Onboard Failure Logging Commands

This module describes the Cisco IOS XR software commands used to configure onboard failure logging (OBFL) for system monitoring on the router. OBFL gathers boot, environmental, and critical hardware failure data for field-replaceable units (FRUs), and stores the information in the nonvolatile memory of the FRU. This information is used for troubleshooting, testing, and diagnosis if a failure or other error occurs.

Because OBFL is on by default, data is collected and stored as soon as the card is installed. If a problem occurs, the data can provide information about historical environmental conditions, uptime, downtime, errors, and other operating conditions.

To use commands of this module, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using any command, contact your AAA administrator for assistance.

Caution OBFL is activated by default in all cards and should not be deactivated. OBFL is used to diagnose problems in FRUs and to display a history of FRU data.

Related Documents

For detailed information about OBFL concepts, configuration tasks, and examples, see the *Onboard Failure Logging Services* module in the *System Monitoring Configuration Guide for Cisco ASR 9000 Series Routers*.

For detailed information about logging concepts, configuration tasks, and examples, see the *Implementing Logging Services* module in the *System Monitoring Configuration Guide for Cisco ASR 9000 Series Routers*.

For alarm management and logging correlation commands, see the *Alarm Management and Logging Correlation Commands* module in the *System Monitoring Command Reference for Cisco ASR 9000 Series Routers*.

For detailed information about alarm and logging correlation concepts, configuration tasks, and examples, see the *Implementing Alarm Logs and Logging Correlation* module in the *System Monitoring Configuration Guide for Cisco ASR 9000 Series Routers*.

show logging onboard

To display the onboard failure logging (OBFL) messages, use the **show logging onboard** command in Admin EXEC mode.

show logging onboard [{**all** | **cbc common**{**dump-all** | **dump-range** {*start-addressend-address*} | **most-recent** {**fans** *fan-tray-slot* | [**location node-id**]} | **diagnostic** | **environment** | **error** | **genstr** | **temperature** | **uptime** | **voltage**}}] [{**all** | **continuous** | **historical** | **static-data**}] [{**detail** | **raw** | **summary**}] [**location** *node-id*] [**verbose**]

Syntax Description

all	Displays all file information.
cbc	Displays Can Bus Controller (CBC) OBFL commands.
common	Displays the generic OBFL message logging output of multiple clients from string application.
dump-all	Displays all OBFL records.
dump-range {*start-address* | *end-address*}	Displays OBFL EEPROM data for a given range. Start and end address ranges are from 0 to 4294967295.
most-recent	Displays the last five OBFL data records.
fans *fan-tray-slot*	Displays a specific fan tray slot.
location *node-id*	Displays OBFL messages from the designated node. The *node-id* argument is entered in the *rack/slot/module* notation.
diagnostic	Displays diagnostic information.
environment	Displays system environment information.
error	Displays output from the message application.
temperature	Displays temperature information.
uptime	Displays the OBFL uptime.
voltage	Displays voltage information.
continuous	Displays continuous information.
historical	Displays historical information.
static-data	Display system descriptor data.
detail	Displays detailed logging information.
raw	Displays raw OBFL data.
summary	Displays a summary of OBFL logging information.

verbose	Displays internal debugging information.

Command Default

None

Command Modes

Admin EXEC mode

Command History

Release	Modification
Release 3.7.1	This command was introduced.

Usage Guidelines

Use the **show logging onboard** command to display all logging messages for OBFL.

To narrow the output of the command, enter the **show logging onboard** command with one of the optional keywords.

Use the **location** *node-id* keyword and argument to display OBFL messages for a specific node.

Task ID

Task ID	Operations
logging	read

Examples

This example displays uptime information from the OBFL feature:

```
RP/0/RSP0/CPU0:router(admin)# show logging onboard uptime detail location 0/7/cpu0

--------------------------------------------------------------------------------
UPTIME CONTINUOUS DETAIL INFORMATION (Node: node0_7_CPU0)
--------------------------------------------------------------------------------
The first record     : 01/05/2007 00:58:41
The last record      : 01/17/2007 16:07:13
Number of records    :        478
File size            :      15288 bytes
Current reset reason : 0x00
Current uptime       :    0 years  0 weeks 0 days  3 hours  0 minutes
--------------------------------------------------------------------------------
Time Stamp          |
MM/DD/YYYY HH:MM:SS | Users operation
--------------------------------------------------------------------------------
01/05/2007 01:44:35   File cleared by user request.
--------------------------------------------------------------------------------
```

This example displays continuous information about the temperature:

```
RP/0/RSP0/CPU0:router(admin)# show logging onboard temperature continuous

RP/0/RSP1/CPU0:ios(admin)#show logging onboard temperature continuous
Fri Dec 11 02:22:16.247 UTC

--------------------------------------------------------------------------------
TEMPERATURE CONTINUOUS INFORMATION (Node: node0_RSP0_CPU0)
--------------------------------------------------------------------------------
```

```
Sensor                              | ID  |
-------------------------------------------------------------------------------
Inlet0                               0x1
Hotspot0                             0x2
-------------------------------------------------------------------------------
Time Stamp           |Sensor Temperature C
MM/DD/YYYY HH:MM:SS |    1    2    3    4    5    6    7    8    9   10
-------------------------------------------------------------------------------
11/24/2009 20:55:28     23   36
11/24/2009 21:08:47     22   36
+32 minutes             22   37
+32 minutes             22   37
```

This example displays raw information about the temperature:

```
RP/0/RSP0/CPU0:router(admin)# show logging onboard temperature raw

Feature: Temperature
node: node0_2_CPU0, file name: nvram:/temp_cont, file size: 47525
00000000: 00 29 01 02 45 79 d8 a8  00 00 00 00 00 00 ba 37   .)..Ey.........7
00000010: aa 0d 00 00 45 79 d8 a8  1c 18 2b 2c 2f 1d 28 27   ....Ey....+,/.('
00000020: 1b 26 2a 20 27 00 00 fa  fa 00 1f 01 02 45 79 da   .&* '........Ey.
00000030: 2b 00 00 00 00 00 00 ba  38 ca 0d 00 06 00 00 00   +.......8.......
00000040: 0f 00 00 00 00 00 fa fa  00 1f 01 02 45 79 db ae   ............Ey..
00000050: 00 00 00 00 00 00 ba 39  ca 0d 00 06 00 00 00 00   .......9........
00000060: 00 f0 00 00 00 fa fa 00  1f 01 02 45 79 dd 32 00   ...........Ey.2.
00000070: 00 00 00 00 00 ba 3a ca  0d 00 06 00 00 00 00 00   ......:.........
00000080: 00 00 00 00 fa fa 00 1f  01 02 45 79 de b8 00 00   ..........Ey....
00000090: 00 00 00 00 ba 3b ca 0d  00 06 00 00 00 00 00 10   .....;..........
000000a0: 00 00 00 fa fa 00 1f 01  02 45 79 e0 3c 00 00 00   .........Ey.<...
000000b0: 00 00 00 ba 3c ca 0d 00  06 00 00 01 00 00 00 00   ....<...........
000000c0: 00 00 fa fa 00 1f 01 02  45 79 e1 be 00 00 00 00   ........Ey......
000000d0: 00 00 ba 3d ca 0d 00 06  11 00 00 00 00 00 00 00   ...=............
000000e0: 00 fa fa 00 1f 01 02 45  79 e3 43 00 00 00 00 00   .......Ey.C.....
000000f0: 00 ba 3e ca 0d 00 06 ff  00 0f 00 00 00 00 00 00   ..>.............
00000100: fa fa 00 1f 01 02 45 79  e4 c6 00 00 00 00 00 00   ......Ey........
00000110: ba 3f ca 0d 00 06 00 00  00 00 00 00 00 00 00 fa   .?..............
00000120: fa 00 1f 01 02 45 79 e6  49 00 00 00 00 00 00 ba   .....Ey.I.......
00000130: 40 ca 0d 00 06 00 00 00  00 00 00 00 00 00 fa fa   @...............
00000140: 00 1f 01 02 45 79 e7 cc  00 00 00 00 00 00 ba 41   ....Ey.........A
00000150: ca 0d 00 06 00 00 00 10  00 f0 00 00 00 fa fa 00   ................
00000160: 1f 01 02 45 79 e9 4f 00  00 00 00 00 00 ba 42 ca   ...Ey.O.......B.
00000170: 0d 00 06 00 00 00 f0 00  10 00 00 00 00 fa fa 00   ................
00000180: 01 02 45 79 ea d2 00 00  00 00 00 00 ba 43 ca 0d   ..Ey.........C..
00000190: 00 06 00 00 01 01 00 00  00 00 00 fa fa 00 1f 01   ................
000001a0: 02 45 79 ec 55 00 00 00  00 00 00 ba 44 ca 0d 00   .Ey.U.......D...
000001b0: 06 01 00 00 10 00 00 00  00 00 fa fa 00 1f 01 02   ................
000001c0: 45 79 ed d8 00 00 00 00  00 00 ba 45 ca 0d 00 06   Ey.........E....
000001d0: 0f 00 0f ff 00 00 00 00  00 fa fa 00 1f 01 02 45   ...............E
```

Related Commands

Command	Description
clear logging onboard, on page 5	Clears OBFL logging messages from a node or from all nodes.
hw-module logging onboard , on page 7	Enables or disables OBFL.

clear logging onboard

To clear OBFL logging messages from a node or from all nodes, use the **clear logging onboard** command in Admin EXEC mode.

clear logging onboard [{**all** | **cbc** **common**{**obfl** {**fans** *fan-tray-slot* | [**location** *node-id*]} | **corrupted-files** | **diagnostic** | **environment** | **error** | **poweron-time** | **temperature** | **uptime** | **voltage**}}] [**location** *node-id*]

Syntax Description

all	Clears all OBFL logs.
cbc	Clears commands for Can Bus Controller (CBC).
common	Clears the generic OBFL message logging output of multiple clients from string application.
obfl	Clears OBFL EEPROM.
fans *fan-tray-slot*	Clears a specific fan tray slot.
location *node-id*	(Optional) Clears OBFL messages from the designated node. The *node-id* argument is entered in the *rack/slot/module* notation.
corrupted-files	Clears corrupted file information.
diagnostic	Clears the online diagnostics information from the OBFL logs.
environment	Clears the environmental information from the OBFL logs.
error	Clear syslog information.
poweron-time	Clears time of first customer power on.
temperature	Clears temperature information.
uptime	Clears uptime information.
voltage	Clears voltage information.
continuous	Clears continuous information.
historical	Clears historical information.

Command Default

All OBFL logging messages are cleared from all nodes.

Command Modes

Admin EXEC mode

Command History

Release	Modification
Release 3.7.2	This command was introduced.
Release 5.2.2	The keyword common was added for the OBFL generic message logging feature.

Usage Guidelines

Use the **clear logging onboard** command to clear OBFL messages from all nodes. Use the **clear logging onboard** command with the **location** *node-id* keyword and argument to clear OBFL messages for a specific node. If the specified node is not present, an error message is displayed.

Caution The **clear logging onboard** command permanently deletes all OBFL data for a node or for all nodes. Do not clear the OBFL logs without specific reasons, because the OBFL data is used to diagnose and resolve problems in FRUs.

Caution If OBFL is actively running on a card, issuing the **clear logging onboard** command can result in a corrupt or incomplete log at a later point in time. OBFL should always be disabled before this command is issued.

Task ID

Task ID	Operations
logging	read

Examples

In the following example, the OBFL data is cleared for all nodes in the system:

```
RP/0/RSP0/CPU0:router(admin)# clear logging onboard
```

Related Commands

Command	Description
hw-module logging onboard , on page 7	Enables or disables OBFL.
show logging onboard, on page 2	Displays the OBFL messages.

hw-module logging onboard

To disable onboard failure logging (OBFL), use the **hw-module logging onboard** command in Admin Configuration mode. To enable OBFL again, use the **no** form of this command.

hw-module {**all** | **subslot** *node-id*} **logging onboard** [{**disable** | **severity** {**alerts** | **emergencies**}}]
no hw-module {**all** | **subslot** *node-id*} **logging onboard** [**disable**]

Syntax Description

all	Enables or disables OBFL for all nodes.
subslot *node-id*	Enables or disables OBFL for the designated node. The *node-id* argument is entered in the *rack/slot/module* notation.
disable	Enables or disables OBFL. See the Usage Guidelines for more information.
severity	(Optional) Specifies the severity level for the syslog message that is logged into the OBFL storage device.
alerts	Specifies that both emergency and alert syslog messages are logged. The default is the **alerts** keyword.
emergencies	Specifies that only the emergency syslog messages are logged.

Command Default

By default, OBFL logging is enabled.

severity: 1 (alerts) and 0 (emergencies)

Command History

Release	Modification
Release 3.7.2	This command was introduced.

Usage Guidelines

Use the **hw-module logging onboard** command to enable or disable OBFL.

- To disable OBFL use the **disable** keyword. OBFL is enabled by default.

  hw-module {**all** | **subslot** *node-id*} **logging onboard disable**

- To enable OBFL, use the **no** form of the **hw-module logging onboard** command with the **disable** keyword. OBFL is enabled by default. Use this command only if you disabled OBFL:

  no hw-module {**all** | **subslot** *node-id*} **logging onboard disable**

- To enable OBFL and return the configuration to the default message severity level, use the **no** form of the **hw-module logging onboard** command with the **severity** keyword:

  no hw-module {**all** | **subslot** *node-id*} **logging onboard severity**

When the OBFL feature is disabled, existing OBFL logs are preserved. To resume OBFL data collection, enable the OBFL feature again.

Note If a new node is inserted, and OBFL is enabled for that slot, then OBFL is enabled for the new node. If a card is removed from a router and inserted into a different router, the card assumes the OBFL configuration for the new router.

Task ID

Task ID	Operations
logging	read, write

Examples

The following example shows how to disable OBFL for all cards:

```
RP/0/RSP0/CPU0:router(admin-config)# hw-module all logging onboard disable
```

The following example shows how to disable OBFL for a card:

```
RP/0/RSP0/CPU0:router(admin-config)# hw-module subslot 0/2/CPU0 logging onboard disable
```

The following example shows how to enable OBFL again:

```
RP/0/RSP0/CPU0:router(admin-config)# no hw-module all logging onboard disable
```

The following example shows how to save only the syslog message in which the severity level is set to 0 (emergency) to a storage device:

```
RP/0/RSP0/CPU0:router(admin-config)# hw-module subslot 0/2/CPU0 logging onboard severity
emergencies
```

The following example shows how to save the syslog message in which the severity level is set to 0 (emergency) and 1 (alert) to a storage device:

```
RP/0/RSP0/CPU0:router(admin-config)# hw-module subslot 0/2/CPU0 logging onboard severity
alerts
```

Related Commands

Command	Description
clear logging onboard, on page 5	Clears OBFL logging messages from a node or from all nodes.
show logging onboard, on page 2	Displays the OBFL messages.