



Alarms Configuration Guide, Cisco Catalyst IE9300 Rugged Series Switches

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Americas Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
<http://www.cisco.com>
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

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CHAPTER 1

Switch Alarms

Switch alarms are used to monitor network and environment status. Switch alarms check the conditions of each port or the entire switch to ensure alignment with predefined parameters. An alarm or system message is generated when parameters deviate. By default, alerts and messages are relayed to the syslog facility.

- [Supported switch alarms, on page 1](#)

Supported switch alarms

The IE9300 switch platform provides support for alarms in both standalone and stack configurations. It supports these alarms:

- Global status monitoring alarms
- Port status monitoring alarms

Global status monitoring alarms

Global status monitoring alarms are used for critical oversight of temperature and power supply conditions within the switch to ensure optimal functionality and safety. This information helps to maintain reliable switch operations and ensures a stable network environment.

The table describes the types of Global status monitoring alarms.

Table 1: Types of Global Status Monitoring Alarms

Alarm	Description
Power Supply Alarm	The switch monitors dual power supply levels. If both power supplies are installed, the alarm activates when one power supply fails. This alarm clears automatically when both power supplies are operational. You can configure this alarm to communicate with hardware relays. For additional details, see Configuring the Power Supply Alarms .

Alarm	Description
Temperature Alarms	<p>The switch features a temperature sensor with primary and secondary settings for monitoring environmental conditions.</p> <ul style="list-style-type: none"> • Primary Alarm: Automatically triggers for a low temperature of –40 degrees Fahrenheit (–40 degrees Celsius) and a high temperature of 204.8 degrees Fahrenheit (96 degrees Celsius). This alarm is always enabled and links to the major relay by default. • Secondary Alarm: Activates when the system temperature exceeds or falls below configured thresholds. This alarm is disabled by default. For more information, see Configuring the Switch Temperature Alarms.
SD-Card Alarm	<p>By default, this alarm is disabled.</p> <p>The alarm triggers if the SD card is removed or if the file system becomes corrupted.</p>

Port status monitoring alarms

Port status monitoring alarms help maintain the performance of Ethernet switches. This feature allows you to monitor Ethernet ports and get timely alarm notifications based on specific conditions. Understanding how to configure and using these alarms helps you manage your network effectively and respond to issues proactively.

The switch monitors Ethernet port statuses and generate alarm messages as outlined in the table below. The switch supports customizable alarm configurations through alarm profiles. You can create multiple profiles and assign them to individual Ethernet ports, allowing for tailored monitoring based on your network requirements.

Alarm profiles

You can activate or deactivate alarm conditions for each port using alarm profiles. You can link these alarm conditions to alarm relay. Additionally, you can configure alarm profiles to send alarm traps to an SNMP server and to send system messages to a syslog server. In the default configuration, the default alarm profile applies to all interfaces.



Note You can associate multiple alarms with a single relay.

Types of port status monitoring alarms

The table lists various port status monitoring alarms, their descriptions, and their functions. Each alarm is assigned a severity level according to the Cisco IOS System Error Message Severity Level.

Table 2: Port Status Monitoring Alarms

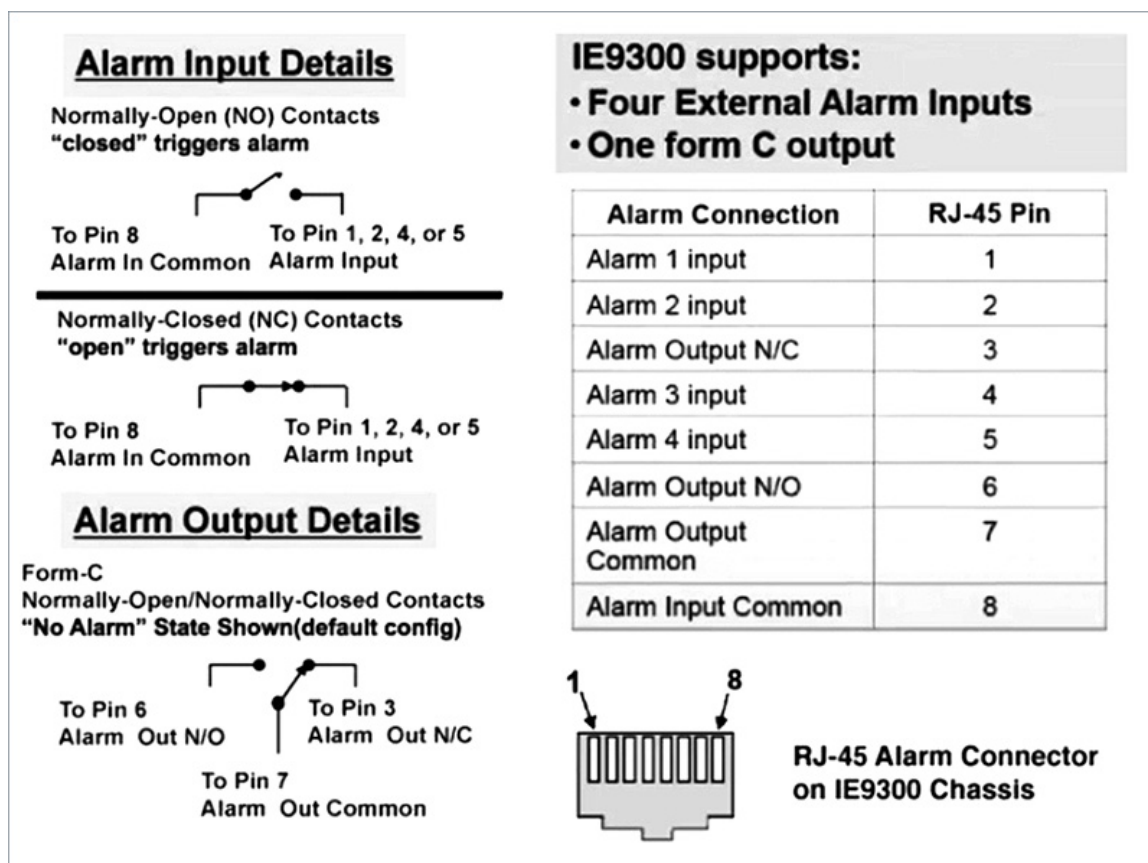
Alarm list ID	Alarm	Description
1	Link Fault Alarm	This alarm activates when physical layer issues cause unreliable data transmission, such as loss of signal or clock. It clears automatically when the issue is resolved.
2	Port Not Forwarding Alarm	This alarm triggers when a port is not forwarding packets. It clears automatically once the port resumes forwarding.
3	Port Not Operating Alarm	This alarm occurs when a port fails during the startup self-test. It only clears after a switch restart and successful port operation.
4	FCS Bit Error Rate Alarm	<p>This alarm is generated when the actual FCS bit error rate approaches the configured threshold. You can set this rate through the interface configuration CLI for each port.</p> <p>For more information, see FCS bit error rate threshold, on page 10.</p>

External alarm pins

You can connect up to four alarm inputs from external devices in your environment, such as a door, a temperature gauge, or a fire alarm, to the alarm input port on the switch front panel. For each alarm input, you can configure an open or closed circuit to trigger an alarm. You can also configure the severity of the alarm.

The figure shows the alarm input pin details for setting up external alarms.

Figure 1: Alarm input pin details



The alarm input circuit is designed to sense whether a dry contact is open or closed relative to the Alarm-In reference pin.

The Alarm Out is a relay with Normally Open and Normally Closed contacts.

The switch software is configured to detect faults. Detected faults energize the relay coil and change the state of output alarm relay contacts. Both internal faults and external input alarms can be relayed to the output alarm pins.

The input alarm trigger setting can be either **open** or **closed**. If the alarm trigger setting is not specified, the alarm is triggered when the circuit closes.

- "Open" means that, under normal conditions, current flows through the contact (which indicates a normally closed contact). The alarm is generated when the current stops flowing.
- "Closed" means that, under normal conditions, no current flows through the contact (which indicates a normally open contact). The alarm is generated when current begins to flow.

A triggered alarm generates a system message. A triggered alarm also turns on the LED display (the LED is normally off, meaning no alarm). You can set the severity of the input alarm to **major**, **minor**, or **none**. The severity is included in the alarm message and also sets the LED color when the alarm is triggered. The LED displays a solid red for a minor alarm and flashing red for a major alarm. If not set, the default alarm severity is **minor**. See [Configure external alarms, on page 15](#) for details on how to configure external alarms.

Actions for triggered alarms

Different options for triggering alarms enable you to effectively monitor and respond to various alarm conditions. Understanding these options allows you to customize alert mechanisms based on the specific needs in your network, ensuring timely notifications and enhanced operational awareness.

The switch supports multiple methods for triggering alarms, providing flexibility in how you receive notifications about potential issues within your network environment. The key triggering methods include using a Configurable Relay, sending SNMP Traps, and sending Syslog Messages.

Configurable Relay

You can utilize a configurable relay to manage alarm notifications effectively. The switch is equipped with an independent alarm relay that can be activated by alarms related to global settings, port status, and SD flash card conditions. You have the capability to configure this relay to send fault signals to external alarm devices, such as bells, lights, or other signaling mechanisms. You can associate any alarm condition with the alarm relay, and each fault condition is assigned a severity level according to the Cisco IOS System Error Message Severity Level. For detailed instructions on configuring the relay, see [Configuring the Power Supply Alarms](#).

SNMP Traps

Simple Network Management Protocol (SNMP) is an application-layer protocol facilitating communication between network managers and agents. The SNMP system comprises an SNMP manager, an SNMP agent, and a management information base (MIB). You can modify the `snmp-server enable traps` command to enable the switch to send alarm traps to an SNMP server. By using alarm profiles, you can configure specific environmental or port status alarm conditions to trigger SNMP alarm traps. For more information, see [Enabling SNMP Traps](#).

Syslog Messages

You can configure alarm profiles to send system messages to a syslog server. This feature allows you to maintain records of alarm conditions and responses in a centralized logging system. For more information, see [Configuring the Power Supply Alarms](#).

Default switch alarm settings

The default switch alarm settings allow you to establish initial monitoring parameters for your network environment. They allow you to manage alarm notifications effectively and ensure alerts to critical conditions based on the operation mode and performance indicators of your switch.

The switch comes with predefined alarm settings designed to optimize network monitoring and management. Default alarm settings outline the behavior of various alarms in different operation modes.

Table 3: Default Alarm Settings

Alarm List ID	Alarm	Default Setting
Global	Power supply alarm	When operating in single power mode, no alarm is enabled. In dual power supply mode, the default notification is a system message sent to the console.
	Primary temperature alarm	Enabled for a temperature range from -40°F (-40°C) minimum to 204.8°F (96°C) maximum associated with the major relay.
	Secondary temperature alarm	Disabled.
	Output relay mode alarm	Normally deenergized, indicating that the alarm output is in OFF state.
Port	Link fault alarm	Disabled on all interfaces
	Port not forwarding alarm	Disabled on all interfaces
	Port not operating alarm	Enabled on all interfaces.
	FCS bit error rate alarm	Disabled on all interfaces



CHAPTER 2

How to Configure Switch Alarms

- [Configure the power supply alarms, on page 7](#)
- [Configure the switch temperature alarms, on page 8](#)
- [Associate the temperature alarms with the relay, on page 9](#)
- [FCS bit error rate threshold, on page 10](#)
- [FCS error hysteresis thresholds, on page 11](#)
- [Alarm profiles, on page 12](#)
- [Enable SNMP traps, on page 14](#)
- [Configure external alarms, on page 15](#)

Configure the power supply alarms

Follow this procedure to configure power supply alarms in a network switch environment to ensure proper monitoring and notification of power supply status.

Procedure

Step 1 Use the **configure terminal** command to access the global configuration mode.

Example:

```
Switch#configure terminal
```

Step 2 Configure the desired alarm settings.

- a) Use the **alarm facility power-supply disable** command to disable the power supply alarm.

Example:

```
Switch (config)#alarm facility power-supply disable
```

- b) Use the **alarm facility power-supply relay major** command to associate the alarm to the relay.

Example:

```
Switch (config)#alarm facility power-supply relay major
```

- c) Use the **alarm facility power-supply notifies** command to enable SNMP notifications.

Example:

```
Switch (config)#alarm facility power-supply notifies
```

- d) Use the **alarm facility power-supply syslog** command to log alerts to a syslog server.

Example:

```
Switch (config)#alarm facility power-supply syslog
```

- Step 3** Use the **end** command to exit to privileged EXEC mode.

Example:

```
Switch#end
```

- Step 4** Verify the Power Supply Alarms configuration on your switch.

- a) Use the **show env power** command to check the power status.

Example:

```
Switch#show env power
```

- b) Use the **show facility-alarm status** command to review the current alarms.

Example:

```
Switch#show facility-alarm status
```

- c) Use the **show alarm settings** command to validate the settings.

Example:

```
Switch#show alarm settings
```

Configure the switch temperature alarms

Follow this procedure to configure temperature alarms for a network switch to ensure effective monitoring of temperature thresholds.

Procedure

- Step 1** Use the **configure terminal** command to enter global configuration mode.

Example:

```
Switch#configure terminal
```

- Step 2** Use the **alarm facility temperature { primary | secondary } high threshold** command to set the high temperature threshold.

Example:

```
Switch (config)#alarm facility temperature primary high 100
```

You can specify a **threshold** value between -40°F (-40°C) and 204.8°F (96°C).

- Step 3** Use the **alarm facility temperature { primary | secondary } low threshold** command to set the low temperature threshold.

Example:

```
Switch (config)#alarm facility temperature primary low -10
```

You can specify a **threshold** value between –328°F (–200°C) and 482°F (250°C).

Step 4 Use the **end** command to exit to privileged EXEC mode.

Example:

```
Switch#end
```

Step 5 Use the **show alarm settings** command to verify the switch temperature alarms configuration on your switch.

Example:

```
Switch#show alarm settings
```

Associate the temperature alarms with the relay

Follow this procedure to associate temperature alarms with a relay to ensure that critical temperature notifications are routed appropriately.

Procedure

Step 1 Use the **configure terminal** command to enter global configuration mode.

Example:

```
Switch#configure terminal
```

Step 2 Use the **alarm facility temperature { primary | secondary } relay major** command to link either the primary or secondary temperature alarm to the major relay.

Example:

```
Switch (config)#alarm facility temperature primary relay major
```

Step 3 (Optional) Use the **alarm facility temperature { primary | secondary } notifies** command to send primary or secondary temperature alarm traps to an SNMP server.

Example:

```
Switch (config)#alarm facility temperature primary notifies
```

Step 4 (Optional) Use the **alarm facility temperature { primary | secondary } syslog** command to send primary or secondary temperature alarm traps to a syslog server.

Example:

```
Switch (config)#alarm facility temperature primary syslog
```

Step 5 (Optional) Use the **no alarm facility temperature secondary** command to turn off the secondary temperature alarm.

Example:

```
Switch (config)#no alarm facility temperature secondary
```

Step 6 Use the **end** command to exit to the privileged EXEC mode.

Example:

```
Switch#end
```

Step 7 Use the **show alarm settings** command to confirm that temperature alarms are configured correctly.

Example:

```
Switch#show alarm settings
```

FCS bit error rate threshold

You can set up the Frame Check Sequence (FCS) bit error rate threshold and establish the error threshold on your switch.

By adjusting the error threshold and hysteresis threshold, you can enhance the reliability of your network, reduce false alarms during fluctuations in error rates and improve overall network stability.

Set the FCS bit error rate threshold

Follow this procedure to configure the acceptable error rate for frames transmitted over a network interface.

The switch activates a FCS bit error-rate alarm when the measured error rate approaches the configured threshold.

Procedure

Step 1 Use the **configure terminal** command to enter global configuration mode.

Example:

```
Switch#configure terminal
```

Step 2 Use the **interface interface-id** command to access the interface configuration.

Example:

```
Switch (config)#interface gig1/0/1
```

Step 3 Use the **fcs-threshold value** command to attach the specified alarm profile to the interface

Example:

```
Switch (config-if)#fcs-threshold value
```

Step 4 Use the **end** command to exit to privileged EXEC mode.

Example:

```
Switch (config-if)# end
```

Step 5 Use the **show fcs-threshold** command to confirm the setting.

Example:

```
Switch#show fcs-threshold
```

FCS error hysteresis thresholds

The FCS error hysteresis threshold in Ethernet switches helps manage alarm notifications related to bit error rates.

The FCS (Frame Check Sequence) error hysteresis threshold is a critical configuration in Ethernet switches that helps manage alarm notifications related to bit error rates. Understanding this threshold enables network administrators to prevent unnecessary alarms caused by transient fluctuations in bit error rates, ensuring a more stable network monitoring environment.

Ethernet standards stipulate a maximum bit-error rate of 10^{-8} , with a practical range between 10^{-6} and 10^{-11} . To configure the bit error rate for a switch, enter the exponent related to your desired value. For a bit error rate of 10^{-9} , enter 9. The default FCS bit error rate setting is 10^{-8} .

To minimize alarm toggling during minor fluctuations, you can configure the FCS error hysteresis threshold. The hysteresis threshold is expressed as the ratio of the alarm clear threshold to the alarm set threshold, measured in percentage.

For instance, if you set the FCS bit error-rate alarm to 10^{-8} (your alarm set threshold) and wish to configure the alarm clear threshold to 5×10^{-10} , you can calculate the hysteresis value as demonstrated in this example:

$$h = \text{alarm clear threshold} / \text{alarm set threshold}$$
$$h = 5 \times 10^{-10} / 10^{-8} = 5 \times 10^{-2} = 0.05 = 5 \text{ percent}$$

The FCS hysteresis threshold applies across all ports on the switch, with an allowable configuration range from 1 percent to 10 percent. The default value is 10 percent.

By adjusting the hysteresis threshold appropriately, network administrators can enhance monitoring accuracy and reduce alarm fatigue, leading to more effective network management.

For more information, see [Configuring the FCS Bit Error Rate Alarm](#).

Set the FCS Error Hysteresis Threshold

To configure the acceptable error rate for frames transmitted over a network interface.

The hysteresis setting prevents the alarm from toggling when the bit error-rate fluctuates around your configured threshold. The FCS hysteresis threshold is applied uniformly across all ports of the switch.

Procedure

Step 1 Use the **configure terminal** command to enter global configuration mode.

Example:

```
Switch# configure terminal
```

Step 2 Use the **alarm facility fcs-hysteresis percentage** command to set the hysteresis percentage for the switch.

Example:

```
Switch(config)# alarm facility fcs-hysteresis 8
```

For *percentage*, the range is 1 to 10. The default value is 10 percent.

Step 3 Use the **end** command to exit to privileged EXEC mode.

Example:

```
Switch(config-if)# end
```

Step 4 Use the **show running config** command to confirm the settings.

Example:

```
Switch# show running config
```

Alarm profiles

Configuring alarm profiles involves procedures for creating and modifying profiles using the necessary commands. The process starts by entering global configuration mode. You can create an alarm profile with only the **Port not operating** alarm enabled by default. The alarm profile includes instructions for modifying alarm parameters, configuring notifications, attaching profiles to specific ports, highlighting verification, and optionally saving configurations for effective system monitoring and response.

Create an alarm profile

Use this procedure to create a new alarm profile or identify an existing one within a network switch system.

In the **defaultPort** profile, only the **port not operating** alarm is enabled.

Procedure

Step 1 Use the **configure terminal** command to enter global configuration mode.

Example:

```
Switch#configure terminal
```

Step 2 Use the **alarm-profile** *alarm-profile-name* command to create a new profile or identify an existing profile and enter the alarm profile configuration mode.

Example:

```
Switch(config)# alarm-profile  
Switch(config)# alarm-profile new-alarm
```

Step 3 Use the **end** command to exit to privileged EXEC mode.

Example:

```
Switch (config-if)# end
```

Step 4 Use the **show alarm profile name** command to verify the configuration on your switch.

Example:


```
Switch# show alarm profile name
```

Modify an alarm profile

Modify an alarm profile to customize alarm settings according to your requirements. Adjust the alarm parameters and configure notifications for specific alarm types.

In the **defaultPort** profile, only the **port not operating** alarm is enabled.

Procedure

Step 1 (Optional) Use the **alarm {fcs-error | link-fault | not-forwarding | not-operating}** command to add or modify parameters for specific alarms.

Example:

```
Switch#alarm fcs-error
```

Step 2 (Optional) Use the **notifies {fcs-error | link-fault | not-forwarding | not-operating}** command to configure the alarm to send an SNMP trap to an SNMP server.

Example:

```
Switch (config)#notifies link-fault
```

Step 3 (Optional) Use the **relay-major {fcs-error | link-fault | not-forwarding | not-operating}** command to configure the alarm to send an alarm trap to the relay.

Example:

```
Switch (config)#relay-major not-forwarding
```

Step 4 (Optional) Use the **syslog {fcs-error | link-fault | not-forwarding | not-operating}** command to configure the alarm to send an alarm trap to a syslog server.

Example:

```
Switch (config)#syslog fcs-error
```

Attach an alarm profile to a specific port

Follow this procedure to attach the alarm profile to a specific port within a network switch system.

Procedure

Step 1 Use the **configure terminal** command to enter global configuration mode.

Example:

```
Switch#configure terminal
```

Step 2 Use the **interface** *interface-id* command to access the interface configuration.

Example:

```
Switch (config)#interface gig1/0/1
```

Step 3 Use the **alarm-profile** *alarm-profile-name* command to attach the specified alarm profile to the interface.

Example:

```
Switch (config-if)#alarm-profile new-alarm
```

Step 4 Use the **end** command to exit to privileged EXEC mode.

Example:

```
Switch (config-if)# end
```

Step 5 Verify the configuration on your switch with the **show alarm profile name** command.

Example:

```
Switch#show alarm profile name
```

Enable SNMP traps

Follow this procedure to enable the SNMP traps within a network switch system.

Procedure

Step 1 Use the **configure terminal** command to enter global configuration mode.

Example:

```
Switch#configure terminal
```

Step 2 Use the **snmp-server enable traps alarms** command to enable the switch to send SNMP traps.

Example:

```
Switch (config)#snmp-server enable traps alarms
```

Step 3 Use the **end** command to exit to privileged EXEC mode.

Example:

```
Switch (config-if)# end
```

Step 4 Verify the configuration on your switch with the **show alarm settings** command.

Example:

```
Switch#show alarm settings
```

Configure external alarms

Configure an open or closed circuit to trigger an alarm for the external devices in your environment and configure the severity of the alarm.

Procedure

Step 1 Use the **configure terminal** command to enter global configuration mode.

Example:

```
Switch#configure terminal
```

Step 2 (Optional) Use the **alarm contact** *contact-number* **description** *string* command to configure a description for the alarm contact number.

Example:

```
Switch(config)#alarm contact 2 description alarm for open door
```

- The *contact-number* is 1, 2, 4, or 5. See the figure in [External alarm pins, on page 3](#) section for the alarm contact pinouts.
- The description *string* is up to 80 alphanumeric characters in length and is included in any generated system messages.

Step 3 Use the **alarm contact** {*contact-number* | **all**} {**severity** { **critical** | **major** | **minor** } | **trigger** { **closed** | **open** }} command to configure the trigger and severity for an alarm contact number or for all contact numbers.

Example:

```
Switch(config)#alarm contact 2 severity critical trigger open
```

- Enter a *contact-number* (1, 2, 4, or 5) or specify that you are configuring **all** alarms. See the figure in [External alarm pins, on page 3](#) section for the alarm contact pinouts.
- For severity, enter **critical**, **major**, or **minor**. If you do not configure a severity, the default is **minor**.
- For trigger, enter **closed** or **open**. If you do not configure a trigger, the alarm is triggered when the circuit is **closed**.

Step 4 Use the **show env alarm-contact** command to show the configured alarm contacts.

Example:

```
Switch(config)#show env alarm-contact
```

Step 5 Use the **end** command to exit to privileged EXEC mode.

Example:

```
Switch (config-if)# end
```




CHAPTER 3

Monitor and Maintain Switch Alarms Status

- [Monitoring and maintaining alarms status of switches, on page 17](#)

Monitoring and maintaining alarms status of switches

Use specific commands to retrieve alarm information and manage switch alarms effectively. Promptly identify and address potential issues within the network infrastructure.

Table 4: Commands for displaying global and port alarm status

No.	Command	Purpose
1	<code>show alarm profile [name]</code>	Displays all alarm profiles in the system or a specified profile.
2	<code>show alarm settings</code>	Displays all global alarm settings on the switch.
3	<code>show env { alarm-contact all power temperature }</code>	Displays the status of environmental facilities on the switch.
4	<code>show facility-alarm status [critical info major minor]</code>	Displays generated alarms on the switch.



CHAPTER 4

Configuration Examples for Switch Alarms

- [Configuration example for external alarms, on page 19](#)
- [Configuration example for associating temperature alarms to a relay, on page 19](#)
- [Configuration example for dual power supplies, on page 20](#)
- [Configuration example for displaying alarm settings, on page 20](#)

Configuration example for external alarms

This configuration assigns **Alarm Input 1**, designated as the **door sensor**, to trigger a major alarm when the door circuit is closed. It then displays the status and configuration details for all alarms.

```
Switch (config)#alarm contact 1 description door sensor
Switch (config)#alarm contact 1 severity major
Switch (config)#alarm contact 1 trigger closed
Switch (config)#end
```

Verification:

```
Switch (config)#show env alarm-contact
Switch#show env alarm-contact
```

```
ALARM CONTACT 1
Status: not asserted
Description: door sensor
Severity: major
Trigger: closed
ALARM CONTACT 2
Status: not asserted
Description: external alarm contact 2
Severity: minor
Trigger: closed
```

Configuration example for associating temperature alarms to a relay

This configuration assigns the secondary temperature alarm to the major relay. With a high temperature threshold is 113°F (45°C). All alarms and traps associated with temperature alarm are logged to both a syslog server and an SNMP server, thereby ensuring reliable alert management.

```
Switch (config)#alarm facility temperature secondary high 45
Switch (config)#alarm facility temperature secondary relay major
Switch (config)#alarm facility temperature secondary syslog
Switch (config)#alarm facility temperature secondary notifies
```

This configuration assigns the primary temperature alarm to the major relay. All alarms and traps related to this alarm are sent to a syslog server.

```
Switch (config)#alarm facility temperature primary syslog
Switch (config)#alarm facility temperature primary relay major
```

Configuration example for dual power supplies

This example shows how to configure two power supplies:

```
Switch#configure terminal
Switch (config)#power-supply dual
```

These examples show how to display information when two power supplies are absent, resulting in a triggered alarm.

```
Switch#show facility-alarm status
Source Severity Description Relay Time
Switch MAJOR 5 Redundant Pwr missing or failed NONE Mar 01
1993 00:23:52
```

```
Switch#show env power
POWER SUPPLY A is DC OK
POWER SUPPLY B is DC FAULTY <--
```

```
Switch#show hard led
SWITCH: 1
SYSTEM: GREEN
ALARM : ALT_RED_BLACK <--
```

Configuration example for displaying alarm settings

This section outlines the process for displaying the current alarm settings and configurations. The section offers information about active alarms and their parameters in the system.

```
Switch#show alarm settings

Alarm relay mode: Positive
Power Supply
  Alarm           Enabled
  Relay
  Notifies        Disabled
  Syslog          Enabled
Temperature-Primary
  Alarm           Enabled
  Thresholds      MAX: 80C          MIN: 0C
  Relay           MAJ
  Notifies        Enabled
  Syslog          Enabled
Temperature-Secondary
  Alarm           Disabled
  Threshold
  Relay
  Notifies        Disabled
  Syslog          Disabled
```



```

SD-Card
  Alarm          Disabled
  Relay
  Notifies       Disabled
  Syslog         Disabled
Input-Alarm 1
  Alarm          Enabled
  Relay
  Notifies       Disabled
  Syslog         Enabled
Input-Alarm 2
  Alarm          Enabled
  Relay
  Notifies       Disabled
  Syslog         Enabled
Input-Alarm 3
  Alarm          Enabled
  Relay
  Notifies       Disabled
  Syslog         Enabled
Input-Alarm 4
  Alarm          Enabled
  Relay
  Notifies       Disabled
  Syslog         Enabled
PTP
  Alarm          Disabled
  Relay
  Notifies       Disabled
  Syslog         Disabled
HSR
  Alarm          Disabled
  Relay
  Notifies       Disabled
  Syslog         Disabled

```

