

# How to Download a Software Image to Cisco 2600/2800/3800 series router through TFTP Using the tftpdnld ROMmon Command

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## Introduction

This document explains how to download a software image to a Cisco 2600/2800/3800 Series Router using Trivial File Transfer Protocol (TFTP) over the *first LAN port* using the ROMmon **tftpdnld** command.

### Notes:

- The ROMmon TFTP transfer works on the first LAN port only. However, for the Cisco 2612, you can choose the Token Ring or Fast Ethernet port.
- You can only download files to the router. You cannot use ROMmon TFTP to get files from the router.
- The transfer does not support route bridging on Token Ring ports.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

This document is not restricted to specific software and hardware versions.

### Conventions

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

# Operation

First, you must set ROMmon environment variables prior to the TFTP download. All variable names are case sensitive.

You can view the ROMmon environment variables by using the **set** command, as shown here:

```
rommon 3 > set
PS1=rommon ! >
IP_ADDRESS=172.18.16.76
IP_SUBNET_MASK=255.255.255.192
DEFAULT_GATEWAY=172.18.16.65
TFTP_SERVER=172.18.16.2
TFTP_FILE=quake/rel22_Jan_16/c2600-i-mz
```

The variables to set for **tftpdnld** are shown here:

```
usage: tftpdnld [-ur]
Use this command for disaster recovery only to recover an image via TFTP.
Monitor variables are used to set up parameters for the transfer.
(Syntax: "VARIABLE_NAME=value" and use "set" to show current variables.)
"ctrl-c" or "break" stops the transfer before flash erase begins.

The following variables are REQUIRED to be set for tftpdnld:
    IP_ADDRESS: The IP address for this unit
    IP_SUBNET_MASK: The subnet mask for this unit
    DEFAULT_GATEWAY: The default gateway for this unit
    TFTP_SERVER: The IP address of the server to fetch from
    TFTP_FILE: The filename to fetch

The following variables are OPTIONAL:
    TFTP_VERBOSE: Print setting. 0=quiet, 1=progress(default), 2=verbose
    TFTP_RETRY_COUNT: Retry count for ARP and TFTP (default=7)
    TFTP_TIMEOUT: Overall timeout of operation in seconds (default=7200)
    TFTP_CHECKSUM: Perform checksum test on image, 0=no, 1=yes (default=1)

Command line options:
    -r: do not write flash, load to DRAM only and launch image
    -u: upgrade the rommon, system will reboot once upgrade is complete
rommon 14 >
```

**Note:** As detailed in Cisco bug ID CSCdk81077 ( registered customers only) , for Cisco 2600 and 1720 Series Routers running the ROM monitor command **tftpdnld**, the command might report a bad checksum comparison when it loads Cisco IOS software images of Cisco IOS Software Release 12.0(2.2)T or later.

**Note:** As a workaround to this problem, set the ROM monitor variable **TFTP\_CHECKSUM** to 0. This is done by defining the variable **TFTP\_CHECKSUM=0** from the ROM monitor **set** command, and then proceeding with the **tftpdnld** procedure.

## Token Ring

The variables to set for Token Ring are shown here:

TR_1E1R_PORT	TR_SPEED_MODE
On the Cisco 2612, this variable sets the Token Ring	For a Token Ring port, this variable sets the ring speed and

or Ethernet port.	duplex mode.
0 = use Ethernet port	0 = 4 Mbps half-duplex mode
1 = use Token Ring port	1 = 4 Mbps full-duplex mode
Default is 0	2 = 16 Mbps half-duplex mode
	3 = 16 Mbps full-duplex mode
	Default is 2

## Fast Ethernet

The variables to set for Fast Ethernet are shown here:

FE_SPEED_MODE
0 = 10 Mbps half-duplex mode
1 = 10 Mbps full-duplex mode
2 = 100 Mbps half-duplex mode
3 = 100 Mbps full-duplex mode
4 = auto-negotiation
Default is 4

You must use the **sync** command to save ROMmon environment variables to nonvolatile RAM (NVRAM).

## Example

```
rommon 16 > IP_ADDRESS=171.68.171.0
rommon 17 > IP_SUBNET_MASK=255.255.254.0
rommon 18 > DEFAULT_GATEWAY=171.68.170.3
rommon 19 > TFTP_SERVER=171.69.1.129
rommon 20 > TFTP_FILE=c2600-is-mz.113-2.0.3.Q
rommon 21 > tftpdnld
```

```
IP_ADDRESS: 171.68.171.0
IP_SUBNET_MASK: 255.255.254.0
DEFAULT_GATEWAY: 171.68.170.3
TFTP_SERVER: 171.69.1.129
TFTP_FILE: c2600-is-mz.113-2.0.3.Q
```

Invoke this command for disaster recovery only.

WARNING: all existing data in all partitions on flash will be lost!

Do you wish to continue? y/n: [n]: y

```
Receiving c2600-is-mz.113-2.0.3.Q from 171.69.1.129 !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
File reception completed.
Copying file c2600-is-mz.113-2.0.3.Q to flash.
Erasing flash at 0x607c0000
```

```
program flash location 0x60440000  
rommon 22 >
```

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## Related Information

- **Technical Support & Documentation – Cisco Systems**
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