GigaX3124

Layer 3 Switch

CLI Command Reference

E3332

July 2007 V1

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1 Getting Started with the CLI

This chapter provides information that you should know before using the ASUS GigaX Switch command-line interface (CLI). If you have never used GigaX Switch, take a few minutes to read this chapter before reading the rest of this guide.

- Command usage basics
- Command-line error messages
- Accessing the CLI
- Saving configuration changes

This guide provides procedures for using only the commands that have been created or changed for these switches.

1.1 Command Usage Basics

This section provides the following topics:

- Accessing command modes
- Abbreviating commands
- Using the No and Default forms of commands
- Redisplaying a command
- Getting help

1.1.1 Accessing Command Modes

The CLI is divided into different modes. The commands available to you at any given time depend on which mode you are in. Entering a question mark (?) or “list” command at the system prompt provides a list of commands for each command mode.

The switch supports the following command modes:

- User EXEC
- Privileged EXEC
- Global configuration
- Interface configuration

- Config-vlan
- Mac access-list extended
- IP standard access-list
- IP extended access-list
- Policy-map configuration
- Policy-map-class configuration
- Config-router

When you start a session on the switch, you begin in user mode, often called user EXEC mode, which has only a limited subset of the commands. To access all commands and modes, you must first enter privileged EXEC mode. From privileged mode, you can enter any EXEC command or enter global configuration mode. Most of the EXEC commands are one-time commands, such as show commands, which show the current configuration status, and no commands, which clear counters or interfaces.

You can use the Config-vlan (virtual LAN) and the various configuration modes to make changes to the running configuration. To access the various configuration modes, you must start at global configuration mode. From global configuration mode, you can enter interface and line configuration modes.

Table 1-1 describes how to access each mode, the prompt you see in that mode, and how to exit the mode. The examples in the table use the host name ASUS.

Table 1-1: Command Modes Summary

Command mode	Access method	Prompt	Exit or Access Next Mode.
User EXEC	This is the first level of access.(For the switch) Change terminal settings, perform basic tasks, and list system information.	ASUS>	Exit to enter the EXIT command. To enter privileged EXEC mode, enter the enable command.
Privileged EXEC	From user EXEC mode, enter the enable command.	ASUS#	To exit to user EXEC mode, enter the disable command. To enter global configuration mode, enter the configure terminal command.

Command mode	Access method	Prompt	Exit or Access Next Mode.
Global configuration	From privileged EXEC mode, enter the configure command.	ASUS (config)#	To exit to privileged EXEC mode, enter the exit or end command, or press Ctrl-Z. To enter interface configuration mode, enter the interface IFNAME configuration command.
Interface configuration	From global configuration mode, specify an interface by entering the interface command followed by an interface identification.	ASUS (config-if)#	To exit to privileged EXEC mode, enter the end command, or press Ctrl-Z. To exit to global configuration mode, enter the exit command.
Config-vlan	In global configuration mode, enter the vlan *vlan-id* command.	ASUS (config-vlan)#	To exit to global configuration mode, enter the exit command. To return to privileged EXEC mode, enter the end command, or press Ctrl-Z.
Mac access-list extended	In global configuration mode, enter the ACL NAME command.	ASUS(config-mac-acl)#	To exit to global configuration mode, enter the exit command. To return to privileged EXEC mode, enter the end command, or press Ctrl-Z.
IP standard access-list	In global configuration mode, enter the ACL NAME command.	ASUS(config-std-acl)#	To exit to global configuration mode, enter the exit command. To return to privileged EXEC mode, enter the end command, or press Ctrl-Z.
IP extended access-list	In global configuration mode, enter the ACL NAME command.	ASUS(config-ext-acl)#	To exit to global configuration mode, enter the exit command. To return to privileged EXEC mode, enter the end command, or press Ctrl-Z.

Command mode	**Access method**	**Prompt**	**Exit or Access Next Mode.**
Policy-map configuration	In global configuration mode, enter the Plocy-map NAME command.	ASUS(config-pmap)#	To exit to global configuration mode, enter the exit command. To return to privileged EXEC mode, enter the end command, or press Ctrl-Z. To enter the Policy-map-class configuration mode, enter the class-map NAME command.
Policy-map-class configuration	In Policy-map configuration mode, enter the class-map NAME command.	ASUS(config-pmap-class)#	To exit to policy-map configuration mode, enter the exit command. To return to privileged EXEC mode, enter the end command, or press Ctrl-Z.
Config-router	In global configuration mode, enter the router ospf/rip command.	ASUS(config-router)#	To exit to global configuration mode, enter the exit command. To return to privileged EXEC mode, enter the end command, or press Ctrl-Z.

For any of the modes, you can see a comprehensive list of the available commands by entering a question mark (?) or “list”at the prompt.

1.1.3 Abbreviating Commands

You can abbreviate commands and keywords to the number of characters that allow a unique abbreviation. For example, you can abbreviate the **show** command to **sh** or the show **running-config** command to **sh ru**.

1.1.4 Using the No and Default Forms of Commands

Almost every configuration command has a **no** form. In general, use the **no** form to

- Disable a feature or function.
- Reset a command to its default values.
- Reverse the action of a command. For example, the **no shutdown** command reverses the shutdown of an interface.

Use the command without the **no** form to reenable a disabled feature or to reverse the action of a **no** command.

Configuration commands can also have a default form. The default form of a command returns the command setting to its default.

1.1.5 Redisplaying a Command

To redisplay a command you previously entered, press the up-arrow key. You can continue to press the up-arrow key for more commands.

1.1.6 Getting Help

Entering a question mark (?) at the system prompt displays a list of commands for each command mode. You can also get a list of any command's associated keywords and arguments with the context-sensitive help feature.

The following are the commands to get help specific to a command mode, a command, a keyword, or an argument:

- **help**—Obtain a brief description of the help system in any command mode.

  ```
  ASUS> help
  ```

- *abbreviated-command-entry*?—Obtain a list of commands that begin with a particular character string.

  ```
  ASUS> sh?
  ASUS> show  Show running system information
  ```

- *abbreviated-command-entry*<**Tab**>—Complete a partial command name.

***Note**: No space before tabbing.*

```
ASUS# sh ru<tab>
ASUS# show running-config
```

- ? — List all commands available for a particular command mode.

```
ASUS> ?
```

- command ?—List of command keywords.

```
ASUS> show ?
```

- command keyword ?— List of command keyword arguments.

```
ASUS# show ip ?
access-group          Specify an Access Control List (ACL)
 access-list          Access lists (ACL) configuration
forwarding             IP forwarding status
 igmp                 Internet Group Management Protocol (IGMP)
```

When using context-sensitive help, the space (or lack of a space) before the question mark (?) is significant. To obtain a list of commands that begin with a particular character sequence, enter those characters followed immediately by the question mark (?). Do not include a space. This form of help is called word help, because it completes a word for you.

To list keywords or arguments, enter a question mark (?) in place of a keyword or argument. Include a space before the ?. This form of help is called command syntax help, because it reminds you which keywords or arguments are applicable based on the command, keywords, and arguments you already have entered.

1.2 Command-Line Error Messages

Table 1-2 lists some error messages that you might encounter while using the CLI.

Table 1-2: Common CLI Error Messages

Error Message	Meaning	How to Get Help
Ambiguous Command.	You did not enter enough characters for your switch to recognize the command.	Reenter the command followed by a space and a question mark (?). The possible keywords that you can enter with the command appear.
Command incomplete.	You did not enter all of the keywords or values required by this command.	Reenter the command followed by a space and a question mark (?). The possible keywords that you can enter with the command appear.
Unknown command.	You entered the command incorrectly.	Enter a question mark (?) to display all of the commands that are available in this command mode. The possible keywords that you can enter with the command appear.

1.3 Accessing the CLI

The following procedure assumes you have already assigned IP information and password to the switch or command switch. You can assign this information to the switch in the following ways:

- Using the setup program, as described in the release notes
- Manually assigning an IP address and password

To access the CLI, follow these steps:

Step 1 Start up the emulation software (such as ProComm, HyperTerminal, tip, or minicom) on the management station.

Step 2 If necessary, reconfigure the terminal-emulation software to match the switch console port settings (default settings are 9600 baud, no parity, 8 data bits, and 1 stop bit).

Step 3 Establish a connection with the switch by either

- Connecting the switch console port to a management station. For information about connecting to the console port, refer to the switch user manual.
- Using any Telnet TCP/IP package from a remote management station. The switch must have network connectivity with the Telnet client, and the switch must have an enable secret password configured.

  The switch can't supports many (under four) simultaneous Telnet sessions. Changes made by one Telnet user are reflected in all other Telnet sessions.

After you connect through the console port or through a Telnet session, the User EXEC prompt appears on the management station.

1.4 Saving Configuration Changes

The show command always displays the running configuration of the switch. When you make a configuration change to a switch or switch cluster, the change becomes part of the running configuration. The change does not automatically become part of the config file in Flash memory, which is the startup configuration used each time the switch restarts. If you do not save your changes to Flash memory, they are lost when the switch restarts.

To save all configuration changes to Flash memory, you must enter the **write file** command in privileged EXEC mode.

2 System Management Configuration

2.1 archive download-sw /overwrite tftp: URL

Syntax	archive download-sw /overwrite tftp: URL
Parameters	URL IP address[:Port]/File name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the archive download-sw /overwrite configuration command on the switch stack or standalone switch to download a new copy of software from a server and overwrite an existing image.
Examples	ASUS# archive download-sw /overwrite tftp:192.192.1.131/ image.img

2.2 archive download-sw /overwrite ftp: URL

Syntax	archive download-sw /overwrite ftp: URL
Parameters	URL [Username:Password@]IP address[:Port]/File name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the archive download-sw /overwrite configuration command on the switch stack or standalone switch to download a new copy of software from a server and overwrite an existing image.
Examples	ASUS# archive download-sw /overwrite tftp: admin:1234@192.192.1.131/image.img

2.3 arp timeout SECONDS

Syntax	arp timeout SECONDS
Parameters	SECONDS <1-86400>, age time in seconds
Command Mode	Global configuration mode
No/clear	no arp timeout
Show	show arp
Default	14400
Description	To show arp table.
Examples	ASUS(config)# arp timeout 3600

2.4 clock set TIME MONTH DAY YEAR

Syntax	clock set TIME MONTH DAY YEAR
Parameters	TIME hh:mm:ss Current Time
	MONTH <1-12>, Month of the year
	DAY <1-31>, Day of the month
	YEAR <1970-2037>, Year
Command Mode	Privileged EXEC mode
No/clear	
Show	show clock
Default	
Description	To set time
Examples	ASUS# clock set 15:26:02 4 6 2007

2.5 clock timezone ZONE HOURS MINUTES

Syntax	clock timezone ZONE
Parameters	ZONE time zone
	HOURS <-23-23>, hours offset from UTC
	MINUTES <0-59>, minutes offset from UTC
Command Mode	Privileged EXEC mode

No/clear	no clock timezone
Show	show clock
Default	UTC
Description	To set time zone
Examples	ASUS# clock timezone CCT 8 0

2.6 configure terminal

Syntax	configure terminal
Parameters	terminal Configuration terminal
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the write configuration command on the switch stack or standalone switch to configuration from vty interface.
Examples	ASUS# configure terminal

2.7 copy running-config startup-config

Syntax	copy running-config startup-config
Parameters	running-config Copy from current system configuration
	startup-config Copy to startup configuration
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the copy configuration command on the switch stack or standalone switch to copy running configuration startup-config.
Examples	ASUS# copy running-config startup-config

2.8 copy startup-config tftp: URL

Syntax	copy startup-config tftp: URL
Parameters	startup-config Copy from startup configuration
	ftp: Copy to tftp: file system
	URL IP address[:Port]/File name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Copy the file in Flash memory to the root directory of the TFTP server.
Examples	ASUS# copy startup-config tftp: 192.192.1.131/config.txt

2.9 copy tftp: URL startup-config

Syntax	copy tftp: URL startup-config
Parameters	tftp: Copy from tftp: file system
	URL IP address[:Port]/File name
	startup-config Copy to startup configuration
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Copy the file in the TFTP server to the Flash memory.
Examples	ASUS# copy tftp: 192.192.1.31/config.txt startup-config

2.10 copy startup-config ftp: URL

Syntax	copy startup-config ftp: URL
Parameters	startup-config Copy from startup configuration
	ftp: Copy to ftp: file system
	URL [Username:Password@]IP address[:Port]/File name

Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Copy the file in Flash memory to the root directory of the FTP server.
Examples	ASUS# copy startup-config ftp: asus:1234@192.192.1.131/config.txt

2.11 copy ftp: URL startup-config

Syntax	copy ftp: URL startup-config
Parameters	ftp: Copy from ftp: file system
	URL [Username:Password@]IP address[:Port]/File name
	startup-config Copy to startup configuration
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Copy the file in the FTP server to the Flash memory.
Examples	ASUS# copy ftp: asus:1234@192.192.1.31/config.txt startup-config

2.12 cpu ingress rate <50-4000>

Syntax	cpu ingress rate <50-4000>
Parameters	<50-4000> Rate limit, in packets per second
Command Mode	Global configuration mode
No/clear	no cpu ingress rate
Show	show running-config
Default	Unlimited
Description	To set the rate limit of CPU receiving packets
Examples	ASUS(config)# cpu ingress rate 100

2.13 disable

Syntax	Disable
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	This command turn off privileged mode and back to user mode
Examples	ASUS# disable

2.14 enable

Syntax	enable
Parameters	
Command Mode	User mode
No/clear	
Show	
Default	
Description	This command let user enter enable mode and turn on privileged mode command.
Examples	ASUS> enable

2.15 end

Syntax	end
Parameters	
Command Mode	Privileged EXEC mode, Global configuration mode, Interface mode
No/clear	
Show	
Default	
Description	This command let user end current mode and down to enable mode.

Examples	ASUS(config)# end

2.16 exit

Syntax	exit
Parameters	
Command Mode	User mode, Privileged EXEC mode, Global configuration mode, Interface mode
No/clear	
Show	
Default	
Description	This command let user exit current mode and down to previous mode.
Examples	ASUS(config)# exit

2.17 hostname HOSTNAME

Syntax	hostname HOSTNAME
Parameters	HOSTNAME This system's network name
Command Mode	Global configuration mode
No/clear	no hostname
Show	show running-config
Default	The default system's network name is ASUS
Description	This command sets the system's network name
Examples	ASUS(config)# hostname ASUS

2.18 list

Syntax	list
Parameters	
Command Mode	User mode, Privileged EXEC mode, Global configuration mode, Interface mode
No/clear	

Show	
Default	
Description	This command lists all of the command of the operation mode.
Examples	ASUS# list

2.19 ping IPADDR

Syntax	ping IPADDR
Parameters	IPADDR Ping destination address
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	This command used to send echo messages to ping destination address
Examples	ASUS# ping 192.192.1.1

2.20 quit

Syntax	quit
Parameters	
Command Mode	User mode, Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the command to exit current mode and down to previous mode.
Examples	ASUS# quit

2.21 reboot

Syntax	reboot
Parameters	

Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use this command to reboot the system.
Examples	ASUS# reboot

2.22 reload default-config file

Syntax	reload default-config file
Parameters	default-config the default-config file
	file the running-config file
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use this command to copy a default-config file to replace the current one
Examples	ASUS# reload default-config file

2.23 show arp

Syntax	show arp
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show arp table.
Examples	ASUS# show arp

2.24 show arp host ADDRSS

Syntax	show arp host [ADDRESS]
Parameters	ADDRESS host
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show arp table for specified host.
Examples	ASUS# show arp host 192.192.1.254 ASUS# show arp host 00:05:5D:0C:5E:41 ASUS# show arp host vlan1

2.25 show cable-diagnostic interface [IFNAME]

Syntax	show cable-diagnostic interface [IFNAME]
Parameters	IFNAME interface name (e.q.: fastethernet1/0/1 or gigabitethernet1/0/1)
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show cable-diagnostic information
Examples	ASUS# show cable-diagnostic interface gi1/0/1

2.26 show clock

Syntax	show clock
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	

Description	To show clock
Examples	ASUS# show clock

2.27 show cpu statistics

Syntax	show cpu statistics
Parameters	
Command Mode	Privileged EXEC mode
No/clear	clear cpu statistics
Show	
Default	
Description	To show cpu received and transmitted packet statistics
Examples	ASUS# show cpu statistics

2.28 show memory

Syntax	show memory
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show system memory status
Examples	ASUS# show memory

2.29 show private health

Syntax	show private health
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	

Description	To show system monitor information
Examples	ASUS# show private health

2.30 show private led

Syntax	show private led
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show system led information
Examples	ASUS# show private led

2.31 show private model

Syntax	show private model
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show model name
Examples	ASUS# show private model

2.32 show processes cpu history

Syntax	show processes cpu history
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	

Description	To show cpu loading history
Examples	ASUS# show processes cpu history

2.33 show running-config

Syntax	show running-config
Parameters	running-config current operating configuration
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show running-config fule.
Examples	ASUS# show running-config

2.34 show startup-config

Syntax	show startup-config
Parameters	startup-config contentes of startup configuration
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show startup-config.
Examples	ASUS# show startup-config

2.35 show syslog

Syntax	show syslog
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	

Default	
Description	To show system log messages
Examples	ASUS# show syslog

2.36 show syslog configuration

Syntax	show syslog configuration
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show system log configuration
Examples	ASUS# show syslog configuration

2.37 show telnet who

Syntax	show telnet who
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show who is logged in.
Examples	ASUS# show telnet who

2.38 show uptime

Syntax	show uptime
Parameters	
Command Mode	Privileged EXEC mode
No/clear	

Show	
Default	
Description	To display system uptime
Examples	ASUS# show uptime

2.39 show version

Syntax	show version
Parameters	version display version information
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show firmware version.
Examples	ASUS# show version

2.40 show user

Syntax	show user
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show user accounts
Examples	ASUS# show user

2.41 syslog (enable | disable)

Syntax	syslog (enable | disable)
Parameters	disable Disable syslog protocol
	enable Enable syslog protocol
Command Mode	Global configuration mode

No/clear	
Show	show syslog configuration
Default disable	
Description	To enable/disable system log protocol
Examples	ASUS(config)# syslog enable

2.42 syslog facility <0-23>

Syntax	syslog facility <0-23>
Parameters	facility Assign message facility
	<0-23> Facility code
Command Mode	Global configuration mode
No/clear	
Show	show syslog configuration
Default 2	
Description	To configure system log Facility code
Examples	ASUS(config)# syslog facility 3

2.43 syslog hostname

Syntax	syslog hostname
Parameters	
Command Mode	Global configuration mode
No/clear	no syslog hostname
Show	show syslog configuration
Default	Disable
Description	Turn on message hostname
Examples	ASUS(config)# syslog hostname

2.44 syslog server-ip IPADDR

Syntax	syslog server-ip IPADDR
Parameters	IPADDR IP address
Command Mode	Global configuration mode
No/clear	no syslog server-ip IPADDR
Show	show syslog configuration
Default	
Description	To configure Syslog server IP address
Examples	ASUS(config)# syslog server-ip 192.168.1.1

2.45 syslog severity <0-7>

Syntax	syslog severity <0-7>
Parameters	<0-7> Severity code
Command Mode	Global configuration mode
No/clear	
Show	show syslog configuration
Default 6	
Description	Assign message priority
Examples	ASUS(config)# syslog severity 2

2.46 syslog timestamp

Syntax	syslog timestamp
Parameters	
Command Mode	Global configuration mode
No/clear	no syslog timestamp
Show	show syslog configuration
Default	Disable
Description	Turn on message timestamp
Examples	ASUS(config)# syslog timestamp

2.47 telnet IPADDR

Syntax	telnet IPADDR
Parameters	IPADDR IP address of a remote system
Command Mode	User mode, Privileged EXEC mode
No/clear	
Show	
Default	
Description	To telnet a ip address
Examples	ASUS# telnet 192.192.1.11

2.48 telnet IPADDR PORT

Syntax	telnet IPADDR PORT
Parameters	IPADDR IP address or hostname of a remote system PORT TCP port number
Command Mode	User mode, Privileged EXEC mode
No/clear	
Show	
Default	
Description	To telnet an ip address with the specified port number
Examples	ASUS# telnet 192.192.1.11 21

2.49 tracelog add (dhcp-relay | dhcp-snooping | dot1x | gvrp | igmp-snooping | lacp | stp | switch)

Syntax	tracelog add (dhcp-relay | dhcp-snooping | dot1x | gvrp | igmp-snooping | lacp | stp | switch)
Parameters	
Command Mode	Global configuration mode
No/clear	tracelog delete (dhcp-relay | dhcp-snooping | dot1x | gvrp | igmp-snooping | lacp | stp | switch)

Show	
Default	disable tracelog
Description	This command starts the system logging the function.
Examples	ASUS(config)# tracelog add dot1x

2.50 tracelog level (critical | high | low)

Syntax	tracelog level (critical | high | low)
Parameters	
Command Mode	Global configuration mode
No/clear	
Show	
Default	critical
Description	This command is to decide how much message will be printed.
Examples	ASUS(config)# tracelog level low

2.51 traceroute IPADDR

Syntax	traceroute IPADDR
Parameters	IPADDR Trace route to destination address or hostname
Command Mode	User mode, Privileged EXEC mode
No/clear	
Show	
Default	
Description	
Examples	ASUS# traceroute 192.192.1.11

2.52 user add ACCOUNT PASSWORD

Syntax	user add ACCOUNT PASSWORD	
Parameters	ACCOUNT	user name
	PASSWORD	password

Command Mode	Global configuration mode
No/clear	user delete USERNAME
Show	show user
Default	
Description	To add a new user account
Examples	ASUS# user add test test1234

2.53 user delete USERNAME

Syntax	user delete USERNAME	
Parameters	ACCOUNT	user name
Command Mode	Privileged EXEC mode	
No/clear		
Show	show user	
Default		
Description	To delete a user account	
Examples	ASUS# user delete test	

2.54 write [file | memory | terminal]

Syntax	write [file l memory l terminal]	
Parameters	file	write configuration to the file
	memory	write configuration to the file
	terminal	write to terminal
Command Mode	Privileged EXEC mode	
No/clear		
Show		
Default	write to file	
Description	Use the write configuration command on the switch stack or standalone switch to write running configuration to memory, network, or terminal	
Examples	ASUS# write	

3 Port interface configuration:

Type “interface IFNAME” in global configuration mode, then start to configure interface.

3.1 acceptable frame-type (all| discard-all| vlan-tagged-only)

Syntax	acceptable frame-type (alll discard-alll vlan-tagged-only)
Parameters	all Accept all packets
	discard-all Discard all packets
	vlan-tagged-only Accept VLAN-tagged packets only
Command Mode	Interface configuration mode
No/clear	
show	show interface IFNAME
Default	Accept all packets.
Description	Use the acceptable frame type configuration command on the switch stack or standalone switch to set the type of the acceptable frame, for any kind of frame type is accepted or only vlan-tag frame is accepted.
Examples	ASUS(config-if)# acceptable frame-type all

3.2 auto-negotiation

Syntax	auto-negotiation
Parameters	
Command Mode	Interface configuration mode
No/clear	no auto-negotiation
Show	show interface IFNAME
Default	The default is enable
Description	Use the auto-negotiation configuration command on the switch stack or standalone switch to set auto-negotiation status of the port.
Examples	ASUS(config-if)# auto-negotiation

3.3 default-priority <0-7>

Syntax	default-priority <0-7>
Parameters	<0-7> Cos priority
Command Mode	Interface configuration mode
No/clear	no default-priority
Show	show running-config
Default	The default is 0
Description	Use the default priority configuration command on the switch stack or standalone switch to set default cos priority of the port.
Examples	ASUS(config-if)# default-priority 3

3.4 description LINE

Syntax	description LINE
Parameters	LINE Characters describing this interface
Command Mode	Interface configuration mode
No/clear	no description
Show	show interface status
Default	None
Description	Use the description command on the switch stack or standalone switch to set description of the port.
Examples	ASUS(config-if)# description server

3.5 duplex (full|half)

Syntax	duplex (fulllhalf)
Parameters	full Force the interface in full-dupex mode
	half Force the interface in half-dupex mode
Command Mode	Interface configuration mode
No/clear	no duplex
Show	show interface IFNAME
Default	The default is full

Description	Use the duplex interface configuration command on the switch stack or on a standalone switch to specify the duplex mode of operation for Fast Ethernet and Gigabit Ethernet ports. Use the no form of this command to return the port to its default value.
Examples	ASUS(config-if)# duplex full

3.6 flowcontrol (both| rx| tx)

Syntax	flowcontrol (bothl rxl tx)
Parameters	both Allow the interface to receive+transmit pause frames
	rx Allow the interface to receive pause frames
	tx Allow the interface to transmit pause frames
Command Mode	Interface configuration mode
No/clear	no flowcontrol
Show	show interface IFNAME
Default	The default is both
Description	This command sets the interface flowcontrol method.
Examples	ASUS(config-if)# flowcontrol both

3.7 ingress-filter (enable|disable)

Syntax	ingress-filter (enableldisable)
Parameters	enable Allow non-VLAN-member tagged packets forwarding
	disable Drop non-VLAN-member tagged packets
Command Mode	Interface configuration mode
No/clear	
Show	show interface IFNAME
Default	The default is enable
Description	This command sets the IEEE 802.1Q tagged frames filtering for the interface.
Examples	ASUS(config-if)# ingress-filter disable

3.8 interface IFNAME

Syntax	interface IFNAME
Parameters	IFNAME interface's name
Command Mode	Global configuration mode
No/clear	
Show	show interface IFNAME
Default	
Description	This command changes the operation to interface command mode.
Examples	ASUS(config)# interface gi1/0/1

3.9 interface vlan <1-3000>

Syntax	interface vlan <1-3000>
Parameters	vlan Select a vlan to configure
	<1-3000> VLAN ID
Command Mode	Global configuration mode
No/clear	
Show	
Default	
Description	In L2 model, this command changes the system vlan to specific vlan interface command mode. In L3 model, this command only changes to L3 interface mode.
Examples	ASUS(config)# interface vlan 2

3.10 ip address A.B.C.D/M

Syntax	ip address A.B.C.D/M
Parameters	address Set the IP address of an L3 interface
	A.B.C.D/M IP address (e.g. 10.0.0.1/8)
Command Mode	Interface configuration mode
No/clear	no ip address A.B.C.D/M

Show	show running-config
Default	
Description	This command sets the ip address for indicated L3 interface.
Examples	ASUS(config)# interface vlan2
	ASUS(config-if)# ip address 192.192.1.11/24

3.11 line loopback

Syntax	line loopback
Parameters	
Command Mode	Interface configuration mode
No/clear	no line loopback
Show	show running-config
Default	Enable
Description	Use the line loopback command on the switch stack or stand-alone switch to detect loopback of the port.
Examples	ASUS(config-if)# line loopback
	ASUS(config-if)# no line loopback

3.12 line loopback shutdown <60-600>

Syntax	line loopback shutdown <60-600>
Parameters	shutdown Interface maximum shutdown time
	<60-600> Showdown time, in seconds
Command Mode	Interface configuration mode
No/clear	no line loopback shoutdown
Show	show running-config
Default	Shutdown forever.
Description	To set the line loopback shutdown time for the dedicated port.
Examples	ASUS(config-if)# line loopback shutdown 60

3.13 max-frame-size <1518-9216>

Syntax	max-frame-size <1518-9216>
Parameters	<1518-9216> Maximum frame size in byte
Command Mode	Interface configuration mode
No/clear	no max-frame-size
Show	show interface IFNAME
Default	The default is 1518 bytes
Description	Use the max-frame-size command on the switch stack or standalone switch to set the received frame max size of the port.
Examples	ASUS(config-if)# max-frame-size 9216

3.14 mdix

Syntax	Mdix
Parameters	mdix Enable Medium-Dependent Interface Crossover (MDIX)
Command Mode	Interface configuration mode
No/clear	no mdix
Show	
Default	The default is enable
Description	Use the mdix command on the switch stack or standalone switch to set mdix of the port.
Examples	ASUS(config-if)# mdix

3.15 no switchport

Syntax	no switchport
Parameters	
Command Mode	Interface configuration mode
No/clear	switchport
Show	
Default	

Description	Use the command to set the port to be a routed port. A routed port is a L3 interface can configure IP and routing.
Examples	ASUS(config)# interface gi1/0/1 ASUS(config-if)# no switchport

3.16 shutdown

Syntax	shutdown
Parameters	
Command Mode	Interface configuration mode
No/clear	no shutdown
Show	show running-config
Default	
Description	The shutdown command for a port causes it to stop forwarding. You can enable the port with the no shutdown command. In L3 model, the command also can stop forwarding for a L3 interface.
Examples	ASUS(config-if)# shutdown

3.17 speed (10|100|1000)

Syntax	speed (10|100|1000)
Parameters	10 Force the interface in 10 Mbps 100 Force the interface in 100 Mbps 1000 Force the interface in 1 Gbps
Command Mode	Interface configuration mode
No/clear	no speed
Show	show interface IFNAME
Default	
Description	Use the speed configuration command on the switch stack or standalone switch to set speed status of the port.
Examples	ASUS(config-if)# speed 100

3.18 show interface IFNAME

Syntax	Show interface IFNAME
Parameters	IFNAME interface's name, ex: gi1/0/1 or vlan1
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	This command shows the interface detail status.
Examples	ASUS# show interface gi1/0/1 ASUS# show interface vlan2

3.19 show interface status

Syntax	Show interface status
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	This command shows all interface status.
Examples	ASUS# show interface status

3.20 switchport

Syntax	switchport
Parameters	
Command Mode	Interface configuration mode
No/clear	no switchport
Show	
Default	

Description	Use the command to reset the port to L2 interface from routed port.
Examples	ASUS(config)# interface gi1/0/1 ASUS(config-if)# switchport

3.21 switchport multicast filter

Syntax	switchport multicast filter
Parameters	
Command Mode	Interface configuration mode
No/clear	no switchport multicast filter
Show	show interface IFNAME
Default	
Description	Use the command to filter unknown multicast traffic.
Examples	ASUS(config-if)# switchport multicast filter

4 IEEE 802.1Q VLAN Configuration

4.1 name VLANAME

Syntax	name VLANAME
Parameters	VLANNAME Characters name
No/clear	no name
Command Mode	Config-vlan mode
Show	show vlan [VLANID]
Default	"VLAN" + "VLANID", ex: VLAN20
Description	Use the name command to set the vlan name on the switch.
Example	ASUS(config)# vlan 20 ASUS(config-vlan)# name outvlan

4.2 show vlan [VLANID]

Syntax	show vlan [VLANID]
Parameters	[VLANID] VLAN ID
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show vlan user EXEC command to display the parameters for all configured VLANs or one VLAN (if the VLAN ID specified) on the switch.
Example	ASUS# show vlan 2

4.3 show vlan name VLANAME

Syntax	show vlan name VLANAME
Parameters	VLANAME vlan name
Command Mode	Privileged EXEC mode

No/clear	
Show	
Default	
Description	Use the show vlan user EXEC command to display the parameters for all configured VLANs or one VLAN (if the name is specified) on the switch.
Example	ASUS# show vlan name VLAN2

4.4 switchport access vlan <1-3000>

Syntax	switchport access vlan <1-3000>
Parameters	access Set 802.1Q access mode for the port
	vlan IEEE 802.1Q Virtual Local Area Networks
	<1-3000> VLAN ID
Command Mode	Interface configuration mode
No/clear	
Show	show vlan [VLANID]
Default	
Description	Set Virtual LAN and the interface to access mode
Example	ASUS(config-if)# switchport access vlan 2

4.5 switchport mode (access|trunk)

Syntax	switchport mode (accessItrunk)
Parameters	access Set 802.1Q access mode for the port
	trunk Set 802.1Q trunk mode for the port
Command Mode	Interface configuration mode
No/clear	
Show	show interface [IFNAME]
Default	The default mode is trunk
Description	Set the interface to access or trunk mode.
Example	ASUS(config-if)# switchport mode access

4.6 switchport trunk native vlan <1-3000>

Syntax	switchport trunk native vlan <1-3000>
Parameters	trunk Set 802.1Q trunk mode for the port
	native Specify the native VLAN for the port
	vlan IEEE 802.1Q Virtual Local Area Networks
	<1-3000> VLAN ID
Command Mode	Interface configuration mode
No/clear	
Show	show vlan [VLANID]
Default	Default is setting to native vlan 1
Description	Set Virtual LAN and the interface to trunk mode
Example	ASUS(config-if)# switchport trunk native vlan 2

4.7 switchport trunk allowed vlan (add|remove) VLANLIST

Syntax	switchport trunk allowed vlan (addlremove) VLANLIST
Parameters	trunk Set 802.1Q trunk mode for the port
	allowed the allowed VLANs that can receive and send traffic on this interface in tagged format when in trunk mode
	vlan IEEE 802.1Q Virtual Local Area Networks
	add Add allowed VLANs to the interface
	remove Remove allowed VLANs from the interface
	VLANLIST VLAN ID <1-3000> list
Command Mode	Interface configuration mode
No/clear	switchport trunk allowed vlan remove VLANLIST
Show	show vlan [VLANID]
Default	

Description	Use the switchport trunk allowed vlan configuration command on the switch stack or standalone switch to add or remove the allowed VLANs that can receive and send traffic on this interface in tagged format when in trunking mode
Example	ASUS(config-if)# switchport trunk allowed vlan add 2-20

4.8 vlan VLANLIST

Syntax	vlan VLANLSIT
Parameters	VLANLIST VLAN ID <1-3000> list
No/clear	no vlan <1-3000>
Command Mode	Global configuration mode
Show	show vlan [VLANID]
Default	VLAN 1 is default created.
Description	Use the vlan command to create vlan entry on the switch.
Example	ASUS(config)# vlan 2 ASUS(config)# vlan 3,6,10-20

5 GARP Configuration:

5.1 garp join-timer <1-100000000>

Syntax	garp join-timer <1-100000000>
Parameters	join-timer Join timer
	<1-100000000> the timer values
Command Mode	Interface configuration mode
No/clear	no garp join-timer
Show	show garp timer IFNAME
Default	The default is 20 (centi-seconds)
Description	This command sets the garp join-timer value in the indicated interface port.
Example	ASUS(config-if)# garp join-timer 30

5.2 garp leave-timer <1-100000000>

Syntax	garp leave-timer <1-100000000>
Parameters	leave-timer Leave timer
	<1-100000000> the timer values
Command Mode	Interface configuration mode
No/clear	no garp leave-timer
Show	show garp timer IFNAME
Default	The default is 60 (centi-seconds)
Description	This command sets the garp leave-timer value in the indicated interface port.
Example	ASUS(config-if)# garp leave-timer 100

5.3 garp leaveall-timer <1-100000000>

Syntax	garp leaveall-timer <1-100000000>
Parameters	leaveall-timer Leaveall timer
	<1-100000000> the timer values
Command Mode	Interface configuration mode
No/clear	no garp leaveall-timer
Show	show garp timer IFNAME
Default	The default is 1000 (centi-seconds)
Description	This command sets the garp leaveall-timer value in the indicated interface port.
Example	ASUS(config-if)# garp leaveall-time 2000

5.4 show garp timer [IFNAME]

Syntax	show garp timer [IFNAME]
Parameters	timer the setting timer values (join, leave, and leaveall timer)
	[IFNAME] Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show garp timer IFNAME status.
Example	ASUS# show garp timer [gi1/0/1]

6 GVRP Configuration:

6.1 clear gvrp statistics [IFNAME]

Syntax	clear gvrp statistics [IFNAME]
Parameters	[IFNAME] Interface name
Command Mode	Global configuration mode
No/clear	
Show	
Default	
Description	Use the clear gvrp statistics configuration command on the switch stack or standalone switch to clear all the GVRP statistics information on one or all interfaces.
Example	ASUS(config)# clear gvrp statistics gi1/0/1

6.2 gvrp (enable|disable)

Syntax	gvrp (enable|disable)
Parameters	disable Disable GVRP feature globally on the switch
	enable Enable GVRP feature globally on the switch
Command Mode	Global configuration mode
No/clear	gvrp disable
Show	show gvrp
Default	The default is disabled on the switch.
Description	This command sets the GVRP feature globally enable or disable on the switch.
Example	ASUS(config)# gvrp enable

6.3 gvrp (enable|disable)

Syntax	gvrp (enable|disable)

Parameters	disable Disable GVRP feature globally on the interface enable Enable GVRP feature globally on the interface
Command Mode	Interface configuration mode
No/clear	gvrp disable
Show	show gvrp
Default	The default is disabled on the interface.
Description	This command sets the GVRP feature enable or disable with the interface.
Example	ASUS(config-if)# gvrp enable

6.4 gvrp registration (normal| fixed| forbidden)

Syntax	gvrp registration (normall fixedl forbidden)
Parameters	registration GVRP registration mode normal normal registration mode fixed fixed registration mode forbidden forbidden registration mode
Command Mode	Interface configuration mode
No/clear	
Show	show gvrp interface IFNAME
Default	The default is Normal on each interface after the indicated interface gvrp mode is enabled.
Description	This command sets the gvrp registration type of the indicated interface.
Example	ASUS(config-if)# gvrp registration fixed

6.5 show gvrp

Syntax	show gvrp
Parameters	
Command Mode	Privileged EXEC mode

No/clear	
Show	
Default	
Description	To show gvrp global configuration.
Example	ASUS# show gvrp

6.6 show gvrp statistics [IFNAME]

Syntax	show gvrp statistics [IFNAME]
Parameters	statistics the GVRP statistics [IFNAME] Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show gvrp statistics IFNAME status.
Example	ASUS# show gvrp statistics [gi1/0/1]

6.7 show gvrp interface [IFNAME]

Syntax	show gvrp interface [IFNAME]
Parameters	[IFNAME] Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show gvrp port configuration and status.
Example	ASUS# show gvrp interface [gi1/0/1]

7 MAC address management Configuration:

7.1 clear mac-address-table dynamic

Syntax	clear mac-address-table dynamic
Parameters	
Command Mode	Global configuration mode
No/clear	
Show	
Default	
Description	Use the write configuration command on the switch stack or standalone switch to clear dynamic L2 MAC addresses in the database.
Example	ASUS(config)# clear mac-address-table dynamic

7.2 clear mac-address-table dynamic interface IFNAME

Syntax	clear mac-address-table dynamic interface IFNAME
Parameters	[IFNAME] Interface name
Command Mode	Global configuration mode
No/clear	
Show	
Default	
Description	Use the write configuration command on the switch stack or standalone switch to clear dynamic L2 MAC addresses in the database for specified interface name.
Example	ASUS(config)# clear mac-address-table dynamic interface gi1/0/1

7.3 clear mac-address-table dynamic mac MACADDR

Syntax	clear mac-address-table dynamic mac MACADDR
Parameters	MACADDR MAC address xxxx.xxxx.xxxx
Command Mode	Global configuration mode
No/clear	
Show	
Default	
Description	Use the write configuration command on the switch stack or standalone switch to clear dynamic L2 MAC addresses in the database for specified MAC address.
Example	ASUS(config)# clear mac-address-table dynamic mac0000.0000.0001

7.4 clear mac-address-table dynamic vlan <1-3000>

Syntax	clear mac-address-table dynamic vlan <1-3000>
Parameters	<1-3000> VLAN ID
Command Mode	Global configuration mode
No/clear	
Show	
Default	
Description	Use the write configuration command on the switch stack or standalone switch to clear dynamic L2 MAC addresses in the database for specified VLAN ID.
Example	ASUS(config)# clear mac-address-table dynamic vlan 1

7.5 clear mac-address-table interface IFNAME

Syntax	clear mac-address-table interface IFNAME
Parameters	IFNAME Interface name
Command Mode	Global configuration mode
No/clear	
Show	
Default	
Description	Use the write configuration command on the switch stack or standalone switch to clear static and dynamic L2 MAC addresses in the database for specified interface name.
Example	ASUS(config)# clear mac-address-table interface gi1/0/1

7.6 clear mac-address-table mac MACADDR

Syntax	clear mac-address-table mac MACADDR
Parameters	MACADDR MAC address
Command Mode	Global configuration mode
No/clear	
Show	
Default	
Description	Use the write configuration command on the switch stack or standalone switch to clear L2 MAC addresses in the database for specified MAC address.
Example	ASUS(config)# clear mac-address-table mac 0000.0000.0001

7.7 clear mac-address-table multicast MACADDR VLANID

Syntax	clear mac-address-table multicast MACADDR VLANID
Parameters	MACADDR Group MAC address
	<1-3000> VLAN ID
Command Mode	Global configuration mode

No/clear	
Show	
Default	
Description	Use the write configuration command on the switch stack or standalone switch to clear multicast L2 MAC addresses in the database for specified MAC address and VLAN ID.
Example	ASUS(config)# clear mac-address-table multicast 0100.5e0a.0a0a 1

7.8 clear mac-address-table vlan <1-3000>

Syntax	clear mac-address-table dynamic vlan <1-3000>
Parameters	<1-3000> VLAN ID
Command Mode	Global configuration mode
No/clear	
Show	
Default	
Description	Use the write configuration command on the switch stack or standalone switch to clear L2 MAC addresses in the database for specified VLAN ID.
Example	ASUS(config)# clear mac-address-table vlan 1

7.9 mac-address-table aging-time <10-1000000>

Syntax	mac-address-table aging-time <10-1000000>
Parameters	aging-time the length of time that a dynamic entry remains in the MAC address table <10-1000000> Aging time in seconds
Command Mode	Global configuration mode
No/clear	no mac-address-table aging-time
Show	show mac-address-table aging-time
Default	The default is 300 seconds.

Description	Use the mac-address-table aging-time configuration command on the switch stack or on a standalone switch to set the length of time that a dynamic entry remains in the MAC address table after the entry is used or updated. The real aging-time is the triple of the command input radix number.
Example	ASUS(config)# mac-address-table aging-time 600

7.10 mac-address-table multicast MACADDR <1-3000> interface IFLIST

Syntax	mac-address-table multicast MACADDR <1-3000> interface IFLIST
Parameters	multicast Create a multicast MAC address
	MACADDR Group MAC address
	<1-3000> VLAN ID
	interface the specified interface
	IFNAME Interface name
Command Mode	Global configuration mode
No/clear	no mac-address-table multicast MACADDR <1-3000> interface IFLIST
Show	show mac-address-table multicast [MACADDR]
Default	
Description	Use the mac-address-table multicast configuration command on the switch stack or on a standalone switch to add multicast static addresses to the MAC address table.
Example	ASUS(config)# mac-address-table multicast 0100.5e0a.0a0a 1 interface gi1/0/2-5

7.11 mac-address-table static MACADDR <1-3000> IFNAME

Syntax	mac-address-table static MACADDR <1-3000> IFNAME
Parameters	static Create a static unicast MAC address
	MACADDR MAC address
	<1-3000> VLAN ID
	IFNAME Interface name
Command Mode	Global configuration mode
No/clear	no mac-address-table static MACADDR <1-3000> [IFNAME]
Show	show mac-address-table static
Default	
Description	Use the mac-address-table static configuration command on the switch stack or on a standalone switch to add unicast static addresses to the MAC address table.
Example	ASUS(config)# mac-address-table static 0000.0000.0001 2 gi1/0/2

7.12 show mac-address-table

Syntax	show mac-address-table
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table user EXEC command to display static/dynamic unicast MAC address table entries.
Example	ASUS# show mac-address-table

7.13 show mac-address-table aging-time

Syntax	show mac-address-table aging-time
Parameters	aging-time the length of time that a dynamic entry remains in the MAC address table
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table aging-time configuration command on the switch stack or on a standalone switch to show dynamic entry remains in the MAC address table after the entry is used or updated. The real aging-time is the triple of the command input radix number.
Example	ASUS# show mac-address-table aging-time

7.14 show mac-address-table dynamic

Syntax	show mac-address-table dynamic
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table dynamic user EXEC command to display dynamic unicast MAC address table entries.
Example	ASUS# show mac-address-table dynamic

7.15 show mac-address-table dynamic interface [IFNAME]

Syntax	show mac-address-table dynamic interface [IFNAME]
Parameters	[IFNAME] Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table dynamic user EXEC command to display dynamic unicast MAC address table entries only for specified interface name.
Example	ASUS# show mac-address-table dynamic interface gi1/0/1

7.16 show mac-address-table dynamic mac MACADDR

Syntax	show mac-address-table dynamic mac MACADDR
Parameters	MACADDR MAC address
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table dynamic user EXEC command to display dynamic unicast MAC address table entries for specified MAC address.
Example	ASUS# show mac-address-table dynamic mac 0000.0000.0001

7.17 show mac-address-table dynamic vlan <1-3000>

Syntax	show mac-address-table dynamic vlan <1-3000>
Parameters	<1-3000> VLAN ID

Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table dynamic user EXEC command to display dynamic unicast MAC address table entries for specified VLAN ID.
Example	ASUS# show mac-address-table dynamic vlan 1

7.18 show mac-address-table multicast

Syntax	show mac-address-table multicast
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table multicast user EXEC command to display the Layer 2 multicast entries.
Example	ASUS# show mac-address-table multicast

7.19 show mac-address-table multicast MACADDR <1-3000>

Syntax	show mac-address-table multicast MACADDR <1-3000>
Parameters	MACADDR Group MAC address
	<1-3000> VLAN ID
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table multicast user EXEC

	command to display the Layer 2 multicast entries for specified group address and VLAN ID.
Example	ASUS# show mac-address-table multicast 0100.5e0a.0a0a 1

7.20 show mac-address-table static

Syntax	show mac-address-table static
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table static user EXEC command to display static unicast MAC address table entries.
Example	ASUS# show mac-address-table static

7.21 show mac-address-table static interface IFNAME

Syntax	show mac-address-table static interface IFNAME
Parameters	IFNAME Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table static user EXEC command to display static unicast MAC address table entries for specified interface name.
Example	ASUS# show mac-address-table static interface gi1/0/1

7.22 show mac-address-table static mac MACADDR

Syntax	show mac-address-table static mac MACADDR
Parameters	MACADDR MAC address
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table static user EXEC command to display static unicast MAC address table entries for specified MAC address.
Example	ASUS# show mac-address-table static mac 0000.0000.0001

7.23 show mac-address-table static vlan <1-3000>

Syntax	show mac-address-table static vlan <1-3000>
Parameters	<1-3000> VLAN ID
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac-address-table static user EXEC command to display static unicast MAC address table entries for specified VLAN ID.
Example	ASUS# show mac-address-table static vlan 1

8 IGMP Snooping Configuration:

8.1 ip igmp querier

Syntax	ip igmp querier
Parameters	
Command Mode	Global configuration mode
No/clear	no ip igmp querier
Show	show ip igmp querier
Default	The default is disable
Description	This command sets the IGMP querier function enabled globally.
Example	ASUS(config)# ip igmp querier

8.2 ip igmp querier max-response-time <1-255>

Syntax	ip igmp querier max-response-time <1-255>
Parameters	max-response-time IGMP maximum response time <1-255> the time value
Command Mode	Global configuration mode
No/clear	no ip igmp querier max-response-time
Show	show ip igmp querier
Default	The default is 100 deci-seconds
Description	This command sets the maximum response time of IGMP querier function.
Example	ASUS(config)# ip igmp querier max-response-time 200

8.3 ip igmp querier query-interval <1-65535>

Syntax	ip igmp querier query-interval <1-65535>
Parameters	query-interval IGMP query interval <1-65535> the time value
Command Mode	Global configuration mode

No/clear	no ip igmp querier query-interval
Show	show ip igmp querier
Default	The default is 125 seconds.
Description	This command sets the query-interval of IGMP querier function.
Example	ASUS(config)# ip igmp querier query-interval 250

8.4 ip igmp querier version <v1|v2>

Syntax	ip igmp querier version <v1lv2>
Parameters	version IGMP version v1 version 1 v2 version 2
Command Mode	Global configuration mode
No/clear	no ip igmp querier version
Show	show ip igmp querier
Default	The default is v2
Description	This command sets the IGMP querier version.
Example	ASUS(config)# ip igmp version v1

8.5 ip igmp snooping

Syntax	ip igmp snooping
Parameters	
Command Mode	Global configuration mode
No/clear	no ip igmp snooping
Show	show ip igmp snooping
Default	The default is globally disable
Description	This command sets the IGMP snooping function enabled globally.
Example	ASUS(config)# ip igmp snooping

8.6 ip igmp snooping last-member-query-interval <10-1000>

Syntax	ip igmp snooping last-member-query-interval <10-1000>
Parameters	last-member-query-interval The time interval for sending IGMP query since last member leave <10-1000> the time value
Command Mode	Global configuration mode
No/clear	no ip igmp snooping last-member-query-interval
Show	show ip igmp snooping
Default	The default is 500 centi-seconds
Description	This command sets the interval time for the IGMP query sent by switch since last member leave.
Example	ASUS(config)# ip igmp snooping last-member-query-interval 100

8.7 ip igmp snooping report-suppression

Syntax	ip igmp snooping report-suppression
Parameters	report-suppression To suppress IGMP Reports after first message forwarded to Router
Command Mode	Global configuration mode
No/clear	no ip igmp snooping report-suppression
Show	show ip igmp snooping
Default	The default is disable
Description	This command sets the IGMP snooping report-suppression function enabled.
Example	ASUS(config)# ip igmp snooping report-suppression

8.8 ip igmp snooping vlan <1-3000>

Syntax	ip igmp snooping vlan <1-3000>
Parameters	vlan IGMP Snooping enable for a specified vlan <1-3000> VLAN ID

Command Mode	Global configuration mode
No/clear	no ip igmp snooping vlan <1-3000>
Show	show ip igmp snooping
	show ip igmp snooping vlan <1-3000>
Default	The default setting of IGMP snooping on each vlan is enabled after IGMP snooping function is globally enabled.
Description	This command sets the IGMP snooping function enabled on indicated vlan.
Example	ASUS(config)# ip igmp snooping vlan 2

8.9 ip igmp snooping vlan <1-3000> immediate-leave

Syntax	ip igmp snooping vlan <1-3000> immediate-leave
Parameters	vlan IGMP Snooping enable for a specified vlan
	<1-3000> VLAN ID
	immediate-leave Enable IGMP Immediate-Leave processing
Command Mode	Global configuration mode
No/clear	no ip igmp snooping vlan <1-3000> immediate-leave
Show	show ip igmp snooping vlan <1-3000>
Default	The default setting of igmp immediate-leave on each vlan is disabled after IGMP snooping function is globally enabled.
Description	This command sets the IGMP snooping immediate-leave function enabled on indicated vlan.
Example	ASUS(config)# ip igmp snooping vlan 2 immediate-leave

8.10 ip igmp snooping vlan <1-3000> mrouter interface IFNAME

Syntax	ip igmp snooping vlan <1-3000> mrouter interface IFNAME
Parameters	vlan IGMP Snooping enable for a specified vlan
	<1-3000> VLAN ID

	mrouter IGMP multicast router configurations
	interface Specify the multicast router interface
	IFNAME Interface name
Command Mode	Global configuration mode
No/clear	no ip igmp snooping vlan <1-3000> mrouter interface IFNAME
Show	show ip igmp snooping vlan <1-3000>
Default None	
Description	This command sets the IGMP snooping mrouted port interface on indicated vlan.
Example	ASUS(config)# ip igmp snooping vlan 2 mrouter interface gi1/0/3

8.11 show ip igmp snooping

Syntax	show ip igmp snooping
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show ip igmp privileged EXEC command to view Internet Group Management Protocol (IGMP) global profile.
Example	ASUS# show ip igmp snooping

8.12 show ip igmp snooping session

Syntax	show ip igmp snooping session
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show ip igmp privileged EXEC command to display

	session information.
Example	ASUS# show ip igmp snooping session

8.13 show ip igmp snooping vlan [<1-3000>]

Syntax	show ip igmp snooping vlan [<1-3000>]
Parameters	vlan Snooping information on a specified vlan <1-3000> VLAN ID
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show ip igmp snooping vlan privileged EXEC command to display the Internet Group Management Protocol (IGMP) snooping configuration for the switch or multicast information for the selected VLAN.
Example	ASUS# show ip igmp snooping vlan 2

9 Port Mirroring Configuration:

9.1 mirror session <1-2> destination IFNAME

Syntax	mirror session <1-2> destination IFNAME
Parameters	IFNAME Interface name
Command Mode	Global configuration mode
No/clear	no mirror session <1-2>
Show	show mirror session
Default	Not enable this function
Description	To set monitor port in mirror mode
Example	ASUS(config)# mirror session 1 destination gi1/0/1

9.2 mirror session <1-2> source IFLIST (both\| rx\| tx)

Syntax	mirror session <1-2> source IFLIST (both| rx| tx)
Parameters	IFLIST Interface list
	both Ingress+egress mirrored
	rx Ingress mirrored
	tx Egress mirrored
Command Mode	Global configuration mode
No/clear	no mirror session <1-2> source IFLIST
Show	show mirror session
Default	No mirror rule is setting
Description	This command mirrors the source interface list traffic to the destination interface. The mirror type support received traffic, transmitted traffic, or both.
Example	ASUS(config)# mirror session 1 source gi1/0/2-4,gi1/0/7 rx

9.3 show mirror session

Syntax	show mirror session
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display current mirror session configuration.
Example	ASUS# show mirror session

10 Static Link Aggregation:

10.1 aggregation-link group <1-8> IFLIST

Syntax	Aggregation-link trunk <1-8> IFLIST
Parameters	<1-8> Trunk Group ID
Command Mode	Global configuration mode
No/clear	no aggregation-link group <1-8>
show	show aggregation-link group [GROUPID]
Default	
Description	Use the aggregation-link group configuration command on the switch stack or standalone switch to configure static link aggregation group.
Example	ASUS(config)# aggregation-link group 1 gi1/0/1-4

10.2 aggregation-link group <1-8> load-balance (src-mac |dst-mac |src-dst-mac |src-ip |dst-ip |src-dst-ip)

Syntax	aggregation-link group <1-8> load-balance (src-mac ldst-mac lsrc-dst-mac lsrc-ip ldst-ip lsrc-dst-ip)
Parameters	<1-8> Trunk group ID
	src-mac Distribute on source MAC address
	dst-mac Distribute on destination MAC address
	src-dst-mac Distribution on source+destination MAC address
	src-ip Distribute on source IP address
	dst-ip Distribute on destination IP address
	src-dst-ip Distribute on source+destination IP address
Command Mode	Global configuration mode
No/clear	
show	show aggregation-link group [GROUPID]

Default	
Description	Use the aggregation-link group configuration command on the switch stack or standalone switch to configure static link aggregation load balancing by using source-based or destination-based forwarding methods.
Example	ASUS(config)# aggregation-link group 1 load-balance src-mac

10.3 show aggregation-link group [GROUPID]

Syntax	show aggregation-link group [GROUPID]
Parameters	[GROUPID] Trunk Group ID
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show aggregation-link trunk status.
Example	ASUS# show aggregation-link group 1

11 LACP Configuration:

11.1 lacp aggregation-link group <1-8> (add|set) IFLIST

Syntax	lacp aggregation-link group <1-8> (addlset) IFLIST
Parameters	<1-8> GROUPID add Add interfaces to LACP group set Set interfaces for LACP group IFLIST Interface list
Command Mode	Global configuration mode
No/clear	lacp aggregation-link group delete IFNAME no lacp aggregation-link group <1-8>
Show	show aggregation-link group [GROUPID]
Default	
Description	This command sets the Link Aggregation Control Protocol (LACP) operation add/set for the aggregation-link group ports on the switch stack or on a standalone switch.
Example	ASUS(config)# lacp aggregation-link group 2 add gi1/0/1-4

11.2 lacp aggregation-link group <1-8> delete IFNAME

Syntax	lacp aggregation-link group <1-8> delete IFNAME
Parameters	<1-8> GROUPID delete Remove interface from LACP group IFNAME Interface name
Command Mode	Global configuration mode
No/clear	
Show	show aggregation-link group [GROUPID]
Default	

Description	This command sets the Link Aggregation Control Protocol (LACP) operation delete for the aggregation-link group ports on the switch stack or on a standalone switch.
Example	ASUS(config)# lacp aggregation-link group 2 delete gi1/0/4

11.3 lacp system-priority <1-65535>

Syntax	lacp system-priority <1-65535>
Parameters	system-priority LACP system priority
	<1-65535> System priority value
Command Mode	Global configuration mode
No/clear	no lacp system-priority
Show	show lacp [GROUPID]
Default	The default is 32768.
Description	This command sets the system priority for the Link Aggregation Control Protocol (LACP) on the switch stack or on a standalone switch.
Example	ASUS(config)# lacp system-priority 2000

11.4 show lacp [GROUPID]

Syntax	show lacp [GROUPID]
Parameters	[GROUPID] Aggregation-link group ID
Command Mode	Privileged EXEC mode
Default	
Description	Use the show lacp user EXEC command to display Link Aggregation Control Protocol (LACP) channel-group information.
Example	ASUS# show lacp 2

12 ACL: Layer 2 Packet Filtering Configuration

12.1 mac access-list extended ACLNAME

Syntax	mac access-list extended ACLNAME
Parameters	access-list named access-list
	extended extended access-list
	ACLNAME an access-list name
Command Mode	Global configuration mode
No/clear	no mac access-list extended ACLNAME
Show	show access-lists [ACLNAME]
Default	
Description	This command defines an extended MAC access list using a name, and enter access-list configuration mode.
Examples	ASUS(config)# mac access-list extended abc

12.2 mac access-group ACLNAME in

Syntax	mac access-group ACLNAME in
Parameters	ACLNAME a MAC access-list name
Command Mode	Interface configuration mode
No/clear	no mac access-group
Show	show mac access-group [IFNAME]
Default	
Description	This command attaches an extended MAC access-list to an interface.
Examples	ASUS(config-if)# mac access-group abc in

12.3 (permit|deny) any any [IFNAME]

Syntax: (permit|deny) any any [IFNAME]

Parameters:
permit Specify packets to forward
deny Specify packets to reject.
any any source Mac address
any any destination Mac address
[IFNAME] Egress interface name

Command Mode: Mac access-list extended mode

No/clear: no (permit|deny) any any [IFNAME]

Show: show access-lists [ACLNAME]

Default:

Description: This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

Examples:

```
ASUS(config)# mac access-list extended abc
ASUS(config-mac-acl)# permit any any [gi1/0/1]
```

12.4 (permit|deny) any any (cos <0-7> | vlan <1-4094>) [IFNAME]

Syntax: (permit|deny) any any (cos <0-7> | vlan <1-4094>) [IFNAME]

Parameters:
permit Specify packets to forward
deny Specify packets to reject.
any any source Mac address
any any destination Mac address
cos Class of Service
<0-7> the priority value
vlan IEEE 802.1Q VLAN
<1-4094> VLAN ID
[IFNAME] Egress interface name

Command Mode: Mac access-list extended mode

No/clear	no (permit|deny) any any (cos <0-7> | vlan <1-4094>) [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit any any cos 2 [gi1/0/1] ASUS(config-mac-acl)# permit any any vlan 10 [gi1/0/1]

12.5 (permit|deny) any any vlan <1-4094> cos <0-7> [IFNAME]

Syntax	(permit|deny) any any vlan <1-4094> cos <0-7> [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. any any source Mac address any any destination Mac address vlan IEEE 802.1Q VLAN <1-4094> VLAN ID cos Class of Service <0-7> the priority value [IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) any any vlan <1-4094> cos <0-7> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit any any vlan 10 cos 2 [gi1/0/1]

12.6 (permit|deny) MACADDR MASK any [IFNAME]

Syntax	(permit|deny) MACADDR MASK any [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	MACADDR Source MAC address xxxx.xxxx.xxxx
	MASK Source MAC address mask xxxx.xxxx.xxxx
	any any destination Mac address
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) MACADDR MASK any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff any [gi1/0/1]

12.7 (permit|deny) MACADDR MASK any (cos <0-7> | vlan <1-4094>) [IFNAME]

Syntax	(permit|deny) MACADDR MASK any (cos <0-7> | vlan <1-4094>) [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	MACADDR Source MAC address xxxx.xxxx.xxxx
	MASK Source MAC address mask xxxx.xxxx.xxxx
	any any destination Mac address
	cos Class of Service
	<0-7> the priority value
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID

	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) MACADDR MASK any (cos <0-7> | vlan <1-4094>) [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff any cost 2 [gi1/0/1] ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff any vlan 10 [gi1/0/1]

12.8 (permit|deny) MACADDR MASK any vlan <1-4094> cos <0-7> [IFNAME]

Syntax	(permit|deny) MACADDR MASK any vlan <1-4094> cos <0-7> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	MACADDR Source MAC address xxxx.xxxx.xxxx
	MASK Source MAC address mask xxxx.xxxx.xxxx
	any any destination Mac address
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	cos Class of Service
	<0-7> the priority value
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) MACADDR MASK any vlan <1-4094> cos <0-7> [IFNAME]
Show	show access-lists [ACLNAME]

Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff any vlan 10 cost 2 [gi1/0/1]

12.9 (permit|deny) host MACADDR any [IFNAME]

Syntax	(permitIdeny) host MACADDR any [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	host A single source host
	MACADDR Source MAC address xxxx.xxxx.xxxx
	any any destination Mac address
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	(permitIdeny) host MACADDR any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit host 0000.0000.0001 any [gi1/0/2]

12.10 (permit|deny) host MACADDR any (cos <0-7> | vlan <1-4094>) [IFNAME]

Syntax	(permitIdeny) host MACADDR any (cos <0-7> I vlan <1-4094>) [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	host A single source host
	MACADDR Source MAC address xxxx.xxxx.xxxx

	any any destination Mac address
	cos Class of Service
	<0-7> the priority value
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	(permitIdeny) host MACADDR any (cos <0-7> I vlan <1-4094>) [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit host 0000.0000.0001 cos 2 any [gi1/0/2]
	ASUS(config-mac-acl)# permit host 0000.0000.0001 vlan 10 any [gi1/0/2]

12.11 (permit|deny) host MACADDR any vlan <1-4094>) cos <0-7> [IFNAME]

Syntax	(permitIdeny) host MACADDR any vlan <1-4094> cos <0-7> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	host A single source host
	MACADDR Source MAC address xxxx.xxxx.xxxx
	any any destination Mac address
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	cos Class of Service
	<0-7> the priority value

	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	(permitldeny) host MACADDR any vlan <1-4094> cos <0-7> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit host 0000.0000.0001 vlan 10 cos 2 any [gi1/0/2]

12.12 (permit|deny) host MACADDR host MACADDR [IFNAME]

Syntax	(permitldeny) host MACADDR host MACADDR [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	host A single source host
	MACADDR Source MAC address xxxx.xxxx.xxxx
	host A single destination host
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permitldeny) host MACADDR host MACADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit host 0000.0000.0001 host 0000.0000.0002 [gi1/0/2]

12.13 (permit|deny) host MACADDR host MACADDR (cos <0-7> | vlan <1-4094>) [IFNAME]

Syntax	(permitldeny) host MACADDR host MACADDR (cos <0-7> l vlan <1-4094>) [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	host A single source host
	MACADDR Source MAC address xxxx.xxxx.xxxx
	host A single destination host
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	cos Class of Service
	<0-7> the priority value
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permitldeny) host MACADDR host MACADDR (cos <0-7> l vlan <1-4094>) [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit host 0000.0000.0001 host 0000.0000.0002 cos 2 [gi1/0/2]
	ASUS(config-mac-acl)# permit host 0000.0000.0001 host 0000.0000.0002 vlan 10 [gi1/0/2]

12.14 (permit|deny) host MACADDR host MACADDR vlan <1-4094> cos <0-7> [IFNAME]

Syntax	(permitldeny) host MACADDR host MACADDR vlan <1-4094> cos <0-7> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	host A single source host
	MACADDR Source MAC address xxxx.xxxx.xxxx
	host A single destination host
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	cos Class of Service
	<0-7> the priority value
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permitldeny) host MACADDR host MACADDR vlan <1-4094> cos <0-7> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit host 0000.0000.0001 host 0000.0000.0002 vlan 10 cos 2 [gi1/0/2]

12.15 (permit|deny) MACADDR MASK MACADDR MASK [IFNAME]

Syntax	(permitldeny) MACADDR MASK MACADDR MASK [IFNAME]
Parameters	permit Specify packets to forward

	deny Specify packets to reject.
	MACADDR Source MAC address xxxx.xxxx.xxxx
	MASK Source MAC address mask xxxx.xxxx.xxxx
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	MASK Destination MAC address mask xxxx.xxxx.xxxx
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permitIdeny) MACADDR MASK MACADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff 0000.0000.0002 0000.0000.00ff [gi1/0/2]

12.16 (permit|deny) MACADDR MASK MACADDR MASK (cos <0-7> | vlan <1-4094>) [IFNAME]

Syntax	(permitIdeny) MACADDR MASK MACADDR MASK (cos <0-7> l vlan <1-4094>) [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	MACADDR Source MAC address xxxx.xxxx.xxxx
	MASK Source MAC address mask xxxx.xxxx.xxxx
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	MASK Destination MAC address mask xxxx.xxxx.xxxx
	cos Class of Service
	<0-7> the priority value
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	[IFNAME] Egress interface name

Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) MACADDR MASK MACADDR MASK (cos <0-7> | vlan <1-4094>) [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff 0000.0000.0002 0000.0000.00ff cos 2[gi1/0/2]
	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff 0000.0000.0002 0000.0000.00ff vlan10 [gi1/0/2]

12.17 (permit|deny) MACADDR MASK MACADDR MASK vlan <1-4094> cos <0-7> [IFNAME]

Syntax	(permit|deny) MACADDR MASK MACADDR MASK vlan <1-4094> cos <0-7> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	MACADDR Source MAC address xxxx.xxxx.xxxx
	MASK Source MAC address mask xxxx.xxxx.xxxx
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	MASK Destination MAC address mask xxxx.xxxx.xxxx
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	cos Class of Service
	<0-7> the priority value
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) MACADDR MASK MACADDR MASK vlan <1-4094> cos <0-7> [IFNAME]
Show	show access-lists [ACLNAME]

Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff 0000.0000.0002 0000.0000.00ff vlan 10 cos 2[gi1/0/2]

12.18 (permit\|deny) host MACADDR MACADDR MASK [IFNAME]

Syntax	(permit|deny) host MACADDR MACADDR MASK [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. host A single source host MACADDR Source MAC address xxxx.xxxx.xxxx MACADDR Destination MAC address xxxx.xxxx.xxxx MASK Destination MAC address mask xxxx.xxxx.xxxx [IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) host MACADDR MACADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit host 0000.0000.0001 0000.0000.0002 0000.0000.0000 [gi1/0/2]

12.19 (permit\|deny) host MACADDR MACADDR MASK (cos <0-7> \| vlan <1-4094>) [IFNAME]

Syntax	(permit|deny) host MACADDR MACADDR MASK (cos <0-7> | vlan <1-4094>) [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject.

	host A single source host
	MACADDR Source MAC address xxxx.xxxx.xxxx
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	MASK Destination MAC address mask xxxx.xxxx.xxxx
	cos Class of Service
	<0-7> the priority value
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) host MACADDR MACADDR MASK (cos <0-7> | vlan <1-4094>) [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit host 0000.0000.0001 0000.0000.0002 0000.0000.0000 cos 2 [gi1/0/2]
	ASUS(config-mac-acl)# permit host 0000.0000.0001 0000.0000.0002 0000.0000.0000 vlan 10 [gi1/0/2]

12.20 (permit|deny) host MACADDR MACADDR MASK vlan <1-4094> cos <0-7> [IFNAME]

Syntax	(permit|deny) host MACADDR MACADDR MASK vlan <1-4094> cos <0-7> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	host A single source host
	MACADDR Source MAC address xxxx.xxxx.xxxx
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	MASK Destination MAC address mask xxxx.xxxx.xxxx

	vlan IEEE 802.1Q VLAN <1-4094> VLAN ID cos Class of Service <0-7> the priority value [IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clearno	(permitIdeny) host MACADDR MACADDR MASK vlan <1-4094> cos <0-7> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit host 0000.0000.0001 0000.0000.0002 0000.0000.0000 vlan 10 cos 2 [gi1/0/2]

12.21 (permit|deny) MACADDR MASK host MACADDR [IFNAME]

Syntax	(permitIdeny) MACADDR MASK host MACADDR [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. MACADDR Source MAC address xxxx.xxxx.xxxx MASK Source address mask xxxx.xxxx.xxxx host A single destination host MACADDR Destination MAC address xxxx.xxxx.xxxx [IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permitIdeny) MACADDR MASK host MACADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

Examples	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff host 0000.0000.0002 [gi1/0/2]

12.22 (permit|deny) MACADDR MASK host MACADDR (cos <0-7> | vlan <1-4094>) [IFNAME]

Syntax	(permit|deny) MACADDR MASK host MACADDR (cos <0-7> | vlan <1-4094>) [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	MACADDR Source MAC address xxxx.xxxx.xxxx
	MASK Source address mask xxxx.xxxx.xxxx
	host A single destination host
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	cos Class of Service
	<0-7> the priority value
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) MACADDR MASK host MACADDR (cos <0-7> | vlan <1-4094>) [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff host 0000.0000.0002 cost 2 [gi1/0/2]
	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff host 0000.0000.0002 vlan 10 [gi1/0/2]

12.23 (permit|deny) MACADDR MASK host MACADDR vlan <1-4094> cos <0-7> [IFNAME]

Syntax	(permitIdeny) MACADDR MASK host MACADDR vlan <1-4094> cos <0-7> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	MACADDR Source MAC address xxxx.xxxx.xxxx
	MASK Source address mask xxxx.xxxx.xxxx
	host A single destination host
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	cos Class of Service
	<0-7> the priority value
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permitIdeny) MACADDR MASK host MACADDR vlan <1-4094> cos <0-7> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit 0000.0000.0001 0000.0000.00ff host 0000.0000.0002 vlan 10 cost 2 [gi1/0/2]

12.24 (permit|deny) any host MACADDR [IFNAME]

Syntax	(permitIdeny) any host MACADDR [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	any any source Mac address

	host A single destination host
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) any host MACADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit any host 0000.0000.0002 [gi1/0/1]

12.25 (permit|deny) any host MACADDR (cos <0-7> | vlan <1-4094>) [IFNAME]

Syntax	(permit|deny) any host MACADDR (cos <0-7> | vlan <1-4094>) [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	any any source Mac address
	host A single destination host
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	cos Class of Service
	<0-7> the priority value
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) any host MACADDR (cos <0-7> | vlan <1-4094>) [IFNAME]
Show	show access-lists [ACLNAME]
Default	

Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit any host 0000.0000.0002 cos 2 [gi1/0/1] ASUS(config-mac-acl)# permit any host 0000.0000.0002 vlan 10 [gi1/0/1]

12.26 (permit|deny) any host MACADDR vlan <1-4094> cos <0-7> [IFNAME]

Syntax	(permitIdeny) any host MACADDR vlan <1-4094> cos <0-7> [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. any any source Mac address host A single destination host MACADDR Destination MAC address xxxx.xxxx.xxxx vlan IEEE 802.1Q VLAN <1-4094> VLAN ID cos Class of Service <0-7> the priority value [IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permitIdeny) any host MACADDR vlan <1-4094> cos <0-7> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit any host 0000.0000.0002 vlan 10 cos 2 [gi1/0/1]

12.27 (permit|deny) any MACADDR MASK [IFNAME]

Syntax	(permitldeny) any MACADDR MASK [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	any any source MAC address
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	MASK Destination MAC address mask xxxx.xxxx.xxxx
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permitldeny) any MACADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit any 0000.0000.0001 0000.0000.0000 [gi1/0/2]

12.28 (permit|deny) any MACADDR MASK (cos <0-7> | vlan <1-4094>) [IFNAME]

Syntax	(permitldeny) any MACADDR MASK (cos <0-7> l vlan <1-4094>) [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	any any source MAC address
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	MASK Destination MAC address mask xxxx.xxxx.xxxx
	cos Class of Service
	<0-7> the priority value
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID

	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) any MACADDR MASK (cos <0-7> | vlan <1-4094>) [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit any 0000.0000.0001 0000.0000.0000 cos 2 [gi1/0/2]
	ASUS(config-mac-acl)# permit any 0000.0000.0001 0000.0000.0000 vlan 10 [gi1/0/2]

12.29 (permit|deny) any MACADDR MASK vlan <1-4094> cos <0-7> [IFNAME]

Syntax	(permit|deny) any MACADDR MASK vlan <1-4094> cos <0-7> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	any any source MAC address
	MACADDR Destination MAC address xxxx.xxxx.xxxx
	MASK Destination MAC address mask xxxx.xxxx.xxxx
	vlan IEEE 802.1Q VLAN
	<1-4094> VLAN ID
	cos Class of Service
	<0-7> the priority value
	[IFNAME] Egress interface name
Command Mode	Mac access-list extended mode
No/clear	no (permit|deny) any MACADDR MASK vlan <1-4094> cos <0-7> [IFNAME]
Show	show access-lists [ACLNAME]

Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-mac-acl)# permit any 0000.0000.0001 0000.0000.0000 vlan 10 cos 2 [gi1/0/2]

12.30 show mac access-group [IFNAME]

Syntax	show mac access-group [IFNAME]
Parameters	[IFNAME] Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac access-group [IFNAME] EXEC command to display the parameters for MAC access-lists on the switch.
Examples	ASUS# show mac access-group [gi1/0/1]

12.31 show mac access-list [ACLNAME]

Syntax	show mac access-list [ACLNAME]
Parameters	[ACLNAME] a MAC access-list name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show mac access-list [IFNAME] EXEC command to display the parameters for access-lists on the switch.
Examples	ASUS# show mac access-list abc

13 ACL: Layer 3 Packet Filtering Configuration

13.1 access-list (<1-99>|<1300-1999>) (deny|permit) IPADDR MASK [IFNAME]

Syntax	access-list (<1-99>|<1300-1999>) (deny|permit) IPADDR A.B.C.D [IFNAME]
Parameters	access-list Add an access list entry <1-99> standard IP access-list number <1300-1999> standard IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. IPADDR Source address MASK Source wildcard bits [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<1-99>|<1300-1999>) (deny|permit) IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 99 permit 1.1.1.1 0.255.255.0

13.2 access-list (<1-99>|<1300-1999>) (deny|permit) host IPADDR [IFNAME]

Syntax	access-list (<1-99>|<1300-1999>) (deny|permit) host IPADDR [IFNAME]
Parameters	access-list Add an access list entry

	<1-99> standard IP access-list number
	<1300-1999> standard IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	host A single host address
	IPADDR Source address
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<1-99>l<1300-1999>) (denylpermit) host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 99 permit host 1.1.1.1

13.3 access-list (<1-99>|<1300-1999>) (deny|permit) any [IFNAME]

Syntax	access-list (<1-99>l<1300-1999>) (denylpermit) any [IFNAME]
Parameters	access-list Add an access list entry
	<1-99> standard IP access-list number
	<1300-1999> standard IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	any Any source host
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<1-99>l<1300-1999>) (denylpermit) any [IFNAME]
Show	show access-lists [ACLNAME]

Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 99 permit any

13.4 access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) IPADDR MASK IPADDR MASK [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) IPADDR MASK IPADDR MASK [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. ip Any Internet Protocol tcp Transmission Control Protocol udp User Datagram Protocol icmp Internet Control Message Protocol IPADDR Source address MASK Source wildcard bits IPADDR Destination address MASK Destination wildcard bits [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) IPADDR MASK IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	

Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit ip 1.1.1.1 0.0.0.0 1.1.1.3 0.0.0.0

13.5 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR Source address
	MASK Source wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	IPADDR Destination address
	MASK Destination wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit)

	(tcpludp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp 1.1.1.1 0.0.0.0 eq 21 1.1.1.3 0.0.0.0 eq 22

13.6 access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK IPADDR MASK <0-255> code <0-255> [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) icmp IPADDR MASK IPADDR MASK <0-255> code <0-255> [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. icmp Internet Control Message Protocol IPADDR Source address MASK Source wildcard bits IPADDR Destination address MASK Destination wildcard bits <0-255> ICMP message type <0-255> ICMP message code [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) icmp IPADDR MASK IPADDR MASK <0-255> code <0-255>

	[IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp 1.1.1.1 0.0.0.0 1.1.1.3 0.0.0.0 22 code 3

13.7 access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) IPADDR MASK any [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) IPADDR MASK any [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	any Any destination host
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) IPADDR MASK any [IFNAME]
Show	show access-lists [ACLNAME]

Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp 1.1.1.1 0.0.0.0 any

13.8 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) IPADDR MASK [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR Source address
	MASK Source wildcard bits
	any Any destination host
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) IPADDR MASK [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp 1.1.1.1 0.0.0.0 eq 23 any eq 22

13.9 access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK any <0-255> code <0-255> [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK any <0-255> code <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	any Any destination host
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK any <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp 1.1.1.1 0.0.0.0 any 2 code 3

13.10 access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) any IPADDR MASK [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) any IPADDR MASK [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	any Any Source host
	IPADDR destination address
	MASK destination wildcard bits
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) any IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp any 1.1.1.1 0.0.0.0

13.11 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) any [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	any Any Source host
	eq Match only packets on a given port numbe
	<0-65535> Port number
	IPADDR destination address
	MASK destination wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp any eq 21 1.1.1.1 0.0.0.0 eq 22

13.12 access-list (<100-199>|<2000-2699>) (deny|permit) icmp any IPADDR MASK <0-255> code <0-255> [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) icmp any IPADDR MASK <0-255> code <0-255> [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. ip Any Internet Protocol tcp Transmission Control Protocol udp User Datagram Protocol icmp Internet Control Message Protocol any Any Source host IPADDR destination address MASK destination wildcard bits <0-255> ICMP message type <0-255> ICMP message code [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) icmp any IPADDR MASK <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp any 1.1.1.1 0.0.0.0 2 code 3

13.13 access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) any any [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) any any [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	any Any Source host
	any Any destination host
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) any any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp any any

13.14 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) any [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. tcp Transmission Control Protocol udp User Datagram Protocol any Any Source host eq Match only packets on a given port numbe <0-65535> Port number any Any destination host eq Match only packets on a given port numbe <0-65535> Port number [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp any eq 21 any eq 22

13.15 access-list (<100-199>|<2000-2699>) (deny|permit) icmp any any <0-255> code <0-255> [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) icmp any any <0-255> code <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	any Any Source host
	any Any destination host
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) icmp any any <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp any any 2 code 3

13.16 access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) IPADDR MASK host IPADDR [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) IPADDR MASK host IPADDR [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	IPADDR source address
	MASK source wildcard bits
	host A single destination host
	IPADDR Destination address
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) IPADDR MASK host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp 1.1.1.1 0.0.0.0 host 1.1.1.4

13.17 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) IPADDR MASK [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR source address
	MASK source wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	host A single destination host
	IPADDR Destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) IPADDR MASK [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	

Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit udp 1.1.1.1 0.0.0.0 eq 21 host 1.1.1.4 eq 22

13.18 access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK host IPADDR <0-255> code <0-255> [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) icmp IPADDR MASK host IPADDR <0-255> code <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	IPADDR source address
	MASK source wildcard bits
	host A single destination host
	IPADDR Destination address
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) icmp IPADDR MASK host IPADDR <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

Examples	ASUS(config)# access-list 100 permit icmp 1.1.1.1 0.0.0.0 host 1.1.1.4 2 code 3

13.19 access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) host IPADDR IPADDR MASK [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) host IPADDR IPADDR MASK [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. ip Any Internet Protocol tcp Transmission Control Protocol udp User Datagram Protocol icmp Internet Control Message Protocol host A single Source host IPADDR Source address IPADDR destination address MASK destination wildcard bits [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) host IPADDR IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp host 1.1.1.1 1.1.1.4 0.0.0.0

13.20 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single Source host
	IPADDR Source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	IPADDR destination address
	MASK destination wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	

Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp host 1.1.1.1 eq 21 1.1.1.4 0.0.0.0 eq 22

13.21 access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR IPADDR MASK <0-255> code <0-255> [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) icmp host IPADDR IPADDR MASK <0-255> code <0-255> [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. icmp Internet Control Message Protocol host A single Source host IPADDR Source address IPADDR destination address MASK destination wildcard bits <0-255> ICMP message type <0-255> ICMP message code [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) icmp host IPADDR IPADDR MASK <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

<table>
<tr><td>Examples</td><td>ASUS(config)# access-list 100 permit icmp host 1.1.1.1 1.1.1.4 0.0.0.0 2 code 3</td></tr>
</table>

13.22 access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) host IPADDR host IPADDR [IFNAME]

<table>
<tr><td>Syntax</td><td>access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) host IPADDR host IPADDR [IFNAME]</td></tr>
<tr><td>Parameters</td><td>access-list Add an access list entry</td></tr>
<tr><td></td><td><100-199> Extended IP access-list number</td></tr>
<tr><td></td><td><2000-2699> Extended IP access-list number (expanded range)</td></tr>
<tr><td></td><td>permit Specify packets to forward</td></tr>
<tr><td></td><td>deny Specify packets to reject.</td></tr>
<tr><td></td><td>ip Any Internet Protocol</td></tr>
<tr><td></td><td>tcp Transmission Control Protocol</td></tr>
<tr><td></td><td>udp User Datagram Protocol</td></tr>
<tr><td></td><td>icmp Internet Control Message Protocol</td></tr>
<tr><td></td><td>host A single Source host</td></tr>
<tr><td></td><td>IPADDR Source address</td></tr>
<tr><td></td><td>host A single destination host</td></tr>
<tr><td></td><td>IPADDR Destination address</td></tr>
<tr><td></td><td>[IFNAME] Egress interface name</td></tr>
<tr><td>Command Mode</td><td>Global configuration mode</td></tr>
<tr><td>No/clear</td><td>no access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) host IPADDR host IPADDR [IFNAME]</td></tr>
<tr><td>Show</td><td>show access-lists [ACLNAME]</td></tr>
<tr><td>Default</td><td></td></tr>
<tr><td>Description</td><td>This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.</td></tr>
<tr><td>Examples</td><td>ASUS(config)# access-list 100 permit icmp host 1.1.1.1 host 1.1.1.4</td></tr>
</table>

13.23 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single Source host
	IPADDR Source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	host A single destination host
	IPADDR Destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	

Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp host 1.1.1.1 eq 21 host 1.1.1.4 eq 21

13.24 access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR host IPADDR <0-255> code <0-255> [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) icmp host IPADDR host IPADDR <0-255> code <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	host A single Source host
	IPADDR Source address
	host A single destination host
	IPADDR Destination address
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) icmp host IPADDR host IPADDR <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

Examples	ASUS(config)# access-list 100 permit icmp host 1.1.1.1 host 1.1.1.4 3 code 3

13.25 access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) any host IPADDR [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) any host IPADDR [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. ip Any Internet Protocol tcp Transmission Control Protocol udp User Datagram Protocol icmp Internet Control Message Protocol any Any Source host host A single destination host IPADDR Destination address [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (ipltcpludplicmp) any host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp any host 1.1.1.1

13.26 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) any [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	any Any Source host
	eq Match only packets on a given port numbe
	<0-65535> Port number
	host A single destination host
	IPADDR Destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp any eq 21 host 1.1.1.1 eq 22

13.27 access-list (<100-199>|<2000-2699>) (deny|permit) icmp any host IPADDR <0-255> code <0-255> [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) icmp any host IPADDR <0-255> code <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	any Any Source host
	host A single destination host
	IPADDR Destination address
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) icmp any host IPADDR <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp any host 1.1.1.1 2 code 3

13.28 access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) host IPADDR any [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) host IPADDR any [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	host A single Source host
	IPADDR Source address
	any Any destination host
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) (ip|tcp|udp|icmp) host IPADDR any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp host 1.1.1.1 any

13.29 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. tcp Transmission Control Protocol udp User Datagram Protocol host A single Source host IPADDR Source address eq Match only packets on a given port numbe <0-65535> Port number any Any destination host eq Match only packets on a given port numbe <0-65535> Port number [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp host 1.1.1.1 eq 21 any eq 21

13.30 access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR any <0-255> code <0-255> [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR any <0-255> code <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	host A single Source host
	IPADDR Source address
	any Any destination host
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR any <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp host 1.1.1.1 any 2 code 2

13.31 access-list (<1-99>|<1300-1999>) (deny|permit) IPADDR [IFNAME]

Syntax	access-list (<1-99>l<1300-1999>) (denylpermit) IPADDR [IFNAME]
Parameters	access-list Add an access list entry
	<1-99> Standard IP access-list number
	<2000-2699> Standard IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	IPADDR Source address
	[IFNAME] Egress interface name
	Command Mode Global configuration mode
	No/clear no access-list (<1-99>l<1300-1999>) (denylpermit) IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 88 permit 10.0.0.1

13.32 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK IPADDR MASK eq <0-65535> [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) IPADDR A.B.C.D IPADDR A.B.C.D eq <0-65535> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward

	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR Source address
	MASK Source wildcard bits
	IPADDR Destination address
	MASK Destination wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK IPADDR MASK eq <0-65535> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp 1.1.1.1 0.0.0.0 1.1.1.4 0.0.0.0 eq 21

13.33 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.

	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR Source address
	MASK Source wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	IPADDR Destination address
	MASK Destination wildcard bits
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp 1.1.1.1 0.0.0.0 eq 21 1.1.1.4 0.0.0.0

13.34 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK any [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) IPADDR MASK any [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol

	udp User Datagram Protocol IPADDR Source address MASK Source wildcard bits any Any destination host eq Match only packets on a given port numbe <0-65535> Port number [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp 1.1.1.1 0.0.0.0 any eq 21

13.35 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK [eq] [<0-65535>] any [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR A.B.C.D [eq] [<0-65535>] any [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. tcp Transmission Control Protocol udp User Datagram Protocol IPADDR Source address

	MASK Source wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	any Any destination host
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK [eq] [<0-65535>] any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp 1.1.1.1 0.0.0.0 eq 21 any

13.36 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK [eq] [<0-65535>] host IPADDR [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK [eq] [<0-65535>] host IPADDR [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR source address
	MASK source wildcard bits
	eq Match only packets on a given port numbe

<table>
<tr><td></td><td><0-65535> Port number</td></tr>
<tr><td></td><td>host A single destination host</td></tr>
<tr><td></td><td>IPADDR Destination address</td></tr>
<tr><td></td><td>[IFNAME] Egress interface name</td></tr>
<tr><td>Command Mode</td><td>Global configuration mode</td></tr>
<tr><td>No/clear</td><td>no access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK [eq] [<0-65535>] host IPADDR [IFNAME]</td></tr>
<tr><td>Show</td><td>show access-lists [ACLNAME]</td></tr>
<tr><td>Default</td><td></td></tr>
<tr><td>Description</td><td>This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.</td></tr>
<tr><td>Examples</td><td>ASUS(config)# access-list 100 permit tcp 1.1.1.1 0.0.0.0 eq 21 host 1.1.1.4</td></tr>
</table>

13.37 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK host IPADDR [eq] [<0-65535>] [IFNAME]

<table>
<tr><td>Syntax</td><td>access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) IPADDR MASK host IPADDR [eq] [<0-65535>] [IFNAME]</td></tr>
<tr><td>Parameters</td><td>access-list Add an access list entry</td></tr>
<tr><td></td><td><100-199> Extended IP access-list number</td></tr>
<tr><td></td><td><2000-2699> Extended IP access-list number (expanded range)</td></tr>
<tr><td></td><td>permit Specify packets to forward</td></tr>
<tr><td></td><td>deny Specify packets to reject.</td></tr>
<tr><td></td><td>tcp Transmission Control Protocol</td></tr>
<tr><td></td><td>udp User Datagram Protocol</td></tr>
<tr><td></td><td>IPADDR source address</td></tr>
<tr><td></td><td>MASK source wildcard bits</td></tr>
<tr><td></td><td>host A single destination host</td></tr>
<tr><td></td><td>IPADDR Destination address</td></tr>
</table>

eq Match only packets on a given port numbe

<0-65535> Port number

[IFNAME] Egress interface name

Command Mode Global configuration mode

No/clear no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) IPADDR MASK host IPADDR [eq] [<0-65535>] [IFNAME]

Show show access-lists [ACLNAME]

Default

Description This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

Examples ASUS(config)# access-list 100 permit tcp 1.1.1.1 0.0.0.0 host 1.1.1.4 eq 21

13.38 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) any IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any IPADDR MASK [eq] [<0-65535>] [IFNAME]

Parameters access-list Add an access list entry

<100-199> Extended IP access-list number

<2000-2699> Extended IP access-list number (expanded range)

permit Specify packets to forward

deny Specify packets to reject.

tcp Transmission Control Protocol

udp User Datagram Protocol

any Any Source host

IPADDR destination address

MASK destination wildcard bits

eq Match only packets on a given port numbe

<0-65535> Port number

	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp any 1.1.1.1 0.0.0.0 eq 21

13.39 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) any any [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any any [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	any Any Source host
	any Any destination host
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp)

	any any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp any any eq 21

13.40 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) any [eq] [<0-65535>] any [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] any [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	any Any Source host
	eq Match only packets on a given port numbe
	<0-65535> Port number
	any Any destination host
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] any [IFNAME]
Show	show access-lists [ACLNAME]
Default	

Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp any eq 21 any

13.41 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) any [eq] [<0-65535>] IPADDR MASK [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] IPADDR A.B.C.D [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	any Any Source host
	eq Match only packets on a given port numbe
	<0-65535> Port number
	IPADDR destination address
	MASK destination wildcard bits
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp any eq 21 10.0.0.1 0.0.0.0

13.42 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) any [eq] [<0-65535>] host IPADDR [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] host IPADDR [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. tcp Transmission Control Protocol udp User Datagram Protocol any Any Source host eq Match only packets on a given port numbe <0-65535> Port number host A single destination host IPADDR Destination address [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any [eq] [<0-65535>] host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp any eq 21 host 10.0.0.1

13.43 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) any host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	any Any Source host
	host A single destination host
	IPADDR Destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) any host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp any host 10.0.0.1 eq 21

13.44 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR IPADDR MASK [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single Source host
	IPADDR Source address
	IPADDR destination address
	MASK destination wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

Examples

```
ASUS(config)# access-list 100 permit tcp host 10.0.0.1 10.0.0.4
0.0.0.0 eq 21
```

13.45 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR [eq] [<0-65535>] IPADDR MASK [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] IPADDR MASK [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. tcp Transmission Control Protocol udp User Datagram Protocol host A single Source host IPADDR Source address eq Match only packets on a given port numbe <0-65535> Port number IPADDR destination address MASK destination wildcard bits [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp host 10.0.0.1 eq 21 10.0.0.4 0.0.0.0

13.46 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR any [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR any [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single Source host
	IPADDR Source address
	any Any destination host
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp host 10.0.0.1 any eq 21

13.47 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR [eq] [<0-65535>] any [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] any [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single Source host
	IPADDR Source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	any Any destination host
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] any [IFNAME]
Show	show access-lists [ACLNAME]
Default	Pass
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp host 10.0.0.1 eq 21 any

13.48 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR [eq] [<0-65535>] host IPADDR [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] host IPADDR [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single Source host
	IPADDR Source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	host A single destination host
	IPADDR Destination address
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>l<2000-2699>) (denylpermit) (tcpludp) host IPADDR [eq] [<0-65535>] host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp host 10.0.0.1 eq 21 host 10.0.0.4

13.49 access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single Source host
	IPADDR Source address
	host A single destination host
	IPADDR Destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) (tcp|udp) host IPADDR host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit tcp host 10.0.0.1 host 10.0.0.4 eq 21

13.50 access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK IPADDR MASK <0-255> [IFNAME]

Syntax	access-list (<100-199>l<2000-2699>) (denylpermit) icmp IPADDR MASK IPADDR MASK <0-255> [IFNAME]
Parameters	access-list Add an access list entry <100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) permit Specify packets to forward deny Specify packets to reject. icmp Internet Control Message Protocol IPADDR Source address MASK Source wildcard bits IPADDR Destination address MASK Destination wildcard bits <0-255> ICMP message type [IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clearno	access-list (<100-199>l<2000-2699>) (denylpermit) icmp IPADDR MASK IPADDR MASK <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp 10.0.0.1 0.0.0.0 10.0.0.4 0.0.0.0 1

13.51 access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK any <0-255> [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK any <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	any Any destination host
	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK any <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp 10.0.0.1 0.0.0.0 any 1

13.52 access-list (<100-199>|<2000-2699>) (deny|permit) icmp any any <0-255> [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) icmp any

	any <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	any Any Source host
	any Any destination host
	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) icmp any any <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp any any 1

13.53 access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK host IPADDR <0-255> [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) icmp IPADDR MASK host IPADDR <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward

deny   Specify packets to reject.

icmp Internet Control Message Protocol

IPADDR   source address

MASK   source wildcard bits

host   A single destination host

IPADDR   Destination address

<0-255> ICMP message type

[IFNAME]   Egress interface name

Command Mode   Global configuration mode

No/clear   no access-list (<100-199>l<2000-2699>) (denylpermit) icmp IPADDR MASK host IPADDR <0-255> [IFNAME]

Show   show access-lists [ACLNAME]

Default

Description   This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

Examples   ASUS(config)# access-list 100 permit icmp 10.0.0.1 0.0.0.0 host 10.0.0.4 1

13.54 access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR IPADDR MASK <0-255> [IFNAME]

Syntax   access-list (<100-199>l<2000-2699>) (denylpermit) icmp host IPADDR IPADDR MASK <0-255> [IFNAME]

Parameters   access-list   Add an access list entry

<100-199> Extended IP access-list number

<2000-2699> Extended IP access-list number (expanded range)

permit Specify packets to forward

deny   Specify packets to reject.

icmp Internet Control Message Protocol

host   A single Source host

	IPADDR Source address
	IPADDR destination address
	MASK destination wildcard bits
	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR IPADDR MASK <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp host 10.0.0.1 10.0.0.4 0.0.0.0 1

13.55 access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR host IPADDR <0-255> [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR host IPADDR <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	host A single Source host
	IPADDR Source address
	host A single destination host
	IPADDR Destination address

	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR host IPADDR <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp host 10.0.0.1 host 10.0.0.4 1

13.56 access-list (<100-199>|<2000-2699>) (deny|permit) icmp any host IPADDR <0-255> [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) icmp any host IPADDR <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	any Any Source host
	host A single destination host
	IPADDR Destination address
	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) icmp any

<table>
<tr><td></td><td>host IPADDR <0-255> [IFNAME]</td></tr>
<tr><td>Show</td><td>show access-lists [ACLNAME]</td></tr>
<tr><td>Default</td><td></td></tr>
<tr><td>Description</td><td>This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.</td></tr>
<tr><td>Examples</td><td>ASUS(config)# access-list 100 permit icmp any host 10.0.0.1 1</td></tr>
</table>

13.57 access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR any <0-255> [IFNAME]

<table>
<tr><td>Syntax</td><td>access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR any <0-255> [IFNAME]</td></tr>
<tr><td>Parameters</td><td>access-list Add an access list entry
<100-199> Extended IP access-list number
<2000-2699> Extended IP access-list number (expanded range)
permit Specify packets to forward
deny Specify packets to reject.
icmp Internet Control Message Protocol
host A single Source host
IPADDR Source address
any Any destination host
<0-255> ICMP message type
[IFNAME] Egress interface name</td></tr>
<tr><td>Command Mode</td><td>Global configuration mode</td></tr>
<tr><td>No/clear</td><td>no access-list (<100-199>|<2000-2699>) (deny|permit) icmp host IPADDR any <0-255> [IFNAME]</td></tr>
<tr><td>Show</td><td>show access-lists [ACLNAME]</td></tr>
<tr><td>Default</td><td></td></tr>
<tr><td>Description</td><td>This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.</td></tr>
<tr><td>Examples</td><td>ASUS(config)# access-list 100 permit icmp host 10.0.0.1 any 1</td></tr>
</table>

13.58 access-list (<100-199>|<2000-2699>) (deny|permit) icmp any IPADDR MASK <0-255> [IFNAME]

Syntax	access-list (<100-199>|<2000-2699>) (deny|permit) icmp any IPADDR MASK <0-255> [IFNAME]
Parameters	access-list Add an access list entry
	<100-199> Extended IP access-list number
	<2000-2699> Extended IP access-list number (expanded range)
	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	any Any Source host
	IPADDR destination address
	MASK destination wildcard bits
	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	Global configuration mode
No/clear	no access-list (<100-199>|<2000-2699>) (deny|permit) icmp any IPADDR MASK <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# access-list 100 permit icmp any 10.0.0.1 0.0.0.0 1

13.59 ip access-group (<1-199>|<1300-2699>|ACLNAME) in

Syntax	ip access-group (<1-199>|<1300-2699>|ACLNAME) in

Parameters	Standard ID, extended ID or ACLNAME
Command Mode	Interface configuration mode
No/clear	no ip access-group
Show	show ip access-group [IFNAME]
Default	
Description	This command attaches an IP access-list to an interface.
Examples	ASUS(config-if)# ip access-group 100 in

13.60 ip access-list extended (<100-199>|<2000-2699>|ACLNAME)

Syntax	ip access-list extended (<100-199>|<2000-2699>|ACLNAME)
Parameters	<100-199> Extended IP access-list number <2000-2699> Extended IP access-list number (expanded range) ACLNAME an access-list name
Command Mode	Global configuration mode
No/clear	no ip access-list extended (<100-199>|<2000-2699>|ACLNAME)
Show	show access-lists [ACLNAME]
Default	
Description	This command defines an extended IP access list using a name or number, and enter access-list configuration mode.
Examples	ASUS(config)# ip access-list extended 100

13.61 ip access-list standard (<1-99>|<1300-1999>|ACLNAME)

Syntax	ip access-list standard (<1-99>|<1300-1999>|ACLNAME)
Parameters	<1-99> standard IP access-list number <1300-1999> standard IP access-list number (expanded range)

	ACLNAME an access-list name
Command Mode	Global configuration mode
No/clear	no ip access-list standard (<1-99>|<1300-1999>|ACLNAME)
Show	show access-lists [ACLNAME]
Default	
Description	This command defines an standard IP access list using a name or number, and enter access-list configuration mode.
Examples	ASUS(config)# ip access-list standard 99

13.62 (permit|deny) any [IFNAME]

Syntax	(permit|deny) any [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	any Any source host
	[IFNAME] Egress interface name
Command Mode	IP standard access-list mode
No/clear	no (permit|deny) any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# ip access-list standard 99
	ASUS(config-std-acl)# permit any [gi1/0/1]

13.63 (permit|deny) host IPADDR [IFNAME]

Syntax	(permit|deny) host IPADDR [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	host A single host address
	IPADDR Host address

	[IFNAME] Egress interface name
Command Mode	IP standard access-list mode
No/clear	no (permitldeny) host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-std-acl)# permit host 10.0.0.1 [gi1/0/1]

13.64 (permit|deny) IPADDR MASK [IFNAME]

Syntax	(permitldeny) IPADDR MASK [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	host A single host address
	IPADDR Host address
	MASK Wildcard bits
	[IFNAME] Egress interface name
Command Mode	IP standard access-list mode
No/clear	no (permitldeny) host IPADDR A.B.C.D [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-std-acl)# permit 10.0.1.0 0.0.0.255 [gi1/0/1]

13.65 (permit|deny) (ip|tcp|udp|icmp) any any [IFNAME]

Syntax	(permitldeny) (ipltcpludplicmp) any any [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.

	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	any any source address
	any any destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (ipltcpludplicmp) any any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config)# ip access-list extended 100
	ASUS(config-ext-acl)# permit ip any any [gi1/0/1]

13.66 (permit|deny) (tcp|udp) any [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]

Syntax	(permitldeny) (tcpludp) any [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	any any source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	any any destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number

	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) (tcp|udp) any [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any eq 100 any eq 100 [gi1/0/1]

13.67 (permit|deny) icmp any any [<0-255>] code [<0-255>] [IFNAME]

Syntax	(permit|deny) icmp any any [<0-255>] code [<0-255>] [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. icmp Internet Control Message Protocol any any source address any any destination address <0-255> ICMP message type <0-255> ICMP message code [IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) icmp any any [<0-255>] code [<0-255>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp any any 12 code 12 [gi1/0/1]

13.68 (permit|deny) (ip|tcp|udp|icmp) IPADDR MASK any [IFNAME]

Syntax	(permit|deny) (ip|tcp|udp|icmp) IPADDR MASK any [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	any any destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) (ip|tcp|udp|icmp) IPADDR MASK any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit ip 10.0.1.0 0.0.0.255 any [gi1/0/1]

13.69 (permit|deny) (tcp|udp) IPADDR MASK [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]

Syntax	(permit|deny) (tcp|udp) IPADDR MASK [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol

	IPADDR Source address
	MASK Source wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	any any destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) (tcp|udp) IPADDR MASK [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp 10.0.1.0 0.0.0.255 eq 12 any eq 12 [gi1/0/1]

13.70 (permit|deny) icmp IPADDR MASK any <0-255> code <0-255> [IFNAME]

Syntax	(permit|deny) icmp IPADDR MASK any [<0-255>] code [<0-255>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	any any destination address
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name

Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) icmp IPADDR MASK any [<0-255>] code [<0-255>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp 10.0.1.0 0.0.0.255 any 12 code 12 [gi1/0/1]

13.71 (permit|deny) (ip|tcp|udp|icmp) host IPADDR any [IFNAME]

Syntax	(permitIdeny) (ipltcpludplicmp) host IPADDR any [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	host A single source host
	IPADDR Source address.
	any any destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (ipltcpludplicmp) host IPADDR any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit ip host 10.0.0.1 any [gi1/0/1]

13.72 (permit|deny) (tcp|udp) host IPADDR [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]

Syntax	(permitldeny) (tcpludp) host IPADDR [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. tcp Transmission Control Protocol udp User Datagram Protocol host A single source host IPADDR Source address. eq Match only packets on a given port numbe <0-65535> Port number any any destination address eq Match only packets on a given port numbe <0-65535> Port number [IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) host IPADDR [eq] [<0-65535>] any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp host 10.0.0.1 eq 6 any eq 65 [gi1/0/1]

13.73 (permit|deny) icmp host IPADDR any [<0-255>] code [<0-255>] [IFNAME]

Syntax	(permitldeny) icmp host IPADDR any [<0-255>] code [<0-255>] [IFNAME]

Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	host A single source host
	IPADDR Source address.
	any any destination address
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) icmp host IPADDR any [<0-255>] code [<0-255>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp host 10.0.0.1 any 12 code 12 [gi1/0/1]

13.74 (permit|deny) (ip|tcp|udp|icmp) host IPADDR host IPADDR [IFNAME]

Syntax	(permit|deny) (ip|tcp|udp|icmp) host IPADDR host IPADDR [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	host A single source host
	IPADDR Source address

	host A single destination host
	IPADDR Destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) (ip|tcp|udp|icmp) host IPADDR host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp host 10.0.0.1 host 10.0.0.25 [gi1/0/1]

13.75 (permit|deny) (tcp|udp) host IPADDR [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	(permit|deny) (tcp|udp) host IPADDR [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single source host
	IPADDR Source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	host A single destination host
	IPADDR Destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number

	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (tcpludp) host IPADDR [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp host 10.0.0.1 eq 655 host 10.0.0.2 eq 65 [gi1/0/2]

13.76 (permit|deny) icmp host IPADDR host IPADDR [<0-255>] code [<0-255>] [IFNAME]

Syntax	(permitIdeny) icmp host IPADDR host IPADDR [<0-255>] code [<0-255>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	host A single source host
	IPADDR Source address
	host A single destination host
	IPADDR Destination address
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) icmp host IPADDR host IPADDR [<0-255>] code [<0-255>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or

	permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp host 10.0.0.1 host 10.0.0.2 2 code 2 [gi1/0/1]

13.77 (permit|deny) (ip|tcp|udp|icmp) IPADDR MASK IPADDR MASK [IFNAME]

Syntax	(permitldeny) (ipltcpludplicmp) IPADDR MASK IPADDR MASK [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	IPADDR Destination address
	MASK Destination wildcard bits
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (ipltcpludplicmp) IPADDR MASK IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit ip 10.0.0.1 0.0.0.0 10.0.0.2 0.0.0.0 [gi1/0/1]

13.78 (permit|deny) (tcp|udp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax	(permit|deny) (tcp|udp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. tcp Transmission Control Protocol Udp User Datagram Protocol IPADDR Source address MASK Source wildcard bits eq Match only packets on a given port numbe <0-65535> Port number IPADDR Destination address MASK Destination wildcard bits eq Match only packets on a given port numbe <0-65535> Port number [IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) (tcp|udp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp 10.0.1.0 0.0.0.255 eq 2 10.0.0.2 0.0.0.0 eq 3 [gi1/0/1]

13.79 (permit|deny) icmp IPADDR MASK IPADDR MASK <0-255> code <0-255> [IFNAME]

Syntax	(permit|deny) icmp IPADDR MASK IPADDR MASK <0-255> code <0-255> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	IPADDR Destination address
	MASK Destination wildcard bits
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) icmp IPADDR MASK IPADDR MASK <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp 10.0.1.0 0.0.0.255 10.0.0.2 0.0.0.0 2 code 2 [gi1/0/2]

13.80 (permit|deny) (ip|tcp|udp|icmp) host IPADDR IPADDR MASK [IFNAME]

Syntax	(permit|deny) (ip|tcp|udp|icmp) host IPADDR IPADDR MASK [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.

	host A single source host
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	IPADDR Source address
	IPADDR Destination address
	MASK Destination wildcard bits
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (ipltcpludplicmp) host IPADDR IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp host 10.0.0.1 10.0.2.0 0.0.0.255 [gi1/0/2]

13.81 (permit|deny) (tcp|udp) host IPADDR [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax	(permitldeny) (tcpludp) host IPADDR [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single source host
	IPADDR Source address

	eq Match only packets on a given port numbe <0-65535> Port number IPADDR Destination address MASK Destination wildcard bits eq Match only packets on a given port numbe <0-65535> Port number [IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) host IPADDR [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp host 10.0.0.1 eq 2 10.0.0.2 0.0.0.0 eq 2 [gi1/0/2]

13.82 (permit|deny) icmp host IPADDR IPADDR MASK <0-255> code <0-255> [IFNAME]

Syntax	(permitldeny) icmp host IPADDR IPADDR MASK <0-255> code <0-255> [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. icmp Internet Control Message Protocol host A single source host IPADDR Source address IPADDR Destination address MASK Destination wildcard bits <0-255> ICMP message type <0-255> ICMP message code [IFNAME] Egress interface name

Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) icmp host IPADDR IPADDR MASK <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp host 10.0.0.1 10.0.0.2 0.0.0.0 2 code 2 [gi1/0/2]

13.83 (permit|deny) (ip|tcp|udp|icmp) IPADDR MASK host IPADDR [IFNAME]

Syntax	(permitIdeny) (ipltcpludplicmp) IPADDR MASK host IPADDR [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	host A single destination host
	IPADDR Destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (ipltcpludplicmp) IPADDR MASK host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or

	permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp 10.0.0.1 0.0.0.0 host 10.0.0.2 [gi1/0/2]

13.84 (permit|deny) (tcp|udp) IPADDR MASK [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	(permitldeny) (tcpludp) IPADDR MASK [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. tcp Transmission Control Protocol udp User Datagram Protocol IPADDR Source address MASK Source wildcard bits eq Match only packets on a given port numbe <0-65535> Port number host A single destination host IPADDR Destination address eq Match only packets on a given port numbe <0-65535> Port number [IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) IPADDR MASK [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp 10.0.0.1 0.0.0.0 eq 65 host 10.0.0.2 eq 64 [gi1/0/2]

13.85 (permit|deny) icmp IPADDR MASK host IPADDR <0-255> code <0-255> [IFNAME]

Syntax	(permitldeny) icmp IPADDR MASK host IPADDR <0-255> code <0-255> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	host A single destination host
	IPADDR Destination address
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) icmp IPADDR MASK host IPADDR <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp 10.0.0.1 0.0.0.0 host 10.0.0.2 1 code 1 [gi1/0/2]

13.86 (permit|deny) (ip|tcp|udp|icmp) any host IPADDR [IFNAME]

Syntax	(permitldeny) (ipltcpludplicmp) any host A.B.C.D [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol

	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	any any source address
	host A single destination host
	IPADDR Destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (ipltcpludplicmp) any host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any host 10.0.0.1 [gi1/0/2]

13.87 (permit|deny) (tcp|udp) any [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	(permitldeny) (tcpludp) any [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	any any source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	host A single destination host
	IPADDR Destination address

	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (tcpludp) any [eq] [<0-65535>] host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any eq 12 host 10.0.0.1 eq 12 [gi1/0/2]

13.88 (permit|deny) icmp any host IPADDR <0-255> code <0-255> [IFNAME]

Syntax	(permitIdeny) icmp any host IPADDR <0-255> code <0-255> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	any any source address
	host A single destination host
	IPADDR Destination address
	<0-255> ICMP message type
	<0-255> ICMP message code
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) icmp any host IPADDR <0-255> code <0-255>

	[IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp any host 10.0.0.1 2 code 2 [gi1/0/2]

13.89 (permit|deny) (ip|tcp|udp|icmp) any IPADDR MASK [IFNAME]

Syntax	(permitldeny) (ipltcpludplicmp) any IPADDR MASK [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	any any source address
	IPADDR Destination address
	MASK Destination wildcard bits
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (ipltcpludplicmp) any IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any 10.0.0.1 0.0.0.0 [gi1/0/2]

13.90 (permit|deny) (tcp|udp) any [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax	(permitIdeny) (tcpIudp) any [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. tcp Transmission Control Protocol udp User Datagram Protocol any any source address eq Match only packets on a given port numbe <0-65535> Port number IPADDR Destination address MASK Destination wildcard bits eq Match only packets on a given port numbe <0-65535> Port number [IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (tcpIudp) any [eq] [<0-65535>] IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any eq 65 10.0.0.1 0.0.0.0 eq 43 [gi1/0/2]

13.91 (permit|deny) icmp any IPADDR MASK <0-255> code <0-255> [IFNAME]

Syntax	(permitIdeny) icmp any IPADDR MASK <0-255> code <0-255> [IFNAME]

Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	any any source address
	IPADDR Destination address
	MASK Destination wildcard bits
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) icmp any IPADDR MASK <0-255> code <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp any 10.0.0.1 0.0.0.0 2 code 3 [gi1/0/2]

13.92 (permit|deny) (tcp|udp) IPADDR MASK IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax	(permitldeny) (tcpludpl) IPADDR MASK IPADDR MASK [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR Source address
	MASK Source wildcard bits
	IPADDR Destination address
	MASK Destination wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number

	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (tcpludpl) IPADDR MASK IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp 10.0.0.1 0.0.0.0 10.0.0.2 0.0.0.0 eq 23 [gi1/0/1]

13.93 (permit|deny) (tcp|udp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [IFNAME]

Syntax	(permitIdeny) (tcpludpl) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR Source address
	MASK Source wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	IPADDR Destination address
	MASK Destination wildcard bits
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (tcpludp) IPADDR MASK [eq] [<0-65535>] IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	

Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp 10.0.0.1 0.0.0.0 eq 23 10.0.0.2 0.0.0.0 [gi1/0/1]

13.94 (permit|deny) (tcp|udp) IPADDR MASK [eq] [<0-65535>] any [IFNAME]

Syntax	(permitldeny) (tcpludp) IPADDR MASK [eq] [<0-65535>] any [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR Source address
	MASK Source wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	any any destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) IPADDR MASK [eq] [<0-65535>] any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp 10.0.0.1 0.0.0.0 eq 22 any [gi1/0/1]

13.95 (permit|deny) (tcp|udp) IPADDR MASK any [eq] [<0-65535>] [IFNAME]

Syntax	(permitIdeny) (tcpludp) IPADDR MASK any [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR Source address
	MASK Source wildcard bits
	any any destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (tcpludp) IPADDR MASK any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp 10.0.0.1 0.0.0.0 any eq 22 [gi1/0/1]

13.96 (permit|deny) (tcp|udp) IPADDR MASK [eq] [<0-65535>] host IPADDR [IFNAME]

Syntax	(permitIdeny) (tcpludp) IPADDR MASK [eq] [<0-65535>] host IPADDR [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.

	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR Source address
	MASK Source wildcard bits
	eq Match only packets on a given port numbe
	<0-65535> Port number
	host A single destination host
	IPADDR Destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) IPADDR MASK [eq] [<0-65535>] host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp 10.0.0.1 0.0.0.0 eq 2 host 10.0.0.2 [gi1/0/1]

13.97 (permit|deny) (tcp|udp) IPADDR MASK host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	(permitldeny) (tcpludp) IPADDR MASK host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	IPADDR Source address
	MASK Source wildcard bits
	host A single destination host
	IPADDR Destination address

	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) IPADDR MASK host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp 10.0.0.1 0.0.0.0 host 10.0.0.2 eq 2 [gi1/0/1]

13.98 (permit|deny) (tcp|udp) any [eq] [<0-65535>] IPADDR MASK [IFNAME]

Syntax	(permitldeny) (tcpludp) any [eq] [<0-65535>] IPADDR MASK [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	any any source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	IPADDR Destination address
	MASK Destination wildcard bits
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) any [eq] [<0-65535>] IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]

Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any eq 2 10.0.0.1 0.0.0.0 [gi1/0/1]

13.99 (permit|deny) (tcp|udp) any IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax	(permitldeny) (tcpludp) any IPADDR MASK [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. tcp Transmission Control Protocol udp User Datagram Protocol any any source address IPADDR Destination address MASK Destination wildcard bits eq Match only packets on a given port numbe <0-65535> Port number [IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) any IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any 10.0.0.1 0.0.0.0 eq 2 [gi1/0/1]

13.100 (permit|deny) (tcp|udp) any any [eq] [<0-65535>] [IFNAME]

Syntax	(permit|deny) (tcp|udp) any any [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	any any source address
	any any destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) (tcp|udp) any any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any any eq 2 [gi1/0/1]

13.101 (permit|deny) (tcp|udp) any [eq] [<0-65535>] any [IFNAME]

Syntax	(permit|deny) (tcp|udp) any [eq] [<0-65535>] any [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	any any source address
	eq Match only packets on a given port numbe

	<0-65535> Port number
	any any destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) any [eq] [<0-65535>] any [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any eq 2 any [gi1/0/1]

13.102 (permit|deny) (tcp|udp) any [eq] [<0-65535>] host IPADDR [IFNAME]

Syntax	(permitldeny) (tcpludp) any [eq] [<0-65535>] host IPADDR [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	.any any source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	host A single destination host
	IPADDR Destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) any [eq] [<0-65535>] host IPADDR [IFNAME]

Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any eq 2 host 10.0.0.2 [gi1/0/1]

13.103 (permit|deny) (tcp|udp) any host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	(permitIdeny) (tcpIudp) any host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	ip Any Internet Protocol
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	icmp Internet Control Message Protocol
	any any source address
	host A single destination host
	IPADDR Destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (tcpIudp) any host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp any host 10.0.0.2 eq 2 [gi1/0/1]

13.104 (permit|deny) (tcp|udp) host IPADDR [eq] [<0-65535>] host IPADDR [IFNAME]

Syntax	(permit|deny) (tcp|udp) host IPADDR [eq] [<0-65535>] host IPADDR [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single source host
	IPADDR Source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	host A single destination host
	IPADDR Destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) (tcp|udp) host IPADDR [eq] [<0-65535>] host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp host 10.0.0.1 eq 2 host 10.0.0.2 [gi1/0/1]

13.105 (permit|deny) (tcp|udp) host IPADDR host IPADDR [eq] [<0-65535>] [IFNAME]

Syntax	(permit|deny) (tcp|udp) host IPADDR host IPADDR [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward

	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single source host
	IPADDR Source address
	host A single destination host
	IPADDR Destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permit|deny) (tcp|udp) host IPADDR host IPADDR [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp host 10.0.0.1 host 10.0.0.2 eq 2 [gi1/0/1]

13.106 (permit|deny) (tcp|udp) host IPADDR [eq] [<0-65535>] IPADDR MASK [IFNAME]

Syntax	(permit|deny) (tcp|udp) host IPADDR [eq] [<0-65535>] IPADDR MASK [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single source host

	IPADDR Source address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	IPADDR Destination address
	MASK Destination wildcard bits
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) host IPADDR [eq] [<0-65535>] IPADDR MASK [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp host 10.0.0.1 eq 2 10.0.0.2 0.0.0.0 [gi1/0/1]

13.107 (permit|deny) (tcp|udp) host IPADDR IPADDR MASK [eq] [<0-65535>] [IFNAME]

Syntax	(permitldeny) (tcpludp) host IPADDR IPADDR MASK [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single source host
	IPADDR Source address
	IPADDR Destination address
	MASK Destination wildcard bits
	eq Match only packets on a given port numbe

	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (tcpIudp) host IPADDR IPADDR MASK [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp host 10.0.0.1 10.0.0.2 0.0.0.0 eq 2 [gi1/0/1]

13.108 (permit|deny) (tcp|udp) host IPADDR [eq] [<0-65535>] any [IFNAME]

Syntax	(permitIdeny) (tcpIudp) host IPADDR [eq] [<0-65535>] any [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single source host
	IPADDR Source address.
	eq Match only packets on a given port numbe
	<0-65535> Port number
	any any destination address
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) (tcpIudp) host IPADDR [eq] [<0-65535>] any [IFNAME]
Show	show access-lists [ACLNAME]
Default	

Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp host 10.0.0.1 eq 2 any [gi1/0/1]

13.109 (permit|deny) (tcp|udp) host IPADDR any [eq] [<0-65535>] [IFNAME]

Syntax	(permitldeny) (tcpludp) host IPADDR any [eq] [<0-65535>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	tcp Transmission Control Protocol
	udp User Datagram Protocol
	host A single source host
	IPADDR Source address.
	any any destination address
	eq Match only packets on a given port numbe
	<0-65535> Port number
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitldeny) (tcpludp) host IPADDR any [eq] [<0-65535>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit tcp host 10.0.0.1 any eq 2 [gi1/0/1]

13.110 (permit|deny) icmp IPADDR MASK IPADDR MASK <0-255> [IFNAME]

Syntax	(permitldeny) icmp IPADDR MASK IPADDR MASK <0-255> [IFNAME]

Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	IPADDR Destination address
	MASK Destination wildcard bits
	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) icmp IPADDR MASK IPADDR MASK <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp 10.0.0.1 0.0.0.0 10.0.0.2 0.0.0.0 2 [gi1/0/1]

13.111 (permit|deny) icmp host IPADDR IPADDR MASK <0-255> [IFNAME]

Syntax	(permitIdeny) icmp host IPADDR IPADDR MASK <0-255> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	host A single source host
	IPADDR Source address
	IPADDR Destination address
	MASK Destination wildcard bits
	<0-255> ICMP message type

	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) icmp host IPADDR IPADDR MASK <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp host 10.0.0.1 10.0.0.2 0.0.0.0 2 [gi1/0/1]

13.112 (permit|deny) icmp IPADDR MASK host IPADDR <0-255> [IFNAME]

Syntax	(permitIdeny) icmp IPADDR MASK host IPADDR <0-255> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	IPADDR Source address
	MASK Source wildcard bits
	host A single destination host
	IPADDR Destination address
	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) icmp IPADDR MASK host IPADDR <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

Examples	ASUS(config-ext-acl)# permit icmp 10.0.0.1 0.0.0.0 host 10.0.0.2 2 [gi1/0/1]

13.113 (permit|deny) icmp any host IPADDR <0-255> [IFNAME]

Syntax	(permitIdeny) icmp any host IPADDR <0-255> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	any any source address
	host A single destination host
	IPADDR Destination address
	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) icmp any host IPADDR <0-255> [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp any host 10.0.0.1 2 [gi1/0/1]

13.114 (permit|deny) icmp any IPADDR MASK <0-255> [IFNAME]

Syntax	(permitIdeny) icmp any IPADDR MASK <0-255> [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	any any source address
	IPADDR Destination address

MASK Destination wildcard bits

<0-255> ICMP message type

[IFNAME]   Egress interface name

Command Mode   IP extended access-list mode

No/clear   no (permitIdeny) icmp any IPADDR MASK <0-255> [IFNAME]

Show   show access-lists [ACLNAME]

Default

Description   This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

Examples   ASUS(config-ext-acl)# permit icmp any 10.0.0.1 0.0.0.0 2 [gi1/0/1]

13.115 (permit|deny) icmp any any [<0-255>] [IFNAME]

Syntax   (permitIdeny) icmp any any [<0-255>] [IFNAME]

Parameters   permit Specify packets to forward

deny   Specify packets to reject.

icmp Internet Control Message Protocol

any   any source address

any   any destination address

<0-255> ICMP message type

[IFNAME]   Egress interface name

Command Mode   IP extended access-list mode

No/clear   no (permitIdeny) icmp any any [<0-255>] [IFNAME]

Show   show access-lists [ACLNAME]

Default

Description   This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.

Examples   ASUS(config-ext-acl)# permit icmp any any 2 [gi1/0/1]

13.116 (permit|deny) icmp IPADDR MASK any [<0-255>] [IFNAME]

Syntax	(permitIdeny) icmp IPADDR MASK any [<0-255>] [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. icmp Internet Control Message Protocol IPADDR Source address MASK Source wildcard bits any any destination address <0-255> ICMP message type [IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) icmp IPADDR MASK any [<0-255>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	`ASUS(config-ext-acl)# permit icmp 10.0.0.1 0.0.0.0 any 2 [gi1/0/1]`

13.117 (permit|deny) icmp host IPADDR any [<0-255>] [IFNAME]

Syntax	(permitIdeny) icmp host IPADDR any [<0-255>] [IFNAME]
Parameters	permit Specify packets to forward deny Specify packets to reject. icmp Internet Control Message Protocol host A single source host IPADDR Source address. any any destination address

	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	No (permitIdeny) icmp host IPADDR any [<0-255>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp host 10.0.0.1 any 2 [gi1/0/1]

13.118 (permit|deny) icmp host IPADDR host IPADDR [<0-255>] [IFNAME]

Syntax	(permitIdeny) icmp host A.B.C.D host A.B.C.D [<0-255>] [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	icmp Internet Control Message Protocol
	host A single source host
	IPADDR Source address
	host A single destination host
	IPADDR Destination address
	<0-255> ICMP message type
	[IFNAME] Egress interface name
Command Mode	IP extended access-list mode
No/clear	no (permitIdeny) icmp host IPADDR host IPADDR [<0-255>] [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-ext-acl)# permit icmp host 10.0.0.1 host 10.0.0.2 2 [gi1/0/1]

13.119 (permit|deny) IPADDR [IFNAME]

Syntax	(permitIdeny) A.B.C.D [IFNAME]
Parameters	permit Specify packets to forward
	deny Specify packets to reject.
	IPADDR Host address
	[IFNAME] Egress interface name
Command Mode	IP standard access-list mode
No/clear	no (permitIdeny) host IPADDR [IFNAME]
Show	show access-lists [ACLNAME]
Default	
Description	This command specifies one or more conditions denied or permitted to decide if the packet is forwarded or dropped.
Examples	ASUS(config-std-acl)# permit 10.0.0.1 [gi1/0/1]

13.120 show ip access-group [IFNAME]

Syntax	show ip access-group [IFNAME]
Parameters	IFNAME interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Show ip access rule to attach with the specific interface
Examples	ASUS# show ip access-group gi1/0/1

13.121 show ip access list

Syntax	show ip access list
Parameters	
Command Mode	Privileged EXEC mode
No/clear	

Show	
Default	
Description	Use the show ip access list EXEC command to display the parameters for all ip access on the switch.
Examples	ASUS# show ip access list

13.122 show ip access list (<1-199>|<1300-2699>|ACLNAME)

Syntax	show ip access list (<1-199>l<1300-2699>lACLNAME)
Parameters	Standard ID, extended ID or ACLNAME
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show ip access list EXEC command to display the parameters for an ip access on the switch.
Examples	ASUS# show ip access list 100

14 Storm control:

14.1 storm-control (broadcast| dlf| multicast) <1-262143>

Syntax	storm-control (broadcastl dlfl multicast) <1-262143>
Parameters	broadcast Broadcast rate control
	multicast Multicast rate control
	dlf Unknown unicast rate control
	<1-262143> Rate limit value in packets per second
Command Mode	Interface Configuration mode
No/clear	no storm-control (broadcastl dlfl multicast)
Show	show storm-control (broadcastl dlfl multicast)
Default	
Description	Use the storm-control configuration command on the switch stack or standalone switch to set the limit rate of the interface's total bandwidth used by broadcast/dlf/multicast.
Example	ASUS(config-if)# storm-control multicast 4096

14.2 show storm-control (broadcast| dlf| multicast)

Syntax	show storm-control (broadcastl dlfl multicast)
Parameters	broadcast Broadcast rate control
	multicast Multicast rate control
	dlf Unknown unicast rate control
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show storm-control configuration command on the switch stack or standalone switch to show the limit rate of the port's total bandwidth used by broadcast/dlf/multicast.
Example	ASUS# show storm-control dlf

15 QoS/CoS:

15.1 cos cos-map <0-7> <1-8>

Syntax	cos cos-map <0-7> <1-8>
Parameters	<0-7> IEEE 802.1p priority
	<1-8> Class of Service (CoS) Priority Queue ID
Command Mode	Global configuration mode
No/clear	no cos cos-map
Show	show cos cos-map
Default	
Description	Use the queue cos-map configuration command on the switch stack or standalone switch to set which Cos queue a given priority should map into.
Example	ASUS(config)# cos cos-map 3 1

15.2 cos policy fifo

Syntax	cos policy fifo
Parameters	fifo First In First Out
Command Mode	Global configuration mode
No/clear	no cos policy
Show	show cos policy
Default	The default setting of qos ploicy is strict mode
Description	This command sets CoS scheduling policy to First In First Out mode
Example	ASUS(config)# cos policy fifo

15.3 cos policy sp-wrr-queue weight <1-10> <1-10> <1-10> <1-10> <1-10> <1-10> <1-10> <1-10>

Syntax	Cos policy sp-wrr-queue weight <1-10> <1-10> <1-10> <1-10> <1-10> <1-10> <1-10> <1-10>
Parameters	sp-wrr-queue Strict Priority + Weighted Round Robin priority based scheduling
	<0-10> weight for cos queue 1, weight 0 for SP queue
	<0-10> weight for cos queue 2, weight 0 for SP queue
	<0-10> weight for cos queue 3, weight 0 for SP queue
	<0-10> weight for cos queue 4, weight 0 for SP queue
	<0-10> weight for cos queue 5, weight 0 for SP queue
	<0-10> weight for cos queue 6, weight 0 for SP queue
	<0-10> weight for cos queue 7, weight 0 for SP queue
	<0-10> weight for cos queue 8, weight 0 for SP queue
Command Mode	Global configuration mode
No/clear	no cos policy reset to strict mode
Show	show cos policy
Default	
Description	This command sets CoS scheduling policy to Strict Priority + Weighted Round Robin mode
Example	ASUS(config)# cos policy sp-wrr-queue weight 1 2 3 4 5 6 7 0

15.4 cos policy wrr-queue weight <1-10> <1-10> <1-10> <1-10> <1-10> <1-10> <1-10> <1-10>

Syntax	cos policy wrr-queue weight <1-10> <1-10> <1-10> <1-10> <1-10> <1-10> <1-10> <1-10>
Parameters	wrr-queue Weighted Round Robin priority based scheduling
	<1-10> weight for cos queue 1
	<1-10> weight for cos queue 2

	<1-10> weight for cos queue 3
	<1-10> weight for cos queue 4
	<1-10> weight for cos queue 5
	<1-10> weight for cos queue 6
	<1-10> weight for cos queue 7
	<1-10> weight for cos queue 8
Command Mode	Global configuration mode
No/clear	no cos policy reset to strict mode
Show	show cos policy
Default	
Description	This command sets CoS scheduling policy to Weighted Round Robin mode
Example	ASUS(config)# cos policy wrr-queue weight 1 2 3 4 5 6 7 8

15.5 cos policy strict

Syntax	cos policy strict
Parameters	strict Strict priority based scheduling
Command Mode	Global configuration mode
No/clear	
Show	show cos policy
Default	The default setting of CoS mode is strict mode
Description	This command sets CoS scheduling policy to strict mode
Example	ASUS(config)# cos policy strict

15.6 show cos cos-map

Syntax	show cos cos-map
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	

Default	
Description	Show which CoS queue given priority current maps to
Example	ASUS# show cos cos-map

15.7 show cos policy

Syntax	show cos policy
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	This command shows the cos policy.
Example	ASUS# show cos policy

15.8 show qos (egress|ingress) bandwidth [IFNAME]

Syntax	show qos (egresslingress) bandwidth [IFNAME]	
Parameters	egress	Egress traffic
	ingress	Ingress traffic
	[IFNAME]	Interface name
Command Mode	Privileged EXEC mode	
No/clear		
Show		
Default		
Description	This command used to show the Qos bandwidth informational parameter for the outgoing/incoming packets.	
Example	ASUS# show qos egress bandwidth gi1/0/1	

15.9 qos egress bandwidth <64-1048576>

Syntax	qos egress bandwidth <64-1048576>
Parameters	<64-1048576> Rate limit in Kbps, <64-102400> for FE ports, <64-1048576> for GE ports
Command Mode	Interface configuration mode
No/clear	no qos egress bandwidth
Show	show qos egress bandwidth [IFNAME]
Default	Not limited.
Description	This command used to set the Qos bandwidth informational parameter for the outgoing packets.
Example	ASUS(config-if)# qos egress bandwidth 128

15.10 qos ingress bandwidth <64-1048576>

Syntax	qos ingress bandwidth <64-1048576>
Parameters	<64-1048576> Rate limit in Kbps, <64-102400> for FE ports, <64-1048576> for GE ports
Command Mode	Interface configuration mode
No/clear	no qos ingress bandwidth
Show	show qos ingress bandwidth [IFNAME]
Default	Not limited.
Description	This command used to set the Qos bandwidth informational parameter for the incoming packets.
Example	ASUS(config-if)# qos ingress bandwidth 128

16 Policy Map Configuration

16.1 policy-map POLICYMAP

Syntax	policy-map POLICYMAP
Parameters	POLICYMAP Policy map specific name
Command Mode	Global configuration mode
No/clear	no policy-map POLICYMAP
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to create a policy-map.
Examples	ASUS(config)# policy-map pm1

16.2 class CLASSMAP

Syntax	class CLASSMAP
Parameters	CLASSMAP Class map specific name
Command Mode	Policy-map configuration mode
No/clear	no class CLASSMAP
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to create a class-map rule.
Examples	ASUS(config-pmap)# class c1

16.3 match access-group ACLNAME

Syntax	match access-group ACLNAME
Parameters	ACLNAME Access Control List (ACL) name
Command Mode	Policy-map-class configuration mode
No/clear	no match access-group
Show	show policy-map [POLICYMAP]

Default	
Description	This command is used to configure a traffic classifier match criterion using ACL rule.
Examples	ASUS(config-pmap-class)# match access-group acl

16.4 match ip dscp DSCPLIST

Syntax	match ip dscp DSCPLIST
Parameters	DSCPLIST IP DSCP <0-63> value, maximum 8 values
Command Mode	Policy-map-class configuration mode
No/clear	no match ip dscp
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to configure a traffic classifier match criterion using IP DSCP values.
Examples	ASUS(config-pmap-class)# match ip dscp 3-5

16.5 match ip precedence IPPRECEDENCES

Syntax	match ip precedence IPPRECEDENCES
Parameters	IPPRECEDENCES IP Precedence <0-7> value, maximum 8 values
Command Mode	Policy-map-class configuration mode
No/clear	no match ip precedence
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to configure a traffic classifier match criterion using IP Precedence values.
Examples	ASUS(config-pmap-class)# match ip precedence 3

16.6 police <64-1048576> <4-512>

Syntax	police <64-1048576> <4-512>

Parameters	<64-1048576> Traffic ingress rate in Kbps, <64-102400> for FE ports, <64-1048576> for GE ports
	<4-512> Traffic burst size in KB, (4|8|16|32|64) for FE ports, (4|8|16|32|64|128|256|512) for GE ports
Command Mode	Policy-map-class configuration mode
No/clear	no police
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to configure ingress rate and ingress burst size.
Examples	ASUS(config-pmap-class)# police 64 16

16.7 police <64-1048576> <4-512> exceed-action drop

Syntax	police <64-1048576> <4-512> exceed-action drop
Parameters	<64-1048576> Traffic ingress rate in Kbps, <64-102400> for FE ports, <64-1048576> for GE ports
	<4-512> Traffic burst size in KB, (4|8|16|32|64) for FE ports, (4|8|16|32|64|128|256|512) for GE ports
Command Mode	Policy-map-class configuration mode
No/clear	no police exceed-action
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to configure ingress rate and ingress burst size with drop packets when exceed ingress rate.
Examples	ASUS(config-pmap-class)# police 3 16 exceed-action drop

16.8 police <64-1048576> <4-512> exceed-action dscp <0-63>

Syntax	police <64-1048576> <4-512> exceed-action dscp <0-63>
Parameters	<64-1048576> Traffic ingress rate in Kbps, <64-102400> for FE

	ports, <64-1048576> for GE ports
	<4-512> Traffic burst size in KB, (4l8l16l32l64) for FE ports, (4l8l16l32l64l128l256l512) for GE ports
	<0-63> IP DSCP value
Command Mode	Policy-map-class configuration mode
No/clear	no police exceed-action
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to configure ingress rate and ingress burst size with mark down the DSCP value and send the packet when exceed ingress rate.
Examples	ASUS(config-pmap-class)# police 2 16 exceed-action dscp 54

16.9 police drop

Syntax	police drop
Parameters	
Command Mode	Policy-map-class configuration mode
No/clear	no police drop
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to drop classification matched packets
Examples	ASUS(config-pmap-class)# police drop

16.10 police high-drop

Syntax	police high-drop
Parameters	
Command Mode	Policy-map-class configuration mode
No/clear	no police high-drop
Show	show policy-map [POLICYMAP]
Default	

Description	This command is used to mark classification matched packets with high-drop-precedence.
Examples	ASUS(config-pmap-class)# police high-drop

16.11 set cos override <0-7>

Syntax	set cos override <0-7>
Parameters	<0-7> New CoS value
Command Mode	Policy-map-class configuration mode
No/clear	no set cos override
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to set classified ingress packets with packet CoS values.
Examples	ASUS(config-pmap-class)# set cos override 3

16.12 set ip dscp <0-63>

Syntax	set ip dscp <0-63>
Parameters	<0-63> New IP DSCP value
Command Mode	Policy-map-class configuration mode
No/clear	no set ip dscp
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to set classified ingress packets with packet IP DSCP values.
Examples	ASUS(config-pmap-class)# set ip dscp 55

16.13 set ip precedence <0-7>

Syntax	set ip precedence <0-7>
Parameters	<0-7> New IP Precedence value
Command Mode	Policy-map-class configuration mode

No/clear	no set ip precedence
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to set classified ingress packets with packet IP Precedence values.
Examples	ASUS(config-pmap-class)# set ip precedence 3

16.14 service-policy input POLICYMAP

Syntax	service-policy input POLICYMAP
Parameters	POLICYMAP Policy map specific name
Command Mode	Interface configuration mode
No/clear	no service-policy input POLICYMAP
Show	show policy-map [POLICYMAP]
Default	
Description	This command is used to apply a specific policy map to a particular interface.
Examples	ASUS(config)# interface gi1/0/1 ASUS(config-if)# service-policy input pm1

16.15 show policy-map [POLICYMAP]

Syntax	show policy-map [POLICYMAP]
Parameters	[POLICYMAP] Policy map specific name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	This command is used to show the policy-map configuration.
Examples	ASUS# show policy-map

17 Spanning Tree Protocol Configuration:

17.1 show spanning-tree interface [IFNAME]

Syntax	show spanning-tree interface [IFNAME]
Parameters	[IFNAME] Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show spanning-tree interface configuration and running status.
Example	ASUS# show spanning-tree interface gi1/0/1

17.2 show spanning-tree mst [INSTANCE]

Syntax	show spanning-tree mst
Parameters	[INSTANCE] Instance ID, <1-15>
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show MSTP configuration and all or specified instance status
Examples	ASUS# show spanning-tree mst 1

17.3 show spanning-tree mst configuration

Syntax	show spanning-tree mst configuration
Parameters	
Command Mode	Privileged EXEC mode

No/clear	
Show	
Default	
Description	To show MSTP instance and VLAN mapping configuration.
Examples	ASUS# show spanning-tree mst configuration

17.4 show spanning-tree mst instance <1-15> interface [IFNAME]

Syntax	show spanning-tree mst instance <1-15> interface [IFNAME]
Parameters	<1-15> Instance ID, <1-15>
	interface Interface status and configuration
	[IFNAME] Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show MSTP all or specified interface status and configuration
Examples	ASUS# show spanning-tree mst instance 1 interface gi1/0/1

17.5 show spanning-tree summary

Syntax	show spanning-tree summary
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show spanning-tree the summary of bridge and active ports status.
Example	ASUS# show spanning-tree summary

17.6 spanning-tree algorithm-timer <4-30> <6-40> <1-10>

Syntax	spanning-tree algorithm-timer <4-30> <6-40> <1-10>
Parameters	<4-30> Forward time value, in seconds
	<6-40> Max age value, in seconds
	<1-10> Hello time value, in seconds
Command Mode	Global configuration mode
No/clear	no spanning-tree algorithm-timer
Show	show spanning-tree summary
Default	Forward time is 15, Max age is 20, Hello time is 2.
Description	This command sets spanning-tree algorithm-timer parameters.
Example	ASUS(config)# spanning-tree algorithm-time 10 15 4

17.7 spanning-tree (enable|disable)

Syntax	spanning-tree (enableldisable)
Parameters	disable Disable STP on the switch
	enable Enable STP on the switch switch
Command Mode	Global configuration mode
No/clear	spanning-tree disable
Show	show spanning-tree summary
Default	Disable
Description	Enable/Disable the spanning tree
Example	ASUS(config)# spanning-tree enable

17.8 spanning-tree bpdu-guard (enable|disable)

Syntax	spanning-tree bpdu-guard (enableldisable)
Parameters	disable Disable BPDU guard on the interface
	enable Enable BPDU guard on the interface
Command Mode	Interface configuration mode

No/clear	
Show	show spanning-tree interface [IFNAME]
Default	Not enable bpdu-guard
Description	If bpdu-guard is enabled and the system receives any STP bpdu from the interface, the inerface will be blocked.
Example	ASUS(config-if)# spanning-tree bpdu-guard enable

17.9 spanning-tree cost <1-200000000>

Syntax	spanning-tree cost <1-200000000>
Parameters	<1-200000000> Path cost value
Command Mode	Interface configuration mode
No/clear	no spanning-tree cost
Show	show spanning-tree interface [IFNAME]
Default	According link speed and status auto to set.
Description	Use the spanning-tree cost configuration command on the switch stack or standalone switch to set the spanning-tree path cost.
Example	ASUS(config-if)# spanning-tree cost 128

17.10 spanning-tree edge-port (auto| disable| enable)

Syntax	spanning-tree edge-port (auto l disablel enable)
Parameters	edge-port the interface is attached to a LAN segment that
	is at the end of a bridged LAN or to an end node
	auto Automatically determine by receiving BPDU
	disable Disable edge-port on the interface
	enable Enable edge-port on the interface
Command Mode	Interface configuration mode
No/clear	no spanning-tree edge-port
Show	show spanning-tree interface [IFNAME]

Default	The default is auto.
Description	Use the spanning-tree edge-port configuration command on the switch stack or standalone switch to set the spanning-tree interface attached to a LAN segment that is at the end or not.
Example	ASUS(config-if)# spanning-tree edge-port enable

17.11 spanning-tree forward-time <4-30>

Syntax	spanning-tree forward-time <4-30>
Parameters	<4-30> Forward time value, in seconds
Command Mode	Global configuration mode
No/clear	no spanning-tree forward-time
Show	show spanning-tree summary
Default	15 sec
Description	Use the spanning-tree forward-time configuration command on the switch stack or standalone switch to set the spanning-tree bridge forward delay time (sec).
Example	ASUS(config)# spanning-tree forward-time 20

17.12 spanning-tree hello-time <1-10>

Syntax	spanning-tree hello-time <1-10>
Parameters	<1-10> Hello time value, in seconds
Command Mode	Global configuration mode
No/clear	no spanning-tree hello time
Show	show spanning-tree summary
Default	2 sec
Description	Use the spanning-tree hell-time configuration command on the switch stack or standalone switch to set the hello time to send hello BPDUs.
Example	ASUS(config)# spanning-tree hello time 3

17.13 spanning-tree link-type (auto| point-to-point| shared)

Syntax	spanning-tree link-type (autol point-to-pointl shared)
Parameters	auto Automatically determine on linkup point-to-point Link connected with exactly only one bridge shared Link connected with more than one bridge
Command Mode	Interface configuration mode
No/clear	no spanning-tree link-type
Show	show spanning-tree interface [IFNAME]
Default	The default is auto.
Description	Use the spanning-tree link-type configuration command on the switch stack or standalone switch to set the spanning-tree link type for the specified interface.
Example	ASUS(config-if)# spanning-tree link-type shared

17.14 spanning-tree max-age <6-40>

Syntax	spanning-tree max-age <6-40>
Parameters	<6-40> Max age value, in seconds
Command Mode	Global configuration mode
No/clear	No spanning-tree max-age
Show	show spanning-tree summary
Default	20 sec
Description	Use the spanning-tree max-age configuration command on the switch stack or standalone switch to set the spanning-tree interval (sec) between messages the spanning tree receive.
Example	ASUS(config)# spanning-tree max-age 25

17.15 spanning-tree mode (mst| pvst| rapid-pvst)

Syntax	spanning-tree mode (mstl pvstl rapid-pvst)
Parameters	mst Multiple Spanning-Tree (IEEE 802.1s)

	pvst Per-VLAN Spanning-Tree (IEEE 802.1d)
	rapid-pvst Rapid Spanning-Tree (IEEE 802.1w)
Command Mode	Global configuration mode
No/clear	
Show	show spanning-tree summary
Default	The default is rapid-pvst.
Description	the spanning tree mode
Example	ASUS(config)# spanning-tree mode pvst

17.16 spanning-tree mst <1-15> cost <1-200000000>

Syntax	spanning-tree mst <1-15> cost <1-200000000>
Parameters	<1-15> MST Instance ID
	<1-200000000> 32-bit based value
Command Mode	Interface configuration mode
No/clear	no spanning-tree mst <1-15> cost
Show	show spanning-tree mst instance <1-15> interface [IFNAME]
Default	According link speed and status auto to set.
Description	Setup the path cost for a specified interface of the specified MSTP instance.
Examples	ASUS(config-if)# spanning-tree mst 1 cost 2000

17.17 spanning-tree mst <1-15> port-priority <0-240>

Syntax	spanning-tree mst <1-15> port-priority <0-240>
Parameters	<1-15> MST Instance ID
	<0-240> Priority value, in steps of 16
Command Mode	Interface configuration mode
No/clear	no spanning-tree mst <1-15> port-priority
Show	show spanning-tree mst instance <1-15> interface [IFNAME]
Default	The default is 128
Description	Setup the priority value for a specified interface of the specified

	MSTP instance.
Examples	ASUS(config-if)# spanning-tree mst 1 port-priority 16

17.18 spanning-tree mst <1-15> priority <0-61440>

Syntax	spanning-tree mst <1-15> port-priority <0-61440>
Parameters	<1-15> MST Instance ID
	<0-61440> Priority value, in steps of 4096
Command Mode	Global configuration mode
No/clear	no spanning-tree mst <1-15> priority
Show	show spanning-tree mst instance [INSTANCE]
Default	The default is 32768
Description	Setup the priority value for a specified MSTP instance.
Examples	ASUS(config)# spanning-tree mst 1 priority 61440

17.19 spanning-tree mst instance <1-15> vlan VLANLIST

Syntax	spanning-tree mst instance <1-15> vlan VLANLIST
Parameters	<1-15> MST Instance ID
	VLANLIST VLAN ID <1-3000> list
Command Mode	Global configuration mode
No/clear	no spanning-tree mst instance <1-15>
Show	show spanning-tree mst configuration
Default	
Description	To set the VLAN and instance mapping relationship of MSTP
Result	ASUS(config)# spanning-tree mst instance 2 vlan 3-100

17.20 spanning-tree mst max-hops [1-40]

Syntax	spanning-tree mst max-hops [1-40]
Parameters	<1-40> Number of hops in a MST region

Command Mode	Global configuration mode
No/clear	no spanning-tree mst max-hops
Show	show running-config
Default	The default is 20.
Description	To set the max passed hop count of MSTP BPDU
Examples	ASUS(config)# spanning-tree mst max-hops 30

17.21 spanning-tree mst name NAME

Syntax	Spanning-tree mst name NAME
Parameters	NAME MST configuration name
Command Mode	Global configuration mode
No/clear	no spanning-tree mst name
Show	show running-config
Default	
Description	To set the name of the MSTP Region
Examples	ASUS(config)# spanning-tree mst name abcd

17.22 spanning-tree mst revision <0-65535>

Syntax	Spanning-tree mst revision <0-65535>
Parameters	<0-65535> Revision number
Command Mode	Global configuration mode
No/clear	no spanning-tree mst revision
Show	show running-config
Default	
Description	To set MSTP Region revision number
Result	ASUS(config)# spanning-tree mst revision 20

17.23 spanning-tree port-priority <0-240>

Syntax	spanning-tree port-priority <0-240>

Parameters	port-priority the port priority
	<0-240> Priority value, in steps of 16
Command Mode	Interface configuration mode
No/clear	no spanning-tree port-priority
Show	show spanning-tree interface [IFNAME]
Default	The default is 128
Description	Use the spanning-tree port-priority configuration command on the switch stack or standalone switch to set the spanning-tree the port priority between 0 and 240.
Example	ASUS(config-if)# spanning-tree port-priority 64

17.24 spanning-tree priority <0-61440>

Syntax	spanning-tree priority <0-61440>
Parameters	priority STP bridge priority
	<0-61440> valid range is 0 to 61440 in increments of 4096
Command Mode	Global configuration mode
No/clear	no spanning-tree priority
Show	show spanning-tree summary
Default	The default is 32768
Description	Use the spanning-tree priority configuration command on the switch stack or standalone switch to set the spanning-tree bridge priority.
Example	ASUS(config)# spanning-tree priority 61440

17.25 spanning-tree transmission-limit <1-10>

Syntax	spanning-tree transmission-limit <1-10>
Parameters	transmission-limit the minimum interval between the transmission of BPDUs
	<1-10> BPDU transmission limit, in seconds
Command Mode	Global configuration mode
No/clear	no spanning-tree transmission-limit

Show	show spanning-tree summary
Default	The default is 3 seconds.
Description	Use the spanning-tree transmission-limit configuration command on the switch stack or standalone switch to set the spanning-tree transmission of consecutive spanning-tree BPDUs
Example	ASUS(config)# spanning-tree transmission-limit 10

17.26 spanning-tree uplink-fast

Syntax	spanning-tree uplink-fast
Parameters	
Command Mode	Global configuration mode
No/clear	no spanning-tree uplink-fast
Show	show spanning-tree summary
Default	Not enable
Description	Accelerate the root port transitions to the forwarding state
Example	ASUS(config)# spanning-tree uplink-fast

18 Port based Network Access Control Configuration:

18.1 dot1x guest-vlan <1-3000>

Syntax	dot1x guest-vlan <1-3000>
Parameters	<1-3000> valid vlan-id range is from 1 to 3000
Command Mode	Interface configuration mode
No/clear	no dot1x guest-vlan
Show	show dot1x / show dot1x interface IFNAME
Default	No default guest vlan
Description	Use the dot1x guest-vlan interface configuration command on the switch stack or on a standalone switch to specify an active VLAN as an 802.1X guest VLAN. Use the no form of this command to return to the default setting.
Example	ASUS(config)# interface gi1/0/1 ASUS(config-if)# dot1x guest-vlan 2

18.2 dot1x port-control (auto| force-authorized| force-unauthorized)

Syntax	dot1x port-control (autol force-authorizedl force-unauthorized)
Parameters	auto Enables 802.1x port-based authentication and causes the port to begin in the unauthorized state, allowing only EAPOL frames to be sent and received through the port force-authorized Disables 802.1x port-based authentication and causes the port to transition to the authorized state without any authentication exchange required force-unauthorized Causes the port to remain in the unauthorized state, ignoring all attempts by the client to authenticate

Command Mode	Interface configuration mode
No/clear	no dot1x port-control
Show	show dot1x / show dot1x interface IFNAME
Default	The default is ForceAuthorized
Description	Use the dot1x port-control interface configuration command on the switch stack or on a standalone switch to enable manual control of the authorization state of the port. Use the no form of this command to return to the default setting.
Example	ASUS(config)# interface gi1/0/1
	ASUS(config-if)# dot1x port-control auto

18.3 dot1x radius server A.B.C.D KEY [PORT]

Syntax	dot1x radius server A.B.C.D KEY [PORT]
Parameters	A.B.C.D IP address
	KEY RADIUS key
	[PORT] RADIUS port
Command Mode	Global configuration mode
No/clear	
Show	show dot1x radius / show running-config
Default	
Description	This command sets the radius server IP, radius key, and radius port for 802.1X configuration.
Example	ASUS(config)# dot1x radius server 192.192.1.1 testing 1812

18.4 dot1x radius secondary-server A.B.C.D KEY [PORT]

Syntax	dot1x radius secondary-server A.B.C.D KEY [PORT]
Parameters	A.B.C.D IP address
	KEY RADIUS key
	[PORT] RADIUS port

Command Mode	Global configuration mode
No/clear	
Show	show dot1x radius / show running-config
Default	
Description	This command sets the secondary radius server IP, radius key, and radius port for 802.1X configuration.
Example	ASUS(config)# dot1x radius secondary-server 192.192.1.2 testing 1812

18.5 dot1x re-authenticate interface IFNAME

Syntax	dot1x re-authenticate interface IFNAME
Parameters	IFNAME interface's name
Command Mode	Global configuration mode
No/clear	
Show	show dot1x interface IFNAME
Default	
Description	Use the dot1x re-authenticate interface configuration command on the switch stack or on a standalone switch to manually initiate a re-authentication of all 802.1X-enabled ports or the specified 802.1X-enabled port.
Example	ASUS(config)# dot1x re-authenticate interface gi1/0/1

18.6 dot1x reauthentication

Syntax	dot1x reauthentication
Parameters	reauthentication periodic reauthentication of the client
Command Mode	Interface configuration mode
No/clear	no dot1x reauthentication
Show	show dot1x / show dot1x interface IFNAME
Default	The default is disable
Description	Use the dot1x reauthentication interface configuration command on the switch stack or on a standalone switch to enable periodic re-authentication of the client. Use the no form of this command

	to return to the default setting.
Example	ASUS(config-if)# dot1x reauthentication

18.7 dot1x system-auth-control

Syntax	dot1x system-auth-control
Parameters	system-auth-control enabled 802.1X globally
Command Mode	Global configuration mode
No/clear	no dot1x system-auth-control
Show	show dot1x / show running-config
Default	The default is global disable
Description	Use the dot1x system-auth-control global configuration command on the switch stack or on a standalone switch to globally enable 802.1X. Use the no form of this command to return to the default setting.
Example	ASUS(config)# dot1x system-auth-control

18.8 dot1x timeout (reauth-period| quiet-period| server-timeout) TIMEVALUE

Syntax	dot1x timeout (reauth-periodl quiet-periodl server-timeout) TIMEVALUE
Parameters	reauth-period the period between re-authentication attempts quiet-period the time to retain in quiet state after authentication failure server-timeout the time to wait for an authentication server response TIMEVALUE: 1~65535 seconds
Command Mode	Interface configuration mode
No/clear	no dot1x timeout (quiet-periodl reauth-periodl server-timeout)
Show	show dot1x / show dot1x interface IFNAME
Default	reauth-period: 3600 seconds

	quiet-period: 60 seconds
	server-timeout: 20 seconds
Description	This command sets the dot1x reauthentication timer.
Example	ASUS(config-if)# dot1x timeout reauth-period 3600

18.9 dot1x host-mode (multi-host\| single-host)

Syntax	dot1x host-mode (multi-hostl single-host)
Parameters	multi-host Enable multiple-hosts mode on the switch
	single-host Enable single-host mode on the switch
Command Mode	Interface configuration mode
No/clear	no dot1x host-mode
Show	show dot1x / show dot1x interface IFNAME
Default	single-host
Description	Allow multiple hosts (clients) on an 802.1X-authorized port.
Example	ASUS(config-if)# dot1x host-mode multi-host

18.10 dot1x authentic-method (local | radius)

Syntax	dot1x authentic-method (local l radius)
Parameters	local Use the local username database for authentication
	radius Use the Remote Authentication Dial-In User Service (RADIUS) servers for authentication
Command Mode	Global configuration mode
No/clear	no dot1x authentic-method
Show	show dot1x authentic_method
Default	radius
Description	Specify the authentic method for dot1x.
Example	ASUS(config)# dot1x authentic-method radius

18.11 dot1x user USERNAME PASSWORD <1-3000>

Syntax	dot1x user USERNAME PASSWORD <1-3000>
Parameters	USERNAME User Name
	PASSWORD User Password
	<1-3000> VLAN ID
Command Mode	Global configuration mode
No/clear	no dot1x user USERNAME
Show	show dot1x user
Default	
Description	Add user into local database.
Example	ASUS(config)# dot1x user test testing123 10

18.12 show dot1x

Syntax	show dot1x
Parameters	dot1x Get IEEE 802.1x information
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show dot1x privileged EXEC command to display 802.1X system status, and authentic method.
Example	ASUS# show dot1x

18.13 show dot1x interface IFNAME

Syntax	show dot1x interface IFNAME
Parameters	[IFNAME] Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	

Default	
Description	Display the 802.1X status for the specified interface.
Example	ASUS# show dot1x interface gi1/0/1

18.14 show dot1x radius

Syntax	show dot1x radius
Parameters	radius Remote Access Dial-In User Service
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show dot1x radius privileged EXEC command to display 802.1X Remote Access Dial-In User Service configurations.
Example	ASUS# show dot1x radius

18.15 show dot1x user

Syntax	show dot1x user
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Use the show dot1x username privileged EXEC command to display the username in local database.
Example	ASUS# show dot1x user

19 Port Security Configuration:

19.1 show port-security

Syntax	show port-security
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show port-security status of all interfaces.
Examples	ASUS# show port-security

19.2 show port-security address [IFNAME]

Syntax	show port-security address [IFNAME]
Parameters	[IFNAME] Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show secure addresses learned by port security.
Examples	ASUS# show port-security address gi1/0/1

19.3 show port-security interface IFNAME

Syntax	show port-security interface IFNAME
Parameters	IFNAME Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	

Default	
Description	To show port-security status for the specified interface.
Examples	ASUS# show port-security interface gi1/0/1

19.4 switchport port-security

Syntax	switchport port-security
Parameters	
Command Mode	Interface configuration mode
No/clear	no switchport port-security
Show	show port-security [IFNAME]
Default	Not enable port security
Description	To enable port-security of the interface.
Examples	ASUS(config-if)# switchport port-security

19.5 switchport port-security aging-time <0-1440>

Syntax	switchport port-security aging-time <0-1440>	
Parameters	aging-time	Age time of port security learnt addresses
	<0-1440>	Minutes (0 means disabled)
Command Mode	Interface configuration mode	
No/clear	no switchport port-security aging-time	
Show	show port-security [IFNAME]	
Default	The default is 0, not aging.	
Description	To enable port-security aging and set age time of the interface.	
Examples	ASUS(config-if)# switchport port-security aging-time 5	

19.6 switchport port-security aging-type (absolute|inactivity)

Syntax	switchport port-security aging-type (absolutelinactivity)	
Parameters	Absolute	Absolute aging (default)

	Inactivity Aging based on inactivity time period
Command Mode	Interface configuration mode
No/clear	no switchport port-security aging-type
Show	show port-security [IFNAME]
Default	absolute
Description	To select port-security aging type of the interface.
Examples	ASUS(config-if)# switchport port-security aging-type inactivity

19.7 switchport port-security mac-address MACADDR

Syntax	switchport port-security mac-address MACADDR
Parameters	MACADDR MAC address
Command Mode	Interface configuration mode
No/clear	no switchport port-security mac-address MACADDR
Show	show port-security address [IFNAME]
Default	
Description	To configure secure MAC address of the interface.
Examples	ASUS(config-if)# switchport port-security mac-address 0011.2222.3344

19.8 switchport port-security maximun <1-256>

Syntax	switchport port-security maximun <1-256>
Parameters	<1-256> Number of addresses (default is 1).
Command Mode	Interface configuration mode
No/clear	no switchport port-security switchport port-security maximun
Show	show port-security [IFNAME]
Default	Default is 1
Description	To configure maximun secure MAC addresses of the interface.
Examples	ASUS(config-if)# switchport port-security maximum 5

19.9 switchport port-security reup

Syntax	switchport port-security reup
Parameters	
Command Mode	Interface configuration mode
No/clear	
Show	show port-security [IFNAME]
Default	
Description	To reup the interface when it was shutdown by port security
Examples	ASUS(config-if)# switchport port-security reup

19.10 switchport port-security shutdown <10-1440>

Syntax	switchport port-security shutdown <10-1440>
Parameters	<10-1440> Shutdown time, in minutes
Command Mode	Interface configuration mode
No/clear	no switchport port-security shutdown
Show	show port-security [IFNAME]
Default	Shutdown until re-up
Description	To configure maximum shutdown time for the interface
Examples	ASUS(config-if)# switchport port-security shutdown 30

19.11 switchport port-security violation (protect|restrict|shutdown)

Syntax	switchport port-security violation (protectl restrictl shutdown)
Parameters	protect Protect mode, drop packets when security violation occurs
	restrict Restrict mode, notify user when security violation occurs
	shutdown Shutdown mode, shutdown this port when security violation occurs (default)

Command Mode	Interface configuration mode
No/clear	no switchport port-security violation
Show	show port-security [IFNAME]
Default	Shutdown mode
Description	To configure port security violation mode when violation occurs.
Examples	ASUS(config-if)# switchport port-security violation restrict

20 SNMP Configuration:

20.1 rmon alarm <1-65536> OID <1-4294967295> (absolute|delta) rising-threshold VALUE falling-threshold VALUE [OWNER]

Syntax	rmon alarm <1-65536> OID <1-4294967295> (absoluteIdelta) rising-threshold VALUE falling-threshold VALUE [OWNER]
Parameters	<1-65536> Specify the alarm number
	OID The MIB object, 1.3.6.1.2.1.16.1.1.1.5.1 for etherStatsPkts of port 1
	<1-4294967295> The time interval of alarm monitor, in seconds
	absolute To test each MIB variable directly
	delta To test the change between samples of a MIB variable
	VALUE The rising threshold value, the range is -2147483648 to 2147483647
	VALUE The falling threshold value, the range is -2147483648 to 2147483647
	[OWNER] Specify the owner of this RMON alarm
Command Mode	Global configuration mode
No/clear	no rmon alarm <1-65536>
Show	show rmon alarms
Default	
Description	To add rmon alarm entry
Examples	ASUS(config)# rmon alarm 33 1.3.6.1.2.1.16.1.1.1.5.1 10 delta rising-threshold 10000 falling-threshold 1000 tester

20.2 rmon alarm <1-65536> OID <1-4294967295> (absolute|delta) rising-threshold VALUE falling-threshold VALUE <1-65535> [OWNER]

Syntax	rmon alarm <1-65536> OID <1-4294967295> (absoluteIdelta)

	rising-threshold VALUE falling-threshold VALUE <1-65535> [OWNER]
Parameters	<1-65536> Specify the alarm number
	OID The MIB object, 1.3.6.1.2.1.16.1.1.1.5.1 for etherStatsPkts of port 1
	<1-4294967295> The time interval of alarm monitor, in seconds
	absolute To test each MIB variable directly
	delta To test the change between samples of a MIB variable
	VALUE The rising threshold value, the range is -2147483648 to 2147483647
	VALUE The falling threshold value, the range is -2147483648 to 2147483647
	<1-65535> Specify the RMON event to trigger when falling threshold exceeds
	[OWNER] Specify the owner of this RMON alarm
Command Mode	Global configuration mode
No/clear	no rmon alarm <1-65536>
Show	show rmon alarms
Default	
Description	To add rmon alarm entry
Examples	ASUS(config)# rmon alarm 33 1.3.6.1.2.1.16.1.1.1.5.1 10 delta rising-threshold 10000 falling-threshold 1000 10 tester

20.3 rmon alarm <1-65536> OID <1-4294967295> (absolute|delta) rising-threshold VALUE <1-65535> falling-threshold VALUE [OWNER]

Syntax	rmon alarm <1-65536> OID <1-4294967295> (absoluteIdelta) rising-threshold VALUE <1-65535> falling-threshold VALUE [OWNER]
Parameters	<1-65536> Specify the alarm number
	OID The MIB object, 1.3.6.1.2.1.16.1.1.1.5.1 for etherStatsPkts of port 1

	<1-4294967295> The time interval of alarm monitor, in seconds absolute To test each MIB variable directly delta To test the change between samples of a MIB variable VALUE The rising threshold value, the range is -2147483648 to 2147483647 <1-65535> Specify the RMON event to trigger when rising threshold exceeds VALUE The falling threshold value, the range is -2147483648 to 2147483647 [OWNER] Specify the owner of this RMON alarm
Command Mode	Global configuration mode
No/clear	no rmon alarm <1-65536>
Show	show rmon alarms
Default	
Description	To add rmon alarm entry
Examples	ASUS(config)# rmon alarm 33 1.3.6.1.2.1.16.1.1.1.5.1 10 delta rising-threshold 10000 10 falling-threshold 1000 testers

20.4 rmon alarm <1-65536> OID <1-4294967295> (absolute|delta) rising-threshold VALUE <1-65535> falling-threshold VALUE <1-65535> [OWNER]

Syntax	rmon alarm <1-65536> OID <1-4294967295> (absoluteldelta) rising-threshold VALUE <1-65535> falling-threshold VALUE <1-65535> [OWNER]
Parameters	<1-65536> Specify the alarm number OID The MIB object, 1.3.6.1.2.1.16.1.1.1.5.1 for etherStatsPkts of port 1 <1-4294967295> The time interval of alarm monitor, in seconds absolute To test each MIB variable directly delta To test the change between samples of a MIB variable

	VALUE The rising threshold value, the range is -2147483648 to 2147483647
	<1-65535> Specify the RMON event to trigger when rising threshold exceeds
	VALUE The falling threshold value, the range is -2147483648 to 2147483647
	<1-65535> Specify the RMON event to trigger when falling threshold exceeds
	[OWNER] Specify the owner of this RMON alarm
Command Mode	Global configuration mode
No/clear	no rmon alarm <1-65536>
Show	show rmon alarms
Default	
Description	To add rmon alarm entry
Examples	ASUS(config)# rmon alarm 33 1.3.6.1.2.1.16.1.1.1.5.1 10 delta rising-threshold 10000 10 falling-threshold 1000 20 tester

20.5 rmon event <1-65536> description NAME [OWNER]

Syntax	rmon event <1-65536> description NAME [OWNER]
Parameters	<1-65536> Specify the event number
	NAME The description string
	[OWNER] Specify the owner of this RMON event
Command Mode	Global configuration mode
No/clear	no rmon evnet <1-65536>
Show	show rmon events
Default	
Description	To add RMON event entry
Examples	ASUS(config)# rmon event 20 description falling-threshold tester

20.6 rmon event <1-65536> description NAME log [OWNER]

Syntax	rmon event <1-65536> description NAME log [OWNER]
Parameters	<1-65536> Specify the event number
	NAME The description string
	log Generate an RMON log when the event is triggered
	[OWNER] Specify the owner of this RMON event
Command Mode	Global configuration mode
No/clear	no rmon evnet <1-65536>
Show	show rmon events
Default	
Description	To add RMON event entry
Examples	ASUS(config)# rmon event 20 description falling-threshold log tester

20.7 rmon event <1-65536> description NAME trap COMMUNITY [OWNER]

Syntax	rmon event <1-65536> description NAME trap COMMUNITY [OWNER]
Parameters	<1-65536> Specify the event number
	NAME The description string
	trap Generate an SNMP trap when the event is triggered
	COMMUNITY The SNMP community string
	[OWNER] Specify the owner of this RMON event
Command Mode	Global configuration mode
No/clear	no rmon evnet <1-65536>
Show	show rmon events
Default	
Description	To add RMON event entry

Examples	ASUS(config)# rmon event 20 description falling-threshold trap public tester

20.8 rmon event <1-65536> description NAME log trap COMMUNITY [OWNER]

Syntax	rmon event <1-65536> description NAME trap COMMUNITY [OWNER]
Parameters	<1-65536> Specify the event number
	NAME The description string
	log Generate an RMON log when the event is triggered
	trap Generate an SNMP trap when the event is triggered
	COMMUNITY The SNMP community string
	[OWNER] Specify the owner of this RMON event
Command Mode	Global configuration mode
No/clear	no rmon evnet <1-65536>
Show	show rmon events
Default	
Description	To add RMON event entry
Examples	ASUS(config)# rmon event 20 description falling-threshold log trap public tester

20.9 rmon history <1-65536> IFNAME [OWNER]

Syntax	rmon history <1-65536> IFNAME [OWNER]
Parameters	<1-65536> Specify the RMON group of statistics
	IFNAME Interface name
	[OWNER] Specify the owner of this RMON history group
Command Mode	Global configuration mode
No/clear	no rmon history <1-65536>
Show	show rmon history
Default	

Description	To add RMON history entry
Examples	ASUS(config)# rmon history 20 gi1/0/1 tester

20.10 rmon history <1-65536> IFNAME buckets <1-100> [OWNER]

Syntax	rmon history <1-65536> IFNAME buckets <1-100> [OWNER]
Parameters	<1-65536> Specify the RMON group of statistics
	IFNAME Interface name
	buckets Specify the maximum number of buckets for RMON history
	<1-100> The bucket request number, default is 50
	[OWNER] Specify the owner of this RMON history group
Command Mode	Global configuration mode
No/clear	no rmon history <1-65536>
Show	show rmon history
Default	
Description	To add RMON history entry
Examples	ASUS(config)# rmon history 20 gi1/0/1 buckets 30 tester

20.11 rmon history <1-65536> IFNAME interval <1-4294967295> [OWNER]

Syntax	rmon history <1-65536> IFNAME interval <1-4294967295> [OWNER]
Parameters	<1-65536> Specify the RMON group of statistics
	IFNAME Interface name
	interval Specify the time period of polling interval
	<1-4294967295> The polling interval, in seconds
	[OWNER] Specify the owner of this RMON history group
Command Mode	Global configuration mode
No/clear	no rmon history <1-65536>

Show	show rmon history
Default	
Description	To add RMON history entry
Examples	ASUS(config)# rmon history 20 gi1/0/1 interval 30 tester

20.12 rmon history <1-65536> IFNAME buckets <1-100> interval <1-4294967295> [OWNER]

Syntax	rmon history <1-65536> IFNAME buckets <1-100> interval <1-4294967295> [OWNER]
Parameters	<1-65536> Specify the RMON group of statistics IFNAME Interface name buckets Specify the maximum number of buckets for RMON history <1-100> The bucket request number, default is 50 interval Specify the time period of polling interval <1-4294967295> The polling interval, in seconds [OWNER] Specify the owner of this RMON history group
Command Mode	Global configuration mode
No/clear	no rmon history <1-65536>
Show	show rmon history
Default	
Description	To add RMON history entry
Examples	ASUS(config)# rmon history 20 gi1/0/1 buckets 30 interval 30 tester

20.13 show rmon alarms

Syntax	show rmon alarms
Parameters	
Command Mode	Privileged EXEC mode
No/clear	

Show	
Default	
Description	Displays the RMON alarm table
Examples	ASUS# show rmon alarms

20.14 show rmon events

Syntax	show rmon alarms
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Displays the RMON event table
Examples	ASUS# show rmon events

20.15 show rmon history

Syntax	show rmon history
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	Displays the RMON history table
Examples	ASUS# show rmon history

20.16 show rmon statistics [IFNAME]

Syntax	show rmon statistics [IFNAME]
Parameters	rmon Remote monitoring statistics the contents of the switch's RMON statistics table

	[IFNAME] Interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show rmon statistics IFNAME status.
Examples	ASUS# show rmon statistics gi1/0/1

20.17 show snmp-server community

Syntax	show snmp-server community
Parameters	community SNMP server community
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display snmp-server community.
Examples	ASUS# show snmp-server community

20.18 show snmp-server community network

Syntax	show snmp-server community network	
Parameters	community	SNMP server community
	network	the network bind to this community
Command Mode	Privileged EXEC mode	
No/clear		
Show		
Default		
Description	To display the relationship of snmp-server community and network.	
Examples	ASUS# show snmp-server community network	

20.19 show snmp-server contact

Syntax	show snmp-server contact
Parameters	contact show the system contact string
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display snmp-server contact information.
Examples	ASUS# show snmp-server contact

20.20 show snmp-server group

Syntax	show snmp-server group
Parameters	group Show SNMPv3 groups
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display SNMPv3 groups
Examples	ASUS# show snmp-server group

20.21 show snmp-server host

Syntax	show snmp-server host
Parameters	host the recipient (host) of a SNMP notification operation
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display snmp-server host information.
Examples	ASUS# show snmp-server host

20.22 show snmp-server location

Syntax	show snmp-server location
Parameters	location show the system location string
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display snmp-server location information.
Examples	ASUS# show snmp-server location

20.23 show snmp-server trap community

Syntax	show snmp-server trap community
Parameters	community SNMP server community
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display snmp-server trap community.
Examples	ASUS# show snmp-server trap community

20.24 show snmp-server user

Syntax	show snmp-server user
Parameters	user Show SNMPv3 users
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display SNMPv3 users
Examples	ASUS# show snmp-server user

20.25 show snmp-server view

Syntax	show snmp-server view
Parameters	view Show the view name which is used to reference the record
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display the view name used to reference the record.
Examples	ASUS# show snmp-server view

20.26 snmp-server community WORD (ro|rw) network A.B.C.D/MASK

Syntax	snmp-server community WORD (rolrw) network A.B.C.D/MASK
Parameters	community SNMP server community WORD create a new community string (max 30 characters), a unique SNMP community string that acts like a password and permits access to the SNMP protocol ro the relationship between the SNMP manager and the agent, ro->read-only rw the relationship between the SNMP manager and the agent, rw->read-write network the network that allowed to access this community ADDRESS the network that permit SNMP client to access (e.g. A.B.C.D/NETMASK)
Command Mode	Global configuration mode
No/clear	no snmp-server community WORD (rolrw) network ADDRESS
Show	show snmp-server community
Default	Public, and the network is 0.0.0.0/0
Description	This command creates a new community string (max 30 characters).

Examples	ASUS(config)# snmp-server community public rw network 192.192.1.1/24

20.27 snmp-server community trap WORD

Syntax	snmp-server community trap WORD
Parameters	community SNMP server community trap SNMP Trap default community WORD a unique SNMP community string (max 30 characters) that acts like a pass word and permits access to the SNMP protocol
Command Mode	Global configuration mode
No/clear	no snmp-server trap community
Show	show snmp-server trap community
Default Public	
Description	This command sets the trap community string for SNMP protocol.
Examples	ASUS(config)# snmp-server community trap public

20.28 snmp-server contact STRING

Syntax	snmp-server contact DWORD
Parameters	contact the system contact string STRING describes the system contact information
Command Mode	Global configuration mode
No/clear	no snmp-server contact
Show	show snmp-server contact
Default	
Description	This command sets the SNMP contact information
Examples	ASUS(config)# snmp-server contact tsd@asus.com

20.29 snmp-server group WORD v3 WORD

Syntax	snmp-server group WORD v3 WORD
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group
	WORD The name of the group
	v3 Using the SNMPv3 for security mode
	WORD The name of the user who mapping to the group
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default	None
Description	Create a new SNMP group, that maps SNMP users to SNMP group
Examples	ASUS(config)# snmp-server group g1 v3 test

20.30 snmp-server group WORD v3 auth

Syntax	snmp-server group WORD v3 auth
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group
	WORD The name of the group
	v3 Using the SNMPv3 for security mode
	auth Specifies authentication of a packet without encrypting it
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default None	
Description	Create a new SNMP group and enable authentication
Examples	ASUS(config)# snmp-server group g1 v3 auth

20.31 snmp-server group WORD v3 auth read WORD

Syntax	snmp-server group WORD v3 auth read WORD
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group
	WORD The name of the group
	v3 Using the SNMPv3 for security mode
	auth Specifies authentication of a packet without encrypting it
	read The option that allows you to specify a read view (default sysView)
	WORD A string that he name of the view that enables you only to view the contents of the agent
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauthlauthlpriv)
Show	show snmp-server group
Default	None
Description	Create a new SNMP group and enable authentication.
Examples	ASUS(config)# snmp-server group g1 v3 auth read r1

20.32 snmp-server group WORD v3 auth read WORD write WORD

Syntax	snmp-server group WORD v3 auth read WORD write WORD
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group
	WORD The name of the group
	v3 Using the SNMPv3 for security mode
	auth Specifies authentication of a packet without encrypting it
	read The option that allows you to specify a read view (default sysView)
	WORD A string that he name of the view that enables you only to view the contents of the agent

	write The option that allows you to specify a write view (default none)
	WORD A string that is the name of the view that enables you to enter and configure the contents of the agent
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default None	
Description	Create a new SNMP group and enable authentication.
Examples	ASUS(config)# snmp-server group g1 v3 auth read r1 write w1

20.33 snmp-server group WORD v3 auth read WORD write WORD notify WORD

Syntax	snmp-server group WORD v3 auth read WORD write WORD notify WORD
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group
	WORD The name of the group
	v3 Using the SNMPv3 for security mode
	auth Specifies authentication of a packet without encrypting it
	read The option that allows you to specify a read view (default sysView)
	WORD A string that he name of the view that enables you only to view the contents of the agent
	write The option that allows you to specify a write view (default none)
	WORD A string that is the name of the view that enables you to enter and configure the contents of the agent
	notify The option that allows you to specify a notify view (default none)
	WORD A string that is the name of the view that enables you to specify a notify, inform, or trap
Command Mode	Global configuration mode

No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default	None
Description	Create a new SNMP group and enable authentication.
Examples	ASUS(config)# snmp-server group g1 v3 auth read r1 write w1 notify n1

20.34 snmp-server group WORD v3 noauth

Syntax	snmp-server group WORD v3 noauth
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group WORD The name of the group v3 Using the SNMPv3 for security mode noauth Specifies no authentication of a packet
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default	None
Description	Create a new SNMP group without authentication.
Examples	ASUS(config)# snmp-server group g1 v3 noauth

20.35 snmp-server group WORD v3 noauth read WORD

Syntax	snmp-server group WORD v3 noauth read WORD
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group WORD The name of the group v3 Using the SNMPv3 for security mode noauth Specifies no authentication of a packet read The option that allows you to specify a read view (default

	sysView) WORD A string that he name of the view that enables you only to view the contents of the agent
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default	None
Description	Create a new SNMP group without authentication.
Examples	ASUS(config)# snmp-server group g1 v3 noauth read r1

20.36 snmp-server group WORD v3 noauth read WORD write WORD

Syntax	snmp-server group WORD v3 noauth read WORD write WORD
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group WORD The name of the group v3 Using the SNMPv3 for security mode noauth Specifies no authentication of a packet read The option that allows you to specify a read view (default sysView) WORD A string that he name of the view that enables you only to view the contents of the agent write The option that allows you to specify a write view (default none) WORD A string that is the name of the view that enables you to enter and configure the contents of the agent
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default	None
Description	Create a new SNMP group without authentication.

Examples	ASUS(config)# snmp-server group g1 v3 noauth read r1 write w1

20.37 snmp-server group WORD v3 noauth read WORD write WORD notify WORD

Syntax	snmp-server group WORD v3 noauth read WORD write WORD notify WORD
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group WORD The name of the group v3 Using the SNMPv3 for security mode noauth Specifies no authentication of a packet read The option that allows you to specify a read view (default sysView) WORD A string that he name of the view that enables you only to view the contents of the agent write The option that allows you to specify a write view (default none) WORD A string that is the name of the view that enables you to enter and configure the contents of the agent notify The option that allows you to specify a notify view (default none) WORD A string that is the name of the view that enables you to specify a notify, inform, or trap
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default	None
Description	Create a new SNMP group without authentication.
Examples	ASUS(config)# snmp-server group g1 v3 noauth read r1 write w1 notify n1

20.38 snmp-server group WORD v3 priv

Syntax	snmp-server group WORD v3 priv
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group WORD The name of the group v3 Using the SNMPv3 for security mode priv Specifies authentication of a packet with encryption
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default	None
Description	Create a new SNMP group and specifies authentication of a packet with encryption
Examples	ASUS(config)# snmp-server group g1 v3 priv

20.39 snmp-server group WORD v3 priv read WORD

Syntax	snmp-server group WORD v3 priv read WORD
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group WORD The name of the group v3 Using the SNMPv3 for security mode priv Specifies authentication of a packet with encryption read The option that allows you to specify a read view (default sysView) WORD A string that he name of the view that enables you only to view the contents of the agent
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group

Default	None
Description	Create a new SNMP group and specifies authentication of a packet with encryption
Examples	ASUS(config)# snmp-server group g1 v3 priv read r1

20.40 snmp-server group WORD v3 priv read WORD write WORD

Syntax	snmp-server group WORD v3 priv read WORD write WORD
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group WORD The name of the group v3 Using the SNMPv3 for security mode priv Specifies authentication of a packet with encryption read The option that allows you to specify a read view (default sysView) WORD A string that he name of the view that enables you only to view the contents of the agent write The option that allows you to specify a write view (default none) WORD A string that is the name of the view that enables you to enter and configure the contents of the agent
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default	None
Description	Create a new SNMP group and specifies authentication of a packet with encryption
Examples	ASUS(config)# snmp-server group g1 v3 priv read r1 write w1

20.41 snmp-server group WORD v3 priv read WORD write WORD notify WORD

Syntax	snmp-server group WORD v3 priv read WORD write WORD notify WORD
Parameters	group Configure a new SNMP group, that maps SNMP users to SNMP group
	WORD The name of the group
	v3 Using the SNMPv3 for security mode
	priv Specifies authentication of a packet with encryption
	read The option that allows you to specify a read view (default sysView)
	WORD A string that he name of the view that enables you only to view the contents of the agent
	write The option that allows you to specify a write view (default none)
	WORD A string that is the name of the view that enables you to enter and configure the contents of the agent
	notify The option that allows you to specify a notify view (default none)
	WORD A string that is the name of the view that enables you to specify a notify, inform, or trap
Command Mode	Global configuration mode
No/clear	no snmp-server group WORD v3 (noauth|auth|priv)
Show	show snmp-server group
Default	None
Description	Create a new SNMP group and specifies authentication of a packet with encryption
Examples	ASUS(config)# snmp-server group g1 v3 priv read r1 write w1 notify n1

20.42 snmp-server host A.B.C.D

Syntax	snmp-server host A.B.C.D

Parameters	host the recipient (host) of a SNMP notification operation
	A.B.C.D IP address
Command Mode	Global configuration mode
No/clear	no snmp-server host A.B.C.D
Show	show snmp-server host
Default	
Description	This command sets the host of a SNMP notification operation
Examples	ASUS(config)# snmp-server host 192.192.1.1

20.43 snmp-server host A.B.C.D version (1|2) [COMMUNITY]

Syntax	snmp-server host A.B.C.D version (1l2) [COMMUNITY]
Parameters	host the recipient (host) of a SNMP notification operation
	A.B.C.D IP address
	Version (1l2) snmp version1 or version2
	COMMUNITY trap community name
Command Mode	Global configuration mode
No/clear	no snmp-server host A.B.C.D
Show	show snmp-server host
Default	
Description	This command sets the host of a SNMP notification operation
Examples	ASUS(config)# snmp-server host 192.192.1.11 version 1 abcd

20.44 snmp-server location STRING

Syntax	snmp-server location DWORD
Parameters	location the system location string
	STRING describes the system location information

Command Mode	Global configuration mode
No/clear	no snmp-server location
Show	show snmp-server location
Default	
Description	This command sets the SNMP location string.
Examples	ASUS(config)# snmp-server location office

20.45 snmp-server user WORD WORD v3 auth (md5|sha) WORD

Syntax	snmp-server user WORD WORD v3 auth (md5lsha) WORD
Parameters	WORD Name of the user
	WORD Group to which the user belongs
	v3 User using the v3 security model
	auth Specifies authentication of a packet without encrypting it
	md5 Use HMAC MD5 algorithm for authentication
	sha Use HMAC SHA algorithm for authentication
	WORD Authentication pasword for user
Command Mode	Global configuration mode
No/clear	no snmp-server user WORD WORD v3
Show	show snmp-server user
Default	None
Description	Define a user who can access the SNMP engine and authentication information
Examples	ASUS(config)# snmp-server user test g1 v3 auth sha 12345678

20.46 snmp-server user WORD WORD v3 noauth

Syntax	snmp-server user WORD WORD v3 noauth
Parameters	WORD Name of the user
	WORD Group to which the user belongs

	v3 User using the v3 security model
	noauth Specifies no authentication of a packet
Command Mode	Global configuration mode
No/clear	no snmp-server user WORD WORD v3
Show	show snmp-server user
Default	None
Description	Define a user who can access the SNMP engine without authentication.
Examples	ASUS(config)# snmp-server user test g1 v3 noauth

20.47 snmp-server user WORD WORD v3 priv (md5|sha) WORD des WORD

Syntax	snmp-server user WORD WORD v3 priv (md5lsha) WORD des WORD
Parameters	WORD Name of the user
	WORD Group to which the user belongs
	v3 User using the v3 security model
	priv Specifies authentication of a packet with encryption
	md5 Use HMAC MD5 algorithm for authentication
	sha Use HMAC SHA algorithm for authentication
	WORD Authentication password for user
	des Use DES algorithm for encryption
	WORD Encryption password for user
Command Mode	Global configuration mode
No/clear	no snmp-server user WORD WORD v3
Show	show snmp-server user
Default	None
Description	Define a user who can access the SNMP engine
Examples	ASUS(config)# snmp-server user test g1 v3 priv sha 12345678 des 12345678

20.48 snmp-server view WORD WORD (included|excluded)

Syntax	snmp-server view WORD WORD (included|excluded)
Parameters	view Create a view entry
	WORD The view name is used to reference the record
	WORD To identify the subtree, specify a text string consisting of numbers, such as .1.3.6.2.4, or a word (default, .1)
	included Type of view
	excluded Type of view
Command Mode	Global configuration mode
No/clear	no snmp-server view WORD
Show	show snmp-server view
Default	None
Description	Create a view entry
Examples	ASUS(config)# snmp-server view v1 .1.3.6.2.4 include

21 NTP (Network Time Protocol) Configuration:

21.1 ntp sync IPADDR

Syntax	ntp sync IPADDR
Parameters	IPADDR NTP server IP address
Command Mode	Privileged EXEC mode
No/clear	
show	show clock
Default	
Description	Use the command to sync system time with specified NTP server.
Example	ASUS# ntp sync 220.130.158.52

21.2 ntp server IPADDR

Syntax	ntp server IPADDR
Parameters	IPADDR IP address
Command Mode	Global configuration mode
No/clear	no ntp server IPADDR
show	show ntp server
Default	
Description	Use the command to set an ntp server for system to sync time. The max number of configured ntp servers is 4.
Example	ASUS(config)# ntp server 220.130.158.52

21.3 ntp server IPADDR prefer

Syntax	ntp server IPADDR prefer
Parameters	IPADDR IP address

	prefer To make this server preferred synchronization
Command Mode	Global configuration mode
No/clear	no ntp server IPADDR
show	show ntp server
Default	
Description	Use the command to set a prefer ntp server for system to sync time.
Example	ASUS(config)# ntp server 220.130.158.52 prefer

21.4 ntp server IPADDR version <1-4>

Syntax	ntp server IPADDR version <1-4>
Parameters	IPADDR IP address
	version NTP version
	<1-4> NTP version number
Command Mode	Global configuration mode
No/clear	no ntp server IPADDR
show	show ntp server
Default	
Description	Use the command to set an ntp server and protocol version for system to sync time.
Example	ASUS(config)# ntp server 220.130.158.52 version 4

21.5 ntp server IPADDR version <1-4> prefer

Syntax	ntp server IPADDR version <1-4> prefer
Parameters	IPADDR IP address
	version NTP version
	<1-4> NTP version number
	prefer To make this server preferred synchronization
Command Mode	Global configuration mode
No/clear	no ntp server IPADDR

show	show ntp server
Default	
Description	Use the command to set a prefer ntp server and protocol version for system to sync time.
Example	ASUS(config)# ntp server 220.130.158.52 version 4 prefer

21.6 show ntp server

Syntax	show ntp server
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show the configuration and status of NTP servers.
Example	ASUS# show ntp server

22 IP Route Configuration:

22.1 ip forwarding

Syntax	ip forwarding
Parameters	forwarding Enable IP forwarding
Command Mode	Global configuration mode
No/clear	no ip forwarding
Show	show ip forwarding
Default	IP forwarding is default on
Description	This command will turn on IP forwarding function
Examples	ASUS(config)# ip forwarding

22.2 ip route A.B.C.D A.B.C.D (A.B.C.D|INTERFACE)

Syntax	ip route A.B.C.D A.B.C.D (A.B.C.DIINTERFACE)
Parameters	route Establish static routes
	A.B.C.D IP destination prefix
	A.B.C.D IP destination prefix mask
	A.B.C.D IP gateway address
	INTERFACE IP gateway interface name
Command Mode	Global configuration mode
No/clear	no ip route A.B.C.D A.B.C.D (A.B.C.DIINTERFACE)
Show	show ip route
	show running-config
Default	
Description	This command sets the static ip route in this system
Examples	ASUS(config)# ip route 192.192.5.0 255.255.255.0 vlan2
	ASUS(config)# ip route 192.192.5.0 255.255.255.0 192.192.1.254

22.3 ip route A.B.C.D A.B.C.D (A.B.C.D|INTERFACE) <1-255>

Syntax	ip route A.B.C.D A.B.C.D (A.B.C.DIINTERFACE) <1-255>	
Parameters	route	Establish static routes
	A.B.C.D	IP destination prefix
	.B.C.D	IP destination prefix mask
	A.B.C.D	IP gateway address
	INTERFACE	IP gateway interface name
	<1-255>	Distance value for this route
Command Mode	Global configuration mode	
No/clear	no ip route A.B.C.D A.B.C.D (A.B.C.DIINTERFACE)	
Show	show ip route show running-config	
Default	The default distance value is 1	
Description	This command sets the ip route in this system with distance value for this route.	
Examples	ASUS(config)# ip route 192.192.5.0 255.255.255.0 192.192.1.254 10	

22.4 ip route A.B.C.D/M (A.B.C.D|INTERFACE)

Syntax	ip route A.B.C.D/M (A.B.C.DIINTERFACE)	
Parameters	route	Establish static routes
	A.B.C.D/M	IP destination prefix (e.g. 10.0.0.0/8)
	A.B.C.D	IP gateway address
	INTERFACE	IP gateway interface name
Command Mode	Global configuration mode	
No/clear	no ip route A.B.C.D/M (A.B.C.DIINTERFACE)	
Show	show ip route show ip route A.B.C.D/M	

	show running-config
Default	
Description	This command sets the ip route in this system
Examples	ASUS(config)# ip route 192.192.5.0/24 192.192.1.254

22.5 ip route A.B.C.D/M (A.B.C.D|INTERFACE) <1-255>

Syntax	ip route A.B.C.D/M (A.B.C.DIINTERFACE) <1-255>
Parameters	route Establish static routes A.B.C.D/M IP destination prefix (e.g. 10.0.0.0/8) A.B.C.D IP gateway address INTERFACE IP gateway interface name <1-255> Distance value for this route
Command Mode	Global configuration mode
No/clear	no ip route A.B.C.D/M (A.B.C.DIINTERFACE)
Show	show ip route show ip route A.B.C.D/M show running-config
Default	The default distance value is 1
Description	This command sets the ip route in this system with distance value for this route
Examples	ASUS(config)# ip route 192.192.5.0/24 192.192.1.254 10

22.6 show ip route

Syntax	show ip route
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	

Default	
Description	To display routing information in system
Examples	ASUS# show ip route

22.7 show ip route A.B.C.D/M

Syntax	show ip route A.B.C.D/M
Parameters	A.B.C.D/M IP destination prefix (e.g.; 10.0.0.0/8)
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display the dedicated network routing information.
Examples	ASUS# show ip route

22.8 show ip route supernets-only

Syntax	show ip route supernets-only
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display system routing information with supernet entries only
Examples	ASUS# show ip route supernets-only

23 DHCP RELAY Configuration

23.1 ip helper-address A.B.C.D

Syntax	ip helper-address A.B.C.D
Parameters	A.B.C.D IP address of DHCP server
Command Mode	Interface configuration mode
No/clear	no ip helper-address A.B.C.D
Show	show running-config
Default	
Description	Start the function of DHCP relay. This function makes one DHCP server can be shared by several networks or VLANs. It allows user configure four different servers.
Examples	ASUS(config)# interface vlan1 ASUS(config-if)# ip helper-address 192.168.8.45

24 RIP related Configuration

24.1 default-information originate

Syntax	default-information originate
Parameters	originate Distribute a default route
Command Mode	Config-router mode
No/clear	no default-information originate
Show	show running-config
Default	Not enable
Description	Set RIP to distribute the default route of the system.
Examples	ASUS(config-router)# default-information originate

24.2 default-metric <1-16>

Syntax	default-metric <1-16>
Parameters	<1-16> Metric value
Command Mode	Config-router mode
No/clear	no default-metric
Show	show ip rip status
Default	RIP metric is a value for distance for the network. Usually RIP daemon increment the metric when the network information is received. Redistributed routes' metric is set to 1.
Description	This command modifies the default metric value for redistributed routes.
Examples	ASUS(config-router)# default-metric 2

24.3 distance <1-255>

Syntax	distance <1-255>
Parameters	<1-255> Distance value
Command Mode	Config-router mode

No/clear	no distance <1-255>
Show	show ip rip status
Default	Default RIP distance is 120.
Description	Set default RIP distance to specified value.
Examples	ASUS(config-router)# distance 100

24.4 distance <1-255> A.B.C.D/M

Syntax	distance <1-255> A.B.C.D/M
Parameters	<1-255> Distance value A.B.C.D/M IP source prefix
Command Mode	Config-router mode
No/clear	no distance <1-255> A.B.C.D/M
Show	show ip rip status
Default	Default RIP distance is 120.
Description	Set default RIP distance to specified value when the route's source IP address matches the specified prefix.
Examples	ASUS(config-router)# distance 100 10.0.0.5/24

24.5 ip rip authentication mode text

Syntax	ip rip authentication mode text
Parameters	
Command Mode	Interface configuration mode
No/clear	no ip rip authentication mode
Show	show running-config
Default	
Description	Set the interface with RIPv2 simple password authentication.
Examples	ASUS(config-if)# ip rip authentication mode text

24.6 ip rip authentication string LINE

Syntax	ip rip authentication string [STRING]
Parameters	LINE Authentication string
Command Mode	Interface configuration mode
No/clear	no ip rip authentication string
Show	show running-config
Default	None
Description	RIP version 2 has simple text authentication. This command sets authentication string. The string must be shorter than 16 characters.
Examples	ASUS(config-if)# ip rip authentication string 12345678

24.7 ip rip receive version (1\| 2\| 1 2)

Syntax	Ip rip receive version (1| 2| 1 2)
Parameters	(1| 2| 1 2) RIP version 1 or 2 or 1 & 2
Command Mode	Interface configuration mode
No/clear	no ip rip receive version
Show	show ip rip status
Default	The default is to receive both versions.
Description	Version setting for incoming RIP packets. This command will enable the selected interface to receive packets in RIP Version 1, RIP Version 2, or both.
Examples	ASUS(config-if)# ip rip receive version 1

24.8 ip rip send version (1\| 2\| 1 2)

Syntax	ip rip send version (1| 2| 1 2)
Parameters	(1| 2| 1 2) RIP version 1 or 2 or 1 & 2
Command Mode	Interface configuration mode
No/clear	no ip rip send version
Show	show ip rip status

Default	The default is to send only version 2.
Description	Version can be `1', `2', `1 2'. This configuration command overrides the router's rip version setting. The command will enable the selected interface to send packets with RIP Version 1, RIP Version 2, or both. In the case of '1 2', packets will be both broadcast and multicast.
Examples	ASUS(config-if)# ip rip send version 1

24.9 ip split-horizon [poisoned-reverse]

Syntax	ip split-horizon [poisoned-reverse]
Parameters	split-horizon to enable the function of split-horizon
	[poisoned-reverse] With poisoned-reverse
Command Mode	Interface configuration mode
No/clear	no ip split-horizon [poisoned-reverse]
Show	show running-config
Default	Enable split-horizon
Description	Control split-horizon on the interface. Default is ip split-horizon. If you don't perform split-horizon on the interface, please specify no ip split-horizon.
Examples	ASUS(config-if)# ip rip split-horizon poisoned-reverse

24.10 neighbor A.B.C.D

Syntax	neighbor A.B.C.D
Parameters	A.B.C.D Neighbor router address
Command Mode	Config-router mode
No/clear	no neighbor A.B.C.D
Show	show ip rip status
Default	
Description	Specify RIP neighbor. When a neighbor doesn't understand multicast, this command is used to specify neighbors. In some cases, not all routers will be able to understand multicasting, where packets are sent to a network or a group of addresses. In a situation where a neighbor cannot process multicast packets,

	it is necessary to establish a direct link between routers. The neighbor command allows the network administrator to specify a router as a RIP neighbor. The no neighbor A.B.C.D command will disable the RIP neighbor.
Examples	ASUS(config-router)# neighbor 10.1.1.1

24.11 network (A.B.C.D/M\| IFNAME)

Syntax	network (A.B.C.D/Ml IFNAME)
Parameters	A.B.C.D/M IP address/netmask
	IFNAME Interface name
Command Mode	Config-router mode
No/clear	no network (A.B.C.D/Ml IFNAME)
Show	show ip rip status
Default	
Description	Set the RIP enable interface by network or L3 interface name. The interfaces which have addresses matching with network or name are enabled.
Examples	ASUS(config-router)# network 10.1.1.0/24
	ASUS(config-router)# network vlan10

24.12 passive-interface (IFNAME\|default)

Syntax	passive-interface (IFNAMEldefault)
Parameters	IFNAME Interface name
	default default for all interfaces
Command Mode	Config-router mode
No/clear	no passive-interface (IFNAMEldefault)
Show	show ip rip status
Default	Not enable
Description	This command sets the specified interface to passive mode. On passive mode interface, all receiving packets are processed as normal and RIP daemon does not send either multicast or unicast RIP packets except to RIP neighbors specified with

	neighbor command.
Examples	ASUS(config-router)# passive-interface vlan3
	ASUS(config-router)# passive-interface default

24.13 redistribute (kernel| connected| static| ospf)

Syntax	redistribute (kernell connectedl staticl ospf)
Parameters	kernel Kernel routes
	connected Connected
	static Static routes
	ospf Open Shortest Path First (OSPF)
Command Mode	Config-router mode
No/clear	no redistribute (kernell connectedl staticl ospf)
Show	show ip rip status
Default	None
Description	This command redistributes routing information from kernel, connected, static or OSPF route entries into the RIP tables.
Examples	ASUS(config-router)# redistribute kernel

24.14 redistribute (kernel| connected| static| ospf) metric <0-16>

Syntax	redistribute (kernell connectedl staticl ospf) metric <0-16>
Parameters	<0-16> Metric value
Command Mode	Config-router mode
No/clear	no redistribute kernel metric <0-16>
Show	show running-config
Default	None
Description	This command redistributes routing information from kernel, connected, static or OSPF route entries with specified metric value into the RIP tables.
Examples	ASUS(config-router)# redistribute kernel metric 2

24.15 route A.B.C.D/M

Syntax	route A.B.C.D/M
Parameters	A.B.C.D/M IP address/netmask
Command Mode	Config-router mode
No/clear	no route A.B.C.D/M
Show	show ip rip
Default	
Description	To set a RIP static route.
Examples	ASUS(config-router)# route 192.192.3.0/24

24.16 router rip

Syntax	router rip
Parameters	
Command Mode	Global Configuration mode
No/clear	no router rip
Show	show ip rip status
Default	
Description	The router rip command is necessary to enable RIP. To disable RIP, use the no router rip command. RIP must be enabled before carrying out any of the RIP commands.
Examples	ASUS(config)# router rip

24.17 timers basic <5-2147483647> <5-2147483647> <5-2147483647>

Syntax	timers basic <5-2147483647> <5-2147483647> <5-2147483647>
Parameters	basic Basic routing protocol update timers
	<5-2147483647> Routing table update timer. Default is 30 second
	<5-2147483647> Routing information timeout timer. Default is

	180 second.
	<5-2147483647> Garbage collection timer. Default is 120 second.
Command Mode	Config-router mode
No/clear	no timers basic
Show	show ip rip status
Default	The default settings for the timers are as follows: The update timer is 30 seconds. Every update timer seconds, the RIP process is awakened to send an unsolicited Response message containing the complete routing table to all neighboring RIP routers. The timeout timer is 180 seconds. Upon expiration of the timeout, the route is no longer valid; however, it is retained in the routing table for a short time so that neighbors can be notified that the route has been dropped. The garbage collect timer is 120 seconds. Upon expiration of the garbage-collection timer, the route is finally removed from the routing table. The timers basic command allows the the default values of the timers listed above to be changed.
Description	RIP protocol has several timers. User can configure those timers' values by this command.
Examples	ASUS(config-router)# timer basic 15 90 60

24.18 version <1|2>

Syntax	version <1l2>
Parameters	<1l2> Set RIP process's version
Command Mode	Config-router mode
No/clear	no version
Show	show ip rip status
Default	Version 2
Description	RIP can be configured to process either Version 1 or Version 2 packets, the default mode is Version 2. If no version is specified, then the RIP daemon will default to Version 2. If RIP is set to Version 1, the setting "Version 1" will be displayed, but the setting

	"Version 2" will not be displayed whether or not Version 2 is set explicitly as the version of RIP being used. The version can be specified globally, and also on a per-interface basis (see below).
Examples	ASUS(config-router)# version 1

24.19 show ip rip

Syntax	show ip rip
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	The command displays all RIP routes. For routes that are received through RIP, this command will display the time the packet was sent and the tag information. This command will also display this information for routes redistributed into RIP.
Examples	ASUS# show ip rip

24.20 show ip rip status

Syntax	show ip rip status
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	The command displays current RIP status. It includes RIP timer, filtering, version, RIP enabled interface and RIP peer information.
Examples	ASUS# show ip rip status

25 OSPF related Configuration

25.1 area (A.B.C.D| <0-4294967295>) authentication

Syntax	area (A.B.C.D| <0-4294967295>) authentication
Parameters	A.B.C.D OSPF area ID in IP address format <0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2) authentication Enable authentication
Command Mode	Config-router mode
No/clear	no area (A.B.C.D| <0-4294967295>) authentication
Show	show running-config
Default	Not enable authentication
Description	To enable authentication for the specified area.
Examples	ASUS(config-router)# area 0.0.0.2 authentication

25.2 area (A.B.C.D| <0-4294967295>) authentication message-digest

Syntax	area (A.B.C.D| <0-4294967295>) authentication message-digest
Parameters	A.B.C.D OSPF area ID in IP address format <0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2) authentication Enable authentication message-digest Use message-digest authentication
Command Mode	Config-router mode
No/clear	no area (A.B.C.D| <0-4294967295>) authentication
Show	show running-config
Default	Not enable authentication
Description	To enable authentication and use message-digest to authenticate for the specified area.

Examples	ASUS(config-router)# area 0.0.0.2 authentication message-digest

25.3 area (A.B.C.D\| <0-4294967295>) default-cost <0-16777215>

Syntax	area (A.B.C.DI <0-4294967295>) default-cost <0-16777215>
Parameters	A.B.C.D OSPF area ID in IP address format <0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2) default-cost Set the summary-default cost of a NSSA or stub area <0-16777215> Stub's advertised default summary cost
Command Mode	Config-router mode
No/clear	no area (A.B.C.DI <0-4294967295>) default-cost <0-16777215>
Show	show running-config
Default	
Description	To set advertised default summary cost for the specified stub area.
Examples	ASUS(config-router)# area 0.0.0.2 default 100

25.4 area (A.B.C.D\| <0-4294967295>) range A.B.C.D/M

Syntax	area (A.B.C.DI <0-4294967295>) range A.B.C.D/M
Parameters	A.B.C.D OSPF area ID in IP address format <0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2) range Summarize routes matching address/mask (border routers only) A.B.C.D/M Area range prefix
Command Mode	Config-router mode

No/clear	no area (A.B.C.Dl <0-4294967295>) range A.B.C.D/M
Show	show running-config
Default	
Description	To set the summarizing routes range for the specified area.
Examples	ASUS(config-router)# area 0.0.0.2 range 192.192.0.0/16

25.5 area (A.B.C.D| <0-4294967295>) range A.B.C.D/M (advertise| not-advertise)

Syntax	area (A.B.C.Dl <0-4294967295>) range A.B.C.D/M (advertiselnot-advertise)
Parameters	A.B.C.D OSPF area ID in IP address format
	<0-4294967295> OSPF area ID as a decimal value
	(ID 0.0.0.2 equals ID 2)
	range Summarize routes matching address/mask (border routers only)
	A.B.C.D/M Area range prefix
	advertise Advertise this range (default)
	not-advertise DoNotAdvertise this range
Command Mode	Config-router mode
No/clear	no area (A.B.C.Dl <0-4294967295>) range A.B.C.D/M (advertiselnot-advertise)
Show	show running-config
Default	The default is advertise
Description	To set the summarizing routes range and advertise/not-advertise for the specified area.
Examples	ASUS(config-router)# area 0.0.0.2 range 192.192.0.0/16 not-adevertise

25.6 area (A.B.C.D| <0-4294967295>) range A.B.C.D/M cost <0-16777215>

Syntax	area (A.B.C.Dl <0-4294967295>) range A.B.C.D/M cost

	<0-16777215>
Parameters	A.B.C.D OSPF area ID in IP address format <0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2) range Summarize routes matching address/mask (border routers only) A.B.C.D/M Area range prefix cost User specified metric for this range <0-16777215> Advertised metric for this range
Command Mode	Config-router mode
No/clear	no area (A.B.C.DI <0-4294967295>) range A.B.C.D/M cost <0-16777215>
Show	show running-config
Default	
Description	To set the summarizing routes range and advertise metric value for the specified area.
Examples	ASUS(config-router)# area 0.0.0.2 range 192.192.0.0/16 cost 100

25.7 area (A.B.C.D\| <0-4294967295>) range A.B.C.D/M substitute A.B.C.D/M

Syntax	area (A.B.C.DI <0-4294967295>) range A.B.C.D/M substitute A.B.C.D/M
Parameters	A.B.C.D OSPF area ID in IP address format <0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2) range Summarize routes matching address/mask (border routers only) A.B.C.D/M Area range prefix substitute Announce area range as another prefix A.B.C.D/M Network prefix to be announced instead of range

Command Mode	Config-router mode
No/clear	no area (A.B.C.D| <0-4294967295>) range A.B.C.D/M substitute A.B.C.D/M
Show	show running-config
Default	
Description	To set the summarizing routes range and substitute network prefix for the specified area.
Examples	ASUS(config-router)# area 0.0.0.2 range 192.192.0.0/16 substitute 192.190.0.0/24

25.8 area (A.B.C.D| <0-4294967295>) shortcut (default| enable| disable)

Syntax	area (A.B.C.D| <0-4294967295>) shortcut (default| enable| disable)
Parameters	A.B.C.D OSPF area ID in IP address format
	<0-4294967295> OSPF area ID as a decimal value
	(ID 0.0.0.2 equals ID 2)
	shortcut Configure the area’s shortcutting mode
	default Set default shortcutting behavior
	disable Disable shortcutting through the area
	enable Enable shortcutting through the area
Command Mode	Config-router mode
No/clear	no area (A.B.C.D|<0-4294967295>) shortcut (enable|disable)
Show	show ip ospf
Default	
Description	To set shortcut mode for the specified area.
Examples	ASUS(config-router)# area 0.0.0.2 shortcut disable

25.9 area (A.B.C.D| <0-4294967295>) stub

Syntax	area (A.B.C.D| <0-4294967295>) stub

Parameters	A.B.C.D OSPF area ID in IP address format
	<0-4294967295> OSPF area ID as a decimal value
	(ID 0.0.0.2 equals ID 2)
	stub Configure OSPF area as stub
Command Mode	Config-router mode
No/clear	no area (A.B.C.D| <0-4294967295>) stub
Show	show ip ospf
Default	
Description	To configure the specified area as stub.
Examples	ASUS(config-router)# area 0.0.0.2 stub

25.10 area (A.B.C.D| <0-4294967295>) stub no-summary

Syntax	area (A.B.C.D| <0-4294967295>) stub no-summary
Parameters	A.B.C.D OSPF area ID in IP address format
	<0-4294967295> OSPF area ID as a decimal value
	(ID 0.0.0.2 equals ID 2)
	stub Configure OSPF area as stub
	no-summary Do not inject inter-area routes into stub
Command Mode	Config-router mode
No/clear	no area (A.B.C.D| <0-4294967295>) stub no-summary
Show	show ip ospf
Default	
Description	To configure the specified area as stub and not inject inter-area routes.
Examples	ASUS(config-router)# area 0.0.0.2 stub no-summary

25.11 area (A.B.C.D| <0-4294967295>) virtual-link A.B.C.D

<table>
<tr><td>Syntax</td><td>area (A.B.C.D|<0-4294967295>) virtual-link A.B.C.D</td></tr>
<tr><td>Parameters</td><td>A.B.C.D OSPF area ID in IP address format</td></tr>
<tr><td></td><td><0-4294967295> OSPF area ID as a decimal value</td></tr>
<tr><td></td><td>(ID 0.0.0.2 equals ID 2)</td></tr>
<tr><td></td><td>virtual-link   Configure a virtual link</td></tr>
<tr><td></td><td>A.B.C.D Router ID of the remote ABR</td></tr>
<tr><td>Command Mode</td><td>Config-router mode</td></tr>
<tr><td>No/clear</td><td>no area (A.B.C.D|<0-4294967295>) virtual-link A.B.C.D</td></tr>
<tr><td>Show</td><td>show running-config</td></tr>
<tr><td>Default</td><td></td></tr>
<tr><td>Description</td><td>To configure a virtual link router for the specified area.</td></tr>
<tr><td>Examples</td><td>ASUS(config-router)# area 0.0.0.2 virtual-link 10.1.1.2</td></tr>
</table>

25.12 area (A.B.C.D| <0-4294967295>) virtual-link A.B.C.D (hello-interval| retransmit-interval| transmit-delay| dead-interval) <1-65535>

<table>
<tr><td>Syntax</td><td>area (A.B.C.D|<0-4294967295>) virtual-link A.B.C.D (hello-interval| retransmit-interval| transmit-delay| dead-interval) <1-65535></td></tr>
<tr><td>Parameters</td><td>A.B.C.D OSPF area ID in IP address format</td></tr>
<tr><td></td><td><0-4294967295> OSPF area ID as a decimal value</td></tr>
<tr><td></td><td>(ID 0.0.0.2 equals ID 2)</td></tr>
<tr><td></td><td>virtual-link   Configure a virtual link</td></tr>
<tr><td></td><td>A.B.C.D Router ID of the remote ABR</td></tr>
<tr><td></td><td>hello-interval   Time between HELLO packets</td></tr>
<tr><td></td><td>retransmit-interval Time between retransmitting lost link state advertisements</td></tr>
</table>

	transmit-delay Link state transmit delay
	dead-interval Interval after which a neighbor is declared dead
	<1-65535> Time value, seconds
Command Mode	Config-router mode
No/clear	no area (A.B.C.Dl<0-4294967295>) virtual-link A.B.C.D (hello-intervall retransmit-intervall transmit-delayl dead-interval)
Show	show running-config
Default	Hello-interval is 10 sec, retransmit-interval is 5 sec, transmit-delay 40 sec, dead-interval 40 sec
Description	To configure a virtual link router for the specified area and set hello interval, retransmit interval, transmit delay or dead interval.
Examples	ASUS(config-router)# area 0.0.0.2 virtual-link 10.1.1.2 hello-interval 20 ASUS(config-router)# area 0.0.0.2 virtual-link 10.1.1.2 hello-interval 20 retransmit-interval 10 transmit-delay 50 dead-interval 50

25.13 area (A.B.C.D| <0-4294967295>) virtual-link A.B.C.D authentication

Syntax	area (A.B.C.Dl<0-4294967295>) virtual-link A.B.C.D authentication
Parameters	A.B.C.D OSPF area ID in IP address format <0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2) virtual-link Configure a virtual link A.B.C.D Router ID of the remote ABR authentication Enable authentication on this virtual link
Command Mode	Config-router mode
No/clear	no area (A.B.C.Dl<0-4294967295>) virtual-link A.B.C.D authentication
Show	show running-config
Default	Not enable authentication

Description	To configure a virtual link router for the specified area and enable authentication.
Examples	ASUS(config-router)# area 0.0.0.2 virtual-link 10.1.1.2 authentication

25.14 area (A.B.C.D| <0-4294967295>) virtual-link A.B.C.D authentication message-digest

Syntax	area (A.B.C.D|<0-4294967295>) virtual-link A.B.C.D authentication message-digest
Parameters	A.B.C.D OSPF area ID in IP address format <0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2) virtual-link Configure a virtual link A.B.C.D Router ID of the remote ABR authentication Enable authentication on this virtual link message-digest Use message-digest authentication
Command Mode	Config-router mode
No/clear	no area (A.B.C.D|<0-4294967295>) virtual-link A.B.C.D authentication
Show	show running-config
Default	
Description	To configure a virtual link router for the specified area and use message-digest authentication.
Examples	ASUS(config-router)# area 0.0.0.2 virtual-link 10.1.1.2 authentication message-digest

25.15 area (A.B.C.D| <0-4294967295>) virtual-link A.B.C.D authentication-key AUTH_KEY

Syntax	area (A.B.C.D|<0-4294967295>) virtual-link A.B.C.D authentication-key AUTH_KEY
Parameters	A.B.C.D OSPF area ID in IP address format

	<0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2) virtual-link Configure a virtual link A.B.C.D Router ID of the remote ABR authentication-key Authentication password (key) AUTH_KEY The OSPF password (key)
Command Mode	Config-router mode
No/clear	no area (A.B.C.D|<0-4294967295>) virtual-link A.B.C.D authentication-key
Show	show running-config
Default	
Description	To configure a virtual link router for the specified area and set the authentication key.
Examples	ASUS(config-router)# area 0.0.0.2 virtual-link 10.1.1.2 authentication-key abcdefgh

25.16 area (A.B.C.D| <0-4294967295>) virtual-link A.B.C.D message-digest-key <1-255> md5 KEY

Syntax	area (A.B.C.D|<0-4294967295>) virtual-link A.B.C.D message-digest-key <1-255> md5 KEY
Parameters	A.B.C.D OSPF area ID in IP address format <0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2) virtual-link Configure a virtual link A.B.C.D Router ID of the remote ABR message-digest-key Message digest authentication password (key) <1-255> Key ID md5 Use MD5 algorithm KEY The OSPF password (key)

Command Mode	Config-router mode
No/clear	no area (A.B.C.D|<0-4294967295>) virtual-link A.B.C.D message-digest-key <1-255>
Show	show running-config
Default	
Description	To configure a virtual link router for the specified area and set the message-digest key by key ID.
Examples	ASUS(config-router)# area 0.0.0.2 virtual-link 10.1.1.2 message-digest-key 1 md5 abcedfgh

25.17 auto-cost refrence-bandwidth <1-4294967>

Syntax	auto-cost refrence-bandwidth <1-4294967>
Parameters	reference-bandwidth Use reference bandwidth method to assign OSPF cost <1-4294967> The reference bandwidth in terms of Mbits per second
Command Mode	Config-router mode
No/clear	no auto-cost refrence-bandwidth
Show	show running-config
Default	
Description	To use the specified reference bandwidth value to decide cost value. Must ensure reference bandwidth is consistent across all routers
Examples	ASUS(config-router)# auto-cost reference-bandwidth 10

25.18 compatible rfc1583

Syntax	compatible rfc1583
Parameters	
Command Mode	Config-router mode
No/clear	no compatible rfc1583
Show	show ip ospf
Default	Not enable

Description	To set OSPF protocol to compatible with rfc1583
Examples	ASUS(config-router)# compatible rfc1583

25.19 default-information originate

Syntax	default-information originate
Parameters	originate Distribute a default route
Command Mode	Config-router mode
No/clear	no default-information originate
Show	show running-config
Default	
Description	To set OSPF to distribute a default route.
Examples	ASUS(config-router)# default-information originate

25.20 default-information originate (metric <0-16777214> | metric-type (1|2))

Syntax	default-information originate (metric <0-16777214> | metric-type (1|2))
Parameters	originate Distribute a default route
	<0-16777214> OSPF metric
	metric-type OSPF metric type for default routes
	1 Set OSPF External Type 1 metrics
	2 Set OSPF External Type 2 metrics
Command Mode	Config-router mode
No/clear	no default-information originate
Show	show running-config
Default	
Description	To set the metric value and type of distributing a default route.
Examples	ASUS(config-router)# default-information originate metric 10 metric-type 1

25.21 default-information originate always

Syntax	default-information originate always
Parameters	originate Distribute a default route
	always Always advertise default route
Command Mode	Config-router mode
No/clear	no default-information originate
Show	show running-config
Default	
Description	To set OSPF always to distribute a default route.
Examples	ASUS(config-router)# default-information originate always

25.22 default-information originate always (metric <0-16777214> | metric-type (1|2))

Syntax	default-information originate always (metric <0-16777214> | metric-type (1|2))
Parameters	originate Distribute a default route
	always Always advertise default route
	<0-16777214> OSPF metric
	metric-type OSPF metric type for default routes
	1 Set OSPF External Type 1 metrics
	2 Set OSPF External Type 2 metrics
Command Mode	Config-router mode
No/clear	no default-information originate
Show	show running-config
Default	
Description	To set the metric value and type of always distributing a default route.
Examples	ASUS(config-router)# default-information originate always metric 10 metric-type 1

25.23 default-metric <0-16777214>

Syntax	default-metric <0-16777214>
Parameters	<0-16777214> Default metric
Command Mode	Config-router mode
No/clear	no default-metric
Show	show running-config
Default	
Description	To set metric of redistributed routes.
Examples	ASUS(config-router)# default-metric 10

25.24 distance <1-255>

Syntax	distance <1-255>
Parameters	<1-255> Distance value
Command Mode	Config-router mode
No/clear	no distance <1-255>
Show	show running-config
Default	
Description	To set OSPF administrative distance.
Examples	ASUS(config-router)# distance 100

25.25 distance ospf (intra-area\|inter-area\|external) <1-255>

Syntax	distance ospf (intra-arealinter-arealexternal) <1-255>
Parameters	external External routes
	inter-area Inter-area routes
	intra-area Intra-area routes
	<1-255> Distance for external routes
Command Mode	Config-router mode
No/clear	no distance ospf

Show	show running-config
Default	
Description	To set the OSPF administrative intra-area, inter-area or external distance.
Examples	ASUS(config-router)# distance ospf external 10 ASUS(config-router)# distance ospf intra-area 10 inter-area 10 external 10

25.26 ip ospf authentication

Syntax	ip ospf authentication
Parameters	authentication Enable authentication on this interface
Command Mode	Interface configuration mode
No/clear	no ip ospf authentication
Show	show running-config
Default	
Description	To enable authentication for the specified interface.
Examples	ASUS(config-if)# ip ospf authentication

25.27 ip ospf authentication message-digest

Syntax	ip ospf authentication
Parameters	authentication Enable authentication message-digest Use message-digest authentication
Command Mode	Interface configuration mode
No/clear	no ip ospf authentication
Show	show running-config
Default	
Description	To enable authentication and use message-digest to authenticate for the specified area.
Examples	ASUS(config-if)# ip ospf authentication

25.28 ip ospf authentication-key AUTH_KEY

Syntax	ip ospf authentication-key [AUTH_KEY]
Parameters	AUTH_KEY Character string, max. 8 characters
Command Mode	Interface configuration mode
No/clear	no ip ospf authentication-key
Show	show running-config
Default	
Description	Set OSPF authentication key to a simple password for a specific IP interface. After setting AUTH_KEY, all OSPF packets are authenticated. AUTH_KEY has length up to 8 chars.
Examples	ASUS(config-if)# ip ospf authentication-key abcdefgh

25.29 ip ospf cost <1-65535>

Syntax	ip ospf cost <1-65535>
Parameters	
Command Mode	Interface configuration mode
No/clear	no ip ospf cost
Show	show ip ospf interface [IFNAME]
Default	The default is 1
Description	Set link cost for the specified interface. The cost value is set to router-LSA's metric field and used for SPF calculation.
Examples	ASUS(config-if)# ip ospf cost 100

25.30 ip ospf (hello-interval| retransmit-interval| transmit-delay| dead-interval) <1-65535>

Syntax	ip ospf (hello-intervall retransmit-intervall transmit-delayl dead-interval) <1-65535>
Parameters	
Command Mode	Interface configuration mode
No/clear	no ip ospf (hello-intervall retransmit-intervall transmit-delayl

	dead-interval)
Show	show ip ospf interface [IFNAME]
Default	Hello-interval is 10sec, retransmit-interval is 5 sec, transmit-delay is 40 sec, dead-interval is 40 sec.
Description	Set number of seconds for HelloInterval, RetransmitInterval, Transmitdelay, DeadInterval timer value.
Examples	ASUS(config-if)# ip ospf hello-interval 15

25.31 ip ospf message-digest-key <1-255> md5 KEY

Syntax	ip ospf message-digest-key <1-255> md5 KEY
Parameters	<1-255> Key ID
	md5 Use MD5 algorithm
	KEY Character string, max. 16 characters
Command Mode	Interface configuration mode
No/clear	no ip ospf message-digest-key <1-255>
Show	show running-config
Default	
Description	Set OSPF authentication key to a cryptographic password for a specific IP interface. The cryptographic algorithm is MD5. KEYID identifies secret key used to create the message digest. KEY is the actual message digest key up to 16 chars.
Examples	ASUS(config-if)# ip ospf message-digest-key ABCDEFGH12345678

25.32 ip ospf priority <1-255>

Syntax	ip ospf priority <1-255>
Parameters	<1-255> Priority
Command Mode	Interface configuration mode
No/clear	no ip ospf priority
Show	show ip ospf interface [IFNAME]
Default	The default is 1

Description	Set Router Priority integer value. Setting higher value, router will be more eligible to become Designated Router. Setting the value to 0, router is no longer eligible to Designated Router. The default value is 1.
Examples	ASUS(config-if)# ip ospf priority 10

25.33 neighbor A.B.C.D

Syntax	neighbor A.B.C.D
Parameters	A.B.C.D Neighbor IP address
Command Mode	Config-router mode
No/clear	no neighbor A.B.C.D
Show	show running-config
Default	
Description	To specify OSPF neighbor router
Examples	ASUS(config-router)# neighbor 10.1.1.1

25.34 neighbor A.B.C.D (poll-interval <1-65535> | priority <1-255>)

Syntax	neighbor A.B.C.D (poll-interval <1-65535> l priority <1-255>)
Parameters	A.B.C.D Neighbor IP address poll-interval Dead Neighbor Polling interval <1-65535> Seconds priority Neighbor Priority <1-255> Priority
Command Mode	Config-router mode
No/clear	no neighbor A.B.C.D
Show	show running-config
Default	Poll-interval is 60 sec, priority is 0
Description	To specify OSPF neighbor router and set poll-interval or priority.
Examples	ASUS(config-router)# neighbor 10.1.1.1 poll-interval 120

	ASUS(config-router)# neighbor 10.1.1.1 poll-interval 120 priority 10

25.35 network A.B.C.D/M area (A.B.C.D| <0-4294967295>)

Syntax	network A.B.C.D/M area (A.B.C.Dl <0-4294967295>)
Parameters	A.B.C.D/M OSPF network prefix
	area OSPF area parameters
	A.B.C.D OSPF area ID in IP address format
	<0-4294967295> OSPF area ID as a decimal value (ID 0.0.0.2 equals ID 2)
Command Mode	Config-router mode
No/clear	no network A.B.C.D/M area (A.B.C.Dl <0-4294967295>)
Show	show running-config
Default	
Description	To enable OSPF function on the specified network.
Examples	ASUS(config-router)# network 192.168.1.1/24 area 0.0.0.1

25.36 passive-interface IFNAME

Syntax	passive-interface IFNAME
Parameters	passive-interface Suppress routing updates on an interface
	IFNAME Interface name
Command Mode	Config-router mode
No/clear	no passive-interface IFNAME
Show	show running-config
Default	
Description	To set the specified interface as passive inerface.
Examples	ASUS(config-router)# passive-interface vlan2

25.37 redistribute (kernel| connected| static| rip)

Syntax	redistribute (kernell connectedl staticlrip)
Parameters	connected Connected kernel Kernel routes rip Routing Information Protocol (RIP) static Static routes
Command Mode	Config-router mode
No/clear	no redistribute (kernell connectedl staticl rip)
Show	show running-config
Default	
Description	This command redistributes routing information from kernel, connected, static or RIP route entries into the OSPF tables.
Examples	ASUS(config-router)# redistribute connected

25.38 redistribute (kernel| connected| static| rip) (metric <0-16777214> | metric-type (1|2))

Syntax	redistribute (kernell connectedl staticlrip) (metric <0-16777214> l metric-type (1l2))
Parameters	connected Connected kernel Kernel routes rip Routing Information Protocol (RIP) static Static routes metric Metric for redistributed routes <0-16777214> OSPF default metric metric-type OSPF exterior metric type for redistributed routes 1 Set OSPF External Type 1 metrics 2 Set OSPF External Type 2 metrics
Command Mode	Config-router mode
No/clear	no redistribute (kernell connectedl staticl rip)

Show	show running-config
Default	
Description	This command redistributes routing information from kernel, connected, static or RIP route entries with specified metric value and type into the OSPF tables.
Examples	ASUS(config-router)# redistribute connected metric 10 metric-type 2

25.39 refresh timer <10-1800>

Syntax	refresh timer <10-1800>
Parameters	Timer Set refresh timer
	<10-1800> Timer value in seconds
Command Mode	Config-router mode
No/clear	no refresh timer
Show	show ip ospf
Default	The default is 10 sec.
Description	To set the OSPF refresh timer.
Examples	ASUS(config-router)#refresh timer 100

25.40 router-id A.B.C.D

Syntax	router-id A.B.C.D
Parameters	A.B.C.D OSPF router-id in IP address format
Command Mode	Config-router mode
No/clear	no ospf router-id
Show	show ip ospf
Default	
Description	To set OSPF router ID.
Examples	ASUS(config-router)# router-id 10.0.0.3

25.41 router ospf

Syntax	router ospf
Parameters	
Command Mode	Global Configuration mode
No/clear	no router ospf
Show	show ip ospf
Default	
Description	The router ospf command is necessary to enable OSPF. To disable OSPF, use the no router ospf command.
Examples	ASUS(config)# router ospf

25.42 show ip ospf

Syntax	show ip ospf
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display OSPF configuration and areas status.
Examples	ASUS# show ip ospf

25.43 show ip ospf database

Syntax	show ip ospf database
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display summary information about OSPF LSAs.

Examples	ASUS# show ip ospf database

25.44 show ip ospf database (asbr-summary| external| network| router| summary | max-age| self-originate)

Syntax	show ip ospf database (asbr-summaryl externall networkl routerl summaryl max-agel self-originate)
Parameters	asbr-summary ASBR summary link states
	external External link states
	network Network link states
	router Router link states
	summary Network summary link states
	max-age LSAs in MaxAge list
	self-originate Self-originated link states
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display ASBR, external, network, router, summary, max-age or self-originate link states.
Examples	ASUS# show ip ospf database asbr-summary

25.45 show ip ospf database (asbr-summary| external| network| router| summary) (self-originate| A.B.C.D| adv-router A.B.C.D)

Syntax	show ip ospf database (asbr-summaryl externall networkl routerl summary) (self-originatel A.B.C.Dl adv-router A.B.C.D)
Parameters	self-originate Self-originated link states
	A.B.C.D link-state-id, IP address of specific link
	adv-router Advertising Router link states

	A.B.C.D IP address of Advertising Router
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	To display ASBR, external, network, router, summary link states by self-originate, the specified link-state-id or the specified advertise router.
Description	
Examples	ASUS# show ip ospf database network self-originate

25.46 show ip ospf database (asbr-summary| external| network| router| summary) A.B.C.D adv-router A.B.C.D

Syntax	show ip ospf database (asbr-summaryl externall networkl routerl summary) A.B.C.D adv-router A.B.C.D
Parameters	A.B.C.D link-state-id, IP address of specific link
	adv-router Advertising Router link states
	A.B.C.D IP address of Advertising Router
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display ASBR, external, network, router, summary link states by the specified link-state-id and the specified advertise router.
Examples	ASUS# show ip ospf database network 192.192.1.0 adv-router 192.192.1.254

25.47 show ip ospf interface [IFNAME]

Syntax	show ip ospf interface [IFNAME]
Parameters	[IFNAME] Interface name
Command Mode	Privileged EXEC mode

No/clear	
Show	
Default	
Description	To display OSPF configuration and running status for the specified interface or all interfaces.
Examples	ASUS# show ip ospf interface vlan2

25.48 show ip ospf neighbor

Syntax	show ip ospf neighbor
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display OSPF neighbor list.
Examples	ASUS# show ip ospf neighbor

25.49 show ip ospf route

Syntax	show ip ospf route
Parameters	
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To display OSPF routing table
Examples	ASUS# show ip ospf route

25.50 timers spf <0-4294967295> <0-4294967295>

Syntax	timers spf <0-4294967295> <0-4294967295>
Parameters	<0-4294967295> Delay between receiving a change to SPF calculation <0-4294967295> Hold time between consecutive SPF calculations
Command Mode	Config-router mode
No/clear	no timers spf
Show	show running-config
Default	
Description	
Examples	ASUS(config-router)# timer spf 10 20

26 VRRP (Virtual Router Redundancy Protocol):

26.1 show standby [IFNAME]

Syntax	show standby [IFNAME]
Parameters	[IFNAME] L3 interface name
Command Mode	Privileged EXEC mode
No/clear	
Show	
Default	
Description	To show VRRP running status and configuration for all enabled L3 interface or specified L3 interface.
Example	ASUS(config)# show standby vlan2

26.2 standby <1-255> ip IPADDR

Syntax	standby <1-255> ip IPADDR
Parameters	<1-255> Virtual router ID ip Virtual router IP parameter IPADDR IP address
Command Mode	Interface configuration mode
No/clear	no standby <1-255> ip IPADDR
Show	show standby [IFNAME]
Default	Not enable
Description	Use the command to set Virtual router ID and address, and also enable VRRP. The interface must be a L3 interface
Example	ASUS(config)# interface vlan2 ASUS(config)# standby 1 ip 192.192.1.254

26.3 standby <1-255> (preempt|nonpreempt)

Syntax	standby <1-255> (preempt|nonpreempt)
Parameters	preempt Preemption mode, default value
	nonpreempt Non-preemption mode
Command Mode	Interface configuration mode
No/clear	no standby <1-255> nonpreempt
Show	show standby [IFNAME]
Default	The default mode is preempt
Description	Use the command to set the specified virtual router as preempt or nonpreempt mode. It must enable the virtual router first.
Example	ASUS(config)# standby 1 nonpreempt

26.4 standby <1-255> priority <1-254>

Syntax	standby <1-255> priority <1-254>
Parameters	<1-254> Priority parameter, 100 is default value
Command Mode	Interface configuration mode
No/clear	no standby <1-255> priority
Show	show standby [IFNAME]
Default	The default value is 100
Description	Use the command to set the priority value of the specified virtual router. The value is used to elect VRRP master.
Example	ASUS(config)# standby 1 priority 200

26.5 standby <1-255> timers <1-1000>

Syntax	standby <1-255> timers <1-1000>
Parameters	<1-1000> Advertisement interval parameter, seconds
Command Mode	Interface configuration mode
No/clear	no standby <1-255> timers
Show	show standby [IFNAME]

Default	The default value is 1 second
Description	Use the command to set the advertisement interval value of the specified virtual router.
Example	ASUS(config)# standby 1 timers 10