Transfer a System Image between Devices

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Introduction

This document describes how to copy a system image from one device to another within the same router, and from one router to another.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Copy to a Different File System inside the Same Device

The next table provides command options to use when copying a system image from one device to another. The methods can vary based on different platforms.

Command Summary

Listed in this table are the various locations to which you can copy an image from a TFTP server. Refer to the Configuration Fundamentals Configuration Guide for more information and to learn more about each of these options:

<#root>

```
Router#
```

copy tftp ?

Syntax Description	
bootflash:	Copy to bootflash: file system
disk0:	Copy to disk0: file system
disk1:	Copy to disk1: file system
flash:	Copy to flash: file system
flh:	Copy to flh: file system
ftp:	Copy to ftp: file system
lex:	Copy to lex: file system
null:	Copy to null: file system
nvram:	Copy to nvram: file system
rcp:	Copy to rcp: file system
running-config	Update (merge with) current system configuration
slot0:	Copy to slot0: file system
slot1:	Copy to slot1: file system
startup-config	Copy to startup configuration
system:	Copy to system: file system
tftp:	Copy to tftp: file system

The three most common commands used to copy images are:

- **copy tftp flash**
- **copy rcp flash**

- **copy slot0: slot1:**

This next example illustrates how to copy the system image from one device to another (for example, from one slot/disk to another slot/disk) on Cisco 3600 series routers.

Detailed example:

```
<#root>

router#

show slot0:


!--- This command is used to view the contents of slot 0

-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time------  name
1 .D unknown 5E8B84E6 209D8 11 2392 Jan 22 2000 00:22:42 flashconfig
2 ..  image 5E7BAE19 B623C4 22 11802988 Jan 22 2000 00:23:18

rsp-jsv-mz.120-8.0.2.T



router#

show slot1:


!--- This command is used to view the contents of slot 1

-#- ED --type-- --crc--- -seek-- nlen -length- -----date/time------  name
1 .. unknown 6A2B4BA7 6FA9E0 20 7186784 Jul 30 1999 15:05:19 rsp-jv-mz.111-26.CC1
2 .. config 631F0D8B 6FB1EC 6 1929 Oct 19 1999 06:15:49 config
3 .. config  631F0D8B 6FB9F8 7 1929 Oct 19 1999 06:16:03 config1
```

The **copy** command shown is used to copy the system image file from one slot to another. In the next example, the system image is copied from slot0 to slot1:

```
<#root>

router#

copy slot0: slot1:


Source  filename []?

rsp-jsv-mz.120-8.0.2.T


!--- Enter the file name of the system image to be copied

Destination filename [slot1]?
```

```
Erase slot1: before copying? [confirm]Erasing the slot1 filesystem will remove
all files! Continue? [confirm]
Erasing device... eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
...erasedeeErase of slot1: complete
Copy in progress...CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCC


! --- Output Suppressed


Verifying checksum...  OK (0xE884)11802988 bytes copied in 346.312 secs
(38481 bytes/sec)
```

Copy from One Device to Another

To copy a software image from a device that acts as a TFTP server to another device, see the procedure steps. In this example, Switch1 is the TFTP server and Switch2 is the device where the software image is copied to.

Note: Before you begin, verify the IP connectivity between devices is successful with the use of the **ping** command.

---

1. Look for the image you need to transfer and verify the size of the file on Switch1 with the **dir** command:

```
<#root>

Switch1#

dir | i .bin

97478   -rw-        806048122  May 11 2026 01:59:40 +00:00  cat9k_iosxe.16.12.05.SPA.bin
97424   -rw-       1284011433  Apr 23 2026 17:36:35 +00:00  cat9k_iosxe.17.15.05.SPA.bin
97420   -rw-       1339381361  Mar 27 2026 05:53:48 +00:00  cat9k_iosxe.17.12.06.SPA.bin

97437 -rw- 892195673 Mar 26 2026 02:40:11 +00:00 cat9k_iosxe.17.03.01.SPA.bin

97455   -rw-       1262465196   Feb 5 2026 15:31:55 +00:00  cat9k_iosxe.17.09.07.SPA.bin
Switch1#
```

2. Verify there is enough space available on the destination device (for example, on Switch2) for the system image file to be copied:

```
<#root>

Switch2#

dir | i .bin

365133  -rw-       1262465196  Feb 19 2026 05:34:45 +00:00  cat9k_iosxe.17.09.07.SPA.bin
365139  -rw-       1339381361   Feb 6 2026 08:22:29 +00:00  cat9k_iosxe.17.12.06.SPA.bin
Switch2#

Switch2#

dir | i bytes

11250098176 bytes total (4012613632 bytes free)

Switch2#
```

Note: If there is enough space to copy the system image file, you can retain the original one and the new file can be copied in the additional memory space.
If there is not enough space available, the current file from the Flash must be erased. It is good practice to back up the current system image to the TFTP server with the **copy flash tftp** command.

3. Configure Switch1 as the TFTP server with the **tftp-server** command:

```
<#root>

Switch1#

configure terminal


Enter configuration commands, one per line.  End with CNTL/Z.
Switch1(config)#

tftp-server ?

  bootflash:  Allow URL file TFTP load requests
  cloudfs:    Allow URL file TFTP load requests
  crashinfo:  Allow URL file TFTP load requests
  flash       Allow flash file TFTP load requests
  flash:      Allow URL file TFTP load requests
  null:       Allow URL file TFTP load requests
  nvram:      Allow URL file TFTP load requests
  rom         Allow ROM image TFTP load requests
  system:     Allow URL file TFTP load requests
  tmpsys:     Allow URL file TFTP load requests

Switch1(config)#
```

Note: The options given previously for the **tftp-server** command can vary for different platforms.

```
<#root>

Switch1(config)#

tftp-server bootflash:cat9k_iosxe.17.03.01.SPA.bin

Switch1(config)#

end

Switch1#

!--- This command configures the router as a TFTP server for the specified file.
```

4. When the TFTP server is configured for the desired image file, transfer the specified image from Switch1 to Switch2 with the **copy <source file system><destination file system>** command:

```
<#root>

Switch2#

copy tftp: bootflash:

Address or name of remote host []?

10.1.1.1

Source filename []?

cat9k_iosxe.17.03.01.SPA.bin

Destination filename [cat9k_iosxe.17.03.01.SPA.bin]?
Accessing tftp://10.1.1.1/cat9k_iosxe.17.03.01.SPA.bin...
Loading cat9k_iosxe.17.03.01.SPA.bin from 10.1.1.1 (via HundredGigE1/0/50): !!!!.O!!!!O!!!O!!!O!!!
[OK - 892195673 bytes]

892195673 bytes copied in 4553.468 secs (195938 bytes/sec)
Switch2#
```

5. Verify the new system image is present on the destination device (Switch2):

```
<#root>

Switch2#

dir | i .bin

365117 -rw- 892195673 May 29 2026 16:54:36 +00:00 cat9k_iosxe.17.03.01.SPA.bin

365133  -rw-       1262465196  Feb 19 2026 05:34:45 +00:00  cat9k_iosxe.17.09.07.SPA.bin
365139  -rw-       1339381361   Feb 6 2026 08:22:29 +00:00  cat9k_iosxe.17.12.06.SPA.bin
Switch2#
```

Note: To copy a startup-config file from one device to another, refer to Copying Configuration Files By Using TFTP.

Note: In scenarios where a timeout occurs while attempting to copy a file or image between devices, you can try adjusting the IP TFTP blocksize to either the maximum value allowed or to a value lower than the MTU in use. Additionally, ensure that the IP TFTP source-interface is correctly configured and that this interface is reachable across the devices. These commands can be changed in global configuration mode.

Related Information

- Copy Files Securely from Routers and Switches to Local PC
- Loading and Maintaining System Images
- Generate TFTP Transfer Rate Increase on a Switch and 5760 WLC
- Technical Support & Documentation - Cisco Systems