



H Commands

This chapter describes the Cisco NX-OS system management commands that begin with the letter H.

hardware fan-tray maintenance-mode

To put the switch in fan tray maintenance mode to prepare the switch for fan tray migration or removal, use the **hardware fan-tray maintenance-mode** command. To disable fan tray maintenance mode, use the **no** form of this command.

hardware fan-tray maintenance-mode [**long** | **medium** | **short**]

no hardware fan-tray maintenance-mode [**long** | **medium** | **short**]

Syntax Description		
	long	(Optional) The fans run at 65% speed for approximately 9 minutes.
	medium	(Optional) The fans run at 75% speed for approximately 6 minutes.
	short	(Optional) The fans run at 85% speed for approximately 4 minutes.

Defaults The fans run at 100% speed for approximately 4 minutes. Starting from Cisco NX-OS Release 8.1(1), the fans run at 85% speed for approximately 4 minutes.

Command Modes Global configuration mode (config)

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	8.1(1)	This command was modified. By default, the fans will now run at 85% speed for approximately 4 minutes when the hardware fan-tray maintenance-mode command is used.
	7.2(0)D1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

The fan tray maintenance mode will be cancelled in the following cases:

- If a temperature alarm is present.
- Hot-inlet temperature (Sup inlet temperature \geq 30 degrees Celsius)
- A fan tray is absent.
- Post-cool period (time elapsed after fan tray removal) has crossed 4 minutes.

**Note**

The fan tray maintenance mode is cancelled and the fan speed will be set to normal if the fan tray migration or replacement has been completed within 2 minutes after using the **hardware fan-tray maintenance-mode** command. If the fan tray migration or replacement has not been completed within 2 minutes, the remaining fan trays run at 85% speed for the next 2 minutes and at 100% speed from then on.

- Pre-cool period has crossed 1 hour and 9 minutes - The fan tray has not been removed since the past 1 hour and 9 minutes during which the switch was ready for fan tray removal.

Examples

This example shows how to prepare the switch for fan tray removal or migration by putting the switch in fan tray maintenance mode and making the fans run at 85% speed for approximately 4 minutes:

```
switch# configure terminal
switch(config)# hardware fan-tray maintenance-mode
2017 Apr 7 16:11:04 SWITCH %PLATFORM-6-PFM_INFO: Fan Zone 1 : Fan Speed will change from
37.25(0x5f) to 85.10(0xd9)
```

This example shows how to prepare the switch for fan tray removal or migration by putting the switch in fan tray maintenance mode and making the fans run at 65% speed for approximately 9 minutes:

```
switch# configure terminal
switch(config)# hardware fan-tray maintenance-mode long
2017 Apr 3 19:07:07 SWITCH %PLATFORM-6-PFM_INFO: Fan Zone 1 : Fan Speed will change from
45.88(0x75) to 65.10(0xa6)
2017 Apr 3 19:07:07 SWITCH %PLATFORM-2-PFM_CRITICAL: FAN_MAINTENANCE_MODE: Fan maintenance
mode started.
Please wait for 4-9 minutes for precool to complete before replacing the FANs
2017 Apr 3 19:16:09 SWITCH %PLATFORM-2-PFM_CRITICAL: FAN_MAINTENANCE_MODE: system is ready
for fan-removal.
```

This example shows how to prepare the switch for fan tray removal or migration by putting the switch in fan tray maintenance mode and making the fans run at 75% speed for approximately 6 minutes:

```
switch# configure terminal
switch(config)# hardware fan-tray maintenance-mode medium
2017 Apr 3 18:58:19 SWITCH %PLATFORM-6-PFM_INFO: Fan Zone 1 : Fan Speed will change from
45.88(0x75) to 74.90(0xbf)
2017 Apr 3 18:58:19 SWITCH %PLATFORM-2-PFM_CRITICAL: FAN_MAINTENANCE_MODE: Fan maintenance
mode started.
Please wait for 4-9 minutes for precool to complete before replacing the FANs
2017 Apr 3 19:04:20 SWITCH %PLATFORM-2-PFM_CRITICAL: FAN_MAINTENANCE_MODE: system is ready
for fan-removal.
```

This example shows how to prepare the switch for fan tray removal or migration by putting the switch in fan tray maintenance mode and making the fan run at 85% speed for approximately 4 minutes:

```
switch# configure terminal
switch(config)# hardware fan-tray maintenance-mode short
2017 Apr 3 19:16:41 SWITCH %PLATFORM-6-PFM_INFO: Fan Zone 1 : Fan Speed will change from
45.88(0x75) to 85.10(0xd9)
2017 Apr 3 19:16:41 SWITCH %PLATFORM-2-PFM_CRITICAL: FAN_MAINTENANCE_MODE: Fan maintenance
mode started.
Please wait for 4-9 minutes for precool to complete before replacing the FANs
2017 Apr 3 19:20:42 SWITCH %PLATFORM-2-PFM_CRITICAL: FAN_MAINTENANCE_MODE: system is ready
for fan-removal.
```

This example shows how to disable fan tray maintenance mode and change the fan speed from 65% to 45%:

```
switch# configure terminal
switch(config)# no hardware fan-tray maintenance-mode long
2017 Apr 3 19:16:30 SWITCH %PLATFORM-6-PFM_INFO: Fan Zone 1 : Fan Speed will change from
65.10(0xa6) to 45.88(0x75)
```

hw-module logging onboard

To enable onboard failure logging (OBFL) based on the error type, use the **hw-module logging onboard** command. To disable OBFL (not recommended), use the **no** form of this command.

```
hw-module logging onboard [counter-stats] [environmental-history] [error-stats]
[interrupt-stats] [module num] [obfl-log]
```

```
no hw-module logging onboard [environmental-history] [error-stats] [interrupt-stats] [module
num] [obfl-log]
```

Syntax Description

counter-stats	(Optional) Specifies the OBFL counter statistics.
environmental-history	(Optional) Specifies the OBFL environmental history.
error-stats	(Optional) Specifies OBFL error statistics.
interrupt-stats	(Optional) Specifies OBFL interrupt statistics.
module num	(Optional) Specifies OBFL information for a specific module.
obfl-log	(Optional) Specifies OBFL (boot-upptime/device-version/obfl-history).

Defaults

Enabled and is the recommended state.

Command Modes

Global configuration mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.
4.0(2)	Added counter-stats keyword.

Usage Guidelines

The **hw-module logging onboard** command enables events to be recorded in files stored in nonvolatile memory, so that the data can be used to diagnose problems with hardware modules installed in a Cisco router or switch. When the onboard hardware is started up, a first record is made for each area monitored and becomes a base value for subsequent records. This command provides a circular updating scheme for collecting continuous records and archiving older (historical) records, ensuring accurate data about the hardware. Data is recorded in one of two formats: continuous information that displays a snapshot of data in a continuous file, and summary information that provides details about the data being collected. Use the **show logging onboard** command to see reports of current and historical data.



Note

We recommend that you do not disable OBFL.

This configuration command is applicable to the module inserted in a device. When the module is removed and inserted into a new device, the configuration of this command follows the module to the new device.

This command does not require a license.

Examples

This example shows how to configure OBFL message logging at level 7 (debugging):

```
Router> enable
switch# configure terminal
switch(config)# hw-module switch 2 module 1 logging onboard message level 7
switch(config)# end
```

Related Commands

Command	Description
attach	Connects to a specific line card for the purpose of executing commands on that card.
clear logging onboard	Clears onboard failure logs.
show logging onboard	Displays onboard failure logs.

header-type

To set the ERSPAN source version, use the **header-type** command. To disable this feature, use the **no** form of this command.

header-type *version*

no header-type *version*

Syntax Description	
	<i>version</i> (Optional) specifies the ERSPAN source version 3.

Defaults	
	Enabled and is the recommended state.

Command Modes	
	Global configuration mode

SupportedUserRoles	
	network-admin vdc-admin

Command History	Release	Modification
	6.1(1)	This command was introduced.

Usage Guidelines	
	This command does not require a license.

Examples	
	This example shows how to change the ERSPAN source session from Type II to Type III:

```
switch# configure terminal
switch(config)# monitor session 3 type erspan-source
switch(config-erspan-src)# header-type 3
switch(config-erspan-src)#
```

Related Commands	Command	Description
	show logging onboard	Displays onboard failure logs.

