GENEXIS

ALWAYS CONNECTED

GeneOS 3.0.0-R Command Reference

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Introduction

Genexis Residential Gateway platforms which run the GeneOS operating system, are designed to provide a powerful, flexible and stable platform for modern Fiber to the Home (FTTH) customer premise equipment (CPE) needs. The operation of GeneOS may be configured during runtime using command line interface (CLI) commands.

This manual is intended for personnel configuring Genexis platforms running GeneOS, either directly using the CLI over an SSH connection, or via configuration files using the same syntax which may then be downloaded to the CPE using a variety of mechanisms.

To fully understand this manual, you will need expert knowledge of broadband, access and home networking, data communication protocols and to be familiar with Genexis CPE hardware products.

Please refer to the GeneOS Service Configuration Guide which describes how to use commands to control specific functionality and for specific deployment scenarios.

Conventions used in this manual

The following typeface conventions apply:

Table 1. Typeface conventions

Typeface	Description
show version	Denotes GeneOS commands
`geneos#`	Output to screen

The following command syntax conventions apply:

Table 2. Command syntax conventions

Character	Description
[ ]	Denotes optional keywords or arguments
{keyword | keyword}	Denotes mandatory keywords separated with |, you must select one of the keywords.
< >	Denotes user entered data
a.b.c.d	Denotes standard 4-octet IPv4 address format

catv

Context

configuration-root

Syntax

catv

Enter "catv" context

Description

The **catv** command is used to enter the "catv" context.

The "catv" context is used for cable TV configuration.

Example

```
geneos(config)# catv
geneos(config-catv)#
```

Default

This command has no default value.

History

This command was introduced in GeneOS 2.3.0.

catv agc

Context

catv-configuration-root

Syntax

*[no] catv agc *

Enable or disable the CATV agc.

Description

The **no catv agc** configuration command is used to control the CATV Automatic Gain Control.

When CATV Automatic Gain Control is enabled, it attempts to maintain the same output signal level irrespective of the input level. If the input signal is low the AGC circuit will increase the level, and if it is too high will lower it to maintain as constant a level as possible.

Please see individual product hardware description for details about the CATV Automatic Gain Control support and behaviour as this varies on a per product variant and version basis.

Example

```
geneos(config-catv)# catv agc
geneos(config-catv)# no catv agc
```

Default

By default CATV AGC is enabled.

History

This command was introduced in GeneOS 2.3.0.

See Also

catv enable

show catv status

catv enable

Context

catv-configuration-root

Syntax

[no] catv enable

Enable or disable the CATV function.

Description

The **catv enable** configuration command is used to enable/disable the CATV RF Overlay.

Please see individual product hardware description for details about the CATV support and behaviour as this varies on a per product variant and version basis.

Example

```
geneos(config-catv)# catv enable
```

Default

By default the CATV function is disabled.

History

This command was introduced in GeneOS 2.3.0

See Also

catv filter

show catv status

catv filter

Context

catv-configuration-root

Syntax

[no] catv filter [<1-2>]

Enable or disable the CATV channel filters.

Description

The **no catv filter** configuration command is used to control the CATV channel filters.

When a CATV filter is enabled, the associated channels are blocked and thus unable to be viewed.

If the RG supports multiple filters, **no catv filter** disables all filters.

Please see individual product hardware description for details about the CATV filter support and behaviour as this varies on a per product variant and version basis.

Example

```
geneos(config-catv)# catv filter 1
geneos(config-catv)# no catv filter
geneos(config-catv)# no catv filter 1
geneos(config-catv)# catv filter 2
```

Default

By default CATV filter status is undefined. The management system is responsible for defining the required state. CATV is disabled by default ensuring no service is provided unless enabled by the management system.

History

This command was introduced in GeneOS 2.3.0.

See Also

catv enable

show catv status

clip enable

Context

voice-line-configuration-root

Syntax

[no] clip enable

Enable CLIP on a voice line

Description

The **clip enable** configuration command is used to enable/disable the CLIP (Calling Line Identification Presentation) service on a voice line.

Calling Line Identification Presentation is a service that provides a called party with the Calling Line ID of the caller. If the CLIP enabled, the inbound caller ID will be provided to Foreign eXchange Subscriber (FXS) port. By default the CLIP is disabled on every voice line.

Example

```
geneos(config)# voice line 1
geneos(config-voice-line)# clip enable
```

Default

By default CLIP is disabled for each voice line.

History

This command was introduced in GeneOS 2.2.0.

See Also

country

sip phone-number

clock timezone

Context

configuration-root

Syntax

[no] clock timezone { <timezone> }

Set the system timezone.

Description

The **clock timezone** configuration command is used to set the timezone used for the system clock. The time zones have unique names in the form "Area/Location", e.g. "America/New_York". Area is the name of a continent, an ocean, or "Etc". The continents and oceans currently include: Africa, America, Antarctica, Arctic, Asia, Atlantic, Australia, Europe, Indian, and Pacific. Location is the name of a specific location within the area – usually a city or small island.

Example

```
geneos(config)# clock timezone Europe/Stockholm
geneos(config)# clock timezone Etc/GMT-2
```

Default

The default system timezone is UTC.

History

This command was introduced in GeneOS 2.3.0

See Also

show clock

commit

Context

configuration-root

Syntax

commit

Commit pending configuration changes

Description

The **commit** command manually commits any staged configuration changes immediately, rather than waiting for automatic 2 seconds commit timeout. The commit stores configuration changes persistently, and applies the configuration change so that it becomes active.

Example

```
geneos# configure terminal
geneos(config)# hostname genexis
geneos(config)# commit
```

Default

This command has no default value.

History

This command was introduced in GeneOS 2.2.0.

See Also

exit

configure terminal

configure terminal

Context

executable-root

Syntax

configure terminal

Enter system configuration mode

Description

The **configure terminal** command is used to manually configure GeneOS from the command line interface. The command makes the session enter configuration mode to allow configuration commands to be entered. When in configuration mode the prompt is modified with the addition of the current configuration context to the system hostname.

Example

```
geneos# configure terminal
geneos(config)# interface vlan1
geneos(config-if-vlan)# end
geneos#
```

History

This command was introduced in GeneOS 2.0.0.

See Also

end

exit

copy

Context

executable-root

Syntax

copy { http:// | tftp:// | local:<filename> } { tftp:// | bootflash | bootloader }

Copy file from source to destination

Description

The **copy** command copies a file between a source and destination.

The **http://** keyword designates a URL for a remote file. The file will be copied using the HTTP protocol. The host and path to the file must also be provided.

The **tftp://** keyword designates a URL for a remote file. The file will be copied using the TFTP protocol. The host and path to the file must also be provided.

The **local:** keyword designates a URL for a local file. The local file will be copied to a TFTP destination. One can copy some debug files, e.g. log files, core dump files, from CPE by using the TFTP protocol.

The **bootflash** keyword designates the system boot image. If copying to **bootflash**, the file will be copied to local file system and be used as system boot image following the next system reboot.

The **bootloader** keyword designates the system bootloader. If copying to **bootloader**, the file will be copied to local bootloader and used as the system bootloader following the next system reboot.

Example

```
geneos# copy http://172.19.36.203/geneos-lunar-2.0.0-R.img bootflash
```

History

This command was introduced in GeneOS 2.0.0.

See Also

show version

show running-config

cos map

Context

interface-wan-configuration-root

interface-lan-ethernet-configuration-root

Syntax

[no] cos map dot1p <0-7> queue <0-3>

Maps packets based on the IEEE 802.1p class of service tag to specific physical port egress queues.

Description

The **cos map** command is used to configure the mapping between a particular 802.1p priority value and a specific switch egress queue. Each interface has 4 egress queues and traffic with 802.1p priority values may be mapped to any queue.

Queue 3 has the highest priority and queue 0 has the lowest priority. The traffic in the egress queues is transmitted in the order defined by the queue scheduling algorithm.

The configuration of priority mapping is effective on each layer2 port. e.g. wan and lan/ethernet<1-4> ports.

Example

```
geneos(config-if-wan)# cos map dot1p 0-3,6 queue 1
geneos(config-if-wan)# cos map dot1p 4,5 queue 2
geneos(config-if-lan-eth)# cos map dot1p 7 queue 3
```

Default

By default all priority tag values are mapped to queue 0.

History

This command was introduced in GeneOS 2.1.0.

See Also

queue-scheduling mode

rate-limit

vlan untagged

country

Context

voice-configuration-root

Syntax

[no] country <iso-3166-code>

Configure country code for voice service

Description

The **country** configuration command is used to set the country code for voice services. Some voice functions are dependent on location, i.e. country. These voice functions include FXS settings, call progress tones, etc.

For the supported countries (see the list below), the voice settings (e.g. line impedance, ring sequence, call progress tones, and CLIP methods) are per the national standards for the specified country. Countries which are not on this list use default settings. In these cases, line impedance is ETSI standard, ring sequence and call progress tones are per Sweden, and CLIP uses ETSI DTMF.

The following countries are fully supported: Germany, Sweden, The Netherlands, Denmark.

A complete list of countries and their ISO3166 codes can be found at http://www.iso.org/iso/home/standards/country_codes/iso-3166-1_decoding_table.htm.

Example

```
geneos(config)# voice
geneos(config-voice)# country de
```

Default

By default the country is *nl*.

History

This command was introduced in GeneOS 2.2.0.

See Also

clip enable

cwmp acs server

Context

configuration-root

Syntax

[no] cwmp acs server <url>

Set the ACS (Auto-Configuration Server) URL.

Description

The **cwmp acs server** configuration command sets the ACS (Auto-Configuration Server) URL for the CWMP protocol.

The **url** parameter specifies the ACS location with which the CWMP client will build a connection. It should be a valid HTTP or HTTPS URL.

Example

```
geneos(config)# cwmp acs server http://172.19.33.31:8080/dps/TR069
```

Default

By default the URL is empty, indicating that the location of the ACS is unspecified. If the location of the ACS is unspecified, then ACS discovery will be attempted if CWMP client is enabled.

History

This command was introduced in GeneOS 2.0.0.

cwmp acs username

Context

configuration-root

Syntax

[no] cwmp acs username <username> password <password>

Configures the information that the CWMP client uses to authenticate itself towards the ACS (Auto-Configuration Server).

Description

The **cwmp acs username** configuration command configures the username and password that the CWMP client uses to authenticate itself towards the ACS. If the ACS requires the CWMP client to perform authentication, it will request the client to provide username and password details during the connection process.

Example

```
geneos(config)# cwmp acs username foo password bar
geneos(config)# no cwmp acs username foo password bar
geneos(config)# no cwmp acs username
```

Default

The default username is defined by TR-069, which is <OUI>-<ModelName>-<Serial Number> encoded per the standard, e.g. "000F94-Lunar-G%2E0000010497". The default password is unique per device.

History

This command was introduced in GeneOS 2.1.0.

See Also

cwmp acs server

dhcp client send-option

Context

interface-vlan-configuration-root

Syntax

[no] dhcp client send-option {<option-name> | <60>} <option-value>

Configure the value of a DHCP client option when sent to the DHCP server.

Description

The **dhcp client send-option** command is used to define the value of the specified option in DHCP request messages sent to the DHCP server.

The following DHCP options are supported:

- **vendor-class-identifier** (option 60) : A DHCP client may use this option to unambiguously identify vendor, software, platform, industry consortium or other opaque fields to a DHCP server, to allow the server to return DHCP options and option values which have meaning for the client.

Example

```
geneos(config-if-vlan)# dhcp client send-option vendor-class-identifier “voice”
geneos(config-if-vlan)# dhcp client send-option vendor-class-identifier
 “mgmt,dslforum.org”
geneos(config-if-vlan)# dhcp client send-option 60 “Internet service”
geneos(config-if-vlan)# no dhcp client send-option vendor-class-identifier
geneos(config-if-vlan)# no dhcp client send-option 60
```

Default

Default values are sent for the vendor-class-identifier (60) and hostname (12) options. The default values used are *<firmware version>,<platform>,<product name>*, *dslform.org* and *geneos* respectively.

History

This command was introduced in GeneOS 2.3.0.

dhcp server pool

Context

configuration-root

Syntax

[no] dhcp server pool <name>

Create or enter a DHCP server pool context.

Description

The **dhcp server pool** configuration command is used to create and manage a DHCP server pool. A DHCP server pool represents a set of related parameters which control a single instance of DHCP server.

Currently only one DHCP server pool is supported.

Example

```
geneos(config)# dhcp server pool "iptv network"
geneos(config)# no dhcp server pool "iptv network"

geneos(config)# dhcp server pool guest
geneos(config)# no dhcp server pool guest
```

Default

Default DHCP server pool is named **cpe-lan** and has the following default settings

```
dhcp server pool "cpe-lan"
 !pool enable
 !pool size start 192.168.1.64 end 192.168.1.253
 !pool option lease-time 86400
```

History

This command was introduced in GeneOS 2.2.0.

See Also

pool enable

pool option lease-time

pool size

dial plan

Context

voice-configuration-root

Syntax

[no] dial plan <dial-plan>

Set telephone dial plan.

Description

The **dial plan** configuration command is used to set the telephone dial plan. The dial plan is valid for all voice lines.

The dial plan specifies how to interpret digit sequences dialed by the user, and how to convert those sequences into an outbound dial string.

The syntax for the digit map in GeneOS is derived from RFC3435, which is specific to the MGCP standard. The syntax for the digit map differs from that defined in RFC3435:

DigitMap = DigitString / "(" DigitStringList ")" DigitStringList = DigitString 0*("|" DigitString) DigitString = 1*(DigitStringElement) DigitStringElement = DigitPosition ["."] DigitPosition = DigitMapLetter / DigitMapRange

DigitMapLetter = DIGIT / "#" / "*" / "A" / "B" / "C" / "D" / "T" / "X" DigitMapRange = "[" 1*DigitLetter "]" DigitLetter = *((DIGIT "-" DIGIT) / DigitMapLetter)

Note: RFC3435 defines the ExtensionDigitMapLetter element, which is specific to the MGCP standard. This is not supported by GeneOS.

The syntax is more completely explained in the GeneOS Dialplan Tech Note.

Example

```
geneos(config)# voice
geneos(config-voice)# dial plan (0T|00T|[1-7]xxx|9xxxxxxxx|xx.T)
geneos(config-voice)# no dial plan
```

Default

The default dial plan is "(xx.T)".

History

This command was introduced in GeneOS 2.2.0.

do

Context

All configuration contexts

Syntax

do <command>

Run executable command in configuration context

Description

The **do** command runs an executable (non-configuration) command from the configuration context. This allows one to view the results of new configuration settings, or those in another context, without leaving the current context.

Example

```
geneos# configure terminal
geneos(config)# interface vlan1
geneos(config-if-vlan)# ip address dhcp
geneos(config-if-vlan)# do show int vlan1
vlan1     Link encap:Ethernet  HWaddr 00:0F:5D:A0:02:F0
          inet addr:10.126.3.100  Bcast:10.126.3.255  Mask:255.255.255.0
          inet6 addr: fe80::20f:5dff:fea0:2f0/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2489 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1363 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1221267 (1.1 MiB)  TX bytes:155980 (152.3 KiB)

geneos(config-if-vlan)#
```

History

This command was introduced in GeneOS 2.0.0.

dtmf relay

Context

voice-line-configuration-root

Syntax

[no] dtmf relay { inband | rfc2833 | sip-info }

Set the DTMF relay mode for a voice line.

Description

The **dtmf relay** configuration command is used to select the DTMF signaling relay mode for a voice line.

Three DTMF relay modes are supported: *inband*, *rfc2833* and *sip-info*. *inband* is the default DTMF signaling relay mode. The message format used for *sip-info* DTMF relay mode is *text/plain*.

When using the *rfc2833* or *sip-info* DTMF relay modes, hookflash events are not relayed.

Example

```
geneos(config)# voice line 1
geneos(config-voice-line)# dtmf relay rfc2833
geneos(config-voice-line)# dtmf relay sip-info
geneos(config-voice-line)# dtmf relay inband
```

Default

The default DTMF relay mode is *inband*.

History

This command was introduced in GeneOS 2.2.0.

end

Context

configuration-root

Syntax

end

Exit from configuration mode

Description

The **end** command ends the configuration session and returns to admin mode.

Example

```
geneos# configure terminal
geneos(config)# interface wan
geneos(config-if-wan)# end
geneos#
```

History

This command was introduced in GeneOS 2.0.0.

See Also

exit

configure terminal

exit

Context

configuration-root

configuration-context

Syntax

exit

Leave the current context

Description

The **exit** command results in leaving the current context.

In configuration mode, the user is moved up one context or leaves configuration mode and enters admin mode.

Example

```
geneos# configure terminal
geneos(config)# interface wan
geneos(config-if-wan)# exit
geneos(config)# exit
geneos#
```

History

This command was introduced in GeneOS 2.0.0.

See Also

end

configure terminal

gaps inform interval

Context

configuration-root

Syntax

[no] gaps inform [interval <1 - 99999>]

This command configures the gaps periodic connection interval.

Description

This command configures the GAPS periodic inform interval to the GAPS server.

Example

```
geneos(config)#gaps inform interval 3600
```

Default

The default value of periodic informal interval is 18000.

History

This command was introduced in GeneOS 2.3.0.

hostname

Context

configuration-root

Syntax

[no] hostname <name>

Configure the system hostname

Description

The **hostname** configuration command sets the system hostname in GeneOS. The hostname is used as the command line prompt in following command line sessions, and is sent to upstream DHCP servers in option 12 to permit DNS resolution of devices.

The hostname must contain only the ASCII letters *a* through *z* (case-insensitive), the digits *0* through *9*, and the hyphen. Hostname labels cannot begin or end with a hyphen. No other symbols, punctuation characters, or blank spaces are permitted.

The hostname must be between 1 and 63 characters long.

Example

```
geneos(config)# hostname myhost
geneos(config)# end
myhost#
```

Default

The default hostname is *geneos*.

History

This command was introduced in GeneOS 2.2.0

interface

Context

configuration-root

Syntax

interface wan

Configure the WAN interface.

interface lan

Configure the logical LAN interface.

interface lan/ethernet<1-4>

Configure physical LAN interface.

[no] interface vlan<1-4094>

Configure or remove configuration for a VLAN interface.

Description

The **interface** configuration command is used to enter the interface context of the selected interface type.

There are five types of interfaces: lan, tunnel, vlan, wan, and wlan.

Tunnel, vlan, and wlan interfaces are dynamic and can be created at the time when the user enters the configuration context of the specified interface. Dynamic interfaces can be deleted with the **no interface** command.

Example

```
geneos(config)# interface vlan100
geneos(config-if-vlan)#

geneos(config)# interface wan
geneos(config-if-wan)#
```

Default

The type and number of interfaces present in the system depends on the system model and configuration.

History

This command was introduced in GeneOS 2.0.0.

The interface "vlan1" is the default Layer 3 interface for WAN and the "wan" interface is only for VLAN membership assignment.

See Also

show running-config

ip access-group

Context

interface-lan-configuration-root

interface-vlan-configuration-root

Syntax

[no] ip access-group <access-list> { in | out }

Attach an access-list to or detach it from an interface.

Description

The **ip access-group** configuration command applies an access-list to an interface.

access-list is the name of the access list that will be attached or detached. **in** or **out** specifies whether the access list is applied to incoming or outgoing packets.

Example

```
geneos(config-if-vlan1)# ip access-group my-acl in
```

Default

This command has no default value.

History

This command was introduced in GeneOS 2.1.0

See Also

ip access-list

show ip access-list

ip access-list

Context

configuration-root

Syntax

[no] ip access-list <name>

Creates an IP access control list and brings the operator into the context of the list.

[no] [seq <1-2147483647>] { deny | permit | reject | ignore } ip [source { <a.b.c.d/m> | <a.b.c.d> <m.m.m.m> | host <a.b.c.d> | <hostname> | any }] [destination { <a.b.c.d/m> | <a.b.c.d> <m.m.m.m> | host <a.b.c.d> | any }] [protocol <0-255>]

Configure an IP access control entry for IP packets.

[no] [seq <1-2147483647>] { deny | permit | reject | ignore } icmp [source { <a.b.c.d/m> | <a.b.c.d> <m.m.m.m> | host <a.b.c.d> | <hostname> | any }] [destination { <a.b.c.d/m> | <a.b.c.d> <m.m.m.m> | host <a.b.c.d> | any }] [echo | echo-reply | host-unreachable | net-unreachable | unreachable]

Configure an IP access control entry for ICMP packets.

[no] [seq <1-2147483647>] { deny | permit | reject | ignore } udp [source { <a.b.c.d/m> | <a.b.c.d> <m.m.m.m> | host <a.b.c.d> | <hostname> | any } [port <1-65535>[-<1-65535>]] [destination { <a.b.c.d/m> | <a.b.c.d> <m.m.m.m> | host <a.b.c.d> | any } [port <1-65535>[-<1-65535>]]

Configure an IP access control entry for UDP packets.

[no] [seq <1-2147483647>] { deny | permit | reject | ignore } tcp [source { <a.b.c.d/m> | <a.b.c.d> <m.m.m.m> | host <a.b.c.d> | <hostname> | any } [port <1-65535>[-<1-65535>]] [destination { <a.b.c.d/m> | <a.b.c.d> <m.m.m.m> | host <a.b.c.d> | any } [port <1-65535>[-<1-65535>]]

Configure an IP access control entry for TCP packets.

Description

The **ip access-list** configuration command is used to create a named access list for filtering packets. Access-lists are used to control access based on source and destination IP address, protocol, port or port range for TCP or UDP and other protocol parameters.

An access control list is identified by its **name** parameter. An access control list can consist of multiple entries. Each entry basically consists of three parts: the sequence number **seq**, the action **deny**, **permit**, or **reject**, and the matching statements.

The rules of an access list are ordered by the sequence number **seq**. If no **seq** is specified, a **seq** number is automatically assigned to the entry: If the highest **seq** number in the same list is a multiple of 10, the next higher multiple of 10 is used (e.g. 50 is the highest **seq** number, then 60 is used); If the highest **seq** number in the same list is not a multiple of 10, the second higher multiple of 10 is used (e.g. 51 is the highest **seq** number, then 70 is used). Packets are checked against each entry of the access list in the order of the sequence number. The first entry matching the packet will take effect.

There are four types of action that could be taken to the matched packets: **deny**, **permit**, **reject** and **ignore**. **deny** and **reject** both drop the matched packet, the difference is that

reject will send an ICMP notification but **deny** will not. **ignore** will not have any effect, rule processing will simply pass over the rule.

The matching statements include **source**, **destination**, and other protocol-specific parameters. For example, when matching UDP packets, the source port and destination port can be matched.

The ICMP **unreachable** type is a superset of the **host-unreachable** and **network-unreachable** types.

All IP access lists have an implicit **deny any any** as the last entry. This means that if a packet is compared with all configured entries in the access list and no match is found the packet will be dropped. The assumption is that if an access list is applied on the packet stream, there is something to protect. If communication is not explicitly permitted it is not allowed to pass through.

Entries in the access lists can be removed either by the full content, or by its sequence number in a **no** command. If both sequence number and the full content are specified, the sequence number will be used. The whole access list can be removed by only specifying the **name**.

Example

```
geneos(config)# ip access-list my-acl
geneos(config-acl)# permit ip source any destination any protocol 17
geneos(config-acl)# permit ip protocol 17
geneos(config-acl)# deny ip destination 192.168.1.0/24
geneos(config-acl)# deny ip source host 192.168.1.100
geneos(config-acl)# permit tcp destination any port 20
geneos(config-acl)# ignore ip source host 192.168.1.100
geneos(config-acl)# permit ip source 192.1.1.0/24 protocol 20
geneos(config-acl)# no seq 20
geneos(config-acl)# no reject ip source host 192.168.1.100
geneos(config-acl)# permit udp source 192.168.1.0/24 port 22
geneos(config-acl)# deny tcp destination 192.168.1.0/24 port 50-60
geneos(config-acl)# ignore tcp destination 192.168.1.0/24 port 50-60
geneos(config-acl)# permit icmp source 192.168.1.0/24 destination 192.168.1.0/24
geneos(config-acl)# reject icmp source 192.168.1.0/24 destination 192.168.1.0/24
geneos(config)# no ip access-list test-acl
```

Default

This command has no default value.

History

This command was introduced in GeneOS 2.1.0

See Also

ip access-group

show ip access-list

ip address

Context

interface-lan-configuration-root

interface-vlan-configuration-root

Syntax

[no] ip address <a.b.c.d/m>

Set IP address with prefix.

[no] ip address <a.b.c.d> <m.m.m.m>

Set IP address with separate net mask.

[no] ip address dhcp

Set IP address using DHCP.

[no] ip address none

Disable IP address.

Description

The **ip address** configuration command is used to set the IP address for an interface.

If the **dhcp** option is used a DHCP client will be started to obtain an IP address for the interface. The received IP address can be seen with the **show interface** command.

The **none** option can be used to disable the IP address on the **lan** and **vlan1** interface that will otherwise have default values.

All IP ranges are valid except for: 0.0.0.0/8, 127.0.0.0/8 and 224.0.0.0 - 255.255.255.255.

Example

```
geneos(config)# interface lan
geneos(config-if-lan)# ip address 10.0.0.1/24
geneos(config)# interface vlan1
geneos(config-if-vlan)# ip address dhcp
```

Default

The default for the lan interface is **ip address 192.168.1.254/24**.

The default for the vlan1 interface is **ip address dhcp**.

The default for other interfaces is **ip address none**.

History

This command was introduced in GeneOS 2.0.0.

See Also

interface

show interface

vlan member

vlan untagged

ip igmp snooping

Context

interface-vlan-configuration-root

Syntax

[no] ip igmp snooping

Configure IGMP snooping

Description

The **ip igmp snooping** configuration command is used to control the interception of IGMP packets of the configured vlan on interfaces which operates in L2 mode. IGMP snooping should be used to allow the system to distribute multicast groups only to the interfaces where there are active receivers of the groups. Otherwise, the system will act in a similar manner to a layer 2 switch and flood multicast groups to all switched interfaces.

The IGMP snooping feature only supports IGMP version 2 packets when it is enabled. All IGMPv1 and IGMPv3 packets received will be silently dropped.

Example

```
geneos(config)# interface vlan4
geneos(config-if-vlan)# ip igmp snooping
```

Default

IGMP snooping is disabled by default for all vlans.

History

This command was introduced in GeneOS 3.0.0

ip name-server

Context

configuration-root

Syntax

[no] ip name-server <a.b.c.d> source-interface <interface>

Configure a static DNS name server for Internet service.

Description

The **ip name-server** configuration command is used to configure DNS servers for Internet service.

Multiple domain name servers can be configured. If multiple domain name servers are configured, GeneOS accepts the first authoritative answer received from any server.

Dynamically learned domain name servers will be ignored if there are static ones configured.

Example

```
geneos(config)# ip name-server 10.0.0.173 source-interface lan
```

Default

By default there are no statically configured name servers, only those dynamically learned by DHCP.

History

This command was introduced in GeneOS 2.4.0.

See Also

show running-config

ip port-mapping-list interface

Context

configuration-root

Syntax

[no] ip port-mapping-list interface vlan<1-4094>[/<1-4>]

Configure port mapping rules for an interface.

[no] {permit | ignore} { tcp | udp } external-port <0-65535>[-<0-65535>] destination host <a.b.c.d> port <0-65535>

Configure DMZ.

[no] {permit | ignore} ip destination host <a.b.c.d>

Description

The **ip port-mapping-list interface** configuration command is used to define a set of port mapping rules associated with a particular interface. Port-mapping lists are used to control port forwarding based on external port, destination port and destination host for TCP or UDP.

A port-mapping list is identified by the name of the interface for which it has been defined. The port mapping rules are ordered by the sequence in which they are entered. Packets are checked against each rule in the port-mapping list. The rules with a non-zero external port are applied first and then the rules with external port specified as 0; as prescribed by TR-181. If more that one rule is defined with a non-zero external port value then these rules are applied in the order in which they are defined. The same is true if more than one rule is defined with external port specified as 0.

An **external-port** value of 0 results in all ports for the specified protocol on that interface being forwarded to the specified **destination host**.

A **destination port** value of 0 indicates that port translation is not performed, i.e. packet will be forwarded to the LAN side host with the same destination port number with which it was sent by the remote host.

If a packet is compared with all configured rules in the port mapping list and no match is found then the packet will be dropped by the firewall.

Entries in the port-mapping list can be removed by entering complete rule. The whole port-mapping list can be removed by only specifying the interface.

The underlying firewall configurations required for port forwarding are created automatically, no additional access-list rules need to be specified.

The port mapping command can also be used to define a DMZ host. In this case, the protocol **ip** is used, and **destination host** defines the DMZ host.

Only one entry can exist with the same protocol and **external-port** irrespective of the **interface**. Duplicate rules will result in undefined behaviour and a CLI error.

Example

```
geneos(config)# ip port-mapping-list interface vlan1
```

```
geneos(config-portmap)# permit tcp external-port 8080 destination host 192.168.1.33
 port 80
geneos(config-portmap)# ignore udp external-port 1-100 destination host
 192.168.1.123 port 44

geneos(config)# ip port-mapping-list interface vlan1/1
geneos(config-portmap)# ignore tcp external-port 2-20 destination host 192.168.1.21
 port 33
geneos(config-portmap)# permit udp external-port 8080 destination host 192.168.1.11
 port 80
```

Default

This command has no default value.

History

This command was introduced in GeneOS 2.3.0

See Also

show running-config

ip rule

Context

configuration-root

Syntax

[no] ip rule source-interface <source-interface-name> destination-interface <destination-interface-name> [priority <1-99999>]

This command configures classification and route rules.

Description

The **ip rule** command creates routing rules based on classification of the traffic. The **source-interface** option defines the classification as being by ingress interface name. **destination-interface** defines the egress interface.

Traffic is classified by rules in order, i.e. the first rule which is matched is used. The **priority** option value determines the sequence in which rules are used - the lower the **priority** value the earlier the rule is used to check for a match.

Example

```
geneos(config)#ip rule source-interface lan destination-interface vlan1
geneos(config)#ip rule source-interface lan destination-interface vlan100 priority
 20
geneos(config)#no ip rule source-interface lan destination-interface vlan100
 priority 20
```

Default

This command has no default value.

History

This command was introduced in GeneOS 2.2.0.

ipv6 address

Context

interface-vlan-configuration-root

Syntax

[no] ipv6 address dhcpv6

Configure IPv6 address using DHCP.

Description

The **ipv6 address** configuration command is used to set the IPv6 address for an interface.

IPv6 is enabled on the interface when an IPv6 address assignment method is defined using the **ipv6 address** command.

If the **dhcpv6** option is used a DHCPv6 client will be started to obtain an IPv6 address for the interface. The received IPv6 address can be seen with the **show interface** command.

Example

```
geneos(config)# interface vlan100
geneos(config-if-vlan)# ipv6 address dhcpv6
```

Default

By default IPv6 addresses are not defined for interfaces.

History

This command was introduced in GeneOS 3.0.0.

See Also

interface

show interface

vlan member

vlan untagged

logging console

Context

configuration-root

Syntax

[no] logging console <level>

Configure the logging level to the local system logger.

Description

The **logging console** configuration command controls which level of log messages are sent to the local system logger.

The logging levels are:

```
emergencies    System is unusable (level 0)
alerts         Immediate action needed (level 1)
critical       Critical conditions (level 2)
errors         Error conditions (level 3)
warnings       Warning conditions (level 4)
notifications  Normal but significant conditions (level 5)
informational  Informational messages (level 6)
debugging      Debugging messages (level 7)
```

The order are as listed above with emergencies as lowest, i.e. most critical, level and debugging as highest level messages. Only log messages of the specified level or lower will be sent to the local system logger.

This command does not affect the messages sent to a remote logger, e.g. one defined by the **logging server** command. Remote logging always sends unfiltered logging to the remote server, which can itself perform filtering if desired.

Example

```
geneos# logging console alerts
```

Default

The default level is **debugging**, i.e. all messages are logged.

History

This command was introduced in GeneOS 2.3.0

See Also

show logging

logging server

logging server

Context

configuration-root

Syntax

[no] logging server {<hostname> | <a.b.c.d>} [port <1-65535>]

Configure remote logging

Description

The **logging server** configuration command can be used to specify a remote host as a remote logging server. Either a hostname or IP address can be specified.

The default port of the remote logging server is the standard UDP port 514 for syslog. A different UDP port can be specified by using **port** option.

Example

```
geneos(config)# logging server syslog.example.com
geneos(config)# logging server 192.168.1.2 port 1000
```

Default

This command has no default value. If not configured, GeneOS only generates local logs.

History

This command was introduced in GeneOS 2.3.0

See Also

logging console

show logging

management source-interface

Context

configuration-root

Syntax

[no] management source-interface <interface>

Configure management source-interface

Description

The **management source-interface** configuration command sets the default interface to be used by management traffic, e.g NTP, CWMP, HTTP/TFTP (copy command) and ping.

It is recommended that suitable access control list (ACL) rules are defined and applied on the management interface to ensure secure access to the management interface.

Example

```
geneos(config)# management source-interface vlan100
```

Default

The default management source-interface is **vlan1**.

History

This command was introduced in GeneOS 2.1.0.

ntp server

Context

configuration-root

Syntax

[no] ntp server {<hostname> | <a.b.c.d>}

Configure an NTP server

Description

The **ntp server** configuration command is used to configure an NTP server. Either a host-name or an IP address can be specified.

Multiple (up to 5) servers may be defined using multiple entries. If communication to one server fails, another server will be used.

Example

```
geneos(config)# ntp server 0.europe.pool.ntp.org
geneos(config)# ntp server 203.0.113.1
```

Default

This command has no default value. NTP is disabled.

History

This command was introduced in GeneOS 2.3.0

ping

Context

executable-root

Syntax

ping { <hostname> | <a.b.c.d> } [source-interface <interface>] [count <1-65535>] [size <1-65507>] [timeout <1-255>]

Send ICMP echo request to a remote host.

Description

The **ping** command can be used to test network connectivity at IP level between the GeneOS system and a target. The **ping** command operates by sending ICMP echo request packets. A working TCP/IP stack will respond with ICMP echo reply packets. If reply packets are received from the target, the network segments and routers in between the current system and the target are capable of IP packet forwarding.

ICMP messages may be filtered by firewalls and other network devices, which means that if the **ping** attempt is unsuccessful, the cause might be something other than a broken network connection or router.

Once completed the **ping** command presents statistics for the session, indicating the number of packets sent and received, and a percentage of the number of packets lost. The minimum, average and maximum packet round trip is measured and presented.

The **ping** command may be interrupted by the CTRL-C key. If a hostname is specified, ping will try to resolve the hostname using the configured domain name server.

The options for this command include:

- **source-interface**: Sets the interface used to send out the packets
- **count**: Sets the number of ICMP echo packets to be transmitted
- **size**: Sets the ICMP data block size
- **timeout**: Seconds until ping exits (default:infinite)

History

This command was introduced in GeneOS 2.1.0

See Also

ping6

ping6

Context

executable-root

Syntax

ping6 { <hostname> | <ipv6 address> } [source-interface <interface>] [count <1-65535>] [size <1-65527>] [timeout <1-255>]

Send ICMPv6 echo requests to a remote host.

Description

The **ping6** command can be used to test network connectivity at IP level between the current GeneOS system and a target. The **ping6** command operates by sending ICMPv6 echo request packets. A working IPv6 stack will respond with ICMPv6 echo reply packets. If reply packets are received from the target, the network segments and routers in between the current system and the target are capable of IPv6 packet forwarding.

ICMPv6 messages may be filtered by firewalls and other network devices, which means that if the **ping6** attempt is unsuccessful, the cause might be something other than a broken network connection or router.

Once completed the **ping6** command present statistics for the session, indicating the number of packets sent and received and a percentage of the number of packets lost. The minimum, average and maximum packet round trip is measured and presented.

The **ping6** command may be interrupted by the CTRL-C key. If a hostname is specified, ping6 will try to resolve the hostname using the configured domain name server.

The options for this command include:

- **source-interface**: Sets the interface used to transmit the packets
- **count**: Sets the number of ICMPv6 echo packets to be transmitted
- **size**: Sets the ICMPv6 packet size
- **timeout**: Seconds until ping exits (default:infinite)

History

This command was introduced in GeneOS 3.0.0

See Also

ping

pool enable

Context

dhcp-server-pool-configuration-root

Syntax

[no] pool enable

Enable or disable a DHCP server pool.

Description

The **pool enable** command is used to enable or disable DHCP server pools.

Example

```
geneos(config-dhcp-pool)# pool enable
```

Default

By default DHCP server pools are disabled, with the exception of the default **cpe-lan** pool which is enabled by default.

History

This command was introduced in GeneOS 2.2.0.

See Also

dhcp server pool

pool option lease-time

pool size

pool option domain-name

Context

dhcp-configuration-root

Syntax

[no] pool option domain-name <domain name>

Define domain name to be set for LAN clients.

Description

The **pool option domain-name** configuration command is used to define the DHCP server pool domain name.

The "domain-name" option specifies the domain name for the LAN clients.

The maximum domain name length supported is 64 characters.

Example

```
geneos(config-dhcp-pool)# pool option domain-name example.net
```

Default

By default the domain-name is set to domain_not_set.invalid

History

This command was introduced in GeneOS 3.0.0.

See Also

dhcp server pool

pool enable

pool size

pool option lease-time

Context

dhcp-configuration-root

Syntax

[no] pool option lease-time <leasetime>

Define the DHCP server pool lease duration.

Description

The **pool option lease-time** configuration command is used to define the DHCP server pool lease time.

The "lease-time" option specifies the lease duration offered to DHCP clients in seconds.

Lease durations less than 120 seconds will be constrained to 120 seconds as very short lease durations can result in excessive load on the DHCP server.

Example

```
geneos(config-dhcp-pool)# pool option lease-time 120
```

Default

By default the lease duration of a pool is 86400 seconds (24 hours).

History

This command was introduced in GeneOS 2.2.0.

See Also

dhcp server pool

pool enable

pool size

pool size

Context

dhcp-server-pool-configuration-root

Syntax

[no] pool size start <min> end <max>

Define the DHCP server lease pool size

Description

The **pool size** configuration command is used to define a DHCP server lease pool for clients. The address pool is a range of continuous IP address resources, which can be dynamically offered to DHCP client hosts by the DHCP server.

The pool must be entirely within the network defined for the interface on which the DHCP server listens for DHCP lease requests. Pools should not use reserved IP address ranges, e.g. 0.0.0.0/8, 127.0.0.0/8, 224.0.0.0/4, 240.0.0.0/4 and 255.255.255.255/32

Example

```
geneos(config-dhcp-pool)# pool size start 172.30.30.106 end 172.30.30.120
```

Default

With the exception of the default pool **cpe-lan**, the default pool size is undefined, and must be defined for correct operation.

History

This command was introduced in GeneOS 2.2.0.

See Also

dhcp server pool

pool enable

pool option lease-time

pool option domain-name

queue-scheduling mode

Context

interface-wan-configuration-root

interface-lan-ethernet-configuration-root

Syntax

[no] queue-scheduling mode <sp | wrr>

Configure the queue scheduling mode for a specified interface

Description

The **queue-scheduling** command is used to configure the queue scheduling mode for a specified interface.

Each physical interface has four transmit queues for egress traffic. Each Layer 2 frame that needs to be transmitted is enqueued in one of the transmit queues. The transmit queues are then serviced based on the transmit queue scheduling algorithm. GeneOS supports the following queue scheduling algorithms:

- Strict Priority : **sp**

The queues in the selected interface are scheduled in Strict Priority (SP) order, i.e. all the frames in the highest priority queue are transmitted before the frames in the next highest priority queue, and so on until the lowest priority queue.

Under some conditions it is possible for frames in the lower priority queues to remain unsent because higher priority data always exists.

- Weighted Round Robin **wrr**

Some or all queues in the selected interface operate using Weighted Round Robin (WRR) scheduling. All queues not using WRR use Strict Priority scheduling.

In this mode, the all 4 queues, from Queue 3 to Queue 0, are assigned fixed weight: 8, 4, 2, 1.

Example

```
geneos(config-if-wan)#[no] queue-scheduling mode sp
geneos(config-if-lan-eth)# queue-scheduling mode wrr
```

Default

By default, all queues operate in **sp** mode.

History

This command was introduced in GeneOS 3.0.0.

See Also

cos map

rate-limit

quit

Context

executable-root

Syntax

quit

Logout from system

Description

The **quit** command terminates the current session.

When connected with an SSH connection, the connection is closed. When connected on the management port, the session is terminated and the login prompt is displayed again.

Any pending commands, e.g. **reload** with a delay, will be terminated and will not execute to completion, on the closure of the connection.

Example

```
geneos# quit
Connection to 192.168.1.254 closed.
```

History

This command was introduced in GeneOS 2.0.0.

rate-limit

Context

interface-wan-configuration-root

interface-lan-ethernet-configuration-root

Syntax

[no] rate-limit egress <0-1000000>

Set egress rate shaping for the specified Ethernet interface.

Description

The **rate-limit** command is used to configure egress rate shaping for the specified Ethernet interface.

Egress rate shaping limits the amount of data egressing the interface to the specified rate. Shaping is achieved by inserting delays between frames. Before transmission, the frames may be held in a buffer, which increases delay and possibly jitter. Some frames may be dropped because there is insufficient buffer space available.

You can specify a maximum rate in kilobits per second (kbps) between 0 kbps and 1000 Mbps for egress rate shaping.

Example

```
geneos(config)# interface wan
geneos(config-if-wan)# rate-limit egress 30000
geneos(config)# interface lan/ethernet2
geneos(config-if-lan-eth)# rate-limit egress 64000
```

Default

By default, there is no egress rate shaping on any layer 2 interface.

History

This command was introduced in GeneOS 3.0.0.

See Also

cos map

queue-scheduling mode

reload

Context

executable-root

Syntax

reload [in <0-86400>]

Reload the system

reload cancel

Cancel a pending reload

Description

The **reload** command is used to restart GeneOS and the system. The user is asked to validate the decision to reload - a capitalised character is the default behaviour, i.e. in this case to not reload the system.

The **in** keyword can be used to set the delay between the command execution and the actual restart of GeneOS.

The **reload cancel** command cancels any pending reload of the system. At the next restart the primary firmware image will be started.

Example

```
geneos# reload in 300
System will be reloaded in 300 seconds!

geneos# reload
Reboot the system. Are you sure [y/N]? y
Rebooting system
```

History

This command was introduced in GeneOS 2.0.0.

show catv status

Context

executable-root

Syntax

show catv status

Show CATV status

Description

The **show catv status** command is used to show the CATV RF Overlay status.

Example

```
geneos# show catv status
                    Enabled : 0
                     Status : Disabled
      FilterNumberOfEntries : 2
              FilterEnabled : 0
               FilterStatus : Disabled
 AutomaticGainControlStatus : Disabled
              RFOutputPower : 82.76 dBuV
          OpticalInputPower : -8.45 dBm
```

History

This command was introduced in GeneOS 2.3.0.

See Also

catv enable

catv filter

show clock

Context

executable-root

Syntax

show clock [monotime]

Display the system time

Description

The **show clock** command displays the current time and date of the system.

The **monotime** keyword displays the time in seconds and milliseconds since the system started.

In order to display accurate system time, the system needs to have access to an NTP server. If unable to retrieve real time information from an NTP server, GeneOS starts the clock from the compile time of the firmware being executed.

Example

```
geneos# show clock
Tue Jul 06 16:35:55 2010 UTC

geneos# show clock monotime
11297.45
```

History

This command was introduced in GeneOS 2.0.0.

See Also

show version

show cwmp status

Context

executable-root

Syntax

show cwmp status

Show CWMP status.

Description

The **show cwmp status** command is used to show the CPE WAN Management Protocol (TR-069) status.

The CWMP status will show parameter values in object *Device.ManagementServer.*.

Example

```
geneos# show cwmp status
               EnableCWMP : 1
                      URL : http://10.0.100.19:8080/dps/TR069
                 Username : 000F94-Lunar-G%2E0000010463
                 Password : ********
     PeriodicInformEnable : 1
   PeriodicInformInterval : 30
       PeriodicInformTime : 0001-01-01T00:00:00Z
             ParameterKey :
     ConnectionRequestURL : http://10.0.100.89:8082/acscall
ConnectionRequestUsername :
ConnectionRequestPassword :
          UpgradesManaged : 0
```

History

This command was introduced in GeneOS 2.1.0.

show dhcp client lease

Context

executable-root

Syntax

show dhcp client lease [interface <interface>]

Show DHCP client lease information.

Description

The **show dhcp client lease** command is used to show DHCP lease information requested and received by DHCP interface clients. This information includes lease status, received DHCP options and so on.

The renew, rebind and expire times indicate the estimated time remaining until the client will enter the RENEWING, REBINDING and DISCOVER states. The client may enter these states earlier or later than time indicated. A time of 0h0m0s indicates that the timer has expired and the change in state is pending. The DHCP client will observe the information in the T1 and T2 options (options 58 and 59), if present, else will use 50% and 87.5% of the lease time respectively as defined by RFC2131.

The *interface* keyword is used to show DHCP lease information for the DHCP clients on a specific interface.

Example

```
geneos# show dhcp client lease
           Interface : vlan1
         MAC Address :
          IP Address : 10.0.100.46
     Vendor Class Id : geneos-lunar-2.1.0-R,lunar,platinum-7840,dslforum.org
           Client-ID : ff000100010003000100f940016a0
           Server-ID : 10.0.0.102
         Next Server : 0.0.0.0
                File :
            Renew in : 71h44m25s
           Rebind in : 125h44m25s
           Expire in : 143h44m25s
        DHCP Options :
          Option   1 : netmask 255.255.0.0
          Option   3 : routers 10.0.0.1
          Option   6 : dns-server 10.0.0.102
          Option  12 : hostname
          Option  15 : domain-name lab.example.com
          Option  28 : broadcast 10.0.255.255
          Option  43 : vendor-info 010C4D532D55432D436C69656E7402056874747073
          Option 125 : V-I Vendor-specific Information

geneos#
```

History

This command was introduced in GeneOS 2.1.0

show dhcp server clients

Context

executable-root

Syntax

show dhcp server [pool <poolname>] clients

Display DHCP server clients

Description

The **show dhcp server clients** command is used to display information about DHCP server clients.

The client information includes the IP address, MAC address, hostname and lease expiry time. Some information, e.g. hostname, may not be present if not provided by the client.

Example

```
geneos# show dhcp server pool cpe-lan clients

Pool cpe-lan
Client          MAC address       Hostname                 Expires
-------------------------------------------------------------------------------
192.168.1.250   00:60:2f:da:fd:1c Mollies-iPad              2016-04-26T15:01:33Z
192.168.1.126   00:60:2f:9f:59:d2 NintendoDS                2016-04-26T15:21:25Z
192.168.1.130   60:10:cf:9f:69:d5 iPhone6                   2016-04-26T15:54:42Z
192.168.1.143   80:60:2f:9f:59:d2 *                        2016-04-26T15:32:33Z
192.168.1.188   20:70:43:2f:88:2e android-7afe168aef54e90b 2016-04-26T15:44:20Z
```

History

This command was introduced in GeneOS 2.2.0.

show gaps status

Context

configuration-root

Syntax

show gaps status

Display GAPS related information.

Description

The **show gaps status** command displays the following GAPS related information:

- whether GAPS client is enabled
- GAPS server location
- APS refresh time (in seconds)
- Last connection request time and the result
- Last session attempt time and the result
- Next scheduled session attempt time

Please note that the GAPS client functionality in GeneOS 2.2.0 is not complete. GAPS cannot be used to manage GeneOS at this time.

Example

```
geneos# show gaps status
    Client Enabled : 1
       GAPS Server : gaps.example.com
  APS Refresh Time : 7200
Connection Request : 2016-04-05T06:03:13Z SUCCESS
 Session Attempted : 2016-04-05T06:04:00Z TIMEOUT
      Next Session : 2016-04-05T08:04:13Z
```

Default

This command has no default value.

History

This command was introduced in GeneOS 2.2.0.

See Also

show dhcp client lease

show history

Context

executable-root

Syntax

show history [configuration]

Display the content of the command history buffer.

Description

The **show history** command displays a list of recently entered commands. There are two separate history lists, one for executable root context and one for configuration context. If **configuration** is specified the history from configuration context will be shown otherwise the history from executable root context will be shown.

The command history is stored per session.

Example

```
geneos# show history
000      sh ver
001      show ip route
002      conf t
003      show history
geneos# show history conf
000      interface lan
001      ip address 192.168.3.254/24
002      no shutdown
003      end
geneos#
```

History

This command was introduced in GeneOS 2.0.0.

show interface

Context

executable-root

Syntax

show interface [<interface>]

Display information about the network interfaces

Description

The **show interface** command displays information about physical and logical interfaces in the system. Information displayed includes MAC (HWAddr) and IP (inet and inet6) addresses (if any) on the interface and the status of the interface. In addition counters for packets and bytes sent and received on the interface is displayed. The counters include error counters to indicate bad packets sent or received. For configurable interfaces, the transmission speed and duplex mode are displayed for both administrative and operational state. The type of interface determines additional information.

Example

```
geneos# show interface
vlan1     Link encap:Ethernet  HWaddr 00:0F:94:BA:9D:E0
          inet addr:192.168.3.102  Bcast:192.168.3.255  Mask:255.255.255.0
          inet6 addr: fe80::20f:94ff:feba:9de0/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1586  Metric:1
          RX packets:45827 errors:0 dropped:186 overruns:0 frame:0
          TX packets:3509 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:2969918 (2.8 MiB)  TX bytes:642979 (627.9 KiB)

wan is administratively up, line protocol is up
  Duplex auto (full), Speed auto (1000), Flow-control disabled (disabled)
  45846 packets input, 3796020 bytes, 0 input errors
    0 input queue drops, 0 unknown protocols
    35184 broadcasts, 7971 multicasts, 0 pause
    0 runts, 0 oversized, 0 CRC
    0 jabbers, 0 fragments, 0 symbol, 0 alignment
  3529 packets output, 676041 bytes, 0 output errors
    0 output queue drops
    426 broadcasts, 19 multicasts, 0 pause
    0 collisions, 0 deferred

lan/ethernet1 is administratively up, line protocol is up
  Duplex auto (full), Speed auto (1000), Flow-control disabled (n/a)
  504651 packets input, 52075744 bytes, 0 input errors
    0 input queue drops, 0 unknown protocols
    400588 broadcasts, 72932 multicasts, 0 pause
    0 runts, 0 oversized, 0 CRC
    0 jabbers, 0 fragments, 0 symbol, 0 alignment
  31085 packets output, 2012389 bytes, 0 output errors
    0 output queue drops
    14 broadcasts, 40 multicasts, 0 pause
    0 collisions, 0 deferred

wlan1
  SSID GNX2814BE
  Authentication WPA-WPA2-Personal, Encryption aes
  Mac address 00:0f:94:ba:9d:e4, 0 clients connected
  Radio enabled, Channel 7
```

```
  180 packets input, 32583 bytes, 0 input errors
    0 input queue drops, 0 unknown protocols
    0 broadcasts, 0 multicasts, 0 pause
    0 runts, 0 oversized, 0 CRC
    0 jabbers, 0 fragments, 0 symbol, 0 alignment
  182 packets output, 58052 bytes, 0 output errors
    5 output queue drops
    0 broadcasts, 0 pause
    408 collisions, 0 deferred

wlan2
  SSID GNX2814BE
  Authentication WPA-WPA2-Personal, Encryption aes
  Mac address 00:0f:94:ba:9d:e5, 0 clients connected
  Radio enabled, Channel 100

  0 packets input, 0 bytes, 0 input errors
    0 input queue drops, 0 unknown protocols
    0 broadcasts, 0 multicasts, 0 pause
    0 runts, 0 oversized, 0 CRC
    0 jabbers, 0 fragments, 0 symbol, 0 alignment
  17 packets output, 1505 bytes, 0 output errors
    2198863872 output queue drops
    0 broadcasts, 0 pause
    0 collisions, 0 deferred
```

History

This command was introduced in GeneOS 2.0.0.

show ip access-list

Context

root

Syntax

show ip access-list [<name>]

Show configured access-lists.

Description

The **show ip access-list** command displays the currently configured access-lists in the system. In the first line of the result, the number of entries and the number of hits of the implicit deny are displayed. For each entry in the list, the number of packets that have matched the entry is also displayed.

If **name** is specified, only the specified access-list is displayed, otherwise all access-lists are displayed.

The internal storage of configuration commands may result in rules being displayed in a different format to how they were originally defined. This is because some commands are synonymous, i.e. functionally identical commands may be defined using multiple syntaxes, e.g.

```
geneos(config-acl)# permit ip protocol 6 source any destination any port 80
geneos(config-acl)# permit tcp source any destination any port 80
```

Internally synonymous commands are stored in a single format, which means that since commands are shown in their simplest form when displayed, the format in which synonymous commands are displayed may not be the same as originally entered.

Example

```
geneos# show ip access-list my-acl
IP access-list my-acl (2 entries, 5 implicit denies)
  seq 10 deny ip 192.168.1.0/24 (2 hits)
  seq 20 permit ip any any (250 hits)
```

Default

This command has no default value.

History

This command was introduced in GeneOS 2.1.0

See Also

ip access-list

ip access-group

show ip igmp snooping

Context

executable-root

Syntax

show ip igmp snooping

Show IGMP snooping information

Description

The **show ip igmp snooping** command displays the VLAN, group address, snooping interface.

Example

```
geneos# show ip igmp snooping
VID   Group         Snooped interface   Version   Mode
1     230.1.1.2       lan/ethernet1       V2      L2
1     230.1.1.2       lan/ethernet2       V2      L2
```

History

This command was introduced in GeneOS 3.0.0.

See Also

ip igmp snooping

show ip route

Context

executable-root

Syntax

show ip route

Show system routing table

Description

The **show ip route** command displays the system routing table. The system routing table consist of routes determined from routing protocols, static routes and connected subnets

Example

```
geneos# show ip route
vlan1
default via 172.25.123.1 dev vlan1

vlan100
default via 172.25.125.1 dev vlan100

main
172.25.123.0/24 dev vlan1
172.25.125.0/24 dev vlan100
192.168.1.0/24 dev lan

geneos#
```

History

This command was introduced in GeneOS 2.2.0.

show ipv6 neighbors

Context

executable-root

Syntax

show ipv6 neighbors

Show system IPv6 neighbors.

Description

The **show ipv6 neighbors** command displays information about IPv6 neighbors. IPv6 neighbors are created according to the IPv6 Neighbor Discovery (ND) protocol, which is used to resolve an IPv6 address into the corresponding link-layer address.

It shows all currently known IPv6 neighbors, their IPv6 address and hardware address (MAC), on which interface the neighbor is known to be connected, router or host, and current status. A router is capable to forward IPv6 packets not explicitly addressed to itself, while a host is not.

The status of IPv6 neighbor includes:

- **INCOMPLETE** A solicitation has been sent, but no reply has been received yet. In this state, there is no hardware address to use.
- **REACHABLE** The neighbor is known to be reachable.
- **FAILED** The neighbor is unreachable because of a failed solicitation request.
- **STALE** The address of the neighbor has not been confirmed for a certain amount of time. The next time a packet is sent to the neighbor, the reachability verification process will be started.
- **DELAY** This state is entered when a packet is sent to a neighbor who is in STALE state.
- **PROBE** This state is entered when the neighbor has been in the DELAY state for the allotted amount of time and no proof of reachability has been received, and the solicitation process starts.

Example

```
geneos# show ipv6 neighbors
IPv6 address                            Interface   HW address        R/H    Status
2001:db8:0:1::129                       vlan1       00:17:a4:e2:1f:a0 router
 REACHABLE
fe80::2422:98b7:9743:aae2               vlan1/1     00:26:b9:d9:76:ab host   STALE
geneos#
```

History

This command was introduced in GeneOS 3.0.0.

show ipv6 route

Context

executable-root

Syntax

show ipv6 route

Show system routing table for IPv6 routes

Description

The **show ipv6 route** command displays the system routing table for IPv6 Routes. The system routing table consist of routes determined from routing protocols, static routes and connected subnets

Example

```
geneos# show ipv6 route
vlan1
default from :: via fe80::260:2fff:fe7c:949f dev vlan1
default from 2001:db8:1200::100 via fe80::260:2fff:fe7c:949f dev vlan1
default from 2001:db8:1200::/64 via fe80::260:2fff:fe7c:949f dev vlan1
default from 2001:db8:1290::/48 via fe80::260:2fff:fe7c:949f dev vlan1
2001:db8:1200::/64 dev vlan1

main
2001:db8:1290::/64 dev lan
fd33:205b:a55f::/64 dev lan
fe80::/64 dev lan
fe80::/64 dev vlan1

geneos#
```

History

This command was introduced in GeneOS 3.0.0.

show logging

Context

executable-root

Syntax

show logging [facility <facility>] [level <level>]

Display the system log.

Description

The **show logging** command displays all system log entries at importance level "notifications" and above by default. Each line is prefixed by a time stamp, facility, level, process or user followed by the log message.

It is possible to display facility specific log by using the optional "facility" argument. The logging facilities include:

```
auth        Authorization system
authpriv    Private authorization system
cron        Cron/at facility
daemon      System daemons
ftp         FTP daemon
kern        Kernel
local0      Local use
local1      Local use
local2      Local use
local3      Local use
local4      Local use
local5      Local use
local6      Local use
local7      Local use
lpr         Line printer system
mail        Mail system
news        USENET news
syslog      Syslog itself
user        User process
uucp        Unix-to-Unix copy system
```

The following local facilities are reserved for some internal applications:

```
local0      Reserved for local SIP application.
local1      Reserved for local CWMP application (DSL Forum TR069).
local4      Reserved for local GAPS application
```

It is possible to display log entries of specific importance level and above by using "level" argument. The logging levels are:

```
emergencies    System is unusable (level 0)
alerts         Immediate action needed (level 1)
critical       Critical conditions (level 2)
errors         Error conditions (level 3)
warnings       Warning conditions (level 4)
notifications  Normal but significant conditions (level 5)
informational  Informational messages (level 6)
debugging      Debugging messages (level 7)
```

The lower the value, the higher the importance level. The "emergencies" is the highest level (level 0), and reversely the "debugging" is the lowest level (level 7). And the default log level is "notifications".

Example

```
geneos# show logging
geneos# show logging facility user
geneos# show logging level informational
geneos# show logging facility daemon level warnings
```

History

This command was introduced in GeneOS 2.0.0.

show running-config

Context

executable-root

Syntax

show running-config [context <string> | debug | group <string>]

Displays the active system configuration

Description

The **show running-config** command displays the currently running system configuration to the terminal. The option **context** shows a specified context, **debug** shows configuration debugging (including group membership) and **group** shows specified group of configuration commands from config.

Example

```
geneos# show runn
! version geneos-lunar-2.2.0-RC2
!cwmp acs username "000F94-Lunar-W%2E0000430060" password ""

!dhcp server pool cpe-lan
 !pool enable
 pool size start 192.168.0.64 end 192.168.0.253

!management source-interface vlan1

ip rule source-interface lan destination-interface vlan1

username "operator" password ""
username "admin" password ""

wlan country gb

interface lan
 ip address 192.168.0.254/24

interface lan/ethernet1
 !vlan member 4001
 !vlan untagged 4001

interface lan/ethernet2
 !vlan member 4001
 !vlan untagged 4001

interface lan/ethernet3
 !vlan member 4001
 !vlan untagged 4001

interface lan/ethernet4
 !vlan member 4001
 !vlan untagged 4001

interface vlan1
 ip access-group wan in
 !ip address dhcp

interface wan
 !vlan member 1
 !vlan untagged 1
```

```
interface wlan1

interface wlan2

ip access-list voice

ip access-list wan
 seq 10 permit tcp source any destination any port 22
 seq 20 permit tcp source any destination any port 443

voice
 !country nl
 !dial plan "(xx.T)"

voice line 1

voice line 2
!end
```

History

This command was introduced in GeneOS 2.0.0.

show tech-support

Context

executable-root

Syntax

show tech-support [all | l2 | routing | voip]

Display technical information about the system.

Description

The **show tech-support** command executes a set of show commands. The output of the **show tech-support** command contains valuable information to assist Genexis Support in resolving issues.

The **all** keyword generates a complete tech support output. The **routing** keyword generates routing related tech support output. The **l2** keyword generates Layer 2 related tech support output. The **voip** keyword generates VoIP related tech support output.

Example

```
geneos# show tech-support
```

History

This command was introduced in GeneOS 2.0.0.

show version

Context

executable-root

Syntax

show version

Display system hardware and software status

Description

The **show version** command display information about the system hardware and software.

Example

```
geneos# show version
Genexis Operating System (GeneOS)
Copyright (c) 2009-2015 Genexis B.V. All rights reserved.

GeneOS version: geneos-lunar-2.0.0-R
Compiled: Fri May 7 18:16:47 BST 2015
Source ID: bccf6c116e14723d70177852888cb59661426271
           8ea5f9be804cbf32c91d59678228c4894b563b76

Uptime is 1D22h36m40s
Last boot: unknown

Bootloader version: bootloader-lunar-2.0.0-R
Bootstrap version: bootstrap-lunar-2.0.0-R

Product name: Platinum-7840
Product number: 99615015
Product revision: 1.0
Product date: 2015-05-18
Serial number: G.0000010539
Base MAC address: 000F94001A60
```

History

This command was introduced in GeneOS 2.0.0.

show voip status

Context

executable-root

Syntax

show voip status

Show voice line registration and handset status.

Description

The **show voip status** command is used to show the connection and handset status of voice lines.

The connection status may take one of the values described in the following table.

Table 3. VoIP Connection Status

Status	Comment
Registered	Line registered to proxy
Unregistered	Line is not registered to proxy
Incomplete	Incomplete configuration

The line status may take one of the following values described in the following table.

Table 4. VoIP Line Status

On-hook	Handset on-hook, or no handsets present
Off-hook	Handset off-hook
Ringing	Line is currently ringing
Not initialized	Line is not initialized or other error

Example

```
geneos# show voip status
Voice line    Connection status         Line status
1             Registered                On-hook
2             Incomplete                On-hook

geneos# show voip status
Voice line    Connection status         Line status
1             Registered                Off-hook
2             Unregistered              On-hook
```

History

This command was introduced in GeneOS 2.2.0.

shutdown

Context

interface-wan-configuration-root

interface-lan-ethernet-configuration-root

interface-wlan-configuration-root

Syntax

[no] shutdown

Configure interface administrative status

Description

The **shutdown** configuration command is used to administratively disable an interface.

When used on an interface such as the Ethernet interfaces, the command disables receiving and transmitting data on the interface.

Example

```
geneos(config)# interface lan/ethernet1
geneos(config-if-lan-eth)# shutdown
geneos(config-if-lan-eth)# no shutdown
```

Default

Default behaviour is interface type and product class dependent. Default behaviour for the wan, vlan1 and wireless interfaces (if present) is not shutdown.

LAN Ethernet interfaces are not shutdown on layer3 products, and are shutdown on layer2 products.

History

This command was introduced in GeneOS 2.0.0.

sip domain

Context

voice-line-configuration-root

Syntax

[no] sip domain <domainname>

Set the domain of the SIP client.

Description

The **sip domain** configuration command is used to set the domain of the SIP client.

The SIP domain will be used by the voice line, to register the SIP client with a SIP registrar.

Example

```
geneos(config)# voice line 1
geneos(config-voice-line)# sip domain voice.example.com
geneos(config-voice-line)# no sip domain
```

Default

There is no default SIP domain.

History

This command was introduced in GeneOS 2.2.0.

See Also

sip proxy

sip username

sip phone-number

sip phone-number

Context

voice-line-configuration-root

Syntax

[no] sip phone-number { <phone-number> | <sip-uri> }

Set the phone number or identity of a voice line.

Description

The **sip phone-number** configuration command is used to set the phone number or identity of current voice line. If a SIP-URI is configured, it is used as-is for SIP signaling. The SIP-URI scheme is defined in RFC3261, and consists of an address in the familiar email address user@domain.tld [mailto:user@domain.tld] form, e.g.

sip:1-999-123-4567@voip-provider.example.net

If the configured value does not conform to the SIP-URI scheme, then a SIP-URI value is formed from the **phone-number** option value and the **sip domain** value as follows:

sip:[phone-number]@[domain]

If a **sip domain** value is not defined, then the voice service interface IP address is used instead.

Example

```
geneos(config)# voice line 1
geneos(config-voice-line)# sip phone-number 901511
geneos(config-voice-line)# sip phone-number +862115000774328
geneos(config-voice-line)# sip phone-number Fred-Smith.IT
geneos(config-voice-line)# sip phone-number "foo bar"
geneos(config-voice-line)# sip phone-number sip:foo@example.net
geneos(config-voice-line)# sip phone-number sip:+46-8-555-1234@example.com
```

Default

There is no default SIP phone number.

History

This command was introduced in GeneOS 2.2.0.

See Also

sip domain

sip username

sip proxy

sip proxy

Context

voice-line-configuration-root

Syntax

[no] sip proxy { <a.b.c.d> | <hostname> } [port <1-65535>]

Set the SIP proxy for one voice line.

Description

The **sip proxy** configuration command is used to set the address and port of the SIP proxy for the current voice line.

Before using the voice service on a voice line, you need to configure the SIP proxy.

You can use an IPV4 address (a.b.c.d) or a hostname to specify the location of the SIP proxy. To specify a port other than the default port, use the **port** parameter.

If an IP address is not specified, then the procedure defined in RFC3263 is followed to locate the SIP proxy using NAPTR and SVR records. In this case any port value defined in the command is ignored if a port value is returned by the SVR record lookup. If the RFC3263 procedure does not locate the SIP proxy, then a normal DNS lookup is performed on the hostname.

Example

```
geneos(config)# voice line 1
geneos(config-voice-line)# sip proxy 192.168.10.8 port 4086
geneos(config-voice-line)# sip proxy example.com
```

Default

No default SIP proxy is defined. If no SIP proxy is configured on a voice line, the voice service is disabled on the line.

The default port used on the SIP proxy is 5060.

History

This command was introduced in GeneOS 2.2.0.

See Also

sip domain

sip phone-number

sip username

Context

voice-line-configuration-root

Syntax

[no] sip username <username> password <password>

Set the SIP user name and password of a voice line.

Description

The **sip username** configuration command is used to set the SIP username and password of the current voice line.

The SIP username and password are used for SIP authentication.

Example

```
geneos(config)# voice line 1
geneos(config-voice-line)# sip username foo password foobar
```

Default

There is no default SIP user.

History

This command was introduced in GeneOS 2.2.0.

See Also

sip proxy

sip domain

sip phone-number

test logging

Context

executable-root

Syntax

test logging message <level> <message>

Log a test message

Description

The **test logging** command can be used to test logging a message. The **level** keyword sets the level of the logged message and can be one of the following: emergencies, alerts, critical, errors, warnings, notifications, informational or debugging.

Example

```
geneos# test logging message info "This is a test message"
```

History

This command was introduced in GeneOS 2.3.0

See Also

show logging

username

Context

configuration-root

Syntax

[no] username <username> password <password> [encrypted]

Configure password for a local user

Description

The **username** configuration command is used to create or modify an existing local user.

The **password** keyword is used to configure the password the user must enter to gain access to the system. The password can be entered as cleartext or an encrypted string.

The system accepts passwords encrypted with the SHA-512, SHA-256 and MD5 hash algorithms. Note that MD5 is considered insecure and is not recommended. Encrypted passwords should be in the format N<salt>$<hash> as used by the crypt() function on most UNIX systems. Use the **encrypted** keyword to indicate that the password is already encrypted. Otherwise, the system will apply the crypt() function on the clear text entered to create the encrypted password shown in the configuration. Cleartext passwords will be encrypted with the SHA-512 algorithm.

Example

```
geneos(config)# username operator password verysecret
geneos(config)# username operator password $6$APVdp7wAB$Rf2k8JOQg0gBjyxBtQIt8xdi \
        9nq9CocxEQ91geWsD8aOMNYdJ7Uu9bcm5JgGG6pG.JlbsaCfenkeh31RNp40rI1 encrypted
```

Default

By default two users are defined

Table 5. Default users and passwords

User	Password	Rights
operator	"operator"	Command line access
admin	Device-specific	GUI access

History

This command was introduced in GeneOS 2.2.0.

vlan member

Context

interface-wan-configuration-root

interface-lan-ethernet-configuration-root

interface-wlan-configuration-root

Syntax

[no] vlan member <1-4094>

Configure interface VLAN membership

Description

The **vlan member** configuration command defines the VLANs to which an interface is a member.

Only 802.1Q tagged Ethernet frames matching the configured VLANs will be allowed to be sent and received on the interface. Any frames with a VLAN tag for other VLANs will be dropped.

Example

```
geneos(config)# interface wan
geneos(config-wan)# vlan member 1,2,10-18,20
geneos(config-wan)# no vlan member 2
```

Default

The default configuration for the **wan** interface is **vlan member 1** and is **vlan member 4001** for the lan/ethernetX interfaces.

History

This command was introduced in GeneOS 2.0.0.

See Also

vlan untagged

vlan untagged

Context

interface-wan-configuration-root

interface-lan-ethernet-configuration-root

interface-wlan-configuration-root

Syntax

[no] vlan untagged <1-4094> [priority <0-7>]

Configure interface untagged VLAN

Description

The **vlan untagged** configuration command defines the untagged VLAN for an interface. Only one untagged VLAN may be defined per interface. The interface will operate in untagged mode. Any untagged Ethernet frames received from the interface will also be received by that VLAN interface. The 802.1Q header will be stripped (if present) of any Ethernet frame from that VLAN interface being sent out the configured interface.

The **priority** keyword can be used to specify which priority should be set in the 802.1Q header that will be added to received untagged frames.

An interface that is a member of more than one VLAN and uses untagged mode for one of those VLANs will forward tagged frames ingressing the interface. It should be noted that tagged frames egressing the interface will always have their untagged VLAN tag stripped.

Example

```
geneos(config)# interface wan
geneos(config-wan)# vlan member 1,2,10-18,20
geneos(config-wan)# vlan untagged 2
```

Default

The default configuration for the **wan** interface is **vlan untagged 1** and is **vlan untagged 4001** for the lan/ethernetX interfaces.

The default priority for all VLANs is 0.

History

This command was introduced in GeneOS 2.0.0.

See Also

vlan member

voice

Context

configuration-root

Syntax

voice [line <number>]

Enter "voice" or "voice line" context

Description

The **voice** command is used to enter the "voice" context or one of "voice line" contexts.

The "voice" context is used for global voice configuration. Any command executed in the "voice" context will affect all voice lines.

Each voice line also has a "voice line" context. The line number is used to identify a "voice line" context. Any command executed in a "voice line" context will only affect that specfic voice line.

Example

```
geneos(config)# voice
geneos(config-voice)# exit
geneos(config)# voice line 2
geneos(config-voice-line)# exit
```

Default

This command has no default value.

History

This command was introduced in GeneOS 2.2.0.

voip media dscp

Context

voice-configuration-root

Syntax

[no] voip media dscp <0-63>

Configure DiffServ code point for outgoing media packets.

Description

The **voip media dscp** configuration command is used to set the 6-bit DSCP (Differentiated Services Code Point) field value in the header of outgoing voip media IP packets.

Example

```
geneos(config)# voice
geneos(config-voice)# voip media dscp 20
```

Default

The default dscp value for outgoing media packets is 0.

History

This command was introduced in GeneOS 2.2.0.

See Also

voip media priority

voip signaling dscp

voip signaling priority

voip media priority

Context

voice-configuration-root

Syntax

[no] voip media priority <0-7>

Configure Ethernet priority(802.1p) tag for outgoing RTP frames.

Description

The **voip media priority** configuration command is used to set the Ethernet priority(802.1p) tag value for outgoing voip media frames.

Example

```
geneos(config)# voice
geneos(config-voice)# voip media priority 3
```

Default

The default priority value for outgoing media frame is 0.

History

This command was introduced in GeneOS 2.2.0.

See Also

voip media dscp

voip signaling dscp

voip signaling priority

voip media source-interface

Context

voice-configuration-root

Syntax

[no] voip media source-interface <interface>

Configure source interface for outgoing voip media packets.

Description

The **voip media source-interface** configuration command is used to set the source interface for outgoing media packets. All the voip media packets will be sent out from the specified Layer 3 interface.

Example

```
geneos(config)# voice
geneos(config-voice)# voip media source-interface vlan200
```

Default

The default source interface for outgoing media packets is **vlan1**.

History

This command was introduced in GeneOS 2.2.0.

See Also

voip signaling source-interface

voip signaling dscp

Context

voice-configuration-root

Syntax

[no] voip signaling dscp <0-63>

Configure DiffServ code point for outgoing signaling packets.

Description

The **voip signaling dscp** configuration command is used to set the 6-bit DSCP(Differentiated Services Code Point) field value in the header of outgoing voip signaling IP packets.

Example

```
geneos(config)# voice
geneos(config-voice)# voip signaling dscp 10
```

Default

The default dscp value for outgoing signaling packets is 0.

History

This command was introduced in GeneOS 2.2.0.

See Also

voip media dscp

voip media priority

voip signaling priority

voip signaling priority

Context

voice-configuration-root

Syntax

[no] voip signaling priority <0-7>

Configure ethernet priority(802.1p) tag for outgoing signaling frames.

Description

The **voip signaling priority** configuration command is used to set the ethernet priority(802.1p) tag value for outgoing voip signaling frames.

Example

```
geneos(config)# voice
geneos(config-voice)# voip signaling priority 3
```

Default

The default priority value for outgoing signaling frame is 0.

History

This command was introduced in GeneOS 2.2.0.

See Also

voip media dscp

voip media priority

voip signaling dscp

voip signaling source-interface

Context

voice-configuration-root

Syntax

[no] voip signaling source-interface <interface>

Configure source interface for outgoing voip signaling packets.

Description

The **voip signaling source-interface** configuration command is used to set the source interface for outgoing signaling packets. All the voip signaling packets will be sent out from the specified Layer 3 interface.

Example

```
geneos(config)# voice
geneos(config-voice)# voip signaling source-interface vlan100
```

Default

The default source interface for outgoing signaling packets is **vlan1**.

History

This command was introduced in GeneOS 2.2.0.

See Also

voip media source-interface

wlan bandwidth

Context

configuration-root

Syntax

[no] wlan 2g bandwidth { 20 | 40 }

[no] wlan 5g bandwidth { 20 | 40 | 80 }

Configure wireless LAN (802.11 a/b/g/n/ac) channel bandwidth

Description

The command **wlan bandwidth** configures the preferred wireless channel bandwidth to use for the specified band, which is **2g** for 2.4GHz band and **5g** for 5GHz band.

The default channel bandwidth for 2.4GHz band is 40MHz. 40MHz bandwidth should provide better throughput than 20MHz, but is only used in the presence of a clean radio environment. IEEE802.11 requires that the channel bandwidth falls back to 20MHz in the presence of other wireless APs, which is generally the case in urban environments.

The default channel bandwidth for the 5GHz band is 80MHz.

Example

```
geneos(config)# wlan 2g bandwidth 20
geneos(config)# wlan 5g bandwidth 40
geneos(config)# wlan 5g bandwidth 80
```

Default

By default, the channel bandwidth is 40MHz on the 2.4GHz band and 80MHz on the 5GHz band for 802.11ac-capable radios.

History

This command was introduced in GeneOS 2.2.0.

See Also

wlan channel

wlan channel

Context

configuration-root

Syntax

[no] wlan [2g|5g] channel <channel-number>

Configure wireless LAN (802.11 a/b/g/n/ac) channel number

Description

The command **wlan channel** configures the preferred wireless channel to use for the specified band, which is **2g** for 2.4GHz band and **5g** for 5GHz band. If **2g** or **5g** is omitted, this setting is applied to the 2.4 GHz band.

IEEE802.11 wireless devices use specific, unlicensed radio frequencies in the 2.4GHz and 5GHz bands. Each band is divided into multiple channels, and relevant regulatory organisations define the specific channels which may be used in the countries under their regulatory control.

Example

```
geneos(config)# wlan 2g channel 11
geneos(config)# wlan 5g channel 40
```

Default

By default, GeneOS performs *auto* channel selection which means GeneOS automatically selects the best channel for the selected band. The channel selected is dependant upon the configured country

History

This command was introduced in GeneOS 2.2.0.

wlan country

Context

configuration-root

Syntax

[no] wlan country <country-code>

Configure wireless LAN (802.11 a/b/g/n/ac) country code

Description

The **wlan country** command specifies the radio regulatory domain.

The 802.11 wireless device currently use three distinct frequency ranges, 2.4 GHz, 3.6 GHz and 4.9/5.0 GHz bands. Each range is divided into multitude of channels. Countries apply their own regulations to both the allowable channels and allowed maximum power levels within these frequency ranges. GeneOS uses **wlan country** to set the country settings for all WLAN bands and interfaces.

The country specifies the country code, which represent certain geographical regulatory domains. Each domain has its own regulation for wireless device's radio parameter like supported channels and transmission power. So the country parameter will affect the available channels and transmission powers. The country code is defined in ISO-3166 and in the format of short names in English, for example, *se* stands for Sweden. The complete list is available at http://www.iso.org/iso/home/standards/country_codes/iso-3166-1_decoding_table.htm.

After setting the country, you may use **wlan channel** to set the preferred channel for that regulatory domain. In general, selecting the *auto* channel is recommended.

Regulatory bodies define the channels which may be used in each band in the geographical regions under their jurisdiction. Use of channels which are not defined to be used in a particular jurisdiction is illegal. It is the responsibility of the operator to configure the correct country setting for the geographical region in which the device is being used. Failure to do so, or using a different country, may result in operation of the wireless network which contravenes the regulations of the regulatory body, and may result in fines or other penalties against the operator. Genexis is not responsible for any penalties against an operator for failure to comply with local regulatory requirements.

Example

```
geneos(config)# wlan country se
```

Default

The default value for country is *se*.

History

This command was introduced in GeneOS 2.2.0.

wlan mode

Context

configuration-root

Syntax

[no] wlan 2g mode {11b|11g|11n|11bg|11gn|11bgn}

[no] wlan 5g mode {11a|11n|11ac|11an|11nac|11anac}

Configure wireless LAN mode of operation (802.11 a/b/g/n/ac).

Description

The **wlan mode** command sets the wireless standard used for the WLAN in the specified wireless band (2.4GHz or 5GHz). If supported by the platform hardware, GeneOS supports the following modes and combinations thereof on the 2.4GHz band: 802.11b, 802.11g and 802.11n, and the following modes and combinations thereof on the 5GHz band: 802.11a, 802.11n and 802.11ac.

Example

```
geneos(config)# wlan 2g mode 11bgn
geneos(config)# wlan 5g mode 11an
geneos(config)# wlan 5g mode 11anac
```

Default

On the 2.4GHz band, the default mode is **11bgn**. On the 5GHz band, the default mode is **11anac**.

History

This command was introduced in GeneOS 2.2.0. The default modes were changed in GeneOS 3.0.0.

wlan security authentication

Context

interface-wlan-configuration-root

Syntax

[no] wlan security authentication wpa-wpa2

[no] wlan security authentication wpa2

Configure WLAN security authentication and encryption mode.

Description

The **wlan security authentication** configuration command sets the security parameters for wireless network. Because wireless networks operate by sending information over radio waves, they can be more vulnerable to intruders than traditional wired network. Since it is impossible to physically prevent someone from connecting to the wireless network, some additional measures are needed to keep the network secure. The authentication for the wireless client's access and encryption for the wireless data are the most common security measures.

When a wireless client connects to the network, the Access Point can use different methods to authenticate the client. There are two authentication methods that can be selected: WPA2-Personal and WPA+WPA2-Personal.

WPA2-Personal is an advanced and secure authentication method, using AES (CCMP) encryption.

The WPA+WPA2-Personal allows WPA as well as WPA2 authentication methods. WPA uses TKIP encryption and is considered less secure than WPA2 with AES, but can be enabled for compatiblity with older wireless clients.

Example

```
geneos(config)# interface wlan1
geneos(config-if-wlan)# wlan security authentication wpa-wpa2
geneos(config-if-wlan)# wlan security passphrase "pfse1234"
geneos(config)# interface wlan2
geneos(config-if-wlan)# wlan security authentication wpa2
geneos(config-if-wlan)# wlan security passphrase "4321esfp"
```

Default

By default, the wireless authentication mode is WPA+WPA2-Personal, the encryption method is TKIP+AES, and the encryption key is device specific and can be found on label on rear of the unit.

History

This command was introduced in GeneOS 3.0.0.

See Also

wlan security passphrase

wlan security passphrase

Context

interface-wlan-configuration-root

Syntax

[no] wlan security passphrase "passphrase"

Configure wlan security passphrase.

Description

The **wlan security passphrase** configuration command sets the security passphrase used for encryption. Because wireless networks operate by sending information over radio waves, they can be more vulnerable to intruders than traditional wired network. Since it is impossible to physically prevent someone from connecting to the wireless network, some additional measures are needed to keep the network secure.

The passphrase is used to generate authentication keys, which allow the clients to authenticate themselves to the access point. The minimum and maximum passphrases lengths are 8 and 63 characters respectively.

Example

```
geneos(config)# interface wlan1
geneos(config-if-wlan)# wlan security passphrase "pfse1234"
geneos(config)# interface wlan2
geneos(config-if-wlan)# wlan security passphrase "R4%vS9%^!X-"
```

Default

By default, the passphrase is device specific and can be found on the device label

History

This command was introduced in GeneOS 2.2.0.

wlan ssid

Context

interface-wlan-configuration-root

Syntax

[no] wlan ssid <ssid>

Configure wireless LAN (802.11 a/b/g/n/ac) SSID

Description

The **wlan ssid** configuration command specifies the SSID of the wireless network. The SSID is the network name shared among all points in a wireless network. The SSID must be identical for all devices in the wireless network.

The SSID is case-sensitive, may use any UTF-8 (ASCII) printable character and must not exceed 32 characters. Ensure this setting is the same for all access points in your wireless network.

Example

```
geneos(config-if-wlan)# wlan ssid "Example ssid! *%"
```

Default

The default SSID is device-specific, and its value can be found on the device label. The default SSID is the same for 2.4GHz and 5GHz bands to allow clients to easily swap between bands."

History

This command was introduced in GeneOS 2.2.0.

write erase

Context

executable-root

Syntax

write erase

Erase persistently stored configuration

Description

The **write erase** command erases the storage of the system configuration. It removes the currently stored system configuration from persistent memory.

Example

```
geneos# write erase
```

History

This command was introduced in GeneOS 2.1.0.