

Logging to Local Nonvolatile Storage

The Logging to Local Nonvolatile Storage feature enables system logging messages to be saved on an advanced technology attachment flash disk. Messages saved on bootflash or a harddisk persist after a device is rebooted.

- Prerequisites for Logging to Local Nonvolatile Storage, on page 1
- Restrictions for Logging to Local Nonvolatile Storage, on page 1
- Information About Logging to Local Nonvolatile Storage, on page 2
- How to Configure Logging to Local Nonvolatile Storage, on page 2
- Configuration Examples for Logging to Local Nonvolatile Storage, on page 4
- Additional References, on page 4
- Feature Information for Logging to Local Nonvolatile Storage, on page 5

Prerequisites for Logging to Local Nonvolatile Storage

The logging buffered Command Must Be Enabled

Before the Logging to Local Nonvolatile Storage feature can be enabled with the **logging persistent** command, you must enable the logging of messages to an internal buffer with the **logging buffered** command. For additional information, see the "Writing Logging Messages to Bootflash or a Harddisk" section.

Restrictions for Logging to Local Nonvolatile Storage

Available Bootflash or Harddisk Space Constrains the Size and Number of Stored Log Files

The amount of bootflash or harddisk space allocated to system logging messages constrains the number of logging files that can be stored. When the allocation threshold is passed, the oldest log file in the directory is deleted to make room for new system logging messages. To permanently store system logging messages, you must archive them to an external device. For more information, see “Copying Logging Messages to an External Disk” section.

Note Logging to local nonvolatile storage can use up to 2 GB of storage space.

Information About Logging to Local Nonvolatile Storage

System Logging Messages

System logging messages include error and debug messages generated by application programming interfaces (APIs) on the device. Typically, logging messages are stored in a device's memory buffer; when the buffer is full, older messages are overwritten by new messages. All logging messages are erased from the memory buffer when the device reboots.

How to Configure Logging to Local Nonvolatile Storage

Writing Logging Messages to Bootflash or a Harddisk

Perform this task to enable the Logging to Local Nonvolatile Storage feature and write logging messages to bootflash or a harddisk.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **logging buffered** [*buffer-size* | *severity-level*]
4. **logging persistent** [**url harddisk:**/*directory*] [**size** *filesystem-size*] [**filesize** *logging-file-size*]

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	**configure terminal** **Example:** `Device# configure terminal`	Enables global configuration mode.
Step 3	**logging buffered** [*buffer-size*	*severity-level*] **Example:** `Device(config)# logging buffered`	Enables system message logging to a local buffer and limits messages logged to the buffer based on severity. • The optional *buffer-size* argument specifies the size of the buffer. Range is from 4096 to 4294967295. The default size varies by platform.

	Command or Action	Purpose
		• The optional *severity-level* argument limits the logging of messages to the buffer to those no less severe than the specified level.
Step 4	**logging persistent** [**url harddisk:**/*directory*] [**size** *filesystem-size*] [**filesize** *logging-file-size*] **Example:** `Device(config)# logging persistent url harddisk:/syslog size 134217728 filesize 16384` **Note** The default value is: url: bootflash:/syslog filesystem-size: 10% of total disk space logging-file-size: 262144	Writes logging messages from the memory buffer to the specified directory on the device's bootflash or a harddisk. • Before logging messages are written to a file on the bootflash or harddisk, the Cisco software checks to see if there is sufficient disk space. If not, the oldest file of logging messages (by timestamp) is deleted, and the current file is saved. • The filename format of log files is log_MM:DD:YYYY::hh:mm:ss. For example: log_11:26:2012::01:01:41. **Note** This feature supports only one log file per second due to its filename format, which contains a timestamp suffix down to the seconds level. **Note** The defaults for this command are as follows: • **url: bootflash:/syslog** Filesystem-size: 10% of total disk space. Logging-file-size: 262144

Copying Logging Messages to an External Disk

Perform this task to copy logging messages from the bootflash or a harddisk to an external disk.

SUMMARY STEPS

1. **enable**
2. **copy** *source-url destination-url*

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:** `Device> enable`	Enables privileged EXEC mode. • Enter your password if prompted.

	Command or Action	Purpose
Step 2	**copy** *source-url destination-url* **Example:** `Device# copy harddisk:/syslog ftp://myuser/mypass@192.168.1.129/syslog`	Copies the specified file or directory on the bootflash or a harddisk via FTP to the specified URL.

Configuration Examples for Logging to Local Nonvolatile Storage

Example: Writing Logging Messages to Bootflash or a Harddisk

The following example shows how to write up to 134217728 bytes (128 MB) of logging messages to the syslog directory of disk 0, specifying a file size of 16384 bytes:

```
Device(config)# logging buffered
Device(config)# logging persistent url harddisk:/syslog size 134217728 filesize 16384
```

Example: Copying Logging Messages to an External Disk

The following example shows how to copy logging messages from the device's bootflash or harddisk to an external disk:

```
Device# copy harddisk:/syslog ftp://myuser/mypass@192.168.1.129/syslog
```

Additional References

Related Documents

Related Topic	Document Title
copy command	Cisco IOS Configuration Fundamentals Command Reference
Network management commands (including logging commands): complete command syntax, defaults, command mode, command history, usage guidelines, and examples	Cisco IOS Network Management Command Reference

MIBs

MIBs	MIBs Link
• No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature.	To locate and download MIBs for selected platforms, Cisco IOS XE releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for Logging to Local Nonvolatile Storage

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Table 1: Feature Information for Logging to Local Nonvolatile Storage

Feature Name	Releases	Feature Information
Logging to Local Nonvolatile Storage	Cisco IOS XE Release 2.1	The Logging to Local Nonvolatile Storage feature enables system logging messages to be saved on an advanced technology attachment flash disk. Messages saved on bootflash or a harddisk persist after a device is rebooted. The following command was introduced or modified: **logging persistent**.