

1 SEM Commands

Command	Function
action cli	Configure a policy by running a specified command line.
action counter	Configure an action for a policy by operating a specified SEM naming counter.
action exit	Configure an action for a policy by terminating a policy script and exiting the current status.
action reload	Configure an action for a policy by restarting a device.
action set	Configure an action for a policy by setting local variables.
action syslog	Configure an action of logging.
action wait	Configure an action for a policy by pausing a policy script.
commit	Submit policy configuration.
description	Configure the description of an SEM policy.
event tag counter	Configure a counter monitoring event.
event tag interface	Configure an interface monitoring event.
event tag syslog	Configure a log monitoring event.
event tag timer	Configure a timer monitoring event.
event tag track	Configure a track monitoring event.
list-config	Display the current policy configuration.
policy record	Enable the function of recording CLI command output and configure output size.
rollback	Roll back the current policy configuration.
show smart manager detector	Display detector information.

<u>show smart manager history events</u>	Display event history information.
<u>show smart manager policy all</u>	Display all policies and their submission information.
<u>show smart manager policy registered</u>	Display registered policies.
<u>show smart manager version</u>	Display SEM versions.
<u>smart manager applet</u>	Create an SEM policy.
<u>smart manager detector event-number</u>	Configure upper limits of SEM detector parameters.
<u>smart manager global-variant number</u>	Configure the maximum number of global variables of SEM.
<u>smart manager policy</u>	Configure upper limits of SEM policy parameters.
<u>smart manager record</u>	Configure upper limits of SEM policy instance parameters.
<u>smart manager schedulr</u>	Configure upper limits of SEM policy scheduler parameters.

1.1 action cli

Function

Run the **action cli** command to configure a policy by running a specified command line.

Run the **no** form of this command to remove this configuration.

No action is configured for a policy by default.

Syntax

```
action action-label cli command cli-string [ pattern pattern-string ]
```

```
no action action-label
```

Parameter Description

action-label: Label of an action.

command *cli-string*: Specifies the command content to be run.

pattern *pattern-string*: Specifies the interaction reply content of a command.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

- The *pattern-string* parameter separates multiple interaction replies with space. If a reply contains space, the double quotes (") are used for discrimination.
- Command output of a policy can be recorded to the file system of a device. The **policy record** command is run to enable the recording function and configure file size, and the **smart manager policy record clean** command is run to clear command output records. For more information, see [policy record](#).

Examples

The following example runs the **enable**, **clear arp-cache**, and **clear ip route *** commands for the none events in the clear_cache policy.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet clear_cache
Hostname(config-applet)# event tag monitor_cmd none
Hostname(config-applet)# action 00 cli command "enable"
Hostname(config-applet)# action 10 cli command "clear arp-cache"
Hostname(config-applet)# action 20 cli command "clear ip route *"
```

```
Hostname(config-applet)# commit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [policy record](#)
- [smart manager applet](#)
- [Ошибка: источник перекрёстной ссылки не найден](#)

1.2 action counter

Function

Run the **action counter** command to configure an action for a policy by operating a specified SEM naming counter.

Run the **no** form of this command to remove this configuration.

No action is configured for a policy by default.

Syntax

```
action action-label counter name counter-name value counter-value op { dec | inc | nop | set }
```

```
no action action-label
```

Parameter Description

action-label: Label of an action.

name *counter-name*: Specifies the name of a counter to be operated.

value *counter-value*: Specifies a value used by an operation. The value range is from -2147483648 to 2147483647.

op { **dec** | **inc** | **nop** | **set** }: Specifies a method used by an operation. **dec** indicates a decrement of the counter value based on the value of **value** *counter-value*. **inc** indicates an increment of the counter value based on the value of **value** *counter-value*. **nop** indicates the reading of the counter value, and **set** specifies the counter value.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures a log monitoring policy Test_1 and sets the action of the policy to increase the value of the Authenticate_Faile counter by 1 when the content "login faile" is detected in the log.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag monitor_log syslog pattern "login
faile"
Hostname(config-applet)# action 00 counter name Authenticate_Faile op
inc value 1
Hostname(config-applet)# commit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [smart manager applet](#)

1.3 action exit

Function

Run the **action exit** command to configure an action for a policy by terminating a policy script and exiting the current status.

Run the **no** form of this command to remove this configuration.

The value **1** is returned by default when a policy is run to the end.

Syntax

action *action-label* **exit** [*result*]

no action *action-label*

Parameter Description

action-label: Label of an action.

result: Returned value of **exit**. The value range is from 0 to 2147483647. The default value is **1**.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

In the synchronous mode, the operation that triggers a policy will wait for the policy to complete and determine whether to continue running the policy based on the returned value of the policy. If the returned value is 0, the policy stops running. If the returned value is another value, the policy continues running.

Examples

The following example configures a policy Test_1 to monitor the command lines in the synchronous mode and forbids user operation and displays a notification when the user enters "write memory".

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag monitor_cli cli pattern "write
memory" sync yes
Hostname(config-applet)# action 00 puts "can not do this"
Hostname(config-applet)# action 10 exit 0
Hostname(config-applet)# commit
```

Notifications

N/A

Common Errors

N/A

Related Commands

- [smart manager applet](#)

1.4 action reload

Function

Run the **action reload** command to configure an action for a policy by restarting a device.

Run the **no** form of this command to remove this configuration.

No action is configured for a policy by default.

Syntax

action *action-label* **reload**

no action *action-label*

Parameter Description

action-label: Label of an action.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures a policy Test_1 to restart a device when the total memory of the device is less than 20 MB.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag monitor_memory sysmon memory scope
system-free entry-op lt entry-val 20000
Hostname(config-applet)# action 00 reload
Hostname(config-applet)# commit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [smart manager applet](#)

1.5 action set

Function

Run the **action set** command to configure an action for a policy by setting local variables.

Run the **no** form of this command to remove this configuration.

No local variable of SEM is configured by default.

Syntax

```
action action-label set variable-name variable-value
```

```
no action action-label
```

Parameter Description

action-label: Label of an action.

variable-name: Name of a local variable.

variable-value: Value of a local variable.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

A configured local variable can have the same name as a global variable. If the configured local variable has the same name as a global variable, the local variable takes priority over the global variable when this variable name is used to visit a variable.

Examples

The following example configures a policy Test_1, sets variables in the policy of the none event type, and sends the variables to a log.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag none_event none
Hostname(config-applet)# action 00 set var_for_test "Test_1 running"
Hostname(config-applet)# action 10 syslog msg "$var_for_test"
Hostname(config-applet)# commit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [smart manager applet](#)

1.6 action syslog

Function

Run the **action syslog** command to configure an action of logging.

Run the **no** form of this command to remove this configuration.

No action is configured for a policy by default.

Syntax

action *action-label* **syslog** [**facility** *mnemonics*] **msg** *syslog-message* [**priority** *priority-level*]

no action *action-label* **syslog**

Parameter Description

action-label: Label of an action.

facility *mnemonics*: Specifies the mnemonic of a log.

msg *syslog-message*: Specifies log content.

priority *priority-level*: Sets the priority of a log.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

The mnemonic of a log must consist of uppercase letters and underline, with a length of 4 to 32 characters. If the configured mnemonic exceeds the specified range, the **Action syslog** command fails.

Examples

The following example configures an action Test_2 for logging when the CPU usage of an entire device exceeds 95%.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_2
Hostname(config-applet)# event tag monitor_cpu sysmon cpu scope system
entry-op gt entry-val 95
Hostname(config-applet)# action 00 syslog msg "system busy !"
Hostname(config-applet)# commit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [smart manager applet](#)

1.7 action wait

Function

Run the **action wait** command to configure an action for a policy by pausing a policy script.

Run the **no** form of this command to remove this configuration.

No action is configured for a policy by default.

Syntax

```
action action-label wait wait-time
```

```
no action action-label wait
```

Parameter Description

action-label: Label of an action.

wait-time: Wait time, in seconds. The value range is from 1 to 180.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures a policy Test_1 by waiting for five seconds before running the **show arp** command.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag monitor_cli cli pattern "show arp"
sync yes
Hostname(config-applet)# action 00 cli command "enable"
Hostname(config-applet)# action 10 wait 5
Hostname(config-applet)# action 20 exit 1
Hostname(config-applet)# commit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [smart manager applet](#)

1.8 commit

Function

Run the **commit** command to submit policy configuration.

No policy configuration is submitted by default.

Syntax

```
commit
```

Parameter Description

N/A

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures a policy Test_1 and submits the policy.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag none-event none
Hostname(config-applet)# action 00 set var_for_test "Test_1 running"
Hostname(config-applet)# commit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [rollback](#)

1.9 description

Function

Run the **description** command to configure the description of an SEM policy.

Run the **no** form of this command to remove this configuration

No description is configured for an SEM policy by default.

Syntax

description *string*

no description

Parameter Description

string: Text used to describe an SEM policy by the user.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

Modification to policy description takes effect immediately without submission.

Examples

The following example configures the description of an SEM policy as "Description_For_SEM_Applet".

```
Hostname> enable
Hostname# configure terminal
Hostname(config-applet)# description Description_For_SEM_Applet
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [smart manager applet](#)

1.10 event tag counter

Function

Run the **event tag counter** command to configure a counter monitoring event.

Run the **no** form of this command to remove this configuration.

No counter monitoring event is configured by default.

Syntax

```
event tag event-name [ correlate { and | andnot | or } ] counter name counter-name entry-op  
operator entry-val entry-value exit-op operator exit-val exit-value
```

```
no event tag event-name
```

Parameter Description

event-name: Name of an event.

correlate { **and** | **andnot** | **or** }: Specifies the conditional relationship between the current event and the combination of all other events. **and** indicates a logical AND relation. **andnot** indicates a logical AND NOT relation. **or** indicates a logical OR relation.

name *counter-name*: Specifies the name of a monitored counter.

entry-op *operator*: Triggers a method used for comparison.

exit-op *operator*: Restores a comparison method.

operator indicates a method used for comparison. The value **eq** indicates equal. The value **ge** indicates greater than or equal to. The value **gt** indicates greater than. The value **le** indicates less than or equal to. The value **lt** indicates less than. The value **ne** indicates unequal to.

entry-val *entry-value*: Triggers a value used for comparison. The value range is from -2147483648 to 2147483647.

exit-val *exit-value*: Restore a value used for comparison. The value range is from -2147483648 to 2147483647.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

- This command is used to configure a naming counter for SEM monitoring. The **action counter** command is run to modify the value of the naming counter.
- The **exit-op** and **exit-val** parameters are used to suppress frequent triggering of events. When an event is triggered, it becomes ineffective. If the comparison between the value of the naming counter and the value of the combination of the **exit-op** and **exit-val** parameters complies with the comparison method, the event is restored to effective status and can be triggered again.
- **correlate andnot** indicates a logical AND NOT relationship. For example, x **andnot** y means compliance with x but noncompliance with y.

Examples

The following example configures a counter monitoring policy Test_1 to trigger logging when the value of Test_Counter is greater than or equal to 10 and sets Test_Counter to 0 so that monitoring is restored when the value of Test_Counter is greater than 5.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag monitor_counter counter name
Test_Counter entry-op ge entry-val 10 exit-op gt exit-val 5
```

```
Hostname(config-applet)# action 10 counter name Test_Counter op set
value 0
Hostname(config-applet)# commit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [action counter](#)
- [smart manager applet](#)

1.11 event tag interface

Function

Run the **event tag interface** command to configure an interface monitoring event.

Run the **no** form of this command to remove this configuration.

No interface monitoring event is configured by default.

Syntax

```
event tag event-name [ correlate { and | andnot | or } ] interface name interface-type interface-number parameter { link_down | link_up }
```

```
no event tag event-name
```

Parameter Description

event-name: Name of an event.

correlate { **and** | **andnot** | **or** }: Specifies the conditional relationship between the current event and the combination of all the preceding events. **and** indicates a logical AND relation. **andnot** indicates a logical AND NOT relation. **or** indicates a logical OR relation.

interface-type interface-number: Interface type and interface number of a monitoring interface.

parameter { **link_down** | **link_up** }: Specifies the status of a monitoring interface. **link_down** indicates a down interface and **link_up** indicates an up interface.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

correlate andnot indicates a logical AND NOT relation. For example, x **andnot** y means compliance with x but noncompliance with y.

Examples

The following example configures logging when the status of GigabitEthernet0/1 changes to up.

```
Hostname> enable
Hostname(config)# smart manager applet Test_1
Hostname(config)# event tag monitor_interface interface parameter
link_up name GigabitEthernet0/1
Hostname(config-applet)# action 00 syslog msg "$_interface_name up"
Hostname(config-applet)# commit
Hostname(config-applet)# exit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [smart manager applet](#)

1.12 event tag syslog

Function

Run the **event tag syslog** command to configure a log monitoring event.

Run the **no** form of this command to remove this configuration.

No log monitoring event is configured by default.

Syntax

```
event tag event-name [ correlate { and | andnot | or } ] syslog [ occurs num-occurrences ]
pattern regular-expression [ period period-value ] [ priority priority-level ] [ skip { no | yes } ]
no event tag event-name
```


Parameter Description

event-name: Name of an event.

correlate { **and** | **andnot** | **or** }: Specifies the conditional relationship between the current event and the combination of all configured events. **and** indicates a logical AND relation. **andnot** indicates a logical AND NOT relation. **or** indicates a logical OR relation.

occurs *num-occurrences*: Specifies the number of occurrences that trigger an event. The value range is from 1 to 2147483647. The default value is **1**.

pattern *regular-expression*: Specifies a string for pattern match of log content.

period *period-value*: Specifies the expiry time of **occurs** in a command. An **occurs** operation that lasts for more than *period-value* times out. When the value of **occurs** is 1, this parameter is invalid, in seconds. The value range is from 1 to 2147483647. The default value is **30**.

priority *priority-level*: Sets the priority of a matched log.

skip { **no** | **yes** }: Specifies whether to ignore syslog. If the value is set to **yes**, a matched log is ignored. The default value is **no**.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

- **correlate andnot** indicates a logical AND NOT relation. For example, x **andnot** y means compliance with x but noncompliance with y.
- To avoid event loop, logs sent by SEM, including logs suspended by the SEM scheduler and logs sent by Action Syslog, are ignored by the syslog detector without checking.
- Due to the limited space of a command line, the regular expression in the **pattern** parameter cannot include a question mark (?). To input, display and save configuration, use the ampersand and slash (&/) to replace the question mark (?) and use two ampersands (&&) to replace the ampersand (&). For example, a&/bc&&d represents a?bc&d.
- The **pattern** parameter can be used to add a sub-string of an event variable with the name *pattern_name* and the value *regex* in the (?<*pattern_name*>*regex*) format. The **pattern** parameter supports a maximum number of 16 sub-strings.

Examples

The following example configures a log monitoring event Test_1 to forcibly perform active/standby switchover of a device when "memory fail" is detected in the monitored log.

```
Hostname> enable
Hostname# configure terminal
```

```
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag monitor_log syslog pattern "memory
fail"
Hostname(config-applet)# action 00 switchover
Hostname(config-applet)# commit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [smart manager applet](#)

1.13 event tag timer

Function

Run the **event tag timer** command to configure a timer monitoring event.

Run the **no** form of this command to remove this configuration.

No timer monitoring event is configured by default.

Syntax

```
event tag event-name [ correlate { and | andnot | or } ] timer countdown time countdown-timer
```

```
no event tag event-name
```

Parameter Description

event-name: Name of an event.

correlate { **and** | **andnot** | **or** }: Specifies the conditional relationship between the current event and the combination of all the preceding events. **and** indicates a logical AND relation. **andnot** indicates a logical AND NOT relation. **or** indicates a logical OR relation.

countdown time *countdown-timer*: Configures a time point when events can be triggered. *time-value* indicates the duration in which events can be triggered, in seconds. The value range is from 1 to 2147483.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

- **correlate andnot** indicates a logical AND NOT relation. For example, x **andnot** y means compliance with x but noncompliance with y.

Examples

The following example configures a time point when an event Test_3 can be triggered: the duration in which the event can be triggered is 10 seconds.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_3
Hostname(config-applet)# event tag monitor_timer timer countdown time 10
Hostname(config-applet)# action 00 cli command "enable"
Hostname(config-applet)# action 10 cli command "clear arp-cache"
Hostname(config-applet)# commit
Hostname(config-applet)# exit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [smart manager applet](#)

1.14 event tag track

Function

Run the **event tag track** command to configure a track monitoring event.

Run the **no** form of this command to remove this configuration.

No track monitoring event is configured by default.

Syntax

```
event tag event-name [ correlate { and | andnot | or } ] track [ state { down | up } ] [ track-id ]
```

```
no event tag event-name
```

Parameter Description

event-name: Name of an event.

correlate { **and** | **andnot** | **or** }: Specifies the conditional relationship between the current event and the combination of all the preceding events. **and** indicates a logical AND relation. **andnot** indicates a logical AND NOT relation. **or** indicates a logical OR relation.

state { **down** | **up** }: Specifies the status of a tracked entity. If this parameter is ignored, a tracked entity in the up or down status can trigger an event.

track-id: ID of a tracked entity. If this variable is ignored, all tracked entities are monitored.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

- **correlate andnot** indicates a logical AND NOT relation. For example, x **andnot** y means compliance with x but noncompliance with y.
- Track-based events are categorized into the following types:
 - Monitoring the up or down status of a tracked object
 - Monitoring the up or down status of all tracked objects
 - Monitoring the up and down statuses of a tracked object
 - Monitoring the up and down statuses of all tracked objects
- Before a tracked object is monitored, this object must be configured in advance. Otherwise, users are notified of undetected object when SEM configures an event.

Examples

The following example configures an event Test_1 to print "track 1 up." when the status of tracked object 1 changes to up.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag track_1 track 1 state up
Hostname(config-applet)# action 00 syslog msg "track 1 up."
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [smart manager applet](#)

1.15 list-config

Function

Run the **list-config** command to display the current policy configuration.

Syntax

```
list-config
```

Parameter Description

N/A

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example displays the configuration of the Test_1 policy.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(sem-applet)# list-config

smart manager applet Test_1
  event tag monitor_time timer countdown time 2
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [commit](#)
- [rollback](#)

1.16 policy record

Function

Run the **policy record** command to enable the function of recording CLI command output and configure output size.

Run the **no** form of this command to remove this configuration.

The recording function is not enabled for CLI command action output by default.

Syntax

policy record [**per-instance** *record-size-per-policy*] [**per-policy** *record-size-per-policy*]

no policy record

Parameter Description

per-instance *record-size-per-policy*: Configures the size of CLI command output recorded each time a policy is triggered, in thousand bytes. The value range is from 1 to 50. The default value is **50**.

per-policy *record-size-per-policy*: Configures the total size of all CLI command output recorded when a policy is triggered, in thousand bytes. The value range is from 1 to 1024. The default value is **1000**.

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

- CLI command output is not recorded by default. After the **policy record** command is run, CLI command output will be recorded to the file system of a device. The output is recorded to the file `/sem_record/policy_name/yyyy-mm-dd_hh-mm-ss_mspolicytriggerid.txt`.
 - `/sem_record/` is the general directory of all CLI command output and located in the root directory of the file system.
 - `policy_name` indicates the name of the policy and resides in the `/sem_record/` directory. Each

policy corresponds to a separate directory.

- o yyyy-mm-dd_hh-mm-ss_mspolicytriggerid.txt indicates the file name. The file name consists of the recording time and the ID of the triggered policy.
- The **more** command is run to display recorded content.
- When the size of the CLI command output generated during policy running exceeds the configured value of the **per-instance record-size-per-policy** parameter, the CLI command output starts to override the file from the header of the file.
- When the total size of the CLI command output files generated during running of a specific policy exceeds the configured value of the **per-policy record-size-per-policy** parameter, the earliest files start to be cleared until the total size of the CLI command output files complies with the configured value of **per-policy record-size-per-policy** parameter.
- The **smart manager policy record clean** command is run to clear CLI command output files in the file system.

Examples

The following example configures a Test_1 policy and records the CLI action output of the **enable** and **show arp** commands.

```

Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag none-event none
Hostname(config-applet)# action 00 cli command "enable"
Hostname(config-applet)# action 10 cli command "show arp"
Hostname(config-applet)# policy record
Hostname(config-applet)# commit
Hostname(config-applet)# exit
Hostname(config)# exit
Hostname# more /sem_record/Test_1/2010-01-01_01-00-00_1001.txt
                SEM CLI RECORD FILE

SEM policy name: Test_1
SEM policy trigger id :1
SEM policy cli record time : Fri Jan 01 01:00:00 2010
=====
Hostname# enable
Hostname# show arp
Protocol  Address      Age(min)  Hardware      Type  Interface
Internet  6.6.6.6      21        0027.1994.e59b arpa  VLAN 1
Internet  6.6.6.1      --        00d0.f822.33b3 arpa  VLAN 1
Total number of ARP entries: 2
Hostname#

```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [action cli](#)
- [Ошибка: источник перекрёстной ссылки не найден](#)

1.17 rollback

Function

Run the **rollback** command to roll back the current policy configuration.

The policy rollback function is not enabled by default.

Syntax

```
rollback
```

Parameter Description

N/A

Command Modes

SEM configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example rolls back the configuration of the Test_1 policy.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_1
Hostname(config-applet)# event tag none-event none
Hostname(config-applet)# action 00 set var_for_test "Test_1 running"
Hostname(config-applet)# rollback
```



```
Hostname(config-applet)# exit
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [commit](#)

1.18 show smart manager detector

Function

Run the **show smart manager detector** command to display detector information.

Syntax

```
show smart manager detector [ all | detector-name ] [ statistics ]
```

Parameter Description

all: Displays all detector information.

detector-name: Specific detector information.

statistics: Displays statistics of a detector.

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays detector information.

```
Hostname> enable
Hostname# show smart manager detector all
No.  Name                Version
1    application          01.00
```

```

2  syslog          01.00
3  cli             01.00
4  counter         01.00
5  interface       01.00
6  sysmon          01.00
7  none            01.00
8  oir             01.00
9  snmp            01.00
10 snmp-notification 01.00
11 timer           01.00
12 snmp-object     01.00

```

Table 1-1Output Fields of the show smart manager detector all Command

Field	Description
No	Serial number displayed
Name	Detector name
Version	Detector version

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.19 show smart manager history events

Function

Run the **show smart manager history events** command to display event history information.

Syntax

```
show smart manager history events [ detailed ] [ maximum number ]
```

Parameter Description

detailed: Displays detailed information.

maximum number: Configures the maximum number of events displayed. The value range is from 1 to 50.

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays event history information.

```

Hostname> enable
Hostname# show smart manager history events detailed
No.   Job Id   Event Type      Time                               Policy name
1     927     timer           Thu Oct 21 13:59:54 2010      Test_1
      Class : default, Policy Type: applet
2     926     timer           Thu Oct 21 3:59:53 2010      Test_1
      Class : default, Policy Type: applet
3     925     timer           Thu Oct 21 13:59:52 2010      Test_1
      Class : default, Policy Type: applet
4     924     timer           Thu Oct 21 13:59:51 2010      Test_1
      Class : default, Policy Type: applet
5     923     timer           Thu Oct 21 13:59:50 2010      Test_1
      Class : default, Policy Type: applet

```

Table 1-1 Output Fields of the show smart manager history events detailed Command

Field	Description
No	Serial number displayed
Job Id	Instance ID of a policy
Event Type	Event type
Time	Time at which a policy instance is triggered
Policy name	Policy name
Class	Policy class
Policy Type	Policy type

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.20 show smart manager policy all

Function

Run the **show smart manager policy all** command to display all policies and their submission information.

Syntax

```
show smart manager policy all
```

Parameter Description

N/A

Command Modes

All modes except the user EXEC mode

Usage Guidelines

N/A

Default Level

15

Examples

The following example displays all policies and their submission information.

```
Hostname> enable
Hostname# show smart manager policy all
No.  Status      Policy Name
1    commit      Test_1
2    not commit   Test_2
```

Table 1-1 Output Fields of the show smart manager policy all Command

Field	Description
No.	Serial number displayed
Status	Policy submission information
Policy Name	Policy name

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.21 show smart manager policy registered

Function

Run the **show smart manager policy registered** command to display registered policies.

Syntax

```
show smart manager policy registered [ class class-options ] [ event-type event-name ] [ policy policy-name ] [ statistics ]
```

Parameter Description

class *class-options*: Selects a policy class.

event-type *event-name*: Specifies an event type of a policy.

policy *policy-name*: Specifies a policy name.

statistics: Displays statistics of a registered policy.

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays information of registered policies.

```

Hostname> enable
Hostname# show smart manager policy registered
No.  Name      Class  Type   Event Type      Time Registered
 1   Test_1    A      applet timer        Thu Oct 21 13:46:16 2010
event_1: timer: watchdog time 1
  action 00 syslog msg "Action_00"
  action 10 wait 360
  action 20 syslog msg "Action_20"

```

Table 1-1 Output Fields of the show smart manager policy registered Command

Field	Description
No.	Serial number displayed
Name	Policy name
Class	Policy class
Type	Policy type
Event Type	Type of the first event of a policy
Time Registered	Time at which a policy is registered

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.22 show smart manager version

Function

Run the **show smart manager version** command to display SEM versions.

Syntax

```
show smart manager version
```

Parameter Description

N/A

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays SEM versions.

```
Hostname> enable
Hostname# show smart manager version
Smart Event Manager Version 1.0
Event Detectors:
name                version
timer               01.00
counter             01.00
interface           01.00
syslog              01.00
track               01.00
```

Table 1-1Output Fields of the show smart manager version Command

Field	Description
name	Event name
version	Version No.

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.23 smart manager applet

Function

Run the **smart manager applet** command to create an SEM policy.

Run the **no** form of this command to remove this configuration.

No SEM policy is created by default.

Syntax

smart manager applet *applet-name*

no smart manager applet *applet-name*

Parameter Description

applet-name: Name of an SEM policy. A policy name must consist of digits, letters, and underline.

Command Modes

Global configuration mode

Default Level

15

Usage Guidelines

- A policy includes the following configurations:
 - One or more events
 - One or more actions
 - Description of the policy
 - Trigger control information of the policy
- The **smart manager applet** command is run to enter the SEM configuration mode. In this mode, users can complete the following operations:
 - Configure events of the policy.

Each event must be given a unique name based on the **tag** parameter. SEM arranges the events in the alphabetical order of the **tag** parameter.

- Configure actions of the policy.

Each action must be given a unique label as well. SEM arranges the actions in the alphabetical order of the *label* parameter. When the policy is triggered, the actions are taken in the alphabetical order of the *label*.
- Configure description of the policy.
- Configure trigger control parameters of the policy.
- Submit the policy configuration.
- Roll back the policy configuration.
- Display the current policy configuration.
- In the SEM configuration mode, users can use environmental variables in the actions of the policy. The variables are divided into two types:
 - Global variable
 - Local variable

The global variables can be defined by an event detector when an event occurs.

The local variables can be defined based on actions during policy running.

Note

- Each policy corresponds to a class. The default class is **default**. Multiple policies can belong to the same class. A class is used to allocate thread resources to policies in the class and specify priorities of the policies in the class.
 - Policy configuration cannot take effect immediately and must be submitted by running the **commit** command in the SEM configuration mode.
 - When the policy configuration is submitted, their validity is checked. If the checking fails, the policy configuration fails to be submitted. In this case, the policy is not registered.
 - If no event is configured for the policy, the policy cannot pass the validity check and the policy submission fails.
 - If no action is configured for the policy, the policy can pass the validity check. However, no action is taken when the policy is triggered. Therefore, a warning is given during the policy submission.
 - If users want to quit the changes to the policy configuration, run the **rollback** command to roll back the policy configuration.
 - When multiple events are configured for a policy, the events are automatically arranged in the alphabetical order of tags and the events are juxtaposed. Other events, except the first event, are used as additional conditions of the first event. Except the first event, the relationship of the current event with the combination of all preceding events is referred to as the relationship of other events. The juxtaposition of the first event is ignored, and the default value of the juxtaposition is **and**.
-

Examples

The following example creates a CLI based policy and names the policy Test_A.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager applet Test_A
Hostname(config-applet)#
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [Ошибка: источник перекрёстной ссылки не найден](#)

1.24 smart manager detector event-number

Function

Run the **smart manager detector event-number** command to configure upper limits of SEM detector parameters.

Run the **no** form of this command to remove this configuration.

By default, the maximum number of events configured for the counting detector, that of events for the interface detector, and that of events configured for the timer detector are 256, respectively.

Syntax

smart manager detector { **counter** | **interface** | **timer** | **track** } **event-number** *detector-number*

no smart manager detector { **counter** | **interface** | **timer** } **event-number**

Parameter Description

counter event-number *detector-number*: Configures the maximum number of events for a counter detector. The value range is from 1 to 256.

interface event-number *detector-number*: Configures the maximum number of events for an interface detector. The value range is from 1 to 256.

timer event-number *detector-number*: Configures the maximum number of events for a timer detector. The value range is from 1 to 256.

track event-number *detector-number*: Configures the maximum number of events for a track detector. It is not configured by default. The value range is from 1 to 128.

Command Modes

Global configuration mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example sets the maximum number of events for a timer detector to 128.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager detector timer event-number 128
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.25 smart manager global-variant number

Function

Run the **smart manager global-variant number** command to configure the maximum number of global variables of SEM.

Run the **no** form of this command to remove this configuration.

By default, the maximum number of global variables is **512**.

Syntax

smart manager global-variant number *global-variant-number*

no smart manager global-variant number

Parameter Description

global-variant-number: Maximum number of global variables. The value range is from 1 to 512.

Command Modes

Global configuration mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example sets the maximum number of global variables to 3.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager global-variant number 3
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.26 smart manager policy

Function

Run the **smart manager policy** command to configure upper limits of SEM policy parameters.

Run the **no** form of this command to remove this configuration.

By default, the maximum number of actions in a policy is 64; the maximum numbers of policy detectors and registered policies are 128, respectively; and the maximum numbers of configured policies and policy delayed triggers are 256, respectively.

Syntax

```
smart manager policy { action-number policy-number | config-number policy-number | event-  
number policy-number | register-number policy-number | trigger-delay-number policy-number }  
no smart manager policy { action-number | config-number | event-number | register-number  
| trigger-delay-number }
```

Parameter Description

action-number *policy-number*: Configures the maximum number of actions in a policy. The value range is from 1 to 64.

config-number *policy-number*: Configures the maximum number of policies. The value range is from 1 to 256.

event-number *policy-number*: Configures the maximum number of events that are detected by detectors. The value range is from 1 to 128.

register-number *policy-number*: Configures the maximum number of registered policies. The value range is from 1 to 128.

trigger-delay-number *policy-number*: Configures the maximum number of policy delayed triggers. The value range is from 1 to 256.

Command Modes

Global configuration mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example sets the maximum number of policy delayed triggers to 128.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager policy trigger-delay-number 128
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.27 smart manager record

Function

Run the **smart manager record** command to configure upper limits of SEM policy instance parameters.

Run the **no** form of this command to remove this configuration.

By default, the maximum number of policy instances is **50** and the maximum size of a policy file is **1024** KB.

Syntax

```
smart manager record { size-of-instance record-number | size-of-policy record-number }
```

```
no smart manager record { size-of-instance | size-of-policy }
```

Parameter Description

size-of-instance *record-number*: Configures the maximum number of policy instances. The value range is from 1 to 50.

size-of-policy *record-number*: Configures the maximum size of a policy file, in KB. The value range is from 1 to 1024.

Command Modes

Global configuration mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example sets the maximum number of policy instances to 20.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager record size-of-instance 20
```

The following example sets the maximum size of a policy file to 200.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# smart manager record size-of-policy 200
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.28 smart manager schedulr

Function

Run the **smart manager schedulr** command to configure upper limits of SEM policy scheduler parameters.

Run the **no** form of this command to remove this configuration.

By default, the maximum number of wait policies of the scheduler and the maximum number of policies run by the scheduler are **128**, respectively.

Syntax

```
smart manager schedulr { pending-number schedulr-number | running-number schedulr-number }  
no smart manager schedulr { pending-number | running-number }
```

Parameter Description

pending-number schedulr-number: Configures the maximum number of policies waiting in the queue of the scheduler. The value range is from 1 to 128.

running-number schedulr-number: Configures the maximum number of policies run by the scheduler. The value range is from 1 to 128.

Command Modes

Global configuration mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example sets the maximum number of policies waiting in the queue of the scheduler and the maximum number of policies run by the scheduler to 12, respectively.

```
Hostname> enable
```

```
Hostname# configure terminal
Hostname(config)# smart manager schedulr running-number 12
Hostname(config)# smart manager schedulr pending-number 12
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A