



DATACOM

SYSTEMS INC

VS-1012-F, VS-1024-F, VS-1112-F

VS-1124-F, VS-1212-F, VS-1224-F

Network Packet Brokers

Command Line Interface

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2 Overview

This Command Line Interface for the VS-10XX-F, VS-11XX-F, and the VS-12XX-F Data Access Switch is intended to provide you with CLI information about your Data Access Switch. Additional support, documentation and help can be found on the Datacom Systems website: <http://www.datacomsystems.com>.

3 Command Line Interface (CLI)

The Command Line Interface (CLI) is used to:

- Set IP address (default 192.168.1.1), Subnet Mask (default 255.255.0.0) and Gateway (default 192.168.1.0)
- Set Management Port
- Set the configurations for the Any-to-Any ports
- Enables the user to select which ports or groups of ports receive the data stream copies

3.1 Basic Functionality

Window Size Functionality: The CLI window has a limited number of character spaces available (80 characters per line). If more data than can fit on one line, the line will scroll left.

Character Handling: Printable characters (ASCII codes 32-126) and non-printable codes noted below:

Non-Printable Character	Description
• <enter key>	Executes command; places command in history buffer
• <backspace key>	Erases previous character entry; removes history buffer entry

Connectivity/Authentication Functionality: Connectivity to this product is made through the Management RJ45 or Serial DB9 port and authentication is required.

Base Prompt: This is the text presented to the user logging in to use the CLI (default values shown). All Usernames and passwords are case-sensitive.

```
Enter Username: Administrator
Enter Password: admin
>
```

Command Syntax: All commands, either the exact long form or the shortcut form, are entered after the prompt (default >) at the cursor. No auto-fill mode is available.

Command History Navigation: The up and down arrow keys may be used to cycle through previously entered commands.

3.2 Filtering

3.2.1 ADD FILTER (AD FI)

Usage Guidelines	This command is used to create a filter. Once created, the filter will be added to the filter list. Filters in this list can be used to apply traffic limitations to ports.
Syntax	ADD FILTER <filtername> (expression) <description>
Example	ADD FILTER IP_FILTER (ip.src==172.16.1.1) This filter only allows the IP 172.16.1.1
Command Notes	<ul style="list-style-type: none"> • Expression must be enclosed in (). • Filtername can have a max of 64 characters. No spaces allowed. • Description can have a max of 512 characters. • Filtername is case sensitive.

3.2.2 ADD FILTER OVERWRITE (AD FI OV)

Usage Guidelines	This command is used to create or overwrite a filter. If an existing filter has the same name, it will be overwritten. Once created, the filter will be added to the filter list. Filters in this list can be used to apply traffic limitations to ports.
Syntax	ADD FILTER OVERWRITE <filtername> (expression) <description>
Example	ADD FILTER OVERWRITE IP_FILTER (ip.src==172.16.1.1) This filter only allows the IP 172.16.1.1
Command Notes	<ul style="list-style-type: none"> • Expression must be enclosed in (). • Filtername can have a max of 64 characters. No spaces allowed. • Description can have a max of 512 characters. • Filtername is case sensitive.

3.2.3 DELETE FILTER (DE FI)

Usage Guidelines	This command is used to delete a filter from the filter list. Note that deleting the filter from the filter list will not remove it from any ports it has been applied to.
Syntax	DELETE FILTER <filtername>
Example	DELETE FILTER IP_FILTER
Command Notes	Filtername is case sensitive.

3.2.4 DELETE FILTER DESC (DE FI DE)

Usage Guidelines	This command is used to delete the description of the indicated filter.
Syntax	DELETE FILTER DESC <filename>
Example	DELETE FILTER DESC IP_FILTER
Command Notes	Filename is case sensitive.

3.2.5 SET PORT FILTER (SE PO FI)

Usage Guidelines	This command is used to assign a filter that is located in the filter list to a port. It must be assigned to either the ingress or egress portion of the port.
Syntax	SET PORT FILTER [PORT_# PORT-LIST ALL] [INGRESS EGRESS] <filename>
Example	SET PORT FILTER 3,4,5 egress IP_FILTER
Command Notes	<p>Two permanent default filters exist and can be used to apply to a port:</p> <ul style="list-style-type: none"> • PASS-ALL will pass all traffic • PASS-NONE will block all traffic from being received or transmit on the port

3.2.6 SHOW FILTER EXPRESSION (SH FI EX)

Usage Guidelines	This command is used to display the expression associated with a filter. This will show the criteria that the filter will include or exclude from the traffic on an assigned port.
Syntax	SHOW FILTER EXPRESSION <filename>
Example	SHOW FILTER EXPRESSION IP_FILTER
Command Notes	Filename is case sensitive.

3.2.7 SHOW FILTERS (SH FI)

Usage Guidelines	This command is used to display a list of all filters that are in the filter list. Their respective descriptions are displayed under the filter name.
Syntax	SHOW FILTERS
Example	SHOW FILTERS
Command Notes	This command will not show filters that have been applied to ports, but are not located in the filter list.

3.2.8 SHOW FILTERS FILTERED (SH FI FI)

Usage Guidelines	This command is used to display a list containing a set of filters that are in the filter list. Search criteria may be specified to narrow down the list of filters. Their respective descriptions are displayed under the filter name.
Syntax	SHOW FILTERS FILTERED <string>
Example	SHOW FILTERS FILTERED IP
Command Notes	This command will only search for matches within the Filtername. Filter Descriptions are not searched.

3.2.9 SHOW PORT FILTER

Usage Guidelines	This command is used to display the filter that is assigned to a specific port, or a group of ports. The location of the filter (ingress/egress), filter name, and expression are displayed.
Syntax	SHOW PORT FILTER [PORT_# PORT-LIST ALL]
Example	SHOW PORT FILTER 3

3.3 Group Management

3.3.1 ADD GROUP MEMBER (AD GR ME)

Usage Guidelines	This command is used to add ports to the membership of a group.
Syntax	ADD GROUP MEMBER <name> {list}
Example	ADD GROUP MEMBER Group_A 3,4,5
Command Notes	<ul style="list-style-type: none"> • The group name in this command is case sensitive. • A maximum of 23 ports may be added to a port group.

3.3.2 CREATE GROUP (CR GR)

Usage Guidelines	This command is used to create a group. Groups are used to create load balancing configurations or to quickly configure multiple ports at the same time.
Syntax	CREATE GROUP <name>
Example	CREATE GROUP Group_A
Command Notes	The group name in this command is case sensitive.

3.3.3 DELETE GROUP (DE GR)

Usage Guidelines	This command is used to delete a group from the group list.
Syntax	DELETE GROUP <name>
Example	CREATE GROUP Group_A
Command Notes	<ul style="list-style-type: none"> • The group name in this command is case sensitive. • If the group is part of an active LBC, the group will not be deleted.

3.3.4 REMOVE GROUP MEMBER (RE GR ME)

Usage Guidelines	This command is used to remove a port from the membership of a group.
Syntax	REMOVE GROUP MEMBER <name> {list}
Example	REMOVE GROUP MEMBER Group_A 4
Command Notes	<ul style="list-style-type: none"> • The group name in this command is case sensitive. • If the group is part of an active LBC, the member will not be deleted.

3.3.5 SET GROUP DESCRIPTION (SE GR DE)

Usage Guidelines	This command is used to set the description on a group.
Syntax	SET GROUP DESCRIPTION <name> <description>
Example	SET GROUP DESCRIPTION Group_A This group is used to load balance ports 4 and 5.
Command Notes	<ul style="list-style-type: none"> • The group name in this command is case sensitive. • Description can be a max of 512 characters.

3.3.6 SHOW GROUP (SH GR)

Usage Guidelines	This command is used to show the statistics for a specific group, or all groups present in the configuration.
Syntax	SHOW GROUP <name> LIST [DETAILED]
Example	SHOW GROUP LIST DETAILED
Command Notes	<ul style="list-style-type: none"> • The group name in this command is case sensitive. • Adding "DETAILED" will cause the output to provide additional information.

3.3.7 SHOW GROUP MEMBERSHIP (SH GR ME)

Usage Guidelines	This command is used to show the group that a port is part of.
Syntax	SHOW GROUP MEMBERSHIP <port>
Example	SHOW GROUP MEMBERSHIP 5

3.4 Load Balancing

3.4.1 CREATE LBC (CR LB)

Usage Guidelines	This command is used to create a load balancing configuration. Required fields must be populated before it can be used.
Syntax	CREATE LBC <name>
Example	CREATE LBC LBC_1
Command Notes	<ul style="list-style-type: none"> The LBC name in this command is case sensitive.

3.4.2 DELETE LBC (DE LB)

Usage Guidelines	This command is used to delete a load balancing configuration. The LBC must be made inactive before it can be deleted.
Syntax	DELETE LBC <name>
Example	DELETE LBC LBC_1
Command Notes	<ul style="list-style-type: none"> The LBC name in this command is case sensitive.

3.4.1 SET HASH (SE HA)

Usage Guidelines	This command changes the hash algorithm that is used to split the traffic in a load balancing group. The change is immediate and will impact the flow of traffic between egress ports on all load balancing configurations.			
Syntax	SET HASH [DEF(AULT)] [criteria][criteria][criteria].....[etc]			
Example	SET HASH IP MAC PORTS			
Command Notes	Available criteria:			
	L2	L3	L4	SMAC
	DMAC	VLAN	TYPE	PROTO
	SIP	DIP	TCP	UDP
	SPORT	DPORT	L2SYM	L3SYM

3.4.2 SET LBC DESCRIPTION (SE LB DE)

Usage Guidelines	This command is used to add a description to a created load balancing description.
Syntax	SET LBC DESCRIPTION <name> <description>
Example	SET LBC DESCRIPTION LBC_1 Monitor output from firewall
Command Notes	<ul style="list-style-type: none"> The LBC name in this command is case sensitive. Description can be a max of 512 characters.

3.4.3 SET LBC EGRESS-PORTS (SE LB EG)

Usage Guidelines	This command is used to allocate a port group to be the egress set of a load balancing configuration. These ports will transmit the load balanced traffic.
Syntax	SET LBC EGRESS-PORTS <name> <PortGroupName>
Example	SET LBC EGRESS-PORTS LBC_1 Group_A
Command Notes	<ul style="list-style-type: none"> The LBC and Group name in this command are both case sensitive.

3.4.4 SET LBC INGRESS-PORTS (SE LB IN)

Usage Guidelines	This command is used to allocate a port or port group to be the ingress set of a load balancing configuration. These ports will be the source for the load balanced traffic.
Syntax	SET LBC INGRESS-PORTS <name> [<port#> <PortGroupName>]
Example	SET LBC INGRESS-PORTS LBC_1 12
Command Notes	<ul style="list-style-type: none"> The LBC name in this command is case sensitive.

3.4.5 SET LBC STATE (SE LB ST)

Usage Guidelines	This command is used to set a created load balancing configuration into one of three states. The load balancing configuration needs to be configured with ingress and egress ports before it can be set to "Active".
Syntax	SET LBC STATE <name> <state>
Example	SET LBC STATE LBC_1 ACTIVE
Command Notes	<p>Possible LBC states include:</p> <ul style="list-style-type: none"> ACTIVE - Activate this configuration (PASS TRAFFIC) INACTIVE - Deactivate this configuration (No Traffic) RECOVER-ALL - Re-activate the configuration (Recover ports) bringing recovered ports back into the balance group

3.4.6 SET LBG ADMIN-STATE (SE LB AD)

Usage Guidelines	This command is used to change the state of a port in the egress portion of a load balancing configuration. Ports can be configured to one of two admin-states.
Syntax	SET LBG ADMIN-STATE <name> <port#> [AC(TIVE) FA(ILOVER)
Example	SET LBG ADMIN-STATE LBC_1 4 FAILOVER
Command Notes	Possible admin-states include: <ul style="list-style-type: none"> • ACTIVE - Activate this port (PASS TRAFFIC) • FAILOVER - Deactivate this port (No Traffic)

3.4.7 SET LBG PORT-STATE (SE LB PO)

Usage Guidelines	This command is used to change the link state of a port in the egress portion of a load balancing configuration. A port must be set to “active” after it is brought “up” in order to pass traffic.
Syntax	SET LBG PORT-STATE <name> <port#> [UP DOWN]
Example	SET LBG PORT-STATE LBC_1 4 UP
Command Notes	Possible admin-states include: <ul style="list-style-type: none"> • UP- Attempt to force the state of the port up • DOWN- Attempt to force the state of the port down

3.4.8 SHOW LBC (SH LB)

Usage Guidelines	This command is used to display information for one load balancing configuration, or a list of all created. Will display information including: Name, Description, Ingress ports, Egress ports, load balancing groups contained, link state, etc.
Syntax	SHOW LBC [<name> LI(ST) [DE(TAILED)]]
Example	SHOW LBC LIST DETAILED
Command Notes	<ul style="list-style-type: none"> • The LBC name in this command is case sensitive.

3.5 Management Port Settings

3.5.1 SET GATEWAY (SE GA)

Usage Guidelines	This command is used to configure the gateway address for the management port on the switch.
Syntax	SET GATEWAY <IPv4 address>
Example	SET GATEWAY <192.168.1.1>

3.5.2 SET IP (SE IP)

Usage Guidelines	This command is used to configure the IP address for the management port on the switch.
Syntax	SET IP <IPv4 address>
Example	SET IP <192.168.1.25>

3.5.3 SET MANAGEMENT PORT (SE MA PO)

Usage Guidelines	This command is used to turn the network management port on the switch on or off.
Syntax	SET MANAGEMENT PORT [ON OFF]
Example	SET MANAGEMENT PORT ON
Command Notes	<ul style="list-style-type: none"> Turning the management port off will result in SSH, Telnet and the GUI becoming unavailable. The only way to access the switch in this state is through the serial port.

3.5.4 SET PING (SE PI)

Usage Guidelines	This command is used to determine if the switch will respond to ICMP echo requests.
Syntax	SET PING [ON OFF]
Example	SET PING ON

3.5.5 SET SSH (SE SS)

Usage Guidelines	This command is used to determine if the switch will respond to SSH connection attempts.
Syntax	SET SSH [ON OFF]
Example	SET SSH ON

3.5.6 SET SUBNET (SE SU)

Usage Guidelines	This command is used to configure the subnet address for the management port on the switch.
Syntax	SET SUBNET <IPv4 address>
Example	SET SUBNET <255.255.255.0>

3.5.7 SET TCP PORT (SE TC PO)

Usage Guidelines	This command is used to configure the upgrade port on the switch. This port is used by FLASHutils to upgrade the firmware on the switch.
Syntax	SET TCP PORT <port>
Example	SET TCP PORT 2370
Command Notes	<ul style="list-style-type: none"> • Default TCP port is 2370. If modified, FLASHutils may also need to be configured to reflect the change.

3.5.8 SET TELNET (SE TE)

Usage Guidelines	This command is used to configure the upgrade port on the switch. This port is used by FLASHutils to upgrade the firmware on the switch.
Syntax	SET TCP PORT <port>
Example	SET TCP PORT 2370
Command Notes	<ul style="list-style-type: none"> • Default TCP port is 2370. If modified, FLASHutils may also need to be configured to reflect the change. • Accepted ports are 1-65535

3.5.9 SHOW MANAGEMENT (SH MA)

Usage Guidelines	This command is used to display the management port related information. This includes the IP, subnet, gateway, TCP port, and MAC Address.
Syntax	SHOW MANAGEMENT
Example	SHOW MANAGEMENT

3.6 NTP

3.6.1 ADD NTP SERVER (AD NT SE)

Usage Guidelines	This command is used to add a new NTP server to the configuration of the switch.
Syntax	ADD NTP SERVER <IP address>
Example	ADD NTP SERVER 192.168.10.5

3.6.2 CLEAR NTP SERVER-LIST (CL NT SE)

Usage Guidelines	This command is used to remove all NTP servers from the NTP list on the switch.
Syntax	CLEAR NTP SERVER-LIST
Example	CLEAR NTP SERVER-LIST

3.6.3 REMOVE NTP SERVER (RE NT SE)

Usage Guidelines	This command is used to remove a specific NTP server from the server list.
Syntax	REMOVE NTP SERVER <IP Address>
Example	REMOVE NTP SERVER 192.168.10.5

3.6.4 SHOW NTP (SH NT)

Usage Guidelines	This command is used to display a list of all configured NTP servers, as well as the current NTP synchronization status of the switch.
Syntax	SHOW NTP
Example	SHOW NTP

3.6.5 SHOW NTP SERVER-LIST (SH NT SE)

Usage Guidelines	This command is used to display a list of all configured NTP servers.
Syntax	SHOW NTP SERVER-LIST
Example	SHOW NTP SERVER-LIST

3.6.6 SHOW NTP STATUS (SH NT ST)

Usage Guidelines	This command is used to display the current NTP synchronization status of the switch.
Syntax	SHOW NTP STATUS
Example	SHOW NTP STATUS

3.7 Port Configuration

3.7.1 DELETE PORT DESC (DE PO DE)

Usage Guidelines	This command is used to delete the description configured on a port.
Syntax	DELETE PORT DESC <port>
Example	DELETE PORT DESC 5

3.7.2 DELETE PORT NAME (DE PO NA)

Usage Guidelines	This command is used to delete the name configured on a port.
Syntax	DELETE PORT NAME <port>
Example	DELETE PORT NAME 5

3.7.3 GET LINK SUMMARY (GE LI SU)

Usage Guidelines	This command is used to display a chart of media type, state, filters, load balancing status, PGA groups, configured speed, and negotiated speed for each port on the switch.
Syntax	GET LINK SUMMARY
Example	GET LINK SUMMARY

3.7.4 GET PORT COUNTERS (GE PO CO)

Usage Guidelines	This command is used to display the traffic counters for ports. These statistics include statistics such as packet size and error frames.
Syntax	GET PORT COUNTERS [PORT_# PORT-LIST ALL]
Example	GET PORT COUNTERS 3,4,5

3.7.5 RESET PORT COUNTERS (RE PO CO)

Usage Guidelines	This command is used to reset the traffic counters for ports.
Syntax	RESET PORT COUNTERS [PORT_# PORT-LIST ALL]
Example	RESET PORT COUNTERS ALL

3.7.6 SET PORT DESC (SE PO DE)

Usage Guidelines	This command is used to set a description for a specific port.
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Syntax	SET PORT DESC <port> TO <string>
Example	SET PORT DESC 4 TO Second monitor output.
Command Notes	<ul style="list-style-type: none"> Description can be a max of 512 characters.

3.7.7 SET PORT NAME (SE PO NA)

Usage Guidelines	This command is used to set a name for a specific port.
Syntax	SET PORT NAME <port> TO <string>
Example	SET PORT NAME 5 TO Monitor_3

3.7.8 SET PORT SPEED (SE PO SP)

Usage Guidelines	This command is used to set the speed for a specific port, list of ports, or all ports. The speed must match the media of the SFP in the port.
Syntax	SET PORT SPEED [PORT_# PORT-LIST ALL] <Speed>
Example	SET PORT SPEED 3,4,5 CU-AUTO
Command Notes	<p>Possible speeds are:</p> <ul style="list-style-type: none"> CU-100M CU-AUTO 1000X-Manual 1000X-Auto 10G

3.7.9 SET PORT TYPE (SE PO TY)

Usage Guidelines	This command is used to set the port type of a specific port. Port types determine where traffic is able to be steered. (Ex. Monitor cannot steer to other ports). Interconnect ports can be steered to and receive from all other interconnect ports. Default setting is Interconnect.
Syntax	SET PORT TYPE <port> TO <type>
Example	SET PORT TYPE 5 TO MONITOR
Command Notes	<p>Possible port types are:</p> <ul style="list-style-type: none"> Network Monitor Active Monitor Interconnect

3.7.10 SHOW PORT CONFIG (SH PO CO)

Usage Guidelines	This command is used to display various configurable port settings applied to the ports on the switch. Fields include name, description, type, media, configured speed, negotiated speed.
Syntax	SHOW PORT CONFIG [PORT_# PORT-LIST ALL]
Example	SHOW PORT CONFIG ALL

3.7.11 SHOW PORT DESC (SH PO DE)

Usage Guidelines	This command is used to display the description of a specific port, or of multiple ports.
Syntax	SHOW PORT DESC [PORT_# PORT-LIST ALL]
Example	SHOW PORT DESC ALL

3.7.12 SHOW PORT NAME (SE PO NA)

Usage Guidelines	This command is used to display the name of a specific port, or of multiple ports.
Syntax	SHOW PORT NAME [PORT_# PORT-LIST ALL]
Example	SHOW PORT NAME ALL

3.7.13 SHOW PORT STATS (SH PO ST)

Usage Guidelines	This command is used to display port information including Rx power, SFP vendor, SFP part number, media, configured speed, link status.
Syntax	SHOW PORT STATS [PORT_# PORT-LIST ALL]
Example	SHOW PORT STATS 7

3.7.14 SHOW PORT TYPE (SH PO TY)

Usage Guidelines	This command is used to display the port type associated with a specific port, or a list of ports.
Syntax	SHOW PORT TYPE [PORT_# PORT-LIST ALL]
Example	SHOW PORT TYPE ALL

3.8 Port Group Associations

3.8.1 CREATE PGA (CR PG)

Usage Guidelines	<p>The Port Group will operate as a single logical unit for Up/Down link state propagation. Any one port that is physically down will cause all other ports in that port group to also be brought down.</p> <p>All ports in a port group must be physically Link UP in order for the remaining ports to be up.</p>
Syntax	CREATE PGA <name> <PORT-LIST>
Example	CREATE PGA Security 4,5,6
Command Notes	<p><name> - Unique name of the Port Group Association. 2-64 characters. Character set: [A-Za-z][A-Za-z0-9.@_ -]</p> <p><PORT-LIST> - Port #, a Port-List(1,3,6-10), or the keyword 'ALL'.</p> <p>NOTE: At least 2 ports must be defined in the port list</p>

3.8.2 DELETE PGA (DE PG)

Usage Guidelines	Delete an existing Port Group Association. The ports involved in the PGA will be logically separate. If a port that is part of a port group is physically Link UP and logically Link DOWN when the port group is deleted, it will become active after the deletion of the PGA.
Syntax	DELETE PGA <name>
Example	DELETE PGA Security

3.8.3 SHOW PGA (SH PG)

Usage Guidelines	Display all configured Port Group Associations in a list including the PGA names and the related ports.
Syntax	SHOW PGA
Example	SHOW PGA

3.9 Port Steering

3.9.1 RESET PORT MONITORS (RE PO MO)

Usage Guidelines	This command is used to clear all port steering configurations made on all ports.
Syntax	RESET PORT MONITORS
Example	RESET PORT MONITORS
Command Notes	<ul style="list-style-type: none"> • This command may interrupt traffic flow between ports that are connected through port steering. • Ports involved in load balancing configurations will not be reset.

3.9.2 SET PORT MONITOR (SE PO MO) -Tx

Usage Guidelines	This command is used to assign port steering between two ports. Traffic arriving at the switch from the second parameter will be sent to the first parameter.
Syntax	SET PORT MONITOR <Tx-port> FROM [NONE Rx-Port]
Example	SET PORT MONITOR 7 FROM 3,4,5
Command Notes	<ul style="list-style-type: none"> • Final parameter can be a comma separated list. • "NONE" in the second parameter will clear port steering for the port.

3.9.3 SET PORT MONITOR (SE PO MO) -Rx

Usage Guidelines	This command is used to assign port steering between two ports. Traffic arriving at the switch from the first parameter will be sent to the second parameter.
Syntax	SET PORT MONITOR <Rx-port> TO [NONE Tx-port]
Example	SET PORT MONITOR 10 TO 11
Command Notes	<ul style="list-style-type: none"> • Final parameter can be a comma separated list. • "NONE" in the second parameter will clear port steering for the port.

3.9.4 SHOW PORT ROUTING (SH PO RO)

Usage Guidelines	This command is used to display a chart showing all port steering configurations and ports involved in load balancing configurations. Horizontal axis of the chart shows the input ports, vertical axis shows the output ports.
Syntax	SHOW PORT ROUTING
Example	SHOW PORT ROUTING

3.9.5 SET PORT RX (RE PO RX)

Usage Guidelines	This command is used to set port steering to direct traffic between ports. Command overrides safety checks that are present in the SE PO MO command, and if used without an understanding of the full routing of the device may lead to unstable traffic situations. Using this command, ports that are involved in load balancing groups may also be used to steer traffic.
Syntax	SET PORT RX <Rx-Port> TO <Tx-Port>
Example	SET PORT RX <Rx-Port> TO <Tx-Port>
Command Notes	<ul style="list-style-type: none"> • Final parameter can be a comma separated list. • "NONE" in the second parameter will clear port steering for the port.

3.10 RADIUS

3.10.1 ADD RADIUS (AD RA)

Usage Guidelines	This command is used to add a new RADIUS server to the list of RADIUS servers. Only an IP address is required to add a server, port and secret are optional.
Syntax	ADD RADIUS [<IP> <IP:Port>] <Secret>
Example	ADD RADIUS 192.168.1.30:1812 SecretRadius
Command Notes	<ul style="list-style-type: none"> • Default RADIUS port is 1812.

3.10.2 DELETE RADIUS (DE RA)

Usage Guidelines	This command is used to delete a RADIUS server from the list of RADIUS servers.
Syntax	DELETE RADIUS <IP><:Port>
Example	DELETE RADIUS 192.168.1.30:1812

3.10.3 SET RADIUS SECRET (SE RA SE)

Usage Guidelines	This command is used to configure an existing RADIUS server to have a secret.
Syntax	SET RADIUS SECRET <ip><:Port> <Secret>
Example	SET RADIUS SECRET 192.168.1.30:1812 RadiusSecret

3.10.4 SET RADIUS TIMEOUT (SE RA TI)

Usage Guidelines	This command is used to configure an existing RADIUS server to have a timeout.
Syntax	SET RADIUS TIMEOUT <ip><:Port> <timeout>
Example	SET RADIUS TIMEOUT 192.168.1.30:1812 30
Command Notes	<ul style="list-style-type: none"> • Timeout value must be 1-60 minutes.

3.10.5 SHOW RADIUS (SH RA)

Usage Guidelines	This command is used to display all information for all RADIUS servers on the server list. Information includes IP, port, secret, and timeout values for all servers.
Syntax	SHOW RADIUS
Example	SHOW RADIUS

3.11 SNMP

3.11.1 DELETE SNMPV2C READCOMMUNITY (DE V2 RC)

Usage Guidelines	This command is used to delete the existing READCOMMUNITY value that is configured.
Syntax	DELETE SNMPV2C READCOMMUNITY
Example	DELETE SNMPV2C READCOMMUNITY

3.11.2 DELETE SNMPV2C TRAP (DE V2 TR)

Usage Guidelines	This command is used to delete the existing trap destination configured for SNMPv2C.
Syntax	DELETE SNMPV2C TRAP <Trap Dest IP Address> <port> <community string>
Example	DELETE SNMPV2C TRAP 192.168.1.40 1642 WCstring
Command Notes	<ul style="list-style-type: none"> • Community string is case sensitive.

3.11.3 DELETE SNMPV2C WRITECOMMUNITY (DE V2 WC)

Usage Guidelines	This command is used to delete the existing SNMPv2C WRITECOMMUNITY.
Syntax	DELETE SNMPV2C WRITECOMMUNITY
Example	DELETE SNMPV2C WRITECOMMUNITY

3.11.4 DELETE SNMPV3 TRAP (DE V3 TR)

Usage Guidelines	This command is used to delete the existing trap destination configured for SNMPv3.
Syntax	DELETE SNMPV3 TRAP <Trap Dest IP Address> <port> <username> <security level>
Example	DELETE SNMPV3 TRAP 192.168.1.40 1632 admin authPriv
Command Notes	<p>Security types are:</p> <ul style="list-style-type: none"> • noAuthNoPriv • authNoPriv • authPriv <p>Username is case sensitive.</p>

3.11.5 DELETE SNMPV3 USER (DE V3 US)

Usage Guidelines	This command is used to delete the existing SNMPv3 user.
Syntax	DELETE SNMPV3 USER <username>
Example	DELETE SNMPV3 USER admin
Command Notes	<ul style="list-style-type: none"> • Username is case sensitive.

3.11.6 RESET SNMP DEFAULTS (RE SN DE)

Usage Guidelines	This command is used to reset all SNMP setting to their default values. This will eliminate all values for both SNMPv2C and SNMPv3.
Syntax	RESET SNMP DEFAULTS
Example	RESET SNMP DEFAULTS

3.11.7 SET SNMP (SE SN)

Usage Guidelines	This command is used to turn on SNMPv2C and SNMPv3. SNMP must be configured before it will run.
Syntax	SET SNMP [ON OFF]
Example	SET SNMP ON

3.11.8 SET SNMPV2C READCOMMUNITY (SE V2 RC)

Usage Guidelines	This command is used to set the value for the READCOMMUNITY in SNMPv2c.
Syntax	SET SNMPV2C READCOMMUNITY <readcommunity string>
Example	SET SNMPV2C READCOMMUNITY RC_string
Command Notes	<ul style="list-style-type: none"> String is case sensitive.

3.11.9 SET SNMPV2C TRAP (SE V2 TR)

Usage Guidelines	This command is used to set up the criteria for the SNMPv2C trap.
Syntax	SET SNMPV2C TRAP <Trap Dest IP Address> <port> <community string>
Example	SET SNMPV2C TRAP 192.168.1.44 1232 RC_string
Command Notes	<ul style="list-style-type: none"> String is case sensitive.

3.11.10 SET SNMPV2C WRITECOMMUNITY (SE V2 WC)

Usage Guidelines	This command is used to set the value for the WRITECOMMUNITY in SNMPv2c.
Syntax	SET SNMPV2C WRITECOMMUNITY <writecommunity string>
Example	SET SNMPV2C WRITECOMMUNITY WC_string
Command Notes	<ul style="list-style-type: none"> String is case sensitive.

3.11.11 SET SNMPV3 MONITORUSER (SE V3 MU)

Usage Guidelines	This command is used to set up the monitor user for SNMPv3, along with pertinent criteria.
Syntax	SET SNMPV3 MONITORUSER <name> <auth> <authPass> <priv> <privPass>
Example	SET SNMPV3 MONITORUSER admin MD5 abcdefghijklmnop DES zyxwvutsrqponm
Command Notes	<p>Auth types are:</p> <ul style="list-style-type: none"> MD5 SHA <p>Priv types are:</p> <ul style="list-style-type: none"> DES AES <ul style="list-style-type: none"> Each password must be at least 12 characters. Name is case sensitive.

3.11.12 SET SNMPV3 SUPERUSER (SE V3 SU)

Usage Guidelines	This command is used to set up the super user for SNMPv3, along with pertinent criteria.
Syntax	SET SNMPV3 SUPERUSER <name> <auth> <authPass> <priv> <privPass>
Example	SET SNMPV3 SUPERUSER admin MD5 abcdefghijklmnop DES zyxwvutsrqponm
Command Notes	<p>Auth types are:</p> <ul style="list-style-type: none"> • MD5 • SHA <p>Priv types are:</p> <ul style="list-style-type: none"> • DES • AES <ul style="list-style-type: none"> • Each password must be at least 12 characters. • Name is case sensitive.

3.11.13 SET SNMPV3 TRAP (SE V3 TR)

Usage Guidelines	This command is used to set the criteria for a SNMPv3 trap.
Syntax	SET SNMPV3 TRAP <TrapDest IP> <port> <username> <security level>
Example	SET SNMPV3 TRAP 192.168.1.46 2321 admin authNoPriv
Command Notes	<p>Security types are:</p> <ul style="list-style-type: none"> • noAuthNoPriv • authNoPriv • authPriv <ul style="list-style-type: none"> • Username is case sensitive.

3.11.14 SHOW SNMP (SH SN)

Usage Guidelines	This command is used to display all SNMPv2C and SNMPv3 configurations.
Syntax	SHOW SNMP
Example	SHOW SNMP

3.11.15 SHOW SNMPV2C READCOMMUNITY (SH V2 RC)

Usage Guidelines	This command is used to display value set for the SNMPV2c read community.
Syntax	SHOW SNMPV2C READCOMMUNITY
Example	SHOW SNMPV2C READCOMMUNITY

3.11.16 SHOW SNMPV2C TRAP (SH V2 TR)

Usage Guidelines	This command is used to display criteria of all configured SNMPv2C traps.
Syntax	SHOW SNMPV2C TRAP
Example	SHOW SNMPV2C TRAP

3.11.17 SHOW SNMPV2C WRITECOMMUNITY (SH V2 WC)

Usage Guidelines	This command is used to display value set for the SNMPv2c write community.
Syntax	SHOW SNMPV2C WRITECOMMUNITY
Example	SHOW SNMPV2C WRITECOMMUNITY

3.11.18 SHOW SNMPV3 TRAP (SH V3 TR)

Usage Guidelines	This command is used to display criteria of all configured SNMPv3 traps.
Syntax	SHOW SNMPV3 TRAP
Example	SHOW SNMPV3 TRAP

3.11.19 SHOW SNMPV3 USERS (SH V3 US)

Usage Guidelines	This command is used to display all SNMPv3 users and their configured values.
Syntax	SHOW SNMPV3 TRAP
Example	SHOW SNMPV3 TRAP

3.12 Syslog

3.12.1 ADD SYSLOG SERVER (AD SY SE)

Usage Guidelines	This command is used to add a Syslog server with the specified IP address and port.
Syntax	ADD SYSLOG SERVER <IP Address><IP Port>
Example	ADD SYSLOG SERVER 1.1.1.2 112

3.12.2 CLEAR SYSLOG SERVER-LIST (CL SY SE)

Usage Guidelines	This command is used to delete all configured Syslog servers.
Syntax	CLEAR SYSLOG SERVER-LIST
Example	CLEAR SYSLOG SERVER-LIST

3.12.3 GET SYSLOG SERVER-LIST (GE SY SE)

Usage Guidelines	This command is used to display a list of all Syslog servers.
Syntax	GET SYSLOG SERVER-LIST
Example	GET SYSLOG SERVER-LIST

3.12.4 GET SYSLOG STATE (GE SY ST)

Usage Guidelines	This command is used to display the status of the Syslog service.
Syntax	GET SYSLOG STATE
Example	GET SYSLOG STATE

3.12.5 REMOVE SYSLOG SERVER (RE SY SE)

Usage Guidelines	This command is used to remove a specific Syslog server from the server list.
Syntax	REMOVE SYSLOG SERVER <IP Address> <IP Port>
Example	REMOVE SYSLOG SERVER 1.1.1.2 112

3.12.6 SET SYSLOG STATE (SE SY ST)

Usage Guidelines	This command is used to toggle the status of the Syslog service.
Syntax	SET SYSLOG STATE [ON OFF]
Example	SET SYSLOG STATE ON

3.12.7 SHOW SYSLOG (SH SY)

Usage Guidelines	This command is used to display the status of the Syslog service, as well as any Syslog servers that have been configured in the server list.
Syntax	SHOW SYSLOG
Example	SHOW SYSLOG

3.13 System

3.13.1 DELETE SYS DESC (DE SY DE)

Usage Guidelines	This command is used to delete a configured system description.
Syntax	DELETE SYS DESC
Example	DELETE SYS DESC

3.13.2 EXIT (EX)

Usage Guidelines	This command is used to log the current user out and return to the login prompt. Must be used following the configuration of any IP settings for the management port.
Syntax	EXIT
Example	EXIT

3.13.3 GET KEEPALIVE INTERVAL (GE KE IN)

Usage Guidelines	This command is used to display the current system health keep alive interval in seconds.
Syntax	GET KEEPALIVE INTERVAL
Example	GET KEEPALIVE INTERVAL

3.13.4 HELP (HE)

Usage Guidelines	This command is used to display all of the available commands on the device. Commands are shown with syntax and descriptions.
Syntax	HELP <search field>
Example	HELP group
Command Notes	<ul style="list-style-type: none"> Typing a value after help will filter the results to only include commands that contain an exact match of the value in the name.

3.13.5 POWER STATUS (PO ST)

Usage Guidelines	This command is used to display the current status of the power supplies on the VERSAstream.
Syntax	POWER STATUS
Example	POWER STATUS

3.13.6 REBOOT (REBOOT)

Usage Guidelines	This command is used to perform a reboot. This will require a login once the VERSAstream has finished rebooting.
Syntax	REBOOT
Example	REBOOT

3.13.7 REGENERATE WEB CERTIFICATE (RE WE CE)

Usage Guidelines	This command is used to regenerate the Streamlite Web Certificate. If the GUI is in use when this command is entered, it will log the user out of the GUI.
Syntax	REGENERATE WEB CERTIFICATE
Example	REGENERATE WEB CERTIFICATE

3.13.8 RESTART WEB SERVER (RE WE SE)

Usage Guidelines	This command is used to restart the Streamlite Web Server. If the GUI is in use when this command is entered, it will log the user out of the GUI.
Syntax	REGENERATE WEB SERVER
Example	REGENERATE WEB SERVER

3.13.9 SET AUTHENTICATION ORDER (SE AU OR)

Usage Guidelines	This command is used to set the authentication order for login to the VERSAstream.
Syntax	SET AUTHENTICATION ORDER <Primary>[Secondary]
Example	SET AUTHENTICATION ORDER <Primary>[Secondary]
Command Notes	Auth types are: <ul style="list-style-type: none"> • LOCAL • RADIUS • TACACS

3.13.10 SET DATE (SE DA)

Usage Guidelines	This command is used to set the date on the VERSAstream.
Syntax	SET DATE <MMDDYY>
Example	SET DATE <102518>
Command Notes	<ul style="list-style-type: none"> • Valid year range 2000-2038

3.13.1 SET FRAGMENT (SE FR)

Usage Guidelines	This command is used to set to enable the Fragmented dropped packets recovery feature.
Syntax	SET FRAGMENT [ON OFF]
Example	SET FRAGMENT ON
Command Notes	Setting the feature to "ON" will allow the visibility of fragmented packets.

3.13.2 SET KEEPALIVE INTERVAL (SE KE IN)

Usage Guidelines	This command is used to set the current system health keep alive interval in seconds.
Syntax	SET KEEPALIVE INTERVAL <seconds>
Example	SET KEEPALIVE INTERVAL 20
Command Notes	<ul style="list-style-type: none"> To turn off the keep alive interval, enter a "0" for the seconds field.

3.13.3 SET SESSION TIMEOUT (SE SE TI)

Usage Guidelines	This command is used to set length of inactivity on the CLI before the user is logged out.
Syntax	SET SESSION TIMEOUT <minutes>
Example	SET SESSION TIMEOUT 20
Command Notes	<ul style="list-style-type: none"> To turn off the keep alive interval, enter a "0" for the seconds field.

3.13.4 SET SYS DESC (SE SY DE)

Usage Guidelines	This command is used to set the system description.
Syntax	SET SYS DESC <string>
Example	SET SYS DESC VERSAstream used for monitor devices 1-4
Command Notes	<ul style="list-style-type: none"> Maximum of 512 characters allowed for description.

3.13.5 SET SYS NAME (SE SY NA)

Usage Guidelines	This command is used to set the system name.
Syntax	SET SYS NAME <string>
Example	SET SYS NAME VERSAstream01
Command Notes	<ul style="list-style-type: none"> • Maximum of 64 characters allowed for name.

3.13.6 SET TIME (SE TI)

Usage Guidelines	This command is used to set the system time.
Syntax	SET TIME [HHMMSS]
Example	SET TIME 173020
Command Notes	<ul style="list-style-type: none"> • Time is in 24-Hour format.

3.13.7 SHOW (SH)

Usage Guidelines	This command is used to display many general system settings including IP settings, serial settings, services, firmware version etc.
Syntax	SHOW
Example	SHOW

3.13.8 SHOW AUTHENTICATION ORDER (SH AU OR)

Usage Guidelines	This command is used to display the current order of authentication that is followed for login attempts.
Syntax	SHOW AUTHENTICATION ORDER
Example	SHOW AUTHENTICATION ORDER

3.13.9 SHOW FIRMWARE VERSION (SH FW VE)

Usage Guidelines	This command is used to display the current firmware loaded on the VERSAstream.
Syntax	SHOW FIRMWARE VERSION
Example	SHOW FIRMWARE VERSION

3.13.10 SHOW PRODUCT (SH PR)

Usage Guidelines	This command is used to display the model, serial and firmware version of the VERSAstream.
Syntax	SHOW PRODUCT
Example	SHOW PRODUCT

3.13.11 SHOW SERIAL (SH SE)

Usage Guidelines	This command is used to display the serial port speeds currently configured.
Syntax	SHOW SERIAL
Example	SHOW SERIAL

3.13.12 SHOW SERVICE STATUS (SH SV ST)

Usage Guidelines	This command is used to display the status of various network services including SSH, Telnet, Ping, SNMP, Syslog, SNMP, and NTP.
Syntax	SHOW SERVICE STATUS
Example	SHOW SERVICE STATUS

3.13.13 SHOW SESSION TIMEOUT (SH SE TI)

Usage Guidelines	This command is used to display the current session timeout value.
Syntax	SHOW SESSION TIMEOUT
Example	SHOW SESSION TIMEOUT

3.13.14 SHOW SYS DESC (SH SY DE)

Usage Guidelines	This command is used to display the current system description.
Syntax	SHOW SYS DESC
Example	SHOW SYS DESC

3.13.15 SHOW SYS NAME (SH SY NA)

Usage Guidelines	This command is used to display the current system name.
Syntax	SHOW SYS NAME
Example	SHOW SYS NAME

3.13.16 SHOW TIME (SH TI)

Usage Guidelines	This command is used to display the current system time.
Syntax	SHOW TIME
Example	SHOW TIME

3.14 TACACS

3.14.1 ADD TACACS LOGIN (AD TA LO)

Usage Guidelines	This command is used to configure access for a new TACACS+ server.
Syntax	ADD TACACS LOGIN <ip><:Port> <Secret>
Example	ADD TACACS LOGIN 192.168.53.5:49 TACACS_Secret
Command Notes	<ul style="list-style-type: none"> • Port field is optional. No input will result in the default value of 49. • Secret can be up to 127 characters.

3.14.2 ADD TACACS RIGHTS (AD TA RI)

Usage Guidelines	This command is used to configure rights for a TACACS+ server.
Syntax	ADD TACACS RIGHTS <ip><:Port> <Secret> <Authorization Service>
Example	ADD TACACS RIGHTS 192.168.53.5:49 TACACS_Secret Auth
Command Notes	<ul style="list-style-type: none"> • Port field is optional. No input will result in the default value of 49. • Secret can be up to 127 characters.

3.14.3 DELETE TACACS LOGIN (DE TA LO)

Usage Guidelines	This command is used to delete existing TACACS server access information.
Syntax	DELETE TACACS LOGIN <ip><:Port>
Example	DELETE TACACS LOGIN 192.168.53.5:49
Command Notes	<ul style="list-style-type: none"> • Port field is optional. No input will result in the default value of 49.

3.14.4 DELETE TACACS RIGHTS (DE TA RI)

Usage Guidelines	This command is used to delete existing TACACS server rights information.
Syntax	DELETE TACACS RIGHTS <ip><:Port>
Example	DELETE TACACS RIGHTS 192.168.53.5:49
Command Notes	<ul style="list-style-type: none"> Port field is optional. No input will result in the default value of 49.

3.14.5 SET TACACS LOGIN (SE TA LO)

Usage Guidelines	This command is used to set a secret for the login of a TACACS+ server.
Syntax	SET TACACS LOGIN <ip><:Port> <secret>
Example	DELETE TACACS RIGHTS 192.168.53.5:49 Login_Secret
Command Notes	<ul style="list-style-type: none"> Port field is optional. No input will result in the default value of 49. Secret can be up to 127 characters.

3.14.6 SET TACACS RIGHTS (SE TA RI)

Usage Guidelines	This command is used to set a secret for the rights of a TACACS+ server.
Syntax	SET TACACS RIGHTS <ip><:Port> <secret>
Example	SET TACACS RIGHTS 192.168.53.5:49 Rights_Secret
Command Notes	<ul style="list-style-type: none"> Port field is optional. No input will result in the default value of 49. Secret can be up to 127 characters.

3.14.7 SET TACACS SERVICE (SE TA SV)

Usage Guidelines	This command is used to set a service address for a TACACS server.
Syntax	SET TACACS SERVICE <ip><:Port> <service>
Example	SET TACACS SERVICE 192.168.53.5:49 Auth
Command Notes	<ul style="list-style-type: none"> Port field is optional. No input will result in the default value of 49.

3.14.8 SET TACACS TIMEOUT (SE TA TI)

Usage Guidelines	This command is used to set a service address for a TACACS server.
Syntax	SET RADIUS TIMEOUT <ip><:Port> <timeout>
Example	SET RADIUS TIMEOUT 192.168.53.5:49 40
Command Notes	<ul style="list-style-type: none"> • Port field is optional. No input will result in the default value of 49. • Timeout value must be between 1 and 60 minutes.

3.14.9 SHOW TACACS (SH TA)

Usage Guidelines	This command is used to display all TACACS configurations.
Syntax	SHOW TACACS
Example	SHOW TACACS

3.15 User Management

3.15.1 CREATE USER (CR US)

Usage Guidelines	This command is used to create a new user.
Syntax	CREATE USER <username>
Example	CREATE USER John_Doe
Command Notes	<ul style="list-style-type: none"> • Before the user can be used to login, a password must be created first. • Users start with no administrative access. This must be defined later on. • Username is cap sensitive.

3.15.2 GET USER (GE US)

Usage Guidelines	This command is used to display all configured criteria for a specific user. This includes all privileges and user information.
Syntax	GET USER <username>
Example	GET USER John_Doe
Command Notes	<ul style="list-style-type: none"> • Before the user can be used to login, a password must be created first. • Users start with no administrative access. This must be defined later on. • Username is cap sensitive.

3.15.3 REMOVE USER (RE US)

Usage Guidelines	This command is used to remove a user from the login list.
Syntax	REMOVE USER <username>
Example	REMOVE USER John_Doe
Command Notes	<ul style="list-style-type: none"> • Username is cap sensitive.

3.15.4 REMOVE USER CELL (RE US CE)

Usage Guidelines	This command is used to clear the cell phone field in the user's information.
Syntax	REMOVE USER CELL <username>
Example	REMOVE USER CELL John_Doe
Command Notes	<ul style="list-style-type: none"> • Username is cap sensitive.

3.15.5 REMOVE USER EMAIL (RE US EM)

Usage Guidelines	This command is used to clear the email field in user's information.
Syntax	REMOVE USER EMAIL <username>
Example	REMOVE USER EMAIL John_Doe
Command Notes	<ul style="list-style-type: none"> • Username is cap sensitive.

3.15.6 REMOVE USER PHONE (RE US PH)

Usage Guidelines	This command is used to clear the Phone field in the user's information.
Syntax	REMOVE USER PHONE <username>
Example	REMOVE USER PHONE John_Doe
Command Notes	<ul style="list-style-type: none"> • Username is cap sensitive.

3.15.7 SET USER ACCESS (SE US AC)

Usage Guidelines	This command is used to assign privilege levels to a specific user.
Syntax	SET USER ACCESS <username> <access> <privilege>
Example	SET USER ACCESS John_Doe PORT WRITE
Command Notes	<p>Access types are:</p> <ul style="list-style-type: none"> • ADMIN • USER • PORT • IP • TIME • UPGRADE • SHOW <p>Privilege types are:</p> <ul style="list-style-type: none"> • NONE • READ • WRITE

3.15.8 SET USER CELL (SE US CE)

Usage Guidelines	This command is used to assign a phone number to the cell field in a specified user's information.
Syntax	SET USER CELL <username> <phone_number>
Example	SET USER CELL John_Doe 01234567891
Command Notes	<ul style="list-style-type: none"> • Username is cap sensitive. • Phone number must be 1-16 digits (no spaces, no dashes, no alphas)

3.15.9 SET USER EMAIL (SE US EM)

Usage Guidelines	This command is used to assign a phone number to the email field in a specified user's information.
Syntax	SET USER EMAIL <username> <email>
Example	SET USER EMAIL John_Doe john.doe@johndoe.com
Command Notes	<ul style="list-style-type: none"> • Username is cap sensitive. • Email must use the format: a[.b]@c.d

3.15.10 SET USER PASSWORD (SE US PA)

Usage Guidelines	This command is used to assign a password to an existing user. A user must be assigned a password before it can be used to log in.
Syntax	SET USER PASSWORD <username> <password> <password>
Example	SET USER PASSWORD John_Doe paswd paswd
Command Notes	<ul style="list-style-type: none"> • Username and passwords are cap sensitive.

3.15.11 SET USER PHONE (SE US PH)

Usage Guidelines	This command is used to assign a phone number to the phone field in a specified user's information.
Syntax	SET USER PHONE <username> <phone_number>
Example	SET USER PHONE John_Doe 98765432109
Command Notes	<ul style="list-style-type: none"> • Username is cap sensitive. • Phone number must be 1-16 digits (no spaces, no dashes, no alphas)

3.15.12 SHOW CURRENT USER (SH CU US)

Usage Guidelines	This command is used to display the current logged in user.
Syntax	SHOW CURRENT USER
Example	SHOW CURRENT USER

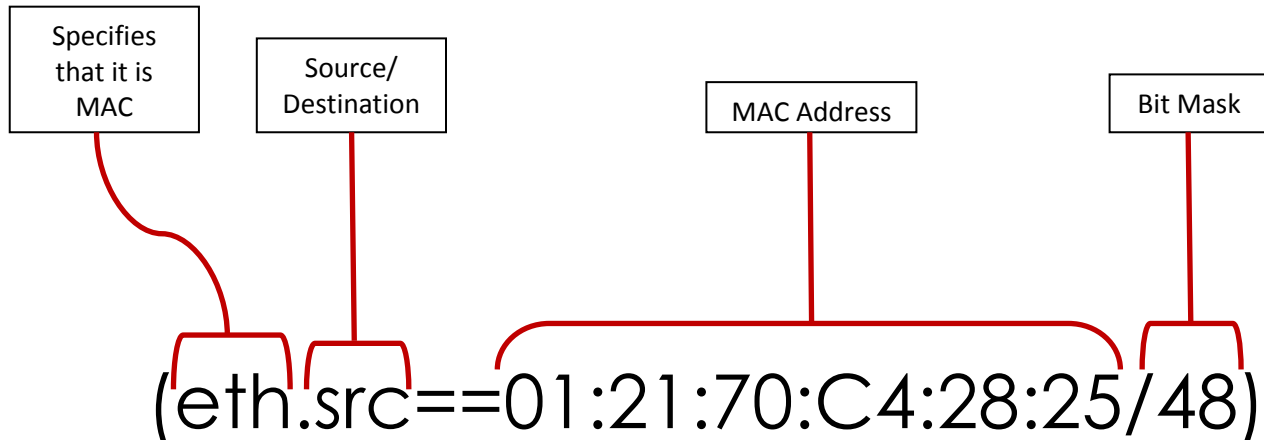
3.15.13 SHOW USERS (SH US)

Usage Guidelines	This command is used to display all created users on the VERSAstream, aside from the default Administrator.
Syntax	SHOW USERS
Example	SHOW USERS

4 CLI Filter Creation Guide

4.1 MAC Address Filters

4.1.1 Syntax



4.1.2 Allow by MAC Address

The following command will create a filter which will include all traffic with the source MAC address of 01:21:70:C4:28:25:

```
add filter AllowMAC (eth.src==01:21:70:C4:28:25/48)
```

4.1.3 Deny by MAC Address

The following command will create a filter which will exclude all traffic with the source MAC address of 01:21:70:C4:28:25:

```
add filter DenyMAC (!(eth.src==01:21:70:C4:28:25/48))
```

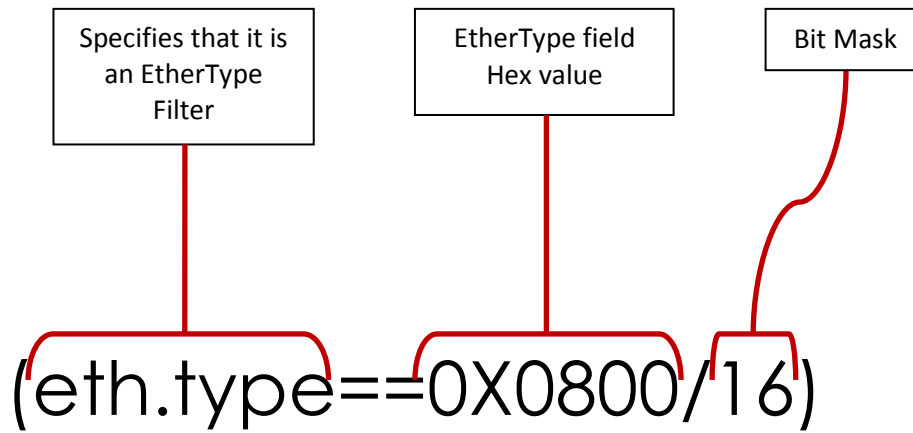
4.1.4 Destination MAC Address

The following command will create a filter which will include all traffic with the destination MAC address of 01:21:70:C4:28:25:

```
add filter DestMAC (eth.dst==01:21:70:C4:28:25/48)
```

4.2 EtherType Filters

4.2.1 Syntax



4.2.2 Allow by EtherType

The following command will create a filter which will include all traffic with the EtherType of 0X0800 (IPv4 traffic):

```
add filter IPv4 (eth.type==0X0800/16)
```

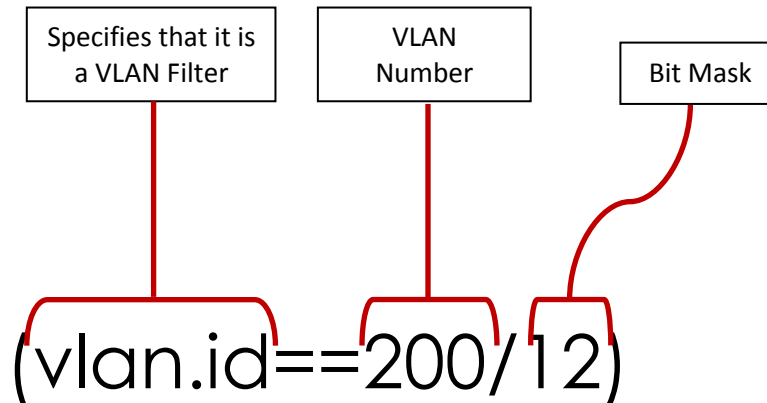
4.2.3 Deny by EtherType

The following command will create a filter which will exclude all traffic with the EtherType of 0X0800 (IPv4 traffic):

```
add filter NoIPv4 (!(eth.type==0X0800/16))
```

4.3 VLAN Filters

4.3.1 Syntax



4.3.2 Allow by VLAN ID

The following command will create a filter which will include all traffic that has the VLAN ID of 40:

```
add filter VL40 (vlan.id==40/12)
```

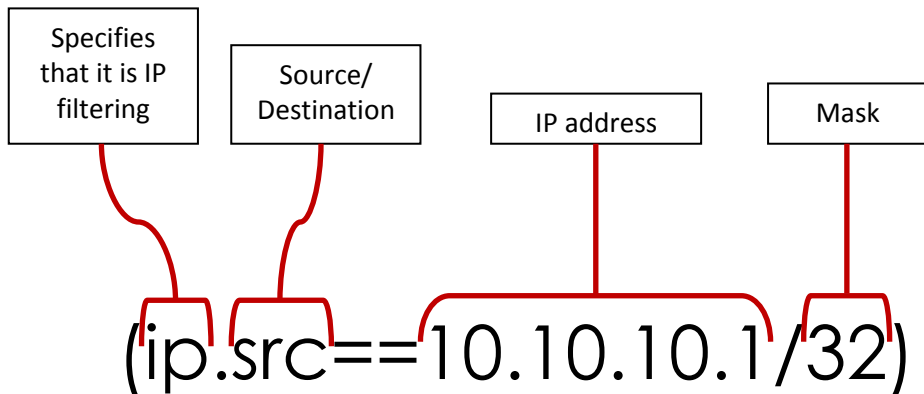
4.3.3 Deny by VLAN ID

The following command will create a filter which will exclude all traffic that has the VLAN ID of 40:

```
add filter NoVL40 (!(vlan.id==40/12))
```

4.4 IPv4 Address Filters

4.4.1 Syntax



4.4.2 Allow by IPv4 Address

The following command will create a filter which will include all traffic with the source IP address of 10.10.10.1:

```
add filter AllowIP (ip.src==10.10.10.1/32)
```

4.4.3 Deny by IPv4 Address

The following command will create a filter which will exclude all traffic with the source IP address of 10.10.10.1:

```
add filter DenyIP (!(ip.src==10.10.10.1/32))
```

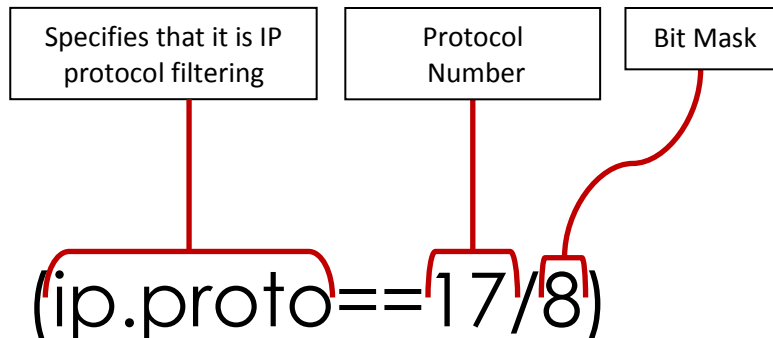
4.4.4 Destination IPv4 Address

The following command will create a filter which will include all traffic with the destination IP address of 10.10.10.1:

```
add filter DestIP (ip.dst==10.10.10.1/32)
```

4.5 Protocol Filters

4.5.1 Syntax



4.5.2 Allow by Protocol

The following command will create a filter which will include all traffic with the protocol TCP (Decimal value 6):

```
add filter AllowTCP (ip.proto==6/8)
```

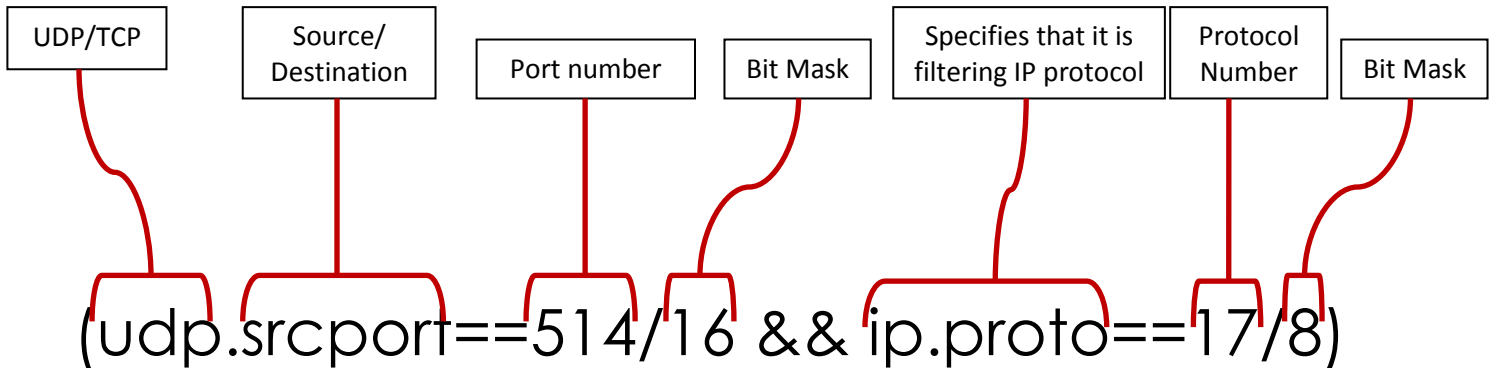
4.5.3 Deny by Protocol

The following command will create a filter which will exclude all traffic with the protocol TCP (Decimal value 6):

```
add filter DenyTCP (!(ip.proto==6/8))
```

4.6 Port Filters

4.6.1 Syntax



4.6.2 Allow by Port

The following command will create a filter which will include all traffic that has the source port of Syslog (UDP port 514):

```
(udp.srcport==514/16 && ip.proto==17/8)
```

4.6.3 Deny by Port

The following command will create a filter which will exclude all traffic that has the source port of Syslog (UDP port 514):

```
(!(udp.srcport==514/16 && ip.proto==17/8))
```

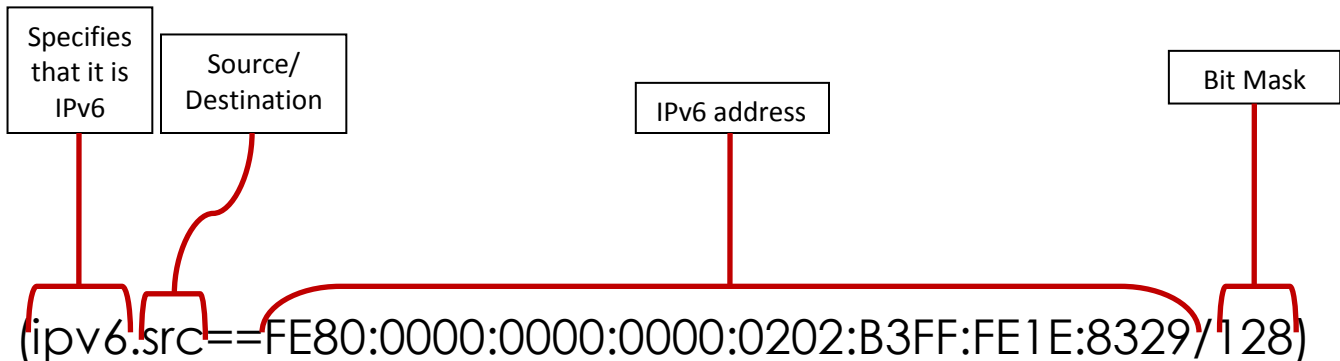
4.6.4 Destination Port

The following command will create a filter which will include all traffic that has the destination port of Syslog (UDP port 514):

```
(udp.dstport==514/16 && ip.proto==0x11/8)
```


4.7 IPv6 Address Filters

4.7.1 Syntax



4.7.2 Allow by IPv6 Address

The following command will create a filter which will include all traffic with the source IP address of FE80:0000:0000:0000:0202:B3FF:FE1E:8329:

```
add filter AllowIPv6  
(ipv6.src==FE80:0000:0000:0000:0202:B3FF:FE1E:8329/128)
```

4.7.3 Deny by IPv6 Address

The following command will create a filter which will exclude all traffic with the source IP address of FE80:0000:0000:0000:0202:B3FF:FE1E:8329:

```
add filter DenyIPv6  
(!(ipv6.src==FE80:0000:0000:0000:0202:B3FF:FE1E:8329/128))
```

4.7.4 Destination IPv6 Address

The following command will create a filter which will include all traffic with the destination IP address of FE80:0000:0000:0000:0202:B3FF:FE1E:8329:

```
add filter DestIPv6  
(ipv6.dst==FE80:0000:0000:0000:0202:B3FF:FE1E:8329/128)
```

4.8 Adding Multiple Criteria to One Rule (AND expression)

Multiple fields may be populated within one rule of a filter. Each added criteria will further narrow down the range of the traffic that the rule applies to. To add multiple criteria to a single rule within an “add filter” command, the criteria must be all within parenthesis and separated by “&&”. Traffic must apply to all fields for the filter to include/exclude it. If the traffic only applies to one of multiple criteria stated in the rule it will be ignored. Below are a couple examples of rules that contain multiple criteria.

4.8.1 Filter for Protocol and MAC

This filter will only allow traffic that:

1. Has the source MAC address of 01:21:70:C4:28:25.
2. Is using TCP protocol.

```
add filter Mon1 (eth.src==01:21:70:C4:28:25/48 && ip.proto==6/8)
```

4.8.2 Filter out IP and Multicast MPLS

This filter will exclude all traffic that:

1. Has the source IP address of 192.168.1.12.
2. Is an MPLS multicast packet.

```
add filter Monitor2 (!(ip.src==192.168.1.12/32 && eth.type==0x8848/16))
```

4.9 Adding Multiple Rules to One Filter (OR expression)

Multiple rules may be added to one filter. Each added rule will expand the range of the traffic that the filter will apply to. To add multiple rules into a filter in an “add filter” command, each rule must be contained within parenthesis and separated by “||”. When adding multiple rules to a filter, traffic only needs to match one of the rules for the filter to apply to it. Only traffic that does not match any of the rules will be ignored by the filter. Below are a couple examples of filters that contain multiple rules.

4.9.1 Filter for multiple IPs

This filter will allow traffic that has any of the following criteria:

1. A source IP address of 19.6.1.10
2. A destination IP address of 19.6.5.15
3. A source IP address of 19.6.10.10

```
add filter IPSet ((ip.src==19.6.1.10/32) || (ip.dst==19.6.5.15/32) ||  
(ip.src==19.6.10.10/32))
```

4.9.2 Filter out a VLAN and MAC Address

This filter will exclude all traffic that has either of the following criteria:

1. A destination MAC address of 02:22:71:C5:29:26.
2. Has the VLAN ID 102.

```
add filter NoVL (!(eth.dst==02:22:71:C5:29:26/48 && vlan.id==102/12))
```

Using a Mask to Filter for a Range of Criteria

A mask may be added to criteria in order to add a range of criteria to one rule in a filter. This is done by changing the mask at the end of the criteria expression. A few examples of creating filters with masks are shown below.

4.9.3 Filter for multiple IPv4 Addresses

This filter will allow all traffic with the IP address starting with “192.168”

```
add filter IPRange (ip.src==192.168.0.0/16)
```

4.9.4 Filter for multiple MAC Addresses

This filter will allow all traffic with the MAC address starting with “01:21:70”

```
add filter MACRange (eth.src==01:21:70:C4:28:25/24)
```

4.9.5 Filter for multiple IPv6 Addresses

This filter will allow all traffic with the IP address starting with “FE80:0000:B3FF:0000:0202”

```
(ipv6.src==FE80:0000:B3FF:0000:0202:0000:0000:0000/80)
```

6. Customer Service

Datacom Customer Service is available via telephone and Internet. Please leave a voice message and our Customer Service Staff will return your call as soon as possible. You may also find the assistance you need at our website: <http://www.datacomsystems.com>.

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