

Recovering from a Corrupted or Lost Cisco IOS Image on LS1010 and Catalyst 8500 Switches

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Introduction

This document discusses how to recover from a corrupted or lost Cisco IOS® software image on LS1010 and Catalyst 8500 series of ATM switches.

The Loading and Maintaining System Images chapter of the Cisco IOS configuration guides provides step-by-step instructions for file system management for all platforms that run Cisco IOS.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

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

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Recovery Methods

Normally, if your ATM switch comes up in ROMMON mode, you can use the **boot** command to tell the switch which image to load. Note that while the ROMMON command-line interface (CLI) lists a **dnld** command, the LS1010 does not support xmodem download. The **dnld** command is left over from the IOS branch from which it was ported.

```
rommon 10 > ?
alias          set and display aliases command
boot          boot up an external process
break        set/show/clear the breakpoint
confreg      configuration register utility
cont         continue executing a downloaded image
context      display the context of a loaded image
dev          list the device table
```

```

dir                list files in file system
dis                disassemble instruction stream
dnld              serial download a program module
frame             print out a selected stack frame
help              monitor builtin command help
[output omitted]

```

If the image in bootflash becomes corrupted and your ATM switch goes into ROMMON, you can manually boot from a network file. Use a command such as **boot <file path> <tftp server ip address>**.

The only other recovery method is to use a PCMCIA card. Cisco platforms support three Flash memory file system types named Class A, Class B and Class C. The LS1010 and Catalyst 8500 series use a Class A file system. If you do not have a PCMCIA card in your ATM switch, you can use a card from one of these platforms, which also use a Class A file system and formatting:

- Route Switch Module (RSM) from the Catalyst 5000
- GSR Route Processor (GRP)
- Cisco 7500 series Route Switch Processor (RSP) 2, 4, or 8
- RSP7000

Use the PCMCIA Filesystem Compatibility Matrix to confirm that you use a PC card from a platform with the same file system.

The PCMCIA card for your ATM switch can be formatted in other RSP-based systems or in a working ATM switch. Format a PCMCIA card on a working system and copy the appropriate image to it via a command such as **copy tftp slot0:**. Then move the PC card back to the ATM switch's PC card slot.

Use these steps to boot an image from a PCMCIA card slot.

1. Execute the **dev** command to determine the device names of the PCMCIA slots.

```

rommon 18 > dev
Devices in device table:
   id  name
bootflash: boot flash
  slot0: PCMCIA slot 0
  slot1: PCMCIA slot 1
  eprom: eprom

```

2. Execute the **dir** command to view the files on your PCMCIA card.

```

rommon 19 > dir
usage: dir <device>
rommon 20 > dir slot0:
      File size           Checksum      File name
401756 bytes (0x80335c) 0x2a290d95  cat8540m-wp-mz_120-10_W5_18c.bin

```

3. Execute the **boot** command and specify a PC card slot number and a Cisco IOS image name.

```

rommon 21 > boot slot0:cat8540m-wp-mz_120-10_W5_18c.bin
Self decompressing the image : #####
#####
#####
#####
#####

PRIMARY CPU:
Booting on Mar 23 2001 13:10:06

Cat8540 Diagnostics V1.4, Dated Aug 19 2000 00:54:12
Model ACTIVE CPU-Card, Serial# MIC025006YD, H/W V5.5
Copyright (c) Cisco Systems Inc. 1999

```

```
.....  
Power-on Diagnostics Passed.  
Reading cubi version..Done
```

In rare cases, you may see these error messages:

```
rommon 20 > dir slot0:  
PCMCIA slot0 device is not initialized  
open: read error...requested 0x4 bytes, got 0x0  
trouble reading device magic number  
dir: cannot open device "slot0:"
```

These messages indicate that ROMMON detected a bad or unexpected checksum when you executed the **directory** command. To fix the problem:

- Read the PC card in another system.
- Swap the PC card with a known working card from another system.
- If necessary, reformat the card on a working system and copy the appropriate image to it via a command such as **copy tftp slot0:**. Then move the PC card back to the ATM switch's PC card slot.

Class A File System Commands

The methods used for erasing, deleting, and recovering files depend on the class of the file system. Class A file systems support these file management commands:

- **delete** – "Marks" files as deleted, but the files still occupy space in Flash memory. Use the **undelete** command to recover these files later.
- **squeeze** – Permanently removes all of the files marked "deleted" from the specified Flash memory device. These files can no longer be recovered. The squeeze operation can take as long as several minutes if it needs to erase and rewrite most of the Flash memory space on a PCMCIA card.
- **format** – Erases all of the files on a Flash device.
- **verify** – Recomputes and verifies the checksum of a file in Flash memory.

Related Information

- [ATM Technology Support Pages](#)
- [Technical Support – Cisco Systems](#)

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