

Troubleshoot Disk Errors

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Disk Errors

ICSeverity

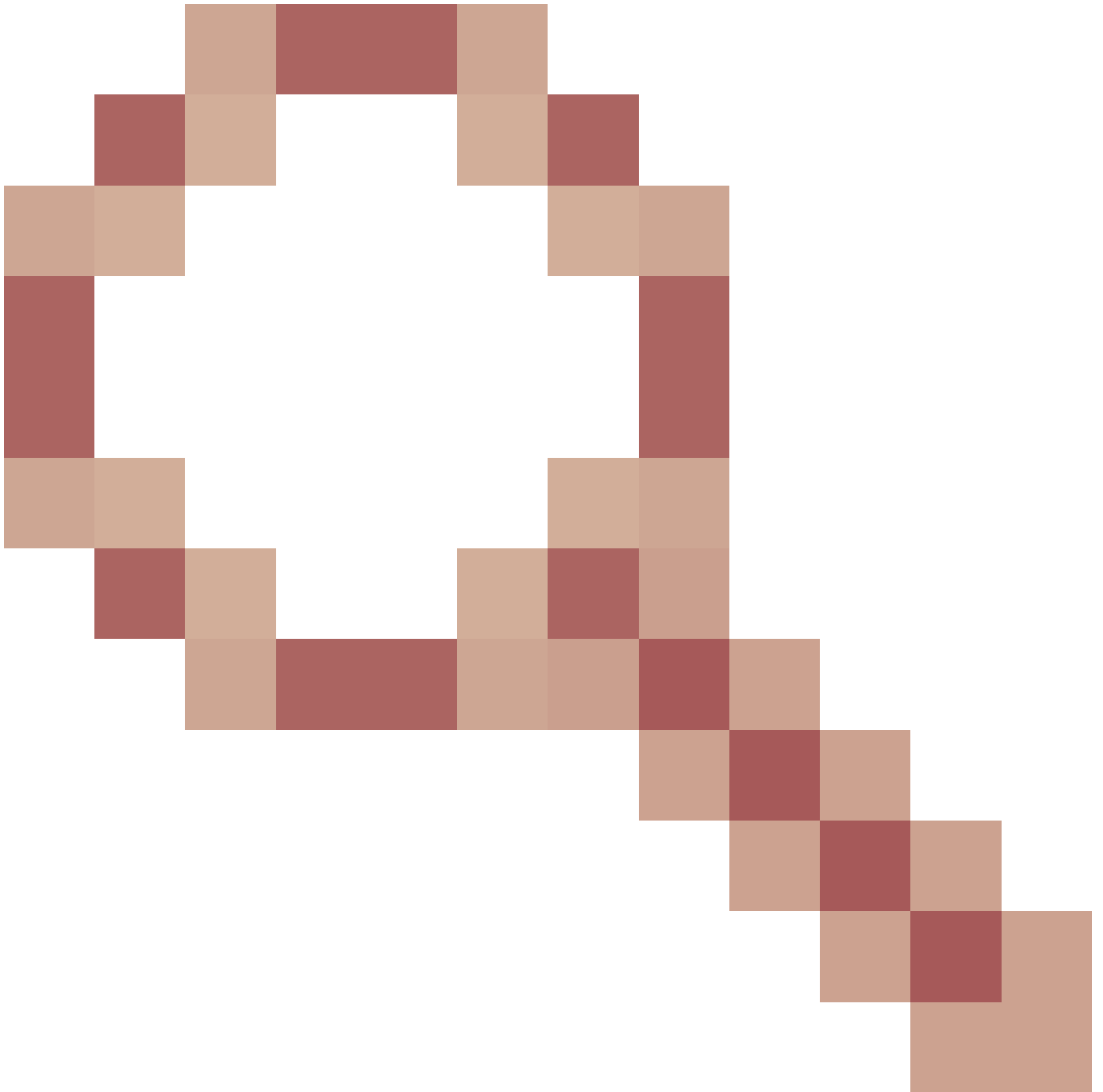
3 - Error

Impact

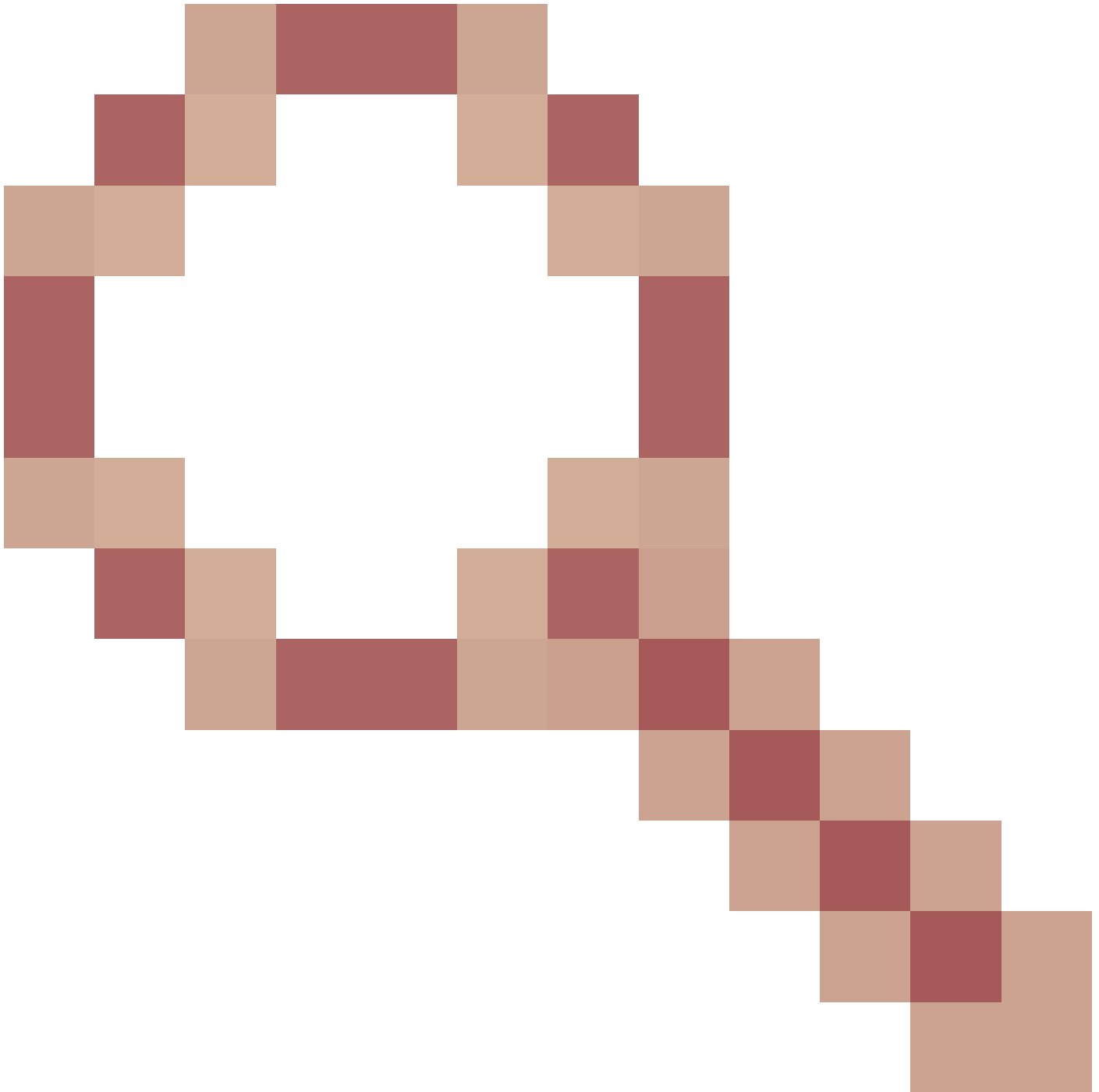
Disk error prevents reading and reading data

Description

This message indicates that the Extended File System (EXT) type encountered an error while reading or writing a memory block on the storage media. EXT file systems are journaling file systems, which means that they keep track of changes to the filesystem in a journal. This allows the filesystem to be recovered in case of a crash. EXT file systems are also very efficient, and they can handle large files and directories. The nature of the log message suggests that there was an input/output (IO) error while attempting to write metadata buffers to the EXT File System on device specified. In some situations, there can be a software defect which can cause unexpected/suboptimal operation of the switch. Please review the next list of some known defects and apply workaround (if available) or software upgrade as applicable: Cisco bug ID [CSCvm77197](#)



- C9300/9500 : %IOSXE-2-PLATFORM: Switch 1 R0/0: kernel: EXT2-fs (sda1): error: Cisco bug ID [CSCvp10506](#)



- C9400 : %IOSXE-2-PLATFORM: Switch 1 R0/0: kernel: EXT2-fs (sda1): error:

SyslogMessage

IOSXE-2-PLATFORM

MessageSample

Sep 11 02:12:15 <> %IOSXE-2-PLATFORM: R0/0: kernel: EXT2-fs (sdb1): error: extx_fsync: detected IO error

ProductFamily

- Cisco ASR 900 Series Aggregation Services Routers
- Cisco Catalyst 4500 Series Switches
- Cisco Catalyst 3650 Series Switches
- Cisco ASR 1000 Series Aggregation Services Routers
- Cisco cBR Series Converged Broadband Routers
- Cisco Catalyst 9400 Series Switches
- Cisco Catalyst 3850 Series Switches
- Cisco 4000 Series Integrated Services Routers
- Cisco Catalyst 9500 Series Switches
- Cisco Catalyst 9300 Series Switches
- Cisco Catalyst 9200 Series Switches
- Cisco Catalyst 9500H Series Switches
- Cisco Catalyst 9600 Series Switches
- Cisco Catalyst 9800 Series Wireless Controllers
- Cisco Catalyst 9800 Wireless Controller in Cloud

Regex

N/A

Recommendation

To help isolate the failure use these recommendations:

1. Run a file system integrity check on the affected partition to identify and repair any possible file system errors. Please run **fsck bootflash:** or **fsck flash:** command to check and fix any file system inconsistencies.
2. Similarly, you can also run the check on the standby with **fsck stby-** or **fsck stbbootflash:y-flash:**
3. After running the file system check, try writing a new file into the flash. As an example, use the command **show clock | append flash:clock.txt** and then proceed to verify if the error messages are still getting populated with the command **show logging**. Most often, these steps are sufficient to resolve the disk I/O problems.
4. If the issue persists, schedule a reload during a maintenance window as that also can automatically run the check file system routine.
5. If this does not resolve the issue, you need to reformat, or replace the disk. Before trying this step, make sure to have a backup of the device configuration and execute this during a maintenance window. Consider that the files contained within the flash can be removed. To proceed with the format of the flash or bootflash, use this procedure:
 - a. Boot the device from a USB. First, download the appropriate file from **software.cisco.com**, format the USB drive on FAT32, and transfer the image into the USB.
 - b. Send the device to **ROMMON** by changing the config register to 0x0 with the command **config-register 0x0** or **boot manual**. Save the configuration with the command **write** or **copy running-config startup-config** and **reload** the device.
 - c. Once the device is in ROMMON state, use the **dev** command to look for the USB file system number, for example usb0:

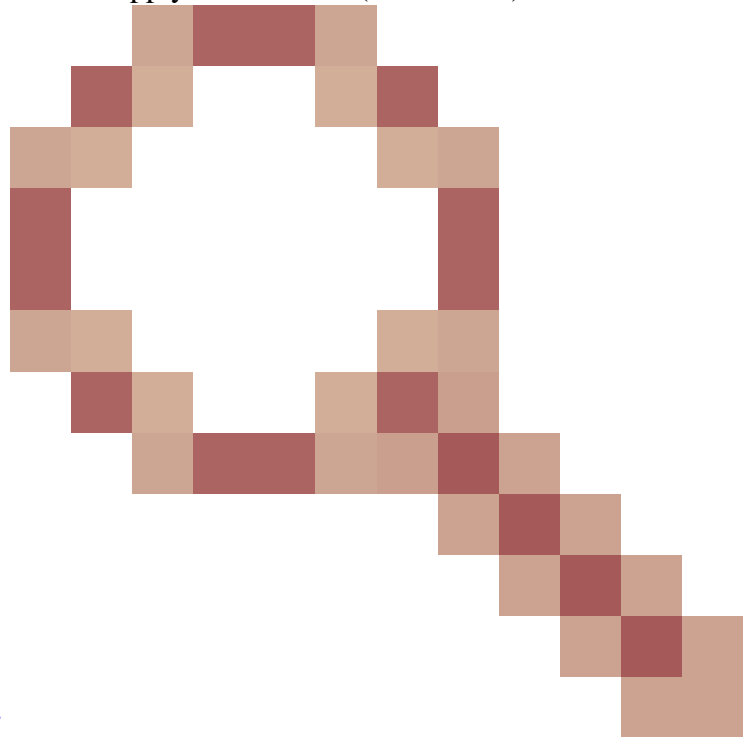
d. Run the command **dir usb0:** (where 0 can change depending on your system) to display the files in the USB drive.

e. Identify the file name of the image, and use the next command to boot up the device from the **USB file boot usb0:**

f. After the device boots up from the USB, use this command to format the disk: **format flash:** or **format bootflash:**

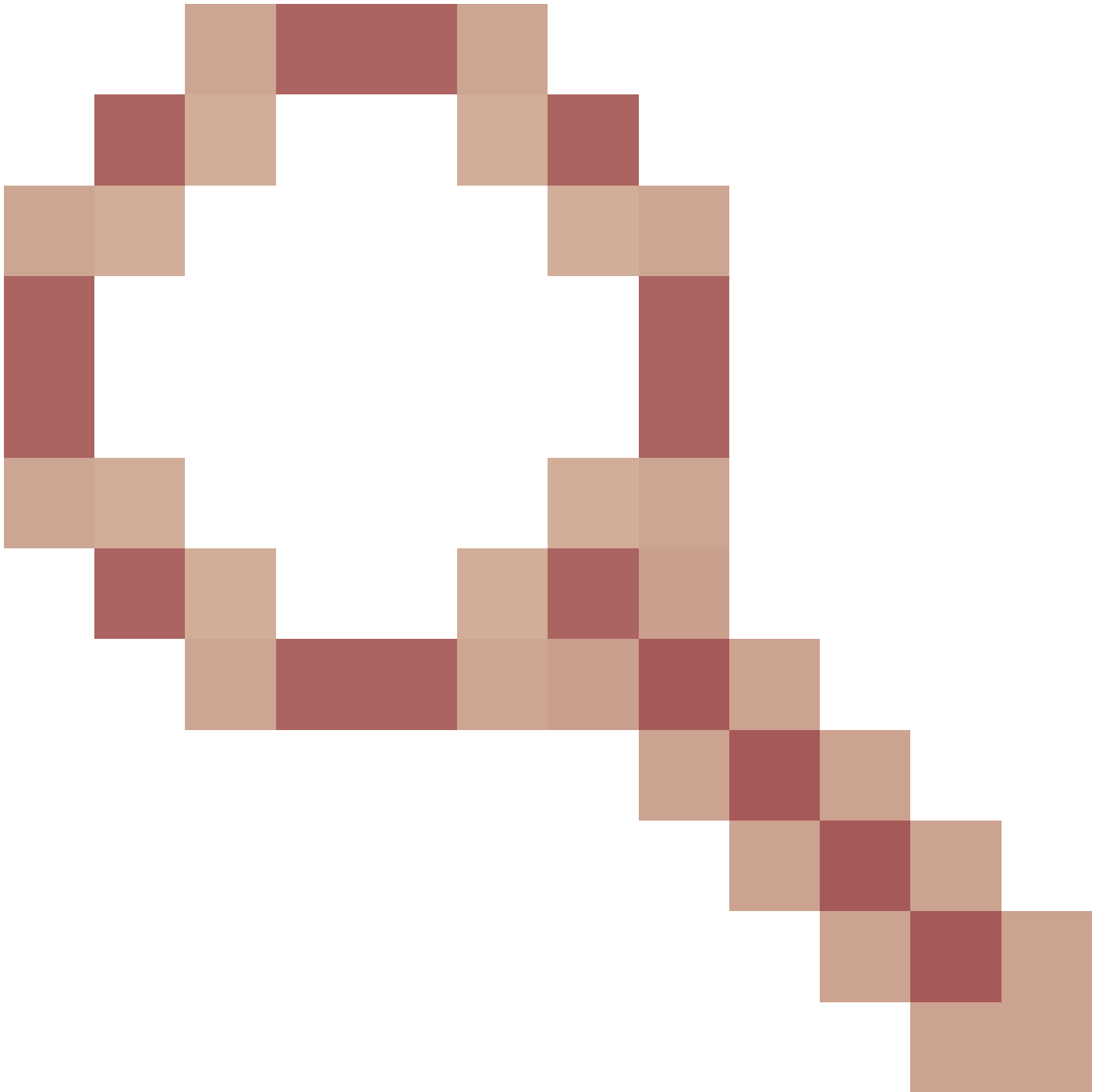
g. Once this step is completed, make sure to copy the image back into the flash: and set the register back to 2102 with the command **config-register 0x2102** or **no boot manual.**

6. In some situations, there can be a software defect which can cause unexpected/suboptimal operation of the switch. Review the next list of some known defects and apply workaround (if available) or software



upgrade as applicable: Cisco bug ID [CSCvm77197](#)

- C9300/9500 : %IOSXE-2-PLATFORM: Switch 1 R0/0: kernel: EXT2-fs (sda1): error: ++ Affected Platforms: C9300/9500 ++ Known Fixed Release: N/A ++ Workaround: Reload or Power Cycle Cisco bug Id [CSCvp10506](#)



- C9400 : %IOSXE-2-PLATFORM: Switch 1 R0/0: kernel: EXT2-fs (sda1): error: ++ Affected Platforms: C9400 ++ Known Fixed Release: 17.3.3 and later ++ Workaround: Power Cycle

Commands

#show version

#show module

#show logging

#show inventory

#show clock

#show file systems