Onboard Failure Logging

OBFL gathers boot, environmental, and critical hardware 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, providing improved accuracy in hardware troubleshooting and root cause isolation analysis. Stored OBFL data can be retrieved in the event of a failure and is accessible even if the card does not boot.

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.

The Onboard Failure Logging (OBFL) functionality is enhanced to provide a generic library that can be used by different clients to log string messages.

Caution OBFL is activated by default in all cards. Do not deactivate OBFL without specific reasons, because the OBFL data is used to diagnose and resolve problems in FRUs.

Note For information about OBFL commands, console logging, alarms, and logging correlation, see Related Documents.

Feature History for Implementing OBFL

Release	Modification
Release 5.0.0	This feature was introduced.

Prerequisites

You must be in a user group associated with a task group that includes the proper task IDs. The command reference guides include the task IDs required for each command. If you suspect user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

Information About Implementing OBFL

Data Collection Types

OBFL collects and stores both baseline and event- driven information in the nonvolatile memory of each supported card where OBFL is enabled. The data collected includes these:

- FRU part serial number
- OS version
- Boot time
- Total run time
- Temperature and voltage at boot
- Temperature and voltage history

This data is collected in two different ways: as baseline data and event- driven data:

Baseline Data Collection

Baseline data is stored independent of hardware or software failures. This includes:

Data Type	Details
Installation	Chassis serial number and slot number are stored at initial boot.
Temperature	Information on temperature sensors is recorded after boot. The subsequent recordings are specific to variations based on preset thresholds.
Run-time	Total run-time is limited to the size of the history buffer used for logging. This is based on the local router clock with logging granularity of 30 minutes.

Supported Cards and Platforms

OBFL data collection is supported.

FRUs that have sufficient nonvolatile memory available for OBFL data storage support OBFL. For example, the processor supports the OBFL.

Table 1: OBFL Support by Card Type

Card Type	Cisco NCS 6000 Series Router
Route processor (RP)	Supported
Fabric cards (FC)	Supported
Line card	Supported
Power supply cards: AC rectifier modules and DC power entry modules (PEMs)	Not Supported
Fan tray	Supported

Where to Go Next

To configure alarm log correlation, see the *Implementing and Monitoring Alarms and Logging Correlation* module in the *System Monitoring Configuration Guide for Cisco NCS 6000 Series Routers*.

Additional References

The following sections provide references related to implementing logging services on Cisco IOS XR software .

Related Documents

Related Topic	Document Title
Logging services command reference	*Logging Services Commands* module in the *System Monitoring Command Reference for Cisco NCS 6000 Series Routers*
Onboard Failure Logging (OBFL) configuration	*Onboard Failure Logging Commands* module in the *System Monitoring Configuration Guide for Cisco NCS 6000 Series Routers*.
Onboard Failure Logging (OBFL) commands	*Onboard Failure Logging Commands* module in the *System Monitoring Command Reference for Cisco NCS 6000 Series Routers*.
Alarm and logging correlation commands	*Alarm Management and Logging Correlation Commands* module in the *System Monitoring Command Reference for Cisco NCS 6000 Series Routers*.
Alarm and logging correlation configuration and monitoring tasks	*Implementing and Monitoring Alarms and Alarm Log Correlation* module in the *System Monitoring Configuration Guide for Cisco NCS 6000 Series Routers*.
SNMP commands	*SNMP Commands* module in the *System Monitoring Command Reference for Cisco NCS 6000 Series Routers*.

Related Topic	Document Title
SNMP configuration tasks	*Implementing SNMP* module in the *System Monitoring Configuration Guide for Cisco NCS 6000 Series Routers*
Information about user groups and task IDs	*Configuring AAA Services* module in the *System Security Command Reference for Cisco NCS 6000 Series Routers*.

Standards

Standards	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

MIBs

MIBs	MIBs Link
To locate and download MIBs for Cisco IOS XR software, use the *Cisco Feature Navigator MIB Locator* and click on the IOS XR software type.	Cisco Feature Navigator MIB Locator

RFCs

RFCs	Title
No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified by this feature.	—

Technical Assistance

Description	Link
The Cisco Technical Support website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	*http://www.cisco.com/cisco/web/support/index.html*