CLI Commands

The CLI is designed around a tree structure of the configuration settings. This configuration tree best represents the configuration data the operator needs to modify. This data tree is manipulated directly, and no "set" keyword is necessary. However, the following commands are implemented to allow the operator to work with the other aspects of the modem. All index numbers used are 1's based unless otherwise specified.

Global Commands

The following CLI commands are available from **all contexts**.

---

apply   command

Description:

When a configuration setting is changed, the new configuration is not activated immediately. New Configuration will be activated in the system only when the "apply" command is executed,

Warning:

- The apply command does not save the configuration in flash memory. Apply only modifies the running configuration in RAM
- The apply command must be issued prior to leaving the WAN connection context.
- The apply command when issued in conjunction with changes in the AP will cause the AP to restart.

---

configure   command

configure [terminal]

Description:

This command sets the CLI to configuration mode. If the optional command terminal is used this allows configuration commands to read from the terminal.

---

disable   command

disable

Description:

This command sets the CLI privilege mode to 0.

---

discard   command

Description:

This command discards any pending changes to the system.

enable   command

enable [<level>]

Description:

This command allows the user to enter a CLI privilege mode. The user can enter a privilege level from 0 to 5. The system will prompt for the specific level password. The levels are:

0. nobody: Default user when first logging in. This level allows the user to view statistics and system information. System changes and the display of settings are not allowed. (No password needed)
1. view: This level allows the user to view statistics, system information, and settings. System changes are not allowed. (Default password: "view")
2. logger: This level allows the user to view statistics, system information, and settings. Changes to log settings are allowed. (Default password: "logger")
5. admin: This level allows the user to view statistics, system information, and settings. Changes to all settings are allowed. (Default password: "Admin")

end   command

Description:

Leave the current context and move the operator to the root context.

exit   command

Description:

Leave the current context and move the operator "up" one level. There is no way to "exit" the root context.

generate   command

Description:

Generate a list of CLI commands that contains all the CLI commands that would be needed to recreate the current configuration. This command list can be captured, and replayed to another modem to provide duplicate settings.

---

help   command

Description:

This command displays a brief listing of user-level commands.

---

logoff   command

Description:

This command allows the operator to exit the CLI interface. The logoff command can be executed from any context. Any current commands not saved or applied prior to the logoff command will be lost.

---

quit   command

Description:

This command will terminate the CLI from any nested level.

---

reboot   command

reboot [yes]

Description:

Perform a reboot of the modem. The yes option will just reboot without a yes/no prompt.

---

save   command

Description:

This command records the current configuration into flash. This command must be used to have the current settings preserved upon system reboot.

Warning:

- Configuration changes must be applied before saving them. The user will be prompted to apply the changes before the save command is issued.

---

show   command

Description:

This command shows the current configuration tree settings. If "show" is entered without any parameters, all the settings from the current context will be displayed, additionally, all the sub-contexts will be recursively traversed, and the settings within those sub-contexts will also be shown. If the show command is entered with a parameter, the show command will only show that parameter's settings

show log command

Configures:

Default:

Description:

Show the log records

show enet-stats command

Configures:

Default:

Description:

Show the statistics information of Ethernet interface

show usb-stats command

Configures:

Default:

Description:

Show the statistics information of USB interface

show dsl-stats command

Configures:

Default:

Description:

Show the statistics information of DSL interface

show wireless-stats command

Configures:

Default:

Description:

Show the statistics information of wireless interface

---

show modem-stats   command

Configures:

Default:

Description:

Show the statistics information of modem

---

show product-info   command

Configures:

Default:

Description:

Show the product information

Root - Context

The following CLI commands are available from the ROOT context.

---

ap   root

ap

Default: None

Description:

Sets the context to ap context

---

lan   root

lan

Default: None

Description:

Sets the context to lan context

---

product-info   root

product-info

Default: None

Description:

Provides a product information list.

---

shell   root

Description:

Provides a way for the operator to get access to the system's shell.

---

show [all]   root

Configures:

Default:

Description:

Show all configuration information of all subcontext

---

show log-config   root

Configures:

Default:

Description:

Display the configuration of remote logging

---

show status   root

Configures:

Default: 100-full

Description:

Show the information of the system

---

stats   root

stats [network {Ethernet | usb | dsl | wireless}] [modem] [connection]

Default: None

Description:

Provides a list of all the current interface and connection stats on the modem.

---

system   root

system

Default: None

Description:

Sets the context to system context

---

wan   root

wan

Default: None

Description:

Sets the context to wan context

Root: SYSTEM - context

The following CLI commands are available from a SYSTEM context.

---

log level   system

log level {panic | alert | critical | error | warning | notice | notice | info | debug}

Configures: The current log level of the system

Default: notice

Description:

This command sets the log level for debug information.

---

log remote   system

log remote add

log remote add <ip_addr>

Configures: Remote Logging IP addresses

Default: 0.0.0.0 for all parameters

Description:

This command set the IP address of a remote logging machine.

---

log remote del   system

log remote del <ip-address>

Configures: Delete remote logging IP addresses

Default: None

Description:

This command deletes a remote logging machine by specifying its IP address.

---

log remote flush   system

log remote flush

Configures: Delete all remote logging IP addresses

Default: None

Description:

This command deletes all remote logging machines.

---

password   system

password {admin | user } <password-string>

Configures: Password associated with the particular CLI privilege mode

Default: None

Description:

This command sets the password associated with a particular CLI privilege mode.

---

reset factory-defaults   system

reset factory-defaults [yes]

Configures: Restores the system to factory default settings.

Default: Pre-stored system default parameters

Description:

This command restores the system defaults. The user must execute the **reboot** command to make the factory-default settings active. If the yes option is given the user will not be prompted with a yes/no prompt.

ROOT: LAN - Context

The following CLI commands are available from the LAN context.

---

host-name   lan

host-name <name-string>

Configures: Host name of the modem

Default: None

Description:

This command sets the host name that the modem will use.

---

domain-name   lan

domain-name <name-string>

Configures: Domain name of the modem

Default: None

Description:

This command set the domain name that the modem will use to complete any unqualified domain names.

---

port configure   lan

port <port-number>   {auto | 10-half | 10-full | 100-half | 100-full}

Configures: The Ethernet physical interface specified by port-number. \

Default: 100-full

Description:

Configure Ethernet physical interfaces with the desired parameters. Range for port-number is <1..4>

---

port assign   lan

port assign {usb | wlan | eth0 | none} {lan1| lan2 | lan3}

Configures: LAN Groups

Default: None

Description: This command assigns interface ports, i.e. usb etc. to a particular LAN GROUP.
There are 3 possible LAN Groups.

---

lan-group   lan

lan-group <num>

Configures: LAN Groups

Default: None

Description: This command sets the context to a particular LAN group.

---

management type   lan

management type {static | dynamic | unmanaged}

Configures: LAN Groups

Default: None

Description: This command sets the management type of a particular LAN group.

---

port assign   lan

port assign {usb | ap | eth0} {lan1 | lan2 | lan3 | unassigned}

Configures: LAN Groups

Default: None

Description: This command assigns a port to a particular LAN group.

---

show [all]   lan

Configures:

Default:

Description:

Show all LAN configuration information

---

show lan-group   lan

Configures:

Default:

Description:

Show the list of lan-groups

ROOT: LAN: GROUP <#> - Context

The following CLI commands are available from the LAN GROUP <#> context. Enter LAN context then GROUP context with a LAN GROUP number to configure a particular managed or unmanaged LAN GROUP The "lan connection <#>" context is entered in the CLI by entering "lan group" followed by the group number from 1 to 3, e.g. "lan group 1" and then carriage return. All commands entered within the lan group <#> context have local significance only to that context.

---

management type   lan group <#>

management type {unmanaged | static | dynamic}

Configures: Management type for LAN Groups

Default: None.

Description:

This command sets the management type for a particular LAN group.

---

static   lan group <#>

static <ip-address> [netmask <mask>] [gateway <ip-address>]

Configures: A LAN group with a static IP.

Default: The netmask defaults to a class C network, but can be configured.

Description:

This command configures a static IP for a LAN Group.

---

dhcp off   lan group <#>

dhcp off

Configures: Disables the DHCP Server/Relay

Default: DHCP server on.

Description:

Disables the DHCP Server/Relay. To turn the DHCP server on execute the command **dhcp server**. To turn the DHCP relay on execute the command **dhcp relay**.

---

dhcp server   lan group <#>

dhcp server start <ip-address> end <ip-address> [lease <lease-time>]

Configures: DHCP Server

Default: The starting and ending IP addresses are calculated from the settings given to the LAN interface. Lease time = 3600 seconds.

Description:

This command without parameters will turn the DHCP server on. The command is also used to configure the optional parameters for the server.

Parameters:
>   start: Starting IP address to be served
>   end: Ending IP address to be served
>   lease: Lease time in seconds.
Warning: This command only works when the LAN management group type is static.

---

dhcp relay   lan group <#>

dhcp relay [<ip-address>]

Configures: DHCP Relay

Default: None

Description:

This command is used to enable and configure the DHCP relay.
Warning: This command only works when the LAN management group type is static.

---

dhcp client-static add   lan group <#>

dhcp client-static add <ip-address> <mac-address> [hostname <name-string>]

Configures: Static LAN clients.

Default: None

Description:

This command adds static LAN clients. This command differs from the dhcp client-reserve because it is used for static allocation of client IP addresses, while dhcp-reserve is used for reserving IP addresses which have been dynamically allocated.

---

dhcp client-static del   lan group <#>

dhcp client-static del <index-number>

Configures: Static LAN clients.

Default: None

Description:

This command is used to delete a specific static or dynamic LAN client by specifying an IP address from a list of LAN clients. Use **show dhcp-static** to get a listing of valid client IP's and their associated index numbers.

dhcp client-static clear   lan group <#>

dhcp client-clear

Configures: Static LAN clients.

Default: None

Description:

This command deletes all static LAN clients.

---

dhcp client-dynamic reserve   lan group <#>

dhcp client-reserve <index-number >

Configures: Reserves IP Addresses for LAN clients from dynamically allocated IP's

Default: None

Description:

This command is used to reserve a dynamic DHCP address for a LAN client by specifying an index number. Use **show dhcp-dynamic** to get a listing of valid dynamic client IP's and their associated index numbers.

---

dhcp client-dynamic del   lan group <#>

dhcp client-del <index number>

Configures: Deletes IP Addresses for LAN clients from dynamically allocated IP's

Default: None

Description:

This command is used to delete a dynamic DHCP address for a LAN client by specifying an index number. Use **show dhcp-dynamic** to get a listing of valid dynamic client IP's and their associated index numbers.

---

dhcp client-dynamic clear   lan group <#>

dhcp client-dynamic clear

Configures: Deletes all IP Addresses for LAN clients from dynamically allocated IP's

Default: None

Description:

This command deletes all IP entries that have been reserved from dynamically allocated IP's.

nat lan group <#>

nat {enable | disable}

Configures: Enables NAT functionality for a LAN group.

Default: enabled

Description:

Enable/Disable NAT.

firewall lan group <#>

firewall {enable | disable}

Configures: Enables the firewall functionality for a LAN group.

Default: enabled

Description:

Enable/Disable the firewall.

upnp lan group <#>

upnp {enable | disable}

Configures: Enables the UPNP functionality for a particular connection.

Default: disabled

Description:

Enable/Disable UPnP. UPnP can only be active on a single connection at a time.

port forward lan group <#>

port forward {enable | disable}

Configures: Port Forwarding.

Default: None

Description:

This command enables Port Forwarding.

port forward rule-add lan group <#>

port forward rule-add [parameters]

Configures: Port Forwarding Rules for a particular connection.

Default: None

Description:

This command allows the user to add rules for the port forwarding function. A connection must be specified for which the rule applies.
Parameters:

        name <rule-name>

        protocol <tcp | udp | tcp-udp | any>
        src-ip <ip-address>
        src-netmask <mask>
        dst-ip <ip-address>
        dst-netmask <mask>
        port-start <port-number>
            Starting value of port numbers to be used. Range <0..65535>
        port-end <port-number>
            Ending value of port numbers to be used. Range <0..65535> and greater than the Start Value.
        port-map <port-number>
            Port map specifies the starting port number from which to re-map the range of port numbers given by port-start, and port-end.

port forward rule-del   lan group <#>

port forward rule-del <index-number>

Configures: Port Forwarding Rules.

Default: None

Description:

This command allows the user to delete a specific rule for the port forwarding function. Use **show port forward rule** to get a listing of valid port forward rules and their associated index numbers.

port forward rule-clear   lan group <#>

port forward rule-clear

Configures: Port Forwarding Rules.

Default: None

Description:

This command clears all rules for the port forwarding function.

dmz
lan group <#>

dmz {enable | disable}

Configures: DMZ

Default: None

Description:

This command enables DMZ functionality.

dmz client-add
lan group <#>

dmz client-add <ip-address>

Configures: DMZ

Default: None

Description:

This command allows the user to set the LAN client IP used for the DMZ. Only one LAN client IP can be specified at a time. The client IP must be chosen from those added through **dhcp client-static add**. A command does not exist to explicitly clear a client IP address because these are added and deleted via the **dhcp client-static** add and delete commands. The **dmz** {disable} command must be used to disable the dmz while a dhcp client-static IP address exists on the system.

ipqos
lan group <#>

ipqos {enable | disable}

Configures: Enables IP QoS services on the egress side of a connection interface.

Default: Disabled

Description:

IP QoS services in the NSP is applicable to the output device (Egress side). IP QoS traffic shaping is associated with any transmitted traffic from the perspective of the NSP. Each output device has 3 priority queues associated with any transmit traffic. The High priority queue has strict priority over the medium and low priority queues. The Medium and Low priority queues are serviced on a Round Robin priority basis according to the configured weights (WRR) set with the ipqos queue command, after the High priority queue has been completely serviced.

ipqos trusted-mode
lan group <#>

ipqos trusted-mode {enable | disable}

Configures: The trusted mode for IP QoS services.

Default: Disabled

Description:

The NSP can operate in either "Trusted" (enabled) or "Untrusted" (disabled) mode of operation with regard to queue traffic prioritization. In "Trusted" mode all the rules will be applied first, regardless of the setting of the TOS bits. After the rules have been exhausted the existing TOS bit settings will be honored. The "Un-trusted" mode will match first against all rules as in "Trusted" mode. The difference is that if there is no match then a default rule will be used. The default rule will have an associated queuing priority – Low.

---

ipqos queue   lan group <#>

ipqos queue [low <percentage>] [med <percentage>]

Configures: The low and medium priority queues used on transmit traffic from the modem.

Default: low = 40, med = 60

Description:

This command allows the setting of the Low and Medium priority queues in increments of 10 percent, so that the sum of the weights of these two queues equals 100 percent.

---

ipqos rule-add   lan group <#>

ipqos rule-add <name-string> [parameters]

Configures: Add rules to be used by IP QoS priority queues.

Default: None

Description:

This command allows a user to specify new rules for Add new rules for queuing transmit traffic. One or more of the following parameters can be specified. Wildcard (*) entries are allowed for IP Address/Netmask and Port range fields.

Parameters:

       src-ip: <ip-address>
       src-netmask: <mask>
       src-start-port: <ip-address>
       src-end-port: <ip-address>
       dst-ip: <ip-address>
       dst-netmask: <mask>
       dst-start-port: <ip-address>
       dst-end-port: <ip-address>
       protocol: {any | icmp | tcp | udp}
       physical-port <port-number>

priority {low | medium | high}: Select the queue priority for this rule.

tos { no-change | normal | min-cost | max-reliability | max-throughput | min-delay }

---

ipqos rule-del   lan group <#>

ipqos rule-del <index-number>

Configures: Delete rules to be used by IP QoS priority queues.

Default: None

Description:

This command deletes a rule specified by index-number from the list of rules used for IP QoS on a particular connection. Use **show ipqos rule** to get a listing of valid ipqos rules and their associated index numbers.

---

ipqos rule-clear   lan group <#>

ipqos rule-clear

Configures: Delete all rules to be used by IP QoS priority queues.

Default: None

Description:

This command deletes all rules used for IP QoS on a particular connection.

---

route static-add   lan group <#>

route static add <destination-ip> <netmask> <gateway-ip> [metric {0 | 1}]

Configures: Static routes

Default: metric = 0

Description:

This command is used to add and configure static routes.

---

route static-del   lan group <#>

route static-del <index-number>

Configures: Static routes

Default: metric = 0

Description:

This command is used to delete a static route by specifying its index number. Use **show route static** to get a listing of valid static routes and their associated index numbers.

route static-clear

route static-clear

Configures: Static routes

Default: metric = 0

Description:

This command is used to delete all static routes.

bridge filter

bridge filter {enable | disable}

Configures: The bridge filter

Default: disabled

Description:

This command enables the bridge filter. The bridge filtering mechanism provides a way for users to define rules to allow/deny frames through the bridge based on source MAC address, destination MAC address and/or frame type and port number.   When bridge filtering is enabled, each frame is examined against each defined filter rule in a sequential order. When a match is determined, the appropriate filtering action (determined by the access type selected, i.e. allow or deny) is performed.

bridge filter rule add mode

bridge filter rule add mode {deny | allow} [parameters]

Configures: Add bridge filter rules.

Default: None

Description:

This command allows the addition of new bridge filter rules. A maximum of 20 rules can be added. The following parameters can be specified:
Parameters:

> src-mac <mac-address>
> src-port {s-any | s-usb | s-ethernet | s-wlan}
> dst-mac <mac-address>
> dst-port {d-any | d-usb | d-ethernet | d-wlan}
> protocol {any | ipv4 | ipv6 | arp | rarp | ipx | pppoe-discovery | pppoe-session}
> mode {deny | allow}
> port <port-number>

bridge filter rule del

bridge filter rule del <index-number>

Configures: Deletes user defined rules for the bridge filter

Default: None

Description:

This command deletes a particular bridge filter rule given by filter-number. Use **show bridge filter rule** to get a listing of valid bridge filter rules and their associated index numbers

bridge filter clear   lan group <#>

bridge filter clear

Configures: Bridge Filter

Default: None

Description:

This command flushes the bridge filter table entries.

bridge filter management-port   lan group <#>

bridge filter management-port {enable | disable} [port <port-name>]

Configures: Bridge Filter

Default: Disabled

Description:

This command enables the bridge filter management port and specifies the port name.

ip filter add rule   lan group <#>

ip filter add rule <name-string> [parameters]

Configures: IP Filter rules

Default: None

Description:

This command allows the user to add rules to the Firewall to block IP traffic between the WAN and the LAN interface on the modem.
Parameters:

       src-ip <ip-address>: interfaces on the LAN side.

       src-netmask <mask>

       dst-ip <ip-address>: interfaces on the WAN side.

dst-netmask <mask>

protocol <any | tcp | udp | tcp-udp | icmp>]

portStart <port-start>

portEnd <port-end>

---

ip filter del rule   lan group <#>

ip filter del rule <index-number>

Configures: IP Filter rules

Default: None

Description:

This command allows the user to delete Firewall rules. Use **show ip filter rule** to get a listing of valid ip filter rules and their associated index numbers.

---

ip filter del clear   lan group <#>

ip filter del clear

Configures: IP Filter rules

Default: None

Description:

This command allows the user to clear all Firewall rules.

---

access-list   lan group <#>

access-list {enable | disable}

Configures: Access control

Default: None

Description:

This command enables the access control list for the modem.

---

access-list service   lan group <#>

access-list service [parameters]

Configures: Access control list

Default: None

Description:

This command enables services for the access control list.

Parameters:

telnet <enable | disable>

web <enable | disable>

ftp <enable | disable>

tftp <enable | disable>

ssh <enable | disable>

snmp <enable | disable>

---

access-list ip add   lan group <#>

access-list ip add <ip-address>

Configures: Access control list

Default: None

Description:

This command adds IP addresses on the access control list.

Warning: The IP addresses assigned through this command have a global scope.

---

access-list ip del   lan group <#>

access-list ip del <index-number>

Configures: Access control list

Default: None

Description:

This command deletes IP addresses on the access control list. Use **show access-list** to get
a listing of valid access-list ip numbers and their associated index numbers.

---

access-list ip clear   lan group <#>

access-list ip clear

Configures: Access control list

Default: None

Description:

This command deletes all IP addresses on the access control list.

show [all]   lan group <#>

Configures:

Default:

Description:

Show all configuration of the LAN group

show management   lan group <#>

Configures:

Default:

Description:

Show the management setting of the LAN group

show static   lan group <#>

Configures:

Default:

Description:

Show the static setting of the LAN group

show dynamic   lan group <#>

Configures:

Default:

Description:

Show the dynamic (DHCP) setting of the LAN group

show lan-config   lan group <#>

Configures:

Default:

Description:

Show the configuration setting of the LAN group

show bridge-filter   lan group <#>

Configures:

Default:

Description:

Show the bridge filter information

---

show ip-filter   lan group <#>

Configures:

Default:

Description:

Show the IP filter information

---

show lan-client   lan group <#>

Configures:

Default:

Description:

Show LAN client information

---

show dhcp-client   lan group <#>

Configures:

Default:

Description:

Show DHCP client information

---

show access-list   lan group <#>

Configures:

Default:

Description:

Show access control list information of the LAN group

ROOT: WAN - CONTEXT

The following CLI commands are available from the WAN context.

---

connection   wan

connection <num>

Configures: Sets WAN connection context

Default: None

Description:

This command is used to set the WAN context to a particular connection number. Range <1..8>

---

modulation   wan

modulation {t1413 | gdmt | glite | mmode}

Configures: Sets the modulation type of the DSL modem

Default: mmode

Description:

This command is used to set the DSL modulation type.

---

modem test   wan

modem test <vpi> <vci> {f5end | f5seg | f4end | f4seg}

Configures: Sends a test F4 or F5 OAM ping on a specific PVC.

Default: None

Description:

This command sends a test F4 or F5 OAM ping on a specific PVC given by the pvc vci/vpi pair. A valid vpi/vci pair must be entered for the command to succeed. This command is used to check the connectivity of the modem to the network.

---

access-list   wan

access-list {enable | disable}

Configures: Access control

Default: None

Description:

This command enables the access control list for the modem.

---

access-list service   wan

access-list service [parameters]

Configures: Access control list

Default: None

Description:

This command enables services for the access control list.

Parameters:

       telnet <enable | disable>

       web <enable | disable>

       ftp <enable | disable>

       tftp <enable | disable>

       ssh <enable | disable>

       snmp <enable | disable>

---

access-list ip add   wan

access-list ip add <ip-address>

Configures: Access control list

Default: None

Description:

This command adds IP addresses on the access control list.

Warning: The IP addresses assigned through this command have a global scope.

---

access-list ip del   wan

access-list ip del <index-number>

Configures: Access control list

Default: None

Description:

This command deletes IP addresses on the access control list. Use **show access-list** to get a listing of valid access-list ip numbers and their associated index numbers.

---

access-list ip clear   wan

access-list ip clear

Configures: Access control list

Default: None

Description:

This command deletes all IP addresses on the access control list.

---

show [all]   wan

Configures:

Default:

Description:

Show all WAN configuration information

---

show modulation   wan

Configures:

Default:

Description:

Show ATM modulation type

---

show connections   wan

Configures:

Default:

Description:

Show the list of all connections

---

show access-list   wan

Configures:

Default:

Description:

Show access control list information of WAN

ROOT: WAN: CONNECTION <#> - Context

The following CLI commands are available from the WAN context. Enter WAN context with a connection number to configure a particular WAN connection. The "wan connection <#>" context is entered in the CLI by entering "wan connection" followed by the connection number from 1 to 8, e.g. "wan connection 1" and then carriage return. All commands entered within the wan connection <#> context have local significance only to that context.

connection type   wan connection <#>

connection type {off | pppoe | pppoa | static | dhcp | bridge | clip}

Configures: The type of interface for this particular connection

Default: None.

Description:

Select the connection type. Additional settings for individual types are given below under their respective names.
Parameters:

> off: Disables the connection.
> pppoe: Configure this connection to be a PPPoE connection.
> pppoa: Configure this connection to be a PPPoA connection.
> static: Configure this connection to be a static connection.
> bridge: Configure this connection to be a bridged connection.
> clip: Configure this connection to be a Classical IP over ATM (CLIP) connection.

connection name   wan connection <#>

connection name <name-string>

Configures: Sets the name for a particular connection.

Default: None

Description:

User defined name for the connection.

nat   wan connection <#>

nat {enable | disable}

Configures: Enables NAT functionality for a particular connection.

Default: enabled

Description:

Enable/Disable NAT.

---

firewall   wan connection <#>

firewall {enable | disable}

Configures: Enables the firewall functionality for a particular connection.

Default: enabled

Description:

Enable/Disable the firewall.

---

upnp   wan connection <#>

upnp {enable | disable}

Configures: Enables the UPNP functionality for a particular connection.

Default: disabled

Description:

Enable/Disable UPnP. UPnP can only be active on a single connection at a time.

---

igmp   wan connection <#>

igmp {enable | disable}

Configures: Enables IGMP (proxy) functionality for a particular connection.

Default: disabled

Description:

Enable/Disable IGMP. IGMP can only be active on a single connection at a time.

---

vlan   wan connection <#>

vlan {enable | disable}

Configures: Connection sharing

Default: enabled

Description:

This command enables connection sharing using VLAN tag mechanism.

---

vlan id   wan connection <#>

vlan id <vlan-id>

Configures: Connection sharing

Default: None

Description:

This command sets the VLAN tag ID for a particular connection to allow connection sharing. Range: vlan-id <1..1024>

---

atm pvc   wan connection <#>

atm pvc <vpi> <vci>

Configures: Creates an ATM PVC

Default: None

Description:

This command creates an ATM Permanent Virtual Circuit (PVC).
Parameters:

> vpi: The Virtual Path Identifier of the PVC. The value can be from 0 to 255
> vci: The Virtual Channel Identifier of the PVC. The value can be from 0 to 1023.
>   vpi and vci may not   both be 0.

---

atm qos ubr   wan connection <#>

atm qos ubr

Configures: UBR type QoS service for the WAN ATM channel specified.

Default: None

Description:

This command sets UBR type QoS service for the WAN ATM channel specified by the context.
Parameters: None.

---

atm qos cbr   wan connection <#>

atm qos cbr <pcr> [cdvt <cdvt-num>]

Configures: CBR type QoS service for the WAN ATM channel specified.

Default: None

Description:

This command sets CBR type QoS service for the WAN ATM channel specified by the context.
Parameters:

        pcr: peak cell rate. Units = cells per second

        cdvt: cell delay variance threshold. Units = usecs

---

atm qos vbr   wan connection <#>

atm qos vbr <pcr> [scr <scr-num>] [[mbs <mbs-num>] [cdvt <cdvt-num>]

Configures: VBR type QoS service for the WAN ATM channel specified.

Default: None.

Description:

This command sets VBR type QoS service for the WAN ATM channel specified by the context.
Parameters:

        pcr: peak cell rate. Units = cells per second

        scr: sustainable cell rate. Units = cells per second

        mbs: maximum burst size. Units = cells

        cdvt: cell delay variance threshold. Units = usecs

---

ppp authentication type   wan connection <#>

ppp authentication type {auto | pap | chap }

Configures: Authentication type for PPP

Default: auto

Description:

This command enables Auto, PAP or CHAP authentication on the connection specified.
This command works for both PPPoE and PPPoA.

---

ppp authentication username   wan connection <#>

ppp authentication {username <user> | password <pass> }

Configures: Username and Password for PPP Authentication

Default:

Description:

This command sets the PPP username and password.
This command works for both PPPoE and PPPoA.

---

ppp connection-mode   wan connection <#>

ppp connection-mode { {on-demand [idle-timeout <idle-time>]} | {keep-alive [keepalive-time]} }

Configures: PPP connection mode.

Default: idle-timeout = 60 seconds, keep-alive = 10 minutes

Description:

This command sets the connection mode type for a ppp connection. The type can be either on-demand or keep-alive. The respective optional parameters idle-timeout, and keepalive-time can be set depending on the connection mode choosen. Ranges: keep-alive <1..100>, idle-timeout <0..60000>. This command is applicable for both PPPoE and PPPoA.

---

ppp mtu   wan connection <#>

ppp mtu <bytes>

Configures: The mtu parameter for both PPPoE and PPPoA connections.

Default: 1492 bytes

Description:

This command is used to set the MTU parameter for PPPoE and PPPoA connections. See also the command **enforce-mtu**. Range: <128..1500>

---

ppp enforce-mtu   wan connection <#>

ppp enforce-mtu {enable | disable}

Configures: The firewall ability to enforce the MTU parameter on PPPoE connections.

Default: Disabled

Description:

This command sets the firewall ability to enforce the MTU parameter that is set on a particular PPPoE connection.

---

ppp default-route   wan connection <#>

ppp default-route {enable | disable}

Configures: The PPP set-route functionality for PPPoE and PPPoA connections.

Default: enabled

Description:

This command is used to set the set-route functionality for PPPoE and PPPoA connections.

---

ppp debug   wan connection <#>

ppp debug {enable | disable}

Configures: Enables debug capability for PPPoE and PPPoA connections.

Default: disabled

Description:

This command is used to enable debug functionality for PPPoE and PPPoA connections. If log level = debug, and PPP debug is enabled the user will see additional PPP specific debug messages on the default console.

---

ppp encapsulation   wan connection <#>

ppp encapsulation {llc | vc }

Configures: The encapsulation method for PPPoA.

Default: llc

Description:

This command sets the encapsulation method for a PPPoA connection. The encapsulation type can be either Bridged LLC or Bridged VC-MUX encapsulation. This command is not used for PPPoE.

---

static   wan connection <#>

static <ip-address> [netmask <mask>] [gateway <ip-address>]

Configures: A static rfc2684 type connection

Default: The netmask defaults to a class C network, but can be configured.

Description:

This command configures a new rfc2684 static connection.

---

static encapsulation   wan connection <#>

static encapsulation {llc | vc} [mode {routed | bridged}]

Configures: The encapsulation method of the static connection

Default: llc-bridged

Description:

This command set the encapsulation method of the static connection. The following choices are available:

llc-bridged

vc-bridged

llc-routed

vc-routed

---

dns static   wan connection <#>

dns static [primary <ip-address>] [secondary <ip-address>] [tertiary <ip-address>]

Configures: Static DNS entries

Default: 0.0.0.0 for all parameters

Description:

This command adds the specified DNS entries for a particular WAN Static connection.

---

dns static-clear   wan connection <#>

dns static-clear

Configures: Static DNS entries

Default: None

Description:

This command deletes all DNS entries for a particular WAN Static connection.

---

dhcp   wan connection <#>

dhcp {llc | vc}

Configures: DHCP configured WAN connection.

Default: None

Description:

Configure a new DHCP connection.
Parameters:
       llc: LLC encapsulation
       vc: VC-MUX encapsulation.

---

dhcp renew   wan connection <#>

dhcp renew

Configures: DHCP addresses for WAN connections.

Default: None

Description:

This command is used to renew DHCP leases for WAN connections.

---

dhcp release   wan connection <#>

dhcp release

Configures: DHCP addresses for WAN connections.

Default: None

Description:

This command is used to delete DHCP leases for WAN connections.

---

clip   wan connection <#>

clip <ip-address> <net-mask> <server-ipaddress> [default-gateway <gateway-ipaddress>]

Configures: Classical IP over ATM (CLIP) interface.

Default: None

Description:

Configure a new CLIP connection.
Parameters:

> ip: IP address of the local interface connection
> netmask: netmask for local interface connection
> server-gateway: IP address of the server side of the CLIP connection.

---

bridge encapsulation   wan connection <#>

bridge encapsulation {llc | vc}

Configures: The encapsulation method used for a bridged connection.

Default: llc

Description:

This command set the encapsulation method for a bridged connection. The encapsulation method can either be Bridged LLC or Bridged VC-MUX.

---

ipqos   wan connection <#>

ipqos {enable | disable}

Configures: Enables IP QoS services on the egress side of an connection interface.

Default: Disabled

Description:

IP QoS services in the NSP is applicable to the output device (Egress side). IP QoS traffic shaping is associated with any transmitted traffic from the perspective of the NSP. Each output device has 3 priority queues associated with any transmit traffic. The High priority queue has strict priority over the medium and low priority queues. The Medium and Low priority queues are serviced on a Round Robin priority basis according to the configured weights (WRR) set with the ipqos queue command, after the High priority queue has been completely serviced.

---

ipqos trusted-mode   wan connection <#>

ipqos trusted-mode {enable | disable}

Configures: The trusted mode for IP QoS services.

Default: Disabled

Description:

The NSP can operate in either "Trusted" (enabled) or "Untrusted" (disabled) mode of operation with regard to queue traffic prioritization. In "Trusted" mode all the rules will be applied first, regardless of the setting of the TOS bits. After the rules have been exhausted the existing TOS bit settings will be honored. The "Un-trusted" mode will match first against all rules as in "Trusted" mode. The difference is that if there is no match then a default rule will be used. The default rule will have an associated queuing priority – Low.

---

ipqos queue   wan connection <#>

ipqos queue [low <percentage>] [med <percentage>]

Configures: The low and medium priority queues used on transmit traffic from the modem.

Default: low = 40, med = 60

Description:

This command allows the setting of the Low and Medium priority queues in increments of 10 percent, so that the sum of the weights of these two queues equals 100 percent. The high priority queue is preconfigured.

---

ipqos rule-add   wan connection <#>

ipqos rule-add <name-string> [parameters]

Configures: Add rules to be used by IP QoS priority queues.

Default: None

Description:

This command allows a user to specify new rules for Add new rules for queuing transmit traffic. One or more of the following parameters can be specified. Wildcard (*) entries are allowed for IP Address/Netmask and Port range fields.

Parameters:

    name <rule-name>

    src-ip: <ip-address>
    src-netmask: <mask>
    src-start-port: <ip-address>
    src-end-port: <ip-address>
    dst-ip: <ip-address>
    dst-netmask: <mask>
    dst-start-port: <ip-address>
    dst-end-port: <ip-address>
    protocol: {any | icmp | tcp | udp}
    physical-port <port-number>
    priority {low | medium | high}: Select the queue priority for this rule.
    tos { no-change | normal | min-cost | max-reliability | max-throughput | min-delay
    }

ipqos rule-del   wan connection <#>

ipqos rule-del <index-number>

Configures: Delete rules to be used by IP QoS priority queues.

Default: None

Description:

This command deletes a rule specified by index-number from the list of rules used for IP QoS on a particular connection. Use **show ipqos rule** to get a listing of valid ipqos rules and their associated index numbers.

ipqos rule-clear   wan connection <#>

ipqos rule-clear

Configures: Delete all rules to be used by IP QoS priority queues.

Default: None

Description:

This command deletes all rules used for IP QoS on a particular connection.

route static-add   wan connection <#>

route static add <destination-ip> <netmask> <gateway-ip> [metric <number>]

Configures: Static routes

Default: None

Description:

This command is used to add and configure static routes. Range: number <0..1>

---

route static-del   wan connection <#>

route static-del <index-number>

Configures: Static routes

Default: metric = 0

Description:

This command is used to delete a static route by specifying its index number. Use **show route static** to get a listing of valid static routes and their associated index numbers.

---

route static-clear   wan connection <#>

route static-clear

Configures: Static routes

Default: metric = 0

Description:

This command is used to delete all static routes.

---

port forward   wan connection <#>

port forward {enable | disable}

Configures: Port Forwarding.

Default: None

Description:

This command enables Port Forwarding.

---

port forward rule-add   wan connection <#>

port forward rule-add [parameters]

Configures: Port Forwarding Rules for a particular connection.

Default: None

Description:

This command allows the user to add rules for the port forwarding function. A connection must be specified for which the rule applies.
Parameters:

      name <rule-name>

protocol <tcp | udp | tcp-udp | any>
src-ip <ip-address>
src-netmask <mask>
dst-ip <ip-address>
dst-netmask <mask>
port-start <port-number>
> Starting value of port numbers to be used. Range <0..65535>

port-end <port-number>
> Ending value of port numbers to be used. Range <0..65535> and greater than the Start Value.

port-map <port-number>
> Port map specifies the starting port number from which to re-map the range of port numbers given by port-start, and port-end.

---

port forward rule-del <div align="right">wan connection <#></div>

port forward rule-del <index-number>

Configures: Port Forwarding Rules.

Default: None

Description:

This command allows the user to delete a specific rule for the port forwarding function. Use **show port forward rule** to get a listing of valid port forward rules and their associated index numbers.

---

port forward rule-clear <div align="right">wan connection <#></div>

port forward rule-clear

Configures: Port Forwarding Rules.

Default: None

Description:

This command clears all rules for the port forwarding function.

---

dmz <div align="right">wan connection <#></div>

dmz {enable | disable}

Configures: DMZ

Default: None

Description:

This command enables DMZ functionality.

---

dmz client-add   wan connection <#>

dmz client-add <ip-address>

Configures: DMZ

Default: None

Description:

This command allows the user to set the LAN client IP used for the DMZ. Only one LAN client IP can be specified at a time. The client IP must be chosen from those added through **dhcp client-static add**. A command does not exist to explicitly clear a client IP address because these are added and deleted via the **dhcp client-static** add and delete commands. The **dmz** {disable} command must be used to disable the dmz while a dhcp client-static IP address exists on the system.

access-list   wan connection <#>

access-list {enable | disable}

Configures: Access control

Default: None

Description:

This command enables the access control list for the modem.

access-list service   wan connection <#>

access-list service [parameters]

Configures: Access control list

Default: None

Description:

This command enables services for the access control list.

Parameters:

       telnet <disabled | enabled>

       web <disabled | enabled>

       ftp <disabled | enabled>

       tftp <disabled | enabled>

       ssh <disabled | enabled>

       snmp <disabled | enabled>

access-list ip add   wan connection <#>

access-list ip add <ip-address>

Configures: Access control list

Default: None

Description:

This command adds IP addresses on the access control list.

Warning: The IP addresses assigned through this command have a global scope.

---

access-list ip del   wan connection <#>

access-list ip del <index-number>

Configures: Access control list

Default: None

Description:

This command deletes IP addresses on the access control list. Use **show access-list** to get a listing of valid access-list ip numbers and their associated index numbers.

---

access-list ip clear   wan connection <#>

access-list ip clear

Configures: Access control list

Default: None

Description:

This command deletes all IP addresses on the access control list.

---

show [all]   wan connection <#>

Configures:

Default:

Description:

Show configuration settings of all connections

---

show connections   wan connection <#>

Configures:

Default:

Description:

Show the basic settings of the WAN connection

---

show atm   wan connection <#>

Configures:

Default:

Description:

Show the ATM settings

---

show dns   wan connection <#>

Configures:

Default:

Description:

Show the static DNS entries

---

show dhcp   wan connection <#>

Configures:

Default:

Description:

Show the DHCP connection settings

---

show clip   wan connection <#>

Configures:

Default:

Description:

Show the CLIP connection settings

---

show bridge   wan connection <#>

Configures:

Default:

Description:

Show the bridge connection settings

---

show static wan connection <#>

Configures:

Default:

Description:

Show the static connection settings

---

show ppp wan connection <#>

Configures:

Default:

Description:

Show the PPP connection settings

---

show route wan connection <#>

Configures:

Default:

Description:

Show route information

---

show route static wan connection <#>

Configures:

Default:

Description:

Show the static route list

---

show port-forwarding wan connection <#>

Configures:

Default:

Description:

Show the port forwarding rules

---

show ip-qos   wan connection <#>

Configures:

Default:

Description:

Show IP-QoS configuration

ROOT: ADVANCED - CONTEXT

The following CLI commands are available from the ADVANCED context.

---

router rip   advanced

router rip {enable | disable}

Configures: RIP Protocol

Default: Disabled

Description:

This command enables the RIP protocol.

---

router rip protocol   advanced

router rip protocol {ripv1 | ripv2 | ripv1compatible} [direction {in | out | both}]

Configures: RIP Protocol

Default: Protocol = ripv1, Direction = both

Description:

This command configures the RIP protocol for the modem.

---

router rip authentication   advanced

router rip authentication {enable | disable} [password <string>]

Configures: Sets the password used for the RIP protocol

Default: None.

Description:

This command sets the password used for the RIP protocol. Empty passwords are allowed**.**

---

snmp agent   advanced

snmp agent {enable | disable}

Configures: SNMP agent

Default: Disabled

Description:

This command enables the SNMP agent.

---

snmp traps   advanced

snmp traps {enable | disable}

Configures: SNMP traps

Default: Disabled

Description:

This command enables the SNMP traps.

---

snmp system   advanced

snmp system [name <name-string>] [location <name-string>] [contact <name-string>]

Configures: SNMP parameters

Default: name = "sptcroute",   location = "germantown,md,usa",   contact = "support@telogy.com"

Description:

This command sets local SNMP parameters.

---

snmp community set   advanced

snmp community set <slot> name <strName> [access-right {read-only | read-write}]

Configures: SNMP community parameters

Default: access-right = readonly

Description:

This command sets SNMP community parameters. A limit of 3 communities can be configured.
The system has a default of name = "public" and access-right ="readonly" configured.
Therefore, without deleting this entry, there will be only 2 more entries allowed.

---

snmp community clear   advanced

snmp community clear {all | <slot> }

Configures: SNMP community parameters

Default: None

Description:

This command deletes SNMP community parameters. Specify all to delete all entries, or specify slot to specify 1 of 3 individual entries.

snmp traps set   advanced

snmp traps set <slot> <ip-address> trap-community <strName> trap-version {snmpv1 | snmpv2c}

Configures: SNMP trap parameters

Default: trap-community = public, trap-version = snmpv1

Description:

This command sets SNMP trap parameters. A limit of 3 traps can be configured.

snmp traps clear   advanced

snmp traps clear {all | <slot>}

Configures: SNMP trap parameters

Default: None

Description:

This command deletes SNMP trap parameters. Specify all to delete all entries, or specify slot to specify 1 of 3 individual entries.

sntp   advanced

sntp {enable | disable}

Configures: SNTP Time Server

Default: Disabled

Description:

This command enables the SNTP time server.

sntp server   advanced

sntp server [primary <ip-address>] [secondary <ip-address>] [tertiary <ip-address>]

Configures: SNTP server

Default: 0.0.0.0 for all parameters

Description:

This command sets the SNTP timeserver IP addresses.

---

sntp timeout advanced

sntp timeout <seconds>

Configures: SNTP server

Default: None

Description:

This command sets the SNTP timeserver timeout. Range: <0..30>

---

sntp retries advanced

sntp retries <integer>

Configures: SNTP server

Default: 2

Description:

This command sets the SNTP timeserver retry limit. Range: <0..5>

---

sntp polling-interval advanced

sntp polling-interval <integer>

Configures: SNTP server

Default: 30

Description:

This command sets the SNTP timeserver polling interval. Range: <0..30>

---

sntp timezone advanced

sntp timezone <timezone-string>

Configures: SNTP server

Default: GMT

Description:

This command sets the SNTP timeserver timezone.

Enumerated types for timezone-string:

```
{"NZST", "New Zealand Standard Time"}
{"JST", "Japan Standard Time"}
{"KST", "Korea Standard Time"}
{"CCT", "China Coast Time"}
{"IST", "India Standard Time"}
{"IT", "Iran Time"}
{"BT",  "Baghdad Time"}
{"EET",  "Eastern European Time"}
{"CET",  "Central European Time"}
{"GMT", "Greenwich Mean Time"}
{"AT",  "Azores Time"}
{"BST",  "Brazil Standard Time"}
{"AST",  "Atlantic Standard Time"}
{"EST", "Eastern Standard Time"}
{"CST", "Central Standard Time"}
{"PST", "Pacific Standard Time"}
{"YST", "Yukon Standard Time"}
```
{"HST", "Huwaii Standard Time"}

show [all]   advanced

Configures:

Default:

Description:

Show the configuration of all advanced features

show access-list   advanced

Configures:

Default:

Description:

Show all access control list information on WAN and LAN groups

show snmp   advanced

Configures:

Default:

Description:

Show SNMP configuration information

show sntp   advanced

Configures:

Default:

Description:

Show SNTP configuration information

show web-filter   advanced

Configures:

Default:

Description:

Show the configuration information of web filter

show multicast   advanced

Configures:

Default:

Description:

Show multicast configuration

show rip   advanced

Configures:

Default:

Description:

Show RIP configuration

show static-route   advanced

Configures:

Default:

Description:

Show static route configuration