PureFlow WSX

Unified Network Controller
NF7600 series
Command Reference
TCP Acceleration Edition

Fifth 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 Unified Network Controller Operation Manual (NF7600-W011E). Please also refer to this document before using the equipment.
- Keep this manual with the equipment.

ANRITSU NETWORKS CO., LTD.

Safety Symbols

To prevent the risk of personal injury or loss related to equipment malfunction, Anritsu Networks Co., Ltd. uses the following safety symbols to indicate safety-related information. Ensure that you clearly understand the meanings of the symbols BEFORE using the equipment. Some or all of the following symbols may be used on all Anritsu Networks Co., Ltd. equipment. In addition, there may be other labels attached to products that are not shown in the diagrams in this manual.

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.

Safety Symbols Used on Equipment and in Manual

The following safety symbols are used inside or on the equipment near operation locations to provide information about safety items and operation precautions. Ensure that you clearly understand the meanings of the symbols and take the necessary precautions BEFORE using the equipment.

This indicates a prohibited operation. The prohibited operation is indicated symbolically in or near the barred circle.

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.

Anritsu Networks Co., Ltd. Contact

In the event that this equipment malfunctions, contact to "Inquiry of this equipment," which can be found in this manual (the last page of the printed version, or the separate file on the CD).

Maintenance Contract

Anritsu Networks Co., Ltd. can provide a range of optional services under a maintenance contract. For details, contact an Anritsu Networks Co., Ltd. Service and Sales office.

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Trademark and Registered Trademark

OpenFlow is a trademark or registered trademark of the Open Networking Foundation.

About This Manual

This manual describes in detail the commands used in the PureFlow WSX Unified Network Controller (hereafter referred to as "this device").

This manual is applicable to the following models of this equipment:
- NF7601A
- NF7602A
- NF7603A
- NF7604A
- NF7605A

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

<1> Operation Manual TCP Acceleration Edition (NF7600-W011E)
   Describes in detail the installation and handling in this device.

<2> Command Reference TCP Acceleration Edition (NF7600-W012E)
   Describes in detail the commands used in this device.

<3> Configuration Guide TCP Acceleration Edition(NF7600-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 TCP Acceleration Edition (NF7600-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 or an Anritsu Networks Co., Ltd. customer support center.)

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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 Anritsu Networks Co., Ltd. customer support center, 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 autonegotiation`

Enables/disables AutoNegotiation on the Network port and Ethernet port.

(2) `set port speed`

Sets the communication speed of the Network port and Ethernet port.

(3) `set port duplex`

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

(4) `set port flow_control`

Sets the flow control by the Network port's pause frame.

(5) `set port mtu`

Sets the MTU (Maximum Transmission Unit) of the Network port.

(6) `show port`

Displays information related to the Network and Ethernet port.

(7) `show port <slot/port>`

Displays detailed information related to the Network and Ethernet port.

(8) `add port group`

Registers the port group of the Network port.

(9) `delete port group`

Deletes the port group of the Network port.

(10) `show port group`

Displays information related to the port group of the Network 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) `add filter`
Registers a filter.

(2) `delete filter`
Deletes a filter.

(3) `show filter`
Displays information related to the filter.

(4) `add rulelist group`
Registers a rule list.

(5) `add rulelist entry`
Registers a rule list entry.

(6) `delete rulelist group`
Deletes a rule list.

(7) `delete rulelist entry`
Deletes a rule list entry.

(8) `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.

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.

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Explanation of Commands

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)   `add ip system filter`

Registers a filter (system interface filter) for the IP network interface of the system (system interface).

(5)   `delete ip system filter`

Deletes a filter (system interface filter) for the IP network interface of the system (system interface).

(6)   `show ip system`

Displays information related to a filter (system interface filter) and the IP network interface of the system (system interface).

(3)   `unset ip system gateway`

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.

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Explanation of Commands

(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 network 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.

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Explanation of Commands

(22) `set sntp server`

Specifies NTP server.

(23) `set sntp interval`

Sets the interval at which time queries are regularly sent to the NTP server.

(24) `sync sntp`

Sends time queries to the NTP server.

(25) `show sntp`

Displays the information related to SNTP client feature.

(26) `set autologout time`

Sets the time interval for the auto logout feature.

(27) `show autologout`

Displays the information related to auto logout feature.

(28) `set prompt`

Sets the prompt.

(29) `set pager`

Enables/disables the pager feature.

(30) `delete session`

Deletes a session of the connected terminal device.

(31) `show session`

Displays details about the terminal device that is logged in, such as connection type, mode, and login time.

(32) `set radius auth`

Enables/disables RADIUS authentication

(33) `set radius auth timeout`

Sets the timeout time for communication with the RADIUS authentication server.

(34) `set radius auth retransmit`

Sets the number of times to resend an authentication request.

(35) `set radius auth method`

Sets the method for RADIUS authentication.

(36) `add radius auth server`

Adds a RADIUS authentication server.

(37) `update radius auth server`

Updates the preset RADIUS authentication server setting.

(38) `delete radius auth server`

Deletes the setting information on the RADIUS authentication server.

(39) `test radius login`

Tests authentication using the RADIUS protocol.

(40) `show radius`

Displays the RADIUS client settings and all the server information that is set.

(41) `show radius statistics`

Displays the RADIUS client statistics.

(42) `clear radius statistics`

Clears the RADIUS client statistics.

(43) `set ssh`

Sets the SSH connection enable state.

(44) `set ssh server key`

Regenerates the public key (host key) for server authentication.

(45) `show ssh`

Displays the SSH server settings and connected client information.

(46) `set telnet`

Enables/disables Telnet connections.

(47) `show telnet`

Displays whether the Telnet connection is enabled/disabled.

(48) `set http protocol`

Sets the protocol that is used by the Web application.

(49) `show http`

Displays the protocol that is used by the Web application.

(50) `add openflow controller`

Registers the OpenFlow controller setting.

(51) `delete openflow controller`

Deletes the OpenFlow controller setting.

(52) `show openflow controller`

Displays the OpenFlow controller information and state.

(53) `?/help`

Displays the top-level commands available in the current mode.

(54) `exit/logout/quit`

Logs out.

(55) `normal`

Returns to Normal mode.

(56) `admin`

Switches to Administrator mode.

(57) `set password`

Sets the login password.

(58) `set adminpassword`

Sets the login password to switch to Administrator mode.

(59) `show history`

Displays the command input history.

(60) `set console baudrate`

Sets the communication speed (Baud rate) of the console port.

(61) `show console baudrate`

Displays the communication speed (Baud rate) of the console port.

(62) `show module`

Displays information of each module in the system.

(63) `set autoreboot`

Enables/disables auto reboot when a failure occurs.

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Explanation of Commands

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.

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Explanation of Commands

2.1.12 Network bypass-related commands (for NF7603A, NF7604A, NF7605A only)

(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 cf obj`

Downloads software from a CF card.

(6) `download cf patch`

Downloads the software patch file from the CF card.

(7) `download cf conf`

Downloads the configuration file from a CF card.

(8) `download usb obj`

Downloads software from a USB flash drive.

(9) `download usb patch`

Downloads the software patch file from the USB memory.

(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 a CF 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 a CF card or USB flash drive to the FTP server.

(15) `upload cf obj`

Uploads software in the system to a CF card.

(16) `upload cf conf`

Uploads the configuration file to a CF 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 cf list`

Lists the files in a CF card.

(20) `show usb list`

Lists the files in a USB flash drive.

(21) `operate cf remove`

Deletes the files in a CF card.

(22) `operate cf rename`

Renames the files in a CF card.

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(23) `operate cf copy`

Copies the files in a CF card.

(24) `operate cf list`

Lists the files in a CF 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 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 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.
- ・This setting is not applicable to the 10GbE type network port.
- ・For the communication at 1 Gbit/s of 1000BASE-T, 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.

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Explanation of Commands

```
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 applicable to the Network port only when 10/100/1000BASE-T SFP is implemented.
・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 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 1to 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.

```
An argument was missing.
Usage : set port speed system {10M | 100M | 1G}
```

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 applicable to the Network port only when 10/100/1000BASE-T SFP is implemented.
- ・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 and the port type is 1000BASE-T and 1000BASE-X, pause frame reception and transmission are determined by AutoNegotiation. Both pause frame reception and transmission are enabled when AutoNegotiation is disabled. Both reception and transmission are enabled when the port type is 10GBASE-R.

When the reception or transmission is specified to on, pause frame reception or transmission is enabled regardless of the AutoNegotiation results.

When the reception or transmission is specified to off, pause frame reception or transmission is disabled regardless of the AutoNegotiation results.

This command can be executed only in Administrator mode.

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

  ・ If the port type is 10GbE, set a fixed value for both reception and transmission.

[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 1000BASE-T and 1000BASE-X, pause frame reception and transmission are determined by AutoNegotiation. Both pause frame reception and transmission are enabled when AutoNegotiation is disabled.

Both pause frame reception and transmission are enabled when the port type is 10GBASE-R.

{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		MTU (Network port)	
		2048[byte]	10240[byte]
Input burst length (bufsize)	Setting range	2 k[byte] to 1 G[byte]	11 k[byte] to 1 G[byte]
	Setting unit	1 k[byte]	1 k[byte]
Minimum bandwidth (min_bandwidth)	Setting range	10 k[bit/s] to 10 G[bit/s] and 0	50 k[bit/s] to 10 G[bit/s] and 0
	Setting unit	1 k[bit/s]	5 k[bit/s]
Peak bandwidth (peak_bandwidth)	Setting range	10 kbps to 10 Gbps	50 kbps to 10 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		MTU (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]

2

Explanation of Commands

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		MTU (Network port)	
		2048[byte]	10240[byte]
Peak burst size (size)	Setting range	1536 to 9216[byte] When the peak burst size is set to a greater value than 2048, the value is rounded off to the default value (1536 [byte]).	7680 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     10k -> 50k
  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 MTU 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           Status   Link   Autonego   Speed  Duplex
----    -------------  ------   ----   --------   -----  ------
1/1     1000BASE-T     Enabled  Up     Enabled    1G     Full
1/2     1000BASE-T     Enabled  Up     Enabled    1G     Full
1/3     1000BASE-T     Enabled  Up     Enabled    1G     Full
1/4     1000BASE-T     Enabled  Up     Enabled    1G     Full
system  1000BASE-T     Enabled  Up     Enabled    100M   Full
PureFlow(A)>

PureFlow(A)>  show port
Port    Type           Status   Link   Autonego   Speed  Duplex
----    -------------  ------   ----   --------   -----  ------
1/1     10GBASE-R      Enabled  Up     --------   10G    Full
1/2     10GBASE-R      Enabled  Up     --------   10G    Full
1/3     1000BASE-T     Enabled  Up     --------   10G    Full
1/4     1000BASE-T     Enabled  Up     --------   10G    Full
system  1000BASE-T     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 1000BASE-T port.
1000BASE-X	Indicates a 1000BASE-X port.
10GBASE-R	Indicates a 10GBASE-R port.
not mounted	SFP is not mounted.
unknown	The SFP 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.

2

Explanation of Commands

- `Autonego`

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

`Enabled`	AutoNegotiation is enabled.
`Disabled`	AutoNegotiation is disabled.
`--------`	AutoNegotiation is outside the specifications.

- `Speed`

    Shows the communication speed of the port using the following character strings.

`10G`	10 gigabits per second
`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
Admin status       : Enabled
Oper status        : Up
Auto negotiation   : Enabled
Admin speed        : 100M
Oper speed         : 100M
Admin duplex       : Full
Oper duplex        : Full
Tx Flow control    : Auto
Rx Flow control    : Auto
Admin MTU          : 2048[Bytes]
Oper MTU           : 2048[Bytes]
PureFlow(A)>

PureFlow(A)> show port 1/1
Slot/Port          : 1/1
Port type          : 10GBASE-R
Admin status       : Enabled
Oper status        : Up
Auto negotiation   : --------
Admin speed        : 1G
Oper speed         : 10G
Admin duplex       : Full
Oper duplex        : Full
Tx Flow control    : Auto
Rx Flow control    : Auto
Admin MTU          : 2048[Bytes]
Oper MTU           : 2048[Bytes]
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 1000BASE-T port.
`1000BASE-X`	Indicates a 1000BASE-X port.
`10GBASE-R`	Indicates a 10GBASE-R port.
`not mounted`	SFP is not mounted.
`unknown`	The SFP 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.
`--------`	AutoNegotiation is outside the specifications.

- `Admin speed`
     Shows the communication speed setting of the port. This setting only applies if 10/100/1000BASE-T SFP is 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).
`10G`	10 gigabits per second
`1G`	1 gigabit per second
`100M`	100 megabits per second
`10M`	10 megabits per second

- `Admin duplex`
     Shows the settings specified for the duplex mode of the port. This setting only applies if 10/100/1000BASE-T SFP is 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.

- `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.

- `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.

- `Admin MTU`
     Shows the MTU (setting value) for the Network port.

・Oper MTU

Shows the MTU (operation value) for the Network port.

[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

Explanation of Commands

add port group

[Format]

```
add port group <group_name> port <slot/port>,<slot/port>
```

[Description]

Registers port group of Network port.

The port group is referred to as a grouping of the multiple Network ports.

The Network port is specified in the `<slot/port>` format. Two ports are specified by using a comma (,) as a delimiter.

A maximum of two port groups can be registered.

This command can be executed only in the Administrator mode.

Note 1)

Currently, this command is not supported.

[Display]

```
PureFlow(A)> add port group "group1" port 1/1,1/3
PureFlow(A)> add port group "group2" port 1/2,1/4
```

[Arguments]

```
group_name
```
  Specifies a port group 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, duplicates in the equipment, or consists of only a pair of quotation marks (" ").

  Any port group 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 for the Network port and port number.

  Only 1 can be specified for the slot position. Valid port numbers are 1 to 4.

[Default Value]

```
None
```

[Errors]

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

```
An argument was missing.
Usage : add port group <group_name> port <slot/port>,<slot/port>
```
  ・There is a missing argument.

```
Specified group name is invalid.
```
  ・The specified port group name is invalid.

```
Specified group name is already used.
```
  ・The specified port group name has already been used in another port group.

```
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.

```
Number of port is invalid.
```
　　・The specified number of ports is invalid.

2

Explanation of Commands

delete port group

[Format]

```
delete port group all
delete port group <group_name>
```

[Description]

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

Note 1)

Currently, this command is not supported.

[Display]

```
PureFlow(A)> delete port group "group1"
PureFlow(A)> delete port group all
```

[Arguments]

```
group_name
```
  Specifies a port group name.

```
all
```
  All of the port groups are deleted.

[Default Value]

```
None
```

[Errors]

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

```
An argument was missing.
Usage : delete port group {<group_name> | all}
```
  · There is a missing argument.

```
Specified group name is invalid.
```
  · The specified group name is invalid.

```
Specified group name is not used.
```
  · The specified port group does not exist.

show port group

[Format]

```
show port group all
show port group <group_name>
```

[Description]

This command displays information related to port group of Network port.
This command can be executed in the Normal/Administrator mode.

Note 1)

Currently, this command is not supported.

[Display]

<u>(In the case of the "`all`" specification)</u>

```
PureFlow(A)> show port group all
Total port group entries: 2

Group name    : group1
  port group  : 1/1, 1/3
Group name    : group2
  port group  : 1/2, 1/4

Total port group entries: 2
PureFlow(A)>
```

<u>(In the case of the group name specification)</u>

```
PureFlow(A)> show port group "group1"
total port group entries: 2

Group name    : group1
  port group  : 1/1, 1/3

Total port group entries: 2
PureFlow(A)>
```

<u>(When there is no port group)</u>

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

The display contents and their meanings are described below.

• `Group Name`
    Displays the port group name.

• `port group`
    Displays the port that is registered in the port group.

[Arguments]

`group_name`
  Specifies a port group name.

`all`
  Displays all of the port groups.

[Default Value]

    None

[Errors]

    `Invalid input at Marker`

        ・There is an unnecessary argument.

    `An argument was missing.`
    `Usage : show port group {<group_name> | all}`

        ・There is a missing argument.

    `Specified group name is invalid.`

        ・The specified port group name is invalid.

    `Specified group name is not used.`

        ・The specified port group does not exist.

2.2.2 Channel-related commands

add channel

[Format]
```
add channel <channel_name> lan {<slot/port> | <group_name>}
        wan {<slot/port> | <group_name>} default

add channel <channel_name> lan {<slot/port> | <group_name>}
        wan {<slot/port> | <group_name>} 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 10000 channels can be registered.
This command can be executed only in the Administrator mode.

Note 1)

If the default channel is not registered, the flow that is not applied to VLAN of the normal channel is not

transferred.

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, 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.

group_name
  Specifies the names of the port group on the LAN and WAN sides. Currently, this parameter is not supported.

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.
  When setting a value greater than MTU (operational value) of the Network port set by the "set port mtu" command, 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 "1448".

[Errors]
Invalid input at Marker
    · There is an unnecessary argument.

Command making ambiguity
Usage : add channel <channel_name> lan {<slot/port> | <group_name>}
        wan {<slot/port> | <group_name>} default
Usage : add channel <channel_name> lan {<slot/port> | <group_name>}
        wan {<slot/port> | <group_name>} 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 group name is invalid.
```
・The specified group name is invalid.

```
Specified group name is not used.
```
・The specified group does not exist.

```
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 innver-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.

```
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 MTU (operational value) of the Network port set by the "set port mtu" command rounds off the MTU of a channel 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.

2

Explanation of Commands

`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.

Invalid IP address
 ・The specified IP address format or the value is invalid.

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".

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]

<u>(In the case of the "all" specification)</u>

```
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)>
```

<u>(In the case of the channel name specification)</u>

```
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)>
```

<u>(When there is no channel interface)</u>

```
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.

2

- `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.

`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.

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.

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 0 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.

    `Specified channel name is invalid.`

      ・The specified channel name is invalid.

    `Specified channel name is not used.`

      ・The specified channel does not exist.

    `Route is not configured.`

      ・The route is not set for the specified channel.

2

Explanation of Commands

2.2.3   ACL-related commands

`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}] [inner-vid {<VID> | none}]
        [ethertype <type>]
        [priority <filter_pri>]

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

[Description]

This command registers filers.

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 40000 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 "harajuku1" 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.

```
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.

```
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>.
   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>.
   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.

```
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> (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> (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.

```
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}] [inner-vid {<VID>|none}]
        [ethertype <type>] [priority <filter_pri>]
Usage : add filter scenario <scenario_name> filter <filter_name> ipv4
        [vid {<VID>|none}] [inner-vid {<VID>|none}]
        [sip [list] {<src_IP_address>|<list_name>}]
        [dip [list] {<dst_IP_address>|<list_name>}]
        [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}] [inner-vid {<VID>|none}]
        [sip [list] {<src_IP_address>|<list_name>}]
        [dip [list] {<dst_IP_address>|<list_name>}]
        [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 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.

```
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 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.

2

Explanation of Commands

```
Maximum number of filter was exceeded.
```
・The number of registered filters exceeded the registration limit.

`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 "shibuya1"
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.

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               : l4port
    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>]
      [maxquenum <quenum>] [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 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:

When the scenario with the same name is re-registered after deleting the scenario, the information of the scenario is not inherited by Monitoring Manager 2.

Note:

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

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

[Display]

```
PureFlow(A)> add scenario "/port1/East/" action aggregate min_bw 1G
PureFlow(A)> add scenario "/port1/East/Channel1" 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
PureFlow(A)> add scenario "/group1/South"_action wan-accel peer 192.168.100.11
            vid 30 compression enable tcp-mem 100M
```

[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 eight hierarchies can be added.

When the port group is set by the "set port group" command, the group name is specified in the first hierarchy, for example, "/group1".

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

The scenario in the first hierarchy cannot be added nor deleted also when setting the port group.

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

For the scenario in the first hierarchy, the parameter can also be updated by the "update scenario" command when setting the port group.

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.

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 10k [bits/s] to 10G [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 10k [bits/s] to 10G [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 1G [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.

scenario <scenario_id>
Specify the scenario index. Valid values are from 1 to 40000.

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

`default`	Divides the queues by 5tuple.
	The combination of `sip`, `dip`, `proto`, `sport`, and `dport` is used to divide queues.
`vlan`	Divides queues based on VLAN ID.
`ethertype`	Divides queues based on Ethernet Type/Length.
`sip`	Divides queues based on SIP.
`dip`	Divides queues based on DIP.
`proto`	Divides queues based on the protocol number.
`sport`	Divides queues based on Sport.
`dport`	Divides queues based on Dport.

```
failaction {discard | forwardbesteffort | forwardattribute}
```
Specify the operation 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
```
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 1000 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 1000.

[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
   The default value is "15M" [bytes].

maxquenum
   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 "1000".

[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, 10k to 10G)

   ・The specified minimum bandwidth is invalid.

Specified peak bandwidth is invalid. (Valid from 10k to 10G)

   ・The specified peak bandwidth is invalid.

```
Specified fail action minimum bandwidth is invalid.(Valid from 0, 10k to 10G)
```
　　・The Fail Action Minimum Bandwidth specification is invalid.

```
Specified fail action peak bandwidth is invalid.(Valid from 10k to 10G)
```
　　・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 1G)
```
　　・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 maxquenum is out of range.

```
Specified Q division field is invalid.
Valid fields:
  default, vlan, ethertype, sip, dip, 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 1000)
```
・ The FEC session specification is invalid.

```
FEC function is not licensed.
```
・ Not licensed FEC function.

2

Explanation of Commands

```
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.

`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.

When the port group is set by the "set port group" command, specify the group name in the first hierarchy, for example, "/group1" and update the parameter.

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
PureFlow(A)> update scenario "/group1/tokyo/shinagawa" 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_ bandwidth <min_bandwidth>`
Changes the minimum bandwidth.

Setting range is from 10k [bits/s] to 10G [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_bandwidth <peak_bandwidth>`
Changes the peak bandwidth.
Valid values are from 10k [bits/s] to 10G [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 1G [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.
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. 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 5tuple. The combination of "`sip, dip, proto, sport`", and "`dport`" is used to divide queues.
`vlan`	Divides queues based on VLAN ID.
`ethertype`	Divides queues based on Ethernet Type/Length.
`sip`	Divides queues based on SIP.
`dip`	Divides queues based on DIP.
`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 operation 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 1000 in all scenarios.
   This setting number is not guaranteed because of affecting other scenarios.
   The setting range is from 0 to 1000.

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

[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, 10k to 10G)
```
    ・The specified Minimum Bandwidth is invalid.


```
Specified fail action minimum bandwidth is invalid. (Valid from 0, 10k to 10G)
```
    ・The Fail Action Minimum Bandwidth specification is invalid.


```
Specified peak bandwidth is invalid. (Valid from 10k to 10G)
```
    ・The specified Peak Bandwidth is invalid.


```
Specified fail action peak bandwidth is invalid. (Valid from 10k to 10G)
```
    ・The Fail Action Peak Bandwidth specification is invalid.

2

Explanation of Commands

```
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 1G)
```
・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.

```
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, vlan, sip, dip, 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 1000)
```
・ 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.

2

Explanation of Commands

```
Specified data block size is invalid. (Valid from 2K to 200K)
```
・ The data block size specification is invalid.

`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 "/group1/tokyo/"
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.
   The scenario in the first hierarchy cannot be added nor deleted when setting the port group.

```
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.

[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.

        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]
<u>(In the case of the acceleration mode)</u>
```
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]
        CongetionControl-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

    Attached Filters:
          "shibuya1"
          "shinjyuku1"

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

<u>**(For aggregate mode)**</u>
```
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]

  Attached Filters::
          "shibuya1"
          "shinjyuku1"

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

<u>**(For individual mode)**</u>
```
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       :
                  vlan         :Disable
                  ethertype    :Disable
                  sip          :Enable
                  dip          :Enable
                  proto        :Enable
                  sport        :Enable
                  dport        :Enable
          Fail Action          :Forward attribute
                  Class        :8
                  Min Bandwidth  :---
                  Peak Bandwidth :1M[bps]

  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

  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]

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]

  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]

    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]

    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]

  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, 40001 is displayed for port 1, 40002 for port 2, 40003 for port 3, and 40004 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.

  CongetionControl-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.

• 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]

<u>(When an argument is omitted)</u>
```
PureFlow(A)> show scenario tree

"/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)>
```

<u>(If conf is specified)</u>
```
PureFlow(A)> show scenario tree conf

"/port1" (Aggregate)
      |
2     |- "/port1/NewYork" (Aggregate)
      |    Class:2 MinBW:5M PeakBW:8M Buff:1M
      | |

PureFlow(A)>
```

<u>**(If filter is specified)**</u>
```
PureFlow(A)> show scenario tree filter

"/port1" (Aggregate)
      |
2     |- "/port1/NewYork" (Aggregate)
      |    Attached Filters:
      |       "NewYorkSeg1"
      |       "NewYorkSeg2"
      |  |

PureFlow(A)>
```

The displayed items and their meanings are as follows:

```
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.

2

Explanation of Commands

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 packet 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 1536
PureFlow(A)>
```

[Arguments]

```
size
```
Specify the peak burst size.
The setting range varies depending on MTU of the Network port set by the "set port mtu" command.
When the Network port MTU is 2048 [bytes], the setting range is from 1536 to 9216 [bytes].
When the Network port MTU is 10240 [bytes], the setting range is from 7680 to 46080 [bytes].
When setting a value greater than MTU (operational value) of the Network port, 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 1536 to 9216)
Specified burst size is invalid. (Valid from 7680 to 46080)
```
・The specified size is out of range.

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.

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.

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.

`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.

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 10000
```

[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 10000 SMB sessions are used for the entire device.

If the number of the sessions used for the entire device exceeds 10000, 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 10000.

`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 "1000".

```
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 10000)
```
　　・The specified SMB Session is invalid.

```
Specified read cache size is invalid. (Valid from 64k to 60M)
```
　　・The specified Read Cache Size is invalid.

`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 10000.

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 10000)
```
・The specified SMB Session is invalid.

```
Specified read cache size is invalid. (Valid from 64k to 60M)
```
・The specified Read Cache Size is invalid.

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.

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.

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.

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 once cannot be 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
```

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.

[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.

2

Explanation of Commands

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>
        Specify the subnet mask when setting the IPv4 address.
        Valid values of the subnet mask are from 0.0.0.0 to 255.255.255.255.

        Specify the prefix length when setting the IPv6 address.
        Valid values of prefix length are from 0 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.

`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.

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
```

<u>(When the ToS value is specified)</u>
```
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)
```
   ・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]

```
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>
```

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
    ```

- 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.

    ```
    Permit          Packets that fall into the range of the filter are received.
    Deny            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.
- For the Discard Counter value, an invalid value may appear while the packet is received or transmitted. The correct value is displayed while the packet is not received or transmitted.
- 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.

[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          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]
This command displays the specified Network port/Ethernet port statistics information.
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.

[Display]
<u>(When a Network port is specified)</u>
```
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)>
```

<u>(When system is specified)</u>
```
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 MTU 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 statics 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]

<u>(In the case of acceleration mode)</u>

```
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          :10G
        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

    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              :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, 40001 is displayed for port 1, 40002 for port 2, 40003 for port 3, and 40004 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.

`CongetionControl-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.

- `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	Shows the settings and operation related to the bypass function of the traffic acceleration. Status Shows the auto bypass settings. enable Shows that the auto bypass function is enabled. disable Shows that the auto bypass function is disabled. Recovery time Shows the time taken until the scenario in the bypass transfer state retries the traffic acceleration. State Shows the current scenario state by the bypass function. Standby Shows the scenario is waiting for the traffic input. Measuring Shows the scenario is measuring the RTT and connection state. Acceleration Shows the traffic acceleration is being applied. Bypass Shows that the bypass function is being performed. Force Bypass Shows that the forced bypass function is being performed. Acceleration Trans Shows the accumulated numbers of shift to the Acceleration state. Bypass Trans Shows the accumulated numbers of shift to the Bypass state. Threshold RTT Shows the RTT threshold value of the auto bypass. Minimum RTT 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. Low RTT Shows the detection state of the exceeded RTT threshold value of the auto bypass. not detected Shows that the exceeded RTT threshold value is not detected. detected Shows that the exceeded RTT threshold value is detected.

2

Explanation of Commands

Type	Description

WAN Acceleration Bypass (Continued)	`Connection Error`
	
	Shows the detection state of an error in the TCP connection with the opposing device by the auto bypass of the traffic acceleration.
	
	  `not detected`
	
	    Shows that the TCP connection error is not detected.
	
	  `detected`
	
	    Shows that the TCP connection error is detected.
	
	`Keep Alive`
	
	Shows the settings of the current Keep Alive monitoring in the auto bypass function of the traffic acceleration.
	
	  `Enable`
	
	    Shows that Keep Alive monitoring is effectively set.
	
	  `Disable`
	
	    Shows that Keep Alive monitoring is ineffectively set.
	
	`Keep Alive State`
	
	Shows the current Keep Alive monitoring state by the bypass function of the traffic acceleration.
	
	  `Alive`
	
	    Shows that communication with Peer is normal.
	
	  `Timeout`
	
	    Shows that communication with Peer is time out.
	
	  `-----`
	
	    Shows that Keep Alive monitoring is not performed for the following reasons.
	
	    ・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
`Queue Num`	Displays the number of individual queues generated for the scenario.

[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.

Explanation of Commands

2

`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        :10G
      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

  Attached Filters:
       "shibuya1"
```

```
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         :10G
        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

   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, 40001 is shown for port 1, and 40002 is shown for port 2.

· `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.

    `CongetionControl-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.

2

Explanation of Commands

```
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.

• 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> [<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.

This command can be executed only in Administrator mode.

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

- The pager function of the terminal session is invalid when this command is being executed. Please note that the pager function applies to this command and stops displaying if the pager function is enabled by the "set pager" command for other terminal sessions when this command is being executed. If the pager function stops displaying according to the restrictions, press the **Q** key to stop displaying and perform the measurement again.

[Display]

```
PureFlow(A)> monitor rate "/port1/Tokyo" 3
Scenario Name : "/port1/Tokyo"

 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)>
```

The displayed items and their meanings are as follows:

- Scenario Name
    Shows the scenario name.

- 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.

```
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> [<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 number is invalid (Valid from 0 to 2147483647)
```
    ・The specified number of measurement times is out of range.

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:
      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)>
```

(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:
      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:
      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.

・`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.

Command Details

```
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                :     40000        0        40000 [entry]
Rulelist              :      1024        0         1024 [group]
Total Rulelist Entry  :     64000        0        64000 [entry]
Channel               :     10000        0        10000 [entry]
Route                 :     10000        0        10000 [entry]
Flow                  :   1280000        0      1280000 [flow]
WAN Accel Session     :     10000        0        10000 [entry]
System Buffer
  System Packet  Buffer: 16777216    46080     16731136 [block]
  Context Pool        :    967973       40       967933 [block]
  Event   Message Pool :   8388608        2      8388606 [block]
  Output  Command Pool :     16384       45        16339 [block]
  Output  Packet Buffer:   5242880    40000      5202880 [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.

- 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]
Context Pool	A temporary area for packets in progress	256 [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 CCPU (control system) is displayed.

If "fcpu" is specified, information on the FCPU (forwarding system) 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 software is shown; for FCPU, the load factor of the bandwidth control engine is shown.

・Memory utilization

Shows the memory use rate.

For CCPU, the use rate of the area used for the control system software internal messages is shown; for FCPU, the use rate of the packet buffer of the bandwidth control engine 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.

2

Explanation of Commands

`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.

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.

`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).
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.

`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.

`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 1,000,000 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.

2

Explanation of Commands

`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 1,000,000 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 1000000.

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 1000000.

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 1000000.

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 1000000.

[Default Value]

    sip <cnt_num>
      The default value is 1000000.

    dip <cnt_num>
      The default value is 1000000.

    sip_dip <cnt_num>
      The default value is 1000000.

    appli <cnt_num>
      The default value is 1000000.

[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 1000000)
        ・The specified number of SIP counter entries is out of range.

    Specified DIP flow entry is invalid. (Valid from 0 to 1000000)
        ・The specified number of DIP counter entries is out of range.

    Specified SIP_DIP flow entry is invalid. (Valid from 0 to 1000000)
        ・The specified number of SIP_DIP counter entries is out of range.

    Specified application flow entry is invalid. (Valid from 0 to 1000000)
        ・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.

Explanation of Commands

2

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 1000000.

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 1000000.

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 1000000.

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 1000000.

[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 1000000)
```
    ・The specified number of SIP counter entries is out of range.

```
Specified DIP flow entry is invalid. (Valid from 0 to 1000000)
```
    ・The specified number of DIP counter entries is out of range.

```
Specified SIP_DIP flow entry is invalid. (Valid from 0 to 1000000)
```
    ・The specified number of SIP_DIP counter entries is out of range.

```
Specified application flow entry is invalid. (Valid from 0 to 1000000)
```
    ・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          : 2012 Jul 25 11:31:15  To        : 2012 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          : 2012 Jul 25 11:31:15  To        : 2012 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
     ------- ------- ------- -------
     1000000 1000000 1000000 1000000
    Static Application PortNo
      80, 443, 21

  Target Scenario Name        : "/port1/east/channel2"
    Max Traffic Counter
     sip     dip     sip_dip appli
     ------- ------- ------- -------
     1000000 1000000 1000000 1000000
    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

Explanation of Commands

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 network 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 network interface.

The Ping timeout operates at 1000 ms.

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

[Display]

<u>(When there is a response to output from system interface)</u>

```
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>
```

<u>(When there is no response to output from system interface)</u>

```
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>
```

<u>(When a subnet different from system interface is specified)</u>

```
PureFlow> ping 10.100.1.1
connect: Network is unreachable
PureFlow>
```

<u>(When there is a response to output from network interface)</u>

```
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 network interface)

```
PureFlow> ping 192.168.0.1 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 network 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 network 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.

```
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".

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.

The ICMP (Ping) packet is transmitted until the response from the specified IP address is received or until TTL reaches the maximum (64).

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.

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.

2

Explanation of Commands

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.
Those for all channels cannot be deleted (-d).
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 10 minutes for both the Ethernet port and Network port sides.
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 entryies 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.

`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.

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 10 minutes for both the Ethernet port and Network port sides.
Aging time for the NDP entry is 10 minutes for both CCPU (control system) and FCPU (forwarding system).
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 entryies 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.

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 CCPU (control system), specify "ccpu". When setting the facility of the system log generated by FCPU (forwarding system), 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 numeric values that represent the facilities of the CCPU (control system) and FCPU (forwarding system) system logs.

• `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

    Date   Time   Host   Ident   [PID]   Message

    Jan 25 21:50:54 PureFlow System   [10330]: Port 1/1 changed Up from Down.
    Jan 25 21:50:54 PureFlow System   [10330]: Pipe 1 changed Operate from Down.

The displayed items and their meanings are as follows:

• 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.

• Ident

   Shows the identifier of the program that recorded the system log information.

   If the log is generated by CCPU (control system) or FCPU (forwarding system), 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 : 2015 Jan 30 22:09:45
--------------------------------------------------------------------------------
Pri Date        Time      Message
--------------------------------------------------------------------------------
133 2015 Jan 30 22:09:49  Anritsu PureFlow NF7600-S001A Software Version 1.1.1
150 2015 Jan 30 22:09:49  Port 1/1 changed Up from Down.
150 2015 Jan 30 22:09:49  Pipe 1 changed Operate from Down.

<Second last system log>
System start up time : 2015 Jan 25 10:02:50
--------------------------------------------------------------------------------
Pri Date        Time      Message
--------------------------------------------------------------------------------
133 2015 Jan 25 10:02:54  Anritsu PureFlow NF7600-S001A Software Version 1.1.1
150 2015 Jan 25 10:02:54  Port 1/1 changed Up from Down.
150 2015 Jan 25 10:02:54  Pipe 1 changed Operate 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.

`clear syslog`

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 20150501094530
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, 2015 9:45:30 = 20150501094530).
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 2015(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.

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.

2

Explanation of Commands

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 15 characters is specified for <prompt_string>, the first 15 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:

Only 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 15 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 5.

[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 5
```

· 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                         Normal   Dec 14   2015  12:59:50
*   2 Telnet                         Admin    Dec 14   2015  14:17:07
    3 SSH     192.168.37.185 : 2279  Admin    Dec 14   2015  14:31:44
    4 SSH     192.168.37.185 : 2280  Normal   Dec 14   2015  14:31:55
    5 Telnet                         Admin    Dec 14   2015  14:32:12
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 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.

set radius auth method

2

Explanation of Commands

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 128 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 128)
```
　　　・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 128 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 128)
```
・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.

`test radius login`

[Format]

```
test radius login chap <username> <password>
test radius login pap <username> <password>
```

[Description]

This command tests authentication using the RADIUS protocol.
It sends the CHAP or PAP authentication request to the RADIUS authentication server, and displays whether authentication passed or failed. In addition, it dumps all packets to and from the RADIUS authentication server.
This command can be executed in the Normal and Administrator modes.

Note:

The following ASCII characters can be set in the user name and password.

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

[Display]

```
PureFlow(A)>test radius chap user1 password
==================================================================
Frame 1
  DIRECTION    : SEND
  UDP LENGTH   : 84 bytes
  IP  Src Addr : 192.168.37.100
  IP  Dst Addr : 192.168.37.20
  UDP Src Port : 1901
  UDP Dst Port : 1812
  RADIUS Protocol
    Code       : 0x01 Access Request
    Packet ID  : 0x44 (68)
    Length     : 0x4C (76)
    Authenticator: 0xMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
    Attribute value pairs
       ATTR :TYPE LENGTH VALUE
       0001 :0x01 0x07   0xMMMMMMMMMM
       0002 :0x03 0x13   0xMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
       0003 :0x3C 0x12   0xMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
       0004 :0x06 0x06   0xMMMMMMMM
       0005 :0x04 0x06   0xMMMMMMMM

==================================================================
Frame 2
  DIRECTION    : RECEIVE
  UDP LENGTH   : 82 bytes
  IP  Src Addr : 192.168.37.20
  IP  Dst Addr : 192.168.37.100
  UDP Src Port : 1812
  UDP Dst Port : 1901
  RADIUS Protocol
    Code       : 0x02 Access Accept
    Packet ID  : 0x44 (68)
    Length     : 0x4C (02)
    Authenticator: 0xMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
    Attribute value pairs
       ATTR :TYPE LENGTH VALUE
       0001 :0x06 0x06   0xMMMMMMMM
       0002 :0x0F 0x06   0xMMMMMMMM
       0003 :0x04 0x06   0xMMMMMMMM
       0004 :0x1A 0x14   0xMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
```

```
    0005 :0x12 0x18    0xMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
```

```
==============================================================
```

```
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.

`clear radius statistics`

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
Opernflow 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 address resolution table and control
clear               Clears system statistics, use 'clear ?' for
                    more information
delete              Deletes some parameters, use 'delete ?' for
                    more information
download            Transfers programs or data from a host system,
                    use 'download ?' for more information
exit                Exits the UIF session
help                Performs the same function as '?' command
init                Initializes system parameters, use 'init ?'
                    for more information
logout              Performs the same function as 'exit' command
monitor             Monitor status, use 'monitor ?' for more
                    information
normal              Returns to Normal
ping                Diagnoses reachability of network
quit                Performs the same function as 'exit' command
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
unset               Clears the system parameters, use 'unset ?' for
                    more details
upload              Transfers programs or data to a host system,
                    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]

<u>(When the wrong password was entered)</u>
```
PureFlow> admin
Enter the Admin Password:
In-Correct Admin Password
```

<u>(When the correct password was entered)</u>
```
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 used for 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 saves the currently-running parameter (running parameter) in the internal flash memory when running this command the same as the "save config" command.

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

Done
PureFlow(A)>
```

[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 NF7600-S001A Software Version 1.1.1
Copyright 2016-2017 ANRITSU NETWORKS CO., LTD. All rights reserved.

Management MAC Address              : 00-00-91-09-9c-12
Forwarding MAC Address              : 00-00-91-09-9c-13

Chassis Model Name                  : NF7605A
Chassis Serial Number               : 2600010003

Control Module Version              : 01A
Shaper Module Version               : 00A
Bypass Module Version               : 00A
Software Version                    : 2.1.1
Software License                    : NF7600-L201A (TCP Acceleration Software)
Management U-Boot Version            : 1.1.6
Forwarding U-Boot Version            : 1.1.6
MCU-C Version                       : 109
MCU-S Version                       : 109
MCU-B Version                       : 109

Uptime                              : 19 days, 08:38:59
Temperature
  Intake Temperature                : 29C
Power Supply Unit 0
  Operation Status                  : operational
  Fan Speed                         : 4560[rpm]
Power Supply Unit 1
  Operation Status                  : not present
  Fan Speed                         : 0[rpm]
FAN Unit 0
  Operation Status                  : operational
  Fan Speed                         : 2760[rpm]
FAN Unit 1
  Operation Status                  : operational
  Fan Speed                         : 2760[rpm]
PureFlow>
```

The displayed items and their meanings are as follows:

- `Management MAC Address`
    Indicates the Control module MAC address.

- `Forwarding MAC Address`
    Indicates the Shaper module MAC address.

- `Chassis Model Name`
    Indicates the model of chassis.

- `Chassis Serial Number`
    Indicates the serial number of chassis.

・Control Module Version

　　Show the hardware versions of the control module.

・Shaper Module Version

　　Show the hardware versions of the shaper module.

・Bypass Module Version

　　Represents the hardware version of the Bypass module.

　　Not shown for NF7601A or NF7602A.

・Software Version

　　Show the versions of the installed software.

・Software License

　　Displays currently-running software license.

・Management U-Boot Version

　　Displays the U-Boot version of the Control module.

・Forwarding U-Boot Version

　　Displays the U-Boot version of the Shaper module.

・MCU-C Version
・MCU-S Version
・MCU-B Version

　　Displays the MCU version.

　　The MCU-B version is not shown for NF7601A or NF7602A.

・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. This device has a redundant power supply configuration in which the power supply can be switched by live wire, and information of each power unit is shown. If the live wire is inserted, "operational" is shown, and if the live wire is not inserted, "not present" is shown.

　・Operation Status: Shows the status of the power supply.
　　　other:　　　　　Other than below
　　　operational:　　Normal
　　　malfunctioning: Abnormal
　　　notpresent:　　 Not inserted
　・Fan Speed:　　　　Shows the fan speed. The unit is [rpm].

2

Explanation of Commands

- `FAN Unit N`

  Shows information on the fan unit. Two fan units can be installed on the rear of this device. Information on these fans is shown. If a fan unit is installed, "`operational`" is shown, and if a fan unit is not installed, "`not present`" is shown.

  - `Operation Status`: Shows the status of the fan.
    `other`: Other than below
    `operational`: Normal
    `malfunctioning`: Abnormal
    `notpresent`: Not installed
  - `Fan 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.

[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]
```
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]

<u>(If the "save config" was running)</u>

```
PureFlow> show save status
configuration save is in progress.
PureFlow>
```

<u>(If the "save config" was not running)</u>

```
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 configuration
s.
begin
!
#***** NON-DEFAULT CONFIGURATION *****
!
#Time:  Apl 14 2015(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
#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
#Pipe 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
!
#Pipe 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.

2

Explanation of Commands

```
OID name specified is not supported on PureFlow.
```
・The specified OID is not supported.

OID tree character strings list

```
iso
  └── org
        └── dod
              └── internet
                    ├── mgmt
                    │     └── mib2
                    │           ├── system
                    │           ├── interface
                    │           ├── ip
                    │           ├── icmp
                    │           ├── tcp
                    │           ├── udp
                    │           ├── snmp
                    │           └── ifmib
                    ├── private
                    └── snmpv2
                          └── snmpmodules
```

```
OID name specified is not supported on PureFlow.
```
・The specified OID is not supported.
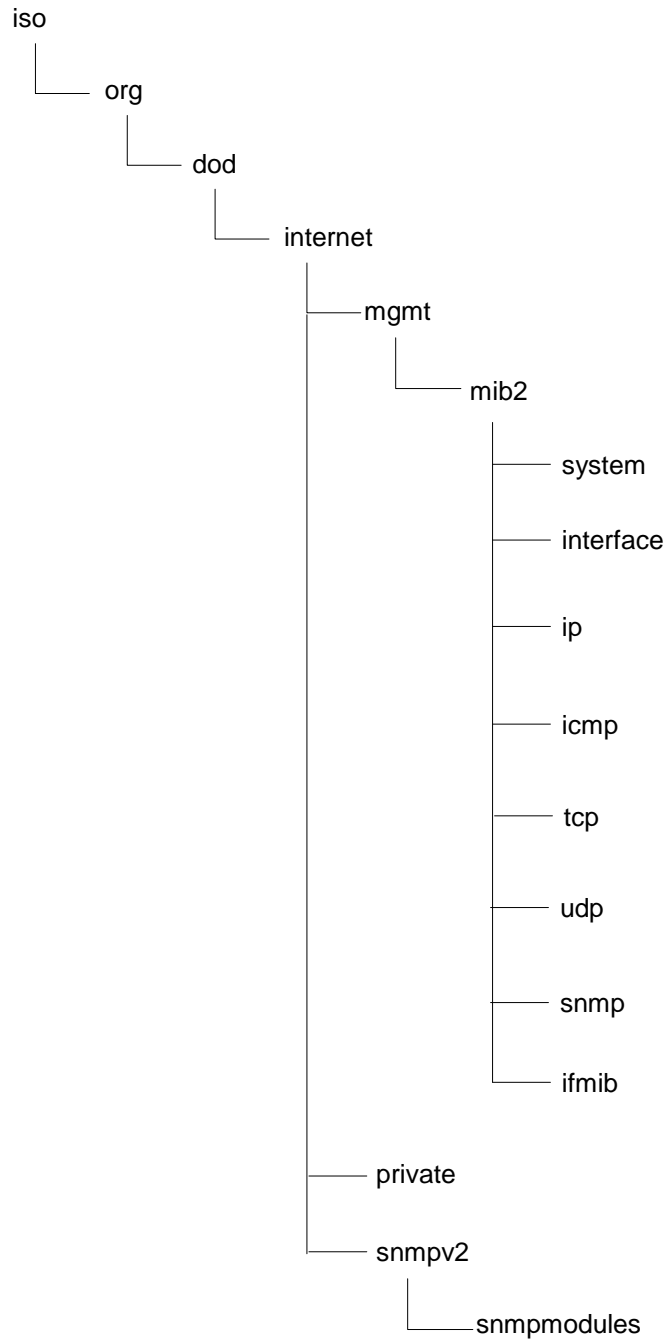
delete snmp view

[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.

```
User security level should be same as of the group security level.
```
　　・auth_type specified by this command must match the authentication level of the specified group.

```
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.

```
Invalid input at Marker
```

`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.

2

Explanation of Commands

・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.

[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.

[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 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.

[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 | queueallocrecovery |
                maxqnumalarm | maxqnumrecovery |
                tcpbypassalarm | tcpbypassrecovery |
                peeralarm | peerrecovery | bypasson | bypassoff}
                {enable | disable}
```

[Description]
This command enables and disables individual SNMP notification transmission.
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 | queueallocrecovery | 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 | modulefailurerecovery |
        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.

[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 Network port bypass function.
This command is enabled only on NF7603A, NF7604A and NF7605A.
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.
For the notes on the network bypass function, refer to the Configuration Guide: TCP Acceleration Edition NF7600-W013E).

[Display]
```
PureFlow(A)> set bypass on
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.

```
This system does not support bypass function.
```
・ This equipment does not support the network bypass function.

show bypass

[Format]

```
show bypass
```

[Description]

Displays the network bypass function settings and state.
This command is enabled only on NF7603A, NF7604A and NF7605A.
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.

```
This system does not support bypass function.
```
    • This equipment does not support the network bypass function.

bypass time

[Format]

```
bypass time <time> {on | off}
```

[Description]

Switches the network bypass temporarily.

This command is enabled only on NF7603A, NF7604A and NF7605A equipment.

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]

```
PureFlow(A)> bypass time 60 on
Current time    : Feb 29  17:38:47
Expiring time   : Feb 29  17:39:47
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.

```
This system does not support bypass function.
```
  • This equipment does not support the network bypass function.

```
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 80 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 Networks (file name: nf7600.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 CF card or USB memory stick that contains the proper object file in order to start up the device. Then, download the proper object file again. Use the CF card that is warranted for the operation by our company. Otherwise, it may cause a failure.

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 nf7600.bin
Download "nf7600.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 80 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.

```
File length is valid from 1 to 80.
```
- The length of the file name including the path should be 1 to 80 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 80 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 Networks 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 a CF card or USB flash drive with the proper configuration file into the CF card slot or USB port and start the system. After that, download the proper configuration file again.
Use a CF card which is options of Anritsu Networks. Using incorrect CF cards will cause failure.

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 80 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 80.
```
　　・The length of the file name including the path should be 1 to 80 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.

```
File length is valid from 1 to 80.
```

`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 80 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. The user name and password must be 1 to 128 characters. The following ASCII characters can be used for the user name and password:

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

This command can be executed only in Administrator mode.

If any object file other than the proper object file specified by Anritsu Networks (file name: nf7600.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 a CF card or USB flash drive with the proper object file into the CF card slot or port and start the system. Then, download the proper object file again.
Use a CF card which is options of Anritsu Networks. Using incorrect CF cards will cause failure.

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 nf7600.bin
Name:ftpuser
Password:
Download "nf7600.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 80 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 80.
```
   · The length of the file name including the path should be 1 to 80 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.

```
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 80 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. The user name and password must be 1 to 128 characters. The following ASCII characters can be used for the user name and password:

1234567890

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

!#$%&'()=~-^|¥@`[]{}:*;+_/.<>

This command can be executed only in Administrator mode.

If any configuration file other than the proper configuration file specified by Anritsu Networks 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 a CF card or USB flash drive with the proper configuration file into the CF card slot or USB port and start the system. After that, download the proper configuration file again.

Use a CF card which is options of Anritsu Networks. Using incorrect CF cards will cause failure.

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 80 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 80.
```
　　　・The length of the file name including the path should be 1 to 80 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.

download cf obj

[Format]

```
download cf obj <file>
```

[Description]

This command downloads the software from the CF card inserted in the CF card slot to the internal flash memory.

CF cards in FAT16/FAT32 format are supported. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E) ". Using other CF cards will cause failure.

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 64 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 Networks (file name: nf7600.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 a CF card or USB flash drive with the proper object file into the CF card slot or USB port and start the system. Then, download the proper object file again. Use a CF card which is options of Anritsu Networks. Using incorrect CF cards will cause failure.

[Display]

```
PureFlow(A)> download cf obj nf7600.bin
Download "nf7600.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 CF card.
   The file name including the path must be within 64 characters.

[Errors]

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

```
An argument was missing.
Usage : download cf 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 64.
```
　　　・The length of the file name including the path should be 1 to 64 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 cf patch`

[Format]

```
download cf patch
```

[Description]

The software patch file of the CF card that is installed into the CF card slot is applied to the internal software.

CF cards in FAT16/FAT32 format are supported. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)". Using other CF cards will cause failure.

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 Networks in the root directory of CF card and run this command. If there are two or more patch files, because this command applies all patch files, store to the CF card all patch files and run this command.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> download cf patch
Apply patch from Flash Memory Card (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.

```
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 cf conf`

[Format]

```
download cf conf <file>
```

[Description]

This command downloads a configuration file from the CF card inserted in the CF card slot to the internal flash memory.

CF cards in FAT16/FAT32 format are supported. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)". Using other CF cards will cause failure.

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 64 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 Networks 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 a CF card or USB flash drive with the proper configuration file into the CF card slot or USB port and start the system. After that, download the proper configuration file again. Use a CF card which is options of Anritsu Networks. Using incorrect CF cards will cause failure.

[Display]

```
PureFlow(A)> download cf 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 64 characters.

[Errors]

```
Invalid input at Marker
```

・There is an unnecessary argument.

```
An argument was missing.
Usage : download cf 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 64.
```
・The length of the file name including the path should be 1 to 64 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.

```
File length is valid from 1 to 64.
```

`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. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)".

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 64 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 Networks (file name: nf7600.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 a CF card or USB flash with the proper object file into the CF card slot or USB port and start the system. Then, download the proper object file again. Use a CF card which is options of Anritsu Networks. Using incorrect CF cards will cause failure.

[Display]

```
PureFlow(A)> download usb obj nf7600.bin
Download "nf7600.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 64 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 64.
```
  ・The length of the file name including the path should be 1 to 64 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.

2

Explanation of Commands

`download usb patch`

[Format]

```
download usb patch
```

[Description]

The software patch file of the USB memory stick that is installed into the USB slot is applied to the internal software.

FAT16/FAT32 format are supported for USB flash drives. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)".

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 Networks 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 drives 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. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)".

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 64 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 Networks 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 a CF card or USB flash drive with the proper configuration file into the CF card slot or USB port and start the system. After that, download the proper configuration file again. Use a CF card which is options of Anritsu Networks. Using incorrect CF cards 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 64 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 64.
```
· The length of the file name including the path should be 1 to 64 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.

```
File length is valid from 1 to 64.
```

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 80 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 80 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 80.
```
      ・The length of the file name including the path should be 1 to 80 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.

2

Explanation of Commands

```
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> {cf | usb} <src_file> <dst_file>
```

[Description]

This command uploads a file on a CF card or USB flash drive to the TFTP server over the network.
CF cards in FAT16/FAT32 format are supported. for the CF card or USB flash drive. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)". Using other CF cards will cause failure. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)".
Do not remove the CF 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 64 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 80 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.

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 cf 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.

{cf | 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 64 characters.

dst_file
   Specify the name of the file on the TFTP server.
   The file name including the path must be within 80 characters.

[Errors]

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

```
An argument was missing.
Usage : upload tftp file <IP_address> {cf | 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 64.
```
- The length of the name of the file to upload including the path should be 1 to 64 characters.

```
"file": File not found
```
- The specified file does not exist.

```
Card is not mounted.
```
- No CF card is inserted.

```
USB  is not mounted.
```
- No USB flash drive is inserted.

```
Card access error
```
- A CF card access error occurred.

```
USB memory access error
```
- A USB flash drive access error occurred.

```
File length is valid from 1 to 80.
```
- The length of the file name including the path on the TFTP server should be 1 to 80 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.

`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 80 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. The user name and password must be 1 to 128 characters. The following ASCII characters can be used for the user name and password:

    1234567890

    abcdefghijklmnopqrstuvwxyz

    ABCDEFGHIJKLMNOPQRSTUVWXYZ

    !#$%&'()=~-^|¥@`[]{}:*;+_/.<>

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 80 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 80.
```
    ・The length of the file name including the path should be 1 to 80 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.


```
Config file not found : <file>
```
　　　・There is no configuration file.

upload ftp file

[Format]

    upload ftp file <IP_address> {cf | usb} <src_file> <dst_file>

[Description]

This command uploads a file on a CF card or USB flash drive to the FTP server over the network.
CF cards in FAT16/FAT32 format are supported. for the CF card or USB flash drive. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)". Using other CF cards will cause failure. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the TCP Acceleration Edition (NF7600-W011E) "Operation Manual".

Do not remove the CF 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 64 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 80 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. The user name and password must be 1 to 128 characters. The following ASCII characters can be used for the user name and password:

    1234567890

    abcdefghijklmnopqrstuvwxyz

    ABCDEFGHIJKLMNOPQRSTUVWXYZ

    !#$%&'()=~-^|¥@`[]{}:*;+_/.<>

This command can be executed only in Administrator mode.

[Display]

    PureFlow(A)> upload ftp file 192.168.40.10 cf 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.

    {cf | 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 64 characters.

    dst_file
      Specify the name of the file on the FTP server.
      The file name including the path must be within 80 characters.

[Errors]

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

```
An argument was missing.
Usage : upload ftp file <IP_address> {cf | 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 64.
```
　・The length of the name of the file to upload including the path should be 1 to 64 characters.

```
"file": File not found
```
　・The specified file does not exist.

```
Card is not mounted.
```
　・No CF card is inserted.

```
USB is not mounted.
```
　・The USB memory stick is not installed.

```
Card access error
```
　・A CF card access error occurred.

```
USB memory access error
```
　・A USB flash drive access error occurred.

```
File length is valid from 1 to 80
```
　・The length of the file name including the path on the FTP server should be 1 to 80 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.

upload cf obj

[Format]

    upload cf obj <file>

[Description]

This command uploads software in the system to the CF card inserted in the CF card slot.

CF cards in FAT16/FAT32 format are supported. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)". Using other CF cards will cause failure.

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 64 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 cf obj nf7600.bin
    Upload as "nf7600.bin" to Flash Memory Card (y/n)? y
    Loading ....
    Done.
    PureFlow(A)>

[Arguments]

    file

Specify the name of the file to upload to the CF card.
The file name including the path must be within 64 characters.

[Errors]

    Invalid input at Marker

　　　・There is an unnecessary argument.

    An argument was missing.
    Usage : upload cf 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 64.

　　　・The length of the file name including the path should be 1 to 64 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 cf conf`

[Format]

```
upload cf conf <file>
```

[Description]

This command uploads a configuration file to the CF card inserted in the CF card slot.

The contents of the configuration file to be uploaded are the contents saved by the "save config" command.

CF cards in FAT16/FAT32 format are supported. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)". Using other CF cards will cause failure.

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 64 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 cf 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 64 characters.

[Errors]

```
Invalid input at Marker
```
　　　・There is an unnecessary argument.
```
An argument was missing.
Usage : upload cf 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 64
```
　　　・The length of the file name including the path should be 1 to 64 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.

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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. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)".
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 64 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 usb obj nf7600.bin
Upload as " nf7600.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 64 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 64.
```

・The length of the file name including the path should be 1 to 64 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. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)".
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 64 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 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 64 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 64.
```

   ・The length of the file name including the path should be 1 to 64 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 cf list

[Format]

```
show cf list [<path>]
```

[Description]

This command functions in the same way as the "operate cf list" command.
Unlike the "operate cf list" command, this command can also be executed in Normal mode.

[Display]

```
PureFlow> show cf 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 1248 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 CF card using up to 64 characters.

[Errors]

```
Invalid input at Marker
```
·There is an unnecessary argument.
```
An argument was missing.
Usage : show cf 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 64.
```
·The length of the path name should be from 1 to 64 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.

[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 1248 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 64 characters.

[Errors]

```
Invalid input at Marker
```
　　　・There is an unnecessary argument.
```
An argument was missing.
Usage : show cf 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 64.
```
　　　・The length of the path name should be from 1 to 64 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 cf remove

[Format]

```
operate cf remove <file>
```

[Description]

This command deletes a file on the CF card inserted in the CF card slot. Directories cannot be deleted since they cannot be specified.

CF cards in FAT16/FAT32 format are supported. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)". Using other CF cards will cause failure.

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 64 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)> operate cf 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 64 characters.

[Errors]

```
Invalid input at Marker
```

・There is an unnecessary argument.

```
An argument was missing.
Usage : operate cf 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 64)
```

・The length of the file name including the path should be 1 to 64 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 cf rename

[Format]

```
operate cf rename <file> <new_name>
```

[Description]

This command renames a file on the CF card inserted in the CF card slot. Directories cannot be renamed since they cannot be specified.

CF cards in FAT16/FAT32 format are supported. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)". Using other CF cards will cause failure.

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 64 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)> operate cf rename config.txt config.bak
PureFlow(A)>
```

[Arguments]

```
file
```
   Specify a file on the CF card using up to 64 characters.

```
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 cf 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.

```
File length is valid from 1 to 64.
```
      ・The length of the file name should be from 1 to 64 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 cf copy

[Format]

    operate cf copy <src_file> <dst_file_or_path>

[Description]

This command copies a file on the CF card inserted in the CF card slot. Directories cannot be copied since they cannot be specified. Can not copy to the directory that does not exist. CF cards in FAT16/FAT32 format are supported. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)". Using other CF cards will cause failure.

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 64 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)> operate cf copy config.txt temp
    PureFlow(A)>

[Arguments]

    src_file

   Specify a file on the CF card using up to 64 characters.

    dst_file_or_path

   Specify the name of the file or directory to which the file is to be copied using up to 64 characters.

[Errors]

    Invalid input at Marker

       • There is an unnecessary argument.

    An argument was missing.
    Usage : operate cf 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 64)
```
　　　・The length of the file name should be from 1 to 64 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 cf list

[Format]

```
operate cf list [<path>]
```

[Description]

This command lists the files in the specified directory on the CF card inserted in the CF 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 $$$$$$$$.$$$.

CF cards in FAT16/FAT32 format are supported. For details about the CF cards that can be used, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)". Using other CF cards will cause failure.

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.

[Display]

```
PureFlow> operate cf 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 1248 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 CF card using up to 64 characters.

[Errors]

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

```
An argument was missing.
Usage : operate cf 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 64.
```
- The length of the path name should be from 1 to 64 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. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)".

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 64 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)> 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 64 characters.

[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 64.
```

・The length of the file name including the path should be 1 to 64 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.

2

Explanation of Commands

`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. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)".

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 64 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)> operate usb rename config.txt config.bak`
      `PureFlow(A)>`

[Arguments]

      `file`

    Specify a file on the USB flash drive using up to 64 characters.

      `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 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 64.`

        ・The length of the file name should be from 1 to 64 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. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)".

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 64 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)> operate usb copy config.txt temp
PureFlow(A)>
```

[Arguments]

`src_file`

Specify a file on the USB flash drive using up to 64 characters.

`dst_file_or_path`

Specify the name of the file or directory to which the file is to be copied using up to 64 characters.

[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 64.
```
　　　・The length of the file name should be from 1 to 64 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.

```
USB memory access error
```

```
Below characters cannot be used in the file/directory name.
```

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. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual TCP Acceleration Edition (NF7600-W011E)".

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 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.

[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 1248 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 64 characters.

[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 64.
```
　　　　・The length of the path name should be from 1 to 64 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 NF7600-L211A (2G 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  NF7600-L211A available  (2G Bandwidth License)
License Key  NF7600-L212A available  (4G Bandwidth License)
License Key  NF7600-L213A available  (7G Bandwidth License)
License Key  NF7600-L214A available  (10G Bandwidth License)
License Key  NF7600-L215A available  (2G to 4G Bandwidth License)
License Key  NF7600-L216A available  (4G to 7G Bandwidth License)
License Key  NF7600-L217A available  (7G to 10G Bandwidth License)
License Key  NF7600-L231A available  (FEC Function License)
License Key  NF7600-L232A available  (OpenFlow Function License)
License Key  NF7600-L201A available  (TCP Acceleration Software 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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