

PureFlow WS1

Traffic Shaper NF7500 series Command Reference

Third Edition

- For safety and warning information, please read this manual before attempting to use the equipment.
- Additional safety and warning information is provided within the Operation Manual (NF7500-W011E). Please also refer to this document before using the equipment.
- Keep this manual with the equipment.

ANRITSU CORPORATION

Safety Symbols

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Symbols used in manual



DANGER

This indicates a very dangerous procedure that could result in serious injury or death if not performed properly.



WARNING

This indicates a hazardous procedure that could result in serious injury or death if not performed properly.



CAUTION

This indicates a hazardous procedure or danger that could result in light-to-severe injury, or loss related to equipment malfunction, if proper precautions are not taken.

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This indicates an obligatory safety precaution. The obligatory operation is indicated symbolically in or near the circle.



This indicates a warning or caution. The contents are indicated symbolically in or near the triangle.



This indicates a note. The contents are described in the box.

PureFlow WS1

Traffic Shaper NF7500 series

Command Reference

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About This Manual

This manual describes in detail the commands used in the PureFlow WS1 Traffic Shaper (hereafter referred to as “this device”).

This manual is applicable to the following models of this equipment:

- NF7501A

The manual of this device consists of the following four manuals. This document is <2>.

<1> Operation Manual (NF7500-W011E)

Describes in detail the installation and handling in this device.

<2> Command Reference (NF7500-W012E)

Describes in detail the commands used in this device.

<3> Configuration Guide (NF7500-W013E)

Describes the basic features of this device and provides specific examples of the settings required to build a network using these features.

<4> WebGUI Operation Manual (NF7500-W014E)

Describes the operation for setting and display of this device using a Web browser.

If the following documents related to this device or other documents related to the features of this device are issued, be sure to read them:

Release notes

(For details of the issuance of release notes, contact your dealer.)

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1.1 Command Format Conventions

The symbols used in the description of the command format follow the rules below:

<A>	Non-optional argument A
[A]	Optional argument A
{A B}	Select one of non-optional arguments A or B
[A B]	Select one of optional arguments A or B

1.2 Logging in after Power-on

When you start this device, an input request prompt for the login username appears.

The username for this device is "root". By factory default, no password is set.

1.3 Common Command Errors

The following errors are common to all the commands:

This Command is not available in this mode

This command is not available in this mode.

Command length is more than XXX characters

The command length exceeds XXX characters.

Command token very long

The keyword of the command is too long.

An unexpected command error occurred.(Error code:xx)

An unexpected command error occurred internally.

Please contact your dealer, and inform them of the executed command and error message.

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This chapter lists the commands for this device and describes the overview of them.

2.1 List of Commands

2.1.1 Port related commands

- (1) `set port media-type`
Sets the media type (RJ-45/SFP) of the Network port.
- (2) `set port autonegotiation`
Enables/disables AutoNegotiation on the Network port and Ethernet port.
- (3) `set port speed`
Sets the communication speed of the Network port and Ethernet port.
- (4) `set port duplex`
Sets the duplex mode of the Network port and Ethernet port.
- (5) `set port flow_control`
Sets the flow control by the Network port's pause frame.
- (6) `set port mtu`
Sets the maximum frame length of the Network port.
- (7) `show port`
Displays information related to the Network and Ethernet port.
- (8) `show port <slot/port>`
Displays detailed information related to the Network and Ethernet port.

2.1.2 Channel-related commands

- (1) `add channel`
Registers the channel of the Network port.
- (2) `delete channel`
Deletes the channel of the Network port.
- (3) `show channel`
Displays information related to the Network port channel.
- (4) `set ip channel`
Sets the IP network interface in the channel (channel interface).
- (5) `unset ip channel`
Cancels the IP network interface in the channel (channel interface).
- (6) `show ip channel`
Displays information related to the IP network interface in the channel (channel interface).
- (7) `add route`
Registers the static routes of the channel interface (default routes and target routes).
- (8) `delete route`
Deletes the static routes of the channel interface (default routes and target routes).
- (9) `show route`
Displays information related to the static routes of the channel interface (default routes and target routes).

2.1.3 ACL-related commands

- (1) `set filter mode`
Sets the flow identification mode.
- (2) `add filter`
Registers a filter.
- (3) `delete filter`
Deletes a filter.
- (4) `show filter`
Displays information related to the filter.
- (5) `add rulelist group`
Registers a rule list.
- (6) `add rulelist entry`
Registers a rule list entry.
- (7) `delete rulelist group`
Deletes a rule list.
- (8) `delete rulelist entry`
Deletes a rule list entry.
- (9) `show rulelist`
Displays information related to a rule list.

2.1.4 Scenario-related commands

- (1) `add scenario`
Registers traffic attributes (scenario).
- (2) `update scenario`
Overwrites traffic attributes (scenario).
- (3) `delete scenario`
Deletes traffic attributes (scenario).
- (4) `set scenario tree mode`
Sets the tree mode of the traffic attributes (scenario) (input/output side).
- (5) `show scenario`
Displays the information related to traffic attributes (scenario).
- (6) `show scenario tree`
Displays the hierarchical tree that related to traffic attributes (scenario).
- (7) `set bandwidth mode`
Enables/disables the communication gap mode (inter-frame gaps and preambles) for the traffic control.
- (8) `set shaper peak burst size`
Sets the peak burst size for the traffic control.
- (9) `set scenario snmp-traps`
Enables/disables the transmission of the SNMP notification related to the traffic attribute (scenario).

2.1.5 Traffic acceleration-related commands

- (1) `set wan-accel bypass status`
Enables/disables the auto bypass function of the traffic acceleration.
- (2) `set wan-accel bypass recoverytime`
Sets the bypass recovery time for the auto bypass function of the traffic acceleration.
- (3) `switch wan-accel bypass force`
Enables/disables the forced bypass function of the traffic acceleration.
- (4) `show wan-accel bypass`
Displays information related to the bypass function of the traffic acceleration.
- (5) `add apl-accel`
Registers the application acceleration setting for the acceleration mode scenario.
- (6) `update apl-accel`
Overwrites the application acceleration setting for the acceleration mode scenario.
- (7) `delete apl-accel`
Deletes the application acceleration setting for the acceleration mode scenario.
- (8) `delete apl-accel excludelist`
Deletes the information registered in the exclusion list of the application acceleration.
- (9) `show apl-accel excludelist`
Displays the information registered in the exclusion list of the application acceleration.

2.1.6 System operation-related commands

- (1) `set lpt`
Enables/disables the link-down transfer function.
- (2) `add lpt pair port`
Registers the combination of Network ports of the link-down transmission function.
- (3) `delete lpt pair port`
Deletes the combination of Network ports of the link-down transmission function.
- (4) `show lpt`
Displays the information related to the link-down transfer feature.
- (5) `set agingtime`
Sets the aging time for flows.
- (6) `show agingtime`
Displays the aging time for flows.

2.1.7 System interface-related commands

- (1) `set ip system`
Sets the IPv4 address and subnet mask of the IP network interface of the system (system interface).
- (2) `set ip system gateway`
Sets the default gateway of the IP network interface of the system (system interface).
- (3) `unset ip system gateway`
Cancels the default gateway settings of the IP network interface of the system (system interface).
- (4) `set ip system port`
Sets the communication port of the IP network interface (system interface) of the system.
- (5) `add ip system filter`
Registers a filter (system interface filter) for the IP network interface of the system (system interface).
- (6) `delete ip system filter`
Deletes a filter (system interface filter) for the IP network interface of the system (system interface).
- (7) `show ip system`
Displays information related to a filter (system interface filter) and the IP network interface of the system (system interface).

2.1.8 Statistics-related commands

- (1) `show counter`
Displays the Network port/system interface statistics.
- (2) `show counter {<slot/port> | system}`
Displays the statistical information on the specified Network port or the system interface.
- (3) `clear counter`
Clears the Network port/system interface statistics.
- (4) `show scenario info`
Displays the operative information related to the scenario.
- (5) `show scenario info summary`
Displays information related to the scenario in the list.
- (6) `clear scenario peakhold buffer`
Clears the maximum buffer usage related to the scenario.
- (7) `show scenario counter`
Displays the statistics related to the scenario.
- (8) `show scenario counter summary`
Displays the statistical information related to the scenario in the list.
- (9) `clear scenario counter`
Clears the statistics related to the scenario.
- (10) `monitor rate`
Measures the reception/transmission rate of the cue that is used by the traffic control.
- (11) `show flow`
Displays information on the flow that is actually generated.
- (12) `show resource`
Displays the traffic attribute (scenario), filter, rule list, and resource status of the flow that is actually generated. In addition, the resource status of the system buffer is also displayed.
- (13) `show process`
Displays the CPU and memory use rate.
- (14) `show wan-accel stat`
Displays the traffic acceleration-related statistical information.
- (15) `clear wan-accel stat`
Clears the traffic acceleration-related statistical information.
- (16) `add wan-accel stat appli`
Registers the application port for displaying the statistical information related to the traffic acceleration.
- (17) `delete wan-accel stat appli`
Deletes the application port for displaying the statistical information related to the traffic acceleration.
- (18) `show apl-accel stat`
Displays the statistical information related to the application acceleration.
- (19) `set topcounter`
Sets the collection interval for the top counter.
- (20) `set topcounter config interval time`
Sets the collection interval for the top counter.
- (21) `add topcounter config appli port`
Adds any application port number as a port number to be monitored by the top counter.

- (22) `delete topcounter config appli port`
Deletes an application port number monitored by the top counter.
- (23) `add topcounter config appli port static`
Sets any application port number to be always monitored by the top counter.
- (24) `delete topcounter config appli port static`
Releases the static setting of the application port number.
- (25) `add topcounter target`
Adds a scenario to be measured by the top counter.
- (26) `delete topcounter target`
Deletes a scenario measured by the top counter.
- (27) `update topcounter target`
Changes parameters specified for the measurement range of the top counter.
- (28) `show topcounter target`
Shows the measurement results of the top counter.
- (29) `show topcounter config`
Displays the top counter settings.

2.1.9 Operation management-related commands

- (1) `ping`
Sends the ICMP ECHO_REQUEST packet from the system interface or the channel interface to the specified host.
- (2) `traceroute`
Displays the routes to the specified IP address.
- (3) `telnet`
Connects to the specified host via Telnet.
- (4) `arp`
Displays or deletes the ARP table.
- (5) `delete ndp neighbor`
Deletes an NDP table entry.
- (6) `show ndp neighbor`
Displays the NDP table.
- (7) `set syslog severity`
Sets the lowest level for the system log to be sent to the syslog host (severity).
- (8) `set syslog facility`
Sets the facility of the system log.
- (9) `add syslog host`
Registers the host of the output destination of the system log.
- (10) `delete syslog host`
Deletes the host of the output destination of the system log.
- (11) `set syslog host`
Enables/disables the system log output to a host.
- (12) `show syslog host`
Displays settings for system log output.
- (13) `show syslog`
Displays system log information stored in the internal memory.
- (14) `show backup syslog`
Displays the system log information stored in the internal backup memory during system operation up to the present.
- (15) `clear syslog`
Clears the system log information stored in internal memory.
- (16) `set date`
Sets the system time using the Western calendar and 24-hour format.
- (17) `set timezone`
Sets the time zone of the system time as the number of hours offset from the UTC (Coordinated Universal Time).
- (18) `set summertime`
Sets the period during which summer time is applied to the system time.
- (19) `unset summertime`
Cancels the application of summer time to the system time.
- (20) `show date`
Displays the current system time.
- (21) `set sntp`
Enables/disables the SNTP client feature.

- (22) `set sntp server`
Sets the IP address of the NTP server.
- (23) `Unset sntp server`
Cancels the IP address of the NTP server.
- (24) `set sntp interval`
Sets the interval at which time queries are regularly sent to the NTP server.
- (25) `sync sntp`
Sends time queries to the NTP server.
- (26) `show sntp`
Displays the information related to SNTP client feature.
- (27) `set autologout time`
Sets the time interval for the auto logout feature.
- (28) `show autologout`
Displays the information related to auto logout feature.
- (29) `set prompt`
Sets the prompt.
- (30) `set pager`
Enables/disables the pager feature.
- (31) `delete session`
Deletes a session of the connected terminal device.
- (32) `show session`
Displays details about the terminal device that is logged in, such as connection type, mode, and login time.
- (33) `set radius auth`
Enables/disables RADIUS authentication
- (34) `set radius auth timeout`
Sets the timeout time for communication with the RADIUS authentication server.
- (35) `set radius auth retransmit`
Sets the number of times to resend an authentication request.
- (36) `set radius auth method`
Sets the method for RADIUS authentication.
- (37) `add radius auth server`
Adds a RADIUS authentication server.
- (38) `update radius auth server`
Updates the preset RADIUS authentication server setting.
- (39) `delete radius auth server`
Deletes the setting information on the RADIUS authentication server.
- (40) `test radius login`
Tests authentication using the RADIUS protocol.
- (41) `show radius`
Displays the RADIUS client settings and all the server information that is set.
- (42) `show radius statistics`
Displays the RADIUS client statistics.
- (43) `clear radius statistics`
Clears the RADIUS client statistics.
- (44) `set ssh`
Sets the SSH connection enable state.

-
- (45) `set ssh server key`
Regenerates the public key (host key) for server authentication.
 - (46) `show ssh`
Displays the SSH server settings and connected client information.
 - (47) `set telnet`
Enables/disables Telnet connections.
 - (48) `show telnet`
Displays whether the Telnet connection is enabled/disabled.
 - (49) `set http protocol`
Sets the protocol that is used by the Web application.
 - (50) `show http`
Displays the protocol that is used by the Web application.
 - (51) `add openflow controller`
Registers the OpenFlow controller setting.
 - (52) `delete openflow controller`
Deletes the OpenFlow controller setting.
 - (53) `show openflow controller`
Displays the OpenFlow controller information and state.
 - (54) `?/help`
Displays the top-level commands available in the current mode.
 - (55) `exit/logout/quit`
Logs out.
 - (56) `normal`
Returns to Normal mode.
 - (57) `admin`
Switches to Administrator mode.
 - (58) `set password`
Sets the login password.
 - (59) `set adminpassword`
Sets the login password to switch to Administrator mode.
 - (60) `show history`
Displays the command input history.
 - (61) `set console baudrate`
Sets the communication speed (Baud rate) of the console port.
 - (62) `show console baudrate`
Displays the communication speed (Baud rate) of the console port.
 - (63) `show module`
Displays information of each module in the system.
 - (64) `set autoreboot`
Enables/disables auto reboot when a failure occurs.

2.1.10 Configuration-related commands

- (1) `init config`
Resets the configuration to the default values.
- (2) `save config`
Saves the running configuration to the internal flash memory.
- (3) `show save status`
Displays the running status of the configuration storage.
- (4) `show config running`
Displays the configuration currently running.
- (5) `show config startup`
Displays the configuration at startup.

2.1.11 SNMP-related commands

- (1) `add snmp community`
Adds the community record.
- (2) `delete snmp community`
Deletes the community record.
- (3) `show snmp community`
Displays the SNMP community record.
- (4) `add snmp view`
Adds the MIB view record.
- (5) `delete snmp view`
Deletes the MIB view record.
- (6) `show snmp view`
Displays the SNMP MIB view record.
- (7) `add snmp group`
Adds a group record used to map a SNMPv3 user to an SNMP view.
- (8) `delete snmp group`
Deletes the group record.
- (9) `show snmp group`
Displays the SNMPv3 group record.
- (10) `add snmp user`
Adds the user record to be mapped to the SNMPv3 group by an SNMPv3 user.
- (11) `delete snmp user`
Deletes user record.
- (12) `show snmp user`
Displays SNMPv3 user record.
- (13) `add snmp host`
Adds a host record that shows an SNMP notification destination.
- (14) `delete snmp host`
Deletes host record.
- (15) `show snmp host`
Displays an SNMP notification destination record.
- (16) `set snmp syscontact`
Sets “sysContact”, an SNMP MIB-II system group object that indicates the administrator of this device.
- (17) `set snmp syslocation`
Sets "sysLocation", an SNMP MIB-II system group object that indicates the place where this device is installed.
- (18) `set snmp sysname`
Sets “sysName”, an SNMP MIB-II system group object that indicates the name of the local system used as the administrator's system.
- (19) `set snmp traps`
Enables/disables individual SNMP notification transmission.
- (20) `show snmp system`
Displays information related to the SNMP MIB-II sysLocation, sysContact, sysName, and trap.

2.1.12 Network bypass-related commands

- (1) `set bypass`
Sets the network bypass function.
- (2) `show bypass`
Displays the network bypass function settings and state.
- (3) `bypass time`
Switches the bypass temporarily.

2.1.13 Other commands

- (1) `download tftp obj`
Downloads software from the TFTP server.
- (2) `download tftp conf`
Downloads the configuration file from the TFTP server.
- (3) `download ftp obj`
Downloads software from the FTP server.
- (4) `download ftp conf`
Downloads the configuration file from the FTP server.
- (5) `download sd obj`
Downloads software from an SD card.
- (6) `download sd patch`
Downloads the software patch file from the SD card.
- (7) `download sd conf`
Downloads the configuration file from an SD card.
- (8) `download usb obj`
Downloads software from a USB flash drive.
- (9) `download usb patch`
Downloads the software patch file from the USB flash drive.
- (10) `download usb conf`
Downloads the configuration file from a USB flash drive.
- (11) `upload tftp conf`
Uploads the configuration file to the TFTP server.
- (12) `upload tftp file`
Uploads the files in an SD card or USB flash drive to the TFTP server.
- (13) `upload ftp conf`
Uploads the configuration file to the FTP server.
- (14) `upload ftp file`
Uploads the files in an SD card or USB flash drive to the FTP server.
- (15) `upload sd obj`
Uploads software in the system to an SD card.
- (16) `upload sd conf`
Uploads the configuration file to an SD card.
- (17) `upload usb obj`
Uploads software in the system to a USB flash drive.
- (18) `upload usb conf`
Uploads the configuration file to a USB flash drive.
- (19) `show sd list`
Lists the files in an SD card.
- (20) `show usb list`
Lists the files in a USB flash drive.
- (21) `operate sd remove`
Deletes the files in an SD card.
- (22) `operate sd rename`
Renames the files in an SD card.

- (23) `operate sd copy`
Copies the files in an SD card.
- (24) `operate sd list`
Lists the files in an SD card.
- (25) `operate usb remove`
Deletes the files in a USB flash drive.
- (26) `operate usb rename`
Renames the files a USB flash drive.
- (27) `operate usb copy`
Copies the files in a USB flash drive.
- (28) `operate usb list`
Lists the files in a USB flash drive.
- (29) `set option`
Enables the options of the system.
- (30) `show option`
Displays the options enabled in the system.
- (31) `reboot`
Restarts the system.

2.2 Command Details

2.2.1 Port-related commands

set port media-type

[Format]

```
set port media-type <slot/port> {rj45 | sfp}
```

[Description]

This command sets the media type (RJ-45/SFP) of the Network port.

For the Network port 1/1 or 1/2, RJ-45 or SFP can be selected as the media type for each port.

Specifies the Network port in the <slot/port> format. Multiple ports can be specified by delimiting them with commas (.). Consecutive ports (a and b) in a slot can be specified using a hyphen (-). For example, specify <slotn/porta>-<slotn/portb>.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set port media-type 1/1 rj45
PureFlow(A)> set port media-type 1/2 sfp
PureFlow(A)>
```

[Arguments]

slot/port

Specifies the slot location and port number of the Network port.

Only 1 can be specified as the slot location.

Valid port numbers are 1 and 2.

{rj45 | sfp}

Specifies "rj45" when using RJ-45, while specifies "sfp" when using SFP.

[Default Value]

The default value is "rj45".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

```
Usage : set port media-type <slot/port> {rj45 | sfp}
```

- There is a missing argument.

An argument was missing.

```
Usage : set port media-type <slot/port> {rj45 | sfp}
```

- There is a missing argument.

Slot #N is invalid.

- The specified slot is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

set port autonegotiation

[Format]

```
set port autonegotiation <slot/port> {enable | disable}
set port autonegotiation system {enable | disable}
```

[Description]

This command enables/disables AutoNegotiation on the Network port or Ethernet port.

Specify the Network port in the <slot/port> format. Multiple ports can be specified by delimiting them with commas (.). Consecutive ports (a and b) in a slot can be specified using a hyphen (-). For example, specify <slotn/porta>-<slotn/portb>.

If AutoNegotiation is set to be disabled, check the communication speed, duplex mode, and flow control setting. This command can be executed only in Administrator mode.

Be careful about the following restrictions when setting by this command.

- For the communication at 1 Gbit/s of 1000BASE-T (RJ-45/SFP), enable AutoNegotiation.
- If the link status of the "show port" command is half duplex, check that AutoNegotiation, communication speed, and duplex mode setting are suitable for the connected device. When the setting does not match, the communication does not operate correctly.

[Display]

```
PureFlow(A)> set port autonegotiation 1/1 enable
PureFlow(A)>
```

[Arguments]

slot/port

Specify the slot location and port number of the Network port.

Only 1 can be specified as the slot location. Valid port numbers are 1 to 4.

system

Specifies "system" when setting the Ethernet port.

{enable | disable}

Specify "enable" to enable AutoNegotiation, and "disable" to disable it.

[Default Value]

The default value is "enable".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

```
Usage : set port autonegotiation <slot/port> {enable | disable}
```

```
Usage : set port autonegotiation system {enable | disable}
```

- There is a missing argument.

An argument was missing.

```
Usage : set port autonegotiation <slot/port> {enable | disable}
```

- There is a missing argument.

An argument was missing.

```
Usage : set port autonegotiation system {enable | disable}
```

- There is a missing argument.

Slot #N is invalid.

- The specified slot is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

Invalid <slot/port> list

- The multiple slot/port specification is invalid.

set port speed

[Format]

```
set port speed <slot/port> {10M | 100M | 1G}
set port speed system {10M | 100M | 1G}
```

[Description]

This command sets the communication speed of the Network port and Ethernet port.

Specifies the Network port in the <slot/port> format. Multiple ports can be specified by delimiting them with commas (.). Consecutive ports (a and b) in a slot can be specified using a hyphen (-). For example, specify <slotn/porta>-<slotn/portb>.

This setting is the communication speed setting with AutoNegotiation disabled. If AutoNegotiation is enabled, a result of AutoNegotiation is reflected and this setting is not applied, while if AutoNegotiation disabled, this setting is applied.

This command can be executed only in Administrator mode.

Be careful about the following restrictions when setting by this command.

- This setting is applied only to 10/100/1000BASE-T (RJ-45/SFP).
- For the communication at 1 Gbit/s of 1000BASE-T (RJ-45/SFP), enable AutoNegotiation.
- If AutoNegotiation is disabled, set the communication speed and duplex mode so that these settings match those of the connected device. If these settings are different from those of the connected device, the link status may be wrongly detected, and ActiveLED may blink.

[Display]

```
PureFlow(A)> set port speed 1/1 100M
PureFlow(A)> set port speed 1/2 10M
PureFlow(A)>
```

[Arguments]

slot/port

Specify the slot location and port number of the Network port.

Only 1 can be specified as the slot location. Valid port numbers are 1 to 4.

system

Specifies "system" when setting the Ethernet port.

{10M | 100M | 1G}

Set the communication speed to either 10Mbps, 100Mbps, or 1Gbps.

[Default Value]

The default value is "1G".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

```
Usage : set port speed <slot/port> {10M | 100M | 1G}
```

```
Usage : set port speed system {10M | 100M | 1G}
```

- There is a missing argument.

An argument was missing.

```
Usage : set port speed <slot/port> {10M | 100M | 1G}
```

- There is a missing argument.

An argument was missing.

Usage : set port speed system {10M | 100M | 1G}

- There is a missing argument.

Slot #N is invalid.

- The specified slot is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

Speed is invalid.

- The specified communication speed is invalid.

set port duplex

[Format]

```
set port duplex <slot/port> {full | half}
set port duplex system {full | half}
```

[Description]

Sets the duplex mode for the Network port and Ethernet port.

Specifies the Network port in the <slot/port> format. Multiple ports can be specified by delimiting them with commas (.). Consecutive ports (a and b) in a slot can be specified using a hyphen (-). For example, specify <slotn/porta>-<slotn/portb>.

This setting is the duplex mode setting with AutoNegotiation disabled. If AutoNegotiation is enabled, a result of AutoNegotiation is reflected and this setting is not applied, while if AutoNegotiation disabled, this setting is applied.

This command can be executed only in Administrator mode.

Be careful about the following restrictions when setting by this command.

- This setting is applied only to 10/100/1000BASE-T (RJ-45/SFP).
- If AutoNegotiation is disabled, set the communication speed and duplex mode so that these settings match those of the connected device. If these settings are different from those of the connected device, the link status may be wrongly detected, and ActiveLED may blink.
- If the link status of the "show port" command is half duplex, check that AutoNegotiation, communication speed, and duplex mode setting are suitable for the connected device. When the setting does not match, the communication does not operate correctly.

[Display]

```
PureFlow(A)> set port duplex 1/2 full
PureFlow(A)> set port duplex 1/1 half
PureFlow(A)>
```

[Arguments]

slot/port

Specify the slot location and port number of the Network port.

Only 1 can be specified as the slot location. Valid port numbers are 1 to 4.

system

Specifies "system" when setting the Ethernet port.

{full | half}

Specify the duplex mode.

full	Full duplex
half	Half duplex

[Default Value]

The default value is "full".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

```
Usage : set port duplex <slot/port> {full | half}
```

```
Usage : set port duplex system {full | half}
```

- There is a missing argument.

An argument was missing.
Usage : set port duplex <slot/port> {full | half}

- There is a missing argument.

An argument was missing.
Usage : set port duplex system {full | half}

- There is a missing argument.

Slot #N is invalid.

- The specified slot is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

Invalid <slot/port> list

- The multiple slot/port specification is invalid.

set port flow control

[Format]

```
set port flow_control <slot/port> auto
set port flow_control <slot/port> {recv | send} {on | off}
```

[Description]

This command sets frame control by using pause frames for the Network port. Specifies the Network port in the <slot/port> format. Multiple ports can be specified by delimiting them with commas (.). Consecutive ports (a and b) in a slot can be specified using a hyphen (-). For example, specify <slotn/porta>-<slotn/portb>. If auto is specified, pause frame reception and transmission are determined by AutoNegotiation. Both pause frame reception and transmission are enabled when AutoNegotiation is disabled. When the reception or transmission is specified to on, pause frame reception or transmission is enabled regardless of the AutoNegotiation results.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set port flow_control 1/1 recv off
PureFlow(A)> set port flow_control 1/1 send off
PureFlow(A)>
```

[Arguments]

slot/port

Specify the slot location and port number of the Network port.

Only 1 can be specified as the slot location. Valid port numbers are 1 to 4.

auto

If the port type is 10/100/1000BASE-T (RJ-45/SFP) and 1000BASE-X, pause frame reception and transmission are determined by AutoNegotiation. Both pause frame reception and transmission are enabled when AutoNegotiation is disabled.

{recv | send}

To set a fixed value for pause frame reception, specify “recv”. To set a fixed value for pause frame transmission, specify “send”.

{on | off}

To receive/transmit pause frames, specify “on”. To not receive/transmit pause frames, specify “off”.

[Default Value]

The default value is “auto”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

```
Usage : set port flow_control <slot/port> auto
```

```
Usage : set port flow_control <slot/port> {recv | send} {on | off}
```

- There is a missing argument.

Slot #N is invalid.

- The specified slot is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

Invalid <slot/port> list

- The multiple slot/port specification is invalid.

set port mtu

[Format]

```
set port mtu {2048 | 10240}
```

[Description]

Set the maximum frame length of the Network port.

Generally, MTU (Maximum Transmission Unit) means the payload length that excludes the header or FCS. In this command, the entire frame length that includes the Ethernet header and FCS are specified. However, the actual MTU is "this value + 4 bytes" for the "With VLAN Tag" frame, or is "this value + 8 bytes" for the "With Duplex VLAN Tag" frame.

This command is applied to all the Network ports.

Change of this setting is applied at the next startup time. This command saves the currently-running parameter (running configuration) in the internal flash memory when running this command the same as the "save config" command. Restart the system after command execution is completed. This command can be executed with the values set before changes until restarting the system.

This command can be executed only in Administrator mode.

Note 1)

This value changes the enabled setting range and setting unit with the following scenario parameters. When this value is 10240 bytes, the value is rounded off within the setting range of the automatically-registered scenario, "add scenario" command or "update scenario" command.

Scenario parameter		Maximum frame length (Network port)	
		2048[byte]	10240[byte]
Input burst length (bufsize)	Setting range	2 k[byte] to 100 M [byte]	11 k[byte] to 100 M [byte]
	Setting unit	1 k[byte]	1 k[byte]
Minimum bandwidth (min_bandwidth)	Setting range	1 k[bit/s] to 1 G[bit/s] and 0	5 k[bit/s] to 1 G[bit/s] and 0
	Setting unit	1 k[bit/s]	5 k[bit/s]
Peak bandwidth (peak_bandwidth)	Setting range	1 kbps to 1 Gbps	5 kbps to 1 Gbps
	Setting unit	1 k[bit/s]	5 k[bit/s]

Note 2)

This value changes the enabled setting range with the following channel parameters. When this value is 2048 bytes, the value is rounded off within the setting range of the automatically-registered channel or the "add channel" command.

Channel parameter		Maximum frame length (Network port)	
		2048[byte]	10240[byte]
MTU (mtu)	Setting range	300 to 10200 [byte] When a greater value than 2008 is set, the value is rounded off to the default value (1488 [bytes]).	300 to 10200[byte]

Note 3)

This value changes the enabled setting range with the following peak burst size. When this value is 2048 bytes, the value is rounded off within the setting range of the automatically-registered peak burst size or the "set shaper peak burst size" command.

Peak burst size		Maximum frame length (Network port)	
		2048[byte]	10240[byte]
Peak burst size (size)	Setting range	0 to 9216[byte] When the peak burst size is set to a greater value than 9216, the value is rounded off to the default value (1536 [byte]).	0 to 46080[byte]

[Display]

```
PureFlow(A)> set port mtu 10240
Warning
This configuration change will be take effect on next boot.
Please save the system configuration and reboot the system.
If changed to 10240, some scenario parameters will be rounded as below.
  bandwidth minimum    1k -> 5k
  bandwidth resolution 1k -> 5k
  buffer size minimum  2k -> 11k
If changed to 2048, channel mtu specified larger than 2048 will be rounded.

Do you wish to save the system configuration into the flash memory (y/n)? y

Done

Rebooting the system, ok (y/n)? y
```

[Arguments]

```
{2048 | 10240}
Specify "2048" to set the Maximum frame length of the Network port to 2048 bytes, and specify
"10240" to set to 10240 bytes.
```

[Default Value]

The default value is "2048".

[Errors]

```
Invalid input at Marker
  • There is an unnecessary argument.

An argument was missing.
Usage : set port mtu {2048 | 10240}
  • There is a missing argument.

Specified mtu is invalid. (Valid 2048 or 10240)
  • The specified mtu is invalid.
```

show port

[Format]

```
show port [<slot>]
```

[Description]

This command displays the Network port or Ethernet port related information.
This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show port
Port      Type           Media type  Status  Link      Autonego  Speed  Duplex
-----  -
1/1      1000BASE-T    RJ-45      Enabled Up      Enabled   1G      Full
1/2      1000BASE-T    RJ-45      Enabled Up      Enabled   1G      Full
1/3      1000BASE-T    SFP        Enabled Up      Enabled   1G      Full
1/4      1000BASE-T    SFP        Enabled Up      Enabled   1G      Full
system   1000BASE-T    RJ-45      Enabled Up      Enabled   100M    Full
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- Port

Shows the slot location and port number of the Network port.
The Ethernet port is shown as `system`.

- Type

Shows the type of the port using the following character strings:

1000BASE-T	Indicates a 10/100/1000BASE-T port.
1000BASE-X	Indicates a 1000BASE-X port.
not mounted	SFP is not mounted.
unknown	The SFP type is unknown.

- Media type

Shows the media type of the port using the following character strings:

RJ-45	Indicates RJ-45.
SFP	Indicates SFP.
unknown	The media type is unknown.

- Status

Shows the state of the port using the following character strings:

Enabled	The port is enabled.
Disabled	The port is disabled.
error	An error was detected. The port cannot be used.

- Link

Shows the link status of the port using the following character strings:

Up	The port is linked up.
Down	The port is linked down.
Off	The power was turned off by the link-down transfer feature.

- Autonego

Shows the AutoNegotiation state of the port using the following character strings:

Enabled	AutoNegotiation is enabled.
Disabled	AutoNegotiation is disabled.

- Speed

Shows the baud rate of the port using the following character strings:

1G	1 gigabit per second
100M	100 megabits per second
10M	10 megabits per second

- Duplex

Shows the duplex mode of the port using the following character strings:

Full	In full duplex.
Half	In half duplex.

[Arguments]

slot

Specify the slot location of the Network port.

Only 1 can be specified as the slot location.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Slot #N is invalid.

- The specified slot is invalid.

show port <slot/port>

[Format]

```
show port <slot/port>
show port system
```

[Description]

This command displays detailed information on the Network port or Ethernet port. This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show port 1/1
Slot/Port           : 1/1
Port type           : 1000BASE-T
Media type          : RJ-45
Admin status        : Enabled
Oper status         : Up
Auto negotiation    : Enabled
Admin speed         : 100M
Oper speed          : 100M
Admin duplex        : Full
Oper duplex         : Full
Admin Tx Flow control: Auto
Admin Rx Flow control: Auto
Oper Tx Flow control : On
Oper Rx Flow control : On
Admin MTU           : 2048
Oper MTU            : 2048
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- Slot/Port
 - Shows the slot location and port number of the Network port.
 - The Ethernet port is shown as system.

- Port type
 - Shows the type of the port using the following character strings:

1000BASE-T	Indicates a 10/100/1000BASE-T port.
1000BASE-X	Indicates a 1000BASE-X port.
not mounted	SFP is not mounted.
unknown	The SFP type is unknown.

- Media type
 - Shows the media type of the port using the following character strings:

RJ-45	Indicates RJ-45.
SFP	Indicates SFP.
unknown	The media type is unknown.

- Admin status
 - Shows the status of the port using the following character strings:

Enabled	The port is enabled.
Disabled	The port is disabled.

- Oper status

Shows the link status of the port using the following character strings:

Up	The port is linked up.
Down	The port is linked down.
Off	The power was turned off by the link-down transfer feature.
- Auto negotiation

Shows the AutoNegotiation setting for the port.

Enabled	AutoNegotiation is enabled.
Disabled	AutoNegotiation is disabled.
- Admin speed

Shows the communication speed setting of the port. This setting only applies to the Network port if Ethernet port and 10/100/1000BASE-T (RJ-45/SFP) are equipped.

1G	1 gigabit per second
100M	100 megabits per second
10M	10 megabits per second
- Oper speed

Shows the communication speed of the port. In the Ethernet port, only if its link status is Up (active).

1G	1 gigabit per second
100M	100 megabits per second
10M	10 megabits per second
- Admin duplex

This setting only applies to the Network port if Ethernet port and 10/100/1000BASE-T (RJ-45/SFP) are equipped.

Full	Full duplex is specified.
Half	Half duplex is specified.
- Oper duplex

Shows the duplex mode of the port. In the Ethernet port, only if its link status is Up (active).

Full	In full duplex.
Half	In half duplex.
- Admin Tx Flow control

Shows the settings of the port's transmitting-side flow control.

Auto	Flow control is set to auto.
On	Flow control is set to On.
Off	Flow control is set to Off.
N/A	The Ethernet port settings cannot be changed.
- Admin Rx Flow control

Shows the settings of the port's receiving-side flow control.

Auto	Flow control is set to auto.
On	Flow control is set to On.
Off	Flow control is set to Off.
N/A	The Ethernet port settings cannot be changed.
- Oper Tx Flow control

Shows the flow control status on the send side of the port.

On	The flow control is enabled.
Off	The flow control is disabled.
- Oper Rx Flow control

Shows the flow control status on the reception side of the port.

On	The flow control is enabled.
Off	The flow control is disabled.

- Admin MTU
Shows the maximum frame length (set value) that includes the Ethernet header and FCS of the Network port.
The Ethernet port does not show this. The maximum frame length is fixed as 1518.
- Oper MTU
Shows the maximum frame length (operation value) that includes the Ethernet header and FCS of the Network port.
The Ethernet port does not show this. The maximum frame length is fixed as 1518.

[Arguments]

slot/port

Specify the slot location and port number of the Network port.

Only 1 can be specified as the slot location. Valid port numbers are 1 to 4.

system

Specifies the "system" when displaying information related to the Ethernet port.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Port <slot/port> is invalid.

- The specified port is invalid.

Slot #N is invalid.

- The specified slot is invalid.

2.2.2 Channel-related commands

add channel

[Format]

```
add channel <channel_name> lan <slot/port>
        wan <slot/port> default

add channel <channel_name> lan <slot/port>
        wan <slot/port>vid {<VID> | none} [tpid <tpid>]
        [inner-vid {<VID> | none}] [inner-tpid <tpid>] [mtu <mtu>]
```

[Description]

This command registers the channel of the Network port.
 The channel is the combination of the Network port on the LAN side and that on the WAN side.
 There are two types of channels: Normal channel that transfers the flow applied to the registered VLAN;
 default channel that transfers the flow that is not applied to the registered VLAN.
 A maximum of 4096 channels can be registered.
 This command can be executed only in the Administrator mode.

Note:

The following ASCII characters can be set in the channel name.

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
!#$%&'()=~-^|@`[]{}:~*~+~_~<~>
```

[Display]

```
PureFlow(A)> add channel "ch1" lan 1/1 wan 1/2 default
PureFlow(A)> add channel "ch2" lan 1/1 wan 1/2 vid 100 tpid 0x88a8
```

[Arguments]

channel_name

Specifies the channel name.

The setting range is from one to 32 characters.

If a space is needed between characters, enclose the character string in quotation marks (""), for example "v4 Servers".

It cannot be specified for any name that consists only of numbers or spaces, duplicates in the equipment, or consists of only a pair of quotation marks (" ").

Any channel name consisting only of "all" cannot be specified.

It cannot contain a double quotation mark ("), question mark (?), back slash (\), or slash (/).

slot/port

Specifies the slot position and the port number for the Network port for the LAN side and the WAN side.

Only 1 can be specified for the slot position. The specification range for the port number is from 1 through 4.

vid {<VID> | none}

Specifies VLAN ID of the channel. In the case of the "none" specification, it establishes communication between the frame without VLAN Tag and VLAN ID 0.

When the other channel has registered VLAN ID, it cannot be specified.

The setting range is from 1 to 4094.

tpid <tpid>

Specifies TPID (Tag Protocol Identifier) of the channel.

Select TPID from five types of 0x8100, 0x88a8, 0x9100, 0x9200, and 0x9300.

This parameter is used when traffic acceleration.

inner-vid {<VID> | none}

Specifies the Inner-VLAN ID of the channel.

If this specification is omitted or "none" is specified, it establishes communication between the frame without the Inner-VLAN Tag and Inner-VLAN ID 0.

If "none" is specified for the VLAN ID, the Inner-VLAN ID cannot be specified.

Valid values are from 1 to 4094.

inner-tpid <tpid>

Specifies the Inner-TPID (Tag Protocol Identifier) of the channel.

Select TPID from five types of 0x8100, 0x88a8, 0x9100, 0x9200, and 0x9300.

This parameter is used when traffic acceleration.

You can specify this parameter even if the Inner-VLAN ID is not specified. However, this does not affect the operation.

mtu

Specifies the MTU (Maximum Transmission Unit) of the channel.

The setting range is from 300 to 10200 [bytes].

This parameter is applied to Network ports on both LAN and WAN sides.

If setting a value greater than 2008 [bytes] when the maximum frame length of the Network port is 2048 [bytes], the value is rounded off automatically to the default value (1488 [bytes]).

default

Specifies "default" to register the default channel.

[Default Value]

tpid

When only vid is specified, the default value is "0 x 8100".

When both vid and inner-vid are specified, the default value is "0 x 88a8".

inner-tpid

The default value is "0x8100".

mtu

The default value is "1488".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : add channel <channel_name> lan <slot/port>

wan <slot/port> default

Usage : add channel <channel_name> lan <slot/port>

wan <slot/port> vid {<VID>|none} [tpid <tpid>]

[inner-vid {<VID> | none}] [inner-tpid <tpid>] [mtu <mtu>]

- There is a missing argument.

An argument was missing.

Usage : add channel <channel_name> lan <slot/port>

wan <slot/port> vid {<VID>|none} [tpid <tpid>]

[inner-vid {<VID> | none}] [inner-tpid <tpid>] [mtu <mtu>]

- There is a missing argument.

Specified channel name is invalid.

- The specified channel name is invalid.

Channel name already exists.

- The specified channel name has already been used in another channel.

Slot #N is invalid.

- The specified slot is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

Specified vid is invalid. (Valid from 1 to 4094)

- The VLAN ID specification is invalid.

Specified TPID is invalid. (Valid 0x8100,0x88a8,0x9100,0x9200 or 0x9300.)

- The TPID or Inner-TPID specification is invalid.

Specified inner-vid is invalid. (Valid from 1 to 4094)

- The specified Inner-VLAN ID is invalid.

VID must be specified when inner-VID is specified.

- The Inner-VLAN ID can be specified only when the VLAN ID is specified.

Specified mtu is invalid. (Valid from 300 to 10200)

- The specified mtu is invalid.

Specified vid and inner-vid is already used on channel "channel name".

- The specified vid and inner-vid have already been used in the "channel name" channel.

Specified port is already used on other default-channel.

- The specified port has already been used in another default channel.

Maximum number of channel was exceeded.

- The number of channels exceeded the registration limit.

delete channel

[Format]

```
delete channel all
delete channel <channel_name>
```

[Description]

Deletes Network port channel.
This command can be executed only in the Administrator mode.

[Display]

```
PureFlow(A)> delete channel "ch1"
PureFlow(A)> delete channel all
```

[Arguments]

channel_name
Specifies the channel name.

all
All of the channels are deleted.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity
Usage : delete channel {<channel_name> | all}

- There is a missing argument.

An argument was missing.
Usage : delete channel {<channel_name> | all}

- There is a missing argument.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

show channel

[Format]

```
show channel all
show channel name <channel_name> [next]
```

[Description]

Displays information related to the Network port channel.
 If “next” is specified, information of the channel next to the specified channel is displayed.
 This command can be executed in the Normal/Administrator mode.

[Display]

(In the case of the “all” specification)

```
PureFlow(A)> show channel all
```

```
Total channel entries: 3
```

```
Channel Name   : ch1
  Channel type : default
  Lan port     : 1/1
  Wan port     : 1/2
Channel Name   : ch2
  Channel type : normal
  Lan port     : 1/1
  Wan port     : 1/2
  vid         : none
  inner-vid    : -----
  tpid        : 0x8100
  inner-tpid   : 0x8100
  mtu         : 1488
Channel Name   : ch3
  Channel type : normal
  Lan port     : 1/1
  Wan port     : 1/2
  vid         : 10
  inner-vid    : 20
  tpid        : 0x88a8
  inner-tpid   : 0x8100
  mtu         : 1488
```

```
Total channel entries: 3
```

```
PureFlow(A)>
```

(In the case of the channel name specification)

```
PureFlow(A)> show channel name "ch3"  
Total channel entries: 3
```

```
Channel Name   : ch2  
Channel type   : normal  
Lan port       : 1/1  
Wan port       : 1/2  
vid            : 10  
inner-vid      : 20  
tpid           : 0x88a8  
inner-tpid     : 0x8100  
mtu            : 1488
```

```
Total channel entries: 3  
PureFlow(A)>
```

(When there is no channel)

```
PureFlow(A)> show channel all  
Total channel entries: 0  
PureFlow(A)>
```

The display contents and their meanings are described below.

- Total channel entries
Shows the total number of channels.

- Channel Name
Shows the channel name.

- Channel type
Shows the channel type.

normal	Normal channel
default	Default channel

- Lan port
Shows the port number of the Network ports on the LAN side.

- Wan port
Shows the port number of the Network ports on the WAN side.

- vid
Shows the VLAN ID of a channel.
When the communication between a frame without the VLAN Tag and VLAN ID 0 is established, "none" is displayed.

- inner-vid
Shows the Inner-VLAN ID of a channel.
When performing the communication with a frame without the Inner-VLAN Tag and Inner-VLAN ID 0, "none" is displayed.
"-----" is displayed when the Inner-VLAN ID is not specified.

- tpid
Shows the TPID (Tag Protocol Identifier) of the channel.

- inner-tpid
Shows the Inner-TPID (Tag Protocol Identifier) of the channel.

- mtu

Specifies the MTU (Maximum Transmission Unit) of the channel.

When the MTU of a channel is rounded off to the value within the setting range, the operational value is displayed in brackets.

```
mtu          : 10200 (1488)
```

[Arguments]

channel_name

Specifies the channel name.

next

Shows information of the channel next to the specified channel is displayed.

all

All of the channel information is displayed.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : show channel name <channel_name> [next]
```

```
Usage : show channel all
```

- There is a missing argument.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

Next channel is not exist.

- The next channel does not exist.

set ip channel

[Format]

```
set ip channel <channel_name> <IP_address> netmask <netmask>
```

[Description]

This command sets the IP network interface in the channel (channel interface).

This command sets the channel interface for the channel registered by the "add channel" command.

The IPv4 address and IPv6 address can be set simultaneously for one channel.

However, the channel interface cannot be set for the default channel.

When this command is executed for the already-set channel, the address is overwritten by a new IP address.

Executing this command changes the channel interface setting resulting in the shutting of the connection.

This command can be executed only in the Administrator mode.

[Display]

```
PureFlow(A)> set ip channel "ch1" 192.168.37.111 netmask 255.255.255.0
```

```
PureFlow(A)> set ip channel "ch1" 2001:1234::1000 netmask 64
```

[Arguments]

channel_name

Specifies the channel name.

The default channel name cannot be specified.

IP_address

Specifies the IPv4/IPv6 address of the channel interface.

netmask

Specifies the subnet mask when setting the IPv4 address for the channel interface.

Valid values of the subnet mask are from 128.0.0.0 to 255.255.255.255.

Specifies the prefix length when setting the IPv6 address for the channel interface.

Valid values of prefix length are from 1 to 128.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : set ip channel <channel_name> <IP_address> netmask <netmask>
```

- There is a missing argument.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

Invalid IP address

- The specified IP address format or the value is invalid.

Invalid netmask

- The format or the value of the specified subnet is invalid.

Default-channel cannot be set for this command.

- This function cannot be specified for the default channel.

The IP address is already used by system interface.

- The IP address has already been used for the system interface.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

unset ip channel

[Format]

```
unset ip channel all
unset ip channel <channel_name> [{ipv4 | ipv6}]
```

[Description]

This command cancels the IP network interface in the channel (channel interface).

Executing this command changes the channel interface setting resulting in the shutting of the connection.

This command can be executed only in the Administrator mode.

[Display]

```
PureFlow(A)> unset ip channel "ch1"
PureFlow(A)> unset ip channel "ch1" ipv6
PureFlow(A)> unset ip channel all
```

[Arguments]

channel_name

Specifies the channel name.

The default channel name cannot be specified.

{ipv4 | ipv6}

Specifies "ipv4" to cancel the IPv4 channel interface, or "ipv6" to cancel the IPv6 channel interface.

If not specified, both channel interfaces of IPv4 and IPv6 are canceled.

all

Cancels all channel interfaces.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : unset ip channel {<channel_name> | all} [{ipv4 | ipv6}]

- There is a missing argument.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

Cannot specified "ipv4" or "ipv6".

- "IPv4" and "IPv6" cannot be specified for "all".

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

show ip channel

[Format]

```
show ip channel all
show ip channel name <channel_name> [next]
```

[Description]

This command displays information related to the IP network interface in the channel (channel interface).

If “next” is specified, information of the channel interface next to the specified channel is displayed.

This command can be executed in the Normal/Administrator mode.

[Display]

(In the case of the “all” specification)

```
PureFlow(A)> show ip channel all
Total channel entries: 2

Channel Name      : ch1
  ID              : 1
  IP Address      : 192.168.37.111
  Netmask         : 255.255.255.0
  IPv6 Address    : 2001:1234::1000
  Prefix          : 64

Channel Name      : ch2
  ID              : 2
  IP Address      : 192.168.38.100
  Netmask         : 255.255.255.0
  IPv6 Address    : none
  Prefix          : none

Total IP channel entries: 2
PureFlow(A)>
```

(In the case of the channel name specification)

```
PureFlow(A)> show ip channel "ch1"
Total IP channel entries: 2

Channel Name      : ch1
  ID              : 1
  IP Address      : 192.168.37.111
  Netmask         : 255.255.255.0
  IPv6 Address    : 2001:1234::1000
  Prefix          : 64

Total IP channel entries: 2
PureFlow(A)>
```

(When there is no channel interface)

```
PureFlow(A)> show ip channel all
Total IP channel entries: 0
PureFlow(A)>
```

The display contents and their meanings are described below.

- Total IP channel entries
Shows the total number of channel interfaces.

- Channel Name
Displays the channel name.
- ID
Shows the interface ID automatically allocated when setting the channel interface.
- IP Address
Displays the IPv4 address of the channel interface.
- Netmask
Shows the subnet mask of the channel interface (when the IPv4 address is set).
- IPv6 Address
Shows the IPv6 address of the channel interface.
- Prefix
Shows the prefix length of the channel interface (when the IPv6 address is set).

[Arguments]

channel_name

Specifies the channel name.

The default channel name cannot be specified.

next

Shows information of the channel interface next to the specified channel.

all

Shows information of all channel interfaces.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : show ip channel name <channel_name> [next]

Usage : show ip channel all

- There is a missing argument.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

IP interface is not configured.

- IP address is not set for the specified channel or next channel.

Next IP channel is not exist.

- The next channel interface does not exist.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

add route

[Format]

```
add route default gateway <IP_address> channel <channel_name> {lan | wan}

add route target <IP_address> netmask <netmask> gateway <gateway>
      channel <channel_name> {lan | wan}
```

[Description]

This command registers the static routes of the channel interface (default routes and target routes). The static routes can be set respectively on the LAN and WAN sides of the channel registered by the "add channel" command.

When setting "0.0.0.0" for the subnet mask or "0" for the prefix length as the target route, register the default route by the "add route default gateway" command.

However, the channel interface cannot be set for the default channel.

Executing this command changes the channel interface setting resulting in the shutting of the connection.

A maximum of 10000 static routes can be registered.

This command can be executed only in the Administrator mode.

[Display]

```
PureFlow(A)> add route target 192.168.3.0 netmask 255.255.255.0
      gateway 192.168.1.1 channel "ch1" wan
PureFlow(A)> add route target 2001:1234::0 netmask 64
      gateway 2001:1234:5678::1 channel "ch1" wan
PureFlow(A)> add route default gateway 192.168.3.0 channel "ch1" lan
PureFlow(A)> add route default gateway 2001:1234::0 channel "ch1" lan
```

[Arguments]

default

Specifies "default" to register the default route.

target

Specifies the "target" to register the target route.

IP_address

Specifies the IPv4/IPv6 address of the destination network.

netmask

Specifies the subnet mask when the IPv4 address is specified as the destination network.

Valid values of the subnet mask are from 128.0.0.0 to 255.255.255.255.

Specifies the prefix length when the IPv6 address is specified as the destination network.

Valid values of prefix length are from 1 to 128.

gateway

Specifies the IPv4/IPv6 address of gateway.

channel_name

Specifies the channel name.

This function cannot specify the default channel name.

{lan | wan}

Specifies "lan" to register the static route on the LAN side, or "wan" to register the route on the WAN side.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add route target <IP_address> netmask <netmask> gateway <gateway>
channel <channel_name> {lan | wan}

Usage : add route default gateway <IP_address> channel <channel_name> {lan | wan}

- There is a missing argument.

Route entry already exists.

- This is the route entry that already exists.

Invalid IP address

- The specified IP address format or the value is invalid.

Invalid netmask

- The format or the value of the specified subnet mask is invalid.
- The value of the specified prefix length is invalid.

Invalid gateway

- The specified IP address format or the value of the gateway is invalid.

Default-channel cannot be set for this command.

- The default channel cannot be specified.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

Target IP address and gateway is not same IP version.

- The destination IP address version does not match the gateway IP address version.

Maximum number of route was exceeded.

- The value exceeds the maximum number of registrations for the static routes.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

delete route

[Format]

```
delete route all
delete route default gateway channel <channel_name> {lan | wan} [{ipv4 | ipv6}]

delete route target <IP_address> netmask <netmask> gateway <gateway>
channel <channel_name> {lan | wan}
```

[Description]

This command deletes the static routes of the channel interface (default routes and target routes). Executing this command changes the channel interface setting resulting in the shutting of the connection. This command can be executed only in the Administrator mode.

[Display]

```
PureFlow(A)> delete route target 192.168.3.0 netmask 255.255.255.0
gateway 192.168.1.1 channel "ch1" wan
PureFlow(A)> delete route target 2001:1234::0 netmask 64
gateway 2001:1234:5678::1 channel "ch1" wan
PureFlow(A)> delete route default gateway channel "ch1" lan
PureFlow(A)> delete route default gateway channel "ch1" lan ipv4
PureFlow(A)> delete route all
```

[Arguments]

default

Specifies "default" to delete the default route.

target

Specifies the "target" to delete the target route.

IP_address

Specifies the IPv4/IPv6 address of the destination network.

netmask

Specifies the subnet mask when specifying the IPv4 address to the destination network.
Specifies the prefix length when specifying the IPv6 address to the destination network.

gateway

Specifies the IPv4/IPv6 address of the destination network.

channel_name

Specifies the channel name.
The default channel name cannot be specified.

{lan | wan}

Specifies "lan" to delete the static route on the LAN side, or "wan" to delete the static route on the WAN side.

{ipv4 | ipv6}

Specifies "ipv4" to delete the default route of IPv4, or "ipv6" to delete the default route of IPv6.
If not specified, both default routes of IPv4 and IPv6 are deleted.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : delete route all

Usage : delete route target <IP_address> netmask <netmask> gateway <gateway>
channel <channel_name> {lan | wan}

Usage : delete route default gateway channel <channel_name> {lan | wan} [{ipv4 | ipv6}]

- There is a missing argument.

Invalid IP address

- The specified IP address format or the value is invalid.

Invalid netmask

- The format or the value of the specified subnet mask is invalid.

Invalid gateway

- The specified IP address format or the value of the gateway is invalid.

Route info is not found.

- The specified static route does not exist.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

Target IP address and gateway is not same IP version.

- The destination IP address version does not match the gateway IP address version.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

show route

[Format]

```
show route all
show route channel <channel_name>
show route target <IP_address> netmask <netmask> gateway <gateway> channel
<channel_name> {lan | wan} [next]
```

[Description]

Displays information related to the static routes of the channel interface (default routes and target routes).

When specifying the address, subnet mask (prefix length), gateway, channel name, or LAN/WAN side of the destination network, the static route in accordance with the specified contents is displayed.

If “next” is specified, information of the static route next to the specified static route is displayed.

This command can be performed in the Normal/Administrator mode.

[Display]

(In the case of the "all" specification)

```
PureFlow(A)> show route all
Total route entries: 3

Route 1:
  Target           : 192.168.37.0
  Netmask(Prefix)  : 255.255.255.0
  Gateway(Next Hop): 192.168.37.1
  Channel Name     : ch1
  LAN/WAN          : LAN

Route 2:
  Target           : 172.0.0.0
  Netmask(Prefix)  : 255.0.0.0
  Gateway(Next Hop): 172.16.222.1
  Channel Name     : ch2
  LAN/WAN          : LAN

Route 3:
  Target           : 2001:DB8::1
  Netmask(Prefix)  : 32
  Gateway(Next Hop): 2001:DB::A2
  Channel Name     : ch3
  LAN/WAN          : LAN

Total route entries: 3
PureFlow(A)>
```

(In the case of the channel name specification)

```
PureFlow(A)> show route channel "ch1"
Total route entries: 3

Route 1:
  Target           : 192.168.37.0
  Netmask(Prefix)  : 255.255.255.0
  Gateway(Next Hop): 192.168.37.1
  Channel Name     : ch1
  LAN/WAN          : LAN

Total route entries: 3
PureFlow(A)>
```

(In the case of the route condition specification)

```
PureFlow(A)> show route target 192.168.37.0 netmask 255.255.255.0 gateway
192.168.37.1 channel "ch1" lan
Total route entries: 3
```

```
Route 1:
Target          : 192.168.37.0
Netmask(Prefix) : 255.255.255.0
Gateway(Next Hop) : 192.168.37.1
Channel Name    : ch1
LAN/WAN        : LAN
```

```
Total route entries: 3
PureFlow(A)>
```

(When there is no static route)

```
PureFlow(A)> show route all
Total route entries: 0
PureFlow(A)>
```

The display contents and their meanings are described below.

- Total route entries
Shows the total number of static routes.
- Target
Shows the IPv4/IPv6 address of the destination network.
Shows "0.0.0.0" for the default route of IPv4 or "0:0:0:0" for the default route of IPv6.
- Netmask(Prefix)
Shows the subnet mask or prefix length.
Shows "0.0.0.0" for the default route of IPv4 or "0" for the default route of IPv6.
- Gateway(Next Hop)
Shows the IPv4/IPv6 address of the gateway.
- Channel Name
Shows the channel name.
- LAN/WAN
Shows the Network port (LAN or WAN side) of the channel.
LAN Static route on LAN side
WAN Static route on WAN side

[Arguments]

IP_address
Specifies the IP address of the destination network.

netmask
Specifies the subnet mask when specifying the IPv4 address of the destination network.
Specifies the prefix length when specifying the IPv6 address of the destination network.
Valid values of prefix length are from 1 to 128.

gateway
Specifies the IPv4/IPv6 address of the gateway.

channel_name
Specifies the channel name.
The default channel name cannot be specified.

{lan | wan}

Specifies "lan" to display the static route on the LAN side, or "wan" to display the static route on the WAN side.

next

Shows information of the static route next to the specified static route.

all

Shows information of all static routes.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : show route all

Usage : show route channel <channel_name>

- There is a missing argument.

Invalid IP address

- The specified IP address format or the value is invalid.

Invalid netmask

- The format or the value of the specified subnet mask is invalid.
- The value of the specified prefix length is invalid.

Invalid gateway

- The specified IP address format or the value of the gateway is invalid.

Specified channel name is invalid.

- The specified channel name is invalid.

Target IP address and gateway is not same IP version.

- The destination IP address version does not match the gateway IP address version.

Route is not configured.

- The route is not set for the specified channel.

Next route is not exist.

- The next static path information does not exist.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

2.2.3 ACL-related commands

set filter mode

[Format]

```
set filter mode in <slot/port> <field>
```

[Description]

Sets the combination of the fields that identifies the flow (flow identification mode).

This device classifies packets by using filters to extract traffic. The minimum unit for identifying the traffic is flow.

The fields that identify the flow are VLAN ID, Inner VLAN ID, CoS, Inner CoS, Source IP address (SIP), Destination IP address (DIP), ToS, protocol number, Source Port (Sport) number, and Destination Port (Dport) number.

This command can transmit the packets of the different fields as different flows or the same flows.

The flow identification mode can be set for each Network port.

If the flow identification mode is changed, the flow that has been registered is deleted temporarily.

This command can be executed only in Administrator mode.

Be careful about the following restrictions for setting by this command.

- If the TCP acceleration function license is enabled while cos, inner-cos, or tos is specified, the traffic is not accelerated. To accelerate the traffic, use default (vid, inner-vid, sip, dip, proto, sport, dport).

[Display]

(If the TCP acceleration function license is disabled)

```
PureFlow(A)> set filter mode in 1/1 cos
PureFlow(A)> set filter mode in 1/2 sip, dip
```

(If the TCP acceleration function license is enabled)

```
PureFlow(A)> set filter mode in 1/1 cos
Warning
Please set the default when traffic acceleration.
PureFlow(A)> set filter mode in 1/1 default
PureFlow(A)>
```

[Arguments]

slot/port

Specifies the slot location and port number of the Network port.

Only 1 can be specified as the slot location. Valid port numbers are 1 to 4.

field

Specifies the field name that identifies the flow. The following character strings can be set.

default	Identifies the flow by the combination out of "vid, inner-vid, sip, dip, proto, sport, or dport".
vid	Identifies the flow of VLAN ID.
cos	Identifies the flow of the outer VLAN ID for the duplex VLAN tag.
inner-vid	Identifies the flow of the outer CoS for the duplex VLAN tag.
inner-cos	Identifies the flow of the inner VLAN ID for the duplex VLAN tag.
sip	Identifies the flow of SIP.
dip	Identifies the flow of DIP.
tos	Identifies the flow of ToS.
proto	Identifies the flow of the protocol number.
sport	Identifies the flow of Sport.
dport	Identifies the flow of Dport.

More than one parameter can be specified by delimiting them with commas (.). For default, other field names cannot be specified, and more than one "default" cannot be specified.

The filter for which any field other than the field specified in the flow identification mode is set is disabled. For example, if "vid, sip, dip" is specified, the flow is identified in the VLAN ID, SIP, and DIP fields. If any field that is not specified in the flow identification mode such as "cos" is specified by the "add filter" command, the filter is not matched.

[Default Value]

field

The default value is "default".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

Usage : set filter mode in <slot/port> <field>

- There is a missing argument.

Command making ambiguity

Usage : set filter mode in <slot/port> <field>

- There is a missing argument.

Slot #N is invalid.

- The specified slot is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

Specified field is invalid.

Valid fields:

default, vid, cos, inner-vid, inner-cos, sip, dip, tos, proto, sport, dport
(multiple fields can be specified with separated comma without space)

- The specified name of the field that identifies the flow is invalid.

Warning

Please set the default when traffic acceleration.

- To accelerate the traffic, specify default.

add filter

[Format]

```
add filter scenario <scenario_name> filter <filter_name> bridge-ctrl
    [priority <filter_pri>]

add filter scenario <scenario_name> filter <filter_name> ethernet
    [vid {<VID> | none}] [cos <user_priority>]
    [inner-vid {<VID> | none}] [inner-cos <user_priority>]
    [ethertype <type>] [priority <filter_pri>]

add filter scenario <scenario_name> filter <filter_name> ipv4
    [vid {<VID> | none}] [cos <user_priority>]
    [inner-vid {<VID> | none}] [inner-cos <user_priority>]
    [sip [list] {<src_IP_address> | <list_name>}]
    [dip [list] {<dst_IP_address> | <list_name>}]
    [tos <type_of_service>] [proto <protocol>]
    [sport [list] {<sport> | <list_name>}]
    [dport [list] {<dport> | <list_name>}]
    [priority <filter_pri>]

add filter scenario <scenario_name> filter <filter_name> ipv6
    [vid {<VID> | none}] [cos <user_priority>]
    [inner-vid {<VID> | none}] [inner-cos <user_priority>]
    [sip [list] {<src_IP_address> | <list_name>}]
    [dip [list] {<dst_IP_address> | <list_name>}]
    [tos <type_of_service>] [proto <protocol>]
    [sport [list] {<sport> | <list_name>}]
    [dport [list] {<dport> | <list_name>}]
    [priority <filter_pri>]
```

[Description]

This command registers filters.

A filter sorts out packets that flow through a pipe and provides rules to extract traffic.

There are three types of filters: a Bridge-Control filter that identifies packets whose destination MAC addresses are 01-80-C2-00-00-00 to 01-80-C2-00-00-FF (including the spanning tree protocol, link aggregation, and EAPoL (authentication protocol)); an Ethernet filter that targets the length/type field of the Ethernet header; and an IP filter that targets IP packets. The IP filter is further categorized into two types: one for IPv4 packets and the other for IPv6 packets. The filter precedence is based on the filter priority.

For the Ethernet filter, specify at least one parameter in addition to the filter priority.

This command can be used to add a filter to a traffic attribute (scenario) to control traffic that matches the filter criteria.

Multiple filters can be added to a scenario.

Only an IP filter can be set when the wan-accel scenario is specified. At this time, set the IP filter so that the IP version of the IP filter matches that of the wan-accel scenario peer.

To set the filter, specify "<filter_name>" (filter name). Use the "show filter" command to confirm "<filter_name>".

Up to 10000 filters can be registered.

Add a scenario and a filter to each hierarchy to enable hierarchical shaping. Traffic that matches both the upper level scenario filter criteria and the lower level scenario filter criteria is controlled in the lower level hierarchy. Traffic that matches the upper level scenario filter criteria but not the lower level scenario filter criteria is controlled in the upper level. Criteria set in the lower level filter must be included in criteria set in the upper level scenario filter.

Traffic that does not match any filter is transferred on a best effort basis (queue class = 8).

This command can be executed only in Administrator mode.

Note:

Only the following ASCII characters can be set in the filter name.

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
!#$%&'()=~-^|@`[]{}:~*+_/.<>
```

[Display]

```
PureFlow(A)> add filter scenario "/port1/tokyo/" filter "shibuya1" bridge-ctrl
PureFlow(A)> add filter scenario "/port1/tokyo/" filter "shibuya2"
    ethernet ethertype 0xFFFF
PureFlow(A)> add filter scenario "/port1/tokyo/" filter "shibuya3" ipv4
    sip 192.168.0.0-192.168.255.255 proto udp
PureFlow(A)> add filter scenario "/port1/tokyo/shibuya/" filter "harajukul" ipv4
    sip 192.168.48.0-192.168.48.255 proto udp sport 10-20
PureFlow(A)> add filter scenario "/port2/tokyo" filter "hibuya1" ipv6
    sip FE80::0001 proto udp sport 10
PureFlow(A)> add filter scenario "/port1/tokyo" filter "shibuya4" ipv4
    sip list "v4Servers" proto udp sport list "RealtimeAppli"
```

[Arguments]

`scenario_name`

Specifies the absolute path of the scenario name for which the filter is registered.

`filter_name`

Specify the filter name.

1 to 48 characters can be used.

The same filter can be registered to different scenarios.

If spaces are required, enclose the character string with quotation marks (“ ”), for example, “v4 Servers”.

It cannot be specified for any name that consists only of numbers or consists of only a pair of quotation marks (“ ”).

Any filter name consisting only of “all” cannot be specified.

{bridge-ctrl | ethernet | ipv4 | ipv6}

Specify the filter type.

bridge-ctrl	Destination MAC address is within the range of 01-80-C2-00-00-00 to 01-80-C2-00-00-FF. Packet (Bridge-Control filter)
ethernet	VLAN Tag or the length/type field of the Ethernet header (Ethernet filter)
ipv4	IPv4 packet (IP filter)
ipv6	IPv6 packet (IP filter)

`ethertype <type>`

Specify the type of the Ethernet header. Valid values are from 0x0000 to 0xFFFF.

`vid {<VID> | none}`

Specifies the VLAN ID.

If not specified, all Ethernet frames (with/without VLAN Tag) match.

In the case of the “none” specification, the frame without VLAN Tag matches.

Enter the VLAN ID value directly or use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 4094.

cos <user_priority>

Specifies the CoS value. If not specified, all CoS values match. In the case of the “none” specification for vid, the value cannot be specified.

To specify the CoS value, use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 7.

inner-vid {<VID> | none}

Specifies the Inner-VLAN ID.

If not specified, all Ethernet frames (with/without the Inner-VLAN Tag) match.

In the case of the “none” specification, the frame without the duplex VLAN Tag matches.

Specify the Inner-VLAN ID value directly or use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

In the case of the “none” specification for vid, <VID> cannot be specified by this parameter.

Valid values are from 0 to 4094.

inner-cos <user priority>

Specifies the Inner-CoS value. If not specified, all CoS values match. In the case of the “none” specification for vid, the value cannot be specified.

To specify the CoS value, use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 7.

sip [list] {<src_IP_address> | <list_name>}

Specify the Source IPv4 address or a rule list name. If not specified, all Source IPv4 addresses match.

To specify “src_IP_address”, use <address> or <address-address> or <address/bitmask>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

dip [list] {<dst_IP_address> | <list_name>}

Specify a Destination IPv4 address or a rule list name. If not specified, all Destination IPv4 addresses match.

To specify “dst_IP_address”, use <address> or <address-address> or <address/bitmask>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Note: For <address-address>,

192.168.10.0-192.168.10.255 means the address range of 192.168.10.0 to 192.168.10.255.

Note: For <address/bitmask>,

192.168.10.0/255.255.255.0 means the addresses ranging from 192.168.10.0 to 192.168.10.255 matches, while 192.168.0.100/255.255.0.255 means the address of 192.168.xxx.100 (xxx is the value ranging from 0 to 255) matches.

sip [list] {<src_IPv6_address> | <list_name>}

Specify the Source IPv6 address or a rule list name. If not specified, all Source IPv6 addresses match.

To specify “src_IPv6_address”, use <address> or <address-address> or <address/bitmask> (lowercase characters can be used).

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

dip [list] {<dst_IPv6_address> | <list_name>}

Specify a Destination IPv6 address or a rule list name. If not specified, all Destination IPv6 addresses match.

To specify “dst_IPv6_address”, use <address> or <address-address> or <address/bitmask> (lowercase characters can be used).

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Note: For <address-address>,
 FE80:1111:2222:3333:4444:5555:0000:0000-
 FE80:1111:2222:3333:4444:5555:FFFF:FFFF means
 the address range of
 FE80:1111:2222:3333:4444:5555:0000:0000 to
 FE80:1111:2222:3333:4444:5555:FFFF:FFFF
 The address ranges described above match.

Note: For <address/bitmask>,
 FE80:1111:2222:3333:4444:5555::FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:: means the addresses
 ranging from FE80:1111:2222:3333:4444:5555:0000:0000 to 0:1111:2222:3333:4444:5555:FFFF:FFFF
 match. FE80:1111:2222::5555:6666:7777/FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF means the address of
 FE80:1111:2222:xxxx:xxxx:5555:6666:7777 (xxxx is the value ranging from 0000 to FFFF) matches.

tos <type_of_service>

Specifies the ToS value. If not specified, all ToS values match.

To specify the ToS value, use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 255.

tos <traffic_class>

Specifies the traffic class value. If not specified, all traffic class values match.

To specify the traffic class value, use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 255.

proto <protocol>

Specify the protocol number. If not specified, all protocol numbers match.

Specify the protocol number directly or use <start-end>. “tcp”, “udp”, “icmp”, and “icmpv6” can be entered in characters.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 255.

sport [list] {<sport> | <list_name>}

Specify the Source port number or a rule list name. If not specified, all Source Port numbers match.

Specify the sport number directly or use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 65535.

dport [list] {<dport> | <list_name>}

Specify the Destination port number or a rule list name. If not specified, all Destination Port numbers match.

Enter the dport number directly or use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 65535.

priority <filter_pri>

Specify the filter priority. A smaller value means a higher priority. If omitted, 20000 is specified. When a packet is received, whether that packet matches the set filter criteria is checked in the filter order. If priorities are the same, an arbitrary search order is applied. Valid values are from 1 to 40000.

[Default value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add filter scenario <scenario_name> filter <filter_name> bridge-ctrl
[priority <filter_pri>]

Usage : add filter scenario <scenario_name> filter <filter_name> ethernet
[vid {<VID>|none}] [cos <user_priority>]
[inner-vid {<VID>|none}] [inner-cos <user_priority>]
[ethertype <type>] [priority <filter_pri>]

Usage : add filter scenario <scenario_name> filter <filter_name> ipv4
[vid {<VID>|none}] [cos <user_priority>]
[inner-vid {<VID>|none}] [inner-cos <user_priority>]
[sip [list] {<src_IP_address>|<list_name>}]
[dip [list] {<dst_IP_address>|<list_name>}]
[tos <type_of_service>] [proto <protocol>]
[sport [list] {<sport>|<list_name>}]
[dport [list] {<dport>|<list_name>}]
[priority <filter_pri>]

Usage : add filter scenario <scenario_name> filter <filter_name> ipv6
[vid {<VID>|none}] [cos <user_priority>]
[inner-vid {<VID>|none}] [inner-cos <user_priority>]
[sip [list] {<src_IP_address>|<list_name>}]
[dip [list] {<dst_IP_address>|<list_name>}]
[tos <type_of_service>] [proto <protocol>]
[sport [list] {<sport>|<list_name>}]
[dport [list] {<dport>|<list_name>}]
[priority <filter_pri>]

- There is a missing argument.

Specified Scenario Name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Specified filter name is invalid.

(Number only cannot be specified. "all" cannot be specified.)
(Valid filter name length is from 1 to 48.)

- The specified filter name is invalid.

Specified filter Name is already used.

- The specified filter name has already been used in another filter.

Specified ether type is invalid. (Valid from 0x0000 to 0xFFFF)

- The specified Ether type is invalid.

Specified vid is invalid. (Valid from 0 to 4094, Or Start - End)

- The specified VLAN ID is invalid.

Specified cos is invalid. (Valid from 0 to 7, Or Start - End)

- The specified CoS value is invalid.

Specified inner-vid is invalid. (Valid from 0 to 4094, Or Start - End)

- The specified Inner-VLAN ID is invalid.

VID must be specified when inner-VID is specified.

- The Inner-VLAN ID can be specified only when the VLAN ID is specified.

Specified inner-cos is invalid. (Valid from 0 to 7, Or Start - End)

- The specified Inner-CoS value is invalid.

The format or value of the specified source IP address is invalid.

- The specified Source IP address is invalid.

The format or value of the specified destination IP address is invalid.

- The specified Destination IP address is invalid.

The format or value of the specified source IPv6 address is invalid.

- The specified Source IPv6 address is invalid.

The format or value of the specified destination IPv6 address is invalid.

- The specified Destination IPv6 address is invalid.

Specified rulelist name of source IP address is invalid.

Specified rulelist name of destination IP address is invalid.

Specified rulelist name of source port is invalid.

Specified rulelist name of destination port is invalid.

- The rule list name is invalid.

Specified rulelist name of source IP address is not used.

Specified rulelist name of destination IP address is not used.

Specified rulelist name of source port is not used.

Specified rulelist name of destination port is not used.

- The specified rule list does not exist.

IP filter and rulelist of source IP address is not same type.

IP filter and rulelist of destination IP address is not same type.

IP filter and rulelist of source port is not same type.

IP filter and rulelist of destination port is not same type.

- The type is different from that of the target rule list.

Specified tos is invalid. (Valid from 0 to 255, Or Start - End)

- The specified ToS value is invalid.

Specified protocol number is invalid. (Valid from 0 to 255, Start - End, Or tcp/udp/icmp/icmpv6)

- The specified protocol number is invalid.

Specified source TCP/UDP port number is invalid. (Valid from 0 to 65535. Or Start - End)

- The specified sport number is invalid.

Specified destination TCP/UDP port number is invalid. (Valid from 0 to 65535. Or Start - End)

- The specified dport number is invalid.

Specified filter priority is invalid. (Valid from 1 to 40000)

- The specified filter priority is invalid.

Maximum number of filter was exceeded.

- The number of registered filters exceeded the registration limit.

It is necessary to set one or more parameters other than Priority.

- For the Ethernet filter, specify at least one parameter in addition to Priority.

Filter type is different. Please specify same type of wan-accel scenario.

- Specify the same IP version as that of the wan-accel scenario peer.

delete filter

[Format]

```
delete filter scenario <scenario_name> filter <filter_name>
delete filter scenario <scenario_name>
delete filter all
```

[Description]

This command deletes a filter.

If a scenario name and a filter name are specified, the specified filter of the specified scenario is deleted.

If a scenario name is specified and a filter name is not specified, all filters of the specified scenario are deleted.

If “all” is specified, all filters of all registered scenarios are deleted.

Use the “show scenario” command to confirm the filters added to the scenario.

Use the “show filter” command to confirm the filter settings.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete filter scenario "/port1/tokyo" filter "shibuyal"
PureFlow(A)> delete filter scenario "/port1/tokyo"
PureFlow(A)> delete filter all
```

[Arguments]

filter_name

Specify the filter name.

scenario_name

Specify the scenario name.

all

Deletes all registered filters.

[Default value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : delete filter all

Usage : delete filter scenario <scenario_name> [filter <filter_name>]

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Specified Filter Name is invalid.

(Number only cannot be specified. "all" cannot be specified.)

(Valid filter name length is from 1 to 48.)

- The specified filter name is invalid.

Specified filter name is not used.

- The specified filter does not exist.

show filter

[Format]

```
show filter scenario <scenario_name> [filter <filter_name>] [summary] [next]
show filter all [summary]
```

[Description]

This command displays the information related to filter.

If a scenario name and a filter name are specified, the specified filter of the specified scenario is displayed.

If a scenario name is specified and a filter name is not specified, all filters of the specified scenario are displayed.

If “summary” is specified, only the filter names are displayed.

If “next” is specified, the filter next to the specified filter is displayed. The display order is the same as when the filter name is specified and “next” not specified for this command.

If “next” is specified and a filter name is not specified, information of the first filter of the specified scenario is displayed. If no filters are registered to the specified scenario, information of the first filter of the next scenario is displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

(When a scenario name and a filter name are specified)

```
PureFlow(A)> show filter scenario "/port1/Tokyo" filter "shibuya1"
Total filter entries: 5
```

```
Scenario Name: "/port1/Tokyo"
```

```
Filter Name: "shibuya1"
Filter Type: IPv4
Filter Rule:
  vid           :10-100
  inner-vid     :200
  Sip           :210.10.10.0-210.10.10.255
  Dip          :192.168.48.0-192.168.48.255
  Proto        :udp
  Sport        :100-110
  Dport        :200-210
  Priority      :1
```

```
Total filter entries: 5
```

```
PureFlow(A)>
```

(When a scenario name is specified and a filter name is not specified)

```
PureFlow(A)> show filter scenario "/port1/Tokyo"
Total filter entries: 5
```

```
Scenario Name: "/port1/Tokyo"
```

```
Filter Name: "shibuya1"
Filter Type: IPv4
Filter Rule:
  vid           :10-100
  inner-vid     :200
  Sip           :210.10.10.0-210.10.10.255
  Dip          :192.168.48.0-192.168.48.255
  Proto        :udp
  Sport        :100-110
  Dport        :200-210
  Priority      :1
```

```

Filter Name: "shibuya2"
  Filter Type: IPv6
  Filter Rule:
    vid          :10-100
    inner-vid    :0-10
    Sip          :FE80::0001-FE80::FFFF:FFFF
    Dip          :FE81::0001-FE81::FFFF:FFFF
    Proto       :udp
    Sport       :100-110
    Dport       :200-210
    Priority     :2

Filter Name: "shibuya3"
  Filter Type: Bridge-ctrl
  Filter Rule:
    Priority     :3

Filter Name: "shibuya4"
  Filter Type: Ethernet
  Filter Rule:
    EtherType   :0x0900
    Priority     :4

Total filter entries: 5
PureFlow(A)>

(When "all" is specified)
PureFlow(A)> show filter all
Total filter entries: 5

Scenario Name: "/port1/Tokyo"

Filter Name: "shibuya1"
  Filter Type: IPv4
  Filter Rule:
    vid          :10-100
    Sip          :210.10.10.0-210.10.10.255
    Dip          :192.168.48.0-192.168.48.255
    Proto       :udp
    Sport       :100-110
    Dport       :200-210
    Priority     :1

Filter Name: "shibuya2"
  Filter Type: IPv6
  Filter Rule:
    vid          :10-100
    Sip          :FE80::0001-FE80::FFFF:FFFF
    Dip          :FE81::0001-FE81::FFFF:FFFF
    Proto       :udp
    Sport       :100-110
    Dport       :200-210
    Priority     :2

Filter Name: "shibuya3"
  Filter Type: Bridge-ctrl
  Filter Rule:
    Priority     :3

Filter Name: "shibuya4"
  Filter Type: Ethernet
  Filter Rule:
    EtherType   :0x0900
    Priority     :4

```

```
Scenario Name: "/port1/Osaka"

Filter Name: "asahi1"
  Filter Type: IPv4
  Filter Rule:
    vid          :10-100
    Sip          :210.10.10.0-210.10.10.255
    Dip          :192.168.48.0-192.168.48.255
    Proto       :udp
    Sport       :100-110
    Dport       :200-210
    Priority     :5

Total filter entries: 5
PureFlow(A)>
```

(When summary is specified)

```
PureFlow(A)> show filter all summary
Total filter entries: 5
```

```
Scenario Name: "/port1/Tokyo"
  Filter Name: "shibuya1"
  Filter Name: "shibuya2"
  Filter Name: "shibuya3"
  Filter Name: "shibuya4"
Scenario Name: "/port1/Osaka"
  Filter Name: "asahi1"
```

```
Total filter entries: 5
PureFlow(A)>
```

(When there is no filter)

```
PureFlow(A)> show filter
Total filter entries: 0
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- Total filter entries
Shows the total number of filters.

- Scenario Name
Shows the scenario name.

- Filter Name
Shows the filter name.

- Filter Type
Shows the type of the filter.

Bridge-ctrl	Bridge-Control filter
Ethernet	Ethernet filter
IPv4	IPv4 filter
IPv6	IPv6 filter

- Filter Rule
Shows the filter criteria set for the filter. Omitted filter criteria do not appear.

[Arguments]

- `scenario_name`
Specify the scenario name.
- `filter_name`
Specify the filter name.
- `summary`
Only displays a summary of the filters.
- `next`
Displays the filter next to the specified filter.
- `all`
Shows information of all filters.

[Errors]

- Invalid input at Marker
- There is an unnecessary argument.
- An argument was missing.
Usage : `show filter scenario <scenario_name> [filter <filter_name>] [summary] [next]`
Usage : `show filter all [summary]`
- There is a missing argument.
- Specified scenario name is invalid.
- The specified scenario name is invalid.
- Specified scenario name is not used.
- The specified scenario does not exist.
- Specified filter name is invalid.
(Number only cannot be specified. "all" cannot be specified.)
(Valid filter name length is from 1 to 48.)
- The specified filter name is invalid.
- Specified filter name is not used.
- The specified filter does not exist.
- Next filter is not exist.
- The next filter does not exist.

add rulelist group

[Format]

```
add rulelist group <list_name> {ipv4 | ipv6 | l4port}
```

[Description]

This command registers a rule list.

A rule list is a group of rules for extracting traffic, such as multiple IP addresses and TCP/UDP ports. In a rule list, you can create IPv4 address/address mask, IPv6 address/address mask, and TCP/UDP port number groups. By grouping hosts and applications for which you want to perform the same traffic control, filter criteria registration can be simplified.

Use this command to create a rule list, and then use the “add rulelist entry” command to register the addresses or TCP/UDP port numbers to be grouped.

Port numbers in the “l4port” rule list do not indicate whether the port is TCP or UDP. To distinguish between TCP and UDP, use the filter parameter when you set a filter.

Up to 1024 groups can be registered to a rule list.

This command can be executed only in Administrator mode.

Note:

Only the following ASCII characters can be set in the rule list.

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
!#$%&'()*~^-^|@`[]{}:~*~+~/.<>
```

[Display]

```
PureFlow(A)> add rulelist group "v4Servers" ipv4
PureFlow(A)> add rulelist group "v6Servers" ipv6
PureFlow(A)> add rulelist group "RealtimeAppli" l4port
```

[Arguments]

list_name

Specify the rule list name. 1 to 32 characters can be specified.

If spaces are required, enclose the character string with quotation marks (“ ”), for example, “v4 Servers”.

It cannot be specified for any name that consists only of numbers, duplicates in the equipment, or consists of only a pair of quotation marks (“ ”).

Any rule list name consisting only of “all” cannot be specified.

ipv4 | ipv6 | l4port

Specify the type of the rule list. Select from IPv4 address, IPv6 address, or TCP/UDP port number as the type of objects to be grouped.

ipv4	IPv4 address/address mask
ipv6	IPv6 address/address mask
l4port	TCP/UDP port number

[Default value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add rulelist group <list_name> {ipv4 | ipv6 | l4port}

- There is a missing argument.

Specified rulelist name is invalid.

(Number only cannot be specified. "all" cannot be specified.)
(Valid rulename length is from 1 to 32.)

- The rule list name is invalid.

Specified rulelist name is already in use.

- A rule list with the same name already exists.

Maximum number of rulelist was exceeded.

- The number of rule lists exceeded the registration limit.

add rulelist entry

[Format]

```
add rulelist entry <list_name> ipv4 <IP_address>
add rulelist entry <list_name> ipv6 <IP_address>
add rulelist entry <list_name> l4port <port>
```

[Description]

This command registers a rule list entry.

An additional IP address or TCP/UDP port to be grouped is registered to a rule list created using the “add rulelist group” command.

Only entries that are of the same type (IPv4 address, IPv6 address, or TCP/UDP port number) as the target rule list can be registered.

Up to 512 rule list entries can be registered for each rule list, provided the number of entries for all rule lists is 64000 or less.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> add rulelist entry "v4Servers" ipv4 192.168.1.1
PureFlow(A)> add rulelist entry "v6Servers" ipv6 FE80::0001
PureFlow(A)> add rulelist entry "v4Servers" ipv4 192.168.1.2-192.168.1.255
PureFlow(A)> add rulelist entry "v6Servers" ipv6 FE80::0002-FE80::FFFF
PureFlow(A)> add rulelist entry "RealtimeAppli" l4port 10
PureFlow(A)> add rulelist entry "RealtimeAppli" l4port 100-200
```

[Arguments]

list_name

Specify the name of the rule list.

{ipv4 | ipv6 | l4port}

Specify the type of the rule list entry. Select IPv4 address, IPv6 address, or TCP/UDP port number.

You can only register entries of the same type as the target rule list.

ipv4	IPv4 address
ipv6	IPv6 address
l4port	TCP/UDP port number

IP_address

Specify an IPv4 address for ipv4, an IPv6 address for ipv6.

To specify the address, use <address> or <address-address>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Note: For <address-address>,

192.168.10.0-192.168.10.255 means the address range of 192.168.10.0 to 192.168.10.255.

port

Specify the TCP/UDP port number.

Enter the number directly or use <start-end>. Valid values are from 0 to 65535.

[Default value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : add rulelist entry <list_name> ipv4 <IP_address>

Usage : add rulelist entry <list_name> ipv6 <IP_address>

Usage : add rulelist entry <list_name> l4port <port>

- There is a missing argument.

Specified rulelist name is invalid.

(Number only cannot be specified. "all" cannot be specified.)

(Valid rulename length is from 1 to 32.)

- The rule list name is invalid.

Specified rulelist name is not used.

- The specified rule list does not exist.

The format or value of the specified IP address is invalid.

- The specified IP address is invalid.

Specified TCP/UDP port number is invalid. (Valid from 0 to 65535. Or Start - End)

- The specified TCP/UDP port number is invalid.

Maximum number of rulelist entry was exceeded.

- The number of entries for the specified rule list exceeded the limit (512 records).

Maximum number of total rulelist entry was exceeded.

- The number of entries of all rule lists exceeded the registration limit (64000 records).

Specified rulelist entry is already in use.

- The specified rule list entry had already been registered.

Rulelist entry and rulelist is not same type.

- The type is different from that of the target rule list.

delete rulelist group

[Format]

```
delete rulelist group {<list_name> | all}
```

[Description]

This command deletes a rule list.

Deleting a rule list also deletes all rule list entries in the rule list.

Specify the type and name of a rule list to delete that rule list. However, if the specified rule list is set in a filter, it cannot be deleted.

Specify "all" to delete all rule lists. However, if any of the rule lists is set in a filter, all rule lists cannot be deleted by specifying "all".

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete rulelist group "v4Servers"  
PureFlow(A)> delete rulelist group all
```

[Arguments]

list_name

Specify the rule list name.

all

Specify this to delete all rule lists.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : delete rulelist group {<list_name>|all}

- There is a missing argument.

Specified rulelist name is invalid.

(Number only cannot be specified. "all" cannot be specified.)
(Valid rulename length is from 1 to 32.)

- The rule list name is invalid.

Specified rulelist name is not used.

- The specified rule list does not exist.

Rulelist is used by filter.

- The rule list is set in a filter.

delete rulelist entry

[Format]

```
delete rulelist entry <list_name> ipv4 <IP_address>
delete rulelist entry <list_name> ipv6 <IP_address>
delete rulelist entry <list_name> l4port <port>
delete rulelist entry <list_name> all
```

[Description]

This command deletes a rule list entry.

Only entries that are of the same type (IPv4 address, IPv6 address, or TCP/UDP port number) as the target rule list can be specified.

Specify “ipv4”, “ipv6”, or “l4port” to delete the specified rule list entry.

Specify “all” to delete all rule list entries from the target rule list.

Even if the target rule list is set in a filter, entries can be deleted.

If a rule list that has no rule list entries is set in a filter, no packets match the criteria.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete rulelist entry "v4Servers" ipv4 192.168.1.1
PureFlow(A)> delete rulelist entry "v6Servers" ipv6 FE80::0001
PureFlow(A)> delete rulelist entry "v4Servers" ipv4 192.168.1.2-192.168.1.255
PureFlow(A)> delete rulelist entry "v6Servers" ipv6 FE80::0002-FE80::FFFF
PureFlow(A)> delete rulelist entry "RealtimeAppli" l4port 10
PureFlow(A)> delete rulelist entry "RealtimeAppli" l4port 100-200
PureFlow(A)> delete rulelist entry "RealtimeAppli" all
```

[Arguments]

list_name

Specify the name of the rule list.

{ipv4 | ipv6 | l4port}

Specify the type of the rule list entry. Select IPv4 address, IPv6 address, or TCP/UDP port number.

You can only specify entries of the same type as the target rule list.

ipv4	IPv4 address/address mask
ipv6	IPv6 address/address mask
l4port	TCP/UDP port number

IP_address

Specify an IPv4 address for ipv4, an IPv6 address for ipv6.

To specify the address, use <address> or <address-address>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

port

Specify the TCP/UDP port number.

Enter the number directly or use <start-end>. Valid values are from 0 to 65535.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

all

Specify this to delete all rule list entries.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : delete rulelist entry <list_name> ipv4 <IP_address>

Usage :delete rulelist entry <list_name> ipv6 <IP_address>

Usage :delete rulelist entry <list_name> l4port <port>

Usage :delete rulelist entry <list_name> all

- There is a missing argument.

Specified rulelist name is invalid.

(Number only cannot be specified. "all" cannot be specified.)

(Valid rulename length is from 1 to 32.)

- The rule list name is invalid.

Specified rulelist name is not used.

- The specified rule list does not exist.

The format or value of the specified IP address is invalid.

- The specified IP address is invalid.

Specified TCP/UDP port number is invalid. (Valid from 0 to 65535. Or Start - End)

- The specified TCP/UDP port number is invalid.

Rulelist entry and rulelist is not same type.

- The type is different from that of the target rule list.

Specified rulelist entry is not used.

- The specified rule list entry does not exist.

show rulelist

[Format]

```
show rulelist name <list_name> [next]
show rulelist all
```

[Description]

This command displays the information related to rule list.
The order for display is alphabetical based on rule list names.
If next is specified, information that related to next rule list of the specified rule list is displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show rulelist all
Total rulelist groups: 3

ListName: RealtimeAppli
  Type           : 14port
  Rulelist Index : 3
  Number of Rules:
    Total        : 128
    Used          : 0
    Available     : 128
  Rules:
    (None)

ListName: v4Servers
  Type           : ipv4
  Rulelist Index : 14
  Number of Rules:
    Total        : 128
    Used          : 2
    Available     : 126
  Rules:
    [ 1]          : 192.168.0.0
    [ 2]          : 192.169.0.0

ListName: v6Servers
  Type           : ipv6
  Rulelist Index : 2
  Number of Rules:
    Total        : 128
    Used          : 2
    Available     : 126
  Rules:
    [ 1]          : FE80::0001
    [ 2]          : FE80::0002

Total rulelist groups: 3
PureFlow(A)>
```

(When there is no rule list)

```
PureFlow(A)> show rulelist all
Total rulelist entrie groups: 0
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- Total rulelist groups
Shows the total number of rule lists.
- ListName
Shows the rule list name. The rule list names are listed in alphabetical order.
- Type
Shows the type of the rule list.

ipv4	IPv4 address/address mask
ipv6	IPv6 address/address mask
l4port	TCP/UDP port number
- Rulelist Index
Shows the rule list index. The rule list index is assigned automatically when it is set.
- Number of Rules
This shows the total number of rule list entries, the number of entries being used, and the number of entries that can be registered in the rule list.
- Rules
Shows the rule list entries.

[Arguments]

list_name
Specify the rule list name. This displays information related to the specified rule list.

next
This displays information of the rule list next to the specified rule list.

all
Shows information of all rule lists.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.
Usage : show rulelist name <list_name> [next]
Usage : show rulelist all

- There is a missing argument.

Specified rulelist name is invalid.
(Number only cannot be specified. "all" cannot be specified.)
(Valid rulename length is from 1 to 32.)

- The rule list name is invalid.

Specified rulelist name is not used.

- The specified rule list does not exist.

2.2.4 Scenario-related commands

add scenario

[Format]

```

add scenario <scenario_name> action discard [scenario <scenario_id>]

add scenario <scenario_name> action aggregate
    [cos {through | <user_priority>}] [inner-cos {through | <user_priority>}]
    [dscp {through | <dscp>}]
    [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
    [class <class>] [bufsize <bufsize>] [scenario <scenario_id>]

add scenario <scenario_name> action individual
    [cos {through | <user_priority>}] [inner-cos {through | <user_priority>}]
    [dscp {through | <dscp>}]
    [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
    [class <class>] [bufsize <bufsize>] [scenario <scenario_id>]
    [maxqenum <qenum>] [quedivision <field>]
    [failaction {discard | forwardbesteffort | forwardattribute}]
    [fail_min_bw <min_bandwidth>]
    [fail_peak_bw <peak_bandwidth>]
    [fail_class <class>]

add scenario <scenario_name> action wan-accel
    peer <IP_address>
    [second-peer <IP_address>]
    [dport <port>]
    [vid <VID>] [inner-vid <VID>]
    [cos {through | <user_priority>}] [inner-cos {through | <user_priority>}]
    [dscp {through | <dscp>}]
    [compression {enable | disable}]
    [tcp-mem {auto | <size>}] [cc-mode {normal | semi-fast | fast}]
    [bypass-thresh <rtt>] [bypass-keepalive {enable | disable}]
    [fec {enable | disable}] [block-size <size>]
    [data-block-size <size>] [fec-session <session>]
    [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>] [bufsize <bufsize>]
    [scenario <scenario_id>]

```

[Description]

Registers traffic attributes (scenario).

Traffic attributes provide the parameters, such as bandwidth and buffer size, used to control traffic. In this device, traffic attributes are called a scenario.

The following scenarios are available as actions: discard (discard mode), aggregate (aggregate queue mode), individual (individual queue mode), and wan-accel (acceleration mode).

The discard scenario is a scenario for discarding traffic.

The aggregate scenario uses one queue to control traffic of all flows that match the filter.

The individual scenario uses individual queues to control traffic of flows that match the filter.

The wan-accel scenario can be registered only when the TCP acceleration function license is enabled, and this scenario compresses and accelerates the flow that matches the filter, at high speed.

To perform hierarchical shaping, set a scenario for each hierarchy.

The maximum number of scenarios that can be registered is 4096.

A total of 4096 queues can be generated for all individual scenarios.

Use an integer to set a numeric value as a traffic attribute. Decimals are not allowed.

Traffic that does not match any filter is transferred on a best effort basis.

This command can be executed only in Administrator mode.

Note:

When a scenario remaining in the buffer during communication is deleted by the “delete scenario” command, output from the buffer continues after command execution is completed. A scenario in this state cannot be re-registered by the “add scenario” command. Wait until the output from the buffer is completed, and run the “add scenario” command again.

Note:

Only the following ASCII characters can be set in the scenario name.

```
1234567890
abcdefghijklmnopqrstuvwxy
ABCDEFGHIJKLMNopQRSTUVWXYZ
!#$%&'()=~^|@`[]{}:*;+_.<>
```

[Display]

```
PureFlow(A) > add scenario "/port1/East/" action aggregate min_bw 1G
PureFlow(A) > add scenario "/port1/East/Channell" action aggregate
                min_bw 3M class 1 bufsize 256k
PureFlow(A) > add scenario "/port1/West/" action discard
PureFlow(A) > add scenario "/port1/North" action wan-accel peer 192.168.100.10
                vid 10 compression enable tcp-mem 50M
```

[Arguments]

<scenario_name>

Specify the absolute path of the scenario name.

For the first level, specify “/port1”, “/port2” for the Network port number and then specify a scenario name to be added to the second level or lower.

A maximum of four hierarchies can be added.

The scenario in the first hierarchy cannot also be added nor deleted.

For the scenario in the first hierarchy, the parameter can be updated by the “update scenario” command.

If a scenario is not registered to the upper level, a scenario name cannot be registered to the lower levels.

Valid values are from 1 to 128 characters for all levels (/port1, /port2, /port3, /port4).

If spaces are required, enclose the character string with quotation marks (“ ”), for example, “v4 Servers”.

It cannot be specified for any name that duplicates in the equipment or consists of only a pair of quotation marks (“ ”).

action discard

Discards traffic that matches the filter in the discard mode.

action aggregate

Aggregates all flows that match the filter and assigns them to one VC queue in the aggregate queue mode.

action individual

Assigns flows that match the filter to individual queues in the individual queue mode.

action wan-accel

Execute the traffic acceleration of the flow that matches the filter in the acceleration mode.

This can be registered only when the TCP acceleration function license is enabled.

class <class>

Specify the priority of the queue. The highest priority is given to class 1, the second highest priority is given to class 2, and so on. Valid values are from 1 to 8.

Note:

If queues with different classes are assigned to the same hierarchy, minimum bandwidth is not guaranteed for flows in queues with low priority classes.

`min_bw <min_bandwidth>`

Specifies the minimum bandwidth.

If “min_bw” is omitted, the minimum bandwidth is not guaranteed.

Valid values are from 1k [bits/s] to 1G [bits/s] and 0.

If 0 is specified, the minimum bandwidth is not guaranteed.

The minimum unit is 1k [bits/s].

Specify the unit (k, M, G).

The letter k represents 1000, M represents 1000000, and G represents 1000000000.

Note:

The sum of minimum bandwidths assigned to lower levels must not exceed the guaranteed bandwidth of the upper level. If it exceeds the guaranteed bandwidth of the upper level, the minimum bandwidth of the lower level cannot be guaranteed.

`peak_bw <peak_bandwidth>`

Specifies the peak bandwidth.

If “peak_bw” is omitted, no maximum bandwidth limit is set, and all redundant bandwidth in the same level can be used.

Valid values are from 1k [bits/s] to 1G [bits/s].

The minimum unit is 1k [bits/s].

Specify the unit (k, M, G).

The letter k represents 1000, M represents 1000000, and G represents 1000000000.

`bufsize <bufsize>`

Specify the allowable input burst length for the traffic.

The setting range is from 2K to 100M [byte].

The minimum unit is 1k [bytes].

Specify the unit (k, M, G).

The letter k represents 1000, M represents 1000000, and G represents 1000000000.

Packet buffer used by the system is 500M [byte].

`scenario <scenario_id>`

Specify the scenario index. Valid values are from 1 to 4096.

`maxquenum <quenum>`

Use a parameter in the individual queue mode to specify the maximum number of queues generated for the scenario.

If the scenario expansion license is disable, the valid values are from 1 to 2048.

If the scenario expansion license is enable, the valid values are from 1 to 4096.

`quedivision <field>`

Use a parameter in the individual queue mode to specify the division target of the queues to be generated. Specify a packet field. The following strings can be specified by delimiting them with commas (,).

The specified field is identified, and an individual queue is assigned to a flow with a different field. Only the field which specified with flow identification mode is valid for the division target of the queue. The field which is not specified with flow identification mode is invalid for the division target of the queue. Note that the ethertype field is valid for this setting.

If any one of 5tuple (sip, dip, proto, sport, dport) is specified, an unconditional failaction is applied to flows other than IP.

<code>default</code>	Divides the queues by the combination out of "vid, inner-vid, sip, dip, proto, sport, or dport".
<code>vid</code>	Divides queues based on VLAN ID. Divides the queues based on the outer VLAN ID for the duplex VLAN tag.
<code>cos</code>	Divides queues based on CoS. Divides the queues based on the outer CoS for the duplex VLAN tag.
<code>inner-vid</code>	Divides the queues based on the inner VLAN ID for the duplex VLAN tag.
<code>inner-cos</code>	Divides the queues based on the inner CoS for the duplex VLAN tag.
<code>ethertype</code>	Divides queues based on Ethernet Type/Length.
<code>sip</code>	Divides queues based on SIP.
<code>dip</code>	Divides queues based on DIP.
<code>tos</code>	Divides queues based on ToS.
<code>proto</code>	Divides queues based on the protocol number.
<code>sport</code>	Divides queues based on Sport.
<code>dport</code>	Divides queues based on Dport.

`failaction {discard | forwardbesteffort | forwardattribute}`

Specifies the action when maximum queue count reached (failaction) applied to a flow other than IP in cases when the number of queues generated exceeds the maxqnum for the scenario or exceeds 4096 for all individual scenarios, or 5tuple is included in quedivision.

Specify "discard" to perform discard, specify "forwardbesteffort" to perform best effort transfer, or specify "forwardattribute" to transfer with a traffic attribute specified.

When "forwardattribute" is specified, the minimum bandwidth, the peak bandwidth, and the class must be specified.

`fail_min_bw, fail_peak_bw, fail_class`

Specify the minimum bandwidth, the peak bandwidth, and the class when "forwardattribute" is specified as failaction in the individual queue mode. If all of these are omitted, the operation is the same as best effort transfer "forwardbesteffort" with minimum/peak bandwidth not specified and class 8 specified.

`peer <IP_address>`

Specifies the Primary IP addresses of the opposing devices that form the acceleration tunnel.

Note:

Do not set the same IP address as the channel interface of one's own device set by the "set ip channel" command.

`second-peer <IP_address>`

In a redundant configuration, the normal route is called the "Primary", and the hot standby route is called the "Secondary".

This parameter specifies the Secondary IP addresses of the opposing devices that form the acceleration tunnel.

"second-peer" can be specified for up to 100 acceleration mode scenarios.

Note:

Do not set the same IP address as the channel interface of one's own device set by the "set ip channel" command.

- `dport <dport>`
Specifies the TCP connection port numbers of the opposing devices that form the acceleration tunnel.
If omitted, 10000 is specified.
For the `dport` format, use numbers.
Valid values are from 10001 to 20000.
- `vid <VID>`
Specifies the VLAN IDs of the channels that form the acceleration tunnel.
When `<VID>` is specified, communication with a frame with the VLAN Tag is performed.
If omitted, communication with a frame without the VLAN Tag is performed.
Valid values are from 1 to 4094.
- `inner-vid <VID>`
Specifies the Inner-VLAN IDs of the channels that form the acceleration tunnel.
When `<VID>` is specified, communication with a frame with the duplex VLAN Tag is performed.
If omitted, communication with a frame without the duplex VLAN Tag is performed.
If `vid` is omitted, this parameter cannot be specified.
Valid values are from 1 to 4094.
- `cos {through | <user_priority>}`
Specifies the CoS overwrite value of a frame with the VLAN Tag.
When specified, the CoS value of the frame to be transferred is overwritten with the setting.
If “through” is specified, the CoS value will not be overwritten.
If this command is omitted, “through” will be used.
If `vid` is omitted in the acceleration mode, this parameter cannot be specified.
Valid values are from 0 to 7.
- `inner-cos {through | <user_priority>}`
Specifies the CoS overwrite value of a frame with the double VLAN Tag.
When specified, the CoS value of the frame to be transferred is overwritten with the setting.
If “through” is specified, the Inner-CoS value will not be overwritten.
If this command is omitted, “through” will be used.
If `inner-vid` is omitted in the acceleration mode, this parameter cannot be specified.
Valid values are from 0 to 7.
- `dscp {through | <dscp>}`
Specifies the DSCP overwrite value.
When it is specified, the DSCP field of the frame to be transferred is overwritten with the specified value.
If “through” is specified, the DSCP value will not be overwritten.
If this command is omitted, “through” will be used.
Valid values are from 0 to 63.
- `compression {enable | disable}`
Specifies enable to enable the compression function, or “disable” to disable it.
- `tcp-mem {auto | <size>}`
Specifies the buffer size of TCP.
The setting range is from 64K to 200M [byte].
The minimum unit is 1k [bits/s].
The setting unit (k, M) can be specified.
The letter k represents 1000 and M represents 1000000.
- `cc-mode {normal | semi-fast | fast}`
Specifies the congestion control of the traffic acceleration.
Specifies “normal” for the congestion mode (normal mode) equipped with the standard, or “semi-fast”/“fast” for the congestion mode (medium speed/high speed mode) equipped with the unique technology.

<Congestion control mode equipped with the unique >

In the case of discarding the packet on the WAN line, you can select the following two modes.

Medium speed mode (semi-fast)

Specify this mode when using the network where small amounts of packets are discarded.

High speed mode (fast)

Specify this mode when using the network where large amounts of packets are discarded.

bypass-thresh <rtt>

Specifies the RTT (Round Trip Time) threshold value of the traffic acceleration auto bypass in millisecond units.

If the RTT between this scenario and the opposing device is less than this value when the auto bypass function is enabled, this scenario shifts to the bypass transfer state for which the traffic acceleration is not performed. The bypass transfer state is canceled after the bypass recovery time, and the RTT measurement and traffic acceleration are retried in a new session and after.

Set the bypass recovery time by the "set wan-accel bypass recoverytime" command.

Set this value to 6 [milliseconds] normally to use the auto bypass function.

When RTT exceeds 6 milliseconds, the traffic acceleration of this device works effectively.

When RTT is 6 milliseconds or lower, the transfer bandwidth of the bypass transfer becomes higher.

When RTT is set to 0 [millisecond], the traffic acceleration is always applied although the RTT measurement is performed.

The setting range is from 0 to 10000 [milliseconds].

bypass-keepalive {enable |disable}

Enables/disables the Keep Alive monitoring of the auto bypass function of the traffic acceleration.

Specifies "enable" to enable the Keep Alive monitoring, or "disable" to disable it.

When the Keep Alive monitoring is enabled, ICMP monitors the communication with the opposing device to this scenario. In the case of a communication error, this scenario shifts to the bypass transfer state. The communication is continuously performed even in the bypass transfer state, and this state is maintained while the communication error remains.

If this scenario is in the force bypass state, the communication is not monitored.

"Keep Alive monitoring" can be specified for up to 100 acceleration mode scenarios.

fec {enable |disable}

Enables/disables the TCP-FEC function.

In the case of enabling and disabling the TCP-FEC function, specify "enable" and "disable", respectively.

block-size <size>

Specifies the FEC block size of TCP-FEC function.

Block size can not be specified in a value greater than the data block size.

Also, please specify a value that is divisible to data-block-size.

The setting range is from 2k to 50k [byte].

The minimum unit is 1k [byte].

k represents 1000.

data-block-size <size>

Specifies the data block size of TCP-FEC function.

Data block size can not be specified in a value smaller than the block size.

Also, please specify a value that is multiple to block-size.

The setting range is from 2k to 200k [byte].

The minimum unit is 1k [byte].

k represents 1000.

fec-session <session>

Specifies the number of TCP sessions (FEC sessions) that use the TCP-FEC function.

This parameter restricts the number of the FEC sessions used in each scenario.

Up to 400 FEC sessions are used for the entire device.

This setting number is not guaranteed because of affecting other scenarios.

The setting range is from 0 to 400.

[Default Value]

class

The default value is “2”.
“8” is applied in the case of fail_class.

min_bandwidth

The default value is no minimum bandwidth guarantee.

peak_bandwidth

The default value is no maximum bandwidth limit.

bufsize

“1M” byte is set for the aggregate queue mode and individual queue mode.
“15M” byte is set for the acceleration mode.

maxquenum

If the scenario expansion license is disable, the default value is 2048.
If the scenario expansion license is enable, the default value is 4096.

quedivision

The default value is “default”.

failaction

The default value is “forwardbesteffort”.

dport

The default value is “10000”.

vid

The default value is “Without VLAN Tag”.

inner-vid

The default value is “Without Inner-VLAN Tag”.

cos

The default value is “through”.

inner-cos

The default value is “through”.

dscp

The default value is “through”.

compression

The default value is “enable”.

tcp-mem

The default value is “auto”.

cc-mode

The default value is “normal”.

bypass-thresh

The default value is “0” [millisecond].

bypass-keepalive

The default value is “disable”.

fec

The default value is “disable”.

block-size

The default value is “2k” [byte].

data-block-size

The default value is “20k” [byte].

fec-session

The default value is “40”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : add scenario <scenario_name> action wan-accel peer <IP_address>
      [second-peer < IP_address >]
      [dport <port>]
      [vid <VID>] [inner-vid <VID>]
      [cos {through | <user_priority>}] [inner-cos {through | <user_priority>}]
      [dscp {through | <dscp>}]
      [compression {enable | disable}]
      [tcp-mem {auto | <size>}] [cc-mode {normal | fast}]
      [bypass-thresh <rtt>] [bypass-keepalive {enable | disable}]
      [fec {enable | disable}] [block-size <size>]
      [data-block-size <size>] [fec-session <session>]
      [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>] [bufsize <bufsize>]
      [scenario <scenario_id>]
Usage : add scenario <scenario_name> action discard [scenario <scenario_id>]
Usage : add scenario <scenario_name> action aggregate
      [cos {through | <user_priority>}] [inner-cos {through | <user_priority>}]
      [dscp {through | <dscp>}]
      [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
      [class <class>] [bufsize <bufsize>] [scenario <scenario_id>]
Usage : add scenario <scenario_name> action individual
      [cos {through | <user_priority>}] [inner-cos {through | <user_priority>}]
      [dscp {through | <dscp>}]
      [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
      [class <class>] [bufsize <bufsize>] [scenario <scenario_id>]
      [maxquenum <quenum>] [quedivision <field>]
      [failaction {discard | forwardbesteffort | forwardattribute}]
      [fail_min_bw <min_bandwidth>] [fail_peak_bw <peak_bandwidth>]
      [fail_class <class>]
```

- There is a missing argument.

Specified scenario class is invalid. It must be either of 1,2,3,4,5,6,7,8.

- The specified class is invalid.

Specified scenario fail action class is invalid. It must be either of 1,2,3,4,5,6,7,8.

- The Fail Action class specification is invalid.

Specified minimum bandwidth is invalid. (Valid from 0, 1k to 1G)

- The specified minimum bandwidth is invalid.

Specified peak bandwidth is invalid. (Valid from 1k to 1G)

- The specified peak bandwidth is invalid.

Specified fail action minimum bandwidth is invalid. (Valid from 0, 1k to 1G)

- The Fail Action Minimum Bandwidth specification is invalid.

Specified fail action peak bandwidth is invalid. (Valid from 1k to 1G)

- The Fail Action Peak Bandwidth specification is invalid.

Peak bandwidth should be greater than minimum bandwidth.

- peak_bw must be equal to or greater than min_bw.

Specified buff size is invalid. (Valid from 2k to 100M)

- The specified bufsize is invalid.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is already used.

- The specified scenario name has already been used in another scenario.

Specified scenario of upper level hierarchy is not found.

- The upper level scenario does not exist.

Maximum number of scenario was exceeded.

- The number of scenarios exceeded the registration limit.

Specified scenario ID is invalid. (Valid from 1 to 4096)

- The scenario index is out of range.

Specified scenario ID is already used.

- The specified scenario index has already been used in another scenario.

Specified max Q num is invalid. (Valid from 1 to 4096)

- The specified maxqnum is out of range.

Extended number of scenario is not licensed.

- The scenarios exceeding the limit count of the scenario expansion license cannot be registered.
- The maxqnum exceeding the limit count of the scenario expansion license cannot be set.

Specified Q division field is invalid.

Valid fields:

default, vid, cos, inner-vid, inner-cos, ethertype, sip, dip, tos, proto, sport, dport

(multiple fields can be specified with separated comma without space)

- The specified quedivision field is invalid.

failaction is not specified.

- fail min bw, fail peak bw, and fail class cannot be specified without specifying failaction.

Specified failaction is invalid.

- fail min bw, fail peak bw, and fail class can be specified only when forwardattribute is specified as failaction.

Invalid IP address

- The specified IP address format or the value is invalid.

Peer IP version and second-peer IP version are different.

- The IP version of peer must match that of the second-peer.

Peer and second-peer are same IP_address.

- The IP address of peer must be different from that of the second-peer.

Specified dport is invalid. (Valid from 10001 to 20000)

- The dport specification is invalid.

Specified Dport is already used.

- The specified deport has already been used in another scenario.

Specified vid is invalid. (Valid from 1 to 4094)

- The VLAN ID specification is invalid.

Specified inner-vid is invalid. (Valid from 1 to 4094)

- The specified Inner-VLAN ID is invalid.

VID must be specified when inner-VID is specified.

- The Inner-VLAN ID can be specified only when the VLAN ID is specified.

Specified cos is invalid. (Valid from 0 to 7)

- The specified CoS value is invalid.

Specified inner-cos is invalid. (Valid from 0 to 7)

- The specified Inner-CoS value is invalid.

VID must be specified when CoS is specified.

- The CoS value can be specified only when the VLAN ID is specified.

Inner-VID must be specified when inner-cos is specified.

- The Inner-CoS value can be specified only when the Inner VLAN ID is specified.

Specified dscp is invalid. (Valid from 0 to 63)

- The specified DSCP value is invalid.

Specified tcp-mem is invalid. (Valid from 64k to 200M)

- The TCP buffer size specification is invalid.

Specified bypass threshold RTT is invalid. (Valid from 0 to 10000)

- The RTT threshold value specification of the auto bypass is invalid.

Specified peak bandwidth is not licensed.

- Not licensed specified bandwidth.

Data block size should be divided by fec block size.

- Data block size has to be specified the divisible value by FEC block size.

Data block size should be greater than fec block size.

- Data block size has to be specified the value greater than FEC block size.

Specified fec block size is invalid. (Valid from 2K to 50K)

- The FEC block size specification is invalid.

Specified data block size is invalid. (Valid from 2K to 200K)

- The data block size specification is invalid.

Specified fec session is invalid. (Valid from 0 to 400)

- The FEC session specification is invalid.

FEC function is not licensed.

- Not licensed FEC function.

Maximum number of secondary peer was exceeded.

- The number of second-peer is specified scenarios exceeded the registration limit.

Maximum number of keep alive scenario was exceeded.

- The number of bypass-keep is the specified scenarios that exceed the registration limit.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

update scenario

[Format]

```
update scenario <scenario_name> action aggregate
  [cos {through | <user_priority>}] [inner-cos {through | <user_priority>}]
  [dscp {through | <dscp>}]
  [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
  [class <class>] [bufsize <bufsize>]

update scenario <scenario_name> action individual
  [cos {through | <user_priority>}] [inner-cos {through | <user_priority>}]
  [dscp {through | <dscp>}]
  [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
  [class <class>] [bufsize <bufsize>]
  [maxquenum <quenum>] [quedivision <field>]
  [failaction {discard | forwardbesteffort | forwardattribute}]
  [fail_min_bw <min_bandwidth>] [fail_peak_bw <peak_bandwidth>]
  [fail_class <class>]

update scenario <scenario_name> action wan-accel
  [compression {enable | disable}]
  [tcp-mem {auto | <size>}] [cc-mode {normal | semi-fast | fast}]
  [bypass-thresh <rtt>] [bypass-keepalive {enable | disable}]
  [fec {enable | disable}] [block-size <size>]
  [data-block-size <size>] [fec-session <session>]
  [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>] [bufsize <bufsize>]
```

[Description]

This command overwrites traffic attributes (scenario).

This command allows you to change traffic attributes while traffic is being controlled.

This command changes the traffic attributes of the traffic transmitted from the Network port.

Specify the scenario name that has already been registered for <scenario_name> to update the parameter. Note that the first hierarchy scenario class cannot be changed.

You can omit each of the parameters but cannot omit all the parameters. Specify at least one parameter that you want to change.

Note that the scenario name and action cannot be changed.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> update scenario "/port1/Tokyo" action aggregate
  min_bw 1G
PureFlow(A)> update scenario "/port1/tokyo/Shibuya" action aggregate
  min_bw 100M peak_bw 500M bufsize 10M
PureFlow(A)> update scenario "/port1/tokyo/Shinjuku" action wan-accel
  tcp-mem 100M
```

[Arguments]

`scenario_name`

Specify the absolute path of the scenario name.

`action aggregate`

Changes a scenario in the aggregate queue mode.

`action individual`

Changes a scenario in the individual queue mode.

`action wan-accel`

Changes the acceleration mode scenario.

`class <class>`

Specify the priority of the queue. The highest priority is given to class 1, the second highest priority is given to class 2, and so on. Valid values are from 1 to 8.

Note:

If queues with different classes are assigned to the same hierarchy, minimum bandwidth is not guaranteed for flows in queues with low priority classes.

`min_bw <min_bandwidth>`

Changes the minimum bandwidth.

Setting range is from 1k [bits/s] to 1G [bits/s] and 0.

If 0 is specified, the minimum bandwidth is not guaranteed.

The minimum unit is 1k [bits/s].

Specify the unit (k, M, G).

The letter k represents 1000, M represents 1000000, and G represents 1000000000.

Note:

The sum of minimum bandwidths assigned to lower levels must not exceed the guaranteed bandwidth of the upper level. If it exceeds the guaranteed bandwidth of the upper level, the minimum bandwidth of the lower level cannot be guaranteed.

`peak_bw <peak_bandwidth>`

Changes the peak bandwidth.

Valid values are from 1k [bits/s] to 1G [bits/s].

The minimum unit is 1k [bits/s].

Specify the unit (k, M, G).

The letter k represents 1000, M represents 1000000, and G represents 1000000000.

`bufsize <bufsize>`

Changes an allowable input burst length for the traffic.

Valid values are from 2k [bytes] to 100M [bytes].

The minimum unit is 1k [bytes].

Specify the unit (k, M, G).

The letter k represents 1000, M represents 1000000, and G represents 1000000000.

`maxquenum <quenum>`

Use a parameter in the individual queue mode to change the maximum number of queues generated for the scenario.

If the scenario expansion license is disable, the valid values are from 1 to 2048.

If the scenario expansion license is enable, the valid values are from 1 to 4096.

quedivision <field>

Use a parameter in the individual queue mode to change the division target of the queues to be generated. Specifies a packet field. The following strings can be specified by delimiting them with commas (,).

The specified field is identified, and an individual queue is assigned to a flow with a different field. Only the field which specified with flow identification mode is valid for the division target of the queue. The field which is not specified with flow identification mode is invalid for the division target of the queue. Note that the ethertype field is valid for this setting.

If any one of 5tuple (sip, dip, proto, sport, dport) is specified, unconditional failaction is applied to flows other than IP (such as ARP).

default	Divides the queues by the combination out of "vid, inner-vid, sip, dip, proto, sport, or dport".
vid	Divides queues based on VLAN ID.
cos	Divides queues based on CoS.
inner-vid	Divides the queues based on the inner VLAN ID for the duplex VLAN tag.
inner-cos	Divides the queues based on the inner CoS for the duplex VLAN tag.
ethertype	Divides queues based on Ethernet Type/Length.
sip	Divides queues based on SIP.
dip	Divides queues based on DIP.
tos	Divides queues based on ToS.
proto	Divides queues based on the protocol number.
sport	Divides queues based on Sport.
dport	Divides queues based on Dport.

failaction {discard | forwardbesteffort | forwardattribute}

Changes the action when maximum queue count reached (failaction) applied to a flow other than IP in cases when the number of queues generated exceeds the maxquenum for the scenario or exceeds 4096 for all individual scenarios, or 5tuple is included in quedivision.

Specify "discard" to perform discard, specify "forwardbesteffort" to perform best effort transfer, or specify "forwardattribute" to transfer with a traffic attribute specified.

When "forwardattribute" is specified, the minimum bandwidth, the peak bandwidth, and the class must be specified.

fail_min_bw, fail_peak_bw, fail_class

Changes the minimum bandwidth, the peak bandwidth, and the class when "forwardattribute" is specified as failaction in the individual queue mode. If all of these are omitted, the operation is the same as the best effort transfer "forwardbesteffort" with minimum/peak bandwidth not specified and class 8 specified.

cos {through | <user_priority>}

Specifies the CoS overwrite value of a frame with the VLAN Tag.

When specified, the CoS value of the frame to be transferred is overwritten with the setting.

If "through" is specified, the CoS value will not be overwritten.

Valid values are from 0 to 7.

inner-cos {through | <user_priority>}

Specifies the CoS overwrite value of a frame with the double VLAN Tag.

When specified, the Inner-CoS value of the frame to be transferred is overwritten with the setting.

If "through" is specified, the Inner-CoS value will not be overwritten.

Valid values are from 0 to 7.

`dscp {through | <dscp>}`

Specifies the DSCP overwrite value.

When it is specified, the DSCP field of the frame to be transferred is overwritten with the specified value.

If “through” is specified, the DSCP value will not be overwritten.

Valid values are from 0 to 63.

`compression {enable | disable}`

Specifies enable to enable the compression function, or “disable” to disable it.

`tcp-mem {auto | <size>}`

Changes the buffer size of tcp.

The setting range is from 64k [byte] through 200M [byte].

The effective setting unit is 1 [byte].

The setting unit can be specified by selecting from k and M.

k denotes 1000 while M denote 1000000.

`cc-mode {normal | semi-fast | fast}`

Changes the congestion control of the traffic acceleration.

Specifies "normal" for the congestion mode (normal mode) equipped with the standard technology, or "semi-fast"/"fast" for the congestion mode (medium speed/high speed mode) equipped with the unique technology.

`bypass-thresh <rtt>`

Changes the RTT (Round Trip Time) threshold value of the traffic acceleration auto bypass.

The setting range is from 0 to 10000 [milliseconds].

`bypass-keepalive {enable | disable}`

Specifies "enable" to enable the Keep Alive monitoring, or “disable” to disable it.

`fec {enable | disable}`

In the case of enabling and disabling the TCP-FEC function, specify “enable” and “disable”, respectively.

`block-size <size>`

Changes the FEC block size of the TCP-FEC function.

Block size can not be specified in a value greater than the data block size.

Also, please specify a value that is divisible to data-block-size.

The setting range is from 2k to 50k [byte].

The minimum unit is 1k [byte].

k denotes 1000

`data-block-size <size>`

Changes the data block size of TCP-FEC function.

Data block size can not be specified in a value smaller than the block size.

Also, please specify a value that is multiple to block-size.

The setting range is from 2k to 200k [byte].

The minimum unit is 1k [byte].

`fec-session <session>`

Changes the number of TCP sessions (FEC sessions) that use the TCP-FEC function.

The maximum number of FEC session is 400 in all scenarios.

This setting number is not guaranteed because of affecting other scenarios.

The setting range is from 0 to 400.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : update scenario <scenario_name> action wan-accel
[compression {enable | disable}] [tcp-mem {auto|<size>}]
[bypass-thresh <rtt>] [bypass-keepalive {enable | disable}]
[fec {enable | disable}] [block-size <size>]
[data-block-size <size>] [fec-session <session>]
[min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>] [bufsize <bufsize>]

Usage : update scenario <scenario_name> action individual
[cos {through | <user_priority>}] [inner-cos {through | <user_priority>}]
[dscp {through | <dscp>}]
[min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
[class <class>] [bufsize <bufsize>]
[maxquenum <quenum>] [quedivision <field>]
[failaction {discard | forwardbesteffort | forwardattribute}]
[fail_min_bw <min_bandwidth>] [fail_peak_bw <peak_bandwidth>]
[fail_class <class>]

Usage : update scenario <scenario_name> action aggregate
[cos {through | <user_priority>}] [inner-cos {through | <user_priority>}]
[dscp {through | <dscp>}]
[min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
[class <class>] [bufsize <bufsize>]

- There is a missing argument.

Specified Scenario Name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Specified scenario class is invalid. It must be either of 1, 2, 3, 4, 5, 6, 7, 8.

- The specified class is invalid.

Specified scenario fail action class is invalid. It must be either of 1, 2, 3, 4, 5, 6, 7, 8.

- The Fail Action class specification is invalid.

Specified minimum bandwidth is invalid. (Valid from 0, 1k to 1G)

- The specified Minimum Bandwidth is invalid.

Specified fail action minimum bandwidth is invalid. (Valid from 0, 1k to 1G)

- The Fail Action Minimum Bandwidth specification is invalid.

Specified peak bandwidth is invalid. (Valid from 1k to 1G)

- The specified Peak Bandwidth is invalid.

Specified fail action peak bandwidth is invalid. (Valid from 1k to 1G)

- The Fail Action Peak Bandwidth specification is invalid.

Peak bandwidth should be greater than minimum bandwidth.

- peak_bandwidth must be equal to or greater than min_bandwidth.

Specified buff size is invalid. (Valid from 2k to 100M)

- The buffer size is out of range.

It is necessary to set one or more parameters.

- At least one parameter must be set.

Specified scenario mode is invalid.

- The specified scenario mode is invalid.

Extended number of scenario is not licensed.

- The maxquenum exceeding the limit count of the scenario expansion license cannot be set.

Specified max Q num is invalid. (Valid from 1 to 4096)

- The specified maxquenum is out of range.

Specified Q division field is invalid.

Valid fields:

default, vid, cos, inner-vid, inner-cos, ethertype, sip, dip, tos, proto, sport, dport

(multiple fields can be specified with separated comma without space)

- The specified quedivision field is invalid.

Fail action forward is incorrect.

- fail_min_bw, fail_peak_bw, and fail_class can be specified only when forwardattribute is specified as failaction.

Invalid IP address

- The specified IP address format or the value is invalid.

Specified cos is invalid. (Valid from 0 to 7)

- The specified CoS value is invalid.

Specified inner-cos is invalid. (Valid from 0 to 7)

- The specified Inner-CoS value is invalid.

Specified dscp is invalid. (Valid from 0 to 63)

- The specified DSCP value is invalid.

Specified tcp-mem is invalid. (Valid from 64k to 200M)

- The TCP buffer size specification is invalid.

Specified bypass threshold RTT is invalid. (Valid from 0 to 10000)

- The RTT threshold value specification of the auto bypass is invalid.

Specified peak bandwidth is not licensed.

- Not licensed specified bandwidth.

Data block size should be divided by fec block size.

- Data block size has to be specified the divisible value by FEC block size.

Data block size should be greater than fec block size.

- Data block size has to be specified the value greater than FEC block size.

Specified fec block size is invalid. (Valid from 2K to 50K)

- The FEC block size specification is invalid.

Specified data block size is invalid. (Valid from 2K to 200K)

- The data block size specification is invalid.

Specified fec session is invalid. (Valid from 0 to 400)

- The FEC session specification is invalid.

FEC function is not licensed.

- Not licensed FEC function.

Maximum number of keep alive scenario was exceeded.

- The number of bypass-keep is the specified scenarios that exceed the registration limit.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

delete scenario

[Format]

```
delete scenario all
delete scenario <scenario_name> [recursive]
```

[Description]

This command deletes a traffic attribute (scenario).
It also deletes filters registered to the scenario.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete scenario "/port1/tokyo/shibuya/"
PureFlow(A)> delete scenario "/port1/tokyo/" recursive
PureFlow(A)> delete scenario all
```

[Arguments]

scenario_name

Specify the absolute path of the scenario name.
The scenario in the first hierarchy cannot be added nor deleted.

recursive

Deletes the specified scenario and its sub scenarios.
If "recursive" is not specified, scenarios that have lower level scenarios cannot be deleted.

all

Deletes all registered scenarios.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : delete scenario {<scenario_name> | all} [recursive]
```

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Down level hierarchy scenario exists.

- A lower level scenario exists.

set scenario tree mode

[Format]

```
set scenario tree mode {inbound | outbound}
```

[Description]

Sets the tree mode of the traffic attributes (scenario)(input/output side).

The scenario tree mode specifies whether the scenario and filter classifications are applied to the input traffic to the Network port and the output traffic from the Network port, respectively.

When "inbound" is specified, the scenario and filter applications are applied to the inbound traffic to the Network port. For example, "/port1" and the scenario and filter in the lower level are applied to the inbound traffic to the Network port 1/1.

When "outbound" is specified, the scenario and filter applications are applied to the inbound traffic from the Network port. For example, "/port1" and the scenario and filter in the lower level are applied to the outbound traffic from the port 1/1.

This command is applied to the scenarios and filters of the entire system.

Change of this setting is applied at the next startup time. This command saves the currently-running parameter (running parameter) in the internal flash memory when running this command the same as the "save config" command. Restart the system after command execution is completed. This command can be executed with the values set before changes until restarting the system.

This command can be executed only in the Administrator mode.

Be careful about the following restrictions for setting by this command.

- To use the normal channel by "outbound", use default (vid, inner-vid, sip, dip, proto, sport, dport) for the flow identification mode. The flow identification mode can be set by the "set filter mode" command.

[Display]

```
PureFlow(A)> set scenario tree mode outbound
This configuration change will be take effect on next boot.
Please save the system configuration and reboot the system.
```

```
Do you wish to save the system configuration into the flash memory (y/n)? y
```

```
Done
```

```
Rebooting the system, ok (y/n)? y
```

[Arguments]

```
{inbound | outbound}
```

Specify "inbound" and "outbound" when the scenario and the filter classification are applied to the inbound traffic and the outbound traffic, respectively.

[Default Value]

The default value is "inbound".

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
Command making ambiguity
```

```
Usage : set scenario tree mode {inbound | outbound}
```

- There is a missing argument.

```
An argument was missing.
```

```
Usage : set scenario tree mode {inbound | outbound}
```

- There is a missing argument.

show scenario

[Format]

```
show scenario name <scenario_name> [summary] [next]
show scenario all [summary]
```

[Description]

Displays information related to traffic attributes (scenario).
 If “summary” is specified, no filter information is displayed.
 If “next” is specified, information of the scenario next to the specified scenario is displayed.
 The order to display is based on the scenario tree.
 This command can be executed in the Normal and Administrator modes.

[Display]

(In the case of the acceleration mode)

```
PureFlow(A)> show scenario name "/port1/Tokyo"
Total scenario entries: 3

Scenario 1: "/port1/Tokyo"
  Rate Control Unit:
    Create Mode           :WAN-accel
    CoS                   :3
    Inner-CoS             :-----
    DSCP                   :-----
    Min Bandwidth         :-----
    Peak Bandwidth        :-----
    Buf Size               :15M[Bytes]

  WAN Acceleration Unit:
    Peer                  :192.168.10.100
    Second Peer           :192.168.10.110
    Dport                  :20001
    Vid                    :10
    Inner-vid             :-----
    Compression           :enable
    Tcp-mem               :10M[Bytes]
    CongestionControl-mode : Fast
    Bypass
      Threshold RTT       :6 [ms]
      Keep Alive          :Disable
    Fec                    :Disable
    Block-size            :10k
    Data-block-size       :20k
    Fec-session           :1000
    SMB                   :Enable
      TCP Port            :139,445
      SMB Session         :1000
      Read Attribute      :Enable
      Read Operation      :Enable
      Read Cache Size     :12500k
      Write Attribute     :Enable
      Write 1st Attribute :Disable
      Write 2nd Attribute :Disable
      Write Operation     :Enable
    Operation Management:
      SNMP Traps          :Enable

  Attached Filters:
    "shibuya1"
    "shinjyukul"
```

```
Total scenario entries: 3
PureFlow(A)>
(For aggregate mode)
PureFlow(A)> show scenario name "/port1/Tokyo"
Total scenario entries: 3
```

```
Scenario 1: "/port1/Tokyo"
Rate Control Unit:
  Create Mode      :Aggregate
  Class            :2
  CoS              :3
  Inner-CoS        :-----
  DSCP             :-----
  Min Bandwidth    :5M[bps]
  Peak Bandwidth   :8M[bps]
Default Queue:
  Class           :8
  Buf Size        :512k[Bytes]
Operation Management:
  SNMP Traps      :Enable

Attached Filters::
  "shibuya1"
  "shinjyuku1"
```

```
Total scenario entries: 3
PureFlow(A)>
```

(For individual mode)

```
PureFlow(A)> show scenario name "/port1/Tokyo"
Total scenario entries: 3
```

```
Scenario 1: "/port1/Tokyo"
Rate Control Unit:
  Create Mode      :Individual
  Class            :2
  CoS              :3
  Inner-CoS        :-----
  DSCP             :-----
  Min Bandwidth    :5M[bps]
  Peak Bandwidth   :8M[bps]
  Buf Size         :512k[Bytes]
  Max Queue Number :300000
  Queue Division   :
    vid            :Disable
    cos            :Disable
    inner-vid      :Disable
    inner-cos      :Disable
    ethertype      :Disable
    sip            :Enable
    dip            :Enable
    tos            :Disable
    proto          :Enable
    sport          :Enable
    dport          :Enable
  Fail Action      :Forward attribute
    Class          :8
    Min Bandwidth  :---
    Peak Bandwidth :1M[bps]
Operation Management:
  SNMP Traps      :Enable
```

```

Attached Filters:
    "shibuya1"
    "shinjyuku1"

Total scenario entries: 3
PureFlow(A) >

(For discard mode)
PureFlow(A) > show scenario name "/port1/Kanagawa/discard"
Total scenario entries: 10

Scenario 1: "/port1/Kanagawa/discard"
  Rate Control Unit:
    Create Mode          :Discard
  Operation Management:
    SNMP Traps           :Enable

Attached Filters:
    "yokohama0"

Total scenario entries: 10
PureFlow(A) >

(When summary is specified)
PureFlow(A) > show scenario name "/port1/Tokyo" summary
Total scenario entries: 3

Scenario 1: "/port1/Tokyo"
  Rate Control Unit:
    Create Mode          :Aggregate
    Class                :2
    CoS                  :3
    Inner-CoS            :-----
    DSCP                  :-----
    Min Bandwidth        :5M[bps]
    Peak Bandwidth       :8M[bps]
  Default Queue:
    Class                :8
    Buf Size              :512k[Bytes]
  Operation Management:
    SNMP Traps           :Enable

Total scenario entries: 3
PureFlow(A) >

(When there is no scenario)
PureFlow(A) > show scenario all
Total scenario entries: 4

Scenario 40001: "/port1"
  Rate Control Unit:
    Create Mode          :Aggregate
    Class                :2
    CoS                  :3
    Inner-CoS            :-----
    DSCP                  :-----
    Min Bandwidth        :-----
    Peak Bandwidth       :1G[bps]
  Default Queue:
    Class                :8
    Buf Size              :1M[Bytes]
  Operation Management:
    SNMP Traps           :Enable

```

```
Attached Filters::
  (none)

Scenario 40002: "/port2"
Rate Control Unit:
  Create Mode      :Aggregate
  Class            :2
  CoS              :3
  Inner-CoS        :-----
  DSCP             :-----
  Min Bandwidth    :-----
  Peak Bandwidth   :1G[bps]

Default Queue:
  Class            :8
  Buf Size         :1M[Bytes]

Operation Management:
  SNMP Traps      :Enable

Attached Filters:
  (none)

Scenario 40003: "/port3"
Rate Control Unit:
  Create Mode      :Aggregate
  Class            :2
  CoS              :3
  Inner-CoS        :-----
  DSCP             :-----
  Min Bandwidth    :-----
  Peak Bandwidth   :1G[bps]

Default Queue:
  Class            :8
  Buf Size         :1M[Bytes]

Operation Management:
  SNMP Traps      :Enable

Attached Filters:
  (none)

Scenario 40004: "/port4"
Rate Control Unit:
  Create Mode      :Aggregate
  Class            :2
  CoS              :3
  Inner-CoS        :-----
  DSCP             :-----
  Min Bandwidth    :-----
  Peak Bandwidth   :1G[bps]

Default Queue:
  Class            :8
  Buf Size         :1M[Bytes]

Operation Management:
  SNMP Traps      :Enable

Attached Filters:
  (none)

Total scenario entries: 4

PureFlow(A) >
```

The displayed items and their meanings are as follows:

- Total scenario entries
Shows the total number of scenarios.
- Scenario
Shows the scenario index and name.
For the scenario index of the port scenario, 4097 is displayed for port 1, 4098 for port 2, 4099 for port 3, and 4100 for port 4.
- Rate Control Unit
Shows the settings of bandwidth control.
- Default Queue
Shows the default queue settings.
The default queue is the queue that transfers the flow whose traffic is not controlled in the lower-level scenario.
- WAN Acceleration Unit
Shows the settings of the traffic acceleration.
 - Peer
Shows the Primary IP address of the opposing device.
 - Second Peer
Shows the Secondary IP address of the opposing device.
 - Dport
Shows the TCP connection port number.
 - Vid
Shows the VLAN ID.
 - Inner-vid
Shows the Inner-VLAN ID.
 - Compression
Shows the settings of the compression function.

Enable	Compression is enabled.
Disable	Compression is disabled.
 - TCP-mem
Shows the buffer size of TCP.
 - CongestionControl-mode
Shows the congestion control mode.

Fast	High speed mode
Semi-Fast	Medium speed mode
Normal	Normal speed mode
 - Bypass
Shows the settings related to the auto bypass function of the traffic acceleration.
 - Threshold RTT
Shows the settings of the RTT threshold value.
 - Keep Alive
Shows the settings of the Keep Alive monitoring.

Enable	Keep Alive monitoring is enabled.
Disable	Keep Alive monitoring is disabled.
 - Fec
Shows the settings of the TCP-FEC function.

Enable	TCP-FEC function is enabled.
Disable	TCP-FEC function is disabled.

Block-size	Shows the FEC block size of TCP-FEC function.
Data-block-size	Shows the data block size of TCP-FEC function.
FEC-session	Shows the number of FEC sessions of TCP-FEC function.
SMB	Shows the setting of the SMB acceleration function. Enable SMB acceleration function is enabled. Disable SMB acceleration function is disabled.
TCP Port	Shows the TCP port number for SMB acceleration.
SMB Session	Shows the TCP session (SMB session) count for SMB acceleration.
Read Attribute	Shows the setting of the attribution substitute response function for the Read operation. Enable The attribution substitute response function for the Read operation is enabled. Disable The attribution substitute response function for the Read operation is disabled.
Read Operation	Shows the setting of the data substitute response function for the Read operation. Enable The data substitute response function for the Read operation is enabled. Disable The data substitute response function for the Read operation is disabled.
Read Cache Size	Shows the cache size of the data substitute response for the Read operation.
Write Attribute	Shows the setting of the attribution substitute response function for the Write operation. Enable The attribution substitute response function for the Write operation is enabled. Disable The attribution substitute response function for the Write operation is disabled.
Write 1st Attribute	Shows the setting of the 1st attribution substitute response for the Write operation. Enable The 1st attribution substitute response function for the Write operation is enabled. Disable The 1st attribution substitute response function for the Write operation is disabled.

Write 2nd Attribute

Shows the setting of the 2nd attribution substitute response for the Write operation.

Enable	The 2nd attribution substitute response function for the Write operation is enabled.
Disable	The 2nd attribution substitute response function for the Write operation is disabled.

Write Operation

Shows the setting of the data substitute response function for the Write operation.

Enable	The data substitute response function for the Write operation is enabled.
Disable	The data substitute response function for the Write operation is disabled.

• **Operation Management**

Displays the settings related to the operation management.

SNMP Traps

Displays the settings of the SNMP notification transmission.

Enable	Enables the transmission.
Disable	Disables the transmission.

• **Attached Filters**

Shows the names of filters added by the "add filter" command.

[Arguments]

`scenario_name`

Specify the absolute path of the scenario.

`summary`

Filter information is not displayed.

`next`

Shows information on the scenario next to the specified scenario.

`all`

Shows information of all scenarios.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : show scenario name <scenario_name> [summary] [next]

Usage : show scenario all [summary]

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Next scenario is not exist.

- The next scenario does not exist.

show scenario tree

[Format]

```
show scenario tree [conf] [filter]
```

[Description]

This command displays the hierarchical scenario tree of traffic attribute (scenario).

The tree is displayed in the order of upper to lower levels. If multiple scenarios exist in the same level, these scenario names are shown in alphabetical order.

If an argument is omitted, only scenario names and types are displayed.

If “conf” is specified, scenario setting values are also displayed. Note that the setting values displayed are common to each scenario type. The values are not displayed in the Discard state.

If “filter” is specified, filter names associated with scenarios are also displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

(When an argument is omitted)

```
PureFlow(A)> show scenario tree
```

```
Current scenario tree mode : inbound
```

```
"/port1" (Aggregate)
|
2  |- "/port1/NewYork" (Aggregate)
    | |
    7  |- "/port1/NewYork/FTP" (Aggregate)
        | |
        3  |- "/port1/NewYork/HTTP" (Aggregate)
            | | |
            4  |- "/port1/NewYork/HTTP/Brooklyn" (Aggregate)
                | | | |
                5  |- "/port1/NewYork/HTTP/Brooklyn/Bedford-stuyvesant" (Aggregate)
                    | |
                    6  |- "/port1/NewYork/Ipphone" (Aggregate)
                        |
                        8  |- "/port1/Paris" (Aggregate)
                            |
                            9  |- "/port1/Roma" (Aggregate)
                                |
                                1  |- "/port1/tokyo1" (Aggregate)

"/port2" (Aggregate)
```

```
PureFlow(A)>
```

(If conf is specified)

```
PureFlow(A)> show scenario tree conf
```

```
Current scenario tree mode : inbound
```

```
"/port1" (Aggregate)
|
2  |- "/port1/NewYork" (Aggregate)
    |   Class:2 MinBW:5M PeakBW:8M Buff:1M
    | |
    | |
```

```
PureFlow(A)>
```

(If filter is specified)

```
PureFlow(A)> show scenario tree filter
Current scenario tree mode : inbound
```

```
"/port1" (Aggregate)
|
2  |- "/port1/NewYork" (Aggregate)
    |   Attached Filters:
    |   "NewYorkSeg1"
    |   "NewYorkSeg2"
    | |
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- Current scenario tree mode
Shows the tree mode of the traffic attribute (scenario).

```
Port Information
|
id  |- Scenario Information
    |   Scenario Configuration
    |   Filter Information
```

- Port Information
Shows the port number of the Network port.
- id
Shows the scenario index automatically set or the set scenario index when adding the scenario.
- Scenario Information
Shows the scenario name and type.
- Scenario Configuration
Shows the setting values of the scenario.
- Filter Information
Shows the filter information related to the scenario.

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

set bandwidth mode

[Format]

```
set bandwidth mode {gap [<size>]| no_gap}
```

[Description]

This command enables/disables the communication gap (inter-frame gaps and preambles) for the traffic control (communication gap mode).

For Ethernet, inter-frame gaps and preambles are required to continuously transmit frames. By using this command, when setting the bandwidth in traffic attributes (scenario), you can select whether to control traffic including the gaps and preambles (the target will include the entire network bandwidth) or to control traffic excluding them (the target will only include packets).

This command is applied to the entire system.

This command can be executed only in Administrator mode.

Be careful about the following restrictions for setting by this command.

- This set value applies to each packet when receiving the packet. Change does not apply to the packet remaining in the scenario buffer when executing the command. Change of this set value is reflected after discharging the packet remaining in the scenario buffer when executing the command.

[Display]

```
PureFlow(A)> set bandwidth mode gap  
PureFlow(A)>
```

[Arguments]

```
{gap [size] | no_gap}
```

If “gap” is specified, inter-frame gaps and preambles are included in the bandwidth.

Valid values for the size are from -100 [bytes] to 100 [bytes].

If the size is set to 0, the behavior is the same as “no_gap”.

If “no_gap” is specified, inter-frame gaps and preambles are not included in the bandwidth.

[Default value]

The default value is “gap”.

If the size is omitted, the default value “20” [bytes] is applied.

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
An argument was missing.
```

```
Usage : set bandwidth mode {gap [size] | no_gap}
```

- There is a missing argument.

```
Specified size is outside the valid range. (Valid from -100 to 100)
```

- The specified size is out of range.

set shaper peak burst size

[Format]

```
set shaper peak burst size <size>
```

[Description]

This command sets the peak burst size for the traffic control.

This device controls the output burst size so that the size is "peak burst size + maximum frame length" or smaller.

This command is applied to all the scenarios.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set shaper peak burst size 3000  
PureFlow(A)>
```

[Arguments]

size

Specify the peak burst size.

The setting range varies depending on the maximum frame length of the Network port.

When the maximum frame length of the Network port is 2048 [bytes], the setting range is 0 [byte] to 9216 [bytes].

When the maximum frame length of the Network port is 10240 [bytes], the setting range is 0 [byte] to 46080 [bytes].

If a value greater than the maximum frame length of the Network port has been set, the value is rounded off automatically to the default value (1536 [bytes]).

[Default value]

The default value is "1536" [bytes].

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set shaper peak burst size <size>

- There is a missing argument.

Specified burst size is invalid. (Valid from 0 to 9216)

Specified burst size is invalid. (Valid from 0 to 46080)

- The specified size is out of range.

set scenario snmp-traps

[Format]

```
set scenario <scenario_name> snmp-traps {enable | disable}
```

[Description]

Enables/disables the transmission of the SNMP notification related to the traffic attribute (scenario). For the individual SNMP notification related to a scenario, the "set snmp traps" command can enable/disable the transmission.

queuebuffalarm	Queue buffer error
queuebuffrecovery	Queue buffer error recovery
maxqnumalarm	Scenario individual queue limit reached
maxqnumrecovery	Scenario individual queue limit recovery
tcpbypassalarm	Bypass status
tcpbypassrecovery	Bypass status recovery
peeralarm	Secondary Peer connected
peerrecovery	Secondary Peer connected recovery

This setting applies only when the transmission is enabled by the "set snmp traps". If this setting is disabled, the individual SNMP notification related to a scenario is not transmitted.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set scenario "/port1/tokyo" snmp-traps enable
PureFlow(A)> set scenario "/port1/Tokyo/shibuya" snmp-traps disable
PureFlow(A)> set scenario "/port1/Tokyo/shinjuku" snmp-traps enable
PureFlow(A)>
```

[Arguments]

scenario_name

Specifies the absolute path of the scenario name.

{enable | disable}

Set to "enable" to enable the SNMP notification transmission, while set to "disable" to disable it.

[Default value]

The default value is "enable".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : set scenario <scenario_name> snmp-traps {enable | disable}

- There is a missing argument.

An argument was missing

Usage : set scenario <scenario_name> snmp-traps {enable | disable}

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

2.2.5 Traffic acceleration-related commands

set wan-accel bypass status

[Format]

```
set wan-accel bypass status {enable | disable}
```

[Description]

This command enables/disables the auto bypass function of the traffic acceleration.

In the following cases while the auto bypass function is enabled, this scenario shifts to the bypass transfer state for which the traffic acceleration is not performed.

- As a result of measurement RTT (Round Trip Time) with TCP connected, RTT is less than the RTT threshold value.
- TCP connection to the opposing device is disabled.
- ICMP communication error occurs during Keep Alive monitoring.

The RTT threshold value and Keep Alive monitoring can be set by the "add scenario" and "update scenario" commands for each acceleration mode scenario.

When the auto bypass function is disabled, the traffic acceleration is always performed without bypass transfer.

This command applies to the acceleration mode scenarios of the entire device.

This command can be executed only in the Administrator mode.

[Display]

```
PureFlow(A)> set wan-accel bypass status disable
PureFlow(A)>
```

[Arguments]

```
{enable | disable}
```

In the case of enabling and disabling the auto bypass function of the traffic acceleration, specify "enable" and "disable", respectively.

[Default Value]

The default value is "enable".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set wan-accel bypass status {enable | disable}

- There is a missing argument.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

set wan-accel bypass recoverytime

[Format]

```
set wan-accel bypass recoverytime <duration>
```

[Description]

This command sets the bypass recovery time for the auto bypass function of the traffic acceleration.

When shifting to the bypass transfer state by the auto bypass function, the bypass transfer state is canceled after this setting time has elapsed, and the RTT measurement and traffic acceleration are retried in a new session and after.

This command applies to the acceleration mode scenarios of the entire device.

This command can be executed only in the Administrator mode.

[Display]

```
PureFlow(A)> set wan-accel bypass recoverytime 120  
PureFlow(A)>
```

[Arguments]

duration

Specifies the recovery time from the bypass transmission state in the unit of seconds.

The setting range is from 1 to 600 [seconds].

[Default Value]

The default value is "60" [seconds].

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set wan-accel bypass recoverytime <duration>

- There is a missing argument.

Duration is valid from 1 to 600.

- The bypass recovery time is out of the range.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

switch wan-accel bypass force

[Format]

```
switch wan-accel bypass force {enable | disable} all
switch wan-accel bypass force {enable | disable} scenario <scenario_name>
```

[Description]

This command enables/disables the forced bypass function of the traffic acceleration.

When the auto bypass function is enabled, this scenario is forcibly shifted to the bypass transfer state for which the traffic acceleration is not performed.

The TCP session during the traffic acceleration is accelerated until the session is finished.

Bypass transfer of a new session is performed.

When the forced bypass function is disabled, the traffic acceleration is performed without forced bypass transfer.

By executing this command, the forced bypass transfer is performed regardless of the auto bypass function enabled by the "set wan-accel bypass status" command.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> switch wan-accel bypass force enable all
PureFlow(A)> switch wan-accel bypass force enable scenario /port1/North
```

[Arguments]

{enable | disable}

In the case of enabling and disabling the forced bypass function of the traffic acceleration, specify "enable" and "disable", respectively.

scenario_name

Specifies the absolute path of the scenario name.

[Default Value]

The default value is "disable".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : switch wan-accel bypass force {enable | disable} all

Usage : switch wan-accel bypass force {enable | disable} scenario <scenario_name>

- There is a missing argument.

An argument was missing.

Usage : switch wan-accel bypass force {enable | disable} scenario <scenario_name>

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Scenario type is different. Please specify a wan-accel scenario.

- The specified scenario is not the acceleration mode scenario.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

show wan-accel bypass

[Format]

```
show wan-accel bypass
```

[Description]

This command displays information related to the bypass function of the traffic acceleration. Check the settings or operation of the acceleration scenario by the "show scenario info" command. This command can be executed in the Normal/Administrator mode.

[Display]

```
PureFlow(A)> show wan-accel bypass
Status          : enable
Recovery time   : 60 [s]
WAN-accel      :
  Scenario 1    : "/port1/sc1"
  State         : Acceleration
  Scenario 2    : "/port1/sc2"
  State         : Force Bypass
PureFlow(A)>
```

The display contents and their meanings are described below.

- Status
 - Displays the status of the auto bypass function of the traffic acceleration.

enable	The auto bypass function is enabled.
disable	The auto bypass function is disabled.
- Recovery time
 - Displays the time until the scenario in the bypass transmission state attempts to accelerate the traffic.
- WAN-accel
 - Shows the bypass function operation state of the traffic acceleration.
 - Shows only the acceleration mode scenario.
- Scenario
 - Shows the scenario index and name.
- State
 - Shows the current scenario state by the bypass function of the traffic acceleration.
 - When the auto bypass function is disabled while the bypass transfer is not in progress, the scenario state is always "Standby".

Standby	Waiting for traffic input
Measuring	Measuring RTT and connection state
Acceleration	Applying traffic acceleration
Bypass	Performing bypass transfer
Force Bypass	Performing forced bypass transfer

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

add apl-accel

[Format]

```
add apl-accel scenario <scenario_name> protocol smb
    [tcp <port>]
    [smb-session <session>]
    [read-attr {enable | disable}]
    [read-operation {enable | disable}]
    [read-cache-size <size>]
    [write-attr {enable | disable}]
    [write-attr-1st {enable | disable}]
    [write-attr-2nd {enable | disable}]
    [write-operation {enable | disable}]
```

[Description]

This command registers the scenario that enables the SMB (Service Message Block) protocol acceleration function. The SMB protocol is the communication protocol shared for Windows files. As the parameter of this command, specify the acceleration scenario. Other parameters can be omitted. Set the default value for operation.

The SMB protocol acceleration function accelerates reading and writing shared Windows files. In the file reading operation, the SMB command (SMB2_QUERY_INFO command) that reads the file attribution and the command (SMB2_READ command) that reads the file data are optimized to accelerate reading the files. In the file writing operation, the command (SMB2_QUERY_INFO command) that reads the file attribution before writing the file data is optimized to accelerate writing the files.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> add apl-accel scenario "/port1/sc1" protocol smb
PureFlow(A)> add apl-accel scenario "/port1/sc2" protocol smb
    smb-session 1000
```

[Arguments]

scenario_name

Specifies the absolute path of the scenario name. The acceleration scenario can be specified for the scenario name.

protocol smb

Enables the SMB protocol acceleration function.

tcp <port>

Specifies the TCO port number that identifies as the SMB protocol. If this is not specified, the traffics of the port numbers 139 and 445 are identified as the SMB protocol. These port numbers are the TCP port numbers used for the general Windows file share. To change the identified TCP port number, specify this parameter.

Up to 16 ports can be specified by delimiting them with commas (,).

The setting range is from 0 to 65535.

smb-session <session>

Specifies the number of TCP sessions (SMB sessions) that use the Windows file share acceleration function.

This parameter restricts the number of the SMB sessions used in each scenario.

Up to 1000 SMB sessions are used for the entire device.

If the number of the sessions used for the entire device exceeds 1000, the number of the SMB sessions used in this scenario may not reach the number of the SMB sessions specified in this parameter.

The setting range is from 0 to 1000.

`read-attr {enable | disable}`

This is the optimization parameter in the file reading operation. This parameter specifies the operation for the file attribution reading command (SMB2_QUERY_INFO command). Specifies “enable” to enable the optimization, and “disable” to disable it. Specifies the default value if not specifying this parameter.

`read-operation {enable | disable}`

This is the optimization parameter in the file reading operation. This parameter specifies the operation for the file data reading command (SMB2_READ command). Specifies “enable” to enable the optimization, and “disable” to disable it. Specifies the default value if not specifying this parameter.

`read-cache-size <size>`

This is the optimization parameter in the file reading operation. This parameter specifies the cache size for the file data reading command. The setting range is from 64 k [byte] to 60 M [byte]. The minimum unit is 1 k [byte]. Specify the unit (k, M). The letter k represents 1000 and M represents 1000000. Specifies the default value if not specifying this parameter.

`write-attr {enable | disable}`

This is the optimization parameter in the file writing operation. This parameter specifies the operation for the file attribution reading command (SMB2_QUERY_INFO command) that was issued prior to the file data writing command (SMB2_WRITE command). Specifies “enable” to enable the optimization, and “disable” to disable it. Specifies the default value if not specifying this parameter.

`write-attr-1st {enable | disable}`

This is the optimization parameter in the file writing operation. This parameter specifies the operation for the file attribution writing command (SMB2_INFO command) that was issued prior to the file data writing command (SMB2_WRITE command). Specifies “enable” to enable the optimization, and “disable” to disable it. Specifies the default value if not specifying this parameter.

`write-attr-2nd {enable | disable}`

This is the optimization parameter in the file writing operation. This parameter specifies the operation for the file attribution writing command (SMB2_SETINFO command) that was issued after the file data writing command (SMB2_WRITE command). Specifies “enable” to enable the optimization, and “disable” to disable it. Specifies the default value if not specifying this parameter.

`write-operation {enable | disable}`

This is the optimization parameter in the file writing operation. This parameter specifies the operation for the file data writing command (SMB2_WRITE command). Specifies “enable” to enable the optimization, and “disable” to disable it. Specifies the default value if not specifying this parameter.

[Default Value]

`tcp <port>`

The default value is “139,445”.

`smb-session <session>`

The default value is “100”.

`read-attr {enable | disable}`

The default value is “enable”.

`read-operation {enable | disable}`

The default value is “enable”.

`read-cache-size <size>`

The default value is “12500 k” [byte].

`write-attr {enable | disable}`

The default value is “enable”.

`write-attr-1st {enable | disable}`

The default value is “disable”.

`write-attr-2nd {enable | disable}`

The default value is “disable”.

`write-operation {enable | disable}`

The default value is “enable”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : `add apl-accel scenario <scenario_name> protocol smb [tcp <port>]`

`[smb-session <session>]`

`[read-attr {enable | disable}]`

`[read-operation {enable | disable}]`

`[read-cache-size <size>]`

`[write-attr {enable | disable}]`

`[write-attr-1st {enable | disable}]`

`[write-attr-2nd {enable | disable}]`

`[write-operation {enable | disable}]`

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Specified scenario name is not wan-accel mode.

- The specified scenario is not the acceleration mode.

Specified protocol is already used.

- The specified protocol is already used.

Specified tcp port is invalid. (Valid from 0 to 65535)

(Up to 16 ports can be specified with separated comma without space)

- The specified SMB TCP Port is invalid.

Specified smb session is invalid. (Valid from 0 to 1000)

- The specified SMB Session is invalid.

Specified read cache size is invalid. (Valid from 64k to 60M)

- The specified Read Cache Size is invalid.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

update apl-accel

[Format]

```
update apl-accel scenario <scenario_name> protocol smb
    [tcp <port>]
    [smb-session <session>]
    [read-attr {enable | disable}]
    [read-operation {enable | disable}]
    [read-cache-size <size>]
    [write-attr {enable | disable}]
    [write-attr-1st {enable | disable}]
    [write-attr-2nd {enable | disable}]
    [write-operation {enable | disable}]
```

[Description]

This command overwrites the parameters for the SMB protocol acceleration function specified in the acceleration mode scenario. This command allows you to change the application acceleration settings while traffic is being controlled.

Specify at least one parameter that you want to change. Parameter to be unchanged can be omitted.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> update apl-accel scenario "/port1/sc1" protocol smb tcp 445
```

[Arguments]

scenario_name

Specifies the absolute path of the scenario name.

protocol smb

Specifies when changing the SMB protocol acceleration function settings.

tcp <port>

Changes the TCP port number that identifies as the SMB protocol.

Up to 16 ports can be specified by delimiting them with commas (,).

The setting range is from 0 to 65535.

smb-session <session>

Specifies when changing the number of TCP sessions (SMB sessions) that use the Windows file share acceleration function.

The setting range is from 0 to 1000.

read-attr {enable | disable}

Specifies when changing the optimization parameter in the file reading operation. Specifies “enable” to enable the optimization parameter, and “disable” to disable it.

read-operation {enable | disable}

Specifies when changing the optimization parameter in the file reading operation. Specifies “enable” to enable the optimization parameter, and “disable” to disable it.

read-cache-size <size>

Specifies when changing the optimization parameter in the file reading operation. The setting range is from 64 k [byte] to 60 M [byte]. The minimum unit is 1 k [byte]. Specify the unit (k, M). The letter k represents 1000 and M represents 1000000.

`write-attr {enable | disable}`

Specifies when changing the optimization parameter in the file writing operation. Specifies “enable” to enable the optimization parameter, and “disable” to disable it.

`write-attr-1st {enable | disable}`

This is the optimization parameter in the file writing operation. This parameter specifies the operation for the file attribution writing command (SMB2_INFO command) that was issued prior to the file data writing command (SMB2_WRITE command). Specifies “enable” to enable the optimization, and “disable” to disable it. Specifies the default value if not specifying this parameter.

`write-attr-2nd {enable | disable}`

This is the optimization parameter in the file writing operation. This parameter specifies the operation for the file attribution writing command (SMB2_SETINFO command) that was issued after the file data writing command (SMB2_WRITE command). Specifies “enable” to enable the optimization, and “disable” to disable it.

`write-operation {enable | disable}`

This is the optimization parameter in the file writing operation. This parameter specifies the operation for the file data writing command (SMB2_WRITE command). Specifies “enable” to enable the optimization, and “disable” to disable it.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage: update apl-accel scenario <scenario_name> protocol smb [tcp <port>]
      [smb-session <session>]
      [read-attr {enable | disable}]
      [read-operation {enable | disable}]
      [read-cache-size <size>]
      [write-attr {enable | disable}]
      [write-attr-1st {enable | disable}]
      [write-attr-2nd {enable | disable}]
      [write-operation {enable | disable}]
```

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Specified scenario name is not wan-accel mode.

- The specified scenario is not the acceleration mode.

Specified protocol is not used.

- The specified protocol is not used.

Specified tcp port is invalid. (Valid from 0 to 65535)

(Up to 16 ports can be specified with separated comma without space)

- The specified SMB TCP Port is invalid.

Specified smb session is invalid. (Valid from 0 to 1000)

- The specified SMB Session is invalid.

Specified read cache size is invalid. (Valid from 64k to 60M)

- The specified Read Cache Size is invalid.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

delete apl-accel

[Format]

```
delete apl-accel scenario <scenario_name> protocol smb
```

[Description]

This command disables the SMB protocol acceleration function specified in the acceleration mode scenario.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete apl-accel scenario "/port1/sc1" protocol smb
```

[Arguments]

scenario_name

Specifies the absolute path of the scenario name.

protocol smb

Deletes the Windows file share acceleration settings.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage: delete apl-accel scenario <scenario_name> protocol smb

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Specified scenario name is not wan-accel mode.

- The specified scenario is not the acceleration mode.

Specified protocol is already disabled.

- The specified protocol is already invalid.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

delete apl-accel excludelist

[Format]

```
delete apl-accel excludelist all
delete apl-accel excludelist scenario name <scenario_name>
```

[Description]

This command deletes the entry registered in the rejection list.
This command can be executed only in Administrator mode.

[Display]

(Deleting rejection list of entire device)

```
PureFlow(A)> delete apl-accel excludelist all
```

(Deleting rejection list for each scenario)

```
PureFlow(A)> delete apl-accel excludelist scenario name "/port1/Tokyo"
```

[Arguments]

all

Deletes all the rejection lists.

scenario_name

Deletes the rejection list (ExcludeList) registered in the specified scenario.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

```
Usage: delete apl-accel excludelist all
```

```
Usage: delete apl-accel excludelist scenario name <scenario_name>
```

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Scenario type is different. Please specify a wan-accel scenario.

- The specified scenario is not wan-accel.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

show apl-accel excludelist

[Format]

```
show apl-accel excludelist all
show apl-accel excludelist scenario name <scenario_name>
```

[Description]

This command displays the entry registered in the rejection list.
 For the entry registered in the rejection list, the application is not accelerated.
 Aging (1 hour) and deletion command can delete the entry registered in the rejection list.

[Display]

(Rejection list of entire device)

```
PureFlow(A)> show apl-accel excludelist all
Scenario Name : /port1/Tokyo
  No. 1:
    Type           : IPv4
    Vid             : none
    inner-vid      : none
    Src Addr       : 192.168.100.20
    Dst Addr       : 192.168.100.10
PureFlow(A)>
```

(Rejection list for each scenario)

```
PureFlow (A)> show apl-accel excludelist scenario name "/port1/Tokyo"
Scenario Name : /port1/Tokyo
  No. 1:
    Type           : IPv4
    Vid             : none
    inner-vid      : none
    Src Addr       : 192.168.100.20
    Dst Addr       : 192.168.100.10
PureFlow(A)>
```

[Arguments]

`all`
 Shows all the rejection lists.

`scenario_name`
 Specifies the absolute path of the scenario name.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage: show apl-accel excludelist all

Usage: show apl-accel excludelist scenario name <scenario_name>

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Scenario type is different. Please specify a wan-accel scenario.

- The specified scenario is not wan-accel.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

2.2.6 System operation-related commands

set lpt

[Format]

```
set lpt {enable | disable}
```

[Description]

This command enables/disables the link-down transfer function.

The link-down transfer function disconnects the linkage to the Network port on the opposing side if the disconnected Network port linkage is detected.

For example, if a link-down is detected on Network port 1/1, it will force the opposing device on Network port 1/2 into a link-down state.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set lpt enable  
PureFlow(A)> set lpt disable
```

[Arguments]

```
{enable | disable}
```

In the case of enabling and disabling the link down transmission function, specify “enable” and “disable”, respectively.

[Default Value]

The default value is “disable”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage: set lpt {enable | disable}
```

- There is a missing argument.

LPT pair is not add.

- The LPT pair is not set.

add lpt pair port

[Format]

```
add lpt pair port <slot/port> <slot/port>
```

[Description]

This command registers the combination of Network ports of the link-down transfer function.

This command combines the Network ports for which the link-down transfer is performed.

If the Network port link-down is detected when the link-down transfer function is enabled, the linkage of the combined Network ports is disconnected.

This command can be executed only in the Administrator mode.

Be careful about the following restrictions when registering the Network port by this command.

- Register the Network port when the link down transfer function is disabled.
- The Network port registered cannot be duplicated and registered for the other combinations.

[Display]

```
PureFlow(A)> add lpt pair port 1/1 1/2
```

[Arguments]

slot/port

Specifies the slot position for the Network port and port number.

Only 1 can be specified for the slot position. The specification range for the port number is from 1 through 4.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add lpt pair port <slot/port> <slot/port>

- There is a missing argument.

Slot #N is invalid.

- The specified slot is invalid.

Port is invalid.

- The specified port is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

Invalid <slot/port> list

- The multiple slot/port specification is invalid.

Port is already used.

- The specified port number has already been used.

LPT Status is enable.

- The link down transmission function is enabled.

delete lpt pair port

[Format]

```
delete lpt pair port <slot/port> <slot/port>
```

[Description]

This command deletes the combination of Network ports of the link-down transfer function. This command can be executed only in the Administrator mode.

Be careful about the following restrictions when registering the Network port by this command.

- Register the Network port when the link down transfer function is disabled.

[Display]

```
PureFlow(A)> delete lpt pair port 1/1 1/2
```

[Arguments]

slot/port

Specifies the slot position and port number for the Network port.

Only 1 can be specified for the slot position. The specification range for the port number is from 1 through 4.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : delete lpt port <slot/port> <slot/port>

- There is a missing argument.

Slot #N is invalid.

- The specified slot is invalid.

Port is invalid.

- The specified port is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

Invalid <slot/port> list

- The multiple slot/port specification is invalid.

Specified pair does not exist.

- The specified combination does not exist.

LPT Status is enable.

- The link down transmission function is enabled.

show lpt

[Format]

show lpt

[Description]

This command displays the information related to the link-down transfer feature. This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show lpt
Link Pass Through state : Disable
  Port pair           : 1/1 1/2
  Port pair           : 1/3 1/4
```

The displayed items and their meanings are as follows:

- Link Path Through state

Shows one of the following character strings that indicate whether the link-down transfer feature is enabled or disabled:

Enable	The link-down transfer feature is enabled.
Disable	The link-down transfer feature is disabled.

- Port pair

Displays the combination of the Network ports registered by the "add lpt pair port" command.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set agingtime

[Format]

```
set agingtime <timeout>
```

[Description]

This command sets the aging time for flows.

Flows that no longer receive packets are deleted after the aging time has elapsed.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A) > set agingtime 400  
PureFlow(A) >
```

[Arguments]

timeout

Specify the aging time in seconds.

Valid values are from 1 to 1800 [seconds].

[Default Value]

The default value is "300" [seconds].

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set agingtime <timeout>

- There is a missing argument.

Specified agingtime is invalid. (Valid from 1 to 1800)

- The aging time is out of range.

show agingtime

[Format]

show agingtime

[Description]

This command displays the aging time used to delete flows.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show agingtime
```

```
agingtime : 300s
```

The displayed items and their meanings are as follows:

- agingtime
Shows the aging time [seconds].

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

2.2.7 System interface-related commands

set ip system

[Format]

```
set ip system <IP_address> netmask <netmask> [up | down]
```

[Description]

This command sets the IP network interface of the system (system interface).

Executing this command may disconnect connections because it changes the settings of the system interface.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set ip system 192.168.37.110 netmask 255.255.255.0 up
PureFlow(A)> set ip system 2001:DB8::1 netmask 32 up
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IPv4 or IPv6 address of the system interface.

netmask <netmask>

Specifies the subnet mask when setting the IPv4 address for the system interface.

Valid values of the subnet mask are from 128.0.0.0 to 255.255.255.255.

Specifies the prefix length when setting the IPv6 address for the system interface.

Valid values of prefix length are from 1 to 128.

{up | down}

Specify "up" to activate the system interface or "down" not to activate it.

If omitted, the system interface state does not change.

[Default Value]

The default values are as follows:

IPv4 address 192.168.1.1

Subnet mask 255.255.255.0

State up

IPv6 address ::C0A8:101

Prefix length 64

State up

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set ip system <IP_address> netmask <netmask> [up | down]

- There is a missing argument.

Invalid IP_address

- The format or value of the specified IP address is invalid.

Invalid netmask

- The format or value of the specified subnet mask is invalid.
- The value of the specified prefix length is invalid.

The IP address is already used by channel interface.

- The IP address has already been used for the channel interface.

set ip system gateway

[Format]

```
set ip system gateway <gateway>
```

[Description]

This command sets the default gateway of the IP network interface of the system (system interface). Executing this command may disconnect connections because it changes the settings of the system interface.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set ip system gateway 192.168.37.3
PureFlow(A)> set ip system gateway 2001:DB8::1
PureFlow(A)>
```

[Arguments]

gateway

Specify the default gateway IPv4 or IPv6 address.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set ip system gateway <gateway>

- There is a missing argument.

Invalid gateway

- The gateway IP address format or value is invalid.

Gateway already exists

- The gateway IP address had already been set.

unset ip system gateway

[Format]

```
unset ip system gateway
```

[Description]

This command cancels the default gateway settings of the IP network interface of the system (system interface).

This command cancels channel interfaces both of IPv4 and IPv6.

Executing this command may disconnect connections because it changes the settings of the system interface.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> unset ip system gateway  
PureFlow(A)>
```

[Arguments]

None

[Default value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set ip system port

[Format]

```
set ip system port ethernet
set ip system port network in {<slot/port> | all}
                                vid {<VID> | none} [tpid <tpid>]
                                inner-vid {<VID> | none} [inner-tpid <tpid>]
```

[Description]

Sets the communication port of the IP network interface (system interface) of the system. Communication to the system interface can be established via the Ethernet port or the Network port. For the communication via the Ethernet port, the packet communication without the VLAN Tag can be established. For the communication via the Network port, the packet communication without the VLAN Tag, with the VLAN Tag, or with the duplex VLAN Tag can be established. For the packet with the VLAN Tag or with the duplex VLAN Tag, the Tag Protocol ID of the VLAN Tag to be added to the packet sent by this device can be specified. If the Tag Protocol ID is not specified, 0x8100 is used for both the VLAN Tag and duplex VLAN Tag. For the Tag Protocol ID of the received packet, 0x8100 and 0x88a8 are recognized as the VLAN Tag. Specifies the Network port in the <slot/port> format. Multiple ports can be specified by delimiting them with commas (.). Consecutive ports (a and b) in a slot can be specified using a hyphen (-). For example, specify <slotn/porta>-<slotn/portb>. The system interface setting is changed when executing this command. Accordingly, the telnet connection may be disconnected. This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set ip system port ethernet
PureFlow(A)>
PureFlow(A)> set ip system port network in 1/1 vid 10 tpid 0x88a8 inner-vid 100
PureFlow(A)>
```

[Arguments]

ethernet | network

Specifies the communication port for the system interface. Specify "ethernet" for the communication via the Ethernet port, while specify "network" for the communication via the Network port.

in {<slot/port> | all}

This parameter can be specified only when the communication to the system interface via the Network port is established.

Specifies the slot location and port number of the Network port used for the communication to the system interface (via the Network port).

If <slot/port> is specified, the communication only from the specified Network port to the system interface can be established. If "all" is specified, the communication from all the Network ports to the system interface can be established.

Only 1 can be set as the slot location.

Valid port numbers are 1 to 4.

vid {<VID> | none}

This parameter can be specified only when the communication to the system interface via the Network port is established.

Specifies VLAN ID of the system interface (via the Network port).

If <VID> is specified, the communication of the packet with the VLAN Tag is established. If "none" is specified, the communication of the packet without the VLAN Tag is established.

The setting range is from 1 to 4094.

[tpid <tpid>]

This parameter can be specified only when the communication to the system interface via the Network port is established while <VID> is specified for the vid parameter.

Specifies the Tag Protocol ID of the VLAN Tag to be added to the packet sent by the system interface (via the Network port) in hexadecimals.

The setting range is from 0x0000 to 0xFFFF.

If omitted, 0x8100 is used.

inner-vid {<VID> | none}

This parameter can be specified only when the communication to the system interface via the Network port is established.

Specifies the Inner VLAN ID of the system interface (via the Network port).

If <VID> is specified, the communication of the packet with the duplex VLAN Tag is established.

<VID> can be specified only when <VID> is specified for the vid parameter.

If "none" is specified, the communication of the packet without the duplex VLAN Tag is established.

The setting range is from 1 to 4094.

[inner-tpid <tpid>]

This parameter can be specified only when the communication to the system interface via the Network port is established while <VID> is specified for the inner-vid parameter.

Specifies the Tag Protocol ID of the Inner VLAN Tag to be added to the packet sent by the system interface (via the Network port) in hexadecimals.

The setting range is from 0x0000 to 0xFFFF.

If omitted, 0x8100 is used.

[Default value]

The default values are as follows:

Communication port	ethernet
--------------------	----------

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : set ip system port ethernet

Usage : set ip system port network in {<slot/port> | all} vid {<VID> | none}
 [tpid <tpid>] inner-vid {<VID> | none} [inner-tpid <tpid>]

- There is a missing argument.

Slot #N is invalid.

- The specified slot is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

Specified vid is invalid. (Valid from 1 to 4094, none)

- The specified VLAN ID is invalid.

Specified TPID is invalid. (Valid from 0x0000 to 0xFFFF)

- The specified Tag Protocol ID is invalid.

TPID can set only when VID is specified.

- The tpid parameter can be specified only when the VLAN ID is specified.

Specified inner-vid is invalid. (Valid from 1 to 4094, none)

- The specified Inner VLAN ID is invalid.

Inner-VID cannot set without VID.

- Inner VLAN ID can be specified only when the VLAN ID is specified.

Specified Inner-TPID is invalid. (Valid from 0x0000 to 0xFFFF)

- The specified Inner Tag Protocol ID is invalid.

Inner-TPID can set only when Inner-VID is specified.

- The inner-tpid parameter can be specified only when the Inner VLAN ID is specified.

The IP address is already used by channel interface.

- The IP address of the system interface has already been used for the channel interface.

Invalid <slot/port> list

- The multiple slot/port specification is invalid.

add ip system filter

[Format]

```
add ip system filter <filter_idx>
    [sip <src_IP_address>] [dip <dst_IP_address>] [tos <type_of_service>]
    [proto <protocol>] [sport <sport>] [dport <dport>] {permit | deny}
```

[Description]

This command registers a filter (system interface filter) for the IP network interface (system interface) of the system.

A system interface filter provides settings to permit or discard incoming packets sent to the system interface.

Up to 128 system interface filters can be registered.

The behavior of packets that do not match the filter is the same as when “permit” is specified.

This command can be executed only in the Administrator mode.

Note:

A ToS value can be specified but filtering based on ToS values is not supported. Command including the tos specification can be accepted, however, the contents of the tos specification cannot be reflected in the filter operation.

[Display]

```
PureFlow(A)> add ip system filter 1 sip 192.168.0.0/255.255.0.0 permit
PureFlow(A)> add ip system filter 2 sip 2001:DB8::1/32 permit
PureFlow(A)> add ip system filter 10 sip 192.168.48.0/255.255.255.0
    proto udp sport 10-20 deny
PureFlow(A)> add ip system filter 11 sip 2001:DB8::/32
    proto udp sport 10-20 deny
```

(When the ToS value is specified)

```
PureFlow(A)> add ip system filter 1 sip 192.168.0.0/255.255.0.0 tos 255 permit
Warning
ToS filtering is not supported. tos parameter will be ignored.
PureFlow(A)>
```

[Arguments]

`filter_idx`

Specify the system interface filter index. Each filter criterion corresponds to this index. When a packet is received, whether that packet matches the set filter criteria is checked in the index order.

Valid values for the filter index are from 1 to 256. Specify a unique index value that is not duplicated in the system.

`sip <src_IP_address>`

Specify the Source IP address. If not specified, all Source IP addresses match.

To specify an Ipv4 address, use <address> or <address/bitmask>.

To specify an Ipv6 address, use <address> or <address/bitmask>.

`dip <dst_IP_address>`

Specify the Destination IP address. If not specified, all Destination IP addresses match.

To specify an Ipv4 address, use <address> or <address/bitmask>.

To specify an Ipv6 address, use <address> or <address/bitmask>.

`tos <type_of_service>`

Filtering based on ToS values is not supported. It is not applied to the operation when specified.

proto <protocol>

Specify the protocol number. If not specified, all protocol numbers match.

Specify the protocol number directly or use <start-end>. “tcp”, “udp”, “icmp”, and “icmpv6” can be entered in characters.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 255.

sport <sport>

Specify the Source port number. If not specified, all Source port numbers match.

Specify the number directly or use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 65535.

dport <dport>

Specify the Destination port number. If not specified, all Destination Port numbers match.

Specify the number directly or use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 65535.

{permit | deny}

If “permit” is specified, the packets sent to the system interface are transferred to the system. If

“deny” is specified, the packets are discarded.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add ip system filter <filter_idx>

[sip <src_IP_address>] [dip <dst_IP_address>] [tos <type_of_service>]

[proto <protocol>] [sport <sport>] [dport <dport>] {permit | deny}

- There is a missing argument.

Specified index number is invalid. (Valid from 1 to 256)

- The index is out of range.

The format or value of the specified source IP address is invalid.

- The specified Source IP address is invalid.

The format or value of the specified destination IP address is invalid.

- The specified Destination IP address is invalid.

Specified tos is invalid. (Valid from 0 to 255, Or Start - End)

- The specified ToS value is invalid.

Specified protocol number is invalid. (Valid from 0 to 255, Start - End, Or tcp/udp/icmp/icmpv6)

- The specified protocol number is invalid.

Specified source TCP/UDP port number is invalid. (Valid from 0 to 65535. Or Start - End)

- The specified sport number is invalid.

Specified destination TCP/UDP port number is invalid. (Valid from 0 to 65535. Or Start - End)

- The specified dport number is invalid.

Specified index number is already in use. Use another index number.

- A filter with the same index already exists. ◦

Sport setup is possible at the time of TCP/UDP.

- Specify 6 or 17 for proto when using dport or sport.

delete ip system filter

[Format]

```
delete ip system filter all
delete ip system filter <filter_idx>
```

[Description]

This command deletes a filter (system interface filter) for the IP network interface (system interface) of the system.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete ip system filter 100
PureFlow(A)> delete ip system filter all
```

[Arguments]

filter_idx

Specify the system interface filter index.

Valid values for the filter index are from 1 to 256.

all

Specifies all registered filters.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : delete ip system filter all

Usage : delete ip system filter <filter_idx>

- There is a missing argument.

Specified index number is invalid. (Valid from 1 to 256)

- The index is out of range.

Specified index of the filter does not exist.

- The specified filter does not exist.

show ip system

[Format]

```
show ip system
```

[Description]

This command displays information related to a filter (system interface filter) and the IP network interface (system interface) of the system.

This command can be executed in the Normal and Administrator modes.

[Display]

(For the communication via the Ethernet port)

```
PureFlow> show ip system
Status          : Up
IP Address      : 192.168.37.110
Netmask         : 255.255.255.0
Broadcast       : 192.168.37.255
Default Gateway : 192.168.37.100
IPv6 Address    : 2001:DB8::1
Prefix         : 32
Default Gateway : 2001:DB8::FE
Port           : Ethernet

Number of system filter entries: 2
Index : 1
  Action      : Permit
  Filter Rule:
    Sip       :210.10.0.0/255.255.0.0
    Dip       :192.168.0.0/255.255.0.0
Index : 2
  Action      : Deny
  Filter Rule:
    Sip       :210.10.10.0/255.255.255.0
    Proto     :tcp
    Sport     :100-200
    Dport     :3000
Number of system filter entries: 2

PureFlow>
```

(For the communication via the Network port 1/1)

```
PureFlow> show ip system
Status      : Up
IP Address  : 10.1.1.1
Netmask     : 255.255.255.0
Broadcast   : 10.1.1.255
Default Gateway : 10.1.1.100
IPv6 Address : 2001:DB8::1
Prefix      : 32
Default Gateway : 2001:DB8::FE
Port        : Network (1/1)
VID         : 10
TPID        : 0x8100
Inner-VID   : 100
Inner-TPID  : 0x8100

Number of system filter entries: 2
Index : 1
  Action      : Permit
  Filter Rule:
    Sip        :210.10.0.0/255.255.0.0
    Dip        :192.168.0.0/255.255.0.0
Index : 2
  Action      : Deny
  Filter Rule:
    Sip        :210.10.10.0/255.255.255.0
    Proto      :tcp
    Sport      :100-200
    Dport      :3000

Number of system filter entries: 2

PureFlow>
```

(For the communication via all the Network ports)

```
PureFlow> show ip system
Status      : Up
IP Address  : 20.1.1.1
Netmask     : 255.255.255.0
Broadcast   : 20.1.1.255
Default Gateway : 20.1.1.100
IPv6 Address : 2001:DB8::1
Prefix      : 32
Default Gateway : 2001:DB8::FE
Port        : Network (all)
VID         : none
TPID        : ----
Inner-VID   : none
Inner-TPID  : ----

Number of system filter entries: 2
Index : 1
  Action      : Permit
  Filter Rule:
    Sip        :210.10.0.0/255.255.0.0
    Dip        :192.168.0.0/255.255.0.0
Index : 2
  Action      : Deny
  Filter Rule:
    Sip        :210.10.10.0/255.255.255.0
    Proto      :tcp
    Sport      :100-200
    Dport      :3000

Number of system filter entries: 2

PureFlow>
```

The displayed items and their meanings are as follows:

- Status

Shows the state of the system interface using one of the following character strings:

Up	The system interface is active.
Down	The system interface is inactive.

- IP Address

Shows the IPv4 address of the system interface.

- Netmask

Shows the subnet mask of the system interface. This is shown only for the IPv4 interface.

- Broadcast

Shows the broadcast IPv4 address. This parameter is automatically determined based on the IPv4 address and subnet mask. It is shown only for the IPv4 interface.

- IPv6 Address

Shows the IPv6 address of the system interface.

If high-order 96 bit are all 0, low-order 32 bit shows the IPv4 address as below.

```
IPv6 Address      : ::192.168.1.1
```

- Prefix

Indicates the prefix length of the IPv6 address. This is shown only for the IPv6 interface.

- Default Gateway

This is the IP address of the default gateway of the system interface.

- Port

Shows the communication port for communicating with the system interface using the following character strings:

Ethernet	Via Ethernet port
Network	Via Network port

Displays the slot location and port number used for the communication to the system interface (via the Network port) in brackets.
Displays "all" for communication via all the Network ports.

- VID

Displays VLAN ID of the system interface (via the Network port). Displays "none" for communication without VLAN Tag. For communication to the system interface via Ethernet port, this is not shown.

- TPID

Displays Tag ProtocolID of VLAN Tag transmitted by the system interface (via the Network port). Displays "----" for communication without VLAN Tag. For communication to the system interface via Ethernet port, this is not shown.

- `Inner-VLAN`
Displays Inner VLAN ID of the system interface (via the Network port). Displays "none" for communication without duplex VLAN Tag. For communication to the system interface via Ethernet port, this is not shown.

- `Inner-TPID`
Displays Tag ProtocolID of Inner VLAN Tag transmitted by the system interface (via the Network port). Displays "----" for communication without duplex VLAN Tag. For communication to the system interface via Ethernet port, this is not shown.

- `Number of system filter entries`
Displays the total number of set system interface filters.

- `Index`
Shows the system interface filter index.

- `Action`
Displays action of the filter.

<code>Permit</code>	Packets that fall into the range of the filter are received.
<code>Deny</code>	Packets that fall into the range of the filter are discarded.

- `Filter Rule`
Shows the filter criteria set for the filter. Omitted filter criteria do not appear.
In addition, the IP address to be displayed in `Sip` or `Dip` is displayed as the masked value.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

2.2.8 Statistics-related commands

show counter

[Format]

```
show counter [brief]
```

[Description]

This command displays the Network port/system interface statistics.

The counter length displayed in this command is 32 bits.

This command can be executed in the Normal and Administrator modes.

Be careful about the following restrictions when executing this command.

- The Rx Octets value and Tx Octets value count the number of octets including the Ether header and FCS.
- The Rx Octets value counts the number of octets excluding the Ether header and FCS. Additionally, the Tx Octets value counts the number of octets excluding FCS.
- If the media type (RJ-45 or SFP) of the Network ports 1/1 and 1/2 has been changed by the "set port media-type", the statistics information of the related port is not cleared. The "clear counter" command can clear the statistics information.

[Display]

```
PureFlow(A) > show counter
```

Port	Rcv Octets	Rcv Packets	Trs Octets	Trs Packets
1/1	6400	100	0	0
1/2	0	0	0	0
1/3	0	0	0	0
1/4	0	0	0	0
system	58368	152	85424	152

Port	Rcv Broad	Rcv Multi	Trs Broad	Trs Multi
1/1	0	0	0	0
1/2	0	0	0	0
1/3	0	0	0	0
1/4	0	0	0	0
system	N/A	N/A	N/A	N/A

Port	Err Packets	Collision	Discard
1/1	0	0	0
1/2	0	0	0
1/3	0	0	0
1/4	0	0	0
system	N/A	N/A	N/A

```
PureFlow(A) >
```

```
PureFlow(A) > show counter brief
Port      Rcv Octets  Rcv Packets  Trs Octets  Trs Packets  Err Packets
-----  -
1/1          6400         100           0            0            0
1/2           0            0             0            0            0
1/3           0            0             0            0            0
1/4           0            0             0            0            0
system       0            0             0            0            0
N/A
```

PureFlow(A) >

The displayed items and their meanings are as follows:

- Port
Shows the slot location and port number of the Network port.
The Ethernet port is shown as the system.
- Rcv Octets
Shows the number of octets in the received packets.
- Rcv Packets
Shows the number of received packets.
- Trs Octets
Shows the number of octets in the transmitted packets.
- Trs Packets
Shows the number of transmitted packets.
- Rcv Broad
Shows the number of received broadcast packets.
- Rcv Multi
Shows the number of received multicast packets.
- Trs Broad
Shows the number of transmitted broadcast packets.
- Trs Multi
Shows the number of transmitted multicast packets.
- Error Packet
Shows the number of received error packets.
- Collision
Shows the number of detected frame collision.
- Discard
Shows the number of packets discarded in the system.

[Arguments]

brief
Displays a summary of the statistics.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Invalid Argument

- The specified port is out of range.

show counter {<slot/port> | system}

[Format]

```
show counter {<slot/port> | system}
```

[Description]

Displays the statistics information of the specified Network port and system interface.

The counter length that are displayed by this command is 64 bits.

This command can be executed in the Normal and Administrator modes.

Be careful about the following restrictions when executing this command.

- The Rx Octets value and Tx Octets value count the number of octets including the Ether header and FCS.
- The Rx Octets value counts the number of octets excluding the Ether header and FCS. Additionally, the Tx Octets value counts the number of octets excluding FCS.
- If the media type (RJ-45 or SFP) of the Network ports 1/1 and 1/2 has been changed by the "set port media-type", the statistics information of the related port is not cleared. The "clear counter" command can clear the statistics information.

[Display]

(When a Network port is specified)

```
PureFlow(A)> show counter 1/1
```

```
Rcv Packets                100
Rcv Broad                   0
Rcv Multi                   6400
Rcv Octets                  1110
Rcv Rate                    152000 [kbps]
Trs Packets                 0
Trs Broad                   0
Trs Multi                   0
Trs Octets                  0
Trs Rate                    100000 [kbps]
Collision                   0
Drop                       0
Discard                     0
Error Packets              0
    CRC Align Error        0
    Undersize Packet       0
    Oversize Packet        0
    Fragments              0
    Jabbers                 0
```

```
PureFlow(A)>
```

(When system is specified)

```
PureFlow(A) > show counter system

Rcv Packets          152
Rcv Broad            N/A
Rcv Multi            N/A
Rcv Octets           58368
Rcv Rate             N/A
Trs Packets          152
Trs Broad            N/A
Trs Multi            N/A
Trs Octets           85424
Trs Rate             N/A
Collision            N/A
Drop                 N/A
Discard              N/A
Error Packets        N/A
    CRC Align Error   N/A
    Undersize Packet  N/A
    Oversize Packet   N/A
PureFlow(A) >
```

The displayed items and their meanings are as follows:

- Rcv Packets
Shows the number of received packets.
- Rcv Broad
Shows the number of received broadcast packets.
- Rcv Multi
Shows the number of received multicast packets.
- Rcv Octets
Shows the number of octets in the received packets.
- Rcv Rate
Displays the average rate (kbits/s) of received packets in 10-second units.
- Trs Packets
Shows the number of transmitted packets.
- Trs Broad
Shows the number of transmitted broadcast packets.
- Trs Multi
Shows the number of transmitted multicast packets.
- Trs Octets
Shows the number of octets in the transmitted packets.
- Trs Rate
Displays the average rate (kbits/s) of transmitted packets in 10-second units.
- Collision
Shows the number of detected frame collision.
- Drop
Shows the number of packets discarded because of insufficient resources in the system.
The number of packets discarded in Queue Buffer is not counted.

- Discard
Displays the number of packets discarded in the system.

- ErrorPackets
 - CRC Align Error
Shows the number of packets received with an FCS error and abnormal alignment.
 - Undersize Packet
Shows the number of packets received in which the FCS for the byte length is normal and the packet count is smaller than the default (64 bytes).
 - Oversize Packet
Shows the number of received packets where the FCS for the byte length is normal and that are greater than the default (due to Maximum frame length setting of the Network port).
 - Fragments
Displays the number of packets received in which the FCS for the byte length is abnormal and the packet count is smaller than the default.
 - Jabbers
Displays the number of packets received in which the FCS for the byte length is abnormal and the packet count is greater than the default.

[Arguments]

slot/port

Specify the slot location and port number of the Network port.

Only 1 can be specified as the slot location. Valid port numbers are 1 and 2.

system

Specifies "system" to display information related to the Ethernet port.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Invalid Argument

- The specified port is out of range.

clear counter

[Format]

```
clear counter [<slot/port> | system]
```

[Description]

This command clears the Network port/system interface statistics.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> clear counter  
PureFlow(A)>
```

[Arguments]

```
slot/port | system
```

Specify the slot location and port number of the Network port or the system interface.

Only 1 can be specified as the slot location. Valid port numbers are 1 and 4.

If omitted, the statistics information of all the Network ports and system interface is cleared.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Slot #N is invalid.

- The specified slot number is out of range.

Port <slot/port> is invalid.

- The specified port is invalid.

show scenario info

[Format]

```
show scenario info name <scenario_name>
```

[Description]

This command displays operational information related to the scenario.
This command can be executed in the Normal and Administrator modes.

[Display]

(For the aggregate queue mode)

```
PureFlow(A)> show scenario info name "/port1/Tokyo"
```

```
Scenario 1:"/port1/Tokyo"
```

```
Rate Control Unit:
```

```
  Create Mode           :Aggregate
  Class                 :2
  CoS                   :3
  Inner-CoS             :-----
  DSCP                  :-----
  Min Bandwidth         :-----
  Peak Bandwidth        :1G
  Buf Size              :15M[Bytes]
```

```
Operation Management:
```

```
  SNMP Traps           :Enable
```

```
Attached Filters:
```

```
"shibuya1"
```

```
Scenario Rate Information
```

```
Recent interval Tx peak   :2250098[bps]
Recent interval Tx average :1077020[bps]
```

```
Default Queue Information
```

```
Buffer Utilization
```

```
Current                   :2035( 1%) [Bytes(%)]
Peak Hold                  :3056( 1%) [Bytes(%)]
```

```
Related Flow
```

```
Flow Num                   :59[flows]
```

```
PureFlow(A)>
```


(For the individual queue mode)

```

PureFlow(A)> show scenario info name "/port1/Tokyo"
Scenario 1: "/port1/Tokyo"
  Rate Control Unit:
    Create Mode           : Individual
    Class                 : 2
    CoS                   : 3
    Inner-CoS             : -----
    DSCP                  : -----
    Min Bandwidth         : -----
    Peak Bandwidth        : 1G
    Buf Size              : 15M[Bytes]
  Operation Management:
    SNMP Traps            : Enable

  Attached Filters:
    "shibuyal"

Scenario Rate Information
  Recent interval Tx peak   : 2250098[bps]
  Recent interval Tx average : 1077020[bps]

Default Queue Information
  Buffer Utilization
    Current                : 2035 ( 1%) [Bytes(%)]
    Peak Hold              : 3056 ( 1%) [Bytes(%)]
  Related Flow
    Flow Num               : 3[flows]

Individual Queue Information
  Buffer Utilization
    Current
      Max (QID 11)         : 2183 ( 2%) [Bytes(%)]
      Min (QID 12)         : 518 ( 1%) [Bytes(%)]
      Ave                   : 1241 ( 2%) [Bytes(%)]
      Peak Hold (QID 10)   : 6358 ( 5%) [Bytes(%)]

    Queue Num              : 3
      QID   Current [Bytes(%)] Peak Hold [Bytes(%)]
      ----  -
      10    1024 ( 2%)    6358 ( 5%)
      11    2183 ( 2%)    3846 ( 3%)
      12    518 ( 1%)     1450 ( 2%)
PureFlow(A)>

```

(In the case of acceleration mode)

PureFlow(A)> show scenario info name "/port1/Tokyo"

Scenario 1: "/port1/Tokyo"

Rate Control Unit:

Create Mode :WAN-accel
CoS :3
Inner-CoS :-----
DSCP :-----
Min Bandwidth :-----
Peak Bandwidth :1G
Buf Size :15M[Bytes]

WAN Acceleration Unit:

Peer :192.168.1.20
Second Peer :-----
Dport :20001
Vid :-----
Inner-Vid :-----
Compression :Enable
Tcp-mem :auto
CongestionControl-mode :Normal
Bypass
 Threshold RTT :100[ms]
 Keep Alive :Disable
Fec :Disable
Block-size :10k
Data-block-size :20k
Fec-session :1000
SMB :Enable
 TCP Port :139,445
 SMB Session :1000
 Read Attribute :Enable
 Read Operation :Enable
 Read Cache Size :12500k
 Write Attribute :Enable
 Write 1st Attribute :Disable
 Write 2nd Attribute :Disable
 Write Operation :Enable

Operation Management:

SNMP Traps :Enable

Attached Filters:

"shibuya1"

Scenario Rate Information

Recent interval Tx peak :2250098[bps]

Recent interval Tx average :1077020[bps]

Default Queue Information

Buffer Utilization

Current :2035(1%) [Bytes(%)]

Peak Hold :3056(1%) [Bytes(%)]

Related Flow

Flow Num :59[flows]

```

WAN Accel Information
  Accel Session Num      :59
  Active Peer            :PRIMARY
  WAN Acceleration Bypass:
    Status                :Disable
    Recovery time         :111 [s]
    State                 :Standby
    Acceleration Trans    :0
    Bypass Trans          :0
  RTT
    Threshold RTT        :100 [ms]
    Minimum RTT          :not measured
    Low RTT              :not detected
  Connection
    Connection Error     :not detected
  Keep Alive
    Keep Alive           :Disable
    Keep Alive State     :-----

```

PureFlow(A) >

The displayed items and their meanings are as follows:

- Scenario
 - Shows the scenario index and name.
 - For the scenario index of the port scenario, 4097 is displayed for port 1, 4098 for port 2, 4099 for port 3, and 4100 for port 4.
 - Rate Control Unit
 - Shows the settings of bandwidth control.
 - WAN Acceleration Unit
 - Shows the settings of the traffic acceleration.
 - Shows only the acceleration mode scenario.
- Peer
- Shows the Primary IP address of the opposing device.
- Second Peer
- Shows the Secondary IP address of the opposing device.
- Dport
- Shows the TCP connection port number.
- Vid
- Shows the VLAN ID.
- Inner-vid
- Shows the Inner-VLAN ID.
- Compression
- Shows the settings of the compression function.
- Enable Compression is enabled.
- Disable Compression is disabled.
- TCP-mem
- Shows the buffer size of TCP.

CongestionControl-mode

Shows the congestion control mode.

Fast	High speed mode
Semi-Fast	Medium speed mode
Normal	Normal speed mode

Bypass

Shows the settings related to the auto bypass function of the traffic acceleration.

Threshold RTT

Shows the settings of the RTT threshold value.

Keep Alive

Shows the settings of the Keep Alive monitoring.

Enable	Keep Alive monitoring is enabled.
Disable	Keep Alive monitoring is disabled.

FEC

Shows the settings of the TCP-FEC function.

Enable	TCP-FEC function is enabled.
Disable	TCP-FEC function is disabled.

Block-size

Shows the FEC block size of TCP-FEC function.

Data-block-size

Shows the data block size of TCP-FEC function.

FEC-session

Shows the number of FEC sessions of TCP-FEC function.

SMB

Shows the setting of the SMB acceleration function.

Enable	SMB acceleration function is enabled.
Disable	SMB acceleration function is disabled.

TCP Port

Shows the TCP port number for SMB acceleration.

SMB Session

Shows the TCP session (SMB session) count for SMB acceleration.

Read Attribute

Shows the setting of the attribution substitute response function for the Read operation.

Enable	The attribution substitute response function for the Read operation is enabled.
Disable	The attribution substitute response function for the Read operation is disabled.

Read Operation

Shows the setting of the data substitute response function for the Read operation.

Enable	The data substitute response function for the Read operation is enabled.
Disable	The data substitute response function for the Read operation is disabled.

Read Cache Size

Shows the cache size of the data substitute response for the Read operation.

Write Attribute

Shows the setting of the attribution substitute response function for the Write operation.

Enable	The attribution substitute response function for the Write operation is enabled.
Disable	The attribution substitute response function for the Write operation is disabled.

Write 1st Attribute

Shows the setting of the 1st attribution substitute response for the Write operation.

Enable	The 1st attribution substitute response function for the Write operation is enabled.
Disable	The 1st attribution substitute response function for the Write operation is disabled.

Write 2nd Attribute

Shows the setting of the 2nd attribution substitute response for the Write operation.

Enable	The 2nd attribution substitute response function for the Write operation is enabled.
Disable	The 2nd attribution substitute response function for the Write operation is disabled.

Write Operation

Shows the setting of the data substitute response function for the Write operation.

Enable	The data substitute response function for the Write operation is enabled.
Disable	The data substitute response function for the Write operation is disabled.

- **Operation Management**

Displays the settings related to the operation management.

- SNMP Traps

Displays the settings of the SNMP notification transmission.

Enable	Enables the transmission.
Disable	Disables the transmission.

- **Attached Filters**

Shows the names of filters added by the “add filter” command.

- **Scenario Rate Information**

Displays the transmission rate (bit/s) of the scenario. The value is updated every minute, and the maximum and average values over the last 1 minute are displayed.

• Default Queue Information

Displays the buffer information assigned by the scenario, by queue type.
For the buffer use rate, numbers after the decimal point are rounded up.

Type	Description
Buffer Utilization	Displays the buffer information of the default queue. Current Displays current buffer usage and use rate Peak Hold Displays maximum buffer usage and use rate
Related Flow	Displays information of flows related to the default queue settings. Flow Num Displays the number of flows related to the default queue.

The maximum buffer usage and use rate are retained until they are cleared by the “clear scenario peakhold buffer” command.

• WAN Accel Information

Shows TCP session information to which the traffic acceleration is applied.
Shows only the acceleration mode scenario.

Type	Description
Accel Session Num	Shows the number of TCP sessions to which the traffic acceleration is applied in the related scenario.
Active Peer	Shows the opposing devices that currently form the acceleration tunnel. PRIMARY This means the Primary opposing device. SECONDARY This means the Secondary opposing device.

Type	Description
WAN Acceleration Bypass	<p>Shows the settings and operation related to the bypass function of the traffic acceleration.</p> <p>Status</p> <ul style="list-style-type: none"> Shows the auto bypass settings. <ul style="list-style-type: none"> enable <ul style="list-style-type: none"> Shows that the auto bypass function is enabled. disable <ul style="list-style-type: none"> Shows that the auto bypass function is disabled. <p>Recovery time</p> <ul style="list-style-type: none"> Shows the time taken until the scenario in the bypass transfer state retries the traffic acceleration. <p>State</p> <ul style="list-style-type: none"> Shows the current scenario state by the bypass function. <ul style="list-style-type: none"> Standby <ul style="list-style-type: none"> Shows the scenario is waiting for the traffic input. Measuring <ul style="list-style-type: none"> Shows the scenario is measuring the RTT and connection state. Acceleration <ul style="list-style-type: none"> Shows the traffic acceleration is being applied. Bypass <ul style="list-style-type: none"> Shows that the bypass function is being performed. Force Bypass <ul style="list-style-type: none"> Shows that the forced bypass function is being performed. <p>Acceleration Trans</p> <ul style="list-style-type: none"> Shows the accumulated numbers of shift to the Acceleration state. <p>Bypass Trans</p> <ul style="list-style-type: none"> Shows the accumulated numbers of shift to the Bypass state. <p>Threshold RTT</p> <ul style="list-style-type: none"> Shows the RTT threshold value of the auto bypass. <p>Minimum RTT</p> <ul style="list-style-type: none"> Shows the minimum RTT measured value of the auto bypass. When this value is lower than the RTT threshold value, the scenario shifts to the bypass transfer state. <p>Low RTT</p> <ul style="list-style-type: none"> Shows the detection state of the exceeded RTT threshold value of the auto bypass. <ul style="list-style-type: none"> not detected <ul style="list-style-type: none"> Shows that the exceeded RTT threshold value is not detected. detected <ul style="list-style-type: none"> Shows that the exceeded RTT threshold value is detected.

Type	Description
WAN Acceleration Bypass (Continued)	<p>Connection Error</p> <p>Shows the detection state of an error in the TCP connection with the opposing device by the auto bypass of the traffic acceleration.</p> <p>not detected</p> <p>Shows that the TCP connection error is not detected.</p> <p>detected</p> <p>Shows that the TCP connection error is detected.</p> <p>Keep Alive</p> <p>Shows the settings of the current Keep Alive monitoring in the auto bypass function of the traffic acceleration.</p> <p>Enable</p> <p>Shows that Keep Alive monitoring is effectively set.</p> <p>Disable</p> <p>Shows that Keep Alive monitoring is ineffectively set.</p> <p>Keep Alive State</p> <p>Shows the current Keep Alive monitoring state by the bypass function of the traffic acceleration.</p> <p>Alive</p> <p>Shows that communication with Peer is normal.</p> <p>Timeout</p> <p>Shows that communication with Peer is time out.</p> <p>-----</p> <p>Shows that Keep Alive monitoring is not performed for the following reasons.</p> <ul style="list-style-type: none"> • Keep Alive setting is disabled. • Auto bypass setting is disabled. • Forced bypass state • Second Peer is set and Active Peer is set to Primary.

- Individual Queue Information

Shows information on the individual queue. This is available only for the individual queue mode scenarios.

Type	Description
Buffer Utilization	<p>Displays the buffer information of the individual queue. Displays the following information from more than one queue.</p> <p>QID Displays the number of individual queues used for each scenario inside the device.</p> <p>Current Displays the current buffer usage and use rate.</p> <p>Max Individual queue with the maximum current buffer usage</p> <p>Min Individual queue with the minimum current buffer usage</p> <p>Ave Average value of current buffer usage</p> <p>Peak Hold Displays the maximum buffer usage and use rate. (This is the queue with the maximum buffer usage value among the individual queues assigned so far. The displayed QID may be reused in another flow currently. The queue continuously hold the value until it is cleared by the “clear scenario peakhold buffer” command.)</p>
Queue Num	<p>Displays the number of queues generated for the scenario. Additionally, displays the buffer information of the individual queue.</p> <p>QID Displays the number of individual queues used for each scenario inside the device.</p> <p>Current Displays the current buffer usage and use rate.</p> <p>Peak Hold Displays the maximum buffer usage and use rate.</p> <p>The individual queue is generated or deleted dynamically. If a large number of individual queues are displayed, there may be a mismatch between the Queue Num and displayed count.</p>

[Arguments]

scenario_name

Specify the absolute path of the scenario name.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : show scenario info name <scenario_name>

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

show scenario info summary

[Format]

```
show scenario info summary
```

[Description]

This command displays information related to the scenario in the list.
 This command can be executed in the Normal and Administrator modes.

[Display]

```
Scenario Name
  FlowNum :      FlowNum[flows]
  Buffer   : Current[Bytes(%)]           PeakHold[Bytes(%)]
  Rate    :      TxPeak[bps] ,      TxAvg[bps]
  IndQue  : IndividualQueue[queues]
  Accel   : SessionNum[sessions]      ActivePeer
  Bypass  :      Status              State
  Trans   :      Accel Trans          Bypass Trans
-----
/port1
  FlowNum :      0
  Buffer   :      0( 0%)              0( 0%)
  Rate    :      0                    0
/port1/tokyo
  FlowNum :      0
  Buffer   :      0( 0%)              0( 0%)
  Rate    :      0                    0
  Accel   :      0                    PRIMARY
  Bypass  :      Enable              Standby
  Trans   :      0                    0

/port2
  FlowNum :      0
  Buffer   :      0( 0%)              0( 0%)
  Rate    :      0                    0
```

The displayed items and their meanings are as follows:

- Scenario Name
Shows the scenario name.
- FlowNum
Displays the number of flows related to the scenario.
- Buffer
Shows the buffer information of the queues assigned by the scenario.
 - Current
Current buffer usage and use rate
 - Peak Hold
Maximum buffer usage and use rate
- Rate
Displays the rate information of the scenario..
 - Tx Peak
Maximum transmission rate over the last 1 minute
 - Tx Avg
Average transmission rate over the last 1 minute

- `IndQue`
This is available only for scenarios in the individual queue mode.
Displays the number of individual queues generated for the scenario.
- `Accel`
Shows information on the operation of the acceleration mode scenario.
 - `SessionNum`
Shows the number of TCP sessions to which the traffic acceleration is applied in the related scenario.
 - `ActivePeer`
Shows the opposing devices that currently form the acceleration tunnel.
- `Bypass`
 - `Status`
Shows the auto bypass settings.
 - `State`
Shows the current scenario state by the bypass function.
- `Trans`
 - `Accel Trans`
Shows the accumulated numbers of shift to the Acceleration state.
 - `Bypass Trans`
Shows the accumulated numbers of shift to the Bypass state.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

clear scenario peakhold buffer

[Format]

```
clear scenario peakhold buffer name <scenario_name>
clear scenario peakhold buffer all
```

[Description]

This command clears the maximum buffer usage related to the scenario.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> clear scenario peakhold buffer name "/port1/Tokyo"
PureFlow(A)> clear scenario peakhold buffer all
PureFlow(A)>
```

[Arguments]

scenario_name
Specify the absolute path of the scenario name.

all
Clears the maximum buffer usage of all scenarios.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity
Usage : clear scenario peakhold buffer name <scenario_name>
Usage : clear scenario peakhold buffer all

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

show scenario counter

[Format]

```
show scenario counter name <scenario_name> [default_queue] [next]
```

[Description]

This command displays the statistics related to the scenario.

Shows the total value including the statistics information under the specified scenario.

If “default_queue” is specified, statistics of the default queue of the specified scenario are displayed.

If “next” is specified, the statistical information will be displayed about the scenario next to the specified one.

Check the statistics related to the traffic acceleration of the acceleration scenario by the “show wan-accel stat” command.

This command can be executed in the Normal and Administrator modes.

[Display]

(When default_queue is not specified)

```
PureFlow(A)> show scenario counter name "/port1/Tokyo"
```

```
Scenario 1: "/port1/Tokyo"
```

```
Rate Control Unit:
```

```
  Create Mode           :WAN-accel
  CoS                   :3
  Inner-CoS             :-----
  DSCP                  :-----
  Min Bandwidth         :-----
  Peak Bandwidth        :1G
  Buf Size              :15M[Bytes]
```

```
WAN Acceleration Unit:
```

```
  Peer                  :192.168.1.20
  Second Peer           :-----
  Dport                 :20001
  Vid                   :-----
  Inner-Vid             :-----
  Compression           :Enable
  Tcp-mem               :auto
  CongestionControl-mode :Normal
  Bypass
  Threshold RTT         :100[ms]
  Keep Alive            :Disable
  Fec                   :Disable
  Block-size            :10k
  Data-block-size       :20k
  Fec-session           :1000
  SMB                   :Enable
  TCP Port              :139,445
  SMB Session           :1000
  Read Attribute        :Enable
  Read Operation        :Enable
  Read Cache Size       :12500k
  Write Attribute       :Enable
  Write 1st Attribute   :Disable
  Write 2nd Attribute   :Disable
  Write Operation       :Enable
```

```
Operation Management:
```

```
  SNMP Traps           :Enable
```

```
Attached Filters:
```

```
  "shibuyal"
```

```
Scenario Counter
Rx Octets      :          378297928
Rx Packets    :          2768994
Tx Octets     :          378297928
Tx Packets    :          2768994
Discard Octets :           0
Discard Packets :           0
PureFlow(A) >
```

(When default queue is specified)

```
PureFlow(A) > show scenario counter name "/port1/Tokyo" default_queue
Scenario 1: "/port1/Tokyo"
```

```
Rate Control Unit:
Create Mode      :WAN-accel
CoS              :3
Inner-CoS       :-----
DSCP             :-----
Min Bandwidth    :-----
Peak Bandwidth   :1G
Buf Size         :15M[Bytes]

WAN Acceleration Unit:
Peer            :192.168.1.20
Second Peer     :-----
Dport          :20001
Vid            :-----
Inner-Vid      :-----
Compression     :Enable
Tcp-mem        :auto
CongestionControl-mode :Normal
Bypass
  Threshold RTT :100[ms]
  Keep Alive    :Disable
Fec             :Disable
Block-size     :10k
Data-block-size :20k
Fec-session    :1000
SMB
  TCP Port     :139,445
  SMB Session  :1000
  Read Attribute :Enable
  Read Operation :Enable
  Read Cache Size :12500k
  Write Attribute :Enable
  Write 1st Attribute :Disable
  Write 2nd Attribute :Disable
  Write Operation :Enable

Operation Management:
  SNMP Traps    :Enable

Attached Filters:
  "shibuya1"
```

```
Scenario Default Queue Counter
Rx Octets      :          37829792
Rx Packets    :          276899
Tx Octets     :          37829792
Tx Packets    :          276899
Discard Octets :           0
Discard Packets :           0
PureFlow(A) >
```

The displayed items and their meanings are as follows:

- Scenario
Shows the scenario index and name. For the port scenario index, 4097 is shown for port 1, 4098 for port 2, 4099 for port 3, and 4100 for port 4.
- Rate Control Unit
Shows the settings of bandwidth control.
- WAN Acceleration Unit
Shows the settings of traffic acceleration.
Shows the settings of the traffic acceleration only.

Peer

Shows the Primary IP address of the opposing device.

Second Peer

Shows the Secondary IP address of the opposing device.

Dport

Shows the TCP connection port number.

Vid

Shows the VLAN ID.

Inner-vid

Shows the Inner-VLAN ID.

Compression

Shows the settings of the compression function.

Enable Compression is enabled.

Disable Compression is disabled.

TCP-mem

Shows the buffer size of TCP.

CongestionControl-mode

Shows the congestion control mode.

Fast High speed mode

Semi-Fast Medium speed mode

Normal Normal mode

Bypass

Shows the settings related to the auto bypass function of the traffic acceleration.

Threshold RTT

Shows the settings of the RTT threshold value.

Keep Alive

Shows the settings of the Keep Alive monitoring.

Enable Keep Alive monitoring is enabled.

Disable Keep Alive monitoring is disabled.

Fec

Shows the settings of the TCP-FEC function.

Enable TCP-FEC function is enabled.

Disable TCP-FEC function is disabled.

Block-size

Shows the FEC block size of TCP-FEC function.

Data-block-size

Shows the data block size of TCP-FEC function.

FEC-session

Shows the number of FEC sessions of TCP-FEC function.

SMB

Shows the setting of the SMB acceleration function.

Enable SMB acceleration function is enabled.

Disable SMB acceleration function is disabled.

TCP Port

Shows the TCP port number for SMB acceleration.

SMB Session

Shows the TCP session (SMB session) count for SMB acceleration.

Read Attribute

Shows the setting of the attribution substitute response function for the Read operation.

Enable The attribution substitute response function for the Read operation is enabled.

Disable The attribution substitute response function for the Read operation is disabled.

Read Operation

Shows the setting of the data substitute response function for the Read operation.

Enable The data substitute response function for the Read operation is enabled.

Disable The data substitute response function for the Read operation is disabled.

Read Cache Size

Shows the cache size of the data substitute response for the Read operation.

Write Attribute

Shows the setting of the attribution substitute response function for the Write operation.

Enable	The attribution substitute response function for the Write operation is enabled.
Disable	The attribution substitute response function for the Write operation is disabled.

Write 1st Attribute

Shows the setting of the 1st attribution substitute response for the Write operation.

Enable	The 1st attribution substitute response function for the Write operation is enabled.
Disable	The 1st attribution substitute response function for the Write operation is disabled.

Write 2nd Attribute

Shows the setting of the 2nd attribution substitute response for the Write operation.

Enable	The 2nd attribution substitute response function for the Write operation is enabled.
Disable	The 2nd attribution substitute response function for the Write operation is disabled.

Write Operation

Shows the setting of the data substitute response function for the Write operation.

Enable	The data substitute response function for the Write operation is enabled.
Disable	The data substitute response function for the Write operation is disabled.

- **Default Queue**
 - Shows the default queue settings.
 - Shows the aggregate queue mode scenario only.
- **Operation Management**
 - Displays the settings related to the operation management.
 - SNMP Traps**
 - Displays the settings of the SNMP notification transmission.
 - Enable Enables the transmission.
 - Disable Disables the transmission.
- **Attached Filters**
 - Displays the names of filters added to the scenario.
- **Rx Octets**
 - Displays the number of bytes of the received packets.
- **Rx Packets**
 - Shows the number of received packets.
- **Tx Octets**
 - Displays the number of bytes of the transmitted packets.

- Tx Packets
Shows the number of transmitted packets.
- Discard Octets
Displays the number of bytes of the discarded packets.
- Discard Packets
Displays the number of discarded packets.

[Arguments]

scenario_name

Specify the absolute path of the scenario name.

default_queue

To display statistics of the default queue of the specified scenario, specify "default_queue".

next

Specifies the statistical information about the scenario next to the specified one.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : show scenario counter name <scenario_name> [default_queue] [next]

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Next scenario is not exist.

- next scenario does not exist.

show scenario counter summary

[Format]

```
show scenario counter summary
```

[Description]

This command displays the statistical information related to the scenario in the list.

Check the statistics related to the traffic acceleration of the acceleration scenario by the “show wan-accel stat” command.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A) > show scenario counter summary
Scenario Index (Name)
                Rx Octets      Rx Packets      Tx Octets      Tx Packets
                Discard Octets  Discard Packets
-----
/port1/Tokyo
                14609825292      212764446      14609825292      212764446
                0                0
/port2/Osaka
                22702372480      354724570      22702372480      354724570
                0                0
PureFlow(A) >
```

The displayed items and their meanings are as follows:

- Scenario Name
Shows the scenario name.
- Rx Octets
Displays the number of bytes of the received packets.
- Rx Packets
Shows the number of received packets.
- Tx Octets
Displays the number of bytes of the transmitted packets.
- Tx Packets
Shows the number of transmitted packets.
- Discard Octets
Displays the number of bytes of the discarded packets.
- Discard Packets
Displays the number of discarded packets.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

clear scenario counter

[Format]

```
clear scenario counter name <scenario_name>
clear scenario counter all
```

[Description]

This command clears the statistics related to the scenario.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> clear scenario counter name "/port1/Tokyo"
PureFlow(A)> clear scenario counter all
PureFlow(A)>
```

[Arguments]

scenario_name
Specify the absolute path of the scenario name.

all
Shows statistics information of all scenarios.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

monitor rate

[Format]

```
monitor rate <scenario_name> [[queue <QID> | default_queue]] [<num>]
```

[Description]

This command measures the reception rate and transmission rate of the scenario being used for traffic control.

Measurement is performed every second after this command is input, and the results for the specified number of times are displayed.

"queue <QID>" can be specified for the scenario of the individual queue mode. If the individual queue number has been specified, the reception/transmission rate of the specified individual queue is measured. If the number of the individual queues has been omitted, the reception/transmission rate including all the individual queues and failaction queue is measured.

When the "default queue" is specified, the receive and transmit rate of the default queue for the specified scenario is measured.

Check the "show scenario info" command for the number of the individual queue currently being generated.

This command can be executed only in Administrator mode.

Be careful about the following restrictions for measuring by this command.

- By the "set bandwidth mode" command settings, you can select whether to perform measurement including inter-frame gaps and preambles or to perform measurement excluding them.

[Display]

(If QID and default queue are not specified)

```
PureFlow(A)> monitor rate "/port1/Tokyo" 3
Scenario Name : "/port1/Tokyo"
QID : -----
```

Times[s]	Rcv Rate[kbps]	Trs Rate[kbps]
1	3587.562	1254.531
2	3482.826	1198.426
3	3624.692	1217.879
Average	3565.026	1223.612

```
PureFlow(A)>
```

(If QID is specified in the individual queue mode)

```
PureFlow(A)> monitor rate "/port1/Tokyo" queue 68 3
Scenario Name : "/port1/Tokyo"
QID : 68 (Individual Queue)
```

Times[s]	Rcv Rate[kbps]	Trs Rate[kbps]
1	3587.562	1254.531
2	3482.826	1198.426
3	3624.692	1217.879
Average	3565.026	1223.612

```
PureFlow(A)>
```

(If default_queue is specified)

```
PureFlow(A)> monitor rate "/port1/Tokyo" default_queue 3
Scenario Name : "/port1/Tokyo"
QID : 0 (Default Queue)
```

Times[s]	Rcv Rate[kbps]	Trs Rate[kbps]
1	3587.562	1254.531
2	3482.826	1198.426
3	3624.692	1217.879
Average	3565.026	1223.612

The displayed items and their meanings are as follows:

- Scenario Name
Shows the scenario name.
- QID
Shows the number of the queue for each scenario used inside the device.
Shows "-----" if the QID and default queue are not specified.
Shows "Individual queue number (Individual Queue)" if the QID is specified in individual queue mode.
Shows "0 (Default Queue)" if the default queue is specified.
Shows "-----" if the scenario is discard mode.
- Times
Shows the elapsed time in seconds from the start of the measurement.
- Rcv Rate
Shows the reception rate for every second (unit: kbit/s) during the measurement to three decimal places.
- Trs Rate
Shows the transmission rate for every second (unit: kbit/s) during the measurement to three decimal places.
- Average
Shows the average reception and transmission rates (unit: kbit/s) to three decimal places.

[Arguments]

scenario_name
Specify the absolute path of the scenario name.

QID
Specifies the number of the individual queue. QID is the number of the individual queue for each scenario used inside the device, and is displayed by the "show scenario info" command.
The setting range is from 1 to 4096.

default_queue
When the "default queue" is specified, the receive and transmit rate of the default queue for the specified scenario is measured.

num
Specify the number of measurement times.
Valid values are from 0 to 2147483647.
If it is omitted or 0 is specified, rate measurement per second continues until exiting by CTRL-C.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : monitor rate <scenario_name> [{queue <QID> | default_queue} [<num>]

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Specified QID is invalid. (Valid from 1 to 4096)

- The specified individual queue number is out of range.

Specified queue is not used.

- The specified individual queue does not exist.

Specified number is invalid (Valid from 0 to 2147483647)

- The specified number of measurement times is out of range.

QID must be specified for individual scenario.

- QID can be specified only for the scenario of the individual queue mode.

show flow

[Format]

```
show flow scenario <scenario_name> all

show flow scenario <scenario_name> best_effort

show flow scenario <scenario_name> match ipv4
[sip <src_IP_address>] [dip <dst_IP_address>]
[proto <protocol>] [sport <sport>] [dport <dport>]
[best_effort]

show flow scenario <scenario_name> match ipv6
[sip <src_IP_address>] [dip <dst_IP_address>]
[prot <protocol>] [sport <sport>] [dport <dport>]
[best_effort]
```

[Description]

This command displays information on flows that are actually generated. Information of flows under the specified scenario (up to 4000 flows) can be displayed. Use a parameter to specify the flows to be displayed. Specify “all” to display all flows of the specified scenario. Specify “best_effort” to display all flows of the default queue of the specified scenario. Specify “match” to display flows that match the specified conditions. When “best_effort” is specified, only the flows of the default queue are displayed. This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show flow scenario "/port1/tokyo" all
```

Applied Scenario:

```
Name       : "/port1/tokyo"
Action     : Aggregate
Class      : 2
```

Attached Filters:

```
"shibuya1"
```

Flow 1:

```
Scenario
Name       : "/port1/tokyo/voice"
Action     : Aggregate
QID        : 0 (Default Queue)
Type       : IPv4
vid        : 10
inner-vid  : 100
Src Addr   : 192.168.10.10
Dst Addr   : 192.168.20.20
Protocol   : UDP
Src Port   : 100
Dst Port   : 200
Status     : pass through
Appli Status : none
```

Flow 2:

```
Scenario
Name       : "/port1/tokyo/video"
Action     : Individual
QID        : 10 (Individual Queue)
Type       : IPv4
vid        : 10
```



```

        inner-vid      : 100
        Src Addr       : 192.168.10.11
        Dst Addr       : 192.168.20.22
        Protocol       : UDP
        Src Port       : 100
        Dst Port       : 200
        Status        : pass through
        Appli Status   : none
PureFlow(A) >

```

(For IP discard flows)

```
PureFlow(A) > show flow scenario "/port1/tokyo" all
```

```

Applied Scenario:
  Name           : "/port1/tokyo"
  Action         : Discard
  Class          : -----

```

```

Attached Filters:
  "shibuya2"

```

```

Flow 1:
  Scenario
    Name           : "/port1/tokyo"
    Action         : Discard
    QID            : -----
  Type            : IPv4
  vid             : 10
  inner-vid       : 100
  Src Addr        : 192.168.10.10
  Dst Addr        : 192.168.20.20
  Protocol        : UDP
  Src Port        : 100
  Dst Port        : 200
  Status          : pass through
  Appli Status    : none
PureFlow(A) >

```

(When match is specified)

```
PureFlow(A) > show flow scenario "/port1/Tokyo" match ipv4 sip 192.168.10.10
```

```

Applied Scenario:
  Name           : "/port1/Tokyo"
  Action         : Aggregate
  Class          : 2

```

```

Attached Filters:
  "shibuya1"

```

```

Flow 1:
  Scenario
    Name           : "/port1/tokyo/voice"
    Action         : Aggregate
    QID            : 0 (Default Queue)
  Type            : IPv4
  vid             : 10
  inner-vid       : 100
  Src Addr        : 192.168.10.10
  Dst Addr        : 192.168.20.20
  Protocol        : UDP
  Src Port        : 100
  Dst Port        : 200

```

```
Status          : pass through
Appli Status    : none
PureFlow(A) >
```

The displayed items and their meanings are as follows:

- **Applied Scenario**
Shows information of the scenario.
- **Attached Filters**
Shows information of the filters applied to the scenario.
- **Scenario**
Shows information (scenario name, scenario mode, number of queue) of the filters applied to the flow. Shows "0 (Default Queue)" for the default queue number.
For the scenario of the discard mode, "-----" is displayed as the queue number.
- **Type**
Shows the type of the flow.
IPv4 IPv4 flow
IPv6 IPv6 flow
- **Class**
Displays the set Class. For discard flows, this is not shown.
- **vid**
Shows the VLAN ID. For frames without VLAN Tag, none is shown.
- **Src Addr**
Shows the Source IP address.
- **Dst Addr**
Shows the Destination IP address.
- **Protocol**
Shows the protocol number.
- **Src Port**
Shows the Source Port number.
- **Dst Port**
Shows the Destination Port number.
- **Status**
Shows the state of the enabled traffic acceleration in the flow.
pass through Flow is not the target of the traffic acceleration.
accel Flow is the target of the traffic acceleration.
accel (active) Traffic acceleration of the flow is being performed.
compression Flow is the target of the compression function.
fec Flow is the target of the TCP-FEC function.
bypass Flow is the bypass transfer of the traffic acceleration.
- **Appli Status**
Shows the status of the application acceleration enabled in the flow.
none Flow is not the target of the application acceleration.
appli through Flow is transferring the application frame.
smb through Flow overwrites MessageID only in the SMB frame, and is transferring it.
smb accel Flow is accelerating SMB.

[Arguments]

scenario_name

Specify the absolute path of the scenario name.

all

Specify “all” to display all flows of the specified scenario.

best_effort

Specify “best_effort” to display the flows of the default queue of the specified scenario.

sip <src_IP_address>

Specify the Source IPv4 address or the Source IPv6 address.

If omitted, the Source IP address is not searched.

To specify “src_IP_address”, use <address> or <address-address>.

(Lowercase letters can be used for the Source IPv6 address.)

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

dip <dst_IP_address>

Specify the Destination IPv4 address or the Destination IPv6 address.

If omitted, the Destination IP address is not searched.

To specify “dst_IP_address”, use <address> or <address/bitmask>.

(Lowercase letters can be used for the Destination IPv6 address.)

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

proto <protocol>

Specify the protocol number. If omitted, the protocol number is not searched.

Specify the protocol number directly or use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

“tcp”, “udp”, and “icmp” can be entered in characters. Valid values are from 0 to 255.

sport <sport>

Specify the Source port number. If omitted, the Source port number is not searched.

Enter the sport number directly or use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 65535.

dport <dport>

Specify the Destination port number. If omitted, the Destination port number is not searched.

Enter the dport number directly or use <start-end>.

When specifying a range by using <start-end>, ensure the order is ascending (start < end).

Valid values are from 0 to 65535.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : show flow scenario <scenario_name> all
        show flow scenario <scenario_name> best_effort
        show flow scenario <scenario_name> match ipv4
        [sip <src_IP_address>] [dip <dst_IP_address>]
        [proto <protocol>] [sport <sport>] [dport <dport>]
        [best_effort]
        show flow scenario <scenario_name> match ipv6
        [sip <src_IP_address>] [dip <dst_IP_address>]
        [proto <protocol>] [sport <sport>] [dport <dport>]
        [best_effort]
```

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

The format or value of the specified source IP address is invalid.

- The specified Source IP address is invalid.

The format or value of the specified destination IP address is invalid.

- The specified Destination IP address is invalid.

The format or value of the specified source IPv6 address is invalid.

- The specified Source IPv6 address is invalid.

The format or value of the specified destination IPv6 address is invalid.

- The specified Destination IPv6 address is invalid.

Specified protocol number is invalid. (Valid from 0 to 255, Start - End, Or tcp/udp/icmp/icmpv6)

- The specified protocol number is invalid.

Specified source TCP/UDP port number is invalid. (Valid from 0 to 65535. Or Start - End)

- The specified sport number is invalid.

Specified destination TCP/UDP port number is invalid. (Valid from 0 to 65535. Or Start - End)

- The specified dport number is invalid.

show resource

[Format]

```
show resource
```

[Description]

This command displays the resource status of scenarios, filters and rule lists.

This command displays the resource status of flows that are actually generated.

It displays the resource status of the top counter.

It also displays the system buffer resource status.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show resource
```

```
Resource information
```

	Total	Used	Available	
-----	-----	-----	-----	-----
Scenario :	4100	4	4096	[entry]
Individual Que :	4096	0	4096	[entry]
Second Peer :	100	0	100	[entry]
Keep Alive :	100	0	100	[entry]
Filter :	10000	0	10000	[entry]
Rulelist :	1024	0	1024	[group]
Total Rulelist Entry :	10000	0	10000	[entry]
Channel :	4096	0	4096	[entry]
Route :	10000	0	10000	[entry]
Flow :	512000	0	512000	[flow]
WAN Accel Session :	40000	0	40000	[entry]
Top Counter				
Target Scenario :	200	0	200	[entry]
Application Port :	256	0	256	[entry]
Monitoring Flow :	400000	0	400000	[entry]
System Buffer				
System Packet Buffer :	655360	0	655360	[block]
Event Message Pool :	655360	2	655358	[block]
Output Command Pool :	16384	45	16339	[block]
Output Packet Buffer :	655360	4	655356	[block]

The displayed items and their meanings are as follows:

- Scenario
Shows the total number, used number, and remaining number of scenario entries.
- Individual Que
Shows the total number, used number, and remaining number of queues generated for an individual scenario.
- Second Peer
Shows the total number, used number, and remaining number of Secondary peer that can be specified in the acceleration mode scenario.
- Keep Alive
Shows the total number, usage, and remaining number of the Secondary Peer that can be set in the acceleration mode scenario.
- Filter
Shows the total number, used number, and remaining number of filter entries.
- Rulelist
Shows the total number, used number, and remaining number of rule list groups.

- **Total Rulelist Entry**
Shows the total number, used number, and remaining number of rule list entries in all rule list groups.
- **Channel**
Displays the total number of channels, number of used channels, and the number of remaining channels.
- **Route**
Displays the total number of static routes, number of used static routes, and the number of remaining static routes, of the Network port.
- **Flow**
Shows the total number, used number, and remaining number of flows.
- **WAN Accel Session**
Displays the total TCP sessions, number of used total TCP sessions, and the number of the remaining TCP sessions, for which the traffic acceleration is applied.
- **Top Counter**
Shows the total number, used number, and the remaining number of top counter resource.
- **Target Scenario**
Shows the total number, used number, and the remaining number of scenarios measured by the top counter.
- **Application Port**
Shows the total number, used number, and the remaining number of application port numbers of the top counter.
- **Monitoring Flow**
Shows the total number, used number, and the remaining number of flows being measured by the top counter.
- **System Buffer**
Shows the total number, used number, and remaining number of the system buffers.

Type	Description	Block size
System Packet Buffer	A packet buffer used by the system	768 [byte]
Event Message Pool	Message block of the band control engine and the traffic acceleration engine	128 [byte]
Output Command Pool	A packet output command area	1024 [byte]
Output Packet Buffer	Packet buffer that is used for the traffic acceleration	2048 [byte]

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

show process

[Format]

```
show process {ccpu | fcpu}
```

[Description]

This command displays the CPU and memory use rate.

If "ccpu" is specified, information on the control system processing unit is displayed.

If "fcpu" is specified, information on the forwarding system processing unit is displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show process ccpu
CPU utilization
  for 5 seconds      : 35 %
  for 1 minute       : 16 %
  for 5 minutes      : 15 %

Memory utilization
  for 5 seconds      : 10 %
  for 1 minute       : 15 %
  for 5 minutes      : 9 %
PureFlow>
```

The displayed items and their meanings are as follows:

- CPU utilization
 - Displays the CPU use rate.
 - For "ccpu", the operation rate of the control system processing unit is shown; for "fcpu", the load factor of the forwarding system processing unit is shown.
- Memory utilization
 - Shows the memory use rate.
 - For "ccpu", the use rate of the memory area of the control system processing unit is shown; for "fcpu", the use rate of the packet buffer of the forwarding system processing unit is shown.
- for 5 seconds
 - Shows the average use rate over the last 5 seconds as a percentage.
- for 1 minute
 - Shows the average use rate over the last 1 minute as a percentage.
- for 5 minutes
 - Shows the average use rate over the last 5 minutes as a percentage.

[Arguments]

```
{ccpu | fcpu}
Specify the system whose information you want to view.
```

[Errors]

```
Invalid input at Marker
  • There is an unnecessary argument.

An argument was missing.
Usage : show process {ccpu | fcpu}
  • There is a missing argument.
```

show wan-accel stat

[Format]

```
show wan-accel stat system all
show wan-accel stat scenario all
show wan-accel stat scenario name <scenario_name>
show wan-accel stat appli {<port> | all}
```

[Description]

Shows the statistic information for each of the entire device, scenario, and application.

When specifying “show wan-accel stat system all”, information on statistics of the entire device is displayed.

When specifying “show wan-accel stat scenario name <scenario_name>”, information on statistics of the specified scenario is displayed.

When specifying “show wan-accel stat scenario all”, information on statistics of the entire scenarios is displayed.

When specifying “show wan-accel stat appli all”, information on the statistics of the entire application port numbers that have been added by the “add wan-accel stat appli” command, is displayed.

When specifying “show wan-accel stat appli <port>”, information on the statistics of the specified application port numbers that have been added by the “add wan-accel stat appli” command, is displayed.

This command can be executed in the Normal/Administrator mode.

[Display]

(Statistics information of the entire device)

```
PureFlow(A)> show wan-accel stat system all
```

Connections Summary:

LAN Side:

Optimized	:0
Established	:0
Half Open	:0
Half Closed	:0
Total rejected	:1
Total Connections	:1

WAN Side:

Optimized	:0
Established	:0
Half Open	:0
Half Closed	:0
Total rejected	:1
Total Connections	:1

TCP Statistics:

LAN Side:

```

Window size(current)      :131400[byte]
RTT                       :0.0[msec]
Duration                  :0:0:6
Status                    :CLOSED
690609 packets sent
    690608 data packets (1000000180 bytes)
    0 data packets (0 bytes) retransmitted
    0 data packets unnecessarily retransmitted
    1 ack-only packets (0 delayed)
    0 window update packets
    1 control packets
345307 packets received
    345305 acks (for 999998937 bytes)
    1 duplicate acks
    2 packets (122 bytes) received in-sequence
    0 completely duplicate packets (0 bytes)
    0 old duplicate packets
    0 packets with some dup. data ( 0 bytes duped)
    0 out-of-order packets (0 bytes)
    1 window update packets
    0 discarded due to memory problems
0 connection requests
1 connection accepts
0 retransmit timeouts
    0 connections dropped by rexmit timeout
0 persist timeouts
    0 connections dropped by persist timeout

```

WAN Side:

```

Window size(current)      :249856[byte]
RTT                       :0.0[msec]
Duration                  :0:0:6
Status                    :CLOSED
288787 packets sent
    2 data packets (133 bytes)
    0 data packets (0 bytes) retransmitted
    0 data packets unnecessarily retransmitted
    362909 ack-only packets (1 delayed)
    11050 window update packets
    4 control packets
65190 packets received
    3 acks (for 133 bytes)
    1 duplicate acks
    731650 packets (1050635669 bytes) received in-sequence
    0 completely duplicate packets (0 bytes)
    0 old duplicate packets
    0 packets with some dup. data ( 0 bytes duped)
    0 out-of-order packets (0 bytes)
    0 window update packets
    0 discarded due to memory problems
1 connection requests
0 connection accepts
6 retransmit timeouts
    0 connections dropped by rexmit timeout
0 persist timeouts
    0 connections dropped by persist timeout

```

```
WAN Optimization Counter:
  LAN Side:
    Reduction Rate           :98.9[%]
    Rx Throughput            :1253327.914[kbps]
    Tx Throughput            :1253329.381[kbps]
  WAN Side:
    Reduction Rate           :0.0[%]
    Rx Throughput            :18188.936[kbps]
    Tx Throughput            :0.166[kbps]
PureFlow(A) >
```

(Statistics information of the respective scenarios)

```
PureFlow(A) > show wan-accel stat scenario name /port1/Tokyo
```

Connections Summary:

```
  LAN Side:
    Optimized                :0
    Established               :0
    Half Open                 :0
    Half Closed               :0
    Total rejected            :1
    Total Connections         :1
  WAN Side:
    Optimized                :0
    Established               :0
    Half Open                 :0
    Half Closed               :0
    Total rejected            :1
    Total Connections         :1
```

TCP Statistics:

```
  LAN Side:
    Window size(current)     :131400[byte]
    RTT                       :0.0[msec]
    Duration                  :0:0:6
    Status                    :CLOSED
    690609 packets sent
      690608 data packets (1000000180 bytes)
      0 data packets (0 bytes) retransmitted
      0 data packets unnecessarily retransmitted
      1 ack-only packets (0 delayed)
      0 window update packets
      1 control packets
    345307 packets received
      345305 acks (for 999998937 bytes)
      1 duplicate acks
      2 packets (122 bytes) received in-sequence
      0 completely duplicate packets (0 bytes)
      0 old duplicate packets
      0 packets with some dup. data ( 0 bytes duped)
      0 out-of-order packets (0 bytes)
      1 window update packets
      0 discarded due to memory problems
    0 connection requests
    1 connection accepts
    0 retransmit timeouts
      0 connections dropped by rexmit timeout
    0 persist timeouts
      0 connections dropped by persist timeout
```

```

WAN Side:
Window size(current)      :249856[byte]
RTT                       :0.0[msec]
Duration                  :0:0:6
Status                    :CLOSED
288787 packets sent
    2 data packets (133 bytes)
    0 data packets (0 bytes) retransmitted
    0 data packets unnecessarily retransmitted
    362912 ack-only packets (1 delayed)
    11050 window update packets
    5 control packets
65190 packets received
    3 acks (for 133 bytes)
    1 duplicate acks
    731650 packets (1050635669 bytes) received in-sequence
    0 completely duplicate packets (0 bytes)
    0 old duplicate packets
    0 packets with some dup. data ( 0 bytes duped)
    0 out-of-order packets (0 bytes)
    0 window update packets
    0 discarded due to memory problems
1 connection requests
0 connection accepts
9 retransmit timeouts
    0 connections dropped by rexmit timeout
0 persist timeouts
    0 connections dropped by persist timeout

WAN Optimization Counter:
LAN Side:
Reduction Rate           :98.9[%]
Rx Throughput            :1253327.914[kbps]
Tx Throughput            :1253329.381[kbps]
WAN Side:
Reduction Rate           :0.0[%]
Rx Throughput            :18188.936[kbps]
Tx Throughput            :0.166[kbps]

FEC Counter:
FEC Total Block         :0
FEC Good Block          :0
FEC Correct Success Block :0
FEC Correct Failure Block :0
PureFlow(A) >

```

(Statistics information of the respective applications)

```
PureFlow(A)> show wan-accel stat appli 80
Application(port)           :80
Connection                  :1
Reduction Rate              :90.0[%]
LAN Side:
  Average Throughput:50255.956 [kbps]
  Octets                  :152
  Packets                 :58368
WAN Side:
  Average Throughput      :65757.725 [kbps]
  Octets                  :152
  Packets                 :85424
PureFlow(A)>
```

The display contents and their meanings are described below.

• Connections Summary

Total Optimized

Displays the total number of the connections that have been accelerated.

Established

Displays the number of established connections.

Half Open

Displays the number of half-open states in the session establishment in progress.

Half Closed

Displays the number of half-close states in the session establishment in progress.

Total rejected

Displays the total number of rejected connections.

Total Connections

Displays the total number of connections.

• Tcp Statistics

Window size(current)

Displays the window size (measured value).

RTT

Displays Round Trip Time.

Duration

Displays the connection duration time.

Status

Displays the transition of the TCP state.

packets sent

Displays the number of transmission packets.

data packets (bytes)

Displays the number of transmission data items (in bytes).

data packets (bytes) retransmitted

Displays the number of retransmission data items (in bytes).

packets received

Displays the number of received packets.

acks (bytes)

Displays the number of ACKs (in bytes).

connection requests

Displays the number of connection requests.

connection accepts

Displays the number of received connections.

connections established

Displays the number of established connections.

- WAN Optimization Counter
 - Reduction Rate
 - Displays the data reduction amount.
 - Rx Throughput
 - Displays the received rate.
 - Tx Throughput
 - Displays the transmitted rate.

- Application Counter
 - Application (port)
 - Displays the port number.
 - Connection
 - Displays the total number of connections.
 - Reduction Rate
 - Displays the data reduction amount.
 - Average Throughput
 - Displays the average throughput.
 - Octets
 - Displays the number of transmission bytes.
 - Packets
 - Displays the number of transmission packets.

- FEC Counter
 - FEC Total Block
 - The TCP session using the TCP-FEC function called the FEC session.
 - Display the number of total FEC session blocks.
 - FEC Good Block
 - Displays the number of non packet discard blocks.
 - FEC Correct Success Block
 - Display the number of recovery successful blocks.
 - FEC Correct Failure Block
 - Display the number of recovery failed blocks.

[Arguments]

scenario_name
Specifies the absolute path of the scenario name.

port
Specifies the application port number.
Specify the format of the application port number by using numbers or by the < start - end > format.
In the case of specifying the range, specify it in ascending order (in the format, start < end).
The setting range is from 0 to 65535.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : show wan-accel stat system all

Usage : show wan-accel stat scenario all

Usage : show wan-accel stat scenario name <scenario_name>

Usage : show wan-accel stat appli {<port> | all}

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Scenario type is different. Please specify a wan-accel scenario.

- The specified scenario is not wan-accel.

Specified application port number is invalid. (Valid from 0 to 65535)

- The specified application port is invalid.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

clear wan-accel stat

[Format]

```
clear wan-accel stat system all
clear wan-accel stat scenario all
clear wan-accel stat scenario name <scenario_name>
clear wan-accel stat appli {<port> | all}
```

[Description]

Clears information on the statistics of the entire device, of the respective scenarios, and of the respective applications, related to the traffic acceleration.

When specifying “clear wan-accel stat system all”, information on statistics of the entire device is cleared. Clearing the statistics information of the entire device clears the statistics information of the entire scenario and of the entire applications.

When specifying “clear wan-accel stat scenario system all,” the statistics information of the entire scenario is cleared.

In addition, when specifying “clear wan-accel stat scenario name <scenario_name>”, the statistics information of the specified scenario is cleared.

When specifying “clear wan-accel stat appli all”, the statistics information of the entire application port numbers that have been added by the “add wan-accel stat appli” command, is cleared.

When specifying “clear wan-accel stat appli <port>”, the statistics information of the specified application port numbers that have been added by the “add wan-accel stat appli” command, is cleared.

This command can be executed only in the Administrator mode.

[Display]

(Clearing the statistics information of the entire device)

```
PureFlow(A)> clear wan-accel stat system all
```

(Clearing the statistics information of the entire scenario)

```
PureFlow(A)> clear wan-accel stat scenario all
```

(Clearing the statistics information of the respective scenarios)

```
PureFlow(A)> clear wan-accel stat scenario name /port1/Tokyo
```

(Clearing the statistics information of the entire application)

```
PureFlow(A)> clear wan-accel stat appli all
```

(Clearing the statistics information of the respective applications)

```
PureFlow(A)> clear wan-accel stat appli 989
```

[Arguments]

scenario_name

Specifies the absolute path of the scenario name.

port

Specifies the application port number.

Specify the format of the application port number by using numbers or by the < start - end > format.

In the case of specifying the range, specify it in ascending order (in the format, start < end).

The setting range is from 0 to 65535.

[Errors]

Command making ambiguity

Usage : clear wan-accel stat system all

Usage : clear wan-accel stat scenario all

Usage : clear wan-accel stat scenario name <scenario_name>

Usage : clear wan-accel stat appli {<port> | all}

- There is an unnecessary argument.

An argument was missing.

Usage : clear wan-accel stat system all

Usage : clear wan-accel stat scenario all

Usage : clear wan-accel stat scenario name <scenario_name>

Usage : clear wan-accel stat appli {<port> | all}

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Scenario type is different. Please specify a wan-accel scenario.

- The specified scenario is not wan-accel.

Specified application port number is invalid. (Valid from 0 to 65535)

- The specified application port is invalid.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

add wan-accel stat appli

[Format]

```
add wan-accel stat appli <port>
```

[Description]

Adds the setting of the application port for which the statistics information items are aggregated. Up to 4096 application ports can be registered.

This command can be executed only in the Administrator mode.

[Display]

```
PureFlow(A)> add wan-accel stat appli 80
```

[Arguments]

port

Specifies the application port number.

Specify the format of the application port number by using numbers or by the < start - end > format.

In the case of specifying the range, specify it in ascending order (in the format, start < end).

The setting range is from 0 to 65535.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add wan-accel stat appli <port>

- There is a missing argument.

Specified application port number is invalid. (Valid from 0 to 65535)

- The specified application port number is invalid.

Specified application port number is already used.

- The specified application port number has already been used.

Maximum number of application port number was exceeded.

- The maximum number of registrations of the application port number has been exceeded.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

delete wan-accel stat appli

[Format]

```
delete wan-accel stat appli {<port> | all}
```

[Description]

Deletes the setting of the application port for which the statistics information items are aggregated. This command can be executed only in the Administrator mode.

[Display]

```
PureFlow(A)> delete wan-accel stat appli 80
```

[Arguments]

port

Specifies the application port number.

Specify the format of the application port number by using numbers or by the < start - end > format.

In the case of specifying the range, specify it in ascending order (in the format, start < end).

Specify the application port number set by the "add wan-accel stat appli" command or < start - end >.

The setting range is from 0 to 65535.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : delete wan-accel stat appli {<port> | all}

- There is a missing argument.

Specified application port number is invalid. (Valid from 0 to 65535)

- The specified application port is invalid.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

show apl-accel stat

[Format]

```
show apl-accel stat scenario <scenario_name> protocol smb
```

[Description]

This command displays statistics information for each scenario related to the application acceleration.

[Display]

```
PureFlow(A)> show apl-accel stat scenario "/port1/Tokyo" protocol smb
SMB Accel Summary:
  Active Connections           :           0
  Total Connections           :           1
  Total File Transports with acceleration :           0

  Total File Read Requests    :           0
  Total File Read Responses by Proxy :           0
  Total File Write Requests   :           0
  Total File Write Responses by Proxy :           0
  Total Get-Info Requests     :           0
  Total Get-Info Responses by Proxy :           0
  Total Set-Info Requests     :           0
  Total Set-Info Responses by Proxy :           0

  Total Rcv TimeOuts         :           0
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- SMB Accel Summary:
 - Active Connections
 - Shows the number of sessions during the SMB acceleration.
 - Total Connections
 - Shows the total number of SMB accelerations.
 - Total File Transports with acceleration
 - Shows the total number of transferred SMB files.
 - Total File Read Requests
 - Shows the total number of requests for reading files.
 - Total File Read Responses by Proxy
 - Shows the total number of substitute responses for reading files.
 - Total File Write Requests
 - Shows the total number of requests for writing files.
 - Total File Write Responses by Proxy
 - Shows the total number of substitute responses for writing files.
 - Total Get-Info Requests
 - Shows the total number of requests for attribute reading.
 - Total Get-Info Responses by Proxy
 - Shows the total number of substitute responses for requests for attribute reading.
 - Total Set-Info Requests
 - Shows the total number of requests for attribute writing.

Total Set-Info Responses by Proxy

Shows the total number of substitute responses for requests for attribute writing.

Total Rcv TimeOuts

Shows the total number of disconnections due to continued requests for rejection of SMB message.

[Arguments]

scenario_name

Specifies the absolute path of the scenario name.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage: show apl-accel stat scenario <scenario_name> protocol smb

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified scenario name is not used.

- The specified scenario does not exist.

Scenario type is different. Please specify a wan-accel scenario.

- The specified scenario is not wan-accel.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

set topcounter

[Format]

```
set topcounter {enable | disable}
```

[Description]

This command enables/disables the top counter.
This command can be executed in Administrator mode.

[Display]

```
PureFlow(A)> set topcounter enable  
PureFlow(A)>
```

[Arguments]

```
enable | disable
```

Specify enable to enable the top counter, or disable to disable it.

[Default Value]

The default value is disable.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

```
Usage : set topcounter {enable | disable}
```

- There is a missing argument.

set topcounter config interval time

[Format]

```
set topcounter config interval time <time_interval>
```

[Description]

This command sets the collection cycle of the top counter.

This command can be executed in Administrator mode.

Note:

If the collection cycle is set to 1 minute, the traffic counter can measure a total of 100,000 entries for all scenarios to be measured. If the collection cycle is 5 or more minutes, a maximum of 400,000 entries can be measured.

Note:

When Monitoring Manager 2 is connected to this device, the collection cycle of the top counter may be changed by Monitoring Manager 2. The collection cycle set by this command and the collection cycle set with the GUI of Monitoring Manager 2 are compared, and the longer cycle is applied. To check the operating collection cycle, use the `show topcounter config` command.

[Display]

```
PureFlow(A)> set topcounter config interval time 5  
PureFlow(A)>
```

[Arguments]

`time_interval`

Specify the collection interval for the top counter in minutes.

Valid values are 1, 5, 60, 180, and 1440 [minutes].

[Default Value]

The default value is 5 [minutes].

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

Usage: `set topcounter config interval time <time_interval>`

- There is a missing argument.

Specified interval time is invalid.

(Valid values are 1, 5, 60, 180, 1440)

- The specified time is out of range.

add topcounter config appli port

[Format]

```
add topcounter config appli port <portno>
add topcounter config appli port <portno>--<portno>
```

[Description]

This command adds any application port number as a port number to be monitored by the top counter. Up to 256 entries can be added. One command can add 1 entry whether it is separate specification or range specification.

If either the source port number or destination port number of the flow matches, the flow is counted. If both the source port number and destination port number match a registered entry, the flow is counted by the traffic counter for destination port numbers. It is not counted by the traffic counter for source port numbers.

Generally known application port numbers are monitored by default. To check the application port numbers set by default, use the `show topcounter config all` command.

An application port number to be registered must not be duplicate. However, the default application port number can be duplicate.

This command can be executed in Administrator mode.

[Display]

```
PureFlow(A)> add topcounter config appli port 8192
PureFlow(A)>
PureFlow(A)> add topcounter config appli port 32768-32800
PureFlow(A)>
```

[Arguments]

```
portno
portno-portno
```

Specify the application port number. Specify the number directly or use `<start-end>`.

When specifying a range by using `<start-end>`, ensure the order is ascending (start < end).

Valid values are from 0 to 65535.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

```
Usage : add topcounter config appli port <portno>
       add topcounter config appli port <portno-portno>
```

- There is a missing argument.

Maximum number of application port entry is exceeded.

- The maximum registration limit for application ports is exceeded.

Specified application port number is invalid. (Valid from 0 to 65535. Or Start - End)

- The specified application port is invalid.

It overlaps with the following, existing entry.

```
port_from - port_to
-----
#N      -      #N
-----
```

- The specified application port duplicates an existing one.

delete topcounter config appli port

[Format]

```
delete topcounter config appli port <portno>
delete topcounter config appli port <portno>-<portno>
```

[Description]

This command deletes an application port number monitored by the top counter.

You can delete application port numbers that duplicate the default application port number, but cannot delete the default application port number. To confirm the default settings, use the `show topcounter config all` command.

This command can be executed in Administrator mode.

[Display]

```
PureFlow(A)> delete topcounter config appli port 8192
PureFlow(A)>
PureFlow(A)> delete topcounter config appli port 32768-32800
PureFlow(A)>
```

[Arguments]

```
portno
portno-portno
```

Specify the application port number. Specify the number directly or use `<start-end>`.

When specifying a range by using `<start-end>`, ensure the order is ascending (start < end).

Valid values are from 0 to 65535.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

```
Usage : delete topcounter config appli port <portno>
        delete topcounter config appli port <portno-portno>
```

- There is a missing argument.

Specified application port number is invalid. (Valid from 0 to 65535. Or Start - End)

- The specified application port is invalid.

Specified application port number does not exist.

- The specified application port does not exist.

add topcounter config appli port static

[Format]

```
add topcounter config appli port static <scenario_name> <portno>
```

[Description]

This command registers any application port number as a port number to be always monitored by the top counter. Up to 25 entries can be specified for each scenario to be measured.

If an application port number is registered as static, the traffic counter is fixed to be used for the application port number. Also, the `show topcounter target` command can always show the measurement results regardless of the priority.

The entries differ from application port numbers added by the `add topcounter config appli port` command. This command can register scenarios regardless of whether they are registered by the `add topcounter config appli port` command.

This command can be executed in Administrator mode.

[Display]

```
PureFlow(A)> add topcounter config appli port static /port1 8192  
PureFlow(A)>
```

[Arguments]

`scenario_name`

Specify the absolute path for the name of the scenario to be measured.

`portno`

Specify the application port number to be assigned as static.

Valid values are from 0 to 65535.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

Usage : `add topcounter config appli port static <scenario_name> <portno>`

- There is a missing argument.

Specified Scenario Name is invalid.

- The scenario name is invalid.

Specified Scenario is not a target.

- The specified scenario is not set as a measurement target.

Maximum number of static application port entry is exceeded.

- The maximum registration limit for static application ports is exceeded.

Specified application port number is invalid. (Valid from 0 to 65535)

- The specified application port is invalid.

It overlaps with the existing entry.

- The specified application port number is already registered as static.

delete topcounter config appli port static

[Format]

```
delete topcounter config appli port static <scenario_name> <portno>
```

[Description]

This command deletes the static registration of the application port number.

This command can be executed in Administrator mode.

[Display]

```
PureFlow(A)> delete topcounter config appli port static /port1 8192  
PureFlow(A)>
```

[Arguments]

scenario_name

Specify the absolute path for the name of the scenario to be measured.

portno

Specify the application port number for which to delete the static registration.

Valid values are from 0 to 65535.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

Usage : delete topcounter config appli port static <scenario_name> <portno>

- There is a missing argument.

Specified Scenario Name is invalid.

- The scenario name is invalid.

Specified Scenario is not a target.

- The specified scenario is not set as a measurement target.

Specified application port number is invalid. (Valid from 0 to 65535)

- The specified application port is invalid.

Specified static application port does not exist.

- The specified application port number is not registered as static.

add topcounter target

[Format]

```
add topcounter target scenario <scenario_name>
                               [sip <cnt_num>] [dip <cnt_num>]
                               [sip_dip <cnt_num>] [appli <cnt_num>]
```

[Description]

This command adds a scenario to be measured by the top counter. Up to 200 measurement ranges can be added.

Unregistered scenarios can be specified. If an unregistered scenario is specified, the top counter counts the scenario when it is registered. If the related scenario is deleted, it is not deleted from the top counter measurement target.

In addition, the maximum number of traffic counters to be assigned to each measurement range can be specified. Traffic counters can be assigned automatically to each IP address or application port number of transmitted traffic up to the specified number to measure the amount of traffic. Up to 400,000 traffic counter entries can be assigned for all measurement targets.

This command can be executed in Administrator mode.

[Display]

```
PureFlow(A)> add topcounter target scenario /port1 sip 1000 dip 500 sip_dip 1000
              appli 100
PureFlow(A)>
```

[Arguments]

scenario_name

Specify the absolute path for the name of the scenario to be measured.

sip <cnt_num>

Specify the maximum number of traffic counters to be assigned to each Source IP address. If you do not need this value to be displayed by the top counter, specify 0.

Valid values are from 0 to 400000.

dip <cnt_num>

Specify the maximum number of traffic counters to be assigned to each Destination IP address. If you do not need this value to be displayed by the top counter, specify 0.

Valid values are from 0 to 400000.

sip_dip <cnt_num>

Specify the maximum number of traffic counters to be assigned to each pair of Source and Destination IP addresses. If you do not need this value to be displayed by the top counter, specify 0.

Valid values are from 0 to 400000.

appli <cnt_num>

Specify the maximum number of traffic counters to be assigned to each application port number. If you do not need this value to be displayed by the top counter, specify 0.

Valid values are from 0 to 400000.

[Default Value]

sip <cnt_num>
The default value is 400000.

dip <cnt_num>
The default value is 400000.

sip_dip <cnt_num>
The default value is 400000.

appli <cnt_num>
The default value is 400000.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

Usage : add topcounter target scenario <scenario_name>
[sip <cnt_num>] [dip <cnt_num>]
[sip_dip <cnt_num>] [appli <cnt_num>]

- There is a missing argument.

Specified Scenario Name is invalid.

- The scenario name is invalid.

Specified Scenario is already a target.

- The specified scenario ID has already been set as a target.

Specified SIP flow entry is invalid. (Valid from 0 to 400000)

- The specified number of SIP counter entries is out of range.

Specified DIP flow entry is invalid. (Valid from 0 to 400000)

- The specified number of DIP counter entries is out of range.

Specified SIP_DIP flow entry is invalid. (Valid from 0 to 400000)

- The specified number of SIP_DIP counter entries is out of range.

Specified application flow entry is invalid. (Valid from 0 to 400000)

- The specified number of application counter entries is out of range.

Maximum number of target entry is exceeded.

- The maximum number of top counter measurement ranges that can be set in the system is exceeded.

delete topcounter target

[Format]

```
delete topcounter target scenario <scenario_name>
delete topcounter target all
```

[Description]

This command deletes a scenario measured by the top counter. Specify `all` to delete all entries.

This command can be executed in Administrator mode.

[Display]

```
PureFlow(A)> delete topcounter target scenario /port1
PureFlow(A)>
```

[Arguments]

`scenario <scenario_name>`

Specify the absolute path for the name of the scenario to be measured.

`all`

Specifies all entries.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

```
Usage : delete topcounter target scenario <scenario_id>
       delete topcounter target all
```

- There is a missing argument.

Specified Scenario Name is invalid.

- The scenario name is invalid.

Specified Scenario is not a target.

- The specified scenario is not set as a measurement target.

update topcounter target

[Format]

```
update topcounter target scenario <scenario_name>
                               [sip <cnt_num>] [dip <cnt_num>]
                               [sip_dip <cnt_num>] [appli <cnt_num>]
```

[Description]

This command changes parameters specified for the measurement range of the top counter.

This command can be executed in Administrator mode.

[Display]

```
PureFlow(A)> update topcounter target scenario /port1 sip 1000 dip 500 sip_dip 1000
              appli 100
PureFlow(A)>
```

[Arguments]

scenario_name

Specify the absolute path for the name of the scenario to be measured.

sip <cnt_num>

Specify the maximum number of traffic counters to be assigned to each Source IP address. If you do not need this value to be displayed by the top counter, specify 0.

Valid values are from 0 to 400000.

dip <cnt_num>

Specify the maximum number of traffic counters to be assigned to each Destination IP address. If you do not need this value to be displayed by the top counter, specify 0.

Valid values are from 0 to 400000.

sip_dip <cnt_num>

Specify the maximum number of traffic counters to be assigned to each pair of Source and Destination IP addresses. If you do not need this value to be displayed by the top counter, specify 0.

Valid values are from 0 to 400000.

appli <cnt_num>

Specify the maximum number of traffic counters to be assigned to each application port number. If you do not need this value to be displayed by the top counter, specify 0.

Valid values are from 0 to 400000.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

Usage : update topcounter target scenario <scenario_name>
[sip <cnt_num>] [dip <cnt_num>]
[sip_dip <cnt_num>] [appli <cnt_num>]

- There is a missing argument.

Specified Scenario Name is invalid.

- The scenario name is invalid.

Specified Scenario is not a target.

- The specified scenario is not set as a measurement target.

It is necessary to set one or more parameters.

- At least one parameter must be set.

Specified SIP flow entry is invalid. (Valid from 0 to 400000)

- The specified number of SIP counter entries is out of range.

Specified DIP flow entry is invalid. (Valid from 0 to 400000)

- The specified number of DIP counter entries is out of range.

Specified SIP_DIP flow entry is invalid. (Valid from 0 to 400000)

- The specified number of SIP_DIP counter entries is out of range.

Specified application flow entry is invalid. (Valid from 0 to 400000)

- The specified number of application counter entries is out of range.

show topcounter target

[Format]

```
show topcounter target scenario <scenario_name> group {sip |dip |sip_dip |appli}
```

[Description]

This command shows the measurement results of the top counter.

This command periodically counts the number of transmitted octets of traffic, and displays the top 25 numbers in order. Note that application port numbers that were registered as static by the `add topcounter config appli port` command are always displayed. This command displays top 25 non-static and static numbers.

The number is counted for each Source IP address, Destination IP address, pair of Source IP and Destination IP addresses, or application port number. Therefore, there are four different types.

To display the top counter results, add a measurement scenario (using the `add topcounter target` command) and enable the top counter (using the `set topcounter` command) beforehand. If necessary, set the collection interval for the top counter (using the `set topcounter config interval time` command).

This command can be executed in the Normal and Administrator modes.

[Display]

(Top counter display by IP Address)

```
PureFlow(A)> show topcounter target scenario /port1 group sip
From          : 2017 Jul 25 11:31:15 To          : 2017 Jul 25 11:36:15
Total Octet   : 34297001                Total Packet : 443555
```

Order	IP Address	Tx Octet	Tx Packet
1	192.100.49.211	402952	5411
2	192.100.103.211	391129	5311
3	fe80:0000:0000:0000:0290:ccff:fe22:8b4c	378346	5079
4	fe80:0000:0000:0000:0290:ccff:fe22:8b4d	362286	4789
5	fe80:0000:0000:0000:0290:ccff:fe22:8b4e	357361	4827

```
PureFlow(A)>
```

(Top counter display by application port number)

```
PureFlow(A)> show topcounter target scenario /port1 group appli
From          : 2017 Jul 25 11:31:15 To          : 2017 Jul 25 11:36:15
Total Octet   : 34297001                Total Packet : 443555
```

Order	TCP/UDP Port	Type	Tx Octet	Tx Packet
1	80	static	29328338	379193
2	20000		461027	6061
3	20001		420104	5503
4	20006		398383	5267
:				
24	443	static	6340	18
25	21	static	0	0

```
PureFlow(A)>
```


The displayed items and their meanings are as follows:

- `From`
Shows the start time of the measurement.
- `To`
Shows the finish time of the measurement.
- `Total Octet`
Shows the total number of transmitted octets for all flows.
- `Total Packet`
Shows the total number of transmitted packets for all flows.
- `Order`
Shows results in descending order of transmitted octets.
The top 25 are displayed for `sip`, `dip`, and `sip_dip` groups.
For the `appli` group, static-specified application port numbers are displayed on a priority basis regardless of their rank. The top 25, including static-specified application port numbers, are displayed.
- `IP Address`
Shows the IP address.
- `TCP/UDP port`
Shows the application port number.
- `Type`
Shows the static setting of the application port number.
- `Tx Octet`
Shows the number of transmitted octets for the flow.
- `Tx Packet`
Shows the number of transmitted packets for the flow.

[Arguments]

`scenario_name`

Specify the absolute path for the name of the scenario to be measured.

`group {sip | dip | sip_dip | appli}`

Specify the type of the top counter to be displayed.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

Usage : show topcounter target scenario <scenario_name>
group {sip | dip | sip_dip | appli}

- There is a missing argument.

Specified scenario name is invalid.

- The specified scenario name is invalid.

Specified Scenario is not a target.

- The specified scenario is not set as a measurement target.

Topcounter status is disable

- The top counter is disabled.

None Topcounter information

- There is no top counter information.

None SIP Topcounter information

- There is no SIP top counter information.

None DIP Topcounter information

- There is no DIP top counter information.

None SIP and DIP Topcounter information

- There is no SIP DIP top counter information.

None Protocol Topcounter information

- There is no Port top counter information.

Specified Group name is invalid

Please specify it from sip, dip, sip_dip or appli.

- The specified group name is invalid.

show topcounter config

[Format]

```
show topcounter config [all]
```

[Description]

This command displays the top counter settings.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show topcounter config
Main Configuration
  Status           : enable
  Interval Time    : 5min

Resource Allocation
  Resource Name           Used   Available
  -----
  Total TOPcounter target entries      4     198
  Total user defined portno entries    3     253

Target Entries
Target Scenario Name      : "/port1/east/channel1"
Max Traffic Counter
  sip      dip      sip_dip appli
  -----
  400000  400000  400000  400000
Static Application PortNo
  80, 443, 21

Target Scenario Name      : "/port1/east/channel2"
Max Traffic Counter
  sip      dip      sip_dip appli
  -----
  400000  400000  400000  400000
Static Application PortNo
  (None)

Application PortNo
User Define:
  8010
  20000-20010
  80
  443
  21

PureFlow(A)>
```

The displayed items and their meanings are as follows:

- Main Configuration
 - Shows the top counter settings.
 - Status
 - Shows the operation status of the top counter.
 - enable The top counter is enabled.
 - disable The top counter is disabled.
 - Interval Time
 - Shows the collection interval of the top counter. The unit is minutes.
- Resource Allocation
 - Shows the number of resources used by the top counter.
 - Resource Name
 - Shows the resource name.
 - Total TOPcounter target entries
 - Shows the number of measurement scenarios that can be set.
 - Total user defined portno entries
 - Shows the number of application port numbers that can be set.
 - Used
 - Shows the number of resources being used.
 - Available
 - Shows the remaining available resources.
- Target Entries
 - Shows the scenarios and parameters to be measured by the top counter.
 - Target Scenario Name
 - Shows the names of the scenarios to be measured by the top counter.
 - Max Traffic Counter
 - Shows the maximum number of traffic counters assigned to the measurement range.
 - sip
 - Shows the maximum number of traffic counters assigned to each Source IP address.
 - dip
 - Shows the maximum number of traffic counters assigned to each Destination IP address.
 - sip_dip
 - Shows the maximum number of traffic counters assigned to each pair of Source and Destination IP addresses.
 - appli
 - Shows the maximum number of traffic counters assigned to each application port number.
 - Static Application PortNo
 - Shows static-specified application port numbers.
- Application PortNo.
 - Shows the number of the application port to be observed.
 - User Define
 - Shows the application port numbers added by the user.
 - default
 - Shows the application port numbers set by default.

[Arguments]

- all
 - Lists the application port numbers set to be observed by default.

[Errors]

- Invalid input at Marker
 - There is an unnecessary argument.

2.2.9 Operation management-related commands

ping

[Format]

```
ping <IP_address> [channel <channel_name> {lan | wan}] [<send_count>]
```

[Description]

This command outputs the ICMP ECHO_REQUEST packet from the system interface or channel interface to the specified host.

When only the "ping <IP address>" is specified and the command is executed, the Ping is output from the system interface.

When "channel" and after is specified and the command is executed, the Ping is output from the channel interface.

The Ping timeout operates at 1000 ms.

The number of times for measurement is set to one for the system interface. If the number of times for measurement is not specified, the measurement is performed three times for the channel interface.

This command can be executed in the Normal and Administrator modes.

[Display]

(When there is a response to output from system interface)

```
PureFlow> ping 192.168.37.20
PING 192.168.37.20 (192.168.37.20) 56(84) bytes of data.
64 bytes from 192.168.37.20: icmp_seq=1 ttl=64 time=0.372 ms
```

```
--- 192.168.37.12 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.372/0.372/0.372/0.000 ms
PureFlow>
```

(When there is no response to output from system interface)

```
PureFlow>
PureFlow> ping 192.168.37.100
PING 192.168.37.100 (192.168.37.100) 56(84) bytes of data.

--- 192.168.37.100 ping statistics ---
1 packets transmitted, 0 received, 100% packet loss, time 100ms
PureFlow>
PureFlow(A)> ping 192.168.37.100
PING 192.168.37.100 (192.168.37.100) 56(84) bytes of data.
From 192.168.37.20 icmp_seq=1 Destination Host Unreachable
```

```
--- 192.168.37.100 ping statistics ---
1 packets transmitted, 0 received, +1 errors, 100% packet loss, time 0ms
```

```
PureFlow(A)>
```

(When a subnet different from system interface is specified)

```
PureFlow> ping 10.100.1.1
connect: Network is unreachable
PureFlow>
```

(When there is a response to output from channel interface)

```
PureFlow> ping 192.168.0.1 channel "ch1" wan
PING 192.168.0.1 0(28) bytes of data.
 8 byte from 192.168.0.1: icmp_req=1 time=1.214 ms
 8 byte from 192.168.0.1: icmp_req=2 time=1.211 ms
 8 byte from 192.168.0.1: icmp_req=3 time=1.213 ms
--- 192.168.0.1 ping statistics ---
 3 packets transmitted, 3 received, 0% packet loss
 rtt min/avg/max = 0.000/0.000/0.000 ms
PureFlow>
```

(When there is no response to output from channel interface)

```
PureFlow> ping 192.162.0.1 channel "ch1" wan
PING 192.162.0.1 0(28) bytes of data.
from 192.162.0.1: icmp_req=1 Destination Host Unreachable
from 192.162.0.1: icmp_req=2 Destination Host Unreachable
from 192.162.0.1: icmp_req=3 Destination Host Unreachable
--- 192.162.0.1 ping statistics ---
 3 packets transmitted, 0 received, 100% packet loss
PureFlow>
```

(When a subnet different from channel interface is specified)

```
PureFlow> ping 200.1.1.1 channel test wan
PING 200.1.1.1 0(28) bytes of data.
from 200.1.1.1: icmp_req=1 Destination Host Unreachable
from 200.1.1.1: icmp_req=2 Destination Host Unreachable
from 200.1.1.1: icmp_req=3 Destination Host Unreachable
--- 200.1.1.1 ping statistics ---
 3 packets transmitted, 0 received, 100% packet loss
PureFlow>
```

[Arguments]

IP_address

Specify the IP address of the host to which the ICMP ECHO_REQUEST packet is to be sent.
IPv4/IPv6 addresses can be specified.

channel_name

Specifies the channel name.

{lan | wan}

Specifies the output port.

send_count

Specifies the number of measurement times.

This can be specified only when outputting from the channel interface.

Valid values are from 0 to 2147483647.

If the number specification is omitted, measurement is performed three times.

If specifying 0, the measurement for every second is continued until exiting by CTRL-C.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : ping [channel <channel_name> {lan | wan}] [<send_count>]

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

Specified channel is not configured.

- The IP address is not set for the specified channel.

Default-channel cannot be used for this command.

- The default channel cannot be specified.

Host address should be same as of the channel IP version.

- The address of the specified host must match the IP version of second-peer.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

connect: Network is unreachable

- Access to the network is disabled.

Specified number is invalid (Valid from 0 to 2147483647)

- The specified number of measurement times is out of range.

Please specify the channel

- A channel must be specified for "send_count".

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

traceroute

[Format]

```
traceroute <IP_address> channel <channel_name> {lan |wan}
```

[Description]

This command displays the routes to the specified IP address.

The ICMP (Ping) packet is transmitted while changing TTL (1 to 64). The ICMP (Ping) packet is transmitted three times for each TTL.

When only "traceroute <IP address>" is specified and the command is executed, the ICMP (Ping) packet is output from the system interface.

When "channel" and after are specified and the command is executed, the ICMP (Ping) packet is output from the channel interface.

This command can be executed in the Normal and Administrator modes.

[Display]

The display contents and their meanings are described below.

Shows the TTL value, address, and RTT (for three times) for each response.

If there is no response during the time-out time for 1000 ms, an * (asterisk) appears.

(When reaching the specified IP address via one router)

```
PureFlow(A)> traceroute 192.168.81.1 channel "ch1" wan
traceroute to 192.168.81.1, 64 hops max
 1 192.168.101.2 405.008 ms 202.064 ms 208.714 ms
 2 192.168.81.1 200.226 ms 201.748 ms 200.167 ms
```

(When there is a response from the same host for Pings sent three times)

```
PureFlow> traceroute 2001:1::1 channel "ch1" wan
1 2001:1::1 0.329 ms 0.314 ms 0.306 ms
```

(In the case of a different response only to the Ping sent third among Pings sent three times)

```
PureFlow> traceroute 2001:1::1 channel "ch1" wan
1 2001:1::1 0.329 ms 0.314 ms 2001:2::1 0.329 ms
```

(When there is no response only to the Ping sent second among Pings sent three times)

```
PureFlow> traceroute 2001:1::1 channel "ch1" wan
1 2001:1::1 0.329 ms * 0.329 ms
```

(When there are no responses to all Pings sent three times)

```
PureFlow> traceroute 2001:1::1 channel "ch1" wan
1 * * *
```

(When there is a response only to the Ping sent third among Pings sent three times)

```
PureFlow> traceroute 2001:1::1 channel "ch1" wan
1 * * 2001:1::1 0.329 ms
```

[Arguments]

IP_address

Shows the route to the specified IP address.

IPv4/IPv6 addresses can be specified.

channel_name

Specifies the channel name. The IP address of the specified channel is used as the source address.

The channel without the IP address or the default channel cannot be specified.

{lan | wan}

Specifies the output port.

[Errors]

Invalid IP address

- The specified IP address format or the value is invalid.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

connect: Network is unreachable

- Access to the network is disabled. Check the linkage state of the Network port.

Default-channel cannot be used for this command.

- The default channel cannot be specified.

Specified channel is not configured.

- The IP address is not set for the specified channel.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

telnet

[Format]

```
telnet <IP_address> [<port>]
```

[Description]

This command connects the system to the specified host (IP_address) via Telnet.

For “port”, specify the TCP port number to be used for connection. If omitted, 23 is used.

While logged into an external device via Telnet, the CLI session in which this command was executed is put on hold. Upon logout, the CLI session is restored.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> telnet 192.168.37.20
```

```
Entering character mode  
Escape character is '^]'.  
  
Debian GNU/Linux 5.0  
debian login:
```

[Arguments]

IP_address

Specify the IP address of the host to connect to via Telnet.

port

Specify the TCP port number to be used for Telnet connection.

Valid values are from 1 to 65535.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : telnet <IP_address> [<port>]

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

Port is invalid (Valid form 1 to 65535)

- The specified TCP port number is invalid.

telnet: Can't connect to remote host. (<IP_address>): Network is unreachable.

- Cannot connect to the remote host of the specified IP address.

arp

[Format]

```
arp -a [channel {<channel_name>|all}] [<IP_address>]
arp -d <IP_address> [channel <channel_name>]
```

[Description]

This command displays (-a) or deletes (-d) the entry contents of the ARP table.

If "channel" is omitted, the ARP entries registered on the system interface side is displayed or deleted.

If "channel" is specified, the ARP entries registered on the channel interface side is displayed or deleted.

If "channel all" is specified, the ARP entries of all channels are displayed.

IP address can be specified only for specifying "channel".

Up to 1024 ARP entries on the system interface side can be registered.

Up to 8192 ARP entries on the channel interface side can be registered.

Aging time for the ARP entry is 1 minute for system interface and 10 minutes for channel interface.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A) > arp -a
IP address      MAC address      type
-----
192.168.40.11   00-00-91-01-11-23 permanent
192.168.40.13   00-00-91-01-23-45 publish
PureFlow(A) >
```

```
PureFlow(A) > arp -a channel ch1 192.168.30.27
IP address      MAC address      Channel
-----
192.168.30.27   00-00-91-01-45-19 ch1
PureFlow(A) >
```

```
PureFlow(A) > arp -d 192.168.40.13
PureFlow(A) >
```

```
PureFlow(A) > arp -d channel ch1 192.168.30.27
PureFlow(A) >
```

The following describes the items displayed when the -a option is specified.

- IP address

Displays the IPv4 address of the entry registered in the ARP table.

- MAC address

Displays the MAC address of the entry registered in the ARP table.

- type

The types of entries registered in the ARP table are as follows:

permanent	Static Entries
publish	Entries that respond to ARP requests

- Channel

Shows the channel name.

[Arguments]

-a

Displays entries registered in the ARP table.

-d

Deletes the specified entry from the ARP table.

IP_address

Specify the IPv4 address of the entry that you want to display or delete.

{channel_name | all}

Specifies the channel name. Specifies the IPv4 address (IP address) at the same time when displaying an entries by specifying the channel name.

Specifies the “all” when displaying the ARP entries for all channels.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : arp -d <IP_address> [channel <channel_name>]

Usage : arp -a [channel {<channel_name>|all}] [<IP_address>]

- There is a missing argument.

Invalid IP_address

- The specified IP address format or value is invalid.

Entry not found

- The ARP entry corresponding to the specified IP address does not exist.

Route doesn't exist to this IP Address.

- There is no accessible route to the specified IP address.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

Specified channel necessary to input IP address.

- When a channel is specified, the IP address must be specified.

IP address cannot be used for this command.

- The IP address cannot be specified.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

delete ndp neighbor

[Format]

```
delete ndp neighbor <IP_address> [channel <channel_name>]
```

[Description]

This command deletes an entry of the NDP (Neighbor Discovery Protocol) cache table. If "channel" is omitted, the NDP entry registered on the system interface side is deleted. If "channel" is specified, the NDP entry registered on the channel interface side is deleted. This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete ndp neighbor 2001:db8::1
PureFlow(A)> delete ndp neighbor fe80::d070:4751:1000:1 channel ch1
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IPv6 address of the entry to delete.

channel_name

Specifies the channel name.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : delete ndp neighbor <IP_address> [channel <channel_name>]

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

Entry not found

- The NDP entry corresponding to the specified IP address does not exist.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

show ndp neighbor

[Format]

```
show ndp neighbor [channel {<channel_name>|all}] [<IP_address>]
```

[Description]

This command displays the entry contents of the NDP (Neighbor Discovery Protocol) cache table.

If "channel" is omitted, the NDP cache table registered on the system interface side is displayed.

If "channel" is specified, the NDP cache table registered on the channel interface side is displayed. If "channel all" is specified, the NDP entries of all channels are displayed.

Up to 1024 NDP entries on the system interface side can be registered.

Up to 8194 NDP entries on the channel interface side can be registered.

Aging time for the NDP entry is 1 minute for system interface and 10 minutes for channel interface.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show ndp neighbor
```

IP address	MAC address	type
2001:db8::1	00-00-91-01-11-23	reachable
fe80::d070:4751:3d86:8f06	00-00-91-01-23-45	stale

```
PureFlow>
```

```
PureFlow> show ndp neighbor channel ch1 fe80::d070:4751:1000:1
```

IP address	MAC address	channel
fe80::d070:4751:1000:1	00-00-91-01-23-45	ch1

```
PureFlow>
```

The displayed items and their meanings are as follows:

- IP address

Shows the IPv6 address of the NDP entry.

- MAC address

Shows the MAC address of the NDP entry.

- type

Shows the status of the NDP entry.

incomplete	Entry in address resolution processing
reachable	Valid and reachable entry
stale	Valid entry but reachability is unknown
delay	Valid entry but reachability is being confirmed
probe	Invalid entry with no response in delay state, and being confirmed by ND
failed	Invalid entry whose address could not resolved
noarp	Valid entry that does not require confirmation
permanent	Entry that only the administrator can delete, like noarp

- channel

Shows the channel name.

[Arguments]

{channel_name | all}

Shows the channel name. Specifies the IPv6 address (IP address) at the same time when displaying an entries by specifying the channel name.

Specifies the “all” when displaying the NDP entries for all channels.

IP address

Specifies the IPv6 address for displaying the entries.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : show ndp neighbor [channel name {<channel_name>|all}] [<IP_Address>]

Usage : show ndp neighbor [channel all]

- There is a missing argument.

Invalid IP address

- The specified IP address format or the value is invalid.

Specified channel name is invalid.

- The specified channel name is invalid.

Specified channel name is not used.

- The specified channel does not exist.

Specified channel necessary to input IP address.

- When a channel is specified, the IP address must be specified.

IP address cannot be used for this command.

- The IP address cannot be specified.

TCP Acceleration Function is not licensed.

- Not licensed TCP acceleration function.

set syslog severity

[Format]

```
set syslog severity <severity_level>
```

[Description]

This command sets the lowest level for the system log to be sent to the syslog host (severity). Logs with a level lower than this are not sent to the syslog host.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set syslog severity notice  
PureFlow(A)>
```

[Arguments]

Severity level

Specify the severity. Use a keyword or numeric value that represents the severity.

Keyword	Severity	Level
emergency	0	Highest
alert	1	↑
critical	2	
error	3	↓
warning	4	
notice	5	
informational	6	Lowest

[Default Value]

The default value for severity is “notice” (logs at the notice level or higher are sent to the syslog host).

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set syslog severity <severity_level>

- There is a missing argument.

Specified severity keyword is invalid

- The specified severity keyword is invalid.

invalid level specified

- The specified severity is out of range.

set syslog facility

[Format]

```
set syslog facility {ccpu | fcpu} <facility_code>
```

[Description]

This command sets the facility of the system logs.

This setting applies both to logs sent to the syslog host and the system logs recorded internally in the system.

This command can be executed only in Administrator mode.

Note:

The facility value can be set to 0, but 0 is reserved as a kernel message, and therefore cannot be used. If 0 is specified, 16 (local message) is used for operation.

[Display]

```
PureFlow(A)> set syslog facility ccpu 20
PureFlow(A)> set syslog facility fcpu 20
PureFlow(A)>
```

(When 0 is specified for the facility code)

```
PureFlow(A)> set syslog facility ccpu 0
Warning
Facility 0 is an object for kernel messages, and since it cannot be used from an user
process, it changes the facility to set up into 16.
PureFlow(A)>
```

[Arguments]

{ccpu | fcpu}

When setting the facility of the system log generated by the control system processing unit, specify "ccpu". When setting the facility of the system log generated by the forwarding system processing unit, specify "fcpu".

facility_code

Specify the facility of the system logs by using a numeric value. Valid values are from 0 to 23.

[Default Value]

The default values for ccpu and fcpu are "16" and "17", respectively.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage: set syslog facility {ccpu | fcpu} <facility_code>

- There is a missing argument.

Specified facility code is invalid. (Valid from 0 to 23)

- The specified facility code is out of range.

add syslog host

[Format]

```
add syslog host <IP_address> [<udp_port>]
```

[Description]

Registers the host of the output destination of the system log.
Up to 16 hosts of the output destination can be registered.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> add syslog host 192.168.37.20 514  
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the destination host for system log output.

udp_port

Specify the UDP port of the destination host for system log output.
Valid values are from 1 to 65534.
If this is not specified, 514 is used as the UDP port number.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add syslog host <IP_address> [<udp_port>]

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

Specified UDP port number is invalid.(Valid from 1 to 65534)

- The specified UDP port number is invalid.

Specified host address already exists

- The specified host IP address had already been set.

Maximum number of host was exceeded

- The maximum registration limit for host IP addresses is exceeded.

delete syslog host

[Format]

```
delete syslog host <IP_address>
delete syslog host all
```

[Description]

Deletes the host of the output destination of the system log.
If "all" is specified, it deletes all destination hosts for system log output.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete syslog host 192.168.1.1
PureFlow(A)>
```

[Arguments]

`IP_address`
Specifies the IP address of the destination host for system log output.

`all`
Deletes the hosts of all output destinations of the system log.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.
Usage : delete syslog host {all | <IP_address>}

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

Specified host address is not configured.

- The specified host address is not registered.

set syslog host

[Format]

```
set syslog host {enable | disable}
```

[Description]

This command enables and disables system log output to a host.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)>set syslog host enable  
PureFlow(A)>  
PureFlow(A)>set syslog host disable  
PureFlow(A)>
```

[Arguments]

```
{enable | disable}
```

In the case of enabling and disabling the system log output to the host, specify “enable” and “disable”, respectively.

[Default Value]

The default value is “disable”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : set syslog host {enable | disable}
```

- There is a missing argument.

show syslog host

[Format]

```
show syslog host
```

[Description]

This command displays settings for system log output.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show syslog host
Severity level      : 5 (notice)
Facility code
  CCPU              : 16
  FCPU              : 17

Host logging       : enable

Host address       : 192.168.37.20
UDP port           : 514

Host address       : 192.168.37.21
UDP port           : 514
PureFlow>
```

The displayed items and their meanings are as follows:

- Severity level

Shows the lowest level for the system log to be sent to the host.

- Facility code

Shows the numeric values that represent the facilities of the system logs generated by the control system processing unit and forwarding system processing unit.

- Host logging

Displays the state of the output to the host using one of the following character strings:

enable	Output is enabled.
disable	Output is disabled.

- Host address

Displays the IP address of the host.

- UDP port

Displays the UDP port number of the host.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

show syslog

[Format]

```
show syslog
```

[Description]

This command displays system log information stored in the internal memory. This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show syslog
-----
Pri Date   Time           Host           Ident          [PID]  Message
-----
134 Jan 25 21:50:54 PureFlow System [10330]: Port 1/1 changed Up from Down.
```

The displayed items and their meanings are as follows:

- Pri
Shows the priority of the system log information. For details of the priority, read the “Configuration Guide”.
- Date
Shows the date on which the system log information is recorded, in the form of month, and day.
- Time
Shows the time at which the system log information is recorded, in the form of hours, minutes, and seconds.
Note that the time is shown in the 24-hour format.
- Host
Shows the name of the host that recorded the system log information.
The host name can be changed by the "set snmp sysname" command.
Up to 10 characters are displayed as the host name.
- Ident
Shows the identifier of the program that recorded the system log information.
If the log is generated by the control system processing unit or forwarding system processing unit, shown as “System”.
- [PID]
Shows the PID for which the system log information is recorded.
- Messages
Shows the contents of the system log information message.
When an identical message output is continuously repeated, only the first one is displayed and the last message repeated N times is displayed for the remaining messages. N indicates the number of repetitions from the second message to the last.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

show backup syslog

[Format]

```
show backup syslog [last | second_last]
```

[Description]

This command displays the system log information stored in the internal backup memory during system operation up to the present. It can go back to the second to last system operation and display information for that period. If the message is 80 characters or longer, it is truncated.

If no argument is specified, system log information stored during the last and second to last system operation is displayed.

If an argument is specified, only system log information stored during the last or second to last system operation is displayed.

To display system log information that is currently stored, use the “show syslog” command.

When this device is restarted, the oldest system log information is deleted, and new system log information generated during the current system operation is stored.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show backup syslog
```

```
<Last system log>
```

```
System start up time : 2017 Jan 30 22:09:45
```

```
-----
```

Pri	Date	Time	Message
133	2017 Jan 30	22:09:49	Anritsu PureFlow NF7500-S001A Software Version 1.1.1
150	2017 Jan 30	22:09:49	Port 1/1 changed Up from Down.

```
<Second last system log>
```

```
System start up time : 2017 Jan 25 10:02:50
```

```
-----
```

Pri	Date	Time	Message
133	2017 Jan 25	10:02:54	Anritsu PureFlow NF7500-S001A Software Version 1.1.1
150	2017 Jan 25	10:02:54	Port 1/1 changed Up from Down.

```
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- Last system log

Indicates that the character strings below are the system log that has been stored since the last startup.

- Second last system log

Indicates that the character strings below are the system log that has been stored since the second to last startup.

- System start up time

Shows the time that this device started the last or second to last time.

- **Pri**
Shows the priority of the system log information. For details about the priority, see the Configuration Guide.
- **Date**
Shows the date on which the system log information is recorded, in the form of year, month, and day.
- **Time**
Shows the time at which the system log information is recorded, in the form of hours, minutes, and seconds.
Note that the time is shown in the 24-hour format.
- **Message**
Shows the contents of the system log information message.

[Arguments]

{last | second_last}

Specify “last” to display the system log information stored during the last system operation, or “second_last” to display the system log information stored during the second to last system operation.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Reading backup syslog message failed

- Failed to read the system log information from the internal backup memory.

clear syslog

[Format]

```
clear syslog
```

[Description]

This command clears the system log information stored in the internal memory. This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> clear syslog  
PureFlow(A)>
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set date

[Format]

```
set date <yyyymmddhhmmss>
```

[Description]

This command sets the system time, using the Western calendar and 24-hour format. This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set date 20170501094530  
PureFlow(A)>
```

[Arguments]

yyyymmddhhmmss

Specify the time to be set in the form of year (yyyy), day (dd), hour (hh), minute (mm), and second (ss). For a 1-digit value, add "0" to make it into a 2-digit number (e.g., May 1, 2017 9:45:30 = 20170501094530).

The year, month, day, hour, minute, and second elements cannot be omitted.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set date <yyyymmddhhmmss>

- There is a missing argument.

Invalid date

- The value set for the date is invalid.

Invalid time

- The value set for the time is invalid.

set timezone

[Format]

```
set timezone <hours-offset> [<minutes-offset>]
```

[Description]

This command sets time zone of the system time as the number of hours offset from the UTC (Coordinated Universal Time).

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set timezone +9 30
PureFlow(A)>
```

[Arguments]

hours-offset

Specify the number of hours the time is offset from the UTC. Specify the number of hours following a plus (+) or minus (-) sign.

For details about the time zones that can be set, see the list of time zones on the following page.

minutes-offset

Specify the minutes part of the offset time.

If omitted, an offset value of 0 [minutes] is applied.

For details about the time zones that can be set, see the list of time zones on the following page.

[Default Value]

The default value is "+9" [hours].

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set timezone <hours-offset> [<minutes-offset>]

- There is a missing argument.

hours-offset is invalid.

- The offset hours specification is invalid.

minutes-offset is invalid.

- The minutes specification is invalid.

List of time zones

UTC + 14:00
UTC + 13:00
UTC + 12:45
UTC + 12:00
UTC + 11:30
UTC + 11:00
UTC + 10:30
UTC + 10:00
UTC + 09:30
UTC + 09:00
UTC + 08:45
UTC + 08:00
UTC + 07:00
UTC + 06:30
UTC + 06:00
UTC + 05:45
UTC + 05:30
UTC + 05:00
UTC + 04:30
UTC + 04:00
UTC + 03:30
UTC + 03:00
UTC + 02:00
UTC + 01:00
UTC + 00:00
UTC - 01:00
UTC - 02:00
UTC - 03:00
UTC - 03:30
UTC - 04:00
UTC - 04:30
UTC - 05:00
UTC - 06:00
UTC - 07:00
UTC - 08:00
UTC - 09:00
UTC - 09:30
UTC - 10:00
UTC - 11:00
UTC - 12:00

set summertime

[Format]

```
set summertime from <week> <day> <month> <hh> to <week> <day> <month> <hh> [offset]
```

[Description]

This command sets the period during which summer time is applied to the system time. This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set summertime from 2 Sunday March 2 to 1 Sunday November 2
PureFlow(A)>
```

[Arguments]

from <week> <day> <month> <hh>

Specify the date and time from which summer time is applied in the form of week number (week), day (day), month (month), and hour (hh).

Specify week and hh as a number and day and month as a word.

Summer time cannot be specified to end in the same month as it starts.

Example: The setting for starting summer time at 2:00 AM on the second Sunday in March is: `from 2 Sunday March 2`.

to <week> <day> <month> <hh>

Specify the date and time from which summer time is no longer applied in the form of week number (week), day (day), month (month), and hour (hh).

Specify “week” and “hh” as a number and “day” and “month” as a word.

Summer time cannot be specified to end in the same month as it starts.

Example: The setting for ending summer time at 2:00 AM on the first Sunday in November is: `from 1 Sunday November 2`.

offset

Specify the offset to be added to the time during the summer time application period in units of minutes.

If omitted, an offset value of 60 [minutes] is applied.

Valid values are from 1 to 720 [minutes].

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : `set summertime from <week> <day> <month> <hh> to <week> <day> <month> <hh> [offset]`

- There is a missing argument.

week is valid from 1 to 5.

- The week specification is invalid.

day is invalid.

- The day specification is invalid.

month is invalid.

- The month specification is invalid.

- Summer time cannot be specified to end in the same month as it starts.

hh is valid from 0 to 23.

- The hour specification is invalid.

offset is valid from 1 to 720.

- The offset is invalid.

unset summertime

[Format]

```
unset summertime
```

[Description]

This command cancels the application of summer time to the system time.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A) > unset summertime  
PureFlow(A) >
```

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

show date

[Format]

show date

[Description]

This command displays the current system time.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show date
Jun 6 2017(Mon) 11:30:45
UTC Offset      : +09:00
Summer Time    : From   Second Sunday March 02:00
                  To     First Sunday November 02:00
                  Offset 60 minutes
PureFlow>
```

The displayed items and their meanings are as follows:

- Month Day Year(Day of Week) HH:MM:SS
Indicates the current date and time.
- UTC Offset
Shows the offset from the UTC (Coordinated Universal Time).
- Summer Time
Shows the summer time start and end date and time, and the offset.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set sntp

[Format]

```
set sntp {enable | disable}
```

[Description]

This command enables and disables the SNTP client feature.

If “enable” is specified, time queries are regularly sent to the registered NTP/SNTP server at the specified interval, and the internal Real Time Clock of this device is synchronized.

For information on how to set an NTP server, see the description of the “set sntp server” command.

For information on how to set the interval for queries to the NTP server, see the description of the “set sntp interval” command. When no NTP server is registered, time is not queried even if this setting is set to enable.

If “disable” is specified, no time queries are sent to the NTP server.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set sntp enable  
PureFlow(A)>
```

[Arguments]

```
enable | disable
```

Specifies “enable” to enable the time synchronization by SNTP, or “disable” to disable it.

[Default Value]

The default value is “disable”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

```
Usage : set sntp {enable | disable}
```

- There is a missing argument.

set sntp server

[Format]

```
set sntp server <IP_address>
```

[Description]

This command sets the IP address of the NTP server.

This setting is effective only when sending time queries to an NTP server is enabled.

For information on how to enable sending time queries to an NTP server, see the description of the “set sntp” command.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set sntp server 192.168.37.110  
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the NTP server.

[Default Value]

The default value is “0.0.0.0” (not registered).

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set sntp server <IP_address>

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

unset sntp server

[Format]

```
unset sntp server
```

[Description]

This command cancels the IP address of the NTP server.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> unset sntp server  
PureFlow(A)>
```

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set sntp interval

[Format]

```
set sntp interval <interval>
```

[Description]

This command sets the interval at which time queries are regularly sent to the NTP server.

This setting is effective only when sending time queries to an NTP server is enabled.

For information on how to enable sending time queries to an NTP server, see the description of the “set sntp” command.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set sntp interval 3600
PureFlow(A)>
```

[Arguments]

interval

Specify the interval (in seconds) at which time queries are regularly sent to the NTP server.

Valid values are from 60 to 86400 [seconds].

Valid values are as above, but the actual operation is rounded up to 60 seconds.

e.g.,

Setting value		Operation
60	→	60
61	→	120
90	→	120

[Default Value]

The default value is “3600” [seconds].

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set sntp interval <interval>

- There is a missing argument.

Interval is valid from 60 to 86400.

- The interval is out of range.

sync sntp

[Format]

sync sntp

[Description]

This command sends time queries to the NTP server.

These queries are sent only when the setting to send time queries to the NTP server is enabled. For information on how to enable sending time queries to an NTP server, see the description of the “set sntp” command.

Check the SNTP state by the “show sntp” command.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> sync sntp
Transmitted to the server.
PureFlow(A)>
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Failure on transmission packet to the server.

- Failed in transmission to the server. Check the SNTP setting.

show sntp

[Format]

```
show sntp
```

[Description]

This command displays the status and settings of the SNTP client feature. This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show sntp
Status      : enable
Server      : 192.168.37.110
Interval    : 3600
Sync        : kept
PureFlow>
```

The displayed items and their meanings are as follows:

- Status

Displays the status of the SNTP client feature.

enable	The SNTP client feature is enabled.
disable	The SNTP client feature is disabled.

- Server

Shows the IP address of the NTP server.

- Interval

Shows the interval [seconds] at which time queries are sent to the NTP server.

- Sync

Displays the state of the time synchronization with the NTP server.

kept	Synchronized with the NTP server.
lost	Not synchronized with the NTP server.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set autologout time

[Format]

```
set autologout time <time_interval>
```

[Description]

This command sets the time interval for the auto logout feature.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set autologout time 30  
PureFlow(A)>
```

[Arguments]

`time_interval`

Specify the time interval in minutes.

Valid values are from 1 to 30 [minutes].

[Default Value]

The default value is "10" [minutes].

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set autologout time <time_interval>

- There is a missing argument.

`Time_interval` is valid from 1 to 30 minutes.

- The specified time is invalid.

show autologout

[Format]

```
show autologout
```

[Description]

This command displays auto logout setting information.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show autologout
Auto logout time = 10 minute(s)
PureFlow>
```

The displayed items and their meanings are as follows:

- Auto logout time = N minute(s)
The auto logout time is currently set to N minute(s).

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set prompt

[Format]

```
set prompt [<prompt_string>]
```

[Description]

This command sets a prompt used for CLI sessions.

The specified character string in <> of the <prompt_string> parameter will actually be shown as the prompt on a terminal device.

If (A) is included in the character string in <>, it indicates that the system is in Administrator mode.

If a value that exceeds 32 characters is specified for <prompt_string>, the first 32 characters are used as the new prompt.

If <prompt_string> is not specified, the value is reset to the default value of "PureFlow".

This command can be executed only in Administrator mode.

Note:

The following ASCII characters can be set in the prompt.

```
1234567890  
abcdefghijklmnopqrstuvwxyz  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
!#$%&'()=~^|¥@`[]{}:~*+_/.,<>
```

[Display]

```
PureFlow(A)> set prompt Console  
Console(A)> set prompt  
PureFlow(A)>
```

[Arguments]

prompt_string

Specify the character string to be used as the prompt.

The character string can be up to 32 characters long.

If spaces are required, enclose the character string with quotation marks (" "), for example, "My Router".

[Default Value]

The default value is "PureFlow".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set pager

[Format]

```
set pager {enable | disable} [current]
```

[Description]

This command enables and disables the pager feature of the CLI.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> set pager enable
PureFlow(A)>
PureFlow(A)> set pager disable
PureFlow(A)>
```

[Arguments]

{enable | disable}

Specify `enable` to enable the pager feature, or “`disable`” to disable it.

current

Sets the pager function of the current CLI session.

If omitted, the pager function is set for all CLI sessions.

[Default Value]

The default value is “`enable`”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set pager {enable | disable} [current]

- There is a missing argument.

delete session

[Format]

```
delete session <sessionId>
```

[Description]

This command deletes a session of the connected terminal device.
For `sessionId`, specify the ID shown by the “`show session`” command.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete session 1  
PureFlow(A)>
```

[Arguments]

`sessionId`

Specify the number of the session to be deleted.

Valid values are from 1 to 9.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : `delete session <sessionId>`

- There is a missing argument.

Session Id is valid from 1 to 9

- The session number is out of range.

Specified session does not exist.

- The specified session does not exist.

show session

[Format]

```
show session
```

[Description]

This command displays details about the terminal device that is logged in, such as connection type, mode, and login time.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show session
  Id Terminal                               Type      Mode      Since
  --  -
  1 Serial   RJ-45                               Normal    Dec 14   2017 12:59:50
* 2 Telnet
  3 SSH      192.168.37.185 : 2279 Admin     Dec 14   2017 14:31:44
  4 SSH      192.168.37.185 : 2280 Normal    Dec 14   2017 14:31:55
  5 Telnet
PureFlow(A)>
```

When executed, the command displays terminal sessions that are set.

One line shows one session that corresponds to the line.

Only sessions from the end of password input to logout (from login to logout) are displayed.

The displayed items and their meanings are as follows:

- Id
 - Indicates the session number of the terminal that is being connected.
- Terminal type
 - Shows the connection type using the following character strings:

Serial	The session is connected via a serial interface.
Telnet	The session is connected via Telnet.
SSH	The session is connected via SSH.

For Serial, the console port type (RJ-45 or miniUSB) is displayed.

For SSH, the IP address and the TCP port number of the client are also shown.

For the terminal session that is executing this command, * is shown at the beginning.

- Mode
 - Shows the current mode using the following character strings:

admin	Administrator mode
Normal	Normal mode

- Since
 - Shows the login date and time.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set radius auth

[Format]

```
set radius auth {enable | disable}
```

[Description]

This command enables and disables login authentication by using a RADIUS authentication server. When this setting is enabled, the user name and login password set in a RADIUS authentication server are used for login authentication to log into this device.

This command can be executed only in Administrator mode.

Note:

The login authentication procedure varies depending on this setting as shown below:

Login authentication procedure when RADIUS authentication is enabled	Login authentication procedure when RADIUS authentication is disabled
(1) Login authentication is performed by using the user name and login password set in this system. (2) If login authentication fails, login authentication is performed by using the user name and login password set in the RADIUS server.	(1) Login authentication is performed by using the user name and login password set in this system.

Note:

If login authentication is performed by using a RADIUS authentication server, the login mode of the login user is changed in accordance with the service type specified by the reply packet from the RADIUS authentication server. If the service type is “LoginUser”, login is performed in Normal mode. If the service type is “Administrative”, login is performed in Administrator mode.

RADIUS service type	Login mode
LoginUser	Normal mode
Administrative	Administrator mode

[Display]

```
PureFlow(A)> set radius auth enable
PureFlow(A)>
```

[Arguments]

```
{enable | disable}
```

In the case of enabling and disabling authentication by the RADIUS authentication server, specify “enable” and “disable”, respectively.

[Default Value]

The default value is “disable”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

```
Usage : set radius auth {enable | disable}
```

- There is a missing argument.

set radius auth timeout

[Format]

```
set radius auth timeout <timeout>
```

[Description]

This command sets the timeout time for receiving the RADIUS authentication reply packet. This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set radius auth timeout 5  
PureFlow(A)>
```

[Arguments]

timeout

Set the reception timeout time in seconds. Valid values are from 1 to 30 [seconds].

[Default Value]

The default value is "5" [seconds].

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set radius auth timeout <timeout>

- There is a missing argument.

Specified timeout is invalid. (Valid from 1 to 30)

- The specified reception timeout time is out of range.

set radius auth retransmit

[Format]

```
set radius auth retransmit <retry>
```

[Description]

This command sets the number of times to resend an authentication request.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set radius auth retransmit 3  
PureFlow(A)>
```

[Arguments]

retry

Specify the number of transmission retries. Valid values are from 0 to 10 [times].

[Default Value]

The default value is “3” [times].

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set radius auth retransmit <retry>

- There is a missing argument.

Specified retransmit is invalid. (Valid from 0 to 10)

- The specified number of transmission retries is out of range.

set radius auth method

[Format]

```
set radius auth method {CHAP | PAP | default}
```

[Description]

This command sets the method for RADIUS authentication.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set radius auth method CHAP  
PureFlow(A)>
```

[Arguments]

PAP

Sets the authentication method to PAP.

CHAP

Sets the authentication method to CHAP.

default

Resets to the default value.

[Default Value]

The default value is "CHAP".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : set radius auth method {CHAP | PAP | default}
```

- There is a missing argument.

add radius auth server

[Format]

```
add radius auth server <IP_address> [port <port>] key <string> [Primary]
```

[Description]

This command adds a RADIUS authentication server.

Set the IP address, port number, and RADIUS shared key of the RADIUS authentication server.

Specification of the “port” number and “Primary” is optional. Up to 16 RADIUS authentication servers can be registered.

This command can be executed only in Administrator mode.

Note:

The following ASCII characters can be set in the RADIUS shared key.

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
!#$%&'()=~-^|¥@`[]{}:*,+/_.,<>
```

[Display]

```
PureFlow(A)> add radius auth server 192.168.10.100 port 1812 key "radiuskey1234"
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the RADIUS authentication server.

port <port>

Specify the port number of the RADIUS authentication server. Valid values are from 1 to 65535.

key <string>

Specify the RADIUS shared key to be used for authentication by the RADIUS authentication server. 1 to 64 characters can be used. The character string can contain alphanumeric and special characters. However, it cannot contain double quotation marks (") and question marks (?).

Primary

Specify the primary server for authentication requests. If “Primary” is not specified, authentication requests are sent in the order of registration of RADIUS authentication servers.

Only one server can be specified as “Primary”. If there is a server that has already been specified as “Primary”, the server that is specified as “Primary” this time becomes the Primary server.

[Default Value]

port

The default value is “1812”.

Primary

The default value is no specification for Primary.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add radius auth server <IP_address> [port <port>] key <string> [Primary]

- There is a missing argument.

Invalid RADIUS server

- The format or value of the IP address of the RADIUS authentication server is invalid.

Specified port number is invalid. (Valid from 1 to 65535)

- The port number of the RADIUS authentication server is out of range.

Specified key length is invalid. (Valid from 1 to 64)

- The number of characters for the RADIUS shared key is out of range.

Maximum number of server.

- The maximum registration limit for RADIUS authentication servers is exceeded.

update radius auth server

[Format]

```
update radius auth server <IP_address> [port <port>] [key <string>] [Primary]
```

[Description]

This command updates the RADIUS shared key or port number of a RADIUS authentication server that has already been set.

Specification of the port number, RADIUS shared key, and “Primary” is optional, but these parameters cannot be omitted altogether. Specify at least one parameter that you want to change.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> update radius auth server 192.168.10.100 key "radiuskey1234"  
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the RADIUS authentication server.

port <port>

Specify the port number of the RADIUS authentication server. Valid values are from 1 to 65535.

key <string>

Specify the RADIUS shared key to be used for authentication by the RADIUS authentication server. 1 to 64 characters can be used. The character string can contain alphanumeric and special characters. However, it cannot contain double quotation marks (") and question marks (?).

Primary

Specify the primary server for authentication requests. If “Primary” is not specified, authentication requests are sent in the order of registration of RADIUS authentication servers.

Only one server can be specified as “Primary”. If there is a server that has already been specified as “Primary”, the server that is specified as “Primary” this time becomes the Primary server.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : update radius auth server <IP_address> [port <port>] [key <string>] [Primary]

- There is a missing argument.

Invalid RADIUS server

- The format or value of the IP address of the RADIUS authentication server is invalid.

Specified port number is invalid. (Valid from 1 to 65535)

- The port number of the RADIUS authentication server is out of range.

Specified key length is invalid. (Valid from 1 to 64)

- The number of characters for the RADIUS shared key is out of range.

It is necessary to set one or more parameters.

- At least one parameter must be set.

Specified server is not configured.

- The specified RADIUS authentication server has not been set.

delete radius auth server

[Format]

```
delete radius auth server <IP_address>
```

[Description]

This command deletes the setting information of a RADIUS authentication server. This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete radius auth server 192.168.10.100  
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the RADIUS authentication server.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : delete radius auth server <IP_address>

- There is a missing argument.

Invalid RADIUS server

- The format or value of the IP address of the RADIUS authentication server is invalid.

Specified server is not configured.

- The specified RADIUS authentication server has not been set.


```

0005 :0x12 0x18 0xMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
=====
Authentication succeeded
PureFlow (A) >

```

Note: MM represents any hexadecimal value.

The displayed items and their meanings are as follows:

- Frame
Shows the order of the packets.
- DIRECTION
Shows the RADIUS packet transmission/reception direction.
- UDP LENGTH
Shows the length of the UDP frame.
- IP Src Addr
Shows the Source IP address of the packet.
- IP Dst Addr
Shows the Destination IP address of the packet.
- UDP Src Port
Shows the Source Port number of the UDP frame.
- UDP Dst Port
Shows the Destination Port number of the UDP frame.
- Code
Shows the type code of the RADIUS frame in hexadecimal.
- Packet ID
Shows the RADIUS frame identifier in hexadecimal and decimal.
- Length
Shows the length of the RADIUS frame in hexadecimal and decimal.
- Authenticator
Shows the authenticator in hexadecimal.
- Attribute value pairs
Shows attributes contained in the packet.
- ATTR
Shows the order of the attributes.
- TYPE
Shows the attribute number of the attribute in hexadecimal.
- LENGTH
Shows the length of the attribute in hexadecimal.
- VALUE
Shows the value of the attribute in hexadecimal.

[Arguments]

username

Specify the user name.

password

Specify the password.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : test radius login chap <username> <password>

Usage : test radius login pap <username> <password>

- There is a missing argument.

Authentication is disabled.

- RADIUS authentication is disabled.

No server configured

- No RADIUS authentication server is registered.

Access rejected

- The RADIUS authentication server rejected the authentication.

No response from server

- There is no response from the RADIUS authentication server.

Reply contain an illegal service type.

- The service type notified by the ACCEPT response from the RADIUS authentication server is invalid.

Session ID is different

- The packet ID of the RADIUS reply packet received from the RADIUS authentication server is different.

RADIUS packet data is invalid

- The contents of the RADIUS reply packet received from the RADIUS authentication server are invalid.

show radius

[Format]

```
show radius
```

[Description]

This command displays RADIUS authentication setting information. RADIUS authentication servers are displayed in the order of their registration. This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow>show radius
RADIUS Authentication   : Enable
RADIUS method          : PAP
RADIUS server entries  : 2
Retry retransmit       : 3
Retry timeout          : 5

Type Pri Server          Port   key
-----
auth * 192.168.1.2        1812  "testing123"
auth   192.168.1.3        1813  "testing123"

PureFlow>
```

The displayed items and their meanings are as follows:

- RADIUS Authentication
Shows whether RADIUS authentication is enabled or disabled.
- RADIUS method
Shows the set authentication method.
- RADIUS server entries
Shows the number of registered RADIUS authentication servers.
- Retry retransmit
Shows the number of transmission retries for the set authentication request.
- Retry timeout
Shows the timeout time for communication with the set RADIUS authentication server. The unit is seconds.
- Type
Shows the type of the registered RADIUS server. auth indicates that the server is a RADIUS authentication server.
- Pri
The RADIUS authentication server specified as the Primary server is marked by an asterisk (*).
- Server
Shows the IP address of the registered RADIUS authentication server.

- Port
Shows the port number of the registered RADIUS authentication server.
- Key
Shows the RADIUS shared key of the registered RADIUS authentication server.

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

show radius statistics

[Format]

```
show radius statistics
```

[Description]

This command displays the RADIUS client statistics. The number of successful and failed login authentication attempts is displayed. In addition, the number of transmitted RADIUS protocol packets per server and the number of times a reception timeout occurred are displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)>show radius statistics
```

```
Authentication Success :      51
Authentication Failure :      3
```

Type	Server	Request	Accept	Reject	Timeout
auth	192.168.1.1	11	9	0	0
auth	192.168.1.2	23	20	2	1
auth	192.168.1.3	20	20	0	0

```
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- Success
Shows the number of successful authentication attempts using the RADIUS protocol.
- Failure
Shows the number of failed authentication attempts using the RADIUS protocol.
- Type
Shows the type of the RADIUS server. Auth indicates that the server is a RADIUS authentication server.
- Server
Shows the IP address of the RADIUS authentication server.
- Request
Shows the number of REQUEST packets transmitted to the RADIUS authentication server.
- Accept
Shows the number of ACCEPT packets received from the RADIUS authentication server.
- Reject
Shows the number of REJECT packets received from the RADIUS authentication server.
- Timeout
Shows the number of times a communication timeout occurred.

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

clear radius statistics

[Format]

```
clear radius statistics
```

[Description]

This command clears the RADIUS client statistics.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> clear radius statistics  
PureFlow(A)>
```

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set ssh

[Format]

```
set ssh {enable | disable}
```

[Description]

This command enables and disables SSH connections. If the value is changed to `disable`, new SSH connections are rejected.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set ssh disable  
PureFlow(A)> set ssh enable  
PureFlow(A)>
```

[Arguments]

```
{enable | disable}
```

Specify `enable` to enable SSH connections, or `disable` to disable them.

[Default Value]

The default value is “enable”.

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
An argument was missing.
```

```
Usage : set ssh {enable | disable}
```

- There is a missing argument.

set ssh server key

[Format]

```
set ssh server key
```

[Description]

This command regenerates the public key (host key) for server authentication, and replaces them. When this command is executed, a warning message that says that the existing keys will be updated appears, and all SSH connections are disconnected. This device has host keys generated beforehand at factory shipment. Use this command if you want to change the host keys.

If the host keys are changed, the fingerprints of the host key that the SSH client software has saved before may need to be updated. For details, see Chapter 10 “SSH” in the Configuration Guide.

This command can be executed only in Administrator mode with the console connected serially.

[Display]

```
PureFlow(A)> set ssh server key
Current SSH session might be disconnected from the network.
It is not possible to SSH login while generate key. ok (y/n)?y
.....
Done.
PureFlow(A)>
```

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

This command is executed only by serial console.

- This command is executed on the serial console.

show ssh

[Format]

```
show ssh
```

[Description]

This command displays the SSH server feature setting information.

Information on the currently connected SSH session and the FingerPrint of the host public key for authentication are displayed.

The SSH session information includes the IP address of the SSH client, connection user name, encryption algorithm, and MAC (Message Authentication Code) algorithm.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show ssh
SSH Status: Enable

Server Information:
  Status: running
  RSA key fingerprint: 1a:01:6f:e8:23:b4:ef:be:ec:13:56:74:e4:db:b6:98
  DSA key fingerprint: 9d:0a:38:ac:10:37:71:4a:be:df:35:96:31:6f:81:ac

Client Information:
-----
IP Address      Username
-----
192.168.10.211  root
-----

PureFlow(A)>
```

The displayed items and their meanings are as follows:

SSH Status

This command shows whether SSH connection is enabled or disabled.

Server Information

Shows information on the SSH server.

- Status

Shows the operation status.

running

The SSH server feature is available.

key generating now

Key generation is in progress.

The SSH server feature is unavailable until the status changes to running.

- RSA key fingerprint

Shows the fingerprint of the RSA key.

- DSA key fingerprint

Shows the fingerprint of the DSA key.

Client Information

Shows information on the SSH client.

- IP Address

Shows the IP address of the client.

- Username

Shows the name of the user who is logged in.

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set telnet

[Format]

```
set telnet {enable | disable}
```

[Description]

This command enables and disables Telnet connections. If the value is changed to “disable”, new Telnet connections are rejected.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set telnet disable  
PureFlow(A)> set telnet enable  
PureFlow(A)>
```

[Arguments]

```
{enable | disable}
```

Specify “enable” to enable Telnet connections, or “disable” to disable them.

[Default Value]

The default value is “enable”.

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
An argument was missing.
```

```
Usage : set telnet {enable | disable}
```

- There is a missing argument.

show telnet

[Format]

```
show telnet
```

[Description]

This command shows whether Telnet connections are enabled or disabled.
This command can be executed in Normal/Administrator mode.

[Display]

```
PureFlow(A)> show telnet  
Telnet : Enable  
PureFlow(A)>
```

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set http protocol

[Format]

```
set http protocol {normalhttp | httpsecure}
```

[Description]

Sets the protocol that is used by the Web application, for example, WebAPI or GUI.

When specifying “normalhttp”, HTTP (Hypertext Transfer Protocol) is used.

When specifying “httpsecure”, HTTPS (Hypertext Transfer Protocol Secure) is used.

Executing this command causes an error or timeout to occur in the request by the Web application in progress. Be sure not to execute this command while requesting the setting by the Web application since the execution result cannot be judged from the requesting side.

This command can be executed only in the Administrator mode.

Note:

HTTP and HTTPS cannot be simultaneously used.

[Display]

```
PureFlow(A)> set http protocol httpsecure  
PureFlow(A)>
```

[Arguments]

```
{normalhttp | httpsecure}
```

Set either of the HTTP or HTTPS for the protocol that is used by the Web application.

[Default Value]

The default value is “normalhttp”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : set http prtocol {normalhttp | httpsecure}
```

- There is a missing argument.

show http

[Format]

```
show http
```

[Description]

Displays the protocol that is used by the Web application, for example, WebAPI or GUI.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show http
Protocol   : HTTP
PureFlow>
```

The display contents and their meanings are described below.

- Protocol
Displays the protocol that is used by the Web application.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

add openflow controller

[Format]

```
add openflow controller <IP_address> [tcp <port>]
```

[Description]

Registers the OpenFlow controller.

Up to two settings can be registered.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> add openflow controller 198.51.100.174 tcp 6633  
PureFlow(A)>
```

[Arguments]

IP_address

Specifies the IPv4 address for Ipv4 or the IPv6 address for Ipv6.

tcp <port>

Specifies the TCO port number of the OpenFlow protocol.

For the OpenFlow protocol, TCP 6633 and 6653 are used as the standard. If the TCP port number of the OpenFlow protocol was changed, set the TCP port number that was changed in this parameter.

The setting range is from 1 to 65535.

[Default Value]

port

The default value is 6653.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage: set openflow controller <IP_address> [tcp <port>]

- There is a missing argument.

Specified IP address already used.

- The specified IP address is already used.

The format of value of the specified IP address is invalid.

- The specified IP address is invalid.

Specified TCP port number is invalid.(Valid from 1 to 65535)

- The specified TCP port number is invalid.

Maximum number of openflow controller was exceeded.

- The maximum number of OpenFlow controllers registered was exceeded.

System busy: Another conflicting command is in progress.

- The OpenFlow command is in execution.

System busy: Please try again later.

- The OpenFlow command was timed out.

OpenFlow function is not licensed.

- The OpenFlow function is not licensed.

delete openflow controller

[Format]

```
delete openflow controller <IP_address>
```

[Description]

Deletes the OpenFlow controller setting.

Executing this command disconnects the connection with the OpenFlow controller.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete openflow controller 198.51.100.174  
PureFlow(A)>
```

[Arguments]

IP_address

Specifies the OpenFlow controller IP address.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage: delete openflow controller <IP_address>

- There is a missing argument.

Specified IP address is not used.

- The specified IP address does not exist.

The format of value of the specified IP address is invalid.

- The specified IP address is invalid.

System busy: Another conflicting command is in progress.

- The OpenFlow command is in execution.

System busy: Please try again later.

- The OpenFlow command was timed out.

OpenFlow function is not licensed.

- The OpenFlow function is not licensed.

show openflow controller

[Format]

```
show openflow controller
```

[Description]

Displays the OpenFlow controller information and state.
This command can be executed only in Normal/Administrator mode.

[Display]

```
PureFlow(A)> show openflow controller
Openflow controller information:
Controller1:
  Controller1 IP address      : 198.51.100.174
  Controller1 protocol      : tcp
  Controller1 port          : 6633
  Controller1 connection status : connected

Controller2:
  Controller2 IP address      : 198.51.100.175
  Controller2 protocol      : tcp
  Controller2 port          : 6653
  Controller2 connection status : disconnected
```

The displayed items and their meanings are as follows:

- Controller IP address
Shows the OpenFlow controller IP address.
- Controller protocol
Shows the OpenFlow controller connection protocol.
- Controller port
Shows the OpenFlow controller connection port number.
- Controller connection status
Shows the status of connection with the OpenFlow controller.
connected Connected with the OpenFlow controller.
disconnected Not connected with the OpenFlow controller.

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

No OpenFlow controller is set.

- The OpenFlow controller has not yet been registered.

System busy: Another conflicting command is in progress.

- The OpenFlow command is in execution.

OpenFlow function is not licensed.

- The OpenFlow function is not licensed.

?/help

[Format]

```
?
help
```

[Description]

This command displays the top-level commands available in the current mode.
This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A) > help
Command          Description
-----
?                Lists the top-level commands available
add              Adds some parameters, use 'add ?' for more
                information
arp              Shows and modifies the address resolution table
bypass           Executes bypass related operation, use
                'bypass ?' for more information
clear            Clears system statistics, use 'clear ?' for
                more information
delete           Deletes some parameters, use 'delete ?' for
                more information
download         Downloads programs or data, use 'download ?' for
                more information
exit             Exits from the current session
help            Performs the same function as '?' command
init            Initializes system parameters, use 'init ?'
                for more information
logout           Logout from the current session
monitor          Monitor status, use 'monitor ?' for more
                information
normal           Returns to normal mode from administrator mode
operate         Performs a file operation, use 'operate ?' for
                more information
ping            Diagnoses reachability of network
quit            PLogout from the current session
reboot          Performs the system hardware reset
save            Saves the system data into the flash memory,
                use 'save ?' for more information
set             Sets system parameters, use 'set ?' for more
                information
show            Shows status, use 'show ?'for more
                information
switch          Switchs system parameters, use 'switch ?' for
                more information
sync            Synchronizes at time
telnet          telnet command
traceroute      Displays the packet route until it reach the destination
unset           Unsets some parameters, use 'unset ?' for
                more information
upload          Uploads programs or data, use 'upload ?' for
                more information
update          Updates some parameters, use 'update ?' for more
                information
PureFlow(A) >
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

exit/logout/quit

[Format]

```
exit
logout
quit
```

[Description]

This command logs you out of the current session and disconnects the connection. This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> logout
Password:

PureFlow(A)> exit
Password:

PureFlow(A)> quit
Password:
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

normal

[Format]

normal

[Description]

This command returns the system to Normal mode.

When the mode is switched to Normal, the prompt for Normal mode appears.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A) > normal  
PureFlow>
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

admin

[Format]

admin

[Description]

This command switches the system to Administrator mode.
While a password is being entered, there is no echo back and the cursor does not move.
When the mode is switched to Administrator, the prompt for Administrator mode appears.
This command can be executed only in Normal mode.

[Display]

(When the wrong password was entered)

```
PureFlow> admin
Enter the Admin Password:
In-Correct Admin Password
```

(When the correct password was entered)

```
PureFlow> admin
Enter the Admin Password:
PureFlow(A)>
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

In-Correct Admin Password

- The password is invalid.

set password

[Format]

set password

[Description]

This command sets the login password.

The login password can be up to 16 characters.

When the “New password” prompt appears, enter a new password. Then, enter the same new password again when a prompt to confirm the new password appears. Only when the two entries match is the new password set.

While a new password is being entered, there is no echo back and the cursor does not move.

To cancel a login password, enter no password and press the [Enter] key.

The new password set by this command is saved to the internal flash memory when the command is executed.

This command can be executed only in Administrator mode.

Note:

The following ASCII characters can be set in the login password.

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
!#$%&'()=~-^|¥@`[]{}:~*~+~/_.<>
```

[Display]

```
PureFlow(A)> set password
New Password:
Retype the new Password:
```

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Retyped password is in-correct.

- The confirmation password is incorrect.

Writing of password failed.

- Failed to write the password.

Password string length is valid from 0 to 16.

- Password can be set by using up to 16 characters.

set adminpassword

[Format]

```
set adminpassword
```

[Description]

This command sets the login password to switch to Administrator mode.

The login password can be up to 16 characters.

When the “New password” prompt appears, enter a new password. Then, enter the same new password again when a prompt to confirm the new password appears. Only when the two entries match is the new password set.

While a new password is being entered, there is no echo back and the cursor does not move.

To cancel a login password, enter no password and press the [Enter] key.

The new password set by this command is saved to the internal flash memory when the command is executed.

This command can be executed only in Administrator mode.

Note:

The following ASCII characters can be used for the login password:

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
!#$%&'()=~-^|¥@`[]{}:~*~+~/.<>
```

[Display]

```
PureFlow(A)> set adminpassword
Changing the Password for the Administrator Mode.
New Password:
Retype the new Password:
```

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Retyped password is in-correct.

- The confirmation password is incorrect.

Writing of password failed.

- Failed to write the password.

Password string length is valid from 0 to 16.

- Password can be set by using up to 16 characters.

show history

[Format]

show history

[Description]

This command displays the input history of up to 15 commands ranging from old ones to the latest that can be recalled using the Command Recall feature.

For a command that exceeds 76 characters, only the first 76 characters are displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show history
save config
show config running
init config
PureFlow(A)>
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set console baudrate

[Format]

```
set console baudrate{9600 | 19200 | 38400 | 115200}
```

[Description]

Sets the communication speed (Baud rate) of the console port.
This command applies to both console ports (RJ-45) and (miniUSB).
This command can be executed only in Administrator mode.

Note:

When 115200 bps is specified, the text may be corrupted or omitted depending on the environment used (device hardware, software). If this happens, lower the communication speed.

[Display]

```
PureFlow(A)> set console baudrate 115200
```

[Arguments]

```
{9600 | 19200 | 38400 | 115200}
```

Set the communication speed (baud rate) to either 9600 bps, 19200 bps, 38400 bps, or 115200 bps.

[Default Value]

The default value is "9600".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : set console baudrate {9600 | 19200 | 38400 | 115200}
```

- There is a missing argument.

Specified Baudrate is invalid. (Valid from 9600, 19200, 38400, 115200)

- The specified communication speed (baud rate) is invalid.

show console baudrate

[Format]

```
show console baudrate
```

[Description]

Displays the communication speed (Baud rate) of the console port.
This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show console baudrate  
baudrate : 19200bps  
PureFlow>
```

The displayed items and their meanings are as follows:

- baudrate
Displays the communication speed (baud rate) [bps].

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

show module

[Format]

```
show module
```

[Description]

This command displays information on each module in the system.
This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show module
Anritsu PureFlow NF7500-S001A Software Version 1.1.1
Copyright 2017 ANRITSU NETWORKS CO., LTD All rights reserved.

System MAC Address           : 00-00-91-09-9c-12
Channel MAC Address          : 00-00-91-09-9c-13

Chassis Model Name           : NF7501A
Chassis Serial Number        : 2600010003

Module Version                : 01B
Software Version              : 1.1.1
U-Boot Version                : 3.1.3
MCU Version                   : 112

Uptime                        : 19 days, 08:38:59
Temperature
  Intake Temperature          : 29C
Power Supply Unit 0
  Operation Status            : operational
FAN Unit 0
  Operation Status            : operational
  Fan 0 Speed                  : 2760[rpm]
  Fan 1 Speed                  : 2760[rpm]
PureFlow>
```

The displayed items and their meanings are as follows:

- System MAC Address
Indicates the system interface MAC address.
- Channel MAC Address
Indicates the channel interface MAC address.
- Chassis Model Name
Indicates the model of chassis.
- Chassis Serial Number
Indicates the serial number of chassis.
- Module Version
Show the hardware version of the built-in printed circuit board.
- Software Version
Show the versions of the installed software.

- U-Boot Version
Show U-Boot version.

- MCU Version
Show MCU version.

- Uptime
Shows the run time from system startup.

- Temperature
Shows the temperature of the system. The following temperature is shown:
 - Intake Temperature: Shows the intake temperature.

- Power Supply Unit N
Shows information on the internal power supply.
 - Operation Status: Shows the status of the power supply.
 - other: Other than below
 - operational: Normal
 - malfunctioning: Abnormal

- FAN Unit N
Shows information on the fan unit.
 - Operation Status: Shows the status of the fan.
 - other: Other than below
 - operational: Normal
 - malfunctioning: Abnormal
 - Fan N Speed: Shows the fan speed. The unit is [rpm].

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

set autoreboot

[Format]

```
set autoreboot {enable | disable}
```

[Description]

This command enables and disables the auto reboot feature used when a failure occurs.

With this command, you can select whether to reboot the system automatically when a fatal error is detected or to leave the system in the state in which the failure has occurred.

There are the following fatal errors:

- The operation of the Management Software has stopped
- The operation of the Forwarding Software has stopped

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set autoreboot disable  
PureFlow(A)>
```

[Arguments]

```
{enable | disable}
```

Specifies "enable" to enable the auto reboot function, or "disable" to disable it.

[Default Value]

The default value is "enable".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : set autoreboot {enable | disable}
```

- There is a missing argument.

2.2.10 Configuration-related commands

init config

[Format]

init config

[Description]

This command resets the configuration to the default values.

Changes made by this command do not have an impact on the running configuration. To reflect the changes, restart the system.

This command can be executed only in Administrator mode.

Please note that the following configurations cannot be returned to the default values.

- Login password
- Login password for shift to the Administrator mode
- Console port communication speed (baud rate)
- Optional function

[Display]

```
PureFlow(A)> init config
Do you wish to initialize flash memory (y/n)? y
The value of flash memory was set on the default value.
This set content becomes valid after the next re-start

Done
PureFlow(A)>
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

save config

[Format]

```
save config
```

[Description]

This command saves the running configuration parameters in the internal flash memory. The saved configuration is loaded as the start-up configuration at the next startup time and is reflected to the operation.
This command can be executed only in Administrator mode.

[Display]**(When a channel is not registered)**

```
PureFlow(A)> save config  
Do you wish to save the system configuration into the flash memory (y/n)? y
```

```
Warning. Channel does not exist.  
Please add the channel by "add channel" command.
```

```
Done  
PureFlow(A)>
```

(When a channel is registered)

```
PureFlow(A)> save config  
Do you wish to save the system configuration into the flash memory (y/n)? y
```

```
Done  
PureFlow(A)>
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

show save status

[Format]

```
show save status
```

[Description]

This command displays the progress of saving the configuration.

If the “save config” command is running for another session (Serial console, Telnet, SSH), a message indicating save config is running for another session is displayed when you run this command.

This command can be executed in the Normal and Administrator modes.

[Display]

(If the “save config” was running)

```
PureFlow> show save status  
configuration save is in progress.  
PureFlow>
```

(If the “save config” was not running)

```
PureFlow> show save status  
configuration save is not in progress.  
PureFlow>
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

show config running

[Format]

```
show config running [<slot/port> | <protocol> | all]
```

[Description]

This command displays the configuration currently running.
 Only a non-default configuration is displayed.
 If <slot/port> is specified, the configuration related to the specified port is displayed.
 If <protocol> is specified, the configuration related to the specified protocol is displayed.
 If "all" is specified, the default and non-default configurations are displayed.
 This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show config running
This command shows non-default configurations only
Use 'show config running all' to show both default and non-default configurations.
begin
!
***** NON-DEFAULT CONFIGURATION *****
!
#Time: Apl 14 2017(Thu) 18:50:57
#UTC Offset   : +09:00
#Summer Time  : From   Second Sunday March 02:00
#              To     First Sunday November 02:00
#              Offset 60 minutes
!
#System Configuration
!
#SNMP Configuration
!
#Port Configuration
#Current port mtu : 2048
!
#System Interface Configuration
set ip system 192.168.37.11 netmask 255.255.255.0 up
!
#Rulelist Configuration
!
#Scenario, Filter Configuration
#Current scenario tree mode : inbound
set bandwidth mode no_gap
set scenario tree mode inbound
update scenario "/port1" action aggregate peak_bw 1G
add scenario "/port1/Tokyo" action aggregate peak_bw 5G scenario 1
  add scenario "/port1/Tokyo/Shibuya" action aggregate class 1 min_bw 3M
  bufsize 300k scenario 2
  add scenario "/port1/Tokyo/Shinagawa" action aggregate class 1 min_bw 5M
  peak_bw 8M bufsize 200k scenario 3
update scenario "/port2" action aggregate peak_bw 1G
update scenario "/port3" action aggregate peak_bw 1G
update scenario "/port4" action aggregate peak_bw 1G
!
#Scenario Operation Management Configuration
set scenario "/port1/Tokyo/Shibuya" snmp-traps disable
!
```

```
#SNTP Configuration
!
#RADIUS Configuration
set radius auth disable
set radius auth timeout 5
set radius auth retransmit 3
set radius auth method CHAP
!
#LPT Configuration
set lpt disable
#Flow Configuration
!
#Bypass Configuration
set bypass on
!
#OpenFlow Configuration
PureFlow>
```

[Arguments]

slot/port

Displays the configuration corresponding to the specified slot location and port number of the Network port.

Only 1 can be specified as the slot location. Valid port numbers are 1 and 4.

protocol

The following protocols can be specified:

snmp, filter, scenario

all

Displays the default and non-default configurations.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Slot #N is invalid.

- The specified slot is invalid.

Port <slot/port> is invalid.

- The specified port is invalid.

Specified Protocol is invalid. (Valid from snmp, filter, scenario)

- The specified protocol is invalid.

show config startup

[Format]

```
show config startup
```

[Description]

This command displays the configuration at startup.
The configuration saved in the internal flash memory is displayed.
This command can be executed in the Normal and Administrator modes.

[Display]

Only the non-default configuration is displayed.

```
PureFlow> show config startup
!
#System Configuration
!
#SNMP Configuration
!
#Port Configuration
#Current port mtu : 2048
!
#System Interface Configuration
set ip system 192.168.37.11 netmask 255.255.255.0 up
!
#Rulelist Configuration
!
#Scenario, Filter Configuration
#Current scenario tree mode : inbound
!
#SNTP Configuration
!
#RADIUS Configuration
!
#LPT Configuration
!
#Flow Configuration
!
#Bypass Configuration
!
#OpenFlow Configuration
PureFlow>
```

[Arguments]

None

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

No configuration is found.

- No configuration is saved.

2.2.11 SNMP-related commands

add snmp community

[Format]

```
add snmp community <community_string> [version {v1 | v2c}]  
[view <view_name>] [permission {ro | rw}]
```

[Description]

This command adds a community record.

To change a registered record, first delete the record using the “delete snmp community” command, and then create a new record using this command.

Up to 16 records can be registered.

If “v1” is specified as the version, the command only adds v1 community records. If “v2c” is specified, it adds only v2c communities.

If version is not specified, it adds both v1 and v2c records.

If “ro” is specified, read-only is set. If “rw” is specified, read and write are permitted.

This command can be executed only in Administrator mode.

Note:

Only the following ASCII characters can be set in the community name.

```
1234567890  
abcdefghijklmnopqrstuvwxyz  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
!#$%&'()=~-^|@`[]{}:~*+_/.<>
```

[Display]

```
PureFlow(A)> add snmp community NetManCom view readme permission ro  
PureFlow(A)>
```

[Arguments]

community_string

Specify the name of the community.

1 to 32 characters can be specified.

If you need to insert a space in the name, enclose it with double quotation marks (" ") as in “NetMan Com”.

view_name

Specify the MIB view name to be assigned to the community record.

1 to 32 characters can be specified.

If you need to insert a space in the name, enclose it with double quotation marks (" ") as in “read me”.

version {v1 | v2c}

Specify “v1” for a v1 community, or “v2c” for a v2c community.

If you want to add both, specify neither “v1” nor “v2c”.

permission {ro | rw}

Specify “ro” for read-only permission, or “rw” for read and write permission.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add snmp community <community_string> [version {v1 | v2c}]
[view <view_name>] [permission {ro | rw}]

- There is a missing argument.

Specified community length is invalid. (Valid from 1 to 32)

- The length of the community name is out of range.

Community string is already used

- The specified community name has already been used by another community record.

Specified view name length is invalid. (Valid from 1 to 32)

- The length of the MIB view name is out of range.

Maximum number of community was exceeded.

- The maximum registration limit for community records is exceeded.

Invalid options in the command.

- This is an invalid option.

delete snmp community

[Format]

```
delete snmp community <community_string>
```

[Description]

This command deletes the community record.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete snmp community NetManCom  
PureFlow(A)>
```

[Arguments]

community_string
Specify the community name.
1 to 32 characters can be specified.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.
Usage : delete snmp community <community_string>

- There is a missing argument.

Specified community length is invalid. (Valid from 1 to 32)

- The length of the community name is out of range.

Specified community name is not configured

- The specified community name is not used by any community record.

show snmp community

[Format]

```
show snmp community [<community_string>]
```

[Description]

This command displays the SNMP community record.

If no argument is specified, information on all community records is displayed.

If the <community_string> parameter is specified, information on the specified community record is displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show snmp community
-----
Community Name      : NetMan
Version             : v1
Read View           : readme
Write View          : -
-----
Community Name      : Guest
Version             : v2c
Read View           : readme
Write View          : -
-----
PureFlow>
```

The displayed items and their meanings are as follows:

- Community Name
Shows the name of the community record.
- Version
Shows the community version.
- Read View
Shows the name of the MIB view that can be read.
If no MIB view is assigned, - is shown.
- Write View
Shows the name of the MIB view that can be written.
If no MIB view is assigned, - is shown.

[Arguments]

community_string
Specify the name of the community record.
1 to 32 characters can be specified.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

No communities are configured.

- None community name is set.

Specified community length is invalid. (Valid from 1 to 32)

- The length of the community name is out of range.

Specified community name is not configured.

- The specified community name is not used by any community record.

add snmp view

[Format]

```
add snmp view <view_name> <oid> {included | excluded}
```

[Description]

This command adds a MIB view record.

If you access this device via SNMP, make sure to create a MIB view record.

Unless the specified view name is used by an existing record, an MIB view record with the specified parameters is created. Up to 32 records can be registered.

Multiple <oid> parameters can be specified by delimiting them with commas (,).

If the specified view name is used by an existing record, the command adds the specified OID tree and the {included|excluded} parameter to the record.

When “included” is specified, access to the specified OID tree is possible.

When “excluded” is specified, access to the specified OID tree is prohibited.

To prohibit access to a certain OID tree, for example, specify “included” for “iso”, and specify “excluded” for the desired OID tree with the same “view_name”.

If you use v2c or v3 trap transmission, add the “included” setting for “system” and “snmpmodules” when you specify “private” for the <oid> parameter.

This command can be executed only in Administrator mode.

Note:

Only the following ASCII characters can be set in the MIB view record name.

```
1234567890  
abcdefghijklmnopqrstuvwxyz  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
!#$%&'()=~-^|@`[]{}:~*+_/.<>
```

[Display]

```
PureFlow(A)> add snmp view readme system included  
PureFlow(A)>
```

[Arguments]

view_name

Specify the name of the MIB view record.

1 to 32 characters can be specified.

If you need to insert a space in the name, enclose it with double quotation marks (" ") as in “read me”.

oid

Specify the character string for the OID tree.

1 to 32 characters can be used for each OID.

For information on OID tree character strings that can be used with this command, see the following page.

Note:

Although the snmpv2 group can be specified by using this command, access via SNMP is not possible.

{included | excluded}

Specify included to include the OID tree, or excluded to exclude it.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add snmp view <view_name> <oid> {included | excluded}

- There is a missing argument.

Specified view name length is invalid. (Valid from 1 to 32)

- The length of the MIB view name is out of range.

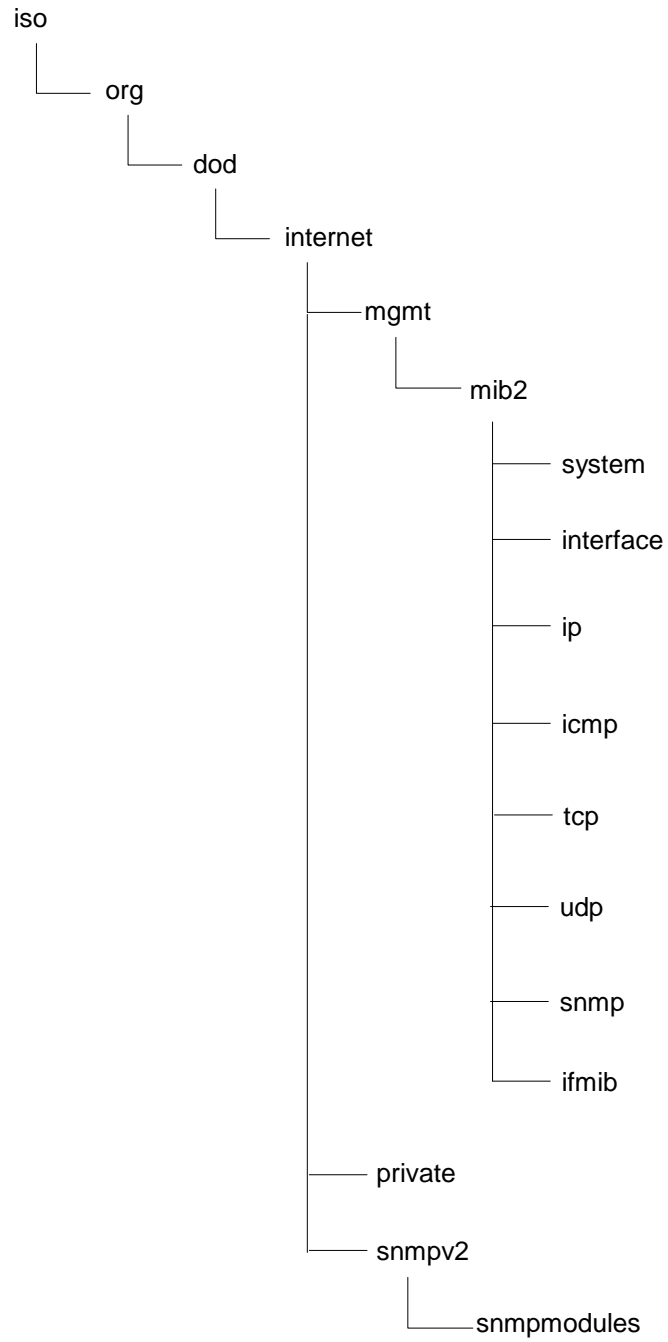
Maximum number of view was exceeded

- The maximum registration limit for MIB view records is exceeded.

OID name specified is not supported on PureFlow.

- The specified OID is not supported.

OID tree character strings list



delete snmp view

[Format]

```
delete snmp view <view_name> [<oid>]
```

[Description]

This command deletes a MIB view record.

If the <oid> parameter is not specified, the specified MIB view record is deleted.

If the <oid> parameter is specified, the specified OID tree is deleted from the specified MIB view record.

Multiple <oid> parameters can be specified by delimiting them with commas (,).

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete snmp view readme system  
PureFlow(A)>
```

[Arguments]

view_name

Specify the name of the MIB view record.

oid

Specify the character string for the OID tree.

1 to 32 characters can be used for each OID.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : delete snmp view <view_name> [<oid>]

- There is a missing argument.

Specified view name length is invalid. (Valid from 1 to 32)

- The length of the MIB view name is out of range.

Specified view name is not configured.

- The specified MIB view name is not used by any MIB view record.

OID name specified is not supported on PureFlow.

- The specified OID is not supported.

show snmp view

[Format]

```
show snmp view [<view_name>]
```

[Description]

This command displays the SNMP MIB view record.

If no argument is specified, information on all MIB view records is displayed.

If the <view_name> parameter is specified, information on the specified MIB view record is displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show snmp view
-----
View Name           : readme
Subtree             : mib2
Access State        : Included
-----
View Name           : notifyme
Subtree             : ip
Access State        : Excluded
-----
PureFlow>
```

The displayed items and their meanings are as follows:

- View Name
Shows the name of the MIB view record.

- Subtree
Shows the accessible (or inaccessible) MIB subtrees.

- Access State
Shows the state of access to the MIB subtree.

Excluded	Access to MIB subtrees other than the specified one is possible.
Included	Access to the specified MIB subtree is possible.

[Arguments]

view_name
Specify the name of the MIB view record.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

No MIB views are configured.

- No MIB view name is set.

Specified view name length is invalid. (Valid from 1 to 32)

- The length of the MIB view name is out of range.

Specified view name is not configured.

- The specified MIB view name is not used by any MIB view record.

add snmp group

[Format]

```
add snmp group <group_name> [auth_type {auth | noauth}]
[read <readview>] [write <writeview>] [notify <notifyview>]
```

[Description]

This command adds a group record used to map an SNMPv3 user to an SNMP view.

To change a registered record, first delete the record using the “delete snmp group” command, and then create a new record using this command.

Up to 32 records can be registered.

Security level parameter [auth_type {auth | noauth}]

If “auth” is specified, authentication for the record is required. If “noauth” is specified, authentication for the record is not required.

If no MIB view parameter is specified, access to the OID tree is not restricted.

A MIB view record can be created by using the “add snmp view” command.

The following characters cannot be used for <group_name>, <readview>, <writeview> and <notifyview>:
" \ ?

This command can be executed only in Administrator mode.

Note:

Only the following ASCII characters can be set in the SNMP group name.

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
!#$%&'()=~^|@`[]{}:*,+/_.<>
```

[Display]

```
PureFlow(A)> add snmp group NetManGroup auth_type auth read readme write writeme
notify notifyme
PureFlow(A)>
```

[Arguments]

group_name

Specify the name of the SNMP group.

1 to 32 characters can be specified.

If you need to insert a space in the name, enclose it with double quotation marks (" ") as in “NetMan Group”.

auth_type {auth | noauth}

Specify auth if authentication is necessary, or noauth if authentication is unnecessary.

readview

If you set read-only permission for the group record, specify the name of the MIB view to be assigned to it.

1 to 32 characters can be specified.

If you need to insert a space in the name, enclose it with double quotation marks (" ") as in “read me”.

writeview

If you set read and write permission for the group record, specify the name of the MIB view to be assigned to it.

1 to 32 characters can be specified.

If you need to insert a space in the name, enclose it with double quotation marks (" ") as in “write me”.

notifyview

If you perform notification (Trap and Inform processing) of the group record, specify the name of the MIB view to be assigned to it.

1 to 32 characters can be specified.

If you need to insert a space in the name, enclose it with double quotation marks (" ") as in "notify me".

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add snmp group <group_name> [auth_type {auth | noauth}]
[read <readview>] [write <writeview>] [notify <notifyview>]

- There is a missing argument.

Specified group name length is invalid. (Valid from 1 to 32)

- The length of the group name is out of range.

Group name is already used

- The specified group name has already been used by another group record.

Specified readview length is invalid. (Valid from 1 to 32)

Specified writeview length is invalid. (Valid from 1 to 32)

Specified notifyview length is invalid. (Valid from 1 to 32)

- The length of the MIB view name is out of range.

Maximum number of group was exceeded.

- The maximum registration limit for group records is exceeded.

Invalid options in the command.

- This is an invalid option.

delete snmp group

[Format]

```
delete snmp group <group_name>
```

[Description]

This command deletes the group record.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete snmp group NetManGroup  
PureFlow(A)>
```

[Arguments]

group_name

Specify the name of the SNMP group.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : delete snmp group <group_name>

- There is a missing argument.

Specified group name length is invalid. (Valid from 1 to 32)

- The length of the group name is out of range.

Specified group name is not configured

- The specified group name is not used by any SNMP group record.

show snmp group

[Format]

```
show snmp group [<group_name>]
```

[Description]

This command displays an SNMPv3 group record.

If no argument is specified, information on all group records is displayed.

If the <group_name> parameter is specified, information on the specified group record is displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show snmp group
-----
Group Name      : NetManGroup
Security        : Authentication
Read View       : readme
Write View      : writeme
Notify View     : notifyme
-----
Group Name      : GuestGroup
Security        : No Authentication
Read View       : readme
Write View      : -
Notify View     : -
-----
PureFlow>
```

The displayed items and their meanings are as follows:

- Group Name
Shows the name of the group record.
- Security
Shows the security level of the SNMPv3 model.

No Authentication	Authentication is not performed
Authentication	Authentication is performed
- Read View
Shows the MIB view name that permits read operations.
If no MIB view is assigned, - is shown.
- Write View
Shows the MIB view name that permits write operations.
If no MIB view is assigned, - is shown.
- Notify View
Shows the MIB view name for sending a notification.
If no MIB view is assigned, - is shown.

[Arguments]

group_name
Specify the name of the group record.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

No groups are configured.

- None group record is set.

Specified group name length is invalid. (Valid from 1 to 32)

- The length of the group name is out of range.

Specified group name is not configured.

- The specified group name is not used by any group record.

add snmp user

[Format]

```
add snmp user <user_name> <group_name>
[auth_type {auth | noauth}] [password <auth_password>]
```

[Description]

This command adds the user record to be mapped to the SNMPv3 group by an SNMPv3 user.

This command adds the specified user to the specified group.

To change a registered record, first delete the record using the “delete snmp user” command, and then create a new record using this command.

Up to 16 records can be registered.

The authentication parameter [auth_type {auth | noauth}] specifies whether authentication is required for this user. The password parameter [password <auth_password>] can only be specified for the user to be authenticated.

This command can be executed only in Administrator mode.

Note:

Only the following ASCII characters can be set in the SNMP user name.

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
!#$%&'()*~^-^|@`[]{}:~*~+~/<>
```

[Display]

```
PureFlow(A)> add snmp user Jack NetManGroup auth_type auth password
PASSWORD
PureFlow(A)>
```

[Arguments]

user_name

Specify the name of the SNMP user.

1 to 32 characters can be specified.

If you need to insert a space in the name, enclose it with double quotation marks (" ") as in “Jack Smith”.

group_name

Specify the name of the SNMP group.

1 to 32 characters can be specified.

If you need to insert a space in the name, enclose it with double quotation marks (" ") as in “NetMan Group”.

auth_type {auth | noauth}

Specify auth if authentication is necessary, or noauth if authentication is unnecessary.

password <auth_password>

Specify the authentication password. The password can only be provided to the user to be authenticated.

8 to 24 characters can be specified.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add snmp user <user_name> <group_name>
[auth_type {auth | noauth}] [password <auth_password>]

- There is a missing argument.

Specified user name length is invalid. (Valid from 1 to 32)

- The length of the user name is out of range.

Specified group name length is invalid. (Valid from 1 to 32)

- The length of the group name is out of range.

Specified password length is invalid. (Valid from 8 to 24)

- The length of the password is out of range.

Password is missing.

- When auth_type is set to auth, a password must be specified.

Password cannot be accepted for noauthentication users.

- When auth_type is set to noauth, no password can be specified.

User name is already used.

- The specified user name has already been used by another user record.

Specified group name is not configured.

- The specified group name is not used by any group record.

Maximum number of user was exceeded.

- The maximum registration limit for user records is exceeded.

delete snmp user

[Format]

```
delete snmp user <user_name>
```

[Description]

This command deletes the user record.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete snmp user Jack  
PureFlow(A)>
```

[Arguments]

user_name

Specify the name of the SNMP user.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : delete snmp user <user_name>

- There is a missing argument.

Specified user name length is invalid. (Valid from 1 to 32)

- The length of the user name is out of range.

Specified user name is not configured.

- The specified user name is not used by any user record.

show snmp user

[Format]

```
show snmp user [<user_name>]
```

[Description]

This command displays an SNMPv3 user record.

If no argument is specified, information on all user records is displayed.

If the <user_name> parameter is specified, information on the specified user record is displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show snmp user
-----
User Name       : Jack
Group Name      : NetManGroup
Security        : Authentication
Auth Algorithm  : md5
-----
User Name       : guest
Group Name      : GuestGroup
Security        : No Authentication
Auth Algorithm  : -
-----

PureFlow>
```

The displayed items and their meanings are as follows:

- User Name
 - Shows the name of the user record.
- Group Name
 - Shows the name of the group to which the user belongs.
- Security
 - Shows the security level of the SNMPv3 model.
 - No Authentication Authentication is not performed
 - Authentication Authentication is performed
- Auth Algorithm
 - Shows the authentication algorithm for the SNMPv3 model.
 - If the model is not SNMPv3, or authentication is not required, - is shown.

[Arguments]

user_name
Specify the name of the user record.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

No users are configured.

- No user record is set.

Specified user name length is invalid. (Valid from 1 to 32)

- The length of the user name is out of range.

Specified user name is not configured.

- The specified user name is not used by any user record.

add snmp host

[Format]

```
add snmp host <host_address> version {v1 | v2c | v3 [auth_type {auth | noauth}]}
{user | community}<community_string / user_name> {trap | inform}
[udp_port <port_number>] [<notification_type>]
```

[Description]

This command adds a host record that shows an SNMP notification destination.

To change a registered record, first delete the record using the “delete snmp host” command, and then create a new record using this command.

If the host address is the same but the UDP port number is different, they are registered as individual entries.

Up to 16 records can be registered.

If “v1” is specified, the record shows the SNMPv1 model. If “v2c” is specified, the record shows the SNMPv2c model. The SNMPv2c model provides Inform and GetBulk processing and can use the Counter64 object type. If v3 is specified, the record shows the SNMPv3 model. The SNMPv3 model improves security and adds functionality to the SNMPv2c model.

The security model parameter [auth_type {auth | noauth}] can only be specified for the SNMPv3 model.

If “auth” is specified, authentication for the record is required. If “noauth” is specified, authentication for the record is not required.

If the <port_number> parameter is not specified, the standard UDP port number 162 is used for SNMP notification.

The {trap | inform} parameter specifies whether to send the TRAP notification or the INFORM notification.

If the <notification_type> parameter is not specified, all types of notifications are sent to the host. This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> add snmp host 192.168.1.123 version v3 auth_type auth user NetManCom
trap udp_port 123 snmp
PureFlow(A)>
```

[Arguments]

host_address

Specify the IPv4 address of the host.

version {v1 | v2c | v3}

Specify “v1” to use the SNMPv1 model, “v2c” for the SNMPv2c model, or “v3” for the SNMPv3 model.

[auth_type {auth | noauth}]

This parameter can only be specified for the SNMPv3 model.

Specify auth if authentication is necessary, or noauth if authentication is unnecessary.

{user | community} <community_string / user_name>

Specify the user name for the SNMPv3 model, or the community name for the v1 or v2c model.

1 to 32 characters can be specified.

If you need to insert a space in the name, enclose it with double quotation marks (") as in “NetMan Com”.

{trap | inform}

Specify whether to send the TRAP notification or the INFORM notification to the notification destination.

For the SNMPv1 model, “inform” cannot be specified.

port_number

Specify the UDP port of the host to be used.

Valid values are from 1 to 65535.

notification_type

Specify the type of the notification to be sent to the host. The following character strings can indicate this type:

snmpv2	SNMP basic notifications (cold start, warm start, link down, link up, and authentication failure)
private	Enterprise notification

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : add snmp host <host_address> version {v1 | v2c | v3 [auth_type {auth | noauth}]}
 {user | community} <community_string / user_name> {trap | inform}
 [udp_port <port_number>] [<notification_type>]

- There is a missing argument.

Invalid host_address

- The specified IP address format or value is invalid.

Host address is already used.

- The specified host address has already been used by another host record.

Specified community length is invalid. (Valid from 1 to 32)

- The length of the community name is out of range.

Specified user name length is invalid. (Valid from 1 to 32)

- The length of the user name is out of range.

Specified port number is invalid. (Valid from 1 to 65535)

- The specified UDP port number is out of range.

Specified notification type is not supported on PureFlow.

- The specified notification type is not supported.

SNMPv1 hosts does not support inform.

- The SNMPv1 host does not support inform.

Auth_type argument can only be given for v3 host.

- auth_type can only be specified for the SNMPv3 model.

Maximum number of host was exceeded.

- The maximum registration limit for host records is exceeded.

Invalid options in the command.

- This is an invalid option.

delete snmp host

[Format]

```
delete snmp host <host_address>
```

[Description]

This command deletes the host record.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete snmp host 192.168.1.123
```

```
PureFlow(A)>
```

[Arguments]

host_address

Specify the IPv4 address of the host.

[Default Value]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : delete snmp host <host_address>

- There is a missing argument.

Specified host address is not configured.

- The specified host name is not used by any SNMP host record.

Invalid host address

- This is an invalid host.

show snmp host

[Format]

```
show snmp host [<host_address>]
```

[Description]

This command displays an SNMP notification destination record.

If no argument is specified, information on all host records is displayed.

If the <host_address> parameter is specified, information on the specified host record is displayed.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show snmp host
-----
Host Address      : 192.168.1.123
Version           : v3
Security          : Authentication
Security Name     : NetManCom
UDP port          : 123
Notification Type : snmpv2
-----
Host Address      : 192.168.1.244
Version           : v3
Security          : No Authentication
Security Name     : NetManCom
UDP port          : 162
Notification Type : all
-----
PureFlow>
```

The displayed items and their meanings are as follows:

- Host Address
 - Shows the IPv4 address of the host.
- Version
 - Shows the version of the SNMP model.

v1	SNMPv1 model
v2c	SNMPv2c model
v3	SNMPv3 model
- Security
 - Shows the security level of the SNMPv3 model.

No Authentication	Authentication is not performed
Authentication	Authentication is performed
- Security Name
 - Shows the name of the community (for SNMPv1/SNMPv2c) or the name of the SNMPv3 user.
- UDP port
 - Shows the UDP port number of the host to be used.

- Notification Type

Specify the type of the notification to be sent to the host. One of the following character strings is used to indicate this type:

all	All notifications
snmpv2	SNMP basic notifications (cold start, warm start, link down, link up, and authentication failure)
private	Enterprise notification

[Arguments]

host_address

Specify the IPv4 address of the host.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

No hosts are configured.

- None host record is set.

Specified host address is not configured.

- The specified IP address is not used by any host record.

set snmp syscontact

[Format]

```
set snmp syscontact <contact_string>
```

[Description]

This command sets “sysContact”, an SNMP MIB-II system group object that indicates the administrator of this device.

The following characters cannot be used for <contact_string>:

```
" \ ?
```

This command can be executed only in Administrator mode.

Note:

Only the following ASCII characters can be set in sysContact.

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
!#$%&'()=~-^|@`[]{}:~*~+~/.<>
```

[Display]

```
PureFlow(A)> set snmp syscontact foo<foo@bar.co.jp>
PureFlow(A)>
```

[Arguments]

contact_string

Specify the character string for sysContact.

Zero to 200 characters can be specified.

If a space is needed between characters, enclose the character string in quotation marks (“”), for example “My Contact”.

If only a pair of quotation marks (“”) is specified, the default value “Not Yet Set” is set.

[Default Value]

The default value is “Not Yet Set”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set snmp syscontact <contact string>

- There is a missing argument.

Contact string length is valid from 0 to 200.

- The setting range for syscontact is from 0 to 200 characters.

set snmp syslocation

[Format]

```
set snmp syslocation <location_string>
```

[Description]

This command sets "sysLocation", an SNMP MIB-II system group object that indicates the place where this device is installed.

The following characters cannot be used for <location_string>:

```
" \ ?
```

This command can be executed only in Administrator mode.

Note:

Only the following ASCII characters can be set in sysLocation.

```
1234567890  
abcdefghijklmnopqrstuvwxyz  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
!#$%&'()=~-^|@`[]{}:~*~+~/.<>
```

[Display]

```
PureFlow(A)> set snmp syslocation Factory  
PureFlow(A)>
```

[Arguments]

location_string

Specify the character string for sysLocation.

Zero to 200 characters can be specified.

If a space is needed between characters, enclose the character string in quotation marks ("), for example "My Location".

If only a pair of quotation marks (" ") is specified, the default value "Not Yet Set" is set.

[Default Value]

The default value is "Not Yet Set".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set snmp syslocation <location_string>

- There is a missing argument.

System location length is valid from 0 to 200.

- The setting range for syslocation is from 0 to 200 characters.

set snmp sysname

[Format]

```
set snmp sysname <name_string>
```

[Description]

This command sets “sysName”, an SNMP MIB-II system group object that indicates the name of the local system used as the administrator’s system.

The following characters cannot be used for <name_string>:

```
" \ ?
```

This command allows you to change the syslog host name.

This command can be executed only in Administrator mode.

Note:

Only the following ASCII characters can be set in sysName.

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
!#$%&'()=~-^|@`[]{}:~*+_/.<>
```

[Display]

```
PureFlow(A)> set snmp sysname shaper
PureFlow(A)>
```

[Arguments]

name_string

Specify the character string for sysName.

Zero to 200 characters can be specified.

If a space is needed between characters, enclose the character string in quotation marks (“”), for example “My Name”.

If only a pair of quotation marks (“”) is specified, the default value “Not Yet Set” is set.

Up to top 64 characters delimited by (.) are used as the syslog host name.

Only the following ASCII characters can be set in the syslog host name.

```
1234567890
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
```

-

However, “-” cannot be used for the first and last characters.

If only a pair of quotation marks (“”) is specified, the syslog host name is set to “PureFlow”.

If the character string that can be specified for sysName is specified although it cannot be used for the syslog host name, no error occurs.

In this case, the syslog host name is “PureFlow”.

[Default Value]

The default value is “Not Yet Set”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : set snmp sysname <name_string>

- There is a missing argument.

System name is valid from 0 to 200.

- The setting range for sysname is from 0 to 200 characters.

set snmp traps

[Format]

```
set snmp traps {authentication | linkup | linkdown | coldstart |
modulefailurealarm | modulefailurerecovery |
systemheatalarm | systemheatrecovery |
powerinsert | powerextract | powerfailure | powerrecovery |
faninsert | fanextract | fanfailure | fanrecovery |
queuebuffalarm | queuebuffrecovery |
systembuffalarm | systembuffrecovery |
queueallocalarm | queueallocalrecovery |
maxqnumalarm | maxqnumrecovery |
tcpbypassalarm | tcpbypassrecovery |
peeralarm | peerrecovery | bypasson | bypassoff}
{enable | disable}
```

[Description]

This command enables and disables individual SNMP notification transmission. In NF7501A, the SNMP notifications for powerinsert, powerextract, faninsert, and fanextract are not transmitted. This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set snmp traps authentication enable
PureFlow(A)>
```

[Arguments]

```
{authentication | linkup | linkdown | coldstart | modulefailurealarm |
modulefailurerecovery | systemheatalarm | systemheatrecovery | powerinsert |
powerextract | powerfailure | powerrecovery | faninsert | fanextract | fanfailure
| fanrecovery | queuebuffalarm | queuebuffrecovery | systembuffalarm|
systembuffrecovery | queueallocalarm | queueallocalrecovery | maxqnumalarm |
maxqnumrecovery | tcpbypassalarm | tcpbypassrecovery | peeralarm | peerrecovery}
```

When enabling/disabling individual SNMP notification transmission, specify the notification name.

The following character strings can indicate this type:

authentication	Authentication error
linkup	Link up
linkdown	Link down
coldstart	Cold start
modulefailurealarm	Module error
modulefailurerecovery	Module error recovery
systemheatalarm	System temperature error
systemheatrecovery	System temperature error recovery
powerinsert	Power unit insert
powerextract	Power unit extract
powerfailure	Power unit error
powerrecovery	Power unit error recovery
faninsert	Fan unit insert
fanextract	Fan unit extract
fanfailurealarm	Fan unit error
fanfailurerecovery	Fan unit error recovery
queuebuffalarm	Queue buffer error
queuebuffrecovery	Queue buffer error recovery

systembuffalarm	System buffer error
systembuffrecovery	System buffer error recovery
queueallocalarm	Total individual queue limit reached
queueallocrecovery	Total individual queue limit recovery
maxqnumalarm	Scenario individual queue limit reached
maxqnumrecovery	Scenario individual queue limit recovery
tcpbypassalarm	Bypass status
tcpbypassrecovery	Bypass status recovery
peeralarm	Secondary Peer connected
peerrecovery	Secondary Peer connected recovery
bypasson	Network bypass status bypass side
bypassoff	Network bypass status normal side

{enable | disable}

Specify “enable” to enable transmission of the specified notification, or “disable” to disable it.

[Default Value]

The default value for all arguments is “enable”.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage :

```
set snmp traps {authentication | linkup | linkdown | coldstart |
  modulefailurealarm | modulefailurecovery |
  systemheatalarm | systemheatrecovery |
  powerinsert | powerextract | powerfailure | powerrecovery |
  faninsert | fanextract | fanfailure | fanrecovery |
  queuebuffalarm | queuebuffrecovery |
  systembuffalarm | systembuffrecovery |
  queueallocalarm | queueallocrecovery | maxqnumalarm | maxqnumrecovery |
  tcpbypassalarm | tcpbypassrecovery | peeralarm | peerrecovery |
  bypasson | bypassoff} {enable | disable}
```

- There is a missing argument.

show snmp system

[Format]

```
show snmp system
```

[Description]

This command displays the information related to SNMP MIB-II sysLocation, sysContact, sysName, engine ID, and trap settings.

This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show snmp system
-----
System Location           : Not Yet Set
System Contact           : Not Yet Set
System Name              : Not Yet Set
Engine ID                : 00:00:04:7f:00:00:00:00:91:00:01:01

Traps
  authentication         : enable
  linkup                 : enable
  linkdown               : enable
  coldstart              : enable
  modulefailurealarm     : enable
  modulefailurerecovery : enable
  systemheatalarm       : enable
  systemheatrecovery    : enable
  powerinsert           : enable
  powerextract          : enable
  powerfailure          : enable
  powerrecovery         : enable
  faninsert             : enable
  fanextract            : enable
  fanfailurealarm       : enable
  fanfailurerecovery    : enable
  queuebuffalarm        : enable
  systembuffalarm       : enable
  queueallocalarm       : enable
  queueallocrecovery    : enable
  maxqnumalarm          : enable
  maxqnumrecovery       : enable
  tcpbypassalarm        : enable
  tcpbypassrecovery     : enable
  peeralarm             : enable
  peerrecovery          : enable
  bypasson              : enable
  bypassoff             : enable
-----
PureFlow>
```

The displayed items and their meanings are as follows:

- System Location
Shows sysLocation, an SNMP MIB-II system group object that indicates the place where this device is installed.

- System Contact
Shows sysContact, an SNMP MIB-II system group object that indicates the administrator of this device.
- System Name
Shows sysName, an SNMP MIB-II system group object that indicates the name of the local system for managing this device.
- Engine ID
Shows the ID of the local engine.
The engine ID is automatically generated from the MAC address of the system.
- Traps
Shows whether a trap transmission is enabled or disabled.
An individual trap is enabled when “enable” is set, and disabled when “disable” is set.
In NF7501A, the SNMP notifications for powerinsert, powerextract, faninsert, and fanextract are not transmitted even if this is set to "enable".

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

2.2.12 Network bypass-related commands

set bypass

[Format]

```
set bypass {auto | on | off}
```

[Description]

Sets the control mode of the Network port (RJ-45) bypass function.

If auto is specified, the auto bypass control will be enabled during the detection of an equipment error or power shutdown.

If on is specified, the equipment will forcibly be placed in the bypass state.

If off is specified, the equipment will forcibly be placed in the non-bypass state.

If temporary bypass switching by a bypass time command is already in execution, this command stops the switching timer.

This command can be executed only in Administrator mode.

Be careful about the following restrictions for setting by this command.

- The network bypass function is operated only when both Network ports 1/1 and 1/2 select RJ-45. The media type of the Network port can be selected by the "set port media-type" command.
- For the automatic bypass control enabled by the "set bypass auto" command, the equipment will be placed in the bypass state during the detection of an equipment error or power shutdown. Even if this command is executed, the bypass state changes only in the above cases. For operation according to the auto setting after the bypass operation by the command, set to non-bypass state by the "set bypass off" command, execute the "set bypass auto" command, and then start operation. Even when the "set bypass auto" command is executed in the bypass state, the network does not change to the non-bypass state automatically.

[Display]**(When the system interface is set to the Ethernet port)**

```
PureFlow(A) > set bypass on  
PureFlow(A) >
```

(When the system interface is set to the Network port)

```
PureFlow(A) > set bypass on  
System interface might be disconnected from the network, ok (y/n)? y  
Done  
PureFlow(A) >
```

[Arguments]

```
auto | on | off
```

To enable auto bypass control during the detection of an equipment error, specify "auto". To forcibly maintain the bypass state, specify "on". To forcibly maintain the non-bypass state including the detection of an equipment error, specify "off".

[Default Value]

The default value is "auto".

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
An argument was missing
```

```
Usage: set bypass {auto | on | off}
```

- There is a missing argument.

show bypass

[Format]

```
show bypass
```

[Description]

Displays the network bypass function settings and state.
This command can be executed in Normal/Administrator mode.

[Display]

```
PureFlow(A)> show bypass
Control mode      : auto
Bypass state     : off
Timer remaining  : 12[s]
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- Control mode
 - Displays the control mode of the network bypass function.

auto	Enables the auto bypass control during the detection of an equipment error.
on	Forcibly maintains the bypass state.
off	Forcibly maintains the non-bypass state.

- Bypass state
 - Shows the network bypass state.

on	Bypass state.
off	Non-bypass state.

- Timer remaining
 - The remaining time of bypass switching by the bypass time command is shown in milliseconds.
 - If the bypass time command is not in execution, 0 seconds is displayed.

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

bypass time

[Format]

```
bypass time <time> {on | off}
```

[Description]

Switches the network bypass temporarily.

If on is specified, the equipment is forcibly switched to the bypass state and after a lapse of time seconds, is returned to the previous state automatically.

If off is specified, the equipment is forcibly switched to the non-bypass state and after a lapse of time seconds, is returned to the previous state automatically.

Executing this command displays the current time and the expiration time of the timer.

If temporary bypass switching is already in execution, this command stops the switching timer and restarts the timer with the new state and time value.

This command cannot be saved using the save config command.

This command can be executed only in Administrator mode.

[Display]

(When the system interface is set to the Ethernet port)

```
PureFlow(A)> bypass time 60 on
Current time      : Feb 29 17:38:47
Expiring time    : Feb 29 17:39:47
PureFlow(A)>
```

(When the system interface is set to the Network port)

```
PureFlow(A)> bypass time 60 on
System interface might be disconnected from the network, ok (y/n)? y
Current time      : Feb 29 17:38:47
Expiring time    : Feb 29 17:39:47
Done
PureFlow(A)>
```

[Arguments]

time

Specifies the time (seconds) at which to switch the network bypass temporarily.

The setting range is from 1 to 3600 seconds.

on | off

For switching to the bypass state, specify "on". For switching to the non-bypass state, specify "off".

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing

Usage: bypass time <time> {on | off}

- There is a missing argument.

Time is valid from 1 to 3600 seceonds.

- The time setting is invalid.

2.2.13 Other commands

download tftp obj

[Format]

```
download tftp obj <IP_address> <file>
```

[Description]

This command downloads software the network from the TFTP server.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/\ [] : ; | =, and space

This command can be executed only in Administrator mode.

If any object file other than the proper object file specified by Anritsu (file name: nf7500.bin) is downloaded, the system may not start up. Be sure not to download a wrong file other than the proper object file by using this command. When an incorrect object file is downloaded by mistake, insert the SD card or USB memory stick that contains the proper object file into the SD card slot or USB port and start the system. Then, download the proper object file again. For the SD card or USB Memory, use our optional items. If other SD card or USB Memory is used, a failure may occur.

If a communication failure occurs during the download, downloading may not be resumed after recovery, and the session of the device may remain. Such a remaining session is displayed in the “show session” command. In this case, please login with another session, and remove the remaining session using the “delete session” command. After removing the session, try download again.

Use the TFTP server which corresponds to the tsize options specified to RFC 2349, because the file size of the software is more than 32M byte.

[Display]

```
PureFlow(A)> download tftp obj 192.168.40.10 nf7500.bin
Download "nf7500.bin" from 192.168.40.10 (y/n)? y
Loading .....
creating Backup from Master file.....completed.
Done.
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the TFTP server.

file

Specify the name of the software file to download.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : download tftp obj <IP_address> <file>

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

"file": File not found

- The specified file does not exist.
- The file size of the specified file is too large.
- The connection to the TFTP server failed.

Internal flash card is not mounted.

- Error occurred in accessing the internal flash memory.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

No valid header or file size exceeds flash.

- The header information in the specified file is invalid.

System busy: Another conflicting command is in progress.

- The TFTP or FTP command execution is in progress.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

Unknown file type

- The object file type is unknown.

CRC error

- The CRC of the object file is invalid.

This file is not a program

- The specified file is not the software file.

download tftp conf

[Format]

```
download tftp conf <IP_address> <file>
```

[Description]

This command downloads a configuration file over the network from the TFTP server.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

If any configuration file other than the proper configuration file specified by Anritsu is downloaded, the system may not start up. Be careful not to download a file that is not the proper configuration file using this command. If the wrong configuration file is downloaded, insert an SD card or USB flash drive with the proper configuration file into the SD card slot or USB port and start the system. After that, download the proper configuration file again. For the SD card or USB Memory, use our optional items. If other SD card or USB Memory is used, a failure may occur.

If a communication failure occurs during the download, downloading may not be resumed after recovery, and the session of the device may remain. Such a remaining session is displayed in the “show session” command. In this case, please login with another session, and remove the remaining session using the “delete session” command. After removing the session, try download again.

[Display]

```
PureFlow(A)> download tftp conf 192.168.40.10 config.txt
Download "config.txt" from 192.168.40.10 (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the TFTP server.

file

Specify the name of the configuration file.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : download tftp conf <IP_address> <file>

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

"file": File not found.

- The specified file does not exist.
- The file size of the specified file is too large.
- The connection to the TFTP server failed.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

System busy: Another conflicting command is in progress.

- The TFTP or FTP command execution is in progress.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

Internal flash card is not mounted.

- Error occurred in accessing the internal flash memory.

download ftp obj

[Format]

```
download ftp obj <IP_address> <file>
```

[Description]

This command downloads software over the network from the FTP server.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

When the command is executed, a message prompting you to enter your user name and password is shown. Enter the user name and password registered with the FTP server.

This command can be executed only in Administrator mode.

If any object file other than the proper object file specified by Anritsu (file name: nf7500.bin) is downloaded, the system may not start up. Be careful not to download a file that is not the proper object file using this command. If the wrong object file is downloaded, insert an SD card or USB flash drive with the proper object file into the SD card slot or port and start the system. Then, download the proper object file again. For the SD card or USB Memory, use our optional items. If other SD card or USB Memory is used, a failure may occur.

If a communication failure occurs during the download, downloading may not be resumed after recovery, and the session of the device may remain. Such a remaining session is displayed in the “show session” command. In this case, please login with another session, and remove the remaining session using the “delete session” command. After removing the session, try download again.

[Display]

```
PureFlow(A)> download ftp obj 192.168.40.10 nf7500.bin
Name:ftpuser
Password:
Download "nf7500.bin" from 192.168.40.10 (y/n)? y
Loading .....
creating Backup from Master file.....completed.
Done.
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the FTP server.

file

Specifies the file name of the software to be downloaded.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : download ftp obj <IP_address> <file>

- There is a missing argument.

invalid IP_address

- The specified IP address format or value is invalid.

"file": File not found

- The specified file does not exist.
- The connection to the FTP server failed.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

No valid header or file size exceeds flash.

- The header information on the specified file is invalid.

System busy: Another conflicting command is in progress.

- Media access conflicts with other commands. Try again after completing the other commands.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

Unknown file type

- The object file type is unknown.

Internal flash card is not mounted.

- Error occurred in accessing the internal flash memory.

CRC error

- The CRC of the object file is invalid.

This file is not a program

- The specified file is not the software file.

download ftp conf

[Format]

```
download ftp conf <IP_address> <file>
```

[Description]

This command downloads a configuration file over the network from the FTP server.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

When the command is executed, a message prompting you to enter your user name and password is shown. Enter the user name and password registered with the FTP server.

This command can be executed only in Administrator mode.

If any configuration file other than the proper configuration file specified by Anritsu is downloaded, the system may not start up. Be careful not to download a file that is not the proper configuration file using this command. If the wrong configuration file is downloaded, insert an SD card or USB flash drive with the proper configuration file into the SD card slot or USB port and start the system. After that, download the proper configuration file again.

For the SD card or USB Memory, use our optional items. If other SD card or USB Memory is used, a failure may occur.

If a communication failure occurs during the download, downloading may not be resumed after recovery, and the session of the device may remain. Such a remaining session is displayed in the “show session” command. In this case, please login with another session, and remove the remaining session using the “delete session” command. After removing the session, try download again.

[Display]

```
PureFlow(A)> download ftp conf 192.168.40.10 config.txt
Name:ftpuser
Password:
Download "config.txt" from 192.168.40.10 (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the FTP server.

file

Specify the name of the configuration file.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : download ftp conf <IP_address> <file>

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

"file": File not found

- The specified file does not exist.
- The connection to the FTP server failed.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

System busy: Another conflicting command is in progress.

- The TFTP or FTP command execution is in progress.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

Internal flash card is not mounted.

- Error occurred in accessing the internal flash memory.

download sd obj

[Format]

download sd obj <file>

[Description]

This command downloads the software from the SD card inserted in the SD card slot to the internal flash memory.

SD cards in FAT16/FAT32 format are supported. Do not remove the card until the download is complete. Otherwise, the contents of the card may be destroyed.

For "file", specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

If any object file other than the proper object file specified by Anritsu (file name: nf7500.bin) is downloaded, the system may not start up. Be careful not to download a file that is not the proper object file using this command. If the wrong object file is downloaded, insert an SD card with the proper object file into the SD card slot and start the system. Then, download the proper object file again. For the SD card, use our optional items. If other SD card is used, a failure may occur.

[Display]

```
PureFlow(A)> download sd obj nf7500.bin
Download "nf7500.bin" from Flash Memory Card (y/n)? y
Loading .....
creating Backup from Master file.....completed.
Done.
PureFlow(A)>
```

[Arguments]

file

Specify the name of the software file to download from the SD card.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : download sd obj <file>

- There is a missing argument.

"file": File not found

- The specified file does not exist.

External flash card is not mounted.

- No card is inserted.

Internal flash card is not mounted.

- An internal flash memory access error occurred.

Card access error

- A card access error occurred.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

This file is invalid format.

- The file format is invalid.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

CRC error

- The CRC of the object file is invalid.

This file is not a program

- The specified file is not the software file.

download sd patch

[Format]

download sd patch

[Description]

The software patch file of the SD card that is installed into the SD card slot is applied to the internal software.

SD cards in FAT16/FAT32 format are supported. Do not remove the card until the application of the patch is complete. Otherwise, the contents of the card may be destroyed.

Store the patch file specified by Anritsu in the root directory of SD card and run this command. If there are two or more patch files, because this command applies all patch files, store to the SD card all patch files and run this command.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> download SD patch
Apply patch from Flash Memory Card (y/n)? y
Applying file system patch ..... done
Applying apps patch ..... done
Applying fcpu patch ..... done
creating Backup from Master file.....completed.
Done.
PureFlow(A)>
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Patch file not found.

- The patch file does not exist.

Patch file is invalid format

- The patch file format is invalid.

Patch requires other patch file.

- The patch file has shortage.

External flash card is not mounted.

- No card is inserted.

Internal flash card is not mounted.

- An internal flash memory access error occurred.

Card access error

- A card access error occurred.

download sd conf

[Format]

```
download sd conf <file>
```

[Description]

This command downloads a configuration file from the SD card inserted in the SD card slot to the internal flash memory.

SD cards in FAT16/FAT32 format are supported. Do not remove the card until the download is complete. Otherwise, the contents of the card may be destroyed.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

If any configuration file other than the proper configuration file specified by Anritsu is downloaded, the system may not start up. Be careful not to download a file that is not the proper configuration file using this command. If the wrong configuration file is downloaded, insert an SD card with the proper configuration file into the SD card slot and start the system. After that, download the proper configuration file again. Use an SD card which is options of Anritsu. Using incorrect SD cards will cause failure.

[Display]

```
PureFlow(A)> download sd conf config.txt
Download "config.txt" from Flash Memory Card (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

file

Specify the name of the configuration file to download.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : download sd conf <file>

- There is a missing argument.

"file": File not found

- The specified file does not exist.

External flash card is not mounted.

- No card is inserted.

Internal flash card is not mounted.

- An internal flash memory access error occurred.

Card access error

- A card access error occurred.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

This file is invalid format.

- The file format is invalid.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

download usb obj

[Format]

```
download usb obj <file>
```

[Description]

This command downloads the software from the USB flash drive inserted in the USB port to the internal flash memory.

FAT16/FAT32 format are supported for USB flash drives. Do not remove the USB flash drive until the download is complete. Otherwise, the contents of the device may be destroyed.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

If any object file other than the proper object file specified by Anritsu (file name: nf7500.bin) is downloaded, the system may not start up. Be careful not to download a file that is not the proper object file using this command. If the wrong object file is downloaded, insert USB flash with the proper object file into USB port and start the system. Then, download the proper object file again. Use USB flash which is options of Anritsu. Using incorrect USB flash will cause failure.

[Display]

```
PureFlow(A)> download usb obj nf7500.bin
Download "nf7500.bin" from USB Memory (y/n)? y
Loading .....
creating Backup from Master file.....completed.
Done.
PureFlow(A)>
```

[Arguments]

file

Specify the name of the software file to download from the USB flash drive.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : download usb obj <file>

- There is a missing argument.

"file": File not found

- The specified file does not exist.

USB Memory is not mounted.

- No USB flash drive is inserted.

Internal flash card is not mounted.

- An internal flash memory access error occurred.

USB memory access error

- A USB flash drive access error occurred.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

This file is invalid format.

- The file format is invalid.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

CRC error

- The CRC of the object file is invalid.

This file is not a program

- The specified file is not the software file.

download usb patch

[Format]

```
download usb patch
```

[Description]

The software patch file of the USB memory stick that is installed into the USB port is applied to the internal software.

FAT16/FAT32 format are supported for USB flash drives. Do not remove the USB flash drive until the application of the patch is complete. Otherwise, the contents of the device may be destroyed.

Store the patch file specified by Anritsu in the root directory of USB flash drives and run this command. If there are two or more patch files, because this command applies all patch files, store to the USB flash drive all patch files and run this command.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> download usb patch
Apply patch from USB Memory (y/n)? y
Appling file system patch ..... done
Appling apps patch ..... done
Appling fcpu patch ..... done
creating Backup from Master file.....completed.
Done.
PureFlow(A) >
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Patch file not found.

- The patch file does not exist.

Patch file is invalid format.

- The patch file format is invalid.

Patch requires other patch file.

- The patch file has shortage.

USB Memory is not mounted.

- No USB flash drive is inserted.

Internal flash card is not mounted.

- An internal flash memory access error occurred.

USB memory access error

- A card access error occurred.

download usb conf

[Format]

```
download usb conf <file>
```

[Description]

This command downloads a configuration file from the USB flash drive inserted in the USB port to the internal flash memory.

FAT16/FAT32 format are supported for USB flash drives. Do not remove the USB flash drive until the download is complete. Otherwise, the contents of the device may be destroyed.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/\ [] : ; | = , and space

This command can be executed only in Administrator mode.

If any configuration file other than the proper configuration file specified by Anritsu is downloaded, the system may not start up. Be careful not to download a file that is not the proper configuration file using this command. If the wrong configuration file is downloaded, insert USB flash drive with the proper configuration file into USB port and start the system. After that, download the proper configuration file again. Use a USB flash which is options of Anritsu. Using incorrect USB flash will cause failure.

[Display]

```
PureFlow(A)> download usb conf config.txt
Download "config.txt" from USB Memory (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

file

Specify the name of the configuration file to download.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : download usb conf <file>

- There is a missing argument.

"file": File not found

- The specified file does not exist.

USB memory is not mounted.

- No USB flash drive is inserted.

Internal flash card is not mounted.

- Error occurred in accessing the internal flash memory.

USB memory access error

- A USB flash drive access error occurred.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

This file is invalid format.

- The file format is invalid.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

upload tftp conf

[Format]

```
upload tftp conf <IP_address> <file>
```

[Description]

This command uploads a configuration file to the TFTP server over the network.

The contents of the configuration file to be uploaded are the contents saved by the “save config” command.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> upload tftp conf 192.168.40.10 config.txt
Upload "config.txt" to 192.168.40.10 (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the TFTP server.

file

Specify the name of the configuration file to upload.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : upload tftp conf <IP_address> <file>

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

Time-out error occurred

- A timeout occurred.

Failure on transmission packet to the server

- The connection to the TFTP server failed.
- Writing is forbidden on the TFTP server.

Internal flash card is not mounted.

- Error occurred in accessing the internal flash memory.

Config file not found : <file>

- There is no configuration file.

Upload failed

- Failed to upload a file.

Check the following items.

Whether there is a directory of the uploading destination.

Whether there is a file of the uploading destination, and the overwrite limitation

Access limitation of the uploading destination

Disk write capacity of the uploading destination

System busy: Another conflicting command is in progress.

- The TFTP or FTP command execution is in progress.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

upload tftp file

[Format]

```
upload tftp file <IP_address> {sd | usb} <src_file> <dst_file>
```

[Description]

This command uploads a file on an SD card or USB flash drive to the TFTP server over the network. SD cards in FAT16/FAT32 format are supported. for the SD card or USB flash drive. Do not remove the SD card or USB flash drive until command execution is complete. Otherwise, the contents of the device may be destroyed.

For “src_file”, specify the name of the file on the USB flash drive including the path. The file name including the path must be within 128 characters.

For “dst_file”, specify the name of the file on the TFTP server including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/\ [] ; | = , and space

This command can be executed only in Administrator mode.

For the SD card or USB Memory, use our optional items. If other SD card or USB Memory is used, a failure may occur.

Use the TFTP server which corresponds to the tsize options specified to RFC 2349, because the file size of control software is more than 32M byte.

[Display]

```
PureFlow(A)> upload tftp file 192.168.40.10 sd config.txt config.bak
Upload "config.bak" to 192.168.40.10 (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the TFTP server.

{sd | usb}

Specify the location from which to upload the file.

src_file

Specify the name of the file to upload.

The file name including the path must be within 128 characters.

dst_file

Specify the name of the file on the TFTP server.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : upload tftp file <IP_address> {sd | usb} <src_file> <dst_file>

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

File length is valid from 1 to 128.

- The length of the name of the file to upload including the path should be 1 to 128 characters.

"file": File not found

- The specified file does not exist.

Card is not mounted.

- No SD card is inserted.

USB is not mounted.

- No USB flash drive is inserted.

Card access error

- An SD card access error occurred.

USB memory access error

- A USB flash drive access error occurred.

File length is valid from 1 to 128.

- The length of the file name including the path on the TFTP server should be 1 to 128 characters.

Time-out error occurred

- A timeout occurred.

Failure on transmission packet to the server.

- The connection to the TFTP server failed.
- Writing is forbidden on the TFTP server.

System busy: Another conflicting command is in progress.

- The TFTP or FTP command execution is in progress.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

Internal flash card is not mounted.

- Error occurred in accessing the internal flash memory.

upload ftp conf

[Format]

```
upload ftp conf <IP_address> <file>
```

[Description]

This command uploads a configuration file to the FTP server over the network.

The contents of the configuration file to be uploaded are the contents saved by the “save config” command.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

When the command is executed, a message prompting you to enter your user name and password is shown. Enter the user name and password registered with the FTP server. This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> upload ftp conf 192.168.40.10 config.txt
Name:ftpuser
Password:
Upload "config.txt" to 192.168.40.10 (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the FTP server.

file

Specify the name of the configuration file to upload.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : upload ftp conf <IP_address> <file>

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

Time-out error occurred

- A timeout occurred.

Failure on transmission packet to the server.

- The connection to the FTP server failed.
- Writing is forbidden on the FTP server.

System busy: Another conflicting command is in progress.

- The TFTP or FTP command execution is in progress.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

Internal flash card is not mounted.

- Error occurred in accessing the internal flash memory.

Config file not found : <file>

- There is no configuration file.

upload ftp file

[Format]

```
upload ftp file <IP_address> {sd | usb} <src_file> <dst_file>
```

[Description]

This command uploads a file on an SD card or USB flash drive to the FTP server over the network. SD cards in FAT16/FAT32 format are supported. for the SD card or USB flash drive. Do not remove the SD card or USB flash drive until command execution is complete. Otherwise, the contents of the device may be destroyed.

For “src_file”, specify the name of the file on the USB flash drive including the path. The file name including the path must be within 128 characters.

For “dst_file”, specify the name of the file on the FTP server including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

When the command is executed, a message prompting you to enter your user name and password is shown. Enter the user name and password registered with the FTP server.

This command can be executed only in Administrator mode.

For the SD card or USB Memory, use our optional items. If other SD card or USB Memory is used, a failure may occur.

[Display]

```
PureFlow(A)> upload ftp file 192.168.40.10 sd config.txt config.bak
Name:ftpuser
Password:
Upload "config.bak" to 192.168.40.10 (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

IP_address

Specify the IP address of the FTP server.

{sd | usb}

Specify the location from which to upload the file.

src_file

Specify the name of the file to upload.

The file name including the path must be within 128 characters.

dst_file

Specify the name of the file on the FTP server.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : upload ftp file <IP_address> {sd | usb} <src_file> <dst_file>

- There is a missing argument.

Invalid IP address

- The specified IP address format or value is invalid.

File length is valid from 1 to 128.

- The length of the name of the file to upload including the path should be 1 to 128 characters.

"file": File not found

- The specified file does not exist.

Card is not mounted.

- No SD card is inserted.

USB is not mounted.

- The USB memory stick is not installed.

Card access error

- An SD card access error occurred.

USB memory access error

- A USB flash drive access error occurred.

File length is valid from 1 to 128

- The length of the file name including the path on the FTP server should be 1 to 128 characters.

Time-out error occurred

- A timeout occurred.

Failure on transmission packet to the server.

- The connection to the FTP server failed.
- Writing is forbidden on the FTP server.

System busy: Another conflicting command is in progress.

- The TFTP or FTP command execution is in progress.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

Internal flash card is not mounted.

- Error occurred in accessing the internal flash memory.

upload sd obj

[Format]

upload sd obj <file>

[Description]

This command uploads software in the system to the SD card inserted in the SD card slot. SD cards in FAT16/FAT32 format are supported. Do not remove the card until command execution is complete. Otherwise, the contents of the card may be destroyed.

For "file", specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

For the SD card, use our optional items. If other SD card is used, a failure may occur.

[Display]

```
PureFlow(A)> upload sd obj nf7500.bin
Upload as "nf7500.bin" to Flash Memory Card (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

file

Specify the name of the file to upload to the SD card.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : upload sd obj <file>

- There is a missing argument.

"file": File not found

- Failed to read the software inside the system.

External flash card is not mounted.

- No card is inserted.

Internal flash card is not mounted.

- An internal flash memory access error occurred.

Card access error

- A card access error occurred, or there is no available space on the card.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

upload sd conf

[Format]

```
upload sd conf <file>
```

[Description]

This command uploads a configuration file to the SD card inserted in the SD card slot. The contents of the configuration file to be uploaded are the contents saved by the “save config” command.

SD cards in FAT16/FAT32 format are supported. Do not remove the card until command execution is complete. Otherwise, the contents of the card may be destroyed.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

For the SD card, use our optional items. If other SD card is used, a failure may occur.

[Display]

```
PureFlow(A)> upload sd conf config.txt
Upload "config.txt" to Flash Memory Card (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

file

Specify the name of the configuration file to upload.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : upload sd conf <file>

- There is a missing argument.

External flash card is not mounted.

- No card is inserted.

Internal flash card is not mounted.

- An internal flash card access error occurred.

Card access error

- A card access error occurred, or there is no available space on the card.

File length is valid from 1 to 128

- The length of the file name including the path should be 1 to 128 characters.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

Config file not found : <file>

- There is no configuration file.

upload usb obj

[Format]

upload usb obj <file>

[Description]

This command uploads software in the system to the USB flash drive inserted in the USB port.

FAT16/FAT32 format are supported for USB flash drives. Do not remove the USB flash drive until command execution is complete. Otherwise, the contents of the device may be destroyed.

For "file", specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

For the USB flash, use our optional items. If other USB Memory is used, a failure may occur.

[Display]

```
PureFlow(A)> upload usb obj nf7500.bin
Upload as " nf7500.bin " to USB Memory (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

file

Specify the name of the file to upload to the USB flash drive.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : upload usb obj <file>

- There is a missing argument.

"file": File not found

- Failed to read the software inside the system.

USB Memory is not mounted.

- No USB flash drive is inserted.

Internal flash card is not mounted.

- An internal flash memory access error occurred.

USB memory access error

- A USB flash drive access error occurred, or there is no available space on the memory.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

upload usb conf

[Format]

```
upload usb conf <file>
```

[Description]

This command uploads a configuration file to the USB flash drive inserted in the USB port. The contents of the configuration file to be uploaded are the contents saved by the “save config” command.

FAT16/FAT32 format are supported for USB flash drives. Do not remove the USB flash drive until command execution is complete. Otherwise, the contents of the device may be destroyed.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

For the USB flash, use our optional items. If other USB flash is used, a failure may occur.

[Display]

```
PureFlow(A)> upload usb conf config.txt
Upload "config.txt" to USB Memory (y/n)? y
Loading .....
Done.
PureFlow(A)>
```

[Arguments]

file

Specify the name of the configuration file to upload.

The file name including the path must be within 128 characters.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : upload usb conf <file>

- There is a missing argument.

USB Memory is not mounted.

- No USB flash drive is inserted.

Internal flash card is not mounted.

- An internal flash memory access error occurred.

USB memory access error

- A USB flash drive access error occurred, or there is no available space on the memory.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

Config file not found : <file>

- There is no configuration file.

show sd list

[Format]

```
show sd list [<path>]
```

[Description]

This command functions in the same way as the “operate sd list” command. Unlike the “operate sd list” command, this command can also be executed in Normal mode.

For the SD card, use our optional items. If other SD card is used, a failure may occur.

[Display]

```
PureFlow> show sd list /
config.txt          1248
test.dat            45012
temp                <DIR>
?????????.txt      8192
PureFlow>
```

The displayed items and their meanings are as follows:

- config.txt 1248
Indicates that there is a file named config.txt whose size is 1,248 bytes.
- temp <DIR>
Indicates that there is a directory named temp.
- ????????.txt 8192
Indicates that there is a file whose name contains double-byte characters or one-byte katakana characters.

[Arguments]

path

Specify the directory on the SD card using up to 128 characters. The directory is not case-sensitive.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : show sd list [<path>]

- There is a missing argument.

"path": Path not found

- The specified directory does not exist.

Card is not mounted.

- No card is inserted.

Card access error

- A card access error occurred.

Path length is valid from 1 to 128.

- The length of the path name should be from 1 to 128 characters.

Invalid path

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the directory name is invalid.

show usb list

[Format]

```
show usb list [<path>]
```

[Description]

This command functions in the same way as the “operate usb list” command. Unlike the “operate usb list” command, this command can also be executed in Normal mode.

For the USB flash, use our optional items. If other USB flash is used, a failure may occur.

[Display]

```
PureFlow> show usb list /
config.txt          1248
test.dat            45012
temp                <DIR>
?????????.txt      8192
PureFlow>
```

The displayed items and their meanings are as follows:

- config.txt 1248
Indicates that there is a file named config.txt whose size is 1,248 bytes.
- temp <DIR>
Indicates that there is a directory named temp.
- ??????????.txt 8192
Indicates that there is a file whose name contains double-byte characters or one-byte katakana characters.

[Arguments]

path

Specify the directory on the USB flash drive using up to 128 characters. The directory is not case-sensitive.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : show usb list [<path>]

- There is a missing argument.

"path": Path not found

- The specified directory does not exist.

USB memory is not mounted.

- No USB flash drive is inserted.

USB memory access error

- A USB flash drive access error occurred.

Path length is valid from 1 to 128.

- The length of the path name should be from 1 to 128 characters.

Invalid path

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the directory name is invalid.

operate sd remove

[Format]

```
operate sd remove <file>
```

[Description]

This command deletes a file on the SD card inserted in the SD card slot. Directories cannot be deleted since they cannot be specified.

SD cards in FAT16/FAT32 format are supported. Do not remove the card until command execution is complete. Otherwise, the contents of the card may be destroyed.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

For the SD card, use our optional items. If other SD card is used, a failure may occur.

[Display]

```
PureFlow(A)> operate sd remove config.txt
Remove "config.txt" to Flash Memory Card (y/n)? y
Done.
PureFlow(A)>
```

[Arguments]

file

Specify the name of the file to delete.

The file name including the path must be within 128 characters. The directory is not case-sensitive.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : operate sd remove <file>

- There is a missing argument.

"file": File not found

- The specified file does not exist. Directories cannot be specified.

Card is not mounted.

- No card is inserted.

Card access error

- A card access error occurred.

Specified file length is invalid. (Valid from 1 to 128)

- The length of the file name including the path should be 1 to 128 characters.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

operate sd rename

[Format]

```
operate sd rename <file> <new_name>
```

[Description]

This command renames a file on the SD card inserted in the SD card slot. Directories cannot be renamed since they cannot be specified.

SD cards in FAT16/FAT32 format are supported. Do not remove the card until command execution is complete. Otherwise, the contents of the card may be destroyed.

For “file”, specify a file name including the path.

For “new_name”, specify a file name excluding the path. The file name must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

For the SD card, use our optional items. If other SD card is used, a failure may occur.

[Display]

```
PureFlow(A)> operate sd rename config.txt config.bak
PureFlow(A)>
```

[Arguments]

file

Specify a file on the SD card using up to 128 characters. The directory is not case-sensitive.

new_name

Specify the new name of the file.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : operate sd rename <file> <new_name>

- There is a missing argument.

"file": File not found

- The specified file does not exist. Directories cannot be specified.

"new_name": File already exists

- A file or directory with the same name exists.

Card is not mounted

- No card is inserted.

Card access error

- A card access error occurred.

Specified file length is invalid. (Valid from 1 to 128)

- The length of the file name should be from 1 to 128 characters.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

operate sd copy

[Format]

```
operate sd copy <src_file> <dst_file_or_path>
```

[Description]

This command copies a file on the SD card inserted in the SD card slot. Directories cannot be copied since they cannot be specified. Can not copy to the directory that does not exist.

SD cards in FAT16/FAT32 format are supported. Do not remove the card until command execution is complete. Otherwise, the contents of the card may be destroyed.

For “src_file”, specify the name of the copy source file including the path.

For “dst_file_or_path”, specify the name of the destination file or directory including the path.

When a directory is specified, the file is copied under that directory.

The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

For the SD card, use our optional items. If other SD card is used, a failure may occur.

[Display]

```
PureFlow(A) > operate sd copy config.txt temp  
PureFlow(A) >
```

[Arguments]

src_file

Specify a file on the SD card using up to 128 characters. The directory is not case-sensitive.

dst_file_or_path

Specify the name of the file or directory to which the file is to be copied using up to 128 characters.

The directory is not case-sensitive.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : operate sd copy <src_file> <dst_file_or_path>

- There is a missing argument.

"src_file": File not found

- The specified file does not exist. Directories cannot be specified.

"dst_file_or_path": File already exists

- A file with the same name exists.

"dst_file_or_path": Path not found

- The path name of the copying destination does not exist.

Card is not mounted

- No card is inserted.

Card access error

- A card access error occurred.

Specified file length is invalid. (Valid from 1 to 128)

- The length of the file name should be from 1 to 128 characters.

Invalid file or path

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

operate sd list

[Format]

```
operate sd list [<path>]
```

[Description]

This command lists the files in the specified directory on the SD card inserted in the SD card slot. The displayed items are file, file size, and directory name. If a file name contains any double-byte characters or one-byte katakana characters, it is shown as \$\$\$\$\$\$. \$\$\$.

SD cards in FAT16/FAT32 format are supported. Do not remove the card until command execution is complete. Otherwise, the contents of the card may be destroyed.

Specify the path in "path". The file name including the path must be within 64 characters.

Use an alphanumeric character for the first character of directory names. The following characters cannot be used for directory names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

For the SD card, use our optional items. If other SD card is used, a failure may occur.

[Display]

```
PureFlow> operate sd list /
config.txt          1248
test.dat           45012
temp                <DIR>
?????????.txt      8192
PureFlow>
```

The displayed items and their meanings are as follows:

• config.txt 1248

Indicates that there is a file named config.txt whose size is 1,248 bytes.

• temp <DIR>

Indicates that there is a directory named temp.

• ??????????.txt 8192

Indicates that there is a file whose name contains double-byte characters or one-byte katakana characters.

[Arguments]

path

Specify the directory on the SD card using up to 128 characters. The directory is not case-sensitive.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : operate sd list [<path>]

- There is a missing argument.

"path": Path not found

- The specified directory does not exist.

Card is not mounted.

- No card is inserted.

Card access error

- A card access error occurred.

Path length is valid from 1 to 128.

- The length of the path name should be from 1 to 128 characters.

Invalid path

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the directory name is invalid.

operate usb remove

[Format]

```
operate usb remove <file>
```

[Description]

This command deletes a file on the USB flash drive inserted in the USB port. Directories cannot be deleted since they cannot be specified.

FAT16/FAT32 format are supported for USB flash drives. Do not remove the USB flash drive until command execution is complete. Otherwise, the contents of the device may be destroyed.

For “file”, specify a file name including the path. The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

For the USB flash, use our optional items. If other USB flash is used, a failure may occur.

[Display]

```
PureFlow(A)> operate usb remove config.txt
Remove "config.txt" to USB Memory (y/n)? y
Done.
PureFlow(A)>
```

[Arguments]

file

Specify the name of the file to delete.

The file name including the path must be within 128 characters. The directory is not case-sensitive.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : operate usb remove <file>

- There is a missing argument.

"file": File not found

- The specified file does not exist. Directories cannot be specified.

USB memory is not mounted.

- No USB flash drive is inserted.

USB memory access error

- A USB flash drive access error occurred.

File length is valid from 1 to 128.

- The length of the file name including the path should be 1 to 128 characters.

Invalid file

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

operate usb rename

[Format]

```
operate usb rename <file> <new_name>
```

[Description]

This command renames a file on the USB flash drive inserted in the USB port. Directories cannot be renamed since they cannot be specified.

FAT16/FAT32 format are supported for USB flash drives. Do not remove the USB flash drive until command execution is complete. Otherwise, the contents of the device may be destroyed.

For “file”, specify a file name including the path.

For “new_name”, specify a file name excluding the path. The file name must be within 128 characters. Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

```
. "/ \ [ ] : ; | = , and space
```

This command can be executed only in Administrator mode.

For the USB flash, use our optional items. If other USB flash is used, a failure may occur.

[Display]

```
PureFlow(A) > operate usb rename config.txt config.bak
PureFlow(A) >
```

[Arguments]

file

Specify a file on the USB flash drive using up to 128 characters. The directory is not case-sensitive.

new_name

Specify the new name of the file. The directory is not case-sensitive.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

```
Usage : operate usb rename <file> <new_name>
```

- There is a missing argument.

"file": File not found

- The specified file does not exist. Directories cannot be specified.

"new_name": File already exists

- A file or directory with the same name exists.

USB memory is not mounted.

- No USB flash drive is inserted.

USB memory access error

- A USB flash drive access error occurred.

File length is valid from 1 to 128.

- The length of the file name should be from 1 to 128 characters.

Invalid file

Below characters cannot be used in the file/directory name.

```
. " / \ [ ] : ; | = , and white space
```

- The format or character(s) of the file name is invalid.

operate usb copy

[Format]

```
operate usb copy <src_file> <dst_file_or_path>
```

[Description]

This command copies a file on the USB flash drive inserted in the USB port. Directories cannot be copied since they cannot be specified.

FAT16/FAT32 format are supported for USB flash drives. Do not remove the USB flash drive until command execution is complete. Otherwise, the contents of the device may be destroyed.

For “src_file”, specify the name of the copy source file including the path.

For “dst_file_or_path”, specify the name of the destination file or directory including the path. If a directory is specified, files are copied under that directory.

The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory and file names. The following characters cannot be used for directory and file names:

. "/ \ [] ; | = , and space

This command can be executed only in Administrator mode.

For the USB flash, use our optional items. If other USB flash is used, a failure may occur.

[Display]

```
PureFlow(A)> operate usb copy config.txt temp  
PureFlow(A)>
```

[Arguments]

src_file

Specify a file on the USB flash drive using up to 128 characters. The directory is not case-sensitive.

dst_file_or_path

Specify the name of the file or directory to which the file is to be copied using up to 128 characters. The directory is not case-sensitive.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

An argument was missing.

Usage : operate usb copy <src_file> <dst_file_or_path>

- There is a missing argument.

"src_file": File not found

- The specified file does not exist. Directories cannot be specified.

"dst_file_or_path": File already exists

- A file with the same name exists.

"dst_file_or_path": Path not found

- The path name of the copying destination does not exist.

USB memory is not mounted.

- No USB flash drive is inserted.

USB memory access error

- A USB flash drive access error occurred.

File length is valid from 1 to 128.

- The length of the file name should be from 1 to 128 characters.

Invalid file or path

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the file name is invalid.

operate usb list

[Format]

```
operate usb list [<path>]
```

[Description]

This command lists the files in the specified directory on the USB flash drive inserted in the USB port. The displayed items are file, file size, and directory name. If a file name contains any double-byte characters or one-byte katakana characters, it is shown as \$\$\$\$\$\$. \$\$\$.

FAT16/FAT32 format are supported for USB flash drives. Do not remove the USB flash drive until command execution is complete. Otherwise, the contents of the device may be destroyed.

Specify the path in "path". The file name including the path must be within 128 characters.

Use an alphanumeric character for the first character of directory names. The following characters cannot be used for directory names:

. "/ \ [] : ; | = , and space

This command can be executed only in Administrator mode.

For the USB flash, use our optional items. If other USB flash is used, a failure may occur.

[Display]

```
PureFlow> operate usb list /
config.txt          1248
test.dat           45012
temp                <DIR>
?????????.txt      8192
PureFlow>
```

The displayed items and their meanings are as follows:

- config.txt 1248

Indicates that there is a file named config.txt whose size is 1,248 bytes.

- temp <DIR>

Indicates that there is a directory named temp.

- ??????????.txt 8192

Indicates that there is a file whose name contains double-byte characters or one-byte katakana characters.

[Arguments]

path

Specify the directory on the USB flash drive using up to 128 characters. The directory is not case-sensitive.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Command making ambiguity

Usage : operate usb list [<path>]

- There is a missing argument.

"path": Path not found

- The specified directory does not exist.

USB memory is not mounted

- No USB flash drive is inserted.

USB memory access error

- A USB flash drive access error occurred.

Path length is valid from 1 to 128.

- The length of the path name should be from 1 to 128 characters.

Invalid path

Below characters cannot be used in the file/directory name.

. " / \ [] : ; | = , and white space

- The format or character(s) of the directory name is invalid.

set option

[Format]

set option

[Description]

This command sets the license key that enables options.

The license key and system serial number are checked. If they do not match, authentication fails and the options cannot be enabled.

When entering a license key, inputting a hyphen every four characters is optional. Both input formats are recognized as the same license key.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set option
```

```
Enter the option key:Xb3e-gXKs-6BBt-dXhC
```

```
Authentication succeed.
```

```
      Making be available : License Key  NF7500-L111A (200M Bandwidth License)
```

```
Updation done.
```

```
Enter update scenario command to change port bandwidth.
```

```
PureFlow(A)>
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

Authentication failed.

- Failed to authenticate.

This license requires below license.

- Another license is required for using this license.

show option

[Format]

show option

[Description]

This command displays the options currently enabled in the system.
This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A) > show option
License Key NF7500-L111A available (200M Bandwidth License)
License Key NF7500-L112A available (400M Bandwidth License)
License Key NF7500-L113A available (700M Bandwidth License)
License Key NF7500-L114A available (1G Bandwidth License)
License Key NF7500-L115A available (200M to 400M Bandwidth License)
License Key NF7500-L116A available (400M to 700M Bandwidth License)
License Key NF7500-L117A available (700M to 1G Bandwidth License)
License Key NF7500-L121A available (4k Scenario License)
License Key NF7500-L131A available (OpenFlow Function License)
License Key NF7500-L211A available (FEC Function License)
License Key NF7500-L201A available (TCP Acceleration Function License)
PureFlow(A) >
```

[Arguments]

None

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

reboot

[Format]

```
reboot system
```

[Description]

This command resets (reboots) the system.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> reboot system  
Rebooting the system, ok (y/n)? y
```

[Arguments]

```
system
```

Resets the entire system.

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
An argument was missing.
```

```
Usage : reboot system
```

- There is a missing argument.

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