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 summer-time

To set the clock daylight savings time, use the **clock summer-time** command in global configuration mode.

clock summer-time { **dayly** | **weekly** } *start-time*

Syntax Description

start-time	Specifies the start time for daylight savings. The daylight savings time format must be entered in hour, minutes and, seconds (HH:MM:SS).

Command Modes Global configuration mode (config)

Examples The following example shows how to configure the daylight savings using the **clock summer-time** command:

```
Device> enable
Device# configure terminal
Device(config)# clock summer-time dayly 00:00:00 2021/03/12 00:00:00 2021/11/05
```

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
```

ntp access

To configure access control for Network Time Protocol (NTP) services, use the **ntp access** command in global configuration mode. To disable NTP settings, use the **no access** form of the command.

ntp access *ip-address* { **permit** | **deny** }

no ntp access *ip-address* { **permit** | **deny** }

Syntax Description

access *ip-address*	Specifies the control access for an IPv4 or IPv6 access list to the NTP services.
permit	Permts the NTP services.
deny	Denies the NTP services

Command Modes

Global configuration (config)

Examples

The following example shows how to enable NTP authentication using the **ntp access** command:

```
Device> enable
Device# configure terminal
Device(config)# ntp access 192.168.0.10 255.255.255.0 permit
```

ntp authentication

To enable NTP authentication and configure NTP settings, use the **ntp authenticatiom** command in global configuration mode. To disable NTP settings, use the **no** form of the command.

ntp authentication authentication-keyid *key_id* **md5** *key_string*

no ntp authentication authentication-keyid *key_id* **md5** *key_string*

Syntax Description

authentication	Enables NTP authentication.
authentication-keyid *key_id* **md5** *key_string*	Specifies an authentication key for a trusted NTP source. • *key_id*: The authentication key. The range is from 1 to 65535. • **md5**: Message Digest 5 (MD5) algorithm authentication support • *key_string*: Key value. The maximum length is 32 characters.

Command Modes

Global configuration (config)

Examples

The following example shows how to enable NTP authentication using the **ntp authentication** command:

```
Device> enable
Device# configure terminal
Device(config)# ntp authentication
```

ntp broadcast

To configure NTP broadcast mode, use the **ntp broadcast** command in interface configuration mode. To disable NTP settings, use the **no** form of the command.

ntp **broadcast** { **server** **authentication-keyid** *key_id* | **client** }

no ntp **broadcast** { **server** **authentication-keyid** *key_id* | **client** }

Syntax Description	
authentication-keyid *key_id*	Specifies an authentication key for a trusted NTP source.
	key_id: The authentication key. The range is from 1 to 65535.

Command Modes

Interface configuration (config-if)

Examples

The following example shows how to configure the NTP broadcast mode using **ntp broadcast** command:

```
Device> enable
Device# configure terminal
Device(config)# interface vlan-interface 1
Device(config-if-vlaninterface-1)# ntp broadcast server
```

ntp disable

To disable NTP incoming packets, use the **ntp disable** command in interface configuration mode. To disable NTP settings, use the **no** form of the command.

ntp disable

no ntp disable

Command Modes   Interface configuration (config-if)

Examples   The following example shows how to disable NTP incoming packets using the **ntp disable** command:

```
Device> enable
Device# configure terminal
Device(config)# interface vlan-interface 1
Device(config-if-vlaninterface-1)# ntp disable
```

ntp max-dynamic-sessions

To configure maximum number of dynamic NTP sessions, use the **ntpmax-dynamic-sessions** command in global configuration mode. To disable NTP settings, use the **no** form of the command.

ntp max-dynamic-sessions *value*

no ntp max-dynamic-sessions *value*

Syntax Description

max-dynamic-sessions *value*	Specifies the maximum number of dynamic sessions. *value*: The range is from 11 to 100.

Command Modes

Interface configuration (config-if)

Examples

The following example shows how to configure maximum number of dynamic NTP sessions using the **ntp authentication** command:

```
Device> enable
Device# configure terminal
Device(config)# ntp max-dynamic-sessions 10
```

ntp multicast

To configure NTP multicast mode, use the **ntp multicast** command in global configuration mode. To disable NTP settings, use the **no** form of the command.

ntp multicast { **server authentication-keyid** *key_id* | **client** }

no ntp multicast { **server authentication-keyid** *key_id* | **client** }

Syntax Description

authentication-keyid *key_id*	Specifies an authentication key for a trusted NTP source.
	key_id: The authentication key. The range is from 1 to 65535.

Command Modes

Interface configuration (config-if)

Examples

The following example shows how to configure the NTP multicast mode using **ntp multicast** command:

```
Device> enable
Device# configure terminal
Device(config)# interface vlan-interface 1
Device(config-if-vlaninterface-1)# ntp multicast server
```

ntp unicast peer

To configure synchronization to an NTP-configured peer device, use the **ntp unicast peer** command in global configuration mode. To disable NTP settings, use the **no** form of the command.

ntp unicast peer *ip-address* [**authentication-keyid** *key_id*]

no ntp unicast peer *ip-address* [**authentication-keyid** *key_id*]

Syntax Description

peer *ip-address*	Specifies the system clock to synchronize a peer or to be synchronized by a peer *ip-address*: IPv4 or IPv6 address of the peer device.

Command Modes   Global configuration (config)

Examples

The following example shows how to configure synchronization to an NTP-configured peer device using the **ntp unicast peer** command:

```
Device> enable
Device# configure terminal
Device(config)# ntp unicast peer 192.168.0.10
```

ntp unicast server

To configure client mode, use the **ntp unicast server** command in global configuration mode. To disable NTP settings, use the **no** form of the command.

ntp unicast server *ip-address* [**authentication-keyid** *key_id*]

no ntp unicast server *ip-address* [**authentication-keyid** *key_id*]

server*ip-address*	Specifies the system clock to be synchronized by a time server.
	ip-address: IPv4 or IPv6 address of the time server.

Syntax Description is shown in the left margin for the above block.

Command Modes

Global configuration (config)

Examples

The following example shows how to configure client mode using the **ntp unicast server** command:

```
Device> enable
Device# configure terminal
Device(config)# ntp unicast server  192.168.0.11
```

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 ntp access

To display the NTP access configuration, use the **show ntp access** command in global configuration mode.

show ntp access

Command Modes   Global configuration mode (config)

Examples   The following is a sample output of the **show ntp access** command:

```
Device> enable
Device# configure terminal
Device(config)# show ntp access
```

show ntp authentication

To display NTP authentication configuration, use the **show ntp authentication** command in global configuration mode.

show ntp authentication

Command Modes   Global configuration mode (config)

Examples   The following is a sample output of the **show ntp authentication** command:

```
Device> enable
Device# configure terminal
Device(config)# show ntp authentication
```

show ntp broadcast server

To display the NTP broadcast server configuration, use the **show ntp broadcast server** command in global configuration mode.

show ntp broadcast server

Command Modes   Global configuration mode (config)

Examples   The following is a sample output of the **show ntp broadcast server** command:

```
Device> enable
Device# configure terminal
Device(config)# show ntp broadcast server
```

show ntp disable

To disable NTP configuration, use the **show ntp disable** command in global configuration mode.

show ntp disable

Command Modes

Global configuration mode (config)

Examples

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

```
Device> enable
Device# configure terminal
Device(config)# show ntp disable
```

show ntp max-dynamic-sessions

To display the maximum number of dynamic sessions, use the **show ntp max-dynamic-sessions** command in global configuration mode.

show ntp max-dynamic-sessions

Command Modes

Global configuration mode (config)

Examples

The following is a sample output of the **show ntp max-dynamic-sessions** command:

```
Device> enable
Device# configure terminal
Device(config)# show ntp max-dynamic-sessions
```

show ntp multicast server

To display the NTP multicast server configuration, use the **show ntp multicast server** command in global configuration mode.

show ntp multicast server

Command Modes

Global configuration mode (config)

Examples

The following is a sample output of the **show ntp multicast server** command:

```
Device> enable
Device# configure terminal
Device(config)# show ntp multicast server
```

show ntp sessions

To display the NTP session details, use the **show ntp sessions** command in global configuration mode.

show ntp sessions

Command Modes

Global configuration mode (config)

Examples

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

```
Device> enable
Device# configure terminal
Device(config)# show ntp sessions
```

show ntp status

To display the NTP status configuration, use the **show ntp status** command in global configuration mode.

show ntp status

Command Modes   Global configuration mode (config)

Examples   The following is a sample output of the **show ntp status** command:

```
Device> enable
Device# configure terminal
Device(config)# show ntp status
```

show ntp unicast peer

To display the NTP unicast peer configuration, use the **show ntp unicast peer** command in global configuration mode.

show ntp unicast peer

Command Modes
Global configuration mode (config)

Examples
The following is a sample output of the **show ntp unicast peer** command:

```
Device> enable
Device# configure terminal
Device(config)# show ntp unicast peer
```

show ntp unicast server

To display the NTP unicast server configuration, use the **show ntp unicast server** command in global configuration mode.

show ntp unicast server

Command Modes   Global configuration mode (config)

Examples   The following is a sample output of the **show ntp unicast server** command:

```
Device> enable
Device# configure terminal
Device(config)# show ntp unicast server
```

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 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**}

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.

Syntax Description (label at left of table)

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 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
```