PureFlow WSX

Unified Network Controller
NF7600 series
Command Reference
Traffic Shaping Edition

Third Edition

- **For safety and warning information, please read this manual before attempting to use the equipment.**
- **Additional safety and warning information is provided within the NF7600 series Unified Network Controller Operation Manual (NF7600-W021E). Please also refer to this document before using the equipment.**
- **Keep this manual with the equipment.**

ANRITSU NETWORKS CO., LTD.

Document No.: NF7600-W022E-3.0

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.

PureFlow WSX
Unified Network Controller NF7600 series
Command Reference

9 March 2016 (First Edition)
30 October 2017 (Third Edition)

Copyright © 2016-2017, ANRITSU NETWORKS CO., LTD.
All rights reserved. No part of this manual may be reproduced without the prior written permission of the publisher.
The contents of this manual may be changed without prior notice.
Printed in Japan

Anritsu Networks Co., Ltd. Contact

In the event that this equipment malfunctions, contact an Anritsu Networks Co., Ltd. Service and Sales office. Contact information can be found on the last page of the printed version of this manual, and is available in a separate file on the CD-ROM.

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.

Notes On Export Management

This product and its manuals may require an Export License/Approval by the Government of the product's country of origin for re-export from your country.

Before re-exporting the product or manuals, please contact us to confirm whether they are export-controlled items or not.

When you dispose of export-controlled items, the products/manuals need to be broken/shredded so as not to be unlawfully used for military purpose.

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
- NF7603A
- NF7604A

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

<1> Operation Manual Traffic Shaping Edition (NF7600-W021E)

Describes in detail the installation and handling in this device.

<2> Command Reference Traffic Shaping Edition (NF7600-W022E)

Describes in detail the commands used in this device.

<3> Configuration Guide Traffic Shaping Edition (NF7600-W023E)

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

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.)

Table of Contents

About This Manual I

Chapter 1 Command Input Rules 1-1

1.1 Command Format Conventions 1-1
1.2 Logging in after Power-on 1-1
1.3 Common Command Errors 1-1

Chapter 2 Explanation of Commands 2-1

2.1 List of Commands 2-1
2.1.1 Interface management commands 2-1
2.1.2 ACL-related commands 2-1
2.1.3 Scenario-related commands 2-2
2.1.4 System operation-related commands 2-2
2.1.5 Statistics-related commands 2-2
2.1.6 Operation management-related commands 2-4
2.1.7 Configuration-related commands 2-6
2.1.8 SNMP-related commands 2-7
2.1.9 Network bypass-related commands (for NF7603A and NF7604A only) 2-8
2.1.10 Other commands 2-8
2.2 Command Details 2-10
2.2.1 Interface management commands 2-10
set port autonegotiation 2-10
set port flow_control 2-12
set port duplex 2-13
set port speed 2-15
set port maxpacketlen 2-17
show port 2-19
show port <slot/port> 2-21
2.2.2 ACL-related commands 2-24
add rulelist group 2-24
add rulelist entry 2-26
delete rulelist group 2-28
delete rulelist entry 2-29
set filter mode 2-31
add filter 2-33
delete filter 2-39
show rulelist 2-40
show filter 2-42

2.2.3 Scenario-related commands 2-47
set bandwidth mode 2-47
set shaper peak burst size 2-48
add scenario 2-49
update scenario 2-55
delete scenario 2-59
show scenario 2-60
show scenario tree 2-63
2.2.4 System operation-related commands 2-65
set lpt 2-65
show lpt 2-66
set agingtime 2-67
show agingtime 2-68
2.2.5 Statistics-related commands 2-69
show counter 2-69
show counter {<slot/port> | system} 2-71
clear counter 2-74
show scenario info 2-75
show scenario info summary 2-77
clear scenario peakhold buffer 2-79
show scenario counter 2-80
show scenario counter summary 2-82
clear scenario counter 2-83
set topcounter 2-84
set topcounter config interval time 2-85
add topcounter config appli port 2-86
delete topcounter config appli port 2-87
add topcounter config appli port static 2-88
delete topcounter config appli port static 2-89
add topcounter target 2-90
delete topcounter target 2-92
update topcounter target 2-93
show topcounter target 2-95
show topcounter config 2-98
monitor rate 2-100
show flow 2-102
show resource 2-106
2.2.6 Operation management-related commands 2-108
set ip system 2-108
set ip system gateway 2-110
unset ip system gateway 2-111
set ip system port 2-112
add ip system filter 2-115

delete ip system filter 2-118
show ip system 2-119
show syslog 2-123
show backup syslog 2-124
clear syslog 2-126
set syslog host 2-127
add syslog host 2-128
delete syslog host 2-129
show syslog host 2-130
set syslog severity 2-131
set syslog facility 2-132
set date 2-133
set timezone 2-134
set summertime 2-136
unset summertime 2-138
show date 2-139
show sntp 2-140
set sntp 2-141
set sntp interval 2-142
set sntp server 2-143
sync sntp 2-144
set password 2-145
set adminpassword 2-147
set autologout time 2-148
show autologout 2-149
set prompt 2-150
set pager 2-151
show session 2-152
delete session 2-153
show module 2-154
set autoreboot 2-157
show process 2-158
set radius auth 2-159
set radius auth timeout 2-161
set radius auth retransmit 2-162
set radius auth method 2-163
add radius auth server 2-164
update radius auth server 2-166
delete radius auth server 2-168
test radius login 2-169
show radius 2-172
show radius statistics 2-174
clear radius statistics 2-176

set ssh 2-177
set ssh server key 2-178
show ssh 2-179
set telnet 2-181
show telnet 2-182
set console baudrate 2-183
show console baudrate 2-184
set webapi protocol 2-185
show webapi 2-186
2.2.7 Configuration-related commands 2-187
init config 2-187
save config 2-188
show save status 2-189
show config running 2-190
show config startup 2-192
2.2.8 SNMP-related commands 2-193
add snmp community 2-193
delete snmp community 2-195
show snmp community 2-196
add snmp view 2-198
delete snmp view 2-201
show snmp view 2-202
add snmp group 2-203
delete snmp group 2-205
show snmp group 2-206
add snmp host 2-208
delete snmp host 2-211
show snmp host 2-212
add snmp user 2-214
delete snmp user 2-216
show snmp user 2-217
set snmp traps 2-219
set snmp syslocation 2-221
set snmp syscontact 2-222
set snmp sysname 2-223
show snmp system 2-224
2.2.9 Network bypass-related commands 2-226
set bypass 2-226
show bypass 2-227
bypass time 2-228
2.2.10 Other commands 2-229
download tftp obj 2-229
download tftp conf 2-231

download ftp obj 2-233
download ftp conf 2-235
download cf obj 2-237
download cf patch 2-239
download cf conf 2-240
download usb obj 2-242
download usb patch 2-244
download usb conf 2-245
upload tftp conf 2-247
upload ftp conf 2-249
upload cf obj 2-251
upload cf conf 2-253
upload usb obj 2-255
upload usb conf 2-257
show cf list 2-259
show usb list 2-261
reboot 2-263
ping 2-264
telnet 2-265
arp 2-266
delete ndp neighbor 2-268
show ndp neighbor 2-269
?/help 2-270
exit/logout/quit 2-271
normal 2-272
admin 2-273
show history 2-274
upload tftp file 2-275
upload ftp file 2-277
operate cf remove 2-279
operate cf rename 2-280
operate cf copy 2-282
operate cf list 2-284
operate usb remove 2-286
operate usb rename 2-288
operate usb copy 2-290
operate usb list 2-292
set option 2-294
show option 2-295

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 NF7101C, an input request prompt for the login username appears. The username for NF7101C 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.

(Blank page)

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

2.1 List of Commands

2.1.1 Interface management commands

(1) `set port autonegotiation`

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

(2) `set port flow_control`

Sets whether to send the Network port's pause frame.

(3) `set port duplex`

Sets the duplex mode for the Network port.

(4) `set port speed`

Sets the communication speed of the Network port.

(5) `set port maxpacketlen`

Sets the maximum packet length for the Network port.

(6) `show port`

Displays the Network port and Ethernet port information.

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

Displays detailed information on the specified Network port or Ethernet port.

2.1.2 ACL-related commands

(1) `add rulelist group`

Adds a rule list.

(2) `add rulelist entry`

Adds a rule list entry.

(3) `delete rulelist group`

Deletes a rule list.

(4) `delete rulelist entry`

Deletes a rule list entry.

(5) `set filter mode`

Sets the flow identification mode.

(6) `add filter`

Sets a filter.

(7) `delete filter`

Deletes a filter.

(8) `show rulelist`

Displays rule list settings.

(9) `show filter`

Displays filter settings.

2.1.3 Scenario-related commands

(1) `set bandwidth mode`

Enables/disables inter-frame gaps and preambles in the communication bandwidth settings.

(2) `set shaper peak burst size`

Sets the peak burst size in the maximum bandwidth setting for each scenario.

(3) `add scenario`

Creates traffic attributes (scenario). Use this command to set the bandwidth, buffer size, queue mode (aggregate/discard), etc.

(4) `update scenario`

Overwrites traffic attributes (scenario) that have already been set.

(5) `delete scenario`

Deletes traffic attributes (scenario).

(6) `show scenario`

Displays traffic attributes (scenario).

(7) `show scenario tree`

Displays the hierarchical scenario tree.

2.1.4 System operation-related commands

(1) `set lpt`

Enables/disables the link-down transfer feature that forces the communicating device into a link-down state when a link-down is detected.

(2) `show lpt`

Displays the status of the link-down transfer feature.

(3) `set agingtime`

Sets the aging time for flows.

(4) `show agingtime`

Displays the aging time for flows.

2.1.5 Statistics-related commands

(1) `show counter`

Displays the Network port/system interface statistics.

(2) `show counter {<slot/port> | system}`

Displays statistics on the specified Network port or system interface.

(3) `clear counter`

Clears the Network port/system interface statistics.

(4) `show scenario info`

Displays the buffer information related to the scenario.

(5) `show scenario info summary`

Displays the list of buffer information related to the scenario.

(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 list of statistics related to the scenario.

(9) `clear scenario counter`

Clears the statistics related to the scenario.

(10) `set topcounter`

Enables/disables the top counter.

(11) `set topcounter config interval time`

Sets the collection interval for the top counter.

(12) `add topcounter config appli port`

Adds any application port number as a port number to be monitored by the top counter.

(13) `delete topcounter config appli port`

Deletes an application port number monitored by the top counter.

(14) `add topcounter config appli port static`

Sets any application port number to be always monitored by the top counter.

(15) `delete topcounter config appli port static`

Releases the static setting of the application port number.

(16) `add topcounter target`

Adds a scenario to be measured by the top counter.

(17) `delete topcounter target`

Deletes a scenario measured by the top counter.

(18) `update topcounter target`

Changes parameters specified for the measurement range of the top counter.

(19) `show topcounter target`

Shows the measurement results of the top counter.

(20) `show topcounter config`

Displays the top counter settings.

(21) `monitor rate`

Measures the reception rate and transmission rate of the queue being used for traffic control.

(22) `show flow`

Displays information on flows that are actually generated.

(23) `show resource`

Displays the resource status of the traffic attributes (scenario), filters, the list of rules, and flows that are actually generated. This command also displays the system buffer resource status.

2.1.6 Operation management-related commands

(1) `set ip system`

Sets the IPv4 address and subnet mask of the IP network interface of the system (system interface).

(2) `set ip system gateway`

Sets the default gateway of the IP network interface of the system (system interface).

(3) `unset ip system gateway`

Cancels the default gateway settings of the IP network interface of the system (system interface).

(4) `set ip system port`

Sets the communication port of the IP network interface of the system (system interface).

(5) `add ip system filter`

Adds a filter setting (system interface filter) for packets sent to the IP network interface of the system (system interface).

(6) `delete ip system filter`

Deletes the filter setting (system interface filter) for packets sent to the IP network interface of the system (system interface).

(7) `show ip system`

Displays the settings of the communication port and filter (system interface filter) of the IP network interface of the system (system interface).

(8) `show syslog`

Displays system log information stored in the internal memory.

(9) `show backup syslog`

Displays the system log stored in the internal backup memory.

(10) `clear syslog`

Clears the system log.

(11) `set syslog host`

Sets whether to output the system log to the specified host.

(12) `add syslog host`

Adds the IPv4 address and UDP port number of the host that is to be the output destination of the system log.

(13) `delete syslog host`

Deletes the IPv4 address and UDP port number of the host that is to be the output destination of the system log.

(14) `show syslog host`

Displays the IPv4 address and UDP port number of the host that is to be the output destination of the system log.

(15) `set syslog severity`

Sets the Severity range for the system log that is to be output to the specified host.

(16) `set syslog facility`

Sets Facility of the system log.

(17) `set date`

Sets the system time using the Western calendar and 24-hour format.

(18) `set timezone`

Sets the time zone of the system time as the number of hours offset from the UTC (Coordinated Universal Time).

(19) `set summertime`

Sets the period during which summer time is applied to the system time.

(20) `unset summertime`

Cancels the application of summer time to the system time.

(21) `show date`

Displays the current system time.

(22) `show sntp`

Displays the SNTP settings and status.

(23) `set sntp`

Enables/disables system time synchronization over SNTP.

(24) `set sntp interval`

Sets the interval during which SNTP queries the time from the NTP server.

(25) `set sntp server`

Sets the IPv4 address of the NTP server from which SNTP queries the time.

(26) `sync sntp`

Sends time queries to the NTP server.

(27) `set password`

Sets the login password.

(28) `set adminpassword`

Sets the login password to switch to Administrator mode.

(29) `set autologout time`

Sets the time interval for the auto logout feature.

(30) `show autologout`

Displays auto logout setting information.

(31) `set prompt`

Sets the prompt.

(32) `set pager`

Sets whether to use the pager.

(33) `show session`

Displays the status of serial, Telnet, and SSH sessions.

(34) `delete session`

Deletes Telnet and SSH sessions.

(35) `show module`

Displays information on each module in the system.

(36) `set autoreboot`

Enables/disables auto reboot when a failure occurs.

(37) `show process`

Displays the CPU and memory use rate.

(38) `set radius auth`

Enables/disables RADIUS authentication.

(39) `set radius auth timeout`

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

(40) `set radius auth retransmit`

Sets the number of times to resend an authentication request.

(41) `set radius auth method`

Sets the method for RADIUS authentication.

(42) add radius auth server

Adds a RADIUS authentication server.

(43) update radius auth server

Updates the preset RADIUS authentication server setting.

(44) delete radius auth server

Deletes the setting information on the RADIUS authentication server.

(45) test radius login

Tests authentication using the RADIUS protocol.

(46) show radius

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

(47) show radius statistics

Displays the RADIUS client statistics.

(48) clear radius statistics

Clears the RADIUS client statistics.

(49) set ssh

Enables/disables SSH connections.

(50) set ssh server key

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

(51) show ssh

Displays the SSH server settings and connected client information.

(52) set telnet

Enables/disables Telnet connections.

(53) show telnet

Displays whether the Telnet connection is enabled/disabled.

(54) set console baudrate

Sets the Baud rate of the console.

(55) show console baudrate

Displays the Baud rate of the console.

(56) set webapi protocol

Sets the protocol for WebAPI.

(57) show webapi

Displays the WebAPI information.

2.1.7 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 progress of configuration saving.

(4) show config running

Displays the configuration currently running.

(5) show config startup

Displays the configuration at startup.

2.1.8 SNMP-related commands

(1) `add snmp community`

Adds the SNMP community information.

(2) `delete snmp community`

Deletes the SNMP community information.

(3) `show snmp community`

Displays the SNMP community information.

(4) `add snmp view`

Adds the SNMP view information.

(5) `delete snmp view`

Deletes the SNMP view information.

(6) `show snmp view`

Displays the SNMP view information.

(7) `add snmp group`

Adds the SNMP group information.

(8) `delete snmp group`

Deletes the SNMP group information.

(9) `show snmp group`

Displays the SNMP group information.

(10) `add snmp host`

Adds the SNMP host information.

(11) `delete snmp host`

Deletes the SNMP host information.

(12) `show snmp host`

Displays the SNMP host information.

(13) `add snmp user`

Adds the SNMP user information.

(14) `delete snmp user`

Deletes the SNMP user information.

(15) `show snmp user`

Displays the SNMP user information.

(16) `set snmp traps`

Enables/disables individual SNMP notification transmission.

(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 syscontact`

Sets “sysContact”, an SNMP MIB-II system group object that indicates the administrator of this device.

(19) `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.

(20) `show snmp system`

Displays information related to the SNMP MIB-II sysLocation, sysContact, sysName, and trap.

2.1.9 Network bypass-related commands (for NF7603A and NF7604A 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.

2.1.10 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 patch from a 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 patch from a USB flash drive.

(10) download usb conf

Downloads the configuration file from a USB flash drive.

(11) upload tftp conf

Uploads the configuration file to the TFTP server.

(12) upload ftp conf

Uploads the configuration file to the FTP server.

(13) upload cf obj

Uploads software in the system to a CF card.

(14) upload cf conf

Uploads the configuration file to a CF card.

(15) upload usb obj

Uploads software in the system to a USB flash drive.

(16) upload usb conf

Uploads the configuration file to a USB flash drive.

(17) show cf list

Lists the files in a CF card.

(18) show usb list

Lists the files in a USB flash drive.

(19) `reboot`

Restarts the system.

(20) `ping`

Sends the ICMP ECHO_REQUEST packet to the specified host via the system interface.

(21) `telnet`

Connects to the specified host via Telnet.

(22) `arp`

Displays or deletes the ARP table.

(23) `delete ndp neighbor`

Deletes an NDP table entry.

(24) `show ndp neighbor`

Displays the NDP table.

(25) `?/help`

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

(26) `exit/logout/quit`

Logs out.

(27) `normal`

Returns to Normal mode.

(28) `admin`

Switches to Administrator mode.

(29) `show history`

Displays the command input history.

(30) `upload tftp file`

Uploads the files in a CF card or USB flash drive to the TFTP server.

(31) `upload ftp file`

Uploads the files in a CF card or USB flash drive to the FTP server.

(32) `operate cf remove`

Deletes the files in a CF card.

(33) `operate cf rename`

Renames the files in a CF card.

(34) `operate cf copy`

Copies the files in a CF card.

(35) `operate cf list`

Lists the files in a CF card.

(36) `operate usb remove`

Deletes the files in a USB flash drive.

(37) `operate usb rename`

Renames the files in a USB flash drive.

(38) `operate usb copy`

Copies the files in a USB flash drive.

(39) `operate usb list`

Lists the files in a USB flash drive.

(40) `set option`

Enables the options of the system.

(41) `show option`

Displays the options enabled in the system.

2.2 Command Details

2.2.1 Interface management 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 and Ethernet port.
Specify the Network port in the <slot/port> format. Multiple addresses 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>.
Specify the Ethernet port by using a system parameter.
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 and 2.

`enable | disable`

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

[Default Value]

The default value is "`enable`".

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
Command making ambiguity
Usage : set port autonegotiation <slot/port> {enable | disable}
Usage : set port autonegotiation system {enable | disable}
```

- There is a missing argument.

```
An argument was missing
Usage : set port autonegotiation <slot/port> {enable | disable}
```

- There is a missing argument.

```
An argument was missing
Usage : set port autonegotiation system {enable | disable}
```

- There is a missing argument.

```
slot #N is invalid
```

- The specified slot is invalid.

```
port <slot/port> is invalid
```

- The specified port is invalid.

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.
Multiple <slot/port> parameters 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 or 1000BASE-X, pause frame reception and transmission is determined by AutoNegotiation. If AutoNegotiation is disabled, both reception and transmission are enabled. If the port type is 10GBASE-R, both reception and transmission are enabled.
If on is specified to reception or transmission, pause frame reception or transmission is enabled regardless of the AutoNegotiation result.
If off is specified to reception or transmission, pause frame reception or transmission is disabled regardless of the AutoNegotiation result.
This command can be executed only in Administrator mode.

[Display]

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

[Arguments]

slot/port
Specify the slot location and port number of the Network port.
Only 1 can be specified as the slot location. Valid port numbers are 1 and 2.

auto
If the port type is 1000BASE-T or 1000BASE-X, pause frame reception and transmission is determined by AutoNegotiation. If AutoNegotiation is disabled, both reception and transmission are enabled.
If the port type is 10GBASE-R, both reception and transmission are enabled.

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.

```
An argument was missing
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.

set port duplex

[Format]

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

[Description]

This command sets the duplex mode for the Network and Ethernet ports.
Specify the Network port in the <slot/port> format. Multiple addresses 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>.
Specify the Ethernet by using a system parameter.
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 and 2.

`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.

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 and Ethernet ports.
Specify the Network port in the <slot/port> format. Multiple addresses 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>.
Specify the Ethernet by using a system parameter.
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 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 1 and 2.

{10M | 100M | 1G}

Set the communication speed (port speed) to either 1 Gbps, 100 Mbps or 1 Mbps.

[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 baud rate (port speed) is invalid.

set port maxpacketlen

[Format]

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

[Description]

This command sets the maximum packet length for the Network port.
The maximum packet length is a common setting for each Network port.
The setting value is the entire length of the packet including the Ethernet header and FCS. Note that the length of VLAN Tag is excluded. The VLAN Tag packet has the maximum length of the setting value plus 4 bytes; the dual VLAN Tag has the maximum length of the setting value plus 8 bytes.
Changes to this setting will be applied at the next boot. Like the `save config` command, this command saves the current operating parameters (running configuration) in the internal flash memory. When the command setting is complete, restart the system. The previous setting value will be used until the system is restarted.

Note:

This setting value changes the following scenario parameter setting ranges: When this value is set to 10240, values are automatically rounded within their ranges for configured scenarios and the `add scenario` and `update scenario` commands.

	2048	10240
Buffer size **(bufsize)**	2 kbyte to 100 Mbyte	11 kbyte to 100 Mbyte
Minimum bandwidth **(min_bw)**	0 or 1kbps to 10 Gbps in 1 kbps units	0 or 5 kbps to 10 Gbps in 5 kbps units
Peak bandwidth **(peak_bw)**	2 kbps to 10 Gbps in 1 kbps units	10 kbps to 10 Gbps in 5 kbps units

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set port maxpacketlen 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.
  minimum value of minimum bandwidth   1k ->  5k
  minimum value of peak bandwidth      2k -> 10k
  bandwidth resolution                 1k ->  5k
  buffer size minimum                  2k -> 11k

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 the maximum packet length for the Network port.

[Default value]

The default value is `2048`.

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
Command making ambiguity
Usage : set port maxpacketlen {2048 | 10240}
```

- There is a missing argument.

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
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
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:

`100BASE-TX`	Indicates a 100BASE-TX port.
`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.

- `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.

show port <slot/port>

[Format]

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

[Description]

This command displays detailed information on the specified 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
AutoNegotiation      : Enabled
Admin speed          : 100M
Oper speed           : 100M
Admin duplex         : Full
Oper duplex          : Full
Tx Flow control      : Auto
Rx Flow control      : Auto
PureFlow(A)>

PureFlow(A)> show port 1/1

Slot/Port            : 1/1
Port type            : 10GBASE-R
Admin status         : Enabled
Oper status          : Up
AutoNegotiation      : --------
Admin speed          : 1G
Oper speed           : 10G
Admin duplex         : Full
Oper duplex          : Full
Tx Flow control      : Auto
Rx Flow control      : Auto
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:

100BASE-TX	Indicates a 100BASE-TX port.
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.

- AutoNegotiation
  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 to 1000BASE-T.

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 to 1000BASE-T.

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 Max Packet Len
  Shows the maximum packet length setting for the Network port.

- Oper Max Packet Len
  Shows the maximum packet length 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 and 2.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

port <slot/port> is invalid

- The specified port is invalid.

slot #N is invalid

- The specified slot is invalid.

2.2.2 ACL-related commands

add rulelist group

[Format]

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

[Description]

This command adds 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.

```
Command making ambiguity
Usage : add rulelist group <list_name> {ipv4 | ipv6 | l4port}
```

- There is a missing 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 adds 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 that the rule list entries are to be registered to.

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

- There is a missing argument.

```
An argument was missing
Usage : add rulelist entry <list_name> ipv4 <IP_address>
        add rulelist entry <list_name> ipv6 <IP_address>
        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 name of the rule list.

`all`
Specify this to delete all rule lists.

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
Command making ambiguity
Usage : delete rulelist group {<list_name> | all}
```

- There is a missing 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 from which the rule list entry should be deleted. 1 to 32 characters can be specified.
If spaces are required, enclose the character string with quotation marks (" "), for example, "v4 Servers".
A name that consists only of numbers and a pair of quotation marks (" ") alone cannot be specified.
The name "all" cannot be specified.

`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.

[Errors]

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

```
Command making ambiguity
Usage : 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
```
- There is a missing argument.

```
An argument was missing
Usage : delete rulelist entry <list_name> ipv4 <IP_address>
        delete rulelist entry <list_name> ipv6 <IP_address>
        delete 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.

```
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.

set filter mode

[Format]

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

[Description]

This command sets the combination of fields to identify a flow (flow identification mode).

This device uses a filter to classify packets and extract traffic. To identify the traffic, a flow is used as the minimum unit.

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

With this command, you can transfer packets that have different fields as different flows or as the same flow.

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

Changing the flow identification mode causes the flows that have been registered to be deleted.

This command can be executed only in Administrator mode.

[Display]

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

[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.

`field`

Specify the field name to identify a flow. The following character strings can be specified:

`default`	A flow is identified based on 5tuple. The combination of `sip`, `dip`, `tos`, `proto`, `sport`, and `dport` is used to identify the flow.
`vid`	Flow identification is performed based on VLAN ID. For a duplex VLAN tag, flow identification is performed based on the outer-side VLAN ID.
`cos`	Flow identification is performed based on CoS. For a duplex VLAN tag, flow identification is performed based on the outer-side CoS.
`inner-vid`	Flow identification is performed based on the inner-side VLAN ID of the duplex VLAN tag.
`inner-cos`	Flow identification is performed based on the inner-side Cos of the duplex VLAN tag.
`sip`	Flow identification is performed based on SIP.
`dip`	Flow identification is performed based on DIP.
`tos`	Flow identification is performed based on ToS.
`proto`	Flow identification is performed based on the protocol number.
`sport`	Flow identification is performed based on Sport.
`dport`	Flow identification is performed based on Dport.

Multiple parameters can be specified by delimiting them with commas (,). However, `default` cannot be specified together with other field names.

Filters that contain fields other than those specified in the flow identification mode are considered invalid. For example, when `vid,sip,dip` is specified to identify the flow based on the VLAN ID, SIP, and DIP fields, if `cos` which is not specified in the flow identification mode is specified by the `add filter` command, the filter is deemed inconsistent.

[Default value]

`field`

The default value is "`default`".

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
An argument was missing
Usage : set filter mode in <slot/port> <field>
```

- There is a missing argument.

```
Command making ambiguity
Usage : set filter mode in <slot/port> <field>
```

- There is a missing argument.

```
Specified input physical port is invalid.
```

- The specified input port number is invalid.

```
Specified input physical slot is invalid.
```

- The specified input slot number is invalid.

```
Specified field is invalid.
 Valid fields:
 default, vid, cos, inner-vid, inner-cos, sip, dip, tos, proto, sport, dport
 (multiple fields can be specified with separated comma without space)
```

- The specified field name for flow identification is invalid.

add filter

[Format]

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

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

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

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

[Description]

This command sets a filter to a scenario.
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.
For the Ethernet filter, IPv4 filter, and IPv6 filter, specify the field that is set by the filter identification mode "`set filter mode`" command. If a field that is not set by the filter identification mode is specified (except the ethertype field of the Ethernet filter), the traffic does not match the filter.

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.
To set a 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 file 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 "shibuya1" 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}, inner-vid {<VID> | none}
Specify the VLAN ID. If not specified, all Ethernet frames (with/without VLAN Tag) match. If none is specified, frames without VLAN Tag match.
Enter the VLAN ID value directly or use <start-end>.
When specifying a range by using <start-end>, ensure the order is ascending (start < end).
Valid values are from 0 to 4094.

cos <user_priority>, inner-cos <user priority>
Specify the CoS value. If not specified, all CoS values match. If the vid value is "none", this cannot be specified.
Enter the CoS 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 7.

sip [list] {<src_IP_address> | <list_name>}
Specify the Source IPv4 address or a rule list name. If not specified, all Source IPv4 addresses match.
To specify src_IP_address, use <address> or <address-address>.
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
.

tos <type_of_service>
Specify the ToS value. If not specified, all ToS values match.
Specify the ToS 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 255.

`tos <traffic_class>`
Specify the traffic class value. If not specified, all traffic class values match.
Specify the traffic class 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 255.

`proto <protocol>`
Specify the protocol number. If not specified, all protocol numbers match.
Specify the protocol number directly or use <start-end>. `tcp`, `udp`, `icmp`, and `icmpv6` can be entered in characters.
When specifying a range by using <start-end>, ensure the order is ascending (start < end).
Valid values are from 0 to 255.

`sport [list] {<sport> | <list_name>}`
Specify the Source port number or a rule list name. If not specified, all Source Port numbers match.
Specify the sport number directly or use <start-end>.
When specifying a range by using <start-end>, ensure the order is ascending (start < end).
Valid values are from 0 to 65535.

`dport [list] {<dport> | <list_name>}`
Specify the Destination port number or a rule list name. If not specified, all Destination Port numbers match.
Enter the dport number directly or use <start-end>.
When specifying a range by using <start-end>, ensure the order is ascending (start < end).
Valid values are from 0 to 65535.

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

[Default value]

None

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

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

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

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

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

- There is a missing argument.

```
Specified Scenario Name is invalid.
```

- The specified scenario name is invalid.

```
Specified scenario name is not used.
```

- The specified scenario does not exist.

```
Specified filter Name is invalid.
(Number only cannot be specified. "all" cannot be specified.)
 (Valid Filter Name length is from 1 to 48.)
```

- The specified filter name is invalid.

```
Specified filter Name is already used.
```

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

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

- The specified Ether type is invalid.

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

- The specified VLAN ID is invalid.

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

- The specified CoS value is invalid.

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

- The specified VLAN ID is invalid.

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

- The specified CoS value is invalid.

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

- The specified Source IP address is invalid.

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

- The specified Destination IP address is invalid.

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

- The specified Source IPv6 address is invalid.

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

- The specified Destination IPv6 address is invalid.

```
Specified rulelist name of source IP address is invalid.
Specified rulelist name of destination IP address is invalid.
Specified rulelist name of source port is invalid.
Specified rulelist name of destination port is invalid.
```

- The rule list name is invalid.

```
Specified rulelist name of source IP address is not used.
Specified rulelist name of destination IP address is not used.
Specified rulelist name of source port is not used.
Specified rulelist name of destination port is not used.
```

- The specified rule list does not exist.

```
IP Filter and rulelist of source IP address is not same type.
IP Filter and rulelist of destination IP address is not same type.
IP Filter and rulelist of source port is not same type.
IP Filter and rulelist of destination port is not same type.
```

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

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

- The specified ToS or Traffic Class 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 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.

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.

[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>
Usage : delete filter 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.

```
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 rulelist

[Format]

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

[Description]

This command displays the rule list settings.
If <list_name> is specified, information related to the specified rule list is displayed.
If next is specified, information next to the specified rule list is displayed. The order is alphabetical based on rule list names.
If all is specified, the information of all rule lists 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 groups:  0
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- 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.

・Total rulelist groups
Shows the number of rule lists being used.

[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.

[Errors]

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

```
Command making ambiguity
Usage : show rulelist name <list_name> [next]
Usage : show rulelist all
```
・There is a missing argument.

```
An argument was missing
Usage : show rulelist name <list_name> [next]
```
・There is a missing argument.

show filter

[Format]

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

[Description]

This command displays the filter settings.
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.
If `all` is specified, all filters of all scenarios are 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
        cos             :0-7
        inner-vid       :10
        inner-cos       :0
        Sip             :210.10.10.0-210.10.10.255
        Dip             :192.168.48.0-192.168.48.255
        ToS             :1-5
        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
       cos             :0-7
       inner-vid       :10
       inner-cos       :0
       Sip             :210.10.10.0-210.10.10.255
       Dip             :192.168.48.0-192.168.48.255
       ToS             :1-5
       Proto           :udp
       Sport           :100-110
       Dport           :200-210
       Priority        :1

  Filter Name:  "shibuya2"
     Filter Type:  IPv6
     Filter Rule:
       vid             :10-100
       cos             :0-7
       inner-vid       :10
       inner-cos       :0
       Sip             :FE80::0001-FE80::FFFF:FFFF
       Dip             :FE81::0001-FE81::FFFF:FFFF
       ToS             :1-5
       Proto           :udp
       Sport           :100-110
       Dport           :200-210
       Priority        :2

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

  Filter Name:  4"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
       cos             :0-7
       inner-vid       :10
       inner-cos       :0
       Sip             :210.10.10.0-210.10.10.255
       Dip             :192.168.48.0-192.168.48.255
       ToS             :1-5
       Proto           :udp
       Sport           :100-110
       Dport           :200-210
       Priority        :1

  Filter Name:  "shibuya2"
     Filter Type:  IPv6
     Filter Rule:
       vid             :10-100
       cos             :0-7
       inner-vid       :10
       inner-cos       :0
       Sip             :FE80::0001-FE80::FFFF:FFFF
       Dip             :FE81::0001-FE81::FFFF:FFFF
       ToS             :1-5
       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
       cos             :0-7
       inner-vid       :10
       inner-cos       :0
       Sip             :210.10.10.0-210.10.10.255
       Dip             :192.168.48.0-192.168.48.255
       ToS             :1-5
       Proto           :udp
       Sport           :100-110
       Dport           :200-210
       Priority        :5

Total parent 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 all
Total filter entries:  0
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- `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.

- `Total filter entries`
  Shows the number of filters.

[Arguments]

`scenario_name`
Specify the scenario.

`filter_name`
Specify the filter name.

`summary`
Only displays a summary of the filters.

`next`
Displays the filter next to the specified filter.

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
Command making ambiguity
Usage : show filter scenario <scenario_name> [filter <filter_name>] [summary] [next]
Usage : show filter all [summary]
```

- There is a missing argument.

```
An argument was missing
Usage : show filter scenario <scenario_name> [filter <filter_name>] [summary] [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.

```
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.

2.2.3 Scenario-related commands

set bandwidth mode

[Format]

```
set bandwidth mode {gap [<size>]| no_gap}
```

[Description]

This command enables/disables inter-frame gaps and preambles in the communication bandwidth settings.

For Ethernet, inter-frame gaps and preambles are required to continuously transmit frames. 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 `no_gap`.
If the size is omitted, the default value 20 [bytes] is applied.

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
An argument was missing
Usage : set bandwidth mode {gap [size] | no_gap}
```

- There is a missing argument.

`Specified size is outside the valid range. (Valid from -100 to 100)`

- The specified size is out of range.

set shaper peak burst size

[Format]

```
set shaper peak burst size <size>
```

[Description]

This command sets the peak burst size in the maximum bandwidth setting for each scenario.
This device controls the transmission burst size to be below "peak burst size + maximum packet length."
This setting is applied to all the scenarios of the entire system.
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 depends on the setting value of the maximum packet length.
If the maximum packet length is 2048, Valid values for the size are from 1536 [bytes] to 9216 [bytes].
If the maximum packet length is 10240, Valid values for the size are from 1536 [bytes] to 46080 [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 1536 to 46080)
```

- The specified size is out of range.

add scenario

[Format]

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

add scenario <scenario_name> action aggregate
       [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
       [class <class>] [bufsize <bufsize>] [scenario <scenario_id>]

add scenario <scenario_name> action individual
       [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
       [class <class>] [bufsize <bufsize>] [scenario <scenario_id>]
       [maxquenum <quenum>] [quedivision <field>]
       [failaction discard]

add scenario <scenario_name> action individual
       [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
       [class <class>] [bufsize <bufsize>] [scenario <scenario_id>]
       [maxquenum <quenum>] [quedivision <field>]
       [failaction forwardbesteffort]

add scenario <scenario_name> action individual
       [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
       [class <class>] [bufsize <bufsize>] [scenario <scenario_id>]
       [maxquenum <quenum>] [quedivision <field>]
       [failaction forwardattribute] [fail_min_bw <min_bandwidth>]
                                     [fail_peak_bw <peak_bandwidth>]
                                     [fail_class <class>]
```

[Description]

This command sets the traffic attributes of traffic that matches the filter.
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 discard mode, aggregate mode, and individual mode are available as actions for scenarios.
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.

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

The maximum number of scenarios that can be registered is 40000.
A total of 300000 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
```

[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.
The scenario`/port1` or`/port2` cannot be added or deleted.
For the scenario`/port1` or`/port2`, use the `update scenario` command to update the parameters.
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`).

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.

`min_bw <min_bandwidth>`
Specifies the minimum bandwidth.
If `min_bw` is omitted, the minimum bandwidth is not guaranteed.
Valid values are from 1k [bits/s] to 10G [bits/s] and 0. If the maximum packet length is set to 10240 [bytes], a value between 1k [bits/s] to 5k [bits/s] is rounded to 5k [bits/s].
If 0 is specified, the minimum bandwidth is not guaranteed.
The minimum unit is 1k [bits/s]. If the maximum packet length is set to 10240 [bytes], the value is rounded up in 5k [bits/s] units.
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 2k [bits/s] to 10G [bits/s]. If the maximum packet length is set to 10240 [bytes], a value between 2k [bits/s] to 10k [bits/s] is rounded to 10k [bits/s].
The minimum unit is 1k [bits/s]. If the maximum packet length is set to 10240 [bytes], the value is rounded up in 5 k [bits/s] units.
Specify the unit (k, M, G).
The letter k represents 1000, M represents 1000000, and G represents 1000000000.

`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.

`bufsize <bufsize>`

Specify the allowable input burst length for the traffic.
Valid values are from 2k [bytes] to 100M [bytes]. If the maximum packet length is set to 10240 [bytes], a value between 2k [bytes] to 11k [bytes] is rounded to 11k [bytes].
The minimum unit is 1k [bytes].
Specify the unit (k, M).
The letter k represents 1000, and M represents 1000000.

`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 300000.

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 in the same way as in the flow identification mode. The following strings can be specified by delimiting them with commas (,).
The specified field is identified, and an individual queue is assigned to a flow with a different field.
Only the field which specified with flow identification mode is valid for the division target of the queue.
The field which is not specified with flow identification mode is invalid for the division target of the queue.
Note that the ethertype field is valid for this setting although it cannot be specified in the flow identification mode.
If any one of 5tuple (sip, dip, tos, 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, tos, proto, sport, and dport is used to divide queues.
vlan	Divides queues based on VLAN ID. For a duplex VLAN tag, the outer-side VLAN ID is used.
cos	Divides queues based on Cos. For a duplex VLAN tag, the outer-side Cos is used.
inner-vlan	Divides queues based on the inner-side VLAN ID of the duplex VLAN tag.
inner-cos	Divides queues based on the inner-side CoS of the duplex VLAN tag.
ethertype	Divides queues based on Ethernet Type/Length.
sip	Divides queues based on SIP.
dip	Divides queues based on DIP.
tos	Divides queues based on ToS.
proto	Divides queues based on the protocol number.
sport	Divides queues based on Sport.
dport	Divides queues based on Dport.

failaction {discard | forwardbesteffort | forwardattribute}

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 300000 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.

[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 1M [bytes].
10M [bytes] is applied in the case of /port1 or/port2 scenario.

maxquenum
The default value is 300000.

quedivision
The default value is default.

failaction
The default value is forwardbesteffort.

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

```
Command making ambiguity
Usage : add scenario <scenario_name> action discard

Usage : add scenario <scenario_name> action aggregate
            [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
            [class <class>] [bufsize <bufsize>] [scenario <scenario_id>]

Usage : add scenario <scenario_name> action individual
            [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
            [class <class>] [bufsize <bufsize>] [scenario <scenario_id>]
            [maxquenum <quenum>] [quedivision <field>]
            [failaction 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 Minimum Bandwidth is invalid. (Valid from 0, 1k to 10G)

- The specified minimum bandwidth is invalid.

Specified Peak Bandwidth is invalid. (Valid from 2k to 10G)

- The specified peak bandwidth is invalid.

Peak Bandwidth should be greater than Minimum Bandwidth.

- peak_bw must be equal to or greater than min_bw.

Specified Buff Size is invalid. (Valid from 2k to 100M)

- The specified bufsize is invalid.

Specified Scenario Name is invalid.

- The specified scenario name is invalid.

Specified Scenario Name is already used.

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

Specified Scenario of upper level hierarchy is not found.

- The upper level scenario does not exist.

maximum number of scenario was exceeded.

- The number of scenarios exceeded the registration limit.

```
Specified Scenario ID is invalid. (Valid from 1 to 40000)
```

- 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 300000)
```

- The specified `maxquenum` is out of range.

```
Extended number of scenario is not licensed.
```

- It is not possible to register a scenario exceeding the limit of the scenario license.
- It is not possible to set the maxquenum parameter exceeding the limit of the scenario license.

```
Specified Q Division Field is invalid.
Valid fields:
  default, vlan, cos, inner-vlan, inner-cos, ethertype, sip, dip, tos, proto, sport,
  dport
(multiple fields can be specified with separated comma without space)
```

- The specified `quedivision` field is invalid.

```
failaction is not specified.
```

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

```
Specified Failaction is invalid.
```

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

```
Specified scenario has packets in buffer.
Please wait until the buffer becomes empty, and try again.
```

- The specified scenario is sending packets. Wait until sending is complete, and try again.

update scenario

[Format]

```
update scenario <scenario_name> action aggregate
       [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
       [class <class>] [bufsize <bufsize>]

update scenario <scenario_name> action individual
       [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
       [class <class>] [bufsize <bufsize>]
       [maxquenum <quenum>] [quedivision <field>]
       [failaction discard]

update scenario <scenario_name> action individual
       [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
       [class <class>] [bufsize <bufsize>]
       [maxquenum <quenum>] [quedivision <field>]
       [failaction forwardbesteffort]

update scenario <scenario_name> action individual
       [min_bw <min_bandwidth>] [peak_bw <peak_bandwidth>]
       [class <class>] [bufsize <bufsize>]
       [maxquenum <quenum>] [quedivision <field>]
       [failaction forwardattribute] [fail_min_bw <min_bandwidth>]
                                     [fail_peak_bw <peak_bandwidth>]
                                     [fail_class <class>]
```

[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 `/port1` or `/port2` for `<scenario_name>` to update the parameter. Note that the `/port1` or `/port2` class cannot be changed.

You can omit each of the parameters but cannot omit all the parameters. Specify at least one parameter that you want to change.
Note that the scenario name and action cannot be changed.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> update scenario "/port1/tokyo" action aggregate
             min_bw 1G
PureFlow(A)> update scenario "/port1/tokyo/shibuya" action aggregate
             min_bw 100M peak_bw 500M bufsize 10M
```

[Arguments]

`scenario_name`
Specify the absolute path of the registered scenario name.
Valid values are from 1 to 128 characters for all levels (/port1, /port2).

`action aggregate`
Changes a scenario in the aggregate queue mode.

`action individual`
Changes a scenario in the individual queue mode.

`min_bw <min_bandwidth>`
Changes the minimum bandwidth.
If 0 is specified, the minimum bandwidth is not guaranteed.
Valid values are from 1k [bits/s] to 10G [bits/s] and 0. If the maximum packet length is set to 10240 [bytes], a value between 1k [bits/s] to 5k [bits/s] is rounded to 5k [bits/s].
The minimum unit is 1k [bits/s]. If the maximum packet length is set to 10240 [bytes], the value is rounded up in 5k [bits/s] units.
Specify the unit (k, M, G).
The letter k represents 1000, M represents 1000000, and G represents 1000000000.

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

`peak_bw <peak_bandwidth>`
Changes the peak bandwidth.
Valid values are from 2k [bits/s] to 10G [bits/s]. If the maximum packet length is set to 10240 [bytes], a value between 2k [bits/s] to 10k [bits/s] is rounded to 10k [bits/s].
The minimum unit is 1k [bits/s]. If the maximum packet length is set to 10240 [bytes], the value is rounded up in 5k [bits/s] units.
Specify the unit (k, M, G).
The letter k represents 1000, M represents 1000000, and G represents 1000000000.

`class <class>`
Changes 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.

`bufsize <bufsize>`
Changes an allowable input burst length for the traffic.
Valid values are from 2k [bytes] to 100M [bytes]. If the maximum packet length is set to 10240 [bytes], a value between 2k [bytes] to 11k [bytes] is rounded to 11k [bytes].
The minimum unit is 1k [bytes].
Specify the unit (k, M).
The letter k represents 1000, and M represents 1000000.

`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 300000.

`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 in the same way as in the flow identification mode. The following strings can be specified by delimiting them with commas (,).
The specified field is identified, and an individual queue is assigned to a flow with a different field.
Only the field which specified with flow identification mode is valid for the division target of the queue.
The field which is not specified with flow identification mode is invalid for the division target of the queue.
Note that the ethertype field is valid for this setting although it cannot be specified in the flow identification mode.
If any one of 5tuple (`sip`, `dip`, `tos`, `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`, `tos`, `proto`, `sport`, and `dport` is used to divide queues.
vlan	Divides queues based on VLAN ID. For a duplex VLAN tag, the outer-side VLAN ID is used.
cos	Divides queues based on Cos. For a duplex VLAN tag, the outer-side Cos is used.
inner-vlan	Divides queues based on the inner-side VLAN ID of the duplex VLAN tag.
inner-cos	Divides queues based on the inner-side CoS of the duplex VLAN tag.
ethertype	Divides queues based on Ethernet Type/Length.
sip	Divides queues based on SIP.
dip	Divides queues based on DIP.
tos	Divides queues based on ToS.
proto	Divides queues based on the protocol number.
sport	Divides queues based on Sport.
dport	Divides queues based on Dport.

`failaction {discard | forwardbesteffort | forwardattribute}`

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 300000 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.

[Default Value]

None

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
Command making ambiguity
Usage : update scenario <scenario_name> action individual
        [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
          [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 Minimum Bandwidth is invalid. (Valid from 0, 1k to 10G)
```

- The specified Minimum Bandwidth is invalid.

```
Specified Peak Bandwidth is invalid. (Valid from 2k to 10G)
```

- The specified Peak Bandwidth is invalid.

```
Peak Bandwidth should be greater than Minimum Bandwidth.
```

- peak_bandwidth must be equal to or greater than min_bandwidth.

```
Specified Buff Size is invalid. (Valid from 2k to 100M)
```

- The specified 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 300000)
```

- The specified maxquenum is out of range.

```
Extended number of scenario is not licensed.
```

- It is not possible to set the maxquenum parameter exceeding the limit of the scenario license.

```
Specified Q Division Field is invalid.
Valid fields:
  default, vlan, cos, inner-vlan, inner-cos, ethertype, sip, dip, tos, proto, sport,
dport
(multiple fields can be specified with separated comma without space)
```

- The specified quedivision field is invalid.

```
Fail Action Forward is incorrect.
```

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

delete scenario

[Format]

```
delete scenario all
delete scenario <scenario_name> [recursive]
```

[Description]

This command deletes a traffic attribute (scenario) setting.
It also deletes filters registered to the scenario.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete scenario "/port1/tokyo/shibuya/"
PureFlow(A)> delete scenario "/port1/tokyo/" recursive
PureFlow(A)> delete scenario all
```

[Arguments]

`scenario_name`

Specify the absolute path of the scenario name.
The scenario `/port1` or `/port2` cannot be added or deleted.
For the scenario `/port1` or `/port2`, use the `update scenario` command to update the parameters.

`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.

show scenario

[Format]

```
show scenario name <scenario_name> [summary] [next]
show scenario all [summary]
```

[Description]

This command displays the settings of 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 is based on the scenario tree order.
If `all` is specified, information of all scenarios is displayed.
This command can be executed in the Normal and Administrator modes.

[Display]

(For aggregate mode)

```
PureFlow(A)> show scenario name "/port1/Tokyo"
Total scenario entries:  3

Scenario 1:  "/port1/Tokyo"
  Rate Control Unit:
          Create Mode          :Aggregate
          Class                :2
          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)>
```

(For individual mode)

```
PureFlow(A)> show scenario name "/port1/Tokyo"
Total scenario entries:  3

Scenario 1:  "/port1/Tokyo"
  Rate Control Unit:
          Create Mode            :Individual
          Class                  :2
          Min Bandwidth          :5M[bps]
          Peak Bandwidth         :8M[bps]
          Buf Size               :512k[Bytes]
          Max Queue Number       :300000
          Queue Division         :
                 vlan            :Disable
                 cos             :Disable
                 inner-vlan      :Disable
                 inner-cos       :Disable
                 ethertype       :Disable
                 sip             :Enable
                 dip             :Enable
                 tos             :Disable
                 proto           :Enable
                 sport           :Enable
                 dport           :Enable
          Fail Action            :Forward attribute
                 Class           :8
                 Min Bandwidth   :---
```

```
                Peak Bandwidth  :1M[bps]

  *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
          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:  2

Scenario 40001:  "/port1"
  Rate Control Unit:
          Create Mode           :Aggregate
          Class                 :1
          Min Bandwidth         :10G[bps]
          Peak Bandwidth        :-----
  Default Queue:
          Class                 :8
          Buf Size              :100M[Bytes]

  *Attached Filters:
         (none)

Scenario 40002:  "/port2"
  Rate Control Unit:
          Create Mode           :Aggregate
          Class                 :1
          Min Bandwidth         :10G[bps]
          Peak Bandwidth        :-----
  Default Queue:
          Class                 :8
```

```
          Buf Size             :100M[Bytes]

  *Attached Filters:
          (none)

Total scenario entries:  2

PureFlow(A)>
```

The displayed items and their meanings are as follows:

- `Scenario`
  Shows the scenario ID and name. For the port scenario ID, 40001 is shown for port 1, and 40002 is shown for port 2.

- `Rate Control Unit`
  Shows the settings of bandwidth control.

- `Default Queue`
  Shows the default queue settings.

- `Attached Filters`
  Shows the names of filters added by the `add filter` command.

- `Total scenario entries`
  Shows the total number of scenarios.

[Arguments]

`scenario_name`
Specify the absolute path of the scenario name you want to display.

`summary`
Filter information is not displayed.

`next`
Displays information of the scenario next to the specified scenario.

[Errors]

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

```
Command making ambiguity
Usage : show scenario name <scenario_name> [summary] [next]
Usage : show scenario all [summary]
```
- There is a missing argument.

```
An argument was missing
Usage : show scenario name <scenario_name> [summary] [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.`
- The next scenario does not exist.

show scenario tree

[Format]

```
show scenario tree [conf] [filter]
```

[Description]

This command displays the hierarchical scenario tree. The tree is displayed in the order of upper to lower levels. If multiple scenarios exist in the same level, these scenario names are shown in alphabetical order.
If an argument is omitted, only scenario names and types are displayed.
If `conf` is specified, scenario setting values are also displayed. Note that the setting values displayed are common to each scenario type. The values are not displayed in the Discard state.
If `filter` is specified, filter names associated with scenarios are also displayed.
This command can be executed in the Normal and Administrator modes.

[Display]

(When an argument is omitted)

```
PureFlow(A)> show scenario tree

"/port1" (Aggregate)
     |
2    |- "/port1/NewYork" (Aggregate)
     |  |
7    |  |- "/port1/NewYork/FTP" (Aggregate)
     |  |
3    |  |- "/port1/NewYork/HTTP" (Aggregate)
     |  |  |
4    |  |  |- "/port1/NewYork/HTTP/Brooklyn" (Aggregate)
     |  |  |  |
5    |  |  |  |- "/port1/NewYork/HTTP/Brooklyn/Bedford-stuyvesant" (Aggregate)
     |  |
6    |  |- "/port1/NewYork/Ipphone" (Aggregate)
     |
8    |- "/port1/Paris" (Aggregate)
     |
9    |- "/port1/Roma" (Aggregate)
     |
1    |- "/port1/tokyo1" (Aggregate)

"/port2" (Aggregate)

PureFlow(A)>
```

(If conf is specified)

```
PureFlow(A)> show scenario tree conf

"/port1" (Aggregate)
   Class:2 MinBW:----- PeakBW:1G[bps] Buff:1M[Bytes]
     |
2    |- "/port1/NewYork" (Aggregate)
     |    Class:2 MinBW:5M PeakBW:8M Buff:1M
     |  |

"/port2" (Aggregate)
   Class:2 MinBW:----- PeakBW:1G[bps] Buff:1M[Bytes]

PureFlow(A)>
```

(If filter is specified)

```
PureFlow(A)> show scenario tree filter

"/port1" (Aggregate)
 "/port1" (Aggregate)
   Attached Filters:
           (none)
      |
1     |- "/port1/NewYork" (Aggregate)
      |   Attached Filters:
      |           "NewYorkSeg1"
      |           "NewYorkSeg2"

"/port2" (Aggregate)
   Attached Filters:
           (none)

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 ID automatically set 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.

2.2.4 System operation-related commands

set lpt

[Format]

```
set lpt {enable | disable}
```

[Description]

This command enables and disables the link-down transfer feature that forces the communicating device into a link-down state when a link-down is detected.
For example, if a link-down is detected on port 1, it will force the device on port 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]

None

[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.

show lpt

[Format]

```
show lpt
```

[Description]

This command displays the status of 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.

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.

2.2.5 Statistics-related commands

show counter

[Format]

```
show counter [brief]
```

[Description]

This command displays statistics.
The counter length displayed in this command is 32 bits.
This command can be executed in the Normal and Administrator modes.

Be careful about the following restrictions when executing this command.

- The Rx Octets value and Tx Octets value count the number of octets including the Ether header and FCS.
- The Rx Octets value counts the number of octets excluding the Ether header and FCS. Additionally, the Tx Octets value counts the number of octets excluding FCS.

[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
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
system             5            0           10            0

Port      Err Packets   Collision    Discard
-------   -----------   ----------   ----------
 1/1                0            0            0
 1/2                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
system            0            0           0            0          N/A

PureFlow(A)>
```

The displayed items and their meanings are as follows:

- Port
  Shows the slot/port of the Network port, or the system interface.

- 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 packet collisions detected by the Network port.

- `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.

`Error in getting <slot>/<port> statistics`

- The specified port is invalid.

`Invalid Argument`

- The specified port is out of range.

show counter {<slot/port> | system}

[Format]

```
show counter {<slot/port> | system}
```

[Description]

This command displays statistics on the specified Network port or system interface.
The counter length that are displayed by this command is 64 bits.
This command can be executed in the Normal and Administrator modes.

Be careful about the following restrictions when executing this command.

- The Rx Octets value and Tx Octets value count the number of octets including the Ether header and FCS.
- The Rx Octets value counts the number of octets excluding the Ether header and FCS. Additionally, the Tx Octets value counts the number of octets excluding FCS.

[Display]

(When a Network port is specified)

```
PureFlow(A)> show counter 1/1

Rcv Packets                      100
Rcv Broad                          0
Rcv Multi                       6400
Rcv Octets                      1110
Rcv Rate                      152000 [kbps]
Trs Packets                        0
Trs Broad                          0
Trs Multi                          0
Trs Octets                         0
Trs Rate                      100000 [kbps]
Collision                          0
Drop                               0
Discard                            0
Error Packets                      0
        CRC Align Error                        0
        Undersize Packet                       0
        Oversize Packet                        0
        Fragments                              0
        Jabbers                                0

PureFlow(A)>
```

(When system is specified)

```
PureFlow(A)> show counter system

Rcv Packets                      152
Rcv Broad                        N/A
Rcv Multi                        N/A
Rcv Octets                     58368
Rcv Rate                         N/A
Trs Packets                      152
Trs Broad                        N/A
Trs Multi                        N/A
Trs Octets                     85424
Trs Rate                         N/A
Collision                        N/A
Drop                             N/A
Discard                          N/A
Error Packets                    N/A
        CRC Align Error                      N/A
        Undersize Packet                     N/A
        Oversize Packet                      N/A
PureFlow(A)>
```

The displayed items and their meanings are as follows:

- `Rcv Packets`
  Shows the number of received packets.

- `Rcv Broad`
  Shows the number of received broadcast packets.

- `Rcv Multi`
  Shows the number of received multicast packets.

- `Rcv Octets`
  Shows the number of octets in the received packets.

- `Rcv Rate`
  Displays the average rate (kbits/s) of received packets in 10-second units.

- `Trs Packets`
  Shows the number of transmitted packets.

- `Trs Broad`
  Shows the number of transmitted broadcast packets.

- `Trs Multi`
  Shows the number of transmitted multicast packets.

- `Trs Octets`
  Shows the number of octets in the transmitted packets.

- `Trs Rate`
  Displays the average rate (kbits/s) of transmitted packets in 10-second units.

- `Collision`
  Shows the number of packet collisions detected by the Network port.

- `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`
  Displays the number of packets received in which the FCS for the byte length is normal and the packet count is greater than the default (according to the maximum packet length setting).
  `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.

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

`Error in getting <slot>/<port> statistics`

- The specified port is invalid.

`Invalid Argument`

- The specified port is out of range.

clear counter

[Format]

```
clear counter [<slot/port> | system]
```

[Description]

If no argument is specified, the counter values of all Network ports and the system interface are cleared.

If an argument is specified, the counter value of the specified Network port or the system interface is cleared.

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 2.

[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 the buffer information related to the specified scenario.
This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show scenario info name "/port1/Tokyo"
Scenario 1:"/port1/Tokyo"
   Rate Control Unit:
      Create Mode             :Aggregate
      Class                   :2
      Min Bandwidth           :-----
      Peak Bandwidth          :3M[bps]
   Default Queue:
      Class                   :8
      Buf Size                :512k[Bytes]

   *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]

Individual Queue Information
   Queue Num                  :59

PureFlow(A)>
```

The displayed items and their meanings are as follows:

- `Scenario`
  Shows the scenario ID and name. For the port scenario ID, 40001 is shown for port 1, and 40002 is shown for port 2.

- `Rate Control Unit`
  Shows the settings of bandwidth control.

- `Default Queue`
  Shows the default queue settings.

- `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`
	Current buffer usage and use rate
	`Peak Hold`
	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.

- `Individual Queue Information`
  Displays information of individual queues. This is available only for scenarios in the individual queue mode.

Type	Description
`Queue Num`	Displays the number of individual queues generated for the scenario.

[Arguments]

`scenario_name`
Specify absolute path of the scenario name.

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
Command making ambiguity
Usage : show scenario info name <scenario_name>
Usage : show scenario info summary
```

- There is a missing 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 a list of information related to a scenario.
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]
----------- ----------------- ----------------- -----------------
/port1
  FlowNum :                 0
  Buffer  :            0(  0%)                          0(  0%)
  Rate    :                 0               0
/port1/tokyo
  FlowNum :                 0
  Buffer  :            0(  0%)                          0(  0%)
  Rate    :                 0               0
  IndQue  :                 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.

[Arguments]

None

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

clear scenario peakhold buffer

[Format]

```
clear scenario peakhold buffer name <scenario_name>
clear scenario peakhold buffer all
```

[Description]

This command clears the maximum buffer usage related to the specified scenario.
If `all` is specified, it clears the maximum buffer usage related to all scenarios.
This command can be executed 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 scenario name.

`all`

Clears the maximum buffer usage of all scenarios.

[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.

```
An argument was missing
Usage : clear scenario peakhold buffer 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 counter

[Format]

```
show scenario counter name <scenario_name> [default_queue]
```

[Description]

This command displays the statistics related to the specified scenario.
The total amount including statistics under the specified scenario is displayed.
If `default_queue` is specified, statistics of the default queue of the specified scenario are displayed.
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             :Aggregate
      Class                   :2
      Min Bandwidth           :-----
      Peak Bandwidth          :3M[bps]
   Default Queue:
      Class                   :8
      Buf Size                :512k[Bytes]

   *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             :Aggregate
      Class                   :2
      Min Bandwidth           :-----
      Peak Bandwidth          :3M[bps]
   Default Queue:
      Class                   :8
      Buf Size                :512k[Bytes]

   *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 ID and name. For the port scenario ID, 40001 is shown for port 1, and 40002 is shown for port 2.

- `Rate Control Unit`
  Shows the settings of bandwidth control.

- `Default Queue`
  Shows the default queue settings.

- `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 scenario name.

`default_queue`
To display statistics of the default queue of the specified scenario, specify `default_queue`.

[Errors]

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

`An argument was missing`
`Usage : show scenario counter name <scenario_name>[default_queue]`
- 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 summary

[Format]

```
show scenario counter summary
```

[Description]

This command displays a list of statistics related to a scenario.
This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow(A)> show scenario counter summary
Scenario 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 specified scenario.
Specify `all` to clear the statistics related to the all scenarios.
This command can be executed 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 scenario name.

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
Command making ambiguity
Usage : show scenario counter name <scenario_name> [default_queue]
Usage : show scenario counter 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.

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.

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.

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.

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 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 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 a break 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
       cos             : 7
       inner-vid       : 20
       inner-cos       : 14
       Src Addr        : 192.168.10.10
       Dst Addr        : 192.168.20.20
       ToS             : 63
       Protocol        : UDP
       Src Port        : 100
       Dst Port        : 200
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
       cos              : 7
       inner-vid        : 20
       inner-cos        : 14
       Src Addr         : 192.168.10.10
       Dst Addr         : 192.168.20.20
       ToS              : 63
       Protocol         : UDP
       Src Port         : 100
       Dst Port         : 200
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
       cos              : 7
       inner-vid        : 20
       inner-cos        : 14
       Src Addr         : 192.168.10.10
       Dst Addr         : 192.168.20.20
       ToS              : 63
       Protocol         : UDP
       Src Port         : 100
       Dst Port         : 200
PureFlow(A)>
```

The displayed items and their meanings are as follows: The displayed fields vary depending on the flow identification mode specified by the `set filter mode` command.

- `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, inner-vid`
  Shows the VLAN ID. For frames without VLAN Tag, `none` is shown.

- `cos, inner-cos`
  Shows the CoS value. For frames without VLAN Tag, no CoS value is shown.

- `Src Addr`
  Shows the Source IP address.

- `Dst Addr`
  Shows the Destination IP address.

- `ToS`
  Shows the ToS or Traffic Class value.

- `Protocol`
  Shows the protocol number.

- `Src Port`
  Shows the Source Port number.

- `Dst Port`
  Shows the Destination Port number.

[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.

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
An argument was missing
Usage : show flow scenario <scenario_name> all
        show flow scenario <scenario_name> best_effort
        show flow scenario <scenario_name> match ipv4
        [sip <src_IP_address>] [dip <dst_IP_address>]
        [proto <protocol>] [sport <sport>] [dport <dport>]
        [best_effort]
        show flow scenario <scenario_name> match ipv6
        [sip <src_IP_address>] [dip <dst_IP_address>]
        [proto <protocol>] [sport <sport>] [dport <dport>]
        [best_effort]
```

- There is a missing argument.

```
Specified scenario name is invalid.
```

- The specified scenario name is invalid.

```
Specified scenario name is not used.
```

- The specified scenario does not exist.

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

- The specified Source IP address is invalid.

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

- The specified Destination IP address is invalid.

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

- The specified Source IPv6 address is invalid.

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

- The specified Destination IPv6 address is invalid.

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

- 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                 :      40002        2        40000 [entry]
  Individual Que         :     300000        0       300000 [entry]
Filter                   :      40000        0        40000 [entry]
Rulelist                 :       1024        0         1024 [group]
Total Rulelist Entry     :      10000        0        10000 [entry]
Flow                     :    1280000        0      1280000 [flow]
Top Counter
  Target Scenario        :        200        0          200 [entry]
  Application Port       :        256        0          256 [entry]
  Monitoring Flow        :     100000        0       100000 [entry]
System Buffer
  System Packet  Buffer : 2013265920    46080   2013219840 [byte]
  Context Pool           :     202296        0       202296 [block]
  Event  Message Pool    :      16384       20        16364 [block]
  Output Command Pool    :       1024       52          972 [block]
  Output Packet  Buffer :      98304        0        98304 [byte]
```

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.

- `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.

- `Flow`
  Shows the total number, used number, and remaining number of flows.

- `Top Counter`
  Shows the total number, used number, and remaining number of top counter resources.

- `Target Scenario`
  Shows the total number, used number, and remaining number of scenarios to be measured by the top counter.

- `Application Port`
  Shows the total number, used number, and remaining number of application ports of the top counter.

- `Monitoring Flow`
  Shows the total number, used number, and remaining number of flows being measured by the top counter.

- `System Buffer`
  Shows the total number, used number, and remaining number of the system buffers.

Type	Description
`System Packet Buffer`	A packet buffer used by the system
`Context Pool`	A temporary area for packets in progress
`Event Message Pool`	A message block for the bandwidth control engine
`Output Command Pool`	A packet output command area
`Output Packet Buffer`	A packet buffer for In-band transmitted packets

[Arguments]

None

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

2.2.6 Operation management-related commands

set ip system

[Format]

```
set ip system <IP_address> netmask <netmask> [{up | down}]
```

[Description]

This command sets the IPv4 address and subnet mask or IPv6 Address and prefix length of the IP network interface of the system (system interface).
Executing this command may disconnect Telnet or other 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.
Specify the prefix length when setting the IPv6 address.
Valid values of prefix length are from 0 to 128.

`[up | down]`
Specify up (active) or down (inactive) to set the status of the system interface.
If not specified, the status 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 `::192.168.1.1`
Prefix length `64`
State `up`

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
Command making ambiguity
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 Telnet or other 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 destination gateway IPv4 or IPv6 address.

[Default Value]

None

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
Command making ambiguity
Usage : set ip system <IP_address> netmask <netmask> [{up | down}]
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). It works for both IPv4 and IPv6.
Executing this command may disconnect Telnet or other 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

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

set ip system port

[Format]

```
set ip system port ethernet
set ip system port network in {<slot/port> | all}
                           vid {<VID> | none} [tpid <tpid>]
                           inner-vid {<VID> | none} [inner-tpid <tpid>]
```

[Description]

This command sets the communication port of the IP network interface of the system (system interface).
Communication with the system interface can be performed via the Ethernet port or a Network port.
When communication is performed via the Ethernet port, communication of packets without VLAN Tag can be performed.
When the communication is performed via a Network port, communication of packets with/without VLAN Tag and with duplex VLAN Tag can be performed. For packets with VLAN Tag or duplex VLAN Tag, you can specify the Tag Protocol ID of the VLAN Tag added to packets transmitted by this device. If the Tag Protocol ID is omitted, 0x8100 is used for both VLAN Tag and duplex VLAN Tag. For the Tag Protocol ID for received packets, 0x8100 and 0x88a8 are recognized as VLAN Tag.
Executing this command may disconnect Telnet or other 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 port ethernet
PureFlow(A)>
PureFlow(A)> set ip system port network in 1/1 vid 10 tpid 0x88a8 inner-vid 100
PureFlow(A)>
```

[Arguments]

`ethernet | network`
Specify the communication port for communication with the system interface.
Specify `ethernet` to use the Ethernet port, or `network` to use a Network port.

`in {<slot/port> | all}`
This parameter can be specified only when communication with the system interface is performed via a Network port.
Specify the slot location and port number of the Network port to be used for communication with the system interface (through the Network port).
If `<slot/port>` is specified, communication with the system interface can only be performed via the specified Network port. If `all` is specified, communication with the system interface can be performed via all Network ports.
Only 1 can be set as the slot location. Valid values for the port number are 1 and 2.

`vid {<VID> | none}`
This parameter can be specified only when communication with the system interface is performed via a Network port.
Specify the VLAN ID of the system interface (for communication via the Network port).
If `<VID>` is specified, packets are transmitted with VLAN Tag. If `none` is specified, packets are transmitted without VLAN Tag.
Valid values are from 0 to 4094.

[tpid <tpid>]
This parameter can be specified only when communication with the system interface is performed via a Network port and <VID> is specified by the vid parameter.
Specify a hexadecimal number for the Tag Protocol ID of the VLAN Tag added to the packets transmitted (via Network port) by the system interface.
Valid values are from 0x0000 to 0xFFFF.
If omitted, 0x8100 is used.

inner-vid {<VID> | none}
This parameter can be specified only when communication with the system interface is performed via a Network port.
Specify the inner VLAN ID of the system interface (for communication via the Network port).
If <VID> is specified, packets are transmitted with duplex VLAN Tag. <VID> can be specified only if <VID> is specified by the vid parameter.
If none is specified, packets are transmitted without duplex VLAN Tag.
Valid values are from 0 to 4094.

[inner-tpid <tpid>]
This parameter can be specified only when communication with the system interface is performed via a Network port and <VID> is specified by the inner-vid parameter.
Specify a hexadecimal number for the Tag Protocol ID of the inner VLAN Tag added to the packets transmitted (via Network port) by the system interface.
Valid values are from 0x0000 to 0xFFFF.
If omitted, 0x8100 is used.

[Default Value]

The default values are as follows:

Communication port ethernet

[Errors]

Invalid input at Marker

- There is an unnecessary argument.

```
Command making ambiguity
Usage : set ip system <IP_address> netmask <netmask> [{up | down}]
Usage : set ip system port ethernet
Usage : set ip system port network in {<slot/port> | all} vid {<VID> | none}
        [tpid <tpid>] inner-vid {<VID> | none} [inner-tpid <tpid>]
```

- There is a missing argument.

Specified input physical slot is invalid.

- The specified input slot number is invalid.

Specified input physical port is invalid.

- The specified input port number is invalid.

Specified vid is invalid. (Valid from 0 to 4094, none)

- The specified VLAN ID is invalid.

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

- The specified Tag Protocol ID is invalid.

TPID can set only when VID is specified.

- The tpid parameter can be specified only when VLAN ID is specified.

`Specified inner-vid is invalid. (Valid from 0 to 4094, none)`

- The specified inner VLAN ID is invalid.

`Inner-VID cannot set without VID.`

- The inner VLAN ID can be specified only when VLAN ID is specified.

`Specified Inner-TPID is invalid. (Valid from 0x0000 to 0xFFFF)`

- The specified inner Tag Protocol ID is invalid.

`Inner-TPID can set only when Inner-VID is specified.`

- The `inner-tpid` parameter can be specified only when inner VLAN ID is specified.

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 adds a filter (system interface filter) for packets sent to the IP network interface of the system (system interface).
A system interface filter provides settings to permit or discard incoming packets sent to the system interface.
Up to 256 system interface filters can be registered.

The behavior of packets that do not match the filter is the same as when `permit` is specified.

Note:
A ToS value can be specified but filtering based on ToS values is not supported. Commands with tos specified can be accepted but not applied to the operation.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> add ip system filter 1 sip 192.168.0.0/255.255.0.0 permit
PureFlow(A)> add ip system filter 2 sip 2001:DB8::1/32 permit
PureFlow(A)> add ip system filter 10 sip 192.168.48.0/255.255.255.0
             proto udp sport 10-20 deny
PureFlow(A)> add ip system filter 11 sip 2001:DB8::/32
             proto udp sport 10-20 deny
```

(When the ToS value is specified)

```
PureFlow(A)> add ip system filter 1 sip 192.168.0.0/255.255.0.0 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.

delete ip system filter

[Format]

```
delete ip system filter all
delete ip system filter <filter_idx>
```

[Description]

This command deletes a system interface filter.
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.

[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 number of the Filter does not exist.
```

- The specified filter does not exist.

show ip system

[Format]

```
show ip system
```

[Description]

This command displays information on the IP network interface of the system (system interface) and the system interface filter.
This command can be executed in the Normal and Administrator modes.

[Display]

(When the Ethernet port is used)

```
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>
```

(When Network port 1/1 is used)

```
PureFlow> show ip system
Status          : Up
IP Address      : 10.1.1.1
Netmask         : 255.255.255.0
Broadcast       : 10.1.1.255
Default Gateway : 10.1.1.100
IPv6 Address    : 2001:DB8::1
Prefix          : 32
Default Gateway : 2001:DB8::FE
Port            : Network (1/1)
VID             : 10
TPID            : 0x8100
Inner-VID       : 100
Inner-TPID      : 0x8100


Number of system filter entries:  2
Index : 1
   Action     : Permit
   Filter Rule:
      Sip              :210.10.0.0/255.255.0.0
      Dip              :192.168.0.0/255.255.0.0
Index : 2
   Action     : Deny
   Filter Rule:
      Sip              :210.10.10.0/255.255.255.0
      Proto            :tcp
      Sport            :100-200
      Dport            :3000
Number of system filter entries:  2

PureFlow>
```

(When all Network ports are used)

```
PureFlow> show ip system
Status          : Up
IP Address      : 20.1.1.1
Netmask         : 255.255.255.0
Broadcast       : 20.1.1.255
Default Gateway : 20.1.1.100
IPv6 Address    : 2001:DB8::1
Prefix          : 32
Default Gateway : 2001:DB8::FE
Port            : Network (all)
VID             : none
TPID            : ----
Inner-VID       : none
Inner-TPID      : ----

Number of system filter entries:  2
Index : 1
   Action     : Permit
   Filter Rule:
      Sip              :210.10.0.0/255.255.0.0
      Dip              :192.168.0.0/255.255.0.0
Index : 2
   Action     : Deny
   Filter Rule:
      Sip              :210.10.10.0/255.255.255.0
      Proto            :tcp
      Sport            :100-200
      Dport            :3000
Number of system filter entries:  2

PureFlow>
```

The displayed items and their meanings are as follows:

- Status

  Shows the state of the system interface using one of the following character strings:

Up	The system interface is active.
Down	The system interface is inactive.

- IP Address

  Shows the IPv4 address of the system interface.

- Netmask

  Shows the subnet mask of the system interface. This is shown only for the IPv4 interface.

- Broadcast

  Shows the broadcast IPv4 address. This parameter is automatically determined based on the IPv4 address and subnet mask. It is shown only for the IPv4 interface.

- IPv6 Address

  Shows the IPv6 address of the system interface.

  If high-order 96 bit are all 0, low-order 32 bit shows the IPv4 address as below.

  ```
  IPv6 Address    : ::192.168.1.1
  ```

- Prefix

  Indicates the prefix length of the IPv6 address. This is shown only for the IPv6 interface.

- Default Gateway

  This is the IP address of the default gateway of the system interface.

- Port

  Shows the communication port for communicating with the system interface using the following character strings:

Ethernet	Via Ethernet port
Network	Via Network port It also displays the slot location and number of the port that is used to communicate with the system interface (via the Network port). If all Network ports are used for communication, `all` is shown.

- VID

  Displays the VLAN ID of the system interface (for communication via the Network port). When packets are transmitted without VLAN Tag, `none` is shown. When communication with the system interface is performed via the Ethernet port, this is not shown.

- TPID

  Displays the Tag Protocol ID of the VLAN Tag transmitted by the system (via Network port). When packets are transmitted without VLAN Tag, `----` is shown. When communication with the system interface is performed via the Ethernet port, this is not shown.

- `Inner-VID`

  Displays the inner VLAN ID of the system interface (for communication via the Network port). When packets are transmitted without duplex VLAN Tag, `none` is shown. When communication with the system interface is performed via the Ethernet port, this is not shown.

- `Inner-TPID`

  Displays the Tag Protocol ID of the inner VLAN Tag transmitted by the system (via Network port). When packets are transmitted without duplex VLAN Tag, `----` is shown. When communication with the system interface is performed via the Ethernet port, this is not shown.

- `Number of system filter entries`

  Displays the total number of set system interface filters.

- `Index`

  Shows the system interface filter index.

- `Action`

  Displays action of the filter.

  `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.

[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), `System` is shown.

- `[PID]`

  Shows the PID for which the system log information is recorded.

- `Messages`

  Shows the contents of the system log information message.

[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 : 2005 Jan 25 10:02:50 AM
--------------------------------------------------------------------------------
Pri Date        Time      Message
--------------------------------------------------------------------------------
133 2015 Jan 25 10:02:54 AM  Anritsu PureFlow NF7600-S001A Software Version 1.1.1
150 2015 Jan 25 10:02:54 AM  Port 1/1 changed Up from Down.
150 2015 Jan 25 10:02:54 AM  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.

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`
Enables system log output to a host.

`disable`
Disables system log output to a host.

[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.

add syslog host

[Format]

```
add syslog host <IP_address> [<udp_port>]
```

[Description]

This command adds the IP address and UDP port number of the destination host for system log output.
If the udp_port argument is not specified, 514 is used as the UDP port number.
Up to 16 output destination hosts can be set.
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.

[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]

This command cancels the destination host for system log output that has the specified IP address.
If `all` is specified, it cancels all destination hosts for system log output.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> del syslog host 192.168.1.1
PureFlow(A)>
```

[Arguments]

`IP_address`

Specify the IP address of the destination host for system log output that you want to delete.

`all`

Deletes all the registered destination hosts for system log output.

[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.

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.

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`

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.
If `ccpu` is specified, the facility of the system logs generated by the CCPU (control system) is set.
If `fcpu` is specified, the facility of the system logs generated by the FCPU (forwarding system) is set.
This setting applies both to logs sent to the syslog host and the system logs recorded internally in the system.

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.

This command can be executed only in Administrator mode.

[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`

Specify the system for which you want to set the facility of the system logs.

`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.

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
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 `+0` [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.

`system busy: another conflicting command is in progress`

- Media access conflicts with other commands. Try again after completing the other commands.

List of time zones

```
UTC + 2:00 PM
UTC + 1:00 PM
UTC + 12:45 PM
UTC + 12:00 PM
UTC + 11:30 AM
UTC + 11:00 AM
UTC + 10:30 AM
UTC + 10:00 AM
UTC + 9:30 AM
UTC + 9:00 AM
UTC + 8:45 AM
UTC + 8:00 AM
UTC + 7:00 AM
UTC + 6:30 AM
UTC + 6:00 AM
UTC + 5:45 AM
UTC + 5:30 AM
UTC + 5:00 AM
UTC + 4:30 AM
UTC + 4:00 AM
UTC + 3:30 AM
UTC + 3:00 AM
UTC + 2:00 AM
UTC + 1:00 AM
UTC + 12:00 AM
UTC - 1:00 AM
UTC - 2:00 AM
UTC - 3:00 AM
UTC - 3:30 AM
UTC - 4:00 AM
UTC - 4:30 AM
UTC - 5:00 AM
UTC - 6:00 AM
UTC - 7:00 AM
UTC - 8:00 AM
UTC - 9:00 AM
UTC - 9:30 AM
UTC - 10:00 AM
UTC - 11:00 AM
UTC - 12:00 PM
```

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.

`system busy: another conflicting command is in progress`

- Media access conflicts with other commands. Try again after completing the other commands.

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

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
system busy: another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 2 2014(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.

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 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`

Enables and disables SNTP time synchronization.

[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 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.

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.

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.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> sync sntp
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.

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.

```
Password string length is valid from 0 to 16
```

- The new password is invalid.

```
Retyped Password is in-correct
```

- The confirmation password is incorrect.

```
writing of Password failed
```

- Failed to write the password.

```
system busy: another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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.

`Retyped Password is too long`

- The confirmation password is invalid.

`writing of Password failed`

- Failed to write the password.

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`

Set the pager function of the current CLI session.
If not specified,set the pager function for all of the CLI session.

[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}
```

- There is a missing argument.

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                         Login      Dec 14   2014  12:59:50
*   2 Telnet                         Admin      Dec 14   2014  14:17:07
    3 SSH      192.168.37.185 : 2279 Admin      Dec 14   2014  14:31:44
    4 SSH      192.168.37.185 : 2280 Normal     Dec 14   2014  14:31:55
    5 Telnet                         Admin      Dec 14   2014  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`
  Shows the session number of the connected device.

- `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.

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 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 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.

MAC Address                              : 00-00-91-12-34-56

Chassis Model Name                       : NF7603A
Chassis Serial Number                    : 2600010003

Control Module Version                   : 01A
Shaper Module Version                    : 00A
Bypass Module Version                    : 00A
Software Version                         : 1.1.1
Software License                         : NF7600-L601A (Traffic Shaping 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                              : 4000[rpm]
Power Supply Unit 1
  Operation Status                       : not present
  Fan Speed                              : 0[rpm]
FAN Unit 0
  Operation Status                       : operational
  Fan Speed                              : 5000[rpm]
FAN Unit 1
  Operation Status                       : operational
  Fan Speed                              : 6000[rpm]
PureFlow>
```

The displayed items and their meanings are as follows:

- MAC Address

  Displays the MAC address of the system.

- Chassis Model Name

  Shows the model name of the main unit.

- Chassis Serial Number

  Shows the serial No. of the main unit.

- 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.

- 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.

- 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].

- 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 in Administrator mode.

[Display]

```
PureFlow(A)> set autoreboot disable
PureFlow(A)>
```

[Arguments]

`enable`
Enables the auto reboot feature.

`disable`
Disables the auto reboot feature.

[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.

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.

set radius auth

[Format]

```
set radius auth {enable | disable}
```

[Description]

This command enables and disables login authentication by using a RADIUS authentication server. When this setting is enabled, the user name and login password set in a RADIUS authentication server are used for login authentication to log into this device.

This command can be executed only in Administrator mode.

Note:

The login authentication procedure varies depending on this setting as shown below:

Login authentication procedure when RADIUS authentication is enabled	Login authentication procedure when RADIUS authentication is disabled
(1) Login authentication is performed by using the user name and login password set in this system. (2) If login authentication fails, login authentication is performed by using the user name and login password set in the RADIUS server.	(1) Login authentication is performed by using the user name and login password set in this system.

Note:

If login authentication is performed by using a RADIUS authentication server, the login mode of the login user is changed in accordance with the service type specified by the reply packet from the RADIUS authentication server. If the service type is `LoginUser`, login is performed in Normal mode. If the service type is `Administrative`, login is performed in Administrator mode.

RADIUS service type	Login mode
`LoginUser`	Normal mode
`Administrative`	Administrator mode

[Display]

```
PureFlow(A)> set radius auth enable
PureFlow(A)>
```

[Arguments]

`{enable | disable}`

In the case of enabling and disabling authentication by the RADIUS authentication server, specify “enable” and “disable”, respectively.

[Default Value]

The default value is `disable`.

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
Command making ambiguity
Usage:  set radius auth {enable | disable}
```

- There is a missing argument.

set radius auth timeout

[Format]

```
set radius auth timeout <timeout>
```

[Description]

This command sets the timeout time for receiving the RADIUS authentication reply packet.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set radius auth timeout 5
PureFlow(A)>
```

[Arguments]

`timeout`

Set the reception timeout time in seconds. Valid values are from 1 to 30 [seconds].

[Default Value]

The default value is “5” [seconds].

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
An argument was missing
Usage : set radius auth timeout <timeout>
```

- There is a missing argument.

```
Specified timeout is invalid. (Valid from 1 to 30)
```

- The specified reception timeout time is out of range.

set radius auth retransmit

[Format]

```
set radius auth retransmit <retry>
```

[Description]

This command sets the number of times to resend an authentication request.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set radius auth retransmit 3
PureFlow(A)>
```

[Arguments]

`retry`

Specify the number of transmission retries. Valid values are from 0 to 10 [times].

[Default Value]

The default value is “3” [times].

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
An argument was missing
Usage : set radius auth retransmit <retry>
```

- There is a missing argument.

```
Specified retransmit is invalid. (Valid from 0 to 10)
```

- The specified number of transmission retries is out of range.

set radius auth method

[Format]

```
set radius  auth method {CHAP | PAP | default}
```

[Description]

This command sets the method for RADIUS authentication.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> set radius auth method CHAP
PureFlow(A)>
```

[Arguments]

`PAP`

Sets the authentication method to PAP.

`CHAP`

Sets the authentication method to CHAP.

`default`

Resets to the default value.

[Default Value]

The default value is "`CHAP`".

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
An argument was missing
Usage : set radius auth method {CHAP | PAP | default}
```

- There is a missing argument.

add radius auth server

[Format]

```
add radius auth server <IP_address> [port <port>] key <secret> [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 <secret>`
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 <secret> [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.

[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 login 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   0xMMMMMMMMM
        0002 :0x03 0x13   0xMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
        0003 :0x3C 0x12   0xMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
        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   0xMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM

=================================================================

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.

```
Command making ambiguity
Usage : test radius login chap <username> <password>
Usage : test radius login pap <username> <password>
```

- There is a missing 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.

`None server configured`

- No RADIUS authentication server is registered.

`Access rejected`

- The RADIUS authentication server rejected the authentication.

`None 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

[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

[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

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

set ssh

[Format]

```
set ssh {enable | disable}
```

[Description]

This command enables and disables SSH connections. If the value is changed to `disable`, new SSH connections are rejected.
This command can be executed 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.

`Command making ambiguity`
`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 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 with the console connected serially.

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

[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 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 Administrator mode.

[Display]

```
PureFlow(A)> show telnet
Telnet  : Enable
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]

This command sets the communication speed of the console port.
Like the `save config` command, this command saves the current operating parameters (running configuration) in the internal flash memory.
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.

`system busy: another conflicting command is in progress`

- Media access conflicts with other commands. Try again after completing the other commands.

show console baudrate

[Format]

```
show console baudrate
```

[Description]

This command displays the communication speed 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.

set webapi protocol

[Format]

```
set webapi protocol{normalhttp | httpsecure}
```

[Description]

This command sets the protocol for WenAPI.
Specify `normalhttp` to use HTTP(Hypertext Transfer Protocol) for WebAPI.
Specify `httpsecure` to use HTTPS(Hypertext Transfer Protocol Secure) for WebAPI.
When this command is executed, any running WebAPI requests result error or timeout. Since the execution results can not be determined at the request side, please do not run this command during changing configuration by WebAPI.

Note:

It is not possible to simultaneously use of HTTP and HTTPS.

This command can be executed only in Administrator mode.

[Display]

```
PureFlow (A)> set webapi protocol httpsecure
PureFlow (A)>
```

[Arguments]

`{normalhttp | httpsecure}`

Set the protocol to either HTTP or HTTPS.

[Default Value]

The default value is `normalhttp`.

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
An argument was missing
Usage : set webapi protocol {normalhttp | httpsecure}
```

- There is a missing argument.

show webapi

[Format]

```
show webapi
```

[Description]

This command displays the WebAPI setting information.
This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show webapi
Protocol : HTTP
PureFlow>
```

The displayed items and their meanings are as follows:

- `Protocol`
  Displays the protocol for WebAPI.

[Arguments]

None

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

2.2.7 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.

```
system busy: another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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.

```
system busy: another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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, WebAPI), a message indicating `save config is running for another session` is displayed when you run this command.
This command can be executed in the Normal and Administrator modes.

[Display]

(If the "save config" was running)

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

(If the "save config" was not running)

```
PureFlow> show save status
configuration save is not in progress.
PureFlow>
```

[Arguments]

None

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

show config running

[Format]

show config running [<slot/port> | <protocol> | all]

[Description]

This command displays the configuration currently running.
Only a non-default configuration is displayed.
If <slot/port> is specified, the configuration related to the specified port is displayed.
If <protocol> is specified, the configuration related to the specified protocol is displayed.
If all is specified, the default and non-default configurations are displayed.
This command can be executed in the Normal and Administrator modes.

[Display]

```
PureFlow> show config running
This command shows non-default configurations only
Use 'show config running all' to show both default and non-default configuration
s.
begin
!
#***** NON-DEFAULT CONFIGURATION *****
!
#Time:  Jun 2 2014(Mon) 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 maxpacketlen : 2048
!
#System Interface Configuration
set ip system 192.168.37.11 netmask 255.255.255.0 up
!
#Rulelist Configuration
!
#Scenario, Filter Configuration
#Current shaper performance : normal
add scenario "/port1/Tokyo" action aggregate peak_bw 5G
  add scenario "/port1/Tokyo/Shibuya" action aggregate class 1 min_bw 3M
bufsize 300k
  add scenario "/port1/Tokyo/Shinagawa" action aggregate class 1 min_bw 5M
peak_bw 8M bufsize 200k
#SNTP Configuration
!
#Pipe Configuration
!
#Bypass Configuration
 set bypass on
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 2.

`protocol`

The following protocols can be specified:

`snmp, filter, scenario`

`all`

Displays the default and non-default configurations.

[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 maxpacketlen : 2048
!
#System Interface Configuration
set ip system 192.168.37.11 netmask 255.255.255.0 up
!
#Rulelist Configuration
!
#Scenario, Filter Configuration
#Current shaper performance : normal
!
#SNTP Configuration
!
#Pipe Configuration
!
#Bypass Configuration

PureFlow>
```

[Arguments]

None

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
None Configuration is found
```

- No configuration is saved.

```
system busy: another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

2.2.8 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 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.

delete snmp community

[Format]

```
delete snmp community <community_string>
```

[Description]

This command deletes the specified 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.

[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.

`None 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 or changes 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.
The following characters cannot be used for <view_name> and <oid>:
" \ ?

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.

```
Specified view name is not valid
Below characters cannot be used
  " \ ?
```

- The format or character(s) of the MIB view name is invalid.

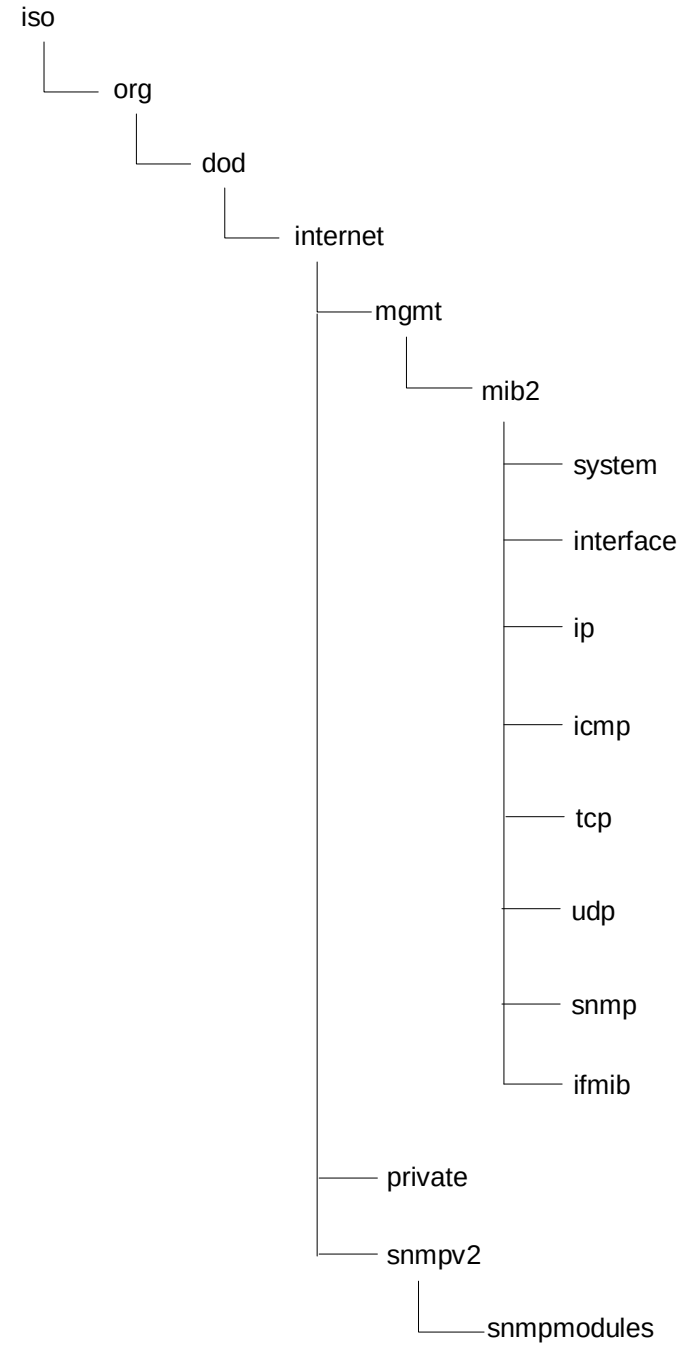
```
maximum number of view was exceeded
```

- The maximum registration limit for MIB view records is exceeded.

```
OID name specified is not supported on PureFlow
```

- The specified OID is not supported.

OID tree character strings list



delete snmp view

[Format]

```
delete snmp view <view_name> [<oid>]
```

[Description]

This command deletes or changes 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 (,).
The following characters cannot be used for <view_name> and <oid>:
" \ ?

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.

[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.

```
Invalid name
Below characters cannot be used
  " \ ?
```

- The format or character(s) of the MIB view name is invalid.

```
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.

None 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.

```
Invalid name
Below characters cannot be used
  " \ ?
```

- The format or character(s) of the group name or MIB view name is invalid.

```
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.

delete snmp group

[Format]

```
delete snmp group <group_name>
```

[Description]

This command deletes the specified group record.
The following characters cannot be used for <group_name>:
" \ ?

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.

[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.

```
Invalid name
Below characters cannot be used
  " \ ?
```

- The format or character(s) of the group name is invalid.

```
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       : None 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.

None 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 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.
The following characters cannot be used for <community_string> and <user_name>:
" \ ?

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 snmpv2
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.

`udp_port <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.

```
Invalid name
Below characters cannot be used
  " \ ?
```

- The format or character(s) of the community name or user name is invalid.

```
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.

delete snmp host

[Format]

```
delete snmp host <host_address>
```

[Description]

This command deletes the specified 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.

[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.

`invalid host_address`

- The specified IP address format or value is invalid.

`Specified host address is not configured`

- The specified host name is not used by any SNMP host record.

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 Normal mode.

[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               : None Authentication
Security Name          : NetManCom
UDP port               : 162
Notification Type      : all
-------------------------------------------------------------
PureFlow>
```

The displayed items and their meanings are as follows:

- Host Address

  Shows the IPv4 address of the host.

- Version

  Shows the version of the SNMP model.

v1	SNMPv1 model
v2c	SNMPv2c model
v3	SNMPv3 model

- Security

  Shows the security level of the SNMPv3 model.

No Authentication	Authentication is not performed
Authentication	Authentication is performed

- Security Name

  Shows the name of the community (for SNMPv1/SNMPv2c) or the name of the SNMPv3 user.

- UDP port

  Shows the UDP port number of the host to be used.

- `Notification Type`

  Specify the type of the notification to be sent to the host. One of the following character strings is used to indicate this type:

`all`	All notifications
`snmpv2`	SNMP basic notifications (cold start, warm start, link down, link up, and authentication failure)
`private`	Enterprise notification

[Arguments]

`host_address`

Specify the IPv4 address of the host.

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

`None hosts are configured`

- None host record is set.

`invalid host_address`

- The specified IP address format or value is invalid.

`Specified host address is not configured`

- The specified IP address is not used by any host record.

add snmp user

[Format]

```
add snmp user <user_name> <group_name>
[auth_type {auth | noauth}] [password <auth_password>]
```

[Description]

A user record maps an SNMPv3 user to an SNMPv3 group. 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.
The following characters cannot be used for <user_name>, <group_name> and <auth_password>:
" \ ?

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.

```
Invalid name
Below characters cannot be used
  " \ ?
```

・The format or character(s) of the user name or group name is invalid.

```
Specified password length is invalid. (Valid from 8 to 24)
```

・The length of the password is out of range.

```
Invalid characters in password
Below characters cannot be used
  " \ ?
```

・The format or character(s) of the password is invalid.

```
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 specified user record.
The following characters cannot be used for <user_name>:
" \ ?

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.

[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.

```
Invalid name
Below characters cannot be used
  " \ ?
```

- The format or character(s) of the user name is invalid.

```
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.

```
None 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.

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 | 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 }
```

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
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 bypasson | bypassoff} {enable | disable}
```

- There is a missing argument.

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 233 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.

```
Invalid name
Below characters cannot be used
  " \ ?
```

- The format or character(s) of the sysLocation string is invalid.

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 233 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.

```
Invalid name
Below characters cannot be used
  " \ ?
```

- The format or character(s) of the sysContact string is invalid.

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 233 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.

```
Invalid name
Below characters cannot be used
  " \ ?
```

- The format or character(s) of the sysName string is invalid.

show snmp system

[Format]

```
show snmp system
```

[Description]

This command displays the 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
  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 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.

2.2.9 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 and NF7604A.
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 including the detection of an equipment error, specify "on". To forcibly maintain the non-bypass state, 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 and NF7604A.
This command can be executed only 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 and NF7604A equipment.
If off 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.

2.2.10 Other commands

download tftp obj

[Format]

```
download tftp obj <IP_address> <file>
```

[Description]

This command downloads software 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 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 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 software is more than 32k 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 64 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.

```
file length is valid from 1 to 64
```

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

```
No valid header or file size exceeds flash
```

- The header information in the specified file 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.

```
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.

```
system busy: another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 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.

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 64 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 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.

```
system busy: another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 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
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`
Specify the name of the software 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 ftp obj <IP_address> <file>
```

- There is a missing argument.

```
Name length is valid from 1 to 128
```

- The length of the user name should be 1 to 128 characters.

```
Password length is valid from 1 to 128
```

- The length of the password should be 1 to 128 characters.

```
Invalid input character
```

- The character(s) of the user name is invalid.
- The character(s) of the password is invalid.

```
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 64
```

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

```
This file is not a program
```

- The specified file is not the software file.

```
No valid header or file size exceeds flash
```

- The header information on the specified file 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.

```
Unknown file type
```

- The object file type is unknown.

```
CRC error
```

- The CRC of the object file is invalid.

```
System busy: another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 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
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 64 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.

```
Name length is valid from 1 to 128
```

- The length of the user name should be 1 to 128 characters.

```
Password length is valid from 1 to 128
```

- The length of the password should be 1 to 128 characters.

```
Invalid input character
```

- The character(s) of the user name is invalid.
- The character(s) of the password is invalid.

```
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 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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

download cf obj

[Format]

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

[Description]

This command downloads 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 Traffic Shaping Edition(NF7600-W021E)". 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 media 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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

download cf patch

[Format]

```
download cf patch
```

[Description]

This command applies patch file of 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 Traffic Shaping Edition (NF7600-W021E)". 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 media is not mounted`

- An internal flash memory access error occurred.

`Card access error`

- A card access error occurred.

`System busy: Another conflicting command is in progress`

- Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)". 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 media 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.

```
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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

download usb obj

[Format]

```
download usb obj <file>
```

[Description]

This command downloads 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 Traffic Shaping Edition (NF7600-W021E)".
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 media 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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

download usb patch

[Format]

```
download usb patch
```

[Description]

This command applies patch file of 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 Traffic Shaping Edition (NF7600-W021E)".
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 media is not mounted`

- An internal flash memory access error occurred.

`USB memory access error`

- A card access error occurred.

`System busy: Another conflicting command is in progress`

- Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)".
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 media 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.

```
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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 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 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 64 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 64`

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

```
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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 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
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 64 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.

`Name length is valid from 1 to 128`

- The length of the user name should be 1 to 128 characters.

`Password length is valid from 1 to 128`

- The length of the password should be 1 to 128 characters.

```
Invalid input character
```

- The character(s) of the user name is invalid.
- The character(s) of the password is invalid.

```
Invalid IP_address
```

- The specified IP address format or value is invalid.

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

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

```
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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)". 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 memory 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.

```
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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)". 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 memory is not mounted`

- An internal flash card 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.

```
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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)".
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 memory 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.

```
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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)".
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 memory 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.

```
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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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.

ping

[Format]

```
ping  <IP_address>
```

[Description]

This command sends an ICMP ECHO_REQUEST packet to the specified host (IP_address).
This command can be executed in the Normal and Administrator modes.

[Display]

```
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>
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>
```

After command execution, a message that indicates the execution result appears.

- `1 packets transmitted, 1 received, 0% packet loss, time xxxms`

  The specified host responded. Packets can be transmitted and received.

- `1 packets transmitted, 0 received, 100% packet loss, time xxxms`

  The specified host does not respond.

[Arguments]

`IP_address`

Specify the IP address of the host to which the ICMP ECHO_REQUEST packet is to be sent.

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
An argument was missing
Usage : ping <IP_address>
```

- There is a missing argument.

`Invalid IP_address`

- The specified IP address format or value is invalid.

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>): No route to host.
```

・Cannot connect to the remote host of the specified IP address.

arp

[Format]

```
arp -a
arp <IP_address>
arp -d <IP_address>
```

[Description]

This command displays or deletes the contents of the ARP table.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> arp -a
IP address       MAC address          type
-----------------------------------------------------------
192.168.40.13         00-00-91-01-23-45
PureFlow(A)>

PureFlow(A)> arp -d 192.168.40.13
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

  Displays the type of the entry registered in the ARP table.

  Entry type does not display is the entry learned by ARP reply.

permanent	Static Entries
publish	Entries that respond to ARP requests

[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.

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
An argument was missing
Usage : arp -a
Usage : arp <IP_address>
Usage : arp -d <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.

delete ndp neighbor

[Format]

```
delete ndp neighbor <IP_address>
```

[Description]

This command deletes an entry of the NDP (Neighbor Discovery Protocol) cache table.
When the command is executed, the specified entry is deleted after the `failed` status is set.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> delete ndp neighbor 2001:db8::1
PureFlow(A)>
```

[Arguments]

`IP_address`

Specify the IPv6 address of the entry to delete.

[Errors]

`Invalid input at Marker`

- There is an unnecessary argument.

```
An argument was missing
Usage : delete ndp neighbor <IP_address>
```

- 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.

show ndp neighbor

[Format]

```
show ndp neighbor
```

[Description]

This command displays the contents of the NDP (Neighbor Discovery Protocol) cache table.
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>
```

The displayed items and their meanings are as follows:

- `IP address`

  Shows the IPv6 address of the NDP cache entry.

- `MAC address`

  Shows the MAC address of the NDP cache entry.

- `type`

  Shows the status of the NDP cache 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`

[Arguments]

None

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

?/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
PureFlow login:

PureFlow(A)> exit
PureFlow login:
```

[Arguments]

None

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

normal

[Format]

```
normal
```

[Description]

This command returns the system to Normal mode.
When the mode is switched to Normal, the prompt for Normal mode appears.
This command can be executed only in Administrator mode.

[Display]

```
PureFlow(A)> normal
PureFlow>
```

[Arguments]

None

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

admin

[Format]

```
admin
```

[Description]

This command switches the system to Administrator mode.
While a password is being entered, there is no echo back and the cursor does not move.
When the mode is switched to Administrator, the prompt for Administrator mode appears.
This command can be executed only in Normal mode.

[Display]

(When the wrong password was entered)

```
PureFlow> admin
Enter the Admin Password:
In-Correct Admin Password
```

(When the correct password was entered)

```
PureFlow> admin
Enter the Admin Password:
PureFlow(A)>
```

[Arguments]

None

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

```
In-Correct Admin Password
```

- The password is invalid.

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.

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 Traffic Shaping Edition (NF7600-W021E)". Using other CF cards will cause failure. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual Traffic Shaping Edition (NF7600-W021E)". 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 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.

Use the TFTP server which corresponds to the tsize options specified to RFC 2349, because the file size of software is more than 32k 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 64 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 64
```

- The length of the file name including the path on the TFTP server should be 1 to 64 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.

```
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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)". Using other CF cards will cause failure. For details about USB flash drives whose performance is confirmed by Anritsu Networks, see the "Operation Manual Traffic Shaping Edition (NF7600-W021E)". 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 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
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 64 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.

```
Name length is valid from 1 to 128
```
- The length of the user name should be 1 to 128 characters.

```
Password length is valid from 1 to 128
```
- The length of the password should be 1 to 128 characters.

```
Invalid input character
```
- The character(s) of the user name is invalid.
- The character(s) of the password is invalid.

```
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 memory 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 64
```
- The length of the file name including the path on the FTP server should be 1 to 64 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 TFTP server.

```
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.

```
System busy: Another conflicting command is in progress
```
- Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)". 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.

`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.

`System busy: Another conflicting command is in progress`

- Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)". 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 or path 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.

```
System busy: Another conflicting command is in progress
```

・Media access conflicts with other commands. Try again after completing the other commands.

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. If you want to create a new directory, use the PC to create a directory.
CF cards in FAT16/FAT32 format are supported. For details about the CF cards that can be used, see the "Operation Manual Traffic Shaping Edition (NF7600-W021E)". 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.

`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 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.

```
System busy: Another conflicting command is in progress
```

・Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)". 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 in Administrator mode.

[Display]

```
PureFlow(A)> operate cf list /
config.txt            1248
test.dat             45012
temp          <DIR>
????????.txt          8192
PureFlow(A)>
```

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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)".
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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other 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 Traffic Shaping Edition (NF7600-W021E)".
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 or path 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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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. Can not copy to the directory that does not exist. If you want to create a new directory, use the PC to create a directory.
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 Traffic Shaping Edition (NF7600-W021E)".
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.

`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.

```
System busy: Another conflicting command is in progress
```

・Media access conflicts with other commands. Try again after completing the other commands.

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 Traffic Shaping Edition (NF7600-W021E)".
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 in Administrator mode.

[Display]

```
PureFlow(A)> operate usb list /
config.txt            1248
test.dat             45012
temp          <DIR>
????????.txt          8192
PureFlow(A)>
```

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.

```
System busy: Another conflicting command is in progress
```

- Media access conflicts with other commands. Try again after completing the other commands.

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-L611A (Extended Bandwidth 2Gbps)

Updation done.

Enter update scenario command to change port bandwidth.
PureFlow(A)>
```

[Arguments]

None

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

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-L611A available  (2G Bandwidth License)
 License Key NF7600-L612A available  (4G Bandwidth License)
 License Key NF7600-L613A available  (7G Bandwidth License)
 License Key NF7600-L614A available  (10G Bandwidth License)
 License Key NF7600-L615A available  (2G to 4G Bandwidth License)
 License Key NF7600-L616A available  (4G to 7G Bandwidth License)
 License Key NF7600-L617A available  (7G to 10G Bandwidth License)
 License Key NF7600-L621A available  (10k Scenario License)
 License Key NF7600-L622A available  (40k Scenario License)
 License Key NF7600-L623A available  (10k to 40k Scenario License)
 License Key NF7600-L601A available  (Traffic Shaping Software License)
PureFlow(A)>
```

[Arguments]

None

[Errors]

```
Invalid input at Marker
```

- There is an unnecessary argument.

(Blank page)