



# M2 SATA Module on Cisco Catalyst 9400 Series Supervisor

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## M2 SATA Module on Cisco Catalyst 9400 Series Supervisor

Cisco Catalyst 9400 is a next generation modular switch that supports model-driven programmability, streaming telemetry, and so on. To support the storage need for these features, the Cisco Catalyst 9400 Series Supervisor has an M2 connector that hosts a 22x88mm M2 SATA flash card. SATA configuration ranges from 240GB, 480GB to 960GB.

## File System and Storage on M2 SATA

Cisco IOS XE 16.6.1 uses only partition 1 on the M2 SATA. If there is no file system present on partition 1 of the M2 card, the Cisco IOS XE 16.6.1 software creates a Linux ext2 filesystem (Linux ext2 is a standard Linux filesystem designed for generic block devices). Each time the device boots, the filesystem on partition 1 is checked. If any repairs are needed, they are made automatically. But if the filesystem is not in the “ext2” format or is unrepairable, a new ext2 filesystem is created and all existing data becomes unreadable or unrecoverable.

- Files stored on the M2 SATA partition are compatible with files stored on other devices.
- You can copy, or, store files between M2 SATA and other types of devices such as USB, eUSB, flash, and other IOS-XE file-system or storage.
- M2 SATA supports different types of storage access such as block-byte; read-store-modify.

## Accessing File System on M2 SATA

The mounted file system from the M2 flash card is accessed at disk0: .

Copying files to and from bootflash: or usbflash0: is supported.

## Formatting the M2 SATA Flash Disk

To format a new Flash Disk, use the **format disk0:** command.

The format command recursively deletes all files on the device. This command fails if any file is open during its execution.

```
Switch# format disk0:
Format operation may take a while. Continue? [confirm]
Format operation will destroy all data in "disk0:". Continue? [confirm]
Format of disk0: complete
```

## Operations on the SATA Module

The following are some of the operations that you can perform on the SATA:

- dir
- copy
- delete
- show disk0:
- show file information disk0:
- show file systems

Following are sample outputs of the operations:

```
Switch# dir disk0:
Directory of disk0:/
 11 drwx          16384 Jul 13 2017 14:51:08 +00:00 lost+found
 13 -rw-          17866 Aug 11 2017 09:51:22 +00:00 test.txt
118148280320 bytes total (112084099072 bytes free)
```

Copy a file from the disk0: to USB

```
Switch# copy disk0:test.txt usbflash0:
Destination filename [test.txt]?
Copy in progress...C
17866 bytes copied in 0.096 secs (186104 bytes/sec)
```

```
Switch# dir usbflash0:
Directory of usbflash0:/
 12 -rw-          33554432 Jul 28 2017 10:12:58 +00:00 nvram_config
 11 drwx          16384 Jul 28 2017 10:09:46 +00:00 lost+found
 13 -rw-          17866 Aug 11 2017 09:52:16 +00:00 test.txt
189628416 bytes total (145387520 bytes free)
```

Delete the file test.txt from disk0:

```

Switch# delete disk0:test.txt
Delete filename [test.txt]?
Delete disk0:/test.txt? [confirm]

Switch# dir disk0:
Directory of disk0:/
No files in directory
118148280320 bytes total (112084135936 bytes free)

Copy file test.txt from USB to disk0:

Switch# copy usbflash0:test.txt disk0:
Destination filename [test.txt]?
Copy in progress...C
17866 bytes copied in 0.058 secs (308034 bytes/sec)

Switch# dir disk0:
Directory of disk0:/
  11  -rw-                17866  Aug 11 2017 09:53:03 +00:00  test.txt
118148280320 bytes total (112084115456 bytes free)

```

### Show commands

```

Switch# show disk0:
-#- --length-- -----date/time----- path
  2      17866 Aug 11 2017 09:54:06.0000000000 +00:00 test.txt
112084115456 bytes available (62513152 bytes used)

Switch# show file information disk0:test.txt
disk0:test.txt:
  type is image (elf64) []
  file size is 448 bytes, run size is 448 bytes
Foreign image, entry point 0x400610

Switch# show file systems
File Systems:

      Size(b)      Free(b)      Type  Flags  Prefixes
      -          -          -     -     -
      -          -          opaque rw    system:
      -          -          opaque rw    tmpsys:
* 11250098176     9694093312   disk  rw    bootflash: flash:
  1651314688     1232220160   disk  rw    crashinfo:
 118148280320  112084115456  disk  rw    disk0:
   189628416    145387520    disk  rw    usbflash0:
   7763918848    7696850944   disk  ro    webui:
      -          -          opaque rw    null:
      -          -          opaque ro    tar:
      -          -          network rw    tftp:
   33554432     33532852     nvram rw    nvram:
      -          -          opaque wo    syslog:
      -          -          network rw    rcp:
      -          -          network rw    http:
      -          -          network rw    ftp:
      -          -          network rw    scp:
      -          -          network rw    https:
      -          -          opaque ro    cns:

```

## Feature History and Information for M2 SATA Module

Release	Modification
Cisco IOS XE Everest 16.6.1	This feature was introduced.

