



APPENDIX **B**

Embedded Event Manager System Events and Configuration Examples

This appendix describes the Embedded Event Manager (EEM) system policies, events, and policy configuration examples.

This appendix includes the following sections:

- [EEM System Policies, page B-1](#)
- [EEM Events, page B-3](#)
- [EEM Policy Configuration Examples, page B-3](#)

EEM System Policies

Table B-1 lists the Embedded Event Manager (EEM) system policies.

Table B-1 EEM System Policies

Event	Description
__PortLoopback	Do CallHome, log error in Syslog/OBFL/Exception Log and disable further HM testing on affected ports after 20 consecutive failures of GOLD "PortLoopback" test
__RewriteEngineLoopback	Do CallHome, log error in Syslog/OBFL/Exception Log and disable further HM testing on affected ports after 20 consecutive failures of GOLD "RewriteEngine" test
__asic_register_check	Do CallHome, log error and disable further HM testing for that ASIC device/instance after 20 consecutive failures of GOLD "ASICRegisterCheck" test
__compact_flash	Do CallHome, log error and disable further HM testing after 20 consecutive failures of GOLD "CompactFlash" test
__crypto_device	Do CallHome and log error when GOLD "CryptoDevice" test fails
__eobc_port_loopback	Do CallHome and log error when GOLD "EOBCPortLoopback" test fails
__ethpm_debug_1	Action: none

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Table B-1 EEM System Policies (continued)

Event	Description
__ethpm_link_flap	Too many link flaps in a short interval. Action: Error Disable the port
__external_compact_flash	Do CallHome, log error and disable further HM testing after 20 consecutive failures of GOLD "ExternalCompactFlash" test
__lcm_module_failure	Power-cycle 2 times then power-down
__management_port_loopback	Do CallHome and log error when GOLD "ManagementPortLoopback" test fails
__nvram	Do CallHome, log error and disable further HM testing after 20 consecutive failures of GOLD "NVRAM" test
__pfm_fanabsent_all_systemfan	Shutdown if both fans (f1 & f2) are together absent for two minutes
__pfm_fanabsent_any_singlefan	Shutdown half-chassis if fan absent for three minutes
__pfm_fanbad_all_systemfan	Shutdown if both fans (f1 & f2) are together bad for two minutes
__pfm_fanbad_any_singlefan	Syslog when fan goes bad
__pfm_power_over_budget	Syslog warning for insufficient power over budget
__pfm_tempev_major	TempSensor Major Threshold. Action: Shutdown
__pfm_tempev_minor	TempSensor Minor Threshold. Action: Syslog.
__primary_bootrom	Do CallHome, log error and disable further HM testing after 20 consecutive failures of GOLD "PrimaryBootROM" test
__pwr_mgmt_bus	Do CallHome, log error and disable further HM testing for the module or spine-card after 20 consecutive failures of GOLD "PwrMgmtBus" test
__real_time_clock	Do CallHome, log error and disable further HM testing after 20 consecutive failures of GOLD "RealTimeClock" test
__secondary_bootrom	Do CallHome, log error and disable further HM testing after 20 consecutive failures of GOLD "SecondaryBootROM" test
__spine_control_bus	Do CallHome, log error and disable further HM testing for that module or spine-card after 20 consecutive failures of GOLD "SpineControlBus" test
__status_bus	Do CallHome, log error and disable further HM testing after 5 consecutive failures of GOLD "StatusBus" test
__standby_fabric_loopback	Do CallHome, log error in Syslog/OBFL/ ExceptionLog and disable further HM testing for that module after 10 consecutive failures
__system_mgmt_bus	Do Call Home, log error and disable further HM testing for that FAN/PS after 20 consecutive failures
__usb	Do Call Home and log error

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EEM Events

Table B-2 describes the EEM events you can use on the device.

Table B-2 EEM Events

EEM Event	Description
cli	CLI command is entered that matches a pattern with a wildcard.
counter	EEM counter reaches a specified value or range.
fanabsent	System fan is absent.
fanbad	System fan generates a fault.
gold	GOLD test failure condition is hit.
memory	Available system memory exceeds a threshold.
module-failure	Module failure is generated.
oir	Online insertion or removal occurs.
policy-default	Default parameters and thresholds are used for the events in the system policy you override.
poweroverbudget	Platform software detects a power budget condition.
snmp	SNMP object ID (OID) state changes.
storm-control	Platform software detects an Ethernet packet storm condition.
sysmgr	System manager generates an event.
temperature	Temperature level in the system exceeds a threshold.
track	Tracked object changes state.

EEM Policy Configuration Examples

This section includes the following topics:

- [Configuration Examples for CLI Events, page B-4](#)
- [Configuration Examples to Override \(Disable\) Major Thresholds, page B-5](#)
- [Configuration Examples to Override \(Disable\) Shutdown for Fan Removal, page B-8](#)
- [Configuration Examples to Create a Supplemental Policy, page B-10](#)
- [Configuration Examples for the Power Over-Budget Policy, page B-11](#)
- [Configuration Examples to Select Modules to Shut Down, page B-12](#)
- [Configuration Examples for the Online Insertion Removal Event, page B-13](#)
- [Configuration Example to Generate a User syslog, page B-13](#)
- [Configuration Examples for SNMP Notification, page B-13](#)
- [Configuration Example for Port Tracking, page B-14](#)

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Configuration Examples for CLI Events

This section includes the following examples of CLI event configuration:

- [Monitoring Interface Shutdown, page B-4](#)
- [Monitoring Module Powerdown, page B-4](#)
- [Adding a Trigger to Initiate a Rollback, page B-4](#)

Monitoring Interface Shutdown

This example shows how to monitor an interface shutdown:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# event manager applet monitorShutdown
switch(config-applet)#
switch(config-applet)# description "Monitors interface shutdown."
switch(config-applet)# event cli match "conf t; interface *; shutdown"
switch(config-applet)# action 1.0 cli show interface e 3/1
switch(config)# copy running-config startup-config
```



Note

Outputs of **show** commands entered as part of EEM policy are archived in the logflash as text files with the "eem_archive_" prefix. To view the archived output, use the **show file logflash:eem_archive_n** command.

Monitoring Module Powerdown

This example shows how to monitor a module powerdown:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# event manager applet monitorPoweroff
switch(config-applet)#
switch(config-applet)# description "Monitors module power down."
switch(config-applet)# event cli match "conf t; poweroff *"
switch(config-applet)# action 1.0 cli show module
switch(config)# copy running-config startup-config
```

Adding a Trigger to Initiate a Rollback

This example shows how to add a trigger to initiate a rollback:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)#
switch(config)# event manager applet rollbackTrigger
switch(config-applet)#
switch(config-applet)# description "Rollback trigger."
switch(config-applet)# event cli match "rollback *"
switch(config-applet)# action 1.0 cli copy running-config bootflash:last_config
switch(config)# copy running-config startup-config
```

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Configuration Examples to Override (Disable) Major Thresholds

This section includes the following topics:

- [Preventing a Shutdown When Reaching a Major Threshold, page B-5](#)
- [Disabling One Bad Sensor, page B-5](#)
- [Disabling Multiple Bad Sensors, page B-6](#)
- [Overriding \(Disabling\) an Entire Module, page B-6](#)
- [Overriding \(Disabling\) Multiple Modules and Sensors, page B-6](#)
- [Enabling One Sensor While Disabling All Remaining Sensors of All Modules, page B-7](#)
- [Enabling Multiple Sensors While Disabling All Remaining Sensors of All Modules, page B-7](#)
- [Enabling All Sensors of One Module While Disabling All Sensors of the Remaining Modules, page B-7](#)
- [Enabling a Combination of Sensors on Modules While Disabling All Sensors of the Remaining Modules, page B-8](#)

Preventing a Shutdown When Reaching a Major Threshold

This example shows how to prevent a shutdown caused by reaching a major threshold:

```
switch# config t
switch(config)# event manager applet myappletname override __pfm_tempev_major
switch(config)# end
```

This example shows how to revert to the default configuration:

```
switch# config t
switch(config)# no event manager applet myappletname override __pfm_tempev_major
switch(config)# end
```

Disabling One Bad Sensor

This example shows how to disable only sensor 3 on module 2 when sensor 3 is malfunctioning (all other sensors are unaffected):

```
switch# config t
switch(config)# event manager applet myappletname override __pfm_tempev_major
switch(config-applet)# event temperature module 2 sensor 3 threshold major
switch(config0aocket)# end
```

This example shows how to revert to the default configuration:

```
switch# config t
switch(config)# no event manager applet myappletname override __pfm_tempev_major
switch(config)# end
```

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Disabling Multiple Bad Sensors

This example shows how to disable sensors 5, 6, and 7 on module 2 when these sensors are malfunctioning (all other sensors are unaffected):

```
switch# config t
switch(config)# event manager applet myappletname override __pfm_tempev_major
switch(config-applet)# event temperature module 2 sensor 5 threshold major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myappletname override __pfm_tempev_major
switch(config-applet)# event temperature module 2 sensor 6 threshold major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myappletname override __pfm_tempev_major
switch(config-applet)# event temperature module 2 sensor 7 threshold major
switch(config-applet)# end
```

This example shows how to revert to the default configuration:

```
switch# config t
switch(config)# no event manager applet myappletname override __pfm_tempev_major
switch(config)# end
```

Overriding (Disabling) an Entire Module

This example shows how to disable module 2 when it is malfunctioning:

```
switch# config t
switch(config)# event manager applet myappletname override __pfm_tempev_major
switch(config-applet)# event temperature module 2 threshold major
switch(config-applet)# end
```

This example shows how to revert to the default configuration:

```
switch# config t
switch(config)# no event manager applet myappletname override __pfm_tempev_major
switch(config)# end
```

Overriding (Disabling) Multiple Modules and Sensors

This example shows how to disable sensors 3, 4, and 7 on module 2 and all sensors on module 3 when they are malfunctioning:

```
switch# config t
switch(config)# event manager applet myappletname override __pfm_tempev_major
switch(config-applet)# event temperature module 2 sensor 3 threshold major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myappletname override __pfm_tempev_major
switch(config-applet)# event temperature module 2 sensor 4 threshold major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myappletname override __pfm_tempev_major
switch(config-applet)# event temperature module 2 sensor 7 threshold major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myappletname override __pfm_tempev_major
switch(config-applet)# event temperature module 3 threshold major
switch(config-applet)# end
```

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This example shows how to revert to the default configuration:

```
switch# config t
switch(config)# no event manager applet myappletname override __pfm_tempev_major
switch(config)# end
```

Enabling One Sensor While Disabling All Remaining Sensors of All Modules

This example shows how to disable all sensors on all modules except sensor 4 on module 9:

```
switch# config t
switch(config)# event manager applet myapplet1 override __pfm_tempev_major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet2 override __pfm_tempev_major
switch(config-applet)# event temperature module 9 sensor 4 threshold major
switch(config-applet)# action 2 policy-default
switch(config-applet)# end
```

Enabling Multiple Sensors While Disabling All Remaining Sensors of All Modules

This example shows how to disable all sensors on all modules except sensors 4, 6, and 7 on module 9:

```
switch# config t
switch(config)# event manager applet myapplet1 override __pfm_tempev_major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet2 override __pfm_tempev_major
switch(config-applet)# event temperature module 9 sensor 4 threshold major
switch(config-applet)# action 2 policy-default
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet3 override __pfm_tempev_major
switch(config-applet)# event temperature module 9 sensor 6 threshold major
switch(config-applet)# action 3 policy-default
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet4 override __pfm_tempev_major
switch(config-applet)# event temperature module 9 sensor 7 threshold major
switch(config-applet)# action 4 policy-default
switch(config-applet)# end
```

Enabling All Sensors of One Module While Disabling All Sensors of the Remaining Modules

This example shows how to disable all sensors on all modules except all sensors on module 9:

```
switch# config t
switch(config)# event manager applet myapplet1 override __pfm_tempev_major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet2 override __pfm_tempev_major
switch(config-applet)# event temperature module 9 threshold major
switch(config-applet)# action 2 policy-default
switch(config-applet)# end
```

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Enabling a Combination of Sensors on Modules While Disabling All Sensors of the Remaining Modules

This example shows how to disable all sensors on all modules except sensors 3, 4, and 7 on module 2 and all sensors on modules 3 and 4:

```
switch# config t
switch(config)# event manager applet myapplet1 override __pfm_tempev_major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet2 override __pfm_tempev_major
switch(config-applet)# event temperature module 2 sensor 3 threshold major
switch(config-applet)# action 2 policy-default
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet3 override __pfm_tempev_major
switch(config-applet)# event temperature module 2 sensor 4 threshold major
switch(config-applet)# action 3 policy-default
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet4 override __pfm_tempev_major
switch(config-applet)# event temperature module 2 sensor 7 threshold major
switch(config-applet)# action 4 policy-default
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet5 override __pfm_tempev_major
switch(config-applet)# event temperature module 3 threshold major
switch(config-applet)# action 5 policy-default
switch(config-applet)# end
```

Configuration Examples to Override (Disable) Shutdown for Fan Removal

This section includes the following topics:

- [Overriding \(Disabling\) a Shutdown for Removal of One or More Fans, page B-8](#)
- [Overriding \(Disabling\) a Shutdown for Removal of a Specified Fan, page B-9](#)
- [Overriding \(Disabling\) a Shutdown for Removal of Multiple Specified Fans, page B-9](#)
- [Overriding \(Disabling\) a Shutdown for Removal of All Fans Except One, page B-9](#)
- [Overriding \(Disabling\) a Shutdown for Removal of Fans Except for a Specified Set of Fans, page B-10](#)
- [Overriding \(Disabling\) a Shutdown for Removal of All Fans Except One from a Set of Fans, page B-10](#)

Overriding (Disabling) a Shutdown for Removal of One or More Fans

This example shows how to disable a shutdown so that you can remove one or more (or all) fans:

```
switch# config t
switch(config)# event manager applet myappletname override __pfm_fanabsent_any_singlefan
switch(config-applet)# end
```

This example shows how to revert to the default configuration:

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```
switch# config t
switch(config)# no event manager applet myappletname override
__pfm_fanabsent_any_singlefan
switch(config-applet)# end
```

Overriding (Disabling) a Shutdown for Removal of a Specified Fan

This example shows how to disable a shutdown so that you can remove a specified fan (fan 3):

```
switch# config t
switch(config)# event manager applet myappletname override __pfm_fanabsent_any_singlefan
switch(config-applet)# event fanabsent fan 3 time 60
switch(config-applet)# end
```

This example shows how to revert to the default configuration:

```
switch# config t
switch(config) no event manager applet myappletname override __pfm_fanabsent_any_singlefan
switch(config)# end
```

Overriding (Disabling) a Shutdown for Removal of Multiple Specified Fans

This example shows how to disable a shutdown so that you can remove multiple specified fans (fans 2, 3, and 4):

```
switch# config t
switch(config)# event manager applet myapplet1 override __pfm_fanabsent_any_singlefan
switch(config-applet)# event fanabsent fan 2 time 60
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet2 override __pfm_fanabsent_any_singlefan
switch(config-applet)# event fanabsent fan 3 time 60
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet3 override __pfm_fanabsent_any_singlefan
switch(config-applet)# event fanabsent fan 4 time 60
switch(config-applet)# end
```

This example shows how to revert to the default configuration:

```
switch# config t
switch(config)# no event manager applet myappletname override
__pfm_fanabsent_any_singlefan
switch(config)# end
```

Overriding (Disabling) a Shutdown for Removal of All Fans Except One

This example shows how to disable a shutdown so that you can remove all fans except one (fan 2):

```
switch# config t
switch(config)# event manager applet myapplet1 override __pfm_fanabsent_any_singlefan
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet2 override __pfm_fanabsent_any_singlefan
switch(config-applet)# event fanabsent fan 2 time 60
switch(config-applet)# action 2 policy-default
switch(config-applet)# end
```

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Overriding (Disabling) a Shutdown for Removal of Fans Except for a Specified Set of Fans

This example shows how to disable a shutdown so that you can remove fans except for a specified set of fans (fans 2, 3, and 4):

```
switch# config t
switch(config)# event manager applet myapplet1 override __pfm_fanabsent_any_singlefan
switch(config-applet)# end
switch(config)# event manager applet myapplet2 override __pfm_fanabsent_any_singlefan
switch(config-applet)# event fanabsent fan 2,3,4 time 60
switch(config-applet)# action 2 policy-default
switch(config-applet)# end
```

Overriding (Disabling) a Shutdown for Removal of All Fans Except One from a Set of Fans

This example shows how to disable a shutdown so that you can remove all fans except one from a set of fans (fans 2, 3, or 4):

```
switch# config t
switch(config)# event manager applet myapplet1 override __pfm_fanabsent_any_singlefan
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet2 override __pfm_fanabsent_any_singlefan
switch(config-applet)# event fanabsent fan 2 time 60
switch(config-applet)# action 2 policy-default
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet3 override __pfm_fanabsent_any_singlefan
switch(config-applet)# event fanabsent fan 3 time 60
switch(config-applet)# action 3 policy-default
switch(config-applet)# end
switch# config t
switch(config)# event manager applet myapplet4 override __pfm_fanabsent_any_singlefan
switch(config-applet)# event fanabsent fan 4 time 60
switch(config-applet)# action 4 policy-default
switch(config-applet)# end
```

Configuration Examples to Create a Supplemental Policy

This section includes the following topics:

- [Creating a Supplemental Policy for the Fan Absent Event, page B-10](#)
- [Creating a Supplemental Policy for the Temperature Threshold Event, page B-11](#)

Creating a Supplemental Policy for the Fan Absent Event

This example shows how to create a supplemental policy using the **event fanabsent** command:

```
[no] event fanabsent [fan fan-number] time time-interval
```

In addition to the default policy, this example shows how to execute the policy myappletname and action 3 if fan 1 is absent for 60 seconds:

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```
switch# config t
switch(config)# event manager applet myappletname
switch(config-applet)# event fanabsent fan 1 time 60
switch(config-applet)# action 3 cli "show env fan"
switch(config-applet)# end
```

Creating a Supplemental Policy for the Temperature Threshold Event

This example shows how to create a supplemental policy using the **event temperature** command:

```
[no] event temperature [mod module-number] [sensor sensor-number] threshold {major | minor
| any}
```

In addition to the default policy, this example shows how to execute the policy myappletname and action 1 if the temperature crosses the minor threshold on sensor 3 of module 2:

```
switch# config t
switch(config)# event manager applet myappletname
switch(config-applet)# event temperature module 2 sensor 3 threshold minor
switch(config-applet)# action 1 cli "show environ temperature"
switch(config-applet)# end
```

Configuration Examples for the Power Over-Budget Policy

The power over-budget policy gets triggered when the available power capacity drops below zero and the device is no longer able to keep the previously powered-up modules in the powered-up state. The default action is to print a syslog to notify the user of the occurrence of power over budget.

You can enable an additional action to power down modules until the available power recovers from the red (negative) zone.

This section includes the following topics:

- [Shutting Down Modules, page B-11](#)
- [Shutting Down a Specified List of Modules, page B-12](#)

Shutting Down Modules

If you do not specify any modules, the power over-budget shutdown starts from slot 1 and shuts down modules until the power recovers from the red (negative) zone. Empty slots and slots that contain a supervisor, standby supervisor, spine, or crossbar are skipped.

This example shows how to shut down modules starting from module 1 when the available power drops below zero:

```
switch# config t
switch(config)# event manager applet <myappletname4a> override __pfm_power_over_budget
switch(config-applet)# event poweroverbudget
switch(config-applet)# action 4 overbudgetshut
switch(config-applet)# end
```

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Shutting Down a Specified List of Modules

You can specify a list of modules that the power over-budget action uses to shut down modules until the power recovers from the red (negative) zone. Empty slots and slots that contain a supervisor, standby supervisor, spine, or crossbar are skipped.

This example shows how to shut down modules from a specified list of modules (1, 2, 7, 8) when the available power drops below zero:

```
switch# config t
switch(config)# event manager applet <myappletname4b> override __pfm_power_over_budget
switch(config-applet)# event poweroverbudget
switch(config-applet)# action 5 overbudgetshut module 1,2,7,8
switch(config-applet)# end
```

Configuration Examples to Select Modules to Shut Down

This section includes the following topics.:

- [Using the Policy Default to Select Nonoverridden Modules to Shut Down, page B-12](#)
- [Using Parameter Substitution to Select Nonoverridden Modules to Shut Down, page B-12](#)

Using the Policy Default to Select Nonoverridden Modules to Shut Down

This example shows how to use the policy default to select the nonoverridden modules to shut down when a major threshold is exceeded:

```
switch# config t
switch(config)# event manager applet my5a1 override __pfm_tempev_major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet my5a2 override __pfm_tempev_major
switch(config-applet)# event temperature module 1-3 sensor 4 threshold major
switch(config-applet)# action 5 policy-default
switch(config-applet)# end
```

Using Parameter Substitution to Select Nonoverridden Modules to Shut Down

This example shows how to use parameter substitution to select the nonoverridden modules to shut down when a major threshold is exceeded:

```
switch# config t
switch(config)# event manager applet my5b1 override __pfm_tempev_major
switch(config-applet)# end
switch# config t
switch(config)# event manager applet my5b2 override __pfm_tempev_major
switch(config-applet)# event temperature module 1-3 sensor 8 threshold major
switch(config-applet)# action 6 forceshut module my_module_list reset "temperature-sensor
policy trigger"
switch(config-applet)# end
```

To create event manager parameters, use the **event manager environment** command. To display the values of event manager parameters, use the **show event manager environment all** command.

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Configuration Examples for the Online Insertion Removal Event

The online insertion removal (OIR) event does not have a default policy.

This example shows how to configure the OIR event using the **event oir** command:

```
event oir device-type event-type [device-number]
```

The *device-type* can be **fan**, **module** or **powersupply**.

The *event-type* can be **insert**, **remove**, or **anyoir** (insert or remove).

The optional *device-number* specifies a single device. If omitted, all devices are selected.

This example shows how to configure the insert event:

```
switch# config t  
switch(config)# event manager applet myoir  
switch(config-applet)# event oir module insert  
switch(config-applet)# action 1 syslog priority critical msg "OIR insert event: A Module is inserted"
```

This example shows how to configure the remove event:

```
switch# config t  
switch(config)# event manager applet myoir  
switch(config-applet)# event oir module remove  
switch(config-applet)# action 1 syslog priority critical msg "OIR remove event: A Module is removed"
```

Configuration Example to Generate a User syslog

This example shows how to generate a user syslog using the **action syslog** command.

```
switch# config t  
switch(config)# event manager applet myoir  
switch(config-applet)# event oir module remove  
switch(config-applet)# action 1 syslog priority critical msg "Module is removed"
```

When this event is triggered, the system will generate a syslog as follows:

```
p1b-57(config)# 2008 Feb 20 00:08:27 p1b-57 %$ VDC-1 %$ %EEM_ACTION-2-CRIT: "Module is removed"
```

```
2008 Feb 20 00:08:27 p1b-57 %$ VDC-1 %$ %PLATFORM-2-MOD_REMOVE: Module 2 removed  
(Serial number JAB120101PW)
```

Configuration Examples for SNMP Notification

This section includes the following topics:

- [Polling an SNMP OID to Generate an EEM Event, page B-14](#)
- [Sending an SNMP Notification in Response to an Event in the Event Policy, page B-14](#)

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Polling an SNMP OID to Generate an EEM Event

The SNMP object ID (OID) CISCO-SYSTEM-EXT-MIB::cseSysCPUUtilization is used for querying the CPU utilization of the switch:

```
cseSysCPUUtilization OBJECT-TYPE
    SYNTAX          Gauge32 (0..100 )
    UNITS           "%"
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The average utilization of CPU on the active supervisor."
    ::= { ciscoSysInfoGroup 1 }
```

This example shows the use of an SNMP OID that is polled at an interval of 10 seconds and has a threshold value of 95 percent:

```
switch# config t
switch(config)# event manager applet test_policy
switch(config-applet)# event snmp oid 1.3.6.1.4.1.9.9.305.1.1.1.0 get-type exact entry-op
gt entry-val 95 exit-op lt exit-val 90 poll-interval 10
```

Sending an SNMP Notification in Response to an Event in the Event Policy

You can use this type of configuration to cause a critical event trigger to generate an SNMP notification.

This example shows how to send an SNMP notification for an event from the Event Manager applet configuration mode:

```
switch(config-applet)# action 1.1 snmp-trap intdata1 100 intdata2 300 strdata "CPU Hogging
at switch1"
switch(config-applet)# action 1.1 snmp-trap intdata1 100 intdata2 300 strdata "Port
Failure eth9/1"
```

This configuration triggers an SNMP notification (trap) from the switch to SNMP hosts. The SNMP payload carries the values of user-defined fields intdata1, intdata2, and strdata.

Configuration Example for Port Tracking

This example shows how to configure the state of one port to match the state of another port (port tracking).

To configure port tracking of Ethernet interface 3/23 by Ethernet interface 1/2, follow these steps:

-
- Step 1** Create an object to track the status of Ethernet interface 3/23.

```
switch# config t
switch(config)# track 1 interface ethernet 3/23
switch(config-track)# end
```

- Step 2** Configure an EEM event to shut Ethernet interface 1/2 when the tracking object shuts down.

```
switch(config)# event manager applet track_3_23_down
switch(config-applet)# event track 1 state down
switch(config-applet)# action 1 syslog msg EEM applet track_3_23_down shutting down port
eth1/2 due to eth3/23 being down
switch(config-applet)# action 2 cli conf term
switch(config-applet)# action 3 cli interface ethernet 1/2
switch(config-applet)# action 4 cli shut
```

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```
switch(config-applet)# end
```

Step 3 Configure an EEM event to bring up Ethernet interface 1/2 when Ethernet interface 3/23 comes up.

```
switch# config t
switch(config)# event manager applet track_3_23_up
switch(config-applet)# event track 1 state up
switch(config-applet)# action 1 syslog msg EEM applet track_3_23_down bringing up port
eth1/2 due to eth3/23 being up
switch(config-applet)# action 2 cli conf term
switch(config-applet)# action 3 cli interface ethernet 1/2
switch(config-applet)# action 4 cli no shut
switch(config-applet)# end
```

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