaded.

Command Modes

Privileged EXEC (#)

Examples

The following example shows how to download a whole bootrom file with a TFTP server using the **load tftp** command:

```
Device> enable
Device# load whole-bootrom tftp inet6 10:23::11:1 bootrom1.bin
```

load xmodem

To download a file with the XMODEM, use the **load ftp** command in privileged EXEC mode.

load {**application** | **configuration** | **whole-bootrom**}**xmodem**

Syntax Description

application	Specifies the host file.
configuration	Specifies the configuration file.
whole-bootrom	Specifies the whole bootrom file.

Command Modes

Privileged EXEC (#)

Examples

The following example shows how to download a whole bootrom file with an XMODEM using the **load xmodem** command:

```
Device> enable
Device# load whole-bootrom xmodem
```

local fec

To enable the ONT uplink FEC, use the **local fec** command in line profile configuration mode. To disable the ONT uplink FEC, use the **no local fec** command.

local fec

no local fec

Command Modes

Line profile configuration (deploy-profile-line)

Examples

This example shows how to enable the ONT uplink FEC

```
Device> enable
Device# configure terminal
Device(config)# deploy profile line
Device(config-profile-line)# aim 5
Device(config-profile-line-5)# local fec
```

show alarm all-packets

To display the port alarm information, use the **show alarm all-packets** command in global configuration mode or interface configuration mode.

show alarm all-packets [{**interface** *port-number*}]

Syntax Description

interface *port-number*	Specifies the interface.

Command Modes

Global configuration mode (config)

Interface configuration mode (config-if)

Examples

The following is a sample output of the **show alarm all-packets** command:

show alarm cpu

To display the CPU alarm information, use the **show alarm all-packets** command in global configuration mode.

show alarm cpu

Command Modes

Global configuration mode (config)

Examples

The following is a sample output of the **show alarm cpu** command:

```
Device(config)# show alarm cpu
CPU status alarm : enable
CPU busy threshold(%) : 90
CPU unbusy threshold(%) : 85
CPU status : unbusy
```

show clock

To display the system clock, use the **show clock** command in global configuration mode.

show clock

Command Modes

Global configuration mode (config)

Examples

The following is a sample output of the **show clock** command:

```
Device> enable
Device# configure terminal
Device(config)# show clock
Mon 2020/4/30 04:25:07 CCT 08:00
```

show running-config

To display the current system configuration, use the **show running-config** command in the privileged EXEC mode or global configuratoin mode.

show running-config {*module* | **interface** {**ethernet** *port-id* | **gpon** *port-id* | **loopback-interface** *loopback-interface-number* | **vlan-interface** *vlan-id*}}**perlines** *lines-per-page*

Syntax Description

module	Specifies a module.
interface	Specifies an interface.
ethernet *port-id*	Displays the ethernet port configuration.
gpon *port-id*	Displays the GPON port configuration.
loopback-interface *loopback-interface-number*	Displays the loopback interface configuration.
vlan-interface *vlan-id*	Displays the VLAN configuration.
perlines *lines-per-page*	Specifies the number of lines displayed per page.

Command Modes

Privileged EXEC (#)

Global configuration mode (config)

Examples

The following is a sample output from the **show running-config interface vlan-interface** command:

```
Device> enable
Device# show running-config interface vlan-interface

Building configuration...
![vlan-interface 1]
ip address range 192.0.2.254 192.0.2.255
description interface1
![vlan-interface 100]
ip address 10.75.171.17 255.255.255.0
end
```

show sntp client

To display SNTP client configurations, use the **show sntp client** command in global configuration mode.

show sntp client

Command Modes

Global configuration mode (config)

Examples

The following is a sample output of the **show sntp client** command:

```
Device> enable
Device# configure terminal
Device(config)# show sntp client
Clock state : synchronized         Current mode : anycast
Use server : 192.168.1.99          State : idle
Server state : synchronized        Server stratum : 1
Retrans-times: 3                   Retrans-interval: 30s
Authenticate : enable              Authentication-key: 1
Poll interval : 1000s
Last synchronized time: THU NOV 26 09:22:25 2015
```

show sntp client summer-time

To display the daylight savings time configuration, use the **show sntp client summer-time** command in global configuration mode.

show sntp client summer-time

Command Modes

Global configuration mode (config)

Examples

The following is a sample output of the **show sntp client summer-time**command:

```
Device> enable
Device# configure terminal
Device(config)# show sntp client summer-time
```

show startup-config

To display the startup configuration, use the **show startup-config** command in the privileged EXEC mode or global configuratoin mode.

show startup-config {*module* | **interface** {**ethernet** *port-id* | **gpon** *port-id* | **loopback-interface** *loopback-interface-number* | **vlan-interface** *vlan-id*}}**perlines** *lines-per-page*

Syntax Description

module	Specifies a module.
interface	Specifies an interface.
ethernet *port-id*	Displays the ethernet port configuration.
gpon *port-id*	Displays the GPON port configuration.
loopback-interface *loopback-interface-number*	Displays the loopback interface configuration.
vlan-interface *vlan-id*	Displays the VLAN configuration.
perlines *lines-per-page*	Specifies the number of lines displayed per page.

Command Modes

Privileged EXEC (#)

Global configuration mode (config)

Examples

The following is a sample output from the **show startup-config interface ethernet** command:

```
Device> enable
Device# show startup-config interface ethernet

Building configuration...
![ethernet 1/1]
channel-group 2 mode on
lacp port-priority 8
description text
switchport hybrid untagged vlan 2-125
igmp-snooping record-host
ip-source-guard ip-mac-vlan
![ethernet 1/2]
switchport hybrid tagged vlan 35,335
switchport hybrid untagged vlan 2-34,36-125,2501-2502
![ethernet 1/3]
switchport default vlan 100
switchport hybrid untagged vlan 2-125
![ethernet 1/4]
priority 2
![ethernet 2/1]
switchport hybrid untagged vlan 2-125
![ethernet 2/2]
switchport hybrid untagged vlan 2-125
end
```

sntp client

To enable SNTP client, use the **sntp client** command in global configuration mode.

sntp client

no sntp client

Command Modes

Global configuration mode (config)

Examples

The following example shows how to enable SNTP client:

```
Device> enable
Device# configure terminal
Device(config)# sntp client
```

sntp client authenticate

To enable authentication of time sources, use the **sntp client authenticate** command in global configuration mode.

sntp client authenticate
no sntp client authenticate

Command Modes

Global configuration mode (config)

Examples

The following example shows how to enable SNTP client authentication using the **sntp client authenticate** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp client authenticate
```

sntp client authentication-key

To configure the password for authentication for trusted time sources, use the **sntp client authentication-key** command in global configuration mode.

sntp client authentication-key *key-number* **md5** *md5-key*
no sntp client authentication-key *key-number*

Syntax Description

key-number	Specifies the authentication key for the SNTP client.
md5 *md5-key*	Specifies the MD5 authentication key for the SNTP client.

Command Modes

Global configuration mode (config)

Examples

The following example shows how to configure SNTP client authentication using the **sntp client authentication-key** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp client authentication-key 3 md5 5
```

sntp client broadcastdelay

To configure the broadcast propagation delay for an SNTP client, use the **sntp client broadcastdelay** command in global configuration mode.

sntp client broadcastdelay *delay-time*

Syntax Description

delay-time	Specifies the round-trip broadcast delay for the SNTP client in milliseconds.

Command Modes

Global configuration mode (config)

Examples

The following example show how to configure the delay time for the SNTP client using the **sntp client broadcastdelay** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp client broadcastdelay 15
```

sntp client mode

To configure the mode of function of the SNTP client, use the **sntp client mode** command in global configuration mode.

sntp client mode {**anycast** {[**key** *key-id*]} | **broadcast** | **multicast** | **unicast**}

Syntax Description

anycast	Sets the SNTP client to work in anycast mode.
key *key-id*	Specifies the authentication key for anycast mode.
broadcast	Sets the SNTP client to work in broadcast mode.
multicast	Sets the SNTP client to work in multicast mode.
unicast	Sets the SNTP client to work in unicast mode.

Command Modes

Global configuration mode (config)

Examples

The following example show how to configure the SNTP client to unicast mode using the **sntp client mode** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp client mode unicast
```

sntp client poll-interval

To configure the polling interval for an SNTP client, use the **sntp client poll-interval** command in global configuration mode.

sntp client poll-interval *poll-interval-time*

Syntax Description

poll-interval-time	Specifies the polling interval for the SNTP client in seconds.

Command Modes

Global configuration mode (config)

Examples

The following example show how to configure the polling interval for the SNTP client using the **sntp client poll-interval** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp client poll-interval 800
```

sntp client retransmit-interval

To configure the timeout retransmission interval for an SNTP client, use the **sntp client retransmit-interval** command in global configuration mode.

sntp client retransmit-interval *retransmit-interval-time*

Syntax Description

retransmit-interval-time	Specifies the timeout retransmission interval for the SNTP client in seconds.

Command Modes

Global configuration mode (config)

Usage Guidelines

The configured timeout retransmission mechanism takes effect only when the SNTP client works in the unicast or anycast mode.

Examples

The following example show how to configure the retransmission interval for the SNTP client using the **sntp client retransmit-interval** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp client retransmit-interval 8
```

sntp client retransmit

To configure the number of timeout retransmission attempts for an SNTP client, use the **sntp client retransmit** command in global configuration mode.

sntp client retransmit *number*

Syntax Description

number	Specifies the number of timeout retransmission attempts for the SNTP client.

Command Modes

Global configuration mode (config)

Usage Guidelines

The configured timeout retransmission mechanism takes effect only when the SNTP client works in the unicast or anycast mode.

Examples

The following example show how to configure the number of retransmission attempts for the SNTP client using the **sntp client retransmit-interval** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp client retransmit 5
```

sntp client summer-time dayly

To set the SNTP client daylight savings time daily, use the **sntp client summer-time dayly** command in global configuration mode.

sntp client summer-time dayly *start-month start-date start-time end-month end-date end-time*

no sntp client summer-time dayly

Syntax Description

start-month	Specifies the start month for daylight savings.
start-date	Specifies the start date for daylight savings.
start-time	Specifies the start time for daylight savings.
end-month	Specifies the end month for daylight savings.
end-date	Specifies the end date for daylight savings.
end-time	Specifies the end time for daylight savings.

Command Modes

Global configuration mode (config)

Examples

The following example show how to configure the daylight savings daily for the SNTP client using the **sntp client summer-time dayly** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp client summer-time dayly 3 25 12:00:00 7 25 12:00:00
```

sntp client summer-time weekly

To set the SNTP client daylight savings time weekly, use the **sntp client summer-time weekly** command in global configuration mode.

sntp client summer-time weekly *start-month start-week start-day start-time end-month end-week end-day end-time*

no sntp client summer-time weekly

Syntax Description

start-month	Specifies the start month for daylight savings.
start-week	Specifies the start week for daylight savings.
start-day	Specifies the start day for daylight savings.
start-time	Specifies the start time for daylight savings.
end-month	Specifies the end month for daylight savings.
end-week	Specifies the end week for daylight savings.
end-day	Specifies the end day for daylight savings.
end-time	Specifies the end time for daylight savings.

Command Modes

Global configuration mode (config)

Examples

The following example show how to configure the daylight savings weekly for the SNTP client using the **sntp client summer-time weekly** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp client summer-time weekly 3 3 mon 12:00:00 7 3 fri 12:00:00
```

sntp client valid-server

To configure a legal server list for the SNTP client, use the **sntp client valid-server** command in global configuration mode.

sntp client valid-server *ip-address wildcard-ip-address*
no sntp client valid-server {**all** | *ip-address wildcard-ip-address*}

Syntax Description

ip-address	Specifies the IP address of the valid SNTP server.
wildcard-ip-address	Specifies the IP address of the wildcard SNTP server.

Command Modes

Global configuration mode (config)

Examples

The following example shows how to configure the valid SNTP servers for an SNTP client using the **sntp client valid-server** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp client valid-server 10.23.23.1 23.1.1.4
```

sntp server

To set SNTP server configurations, use the **sntp server** command in global configuration mode.

sntp server {*ip-address* | **backup** *ip-address* | **key** *key-number*}

Syntax Description

ip-address	Specifies the IP address of the SNTP server.
backup *ip-address*	Specifies the IP address of the SNTP backup server.
key *key-number*	Specifies the authentication key for the SNTP server.

Command Modes

Global configuration mode (config)

Examples

The following example shows how to configure the SNTP server using the **sntp server** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp server 12.2.2.1
```

sntp trusted-key

To configure a trusted password for multicast and broadcast modes, use the **sntp trusted-key** command in global configuration mode.

sntp trusted-key *key-number*
no sntp trusted-key *key-number*

Syntax Description

key-number	Specifies the trusted key for the SNTP client.

Command Modes

Global configuration mode (config)

Examples

The following example shows how to configure SNTP client trusted key authentication using the **sntp trusted-key** command:

```
Device> enable
Device# configure terminal
Device(config)# sntp trusted-key 243586
```

upload automatically configuration ftp

To automatically upload a configuration file at regular intervals with the FTP server, use the **upload automatically configuration ftp** command in privileged EXEC mode.

upload automatically configuration ftp {**inet** | **inet6**}*ftp-server-ip-address file-name ftp-username ftp-password***per hours** *hours* **minutes** *minutes*

Syntax Description

inet	Specifies IPv4 address family.
inet6	Specifies IPv6 address family.
ftp-server-ip-address	Specifies the IP address of the FTP server.
file-name	Specifies the name of the file to be uploaded.
ftp-username	Specifies the user name of the FTP server.
ftp-password	Specifies the password of the FTP server.
per hours *hours* **minutes** *minutes*	Specifies the time interval in hours and minutes after which the configuration file is to be automatically uploaded.

Command Modes

Privileged EXEC (#)

Examples

The following example shows how to upload a configuration file using the **upload automatically configuration tftp** command:

```
Device> enable
Device# upload automatically configuration ftp inet 10.23.13.1 config3.txt per hours 12
minutes 10
```

upload automatically configuration tftp

To automatically upload a configuration file at regular intervals with the TFTP server, use the **upload automatically configuration tftp** command in privileged EXEC mode.

upload automatically configuration tftp {**inet** | **inet6**}*tftp-server-ip-address file-name* **per hours** *hours* **minutes** *minutes*

Syntax Description

inet	Specifies IPv4 address family.
inet6	Specifies IPv6 address family.
tftp-server-ip-address	Specifies the IP address of the TFTP server.
file-name	Specifies the name of the file to be uploaded.
per hours *hours* **minutes** *minutes*	Specifies the time interval in hours and minutes after which the configuration file is to be automatically uploaded.

Command Modes

Privileged EXEC (#)

Examples

The following example shows how to upload a configuration file using the **upload automatically configuration tftp** command:

```
Device> enable
Device# upload automatically configuration tftp inet 10.23.13.1 config2.txt per hours 20
minutes 30
```

upload ftp

To upload a file with the FTP server, use the **upload ftp** command in privileged EXEC mode.

upload {**application** | **configuration** | **keyfile**{**private** | **public**} | **logging**}**ftp** {**inet** | **inet6**}*ftp-server-ip-address file-name ftp-username ftp-password*

Syntax Description

application	Specifies the host file.
configuration	Specifies the configuration file.
keyfile	Specifies the SSH keyfile.
private	Specifies the SSH private keyfile.
public	Specifies the SSH public keyfile.
logging	Specifies the log file.
inet	Specifies IPv4 address family.
inet6	Specifies IPv6 address family.
ftp-server-ip-address	Specifies the IP address of the FTP server.
file-name	Specifies the name of the file to be uploaded.
ftp-username	Specifies the user name of the FTP server.
ftp-password	Specifies the password of the FTP server.

Command Modes

Privileged EXEC (#)

Examples

The following example shows how to upload a host file with an FTP server using the **upload ftp** command:

```
Device> enable
Device# upload application ftp 192.168.1.99 host.arj rr 142
```

upload tftp

To upload a file with the TFTP server, use the **upload tftp** command in privileged EXEC mode.

upload {**application** | **configuration** | **keyfile**{**private** | **public**} | **logging**}**tftp** {**inet** | **inet6**}*tftp-server-ip-address file-name*

Syntax Description

application	Specifies the host file.
configuration	Specifies the configuration file.
keyfile	Specifies the SSH keyfile.
private	Specifies the SSH private keyfile.
public	Specifies the SSH public keyfile.
logging	Specifies the log file.
inet	Specifies IPv4 address family.
inet6	Specifies IPv6 address family.
tftp-server-ip-address	Specifies the IP address of the TFTP server.
file-name	Specifies the name of the file to be uploaded.

Command Modes

Privileged EXEC (#)

Examples

The following example shows how to upload a configuration file with a TFTP server using the **upload tftp** command:

```
Device> enable
Device# upload application tftp 192.168.1.99 text.txt
```