Formatting the Compact Flash Memory Cards

This appendix describes how to format the compact flash memory into a Class B flash file system, known as the low-end file system (LEFS), or into a Class C flash file system, which is similar to the standard DOS file system. It also describes how to perform file and directory operations in each file system.

This appendix presents the following major topics:

Formatting Procedures for Compact Flash Memory Cards

The following sections describe formatting procedures for internal and external compact flash memory cards.

Formatting Procedures

We recommend that you erase (Class B) or format (Class C) new compact flash memory cards to initialize them with either a Class B or Class C flash file system. This ensures proper formatting and enables the ROM monitor to recognize and boot the flash.

Note A compact flash memory card formatted with the standard DOS file system does not support booting from the ROM monitor.

Determining the File System on a Compact Flash Memory Card

To determine the file system of an external compact flash memory card, enter the **show slot0: all** command. To determine the file system of an internal compact flash memory card, enter the **show flash: all** command.

- If geometry and format information is not displayed, the card is formatted with a Class B flash file system.
- If geometry and format information is displayed, the card is formatted with a Class C flash file system.

The following examples show sample outputs for Class B and Class C flash file systems:

External Card with Class B Flash File System

The geometry and format information is not displayed for this format:

```
Router# show slot0: all

Partition   Size    Used      Free      Bank-Size  State          Copy
Mode
  1        31360K   6502K    24857K        0K      Read/Write     Direct

Slot0 CompactFlash directory:
File  Length   Name/status
        addr      fcksum  ccksum
  1   6658376  cvg224-i-mz
        0x40      0xE0FF  0xE0FF
[6658440 bytes used, 25454200 available, 32112640 total]
31360K bytes of ATA Slot0 CompactFlash (Read/Write)

 Chip information NOT available.
```

External Card with Class C Flash File System

The geometry and format information is displayed in this forma:

```
Router# show slot0: all

-#- --length-- -----date/time------ path
1      6658376 Mar 01 1993 04:27:46 cvg224-i-mz

25268224 bytes available (6664192 bytes used)

******** ATA Flash Card Geometry/Format Info ********

ATA CARD GEOMETRY
   Number of Heads:      4
   Number of Cylinders    490
   Sectors per Cylinder   32
   Sector Size            512
   Total Sectors          62720

ATA CARD FORMAT
   Number of FAT Sectors  31
   Sectors Per Cluster    8
   Number of Clusters     7796
   Number of Data Sectors 62560
   Base Root Sector       155
   Base FAT Sector        93
   Base Data Sector       187
```

Internal Card with Class B Flash File System

The geometry and format information is not displayed for this format:

```
Router# show flash: all

Partition   Size    Used      Free      Bank-Size  State          Copy
Mode
  1        125184K  20390K    104793K        0K      Read/Write
Direct
```

```
System CompactFlash directory:
File  Length   Name/status
        addr      fcksum  ccksum
  1   6658376  cvg224-i-mz
        0x40      0xE0FF  0xE0FF
  2   14221136  cvg224-telcoent-mz
        0x6599C8  0x5C3D  0x5C3D
[20879640 bytes used, 107308776 available, 128188416 total]
125184K bytes of ATA System CompactFlash (Read/Write)

 Chip information NOT available.
```

Internal Card with Class C Flash File System

The geometry and format information is displayed in this format:

```
11# show flash: all

-#- --length-- -----date/time------ path
1      6658376 Mar 01 1993 04:27:46 cvg224-i-mz

25268224 bytes available (6664192 bytes used)

******** ATA Flash Card Geometry/Format Info ********

ATA CARD GEOMETRY
   Number of Heads:      4
   Number of Cylinders    490
   Sectors per Cylinder   32
   Sector Size            512
   Total Sectors          62720

ATA CARD FORMAT
   Number of FAT Sectors  31
   Sectors Per Cluster    8
   Number of Clusters     7796
   Number of Data Sectors 62560
   Base Root Sector       155
   Base FAT Sector        93
   Base Data Sector       187
```

Formatting Compact Flash Memory as a Class B Flash File System

Use these formatting commands to:

- Format compact flash memory cards with a Class B flash file system (LEFS)
- Remove the files from a compact flash memory card previously formatted with a Class B flash file system

For external compact flash memory cards, enter the **erase slot0:** command.

For internal compact flash memory cards, enter the **erase flash:** command.

The following example shows sample output for formatting an external compact flash memory card with a Class B flash file system:

```
Router# erase slot0:

Erasing the slot0 filesystem will remove all files! Continue? [confirm]
Current DOS File System flash card in slot0: will be formatted into Low
End File System flash card!  Continue? [confirm]
Erasing device...
```

```
eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
...erased
Erase of slot0: complete
```

Formatting Compact Flash Memory as a Class C File System

Use these formatting commands to do the following:

- Format compact flash memory cards with a Class C flash file system
- Remove the files from a compact flash memory card previously formatted with a Class C flash file system

For external compact flash memory cards, enter the **format slot0:** command.

For internal compact flash memory cards, enter the **format flash:** command.

The following example shows sample output for formatting an internal compact flash memory card with a Class C flash file system:

```
Router# format flash:

Format operation may take a while. Continue? [confirm]
Format operation will destroy all data in "flash:".  Continue? [confirm]
Enter volume ID (up to 64 chars)[default flash]:
Current Low End File System flash card in flash will be formatted into DOS
File System flash card!  Continue? [confirm]
Format:Drive communication & 1st Sector Write OK...
Writing Monlib sectors ...................................................................
Monlib write complete
..
Format:All system sectors written. OK...

Format:Total sectors in formatted partition:250592
Format:Total bytes in formatted partition:128303104
Format:Operation completed successfully.

Format of flash complete
```

File and Directory Operations

The following sections describe file and directory operations for internal and external Cisco flash memory cards. File and directory operations vary according to the formatted file system—Class B or Class C.

Operations for Use with Class B Flash File System

The following file operations are useful for compact flash memory cards formatted with a Class B flash file system.

Copying Files

To copy files to another location, enter the **copy** {**flash:** | **slot0:**} command.

The following example shows sample output for copying a Cisco IOS file from an internal compact flash memory card (**flash:**) to an external compact flash memory card (**slot0:**):

```
Router# copy flash:cvg224-i-mz.tmp slot0:

Destination filename [cvg224-i-mz.tmp]?
Erase slot0:before copying?
[confirm]nCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
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CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Verifying checksum...  OK (0xC68E)
6458584 bytes copied in 67.788 secs (96396 bytes/sec)
```

The following example shows sample output for copying a configuration file to the startup configuration in an internal compact flash memory card (**flash:**):

```
Router# copy flash:my-config1 startup-config

Destination filename [startup-config]?
[OK]
517 bytes copied in 4.188 secs (129 bytes/sec)
```

The following example shows sample output for copying a configuration file to the running configuration in an internal compact flash memory card (**flash:**):

```
Router# copy flash:my-config2 running-config

Destination filename [running-config]?
709 bytes copied in 0.72 secs
```

Displaying the Contents of a Compact Flash Memory Card

To display the contents (directories and files) of a compact flash memory card formatted with a Class B flash file system, enter the **dir** {**flash:** | **slot0:**} command or the **show** {**flash:** | **slot0:**} command.

The following example shows sample output for displaying the contents of an internal compact flash memory card using the **dir flash:** command:

```
Router# dir flash:

Directory of flash:/

     1  -rw-     5190020              <no date>  cvg224-i-mz
     2  -rw-     6458584              <no date>  cvg224-i-mz
     3  -rw-    16535740              <no date>  cvg224-telcoent-mz

128450560 bytes total (100266024 bytes free)
```

The following example shows sample output for displaying the contents of an external compact flash memory card using the **show slot0:** command:

```
Router# show slot0:

System CompactFlash directory:
File  Length   Name/status
   1   5190020  cvg224-i-mz
   2   6458584  cvg224-i-mz
   3   16535740  cvg224-telcoent-mz
[28184536 bytes used, 100266024 available, 128450560 total]
125440K bytes of ATA System CompactFlash (Read/Write)
```

Delete Files from Compact Flash Memory

To delete a file from compact flash memory, enter the **delete** {**flash:** | **slot0:**} command, followed by the **squeeze** {**flash:** | **slot0:**} command.

When a file is deleted in the Class B flash file system, the memory space occupied by the deleted file is not released until you enter the **squeeze** {**flash:** | **slot0:**} command. Although the memory space once occupied by the deleted file remains, the deleted file cannot be recovered. To release the memory space occupied by a deleted file, enter the **squeeze** {**flash:** | **slot0:**} command.

Note The **dir** {**flash:** | **slot0:**} command does not show deleted files; the **show** {**flash:** | **slot0:**} command shows all files, including any deleted files if the **squeeze** {**flash:** | **slot0:**} command has not been entered.

The following example shows sample output for deleting a Cisco IOS file from an external compact flash memory card, and then releasing the memory space originally occupied by the file:

```
Router# dir slot0:

Directory of slot0:/

     1  -rw-     6458208              <no date>  cvg224-i-mz.tmp
     2  -rw-     6458208              <no date>  cvg224-i-mz

16056320 bytes total (3139776 bytes free)

Router# delete slot0:cvg224-i-mz.tmp

Delete filename [cvg224-i-mz.tmp]?
Delete slot0:cvg224-i-mz.tmp? [confirm]

Router# dir slot0:

Directory of slot0:/

     2  -rw-     6458208              <no date>  cvg224-i-mz

16056320 bytes total (3139776 bytes free)

Router# show slot0:

Slot0 CompactFlash directory:
File  Length   Name/status
   1   6458208  cvg224-i-mz.tmp [deleted]
   2   6458208  cvg224-i-mz
[12916544 bytes used, 3139776 available, 16056320 total]
15680K bytes of ATA Slot0 CompactFlash (Read/Write)

Router# squeeze slot0:
```

```
Squeeze operation may take a while. Continue? [confirm]
squeeze in progress...
ssssssssssssssssssssssseeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee
Rebuild file system directory...
Squeeze of slot0 complete
```

Displaying File Content

To display the content of a file in compact flash memory, use the **more** {**flash:** | **slot0:**} command.

The following example shows sample output from the **more** {**flash:** | **slot0:**} command on an external Cisco flash memory card:

```
Router# more slot0:cvg224-i-mz

00000000: 7F454C46 01020100 00000000 00000000    .ELF .... .... ....
00000010: 00020061 00000001 80008000 00000034    ...a .... .... ...4
00000020: 00000054 20000001 00340020 00010028    ...T  ... .4.  ...(
00000030: 00050008 00000001 0000011C 80008000    .... .... .... ....
00000040: 80008000 00628A44 00650EEC 00000007    .... .b.D .e.l ....
00000050: 0000011C 0000001B 00000001 00000006    .... .... .... ....
00000060: 80008000 0000011C 00004000 00000000    .... .... ..@. ....
00000070: 00000000 00000008 00000000 00000021    .... .... .... ...!
00000080: 00000001 00000002 8000C000 0000411C    .... .... ..@. ..A.
00000090: 00000700 00000000 00000000 00000004    .... .... .... ....
000000A0: 00000000 00000029 00000001 00000003    .... ...) .... ....
000000B0: 8000C700 0000481C 00000380 00000000    ..G. ..H. .... ....
000000C0: 00000000 00000004 00000000 0000002F    .... .... .... .../
000000D0: 00000001 10000003 8000CA80 00004B9C    .... .... ..J. ..K.
000000E0: 00000020 00000000 00000000 00000008    ...  .... .... ....
000000F0: 00000000 0000002F 00000001 10000003    .... .../ .... ....
00000100: 8000CAA0 00004BBC 00623FA4 00000000    ..J  ..K< .b?$ ....
00000110: 00000000 00000008 00000000 3C1C8001    .... .... .... <...
00000120: 679C4A80 3C018001 AC3DC70C 3C018001    g.J. <... ,=G. <...
00000130: AC3FC710 3C018001 AC24C714 3C018001    ,?G. <... ,$G. <...
00000140: AC25C718 3C018001 AC26C71C 3C018001    ,%G. <... ,&G. <...
00000150: AC27C720 3C018001 AC30C724 3C018001    ,'G  <... ,0G$ <...
00000160: AC31C728 3C018001 AC32C72C 3C018001    ,1G( <... ,2G, <...
--More-- q
```

Operations for Use with Class C Flash File System

The following file and directory operations are useful for compact flash memory cards formatted with a Class C flash file system.

File Operations for Class C Flash File System

Copying Files

To copy files to another location, enter the **copy** {**flash:** | **slot0:**} command.

The following example shows sample output for copying a Cisco IOS file from an external compact flash memory card to an internal compact flash memory card:

```
Router# copy slot0:cvg224-i-mz.tmp flash:

Destination filename [cvg224-i-mz.tmp]?
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
```

```
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
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CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
6458584 bytes copied in 202.940 secs (31973 bytes/sec)
```

The following example shows sample output for copying a configuration file to the startup configuration in an internal compact flash memory card (`flash:`):

```
Router# copy flash:my-config1 startup-config

Destination filename [startup-config]?
[OK]
517 bytes copied in 4.188 secs (129 bytes/sec)
```

The following example shows sample output for copying a configuration file to the running configuration in an internal compact flash memory card (`flash:`):

```
Router# copy flash:my-config2 running-config

Destination filename [running-config]?
709 bytes copied in 0.72 secs
```

Displaying the Contents of a Compact Flash Memory Card

To display the contents (directories and files) of a compact flash memory card formatted with a Class C flash file system, use the **dir**{**flash:** | **slot0:**} or **show** {**flash:** | **slot0:**} command.

The following examples show sample outputs for displaying the contents of an external compact flash memory card with a Class C flash file system:

```
Router# show slot0:

-#- --length-- -----date/time------ path
1      6658376 Mar 01 1993 00:29:52 cvg224-i-mz
2         2124 Mar 01 1993 00:34:38 running-config
3         2622 Mar 01 1993 00:34:44 startup-config

25260032 bytes available (6672384 bytes used)

Router# dir slot0:

Directory of slot0:/

   3  -rw-     6455048   Mar 01 2001 00:04:06  cvg224-i-mz
1579  -rw-     6458584   Mar 01 2001 00:24:38  cvg224-i-mz.new

15912960 bytes total (2998272 bytes free)
```

Displaying Geometry and Format Information

To display the geometry and format information of a compact flash memory card formatted with a Class C flash file system, use the **show** {**flash:** | **slot0:**} **filesys** command.

The following example shows sample output for displaying the geometry and format information of an external Cisco flash memory card:

```
Router# show slot0: filesys
```

```
******** ATA Flash Card Geometry/Format Info ********

ATA CARD GEOMETRY
   Number of Heads:      4
   Number of Cylinders    490
   Sectors per Cylinder   32
   Sector Size            512
   Total Sectors          62720

ATA CARD FORMAT
   Number of FAT Sectors  31
   Sectors Per Cluster    8
   Number of Clusters     7796
   Number of Data Sectors 62560
   Base Root Sector       155
   Base FAT Sector        93
   Base Data Sector       187
```

Delete Files from Compact Flash Memory

To delete a file from a compact flash memory card, use the **delete** {**flash: | slot0:**} command.

The following example shows sample output for deleting a Cisco IOS file from an internal compact flash memory card:

```
Router# delete flash:cvg224-i-mz.tmp

Delete filename [cvg224-i-mz.tmp]?
Delete flash:cvg224-i-mz.tmp? [confirm]

Router# dir flash:

Directory of flash:/

No files in directory

128094208 bytes total (128094208 bytes free)
```

Rename a File

To rename a file in a compact flash memory card, use the **rename** {**flash: | slot0:**} command.

The following example shows sample output for renaming a Cisco IOS file in an internal compact flash memory card:

```
Router# dir flash:

Directory of flash:/

    3  -rw-     6458388   Mar 01 1993 00:00:58  cvg224-i-mz.tmp
 1580  -rw-     6462268   Mar 06 1993 06:14:02  cvg224-i-mz.VG224ata

63930368 bytes total (51007488 bytes free)

Router# rename flash:cvg224-i-mz.tmp flash:cvg224-i-mz

Destination filename [cvg224-i-mz]?

Router# dir flash:

Directory of flash:/

 1580  -rw-     6462268   Mar 06 1993 06:14:02  cvg224-i-mz.VG224ata
    3  -rw-     6458388   Mar 01 1993 00:01:24  cvg224-i-mz
```

```
63930368 bytes total (51007488 bytes free)
```

Displaying File Content

To display the content of a file in a compact flash memory card, use the **more** {**flash: | slot0:**} command.

The following example shows sample output from the **more** {**flash: | slot0:**} command on an internal compact flash card:

```
Router# more flash:cvg224-i-mz.tmp

00000000: 7F454C46 01020100 00000000 00000000    .ELF .... .... ....
00000010: 00020061 00000001 80008000 00000034    ...a .... .... ...4
00000020: 00000054 20000001 00340020 00010028    ...T  ... .4.  ...(
00000030: 00050008 00000001 0000011C 80008000    .... .... .... ....
00000040: 80008000 00628A44 00650EEC 00000007    .... .b.D .e.l ....
00000050: 0000011C 0000001B 00000001 00000006    .... .... .... ....
00000060: 80008000 0000011C 00004000 00000000    .... .... ..@. ....
00000070: 00000000 00000008 00000000 00000021    .... .... .... ...!
00000080: 00000001 00000002 8000C000 0000411C    .... .... ..@. ..A.
00000090: 00000700 00000000 00000000 00000004    .... .... .... ....
000000A0: 00000000 00000029 00000001 00000003    .... ...) .... ....
000000B0: 8000C700 0000481C 00000380 00000000    ..G. ..H. .... ....
000000C0: 00000000 00000004 00000000 0000002F    .... .... .... .../
000000D0: 00000001 10000003 8000CA80 00004B9C    .... .... ..J. ..K.
000000E0: 00000020 00000000 00000000 00000008    ...  .... .... ....
000000F0: 00000000 0000002F 00000001 10000003    .... .../ .... ....
00000100: 8000CAA0 00004BBC 00623FA4 00000000    ..J  ..K< .b?$ ....
00000110: 00000000 00000008 00000000 3C1C8001    .... .... .... <...
00000120: 679C4A80 3C018001 AC3DC70C 3C018001    g.J. <... ,=G. <...
00000130: AC3FC710 3C018001 AC24C714 3C018001    ,?G. <... ,$G. <...
00000140: AC25C718 3C018001 AC26C71C 3C018001    ,%G. <... ,&G. <...
00000150: AC27C720 3C018001 AC30C724 3C018001    ,'G  <... ,0G$ <...
00000160: AC31C728 3C018001 AC32C72C 3C018001    ,1G( <... ,2G, <...
--More-- q
```

Directory Operations for Class C Flash File System

Create a New Directory

To create a directory in compact flash memory, use the **mkdir** {**flash: | slot0:**} command.

The following example shows sample output for first displaying the contents of an internal compact flash card, and then creating a directory named **config** and a subdirectory named **test-config**:

```
Router# dir flash:

Directory of flash:/

  3  -rw-     6458208   Mar 01 1993 00:04:08  cvg224-i-mz.tmp

128094208 bytes total (121634816 bytes free)

Router# mkdir flash:/config

Create directory filename [config]?
Created dir flash:/config

Router# mkdir flash:/config/test-config
```

```
Create directory filename [/config/test-config]?
Created dir flash:/config/test-config

Router# dir flash:

Directory of flash:/

  3  -rw-     6458208   Mar 01 1993 00:04:08  cvg224-i-mz.tmp
 1580  drw-           0   Mar 01 1993 23:48:36  config

128094208 bytes total (121626624 bytes free)

Router# cd flash:/config

Router# dir flash:

Directory of flash:/config/

 1581  drw-           0   Mar 01 1993 23:50:08  test-config

128094208 bytes total (121626624 bytes free)
```

Remove a Directory

To remove a directory from compact flash memory, use the **rmdir** {**flash:** | **slot0:**} command.

Before you can remove a directory, all files and subdirectories must be removed from the directory.

The following example shows sample output for displaying the contents of an internal compact flash card, then removing the subdirectory named **test-config**:

```
Router# dir flash:

Directory of flash:/config/

  1581  drw-           0   Mar 01 1993 23:50:08  test-config

128094208 bytes total (121626624 bytes free)

Router# rmdir flash:/config/test-config

Remove directory filename [/config/test-config]?
Delete flash:/config/test-config? [confirm]
Removed dir flash:/config/test-config

Router# dir flash:

Directory of flash:/config/

No files in directory

128094208 bytes total (121630720 bytes free)
```

Enter a Directory and Determine Which Directory You Are In

To enter a directory in compact flash memory, use the **cd** command.

To determine which directory you are in, use the **pwd** command.

If you enter only **cd**, you go to the default home directory, which is **flash:/**.

The following example shows sample output, respectively, for the following actions:

- Entering the home directory of a compact flash memory card in an internal slot (**flash:/**)
- Verifying that you are in the home directory

- Displaying the contents of the home directory
- Entering the **/config** directory
- Verifying that you are in the **/config** directory
- Entering the home directory of a compact flash memory card in an external slot (**slot0:/**)
- Verifying that you are in the **slot0:/** directory
- Returning to the home directory (**flash:/**)
- Verifying that you are in the home directory

```
Router# cd

Router# pwd

flash:

Router# dir

Directory of flash:/

     3  -rw-     6458208   Mar 01 1993 00:04:08  cvg224-i-mz.tmp
  1580  drw-           0   Mar 01 1993 23:48:36  config

128094208 bytes total (121630720 bytes free)

Router# cd config

Router# pwd

flash:/config/

Router# cd slot0:

Router# pwd

slot0:/

Router# cd

Router# pwd

flash:
```