



Using Compact Flash Memory on Catalyst 4500 Series Supervisor Engines

Product Numbers: MEM-C4K-FLD64M=, MEM-C4K-FLD128M=

This document contains installation and configuration information for the Catalyst 4500 and 4500 E-series Supervisor Engine compact flash memory.

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Overview

This configuration note is a standalone publication that provides instructions for installing, removing, and using the compact flash memory in many supervisor engines.

Compact flash memory provides increased storage—64 or 128 MB—for system configuration files, Cisco IOS software images, and other types of system-related files. [Table 1](#) provides memory information for each of the options.



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Table 1 Memory Options

Memory Size	Product Number
64 MB	MEM-C4K-FLD64M
128 MB	MEM-C4K-FLD128M

Safety Overview

Throughout this publication, safety warnings are included in procedures that, if performed incorrectly, can harm you. A warning symbol precedes each warning statement.



Warning

IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

SAVE THESE INSTRUCTIONS

Waarschuwing

BELANGRIJKE VEILIGHEIDSINSTRUCTIES

Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.

BEWAAR DEZE INSTRUCTIES

Varoitus

TÄRKEITÄ TURVALLISUUSOHJEITA

Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelemiseen liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.

SÄILYTÄ NÄMÄ OHJEET

Attention IMPORTANTES INFORMATIONS DE SÉCURITÉ

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS**Warnung WICHTIGE SICHERHEITSHINWEISE**

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.**Avvertenza IMPORTANTI ISTRUZIONI SULLA SICUREZZA**

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

CONSERVARE QUESTE ISTRUZIONI**Advarsel VIKTIGE SIKKERHETSINSTRUKSJONER**

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

TA VARE PÅ DISSE INSTRUKSJONENE**Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA**

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

GUARDE ESTAS INSTRUÇÕES

¡Advertencia! INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES**Varning! VIKTIGA SÄKERHETSANVISNINGAR**

Denna varningssignal signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

SPARA DESSA ANVISNINGAR**FONTOS BIZTONSÁGI ELOÍRÁSOK**

Ez a figyelmeztető jel veszélyre utal. Sérülésveszélyt rejtő helyzetben van. Mielőtt bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplő figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján kereshető meg.

ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!**Предупреждение ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ**

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ**警告 重要的安全性说明**

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

警告 安全上の重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。

주의 중요 안전 지침

이 경고 기호는 위험을 나타냅니다. 작업자가 신체 부상을 일으킬 수 있는 위험한 환경에 있습니다. 장비에 작업을 수행하기 전에 전기 회로와 관련된 위험을 숙지하고 표준 작업 관례를 숙지하여 사고를 방지하십시오. 각 경고의 마지막 부분에 있는 경고문 번호를 참조하여 이 장치와 함께 제공되는 번역된 안전 경고문에서 해당 번역문을 찾으십시오.

이 지시 사항을 보관하십시오.

Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA

Este símbolo de aviso significa perigo. Você se encontra em uma situação em que há risco de lesões corporais. Antes de trabalhar com qualquer equipamento, esteja ciente dos riscos que envolvem os circuitos elétricos e familiarize-se com as práticas padrão de prevenção de acidentes. Use o número da declaração fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham o dispositivo.

GUARDE ESTAS INSTRUÇÕES**Advarsel** VIGTIGE SIKKERHEDSANVISNINGER

Dette advarselssymbol betyder fare. Du befinder dig i en situation med risiko for legemeskade. Før du begynder arbejde på udstyr, skal du være opmærksom på de involverede risici, der er ved elektriske kredsløb, og du skal sætte dig ind i standardprocedurer til undgåelse af ulykker. Brug erklæringsnummeret efter hver advarsel for at finde oversættelsen i de oversatte advarsler, der fulgte med denne enhed.

GEM DISSE ANVISNINGER**تحذير****إرشادات الأمان الهامة**

يوضح رمز التحذير هذا وجود خطر. وهذا يعني أنك متواجد في مكان قد ينتج عنه التعرض لإصابات. قبل بدء العمل، احذر مخاطر التعرض للصدمات الكهربائية وكن على علم بالإجراءات القياسية للحيولة دون وقوع أي حوادث. استخدم رقم البيان الموجود في آخر كل تحذير لتحديد مكان ترجمته داخل تحذيرات الأمان المترجمة التي تأتي مع الجهاز. قم بحفظ هذه الإرشادات

Upozorenje VAŽNE SIGURNOSNE NAPOMENE

Ovaj simbol upozorenja predstavlja opasnost. Nalazite se u situaciji koja može prouzročiti tjelesne ozljede. Prije rada s bilo kojim uređajem, morate razumjeti opasnosti vezane uz električne sklopove, te biti upoznati sa standardnim načinima izbjegavanja nesreća. U prevedenim sigurnosnim upozorenjima, priloženima uz uređaj, možete prema broju koji se nalazi uz pojedino upozorenje pronaći i njegov prijevod.

SAČUVAJTE OVE UPUTE**Upozornění DŮLEŽITÉ BEZPEČNOSTNÍ POKYNY**

Tento upozorňující symbol označuje nebezpečí. Jste v situaci, která by mohla způsobit nebezpečí úrazu. Před prací na jakémkoliv vybavení si uvědomte nebezpečí související s elektrickými obvody a seznamte se se standardními opatřeními pro předcházení úrazům. Podle čísla na konci každého upozornění vyhledejte jeho překlad v přeložených bezpečnostních upozorněních, která jsou přiložena k zařízení.

USCHOVEJTE TYTO POKYNY**Προειδοποίηση ΣΗΜΑΝΤΙΚΕΣ ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ**

Αυτό το προειδοποιητικό σύμβολο σημαίνει κίνδυνο. Βρίσκεστε σε κατάσταση που μπορεί να προκαλέσει τραυματισμό. Πριν εργαστείτε σε οποιοδήποτε εξοπλισμό, να έχετε υπόψη σας τους κινδύνους που σχετίζονται με τα ηλεκτρικά κυκλώματα και να έχετε εξοικειωθεί με τις συνήθειες πρακτικές για την αποφυγή ατυχημάτων. Χρησιμοποιήστε τον αριθμό δήλωσης που παρέχεται στο τέλος κάθε προειδοποίησης, για να εντοπίσετε τη μετάφρασή της στις μεταφρασμένες προειδοποιήσεις ασφαλείας που συνοδεύουν τη συσκευή.

ΦΥΛΑΞΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ**אזהרה****הוראות בטיחות חשובות**

סימן אזהרה זה מסמל סכנה. אתה נמצא במצב העלול לגרום לפציעה. לפני שתעבוד עם ציוד כלשהו, עליך להיות מודע לסכנות הכרוכות במעגלים חשמליים ולהכיר את הנהלים המקובלים למניעת תאונות. השתמש במספר ההוראה המסופק בסופה של כל אזהרה כדי לאתר את התרגום באזהרות הבטיחות המתורגמות שמצורפות להתקן.

שמור הוראות אלה**Opomena VAŽNI BEZBEDNOSNI NAPATSTVIJA**

Симболот за предупредување значи опасност. Се наоѓате во ситуација што може да предизвика телесни повреди. Пред да работите со опремата, бидете свесни за ризикот што постои кај електричните кола и треба да ги познавате стандардните постапки за спречување на несреќни случаи. Искористете го бројот на изјавата што се наоѓа на крајот на секое предупредување за да го најдете неговиот период во prevedените безбедносни предупредувања што се испорачани со уредот.

ЧУВАЈТЕ ГИ ОБИЕ НАПАТСТВИЈА

Ostrzeżenie WAŻNE INSTRUKCJE DOTYCZĄCE BEZPIECZEŃSTWA

Ten symbol ostrzeżenia oznacza niebezpieczeństwo. Zachodzi sytuacja, która może powodować obrażenia ciała. Przed przystąpieniem do prac przy urządzeniach należy zapoznać się z zagrożeniami związanymi z układami elektrycznymi oraz ze standardowymi środkami zapobiegania wypadkom. Na końcu każdego ostrzeżenia podano numer, na podstawie którego można odszukać tłumaczenie tego ostrzeżenia w dołączonym do urządzenia dokumencie z tłumaczeniami ostrzeżeń.

NINIEJSZE INSTRUKCJE NALEŻY ZACHOWAĆ**Upozornenie DÔLEŽITÉ BEZPEČNOSTNÉ POKYNY**

Tento varovný symbol označuje nebezpečenstvo. Nachádzate sa v situácii s nebezpečenstvom úrazu. Pred prácou na akomkoľvek vybavení si uvedomte nebezpečenstvo súvisiace s elektrickými obvodmi a oboznámte sa so štandardnými opatreniami na predchádzanie úrazom. Podľa čísla na konci každého upozornenia vyhľadajte jeho preklad v preložených bezpečnostných upozorneniach, ktoré sú priložené k zariadeniu.

USCHOVAJTE SI TENTO NÁVOD**Warning**

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.
Statement 1030

Safety Guidelines

Following are safety guidelines that you should follow when working with any equipment that connects to electrical power or which might be prone to electrostatic discharge (ESD) damage.

Electrical Equipment Guidelines

Follow these basic guidelines when working with any electrical equipment:

- Before beginning any procedures requiring access to the chassis interior, locate the emergency power-off switch for the room in which you are working.
- Disconnect all power and external cables before moving a chassis.
- Do not work alone when potentially hazardous conditions exist.
- Never assume that power has been disconnected from a circuit; always check.
- Do not perform any action that creates a potential hazard or makes the equipment unsafe.
- Carefully examine your work area for possible hazards such as damp floors, ungrounded power extension cables, and missing safety grounds.

Preventing Electrostatic Discharge

ESD damage, which can occur when electronic cards or components are improperly handled, can cause complete or intermittent failures.

Use the following guidelines to prevent ESD damage:

- Always wear an ESD wrist or ankle strap and ensure that it makes good skin contact; connect the equipment end of the strap to an unfinished chassis surface.
- Avoid contact between the printed circuit boards and clothing. The wrist strap only protects components from ESD voltages on the body; ESD voltages on clothing can still cause damage.

Hardware and Software Requirements

Most currently available Catalyst 4500 Series Supervisor Engines have a compact flash slot, and any Cisco IOS release that supports these supervisor engines supports compact flash memory.

Required Tools and Parts

You will need the following tools and parts to install a compact flash memory disk in its slot:

- MEM-C4K-FLD64M or MEM-C4K-FLD128M compact flash memory kit
- Antistatic wrist strap
- Access to a TFTP server

Compatibility Requirements

You must format the compact flash memory disk before using it in a Supervisor Engine.

Boot Environment Variables

The contents of the boot environment variables determine what your system does at startup. These variables are stored in NVRAM. To see the current settings for the boot environment variables, enter the **show bootvar** command as shown in this example:

```
Switch> show bootvar
BOOT variable =
CONFIG_FILE variable =
Current CONFIG_FILE variable =
BOOTLDR variable does not exist
Configuration register is 0x100
```

Following are explanations for each of these boot environment variables and instructions for changing them:

- **BOOT variable**—Points to the Cisco IOS software image that you want to boot; you set the variable in configuration mode.

Using the **configure terminal** and **boot system** commands, enter configuration mode and specify a filename to boot from. Here is an example:

```
Switch# configure terminal
Enter configuration commands, one per line. End with CTRL-Z.
System(config)# boot system flash slot0:<image>
```

The result of this configuration file entry is that the BOOT variable is slot0:<image>.

Upgrade Process Example

This section applies to users who want to use compact flash memory for simple file storage. Use the following procedure to upgrade your compact flash memory disk:

Format your compact flash memory disk for IOS mode. See the [“Using the format Command” section on page 13](#) for more information.

From bootflash or the network, copy an image to slot0:

```
switch# copy bootflash:imagename slot0:imagename
```

or

```
switch# copy tftp://<image path>/imagename slot0:imagename
```

After you finish these tasks, you should be able to store configuration files and Cisco IOS software images in compact flash memory memory.

Installing a Compact Flash Memory Disk

This section provides installation procedures for the compact flash memory disk in the slot on the supervisor.

Use the **show version** command to verify that a compact flash memory-compatible version of Cisco IOS software is running on your system:

```
Switch# show version
Cisco IOS Software, Catalyst 4500 L3 Switch Software (cat4500-ENTSERVICES-M),
→ Version 12.2(37)SG,
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Tue 17-Apr-07 01:34 by huiyuan
Image text-base: 0x10000000, data-base: 0x119C7934

ROM: 12.2(37)SG

Switch uptime is 2 days, 15 hours, 50 minutes
System returned to ROM by reload
System image file is "tftp://172.25.xx.xx/auto/gsg-sw/interim/entservices/cat4500-ent"

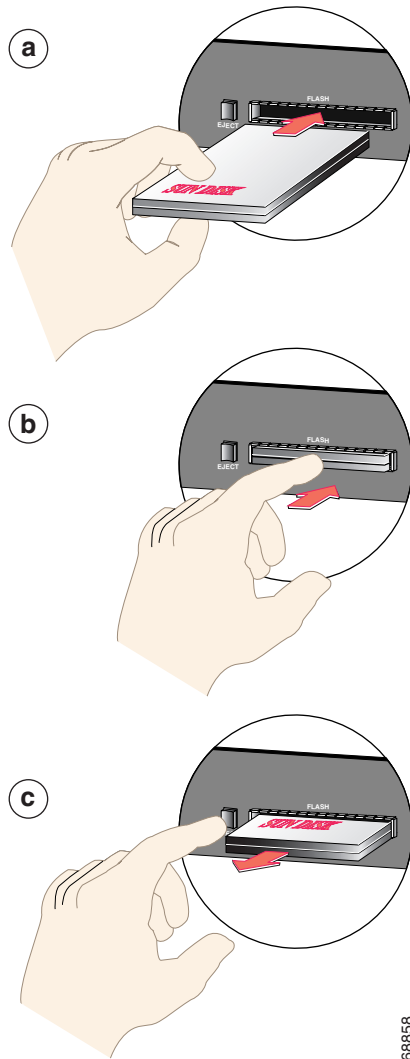
cisco WS-C4506 (MPC8245) processor (revision 5) with 524288K bytes of memory.
Processor board ID TBD
MPC8245 CPU at 333Mhz, Supervisor IV
Last reset from Reload
1 Virtual Ethernet interface
48 FastEthernet interfaces
2 Gigabit Ethernet interfaces
403K bytes of non-volatile configuration memory.

Configuration register is 0x2
Switch#
```

See [Figure 1](#) and perform the following steps to install and eject a compact flash memory disk:

- Step 1** Face the front panel of your supervisor engine.
- Step 2** Hold the disk with its connector end toward the slot and with the label facing up.
The disk is keyed and cannot be seated the wrong way. You can insert and remove the disk with the power on.
- Step 3** Insert the disk into the slot until the compact flash memory device completely seats in the connector at the rear of the slot, and the ejector button pops out toward you (see a and b in [Figure 1](#)).
The ejector button does not pop out if the disk is not completely inserted.

Figure 1 *Installing and Removing the Disk*



- Step 4** To eject a disk, press the ejector button located to the left of the slot, as shown in [Figure 1c](#), until the disk is free of the connector at the rear of the slot.
- Step 5** Remove the disk from the slot and place it in an antistatic bag.

68856

This completes the procedure for installing and removing a compact flash memory disk. Proceed to the “[Working with Compact Flash Memory](#)” section.

Working with Compact Flash Memory

This section provides basic instructions for working with the compact flash memory in your switch. Refer to the configuration note for your supervisor engine for information specific to any given model.



Note

These and all publications are available on Cisco.com.

This section includes the following subsections:

- [Software Command Overview, page 11](#)
- [Using Software Commands, page 12](#)

Software Command Overview

This section lists some of the basic software commands you can use with compact flash memory. Examples of these commands are included below.

The compact flash disk and other memory devices and locations in your system are defined as *file systems*, which are locations where you can store, use, or retrieve files and software images.

You can use the compact flash disk in the slot on your Supervisor Engine. The compact flash slot is called slot0: and internal flash is called bootflash:.

```
Switch#show file system
File Systems:
Size(b) Free(b) Type Flags Prefixes
* 61341696 671892 flash rw bootflash:
- - flash rw slot0:
- - opaque rw system:
- - opaque rw tmpsys:
- - opaque ro crashinfo:
524284 523668 flash rw cat4000_flash:
413676 410212 nvram rw nvram:
- - opaque ro profiler:
- - opaque rw null:
- - opaque ro tar:
- - network rw tftp:
- - network rw rcp:
- - network rw http:
- - network rw ftp:
- - opaque ro cns:
Switch#
```




Note

You can use other arguments with some of the commands listed in [Table 2](#); however, in [Table 2](#) and throughout this document, command arguments are limited to those that apply to the compact flash memory and related file systems.

For a description of additional command arguments, refer to the “File Management Commands” chapter in the *Cisco IOS Configuration Fundamentals Command Reference* document.

Table 2 lists the software commands for slot0:

Table 2 Compact Flash-Related Software Commands

Command and Arguments	Description
<code>cd (slot0: bootflash:)</code>	Changes the default filesystem to slot0: or bootflash:.
<code>copy (bootflash: slot0:source-filename (bootflash: slot0:)destination-filename</code>	Makes a copy of a file (<i>source-filename</i>) located on a source file system (slot0: , bootflash) and places it with either the same filename or a different filename (<i>destination-filename</i>) on a destination file system. Along with slot0: and bootflash: , the source and destination file system arguments include but are not limited to: <ul style="list-style-type: none"> • nvram: (onboard nonvolatile random-access memory) • running-config (the running system configuration file) • startup-config (the startup system configuration file) • tftp: (a TFTP server to which you have access)
<code>delete (slot0: bootflash:) filename</code>	Deletes any file you specify, where <i>filename</i> is the name of the file.
<code>squeeze (slot0: bootflash:)</code>	Reclaims space from compact flash or internal flash after files have been deleted using the delete command.
<code>dir (/all slot0: bootflash:)</code>	Lists the contents of the compact flash or internal flash. The /all argument lists all files on all file systems in your system.
<code>format (bootflash: slot0:)</code>	Formats a linear flash memory card (flash:), onboard flash memory (bootflash:), or a new compact flash (slot0: or disk1:). This command also allows you to reformat a linear Flash memory card or compact flash that was formatted on another type of system. <p> Caution This command destroys all data currently in disk memory; therefore, Cisco strongly recommends that you use the format command with caution to prevent irretrievable loss of data.</p>
<code>pwd</code>	Displays the name of the directory in which you are currently working.
<code>rename (bootflash: slot0:) filename (bootflash: slot0:) filename</code>	Renames a file that is located on one compact flash disk and assigns to that file another (or the same) file system path and filename. The first group of arguments defines the source (current) file system path and filename, and the second set of arguments defines the destination file system path and filename.
<code>show (slot0: bootflash:)</code>	Lists information about compact flash format and geometry.

Using Software Commands

The following sections provide examples of some of the basic software commands you can use with compact flash memory. See Table 2 for optional arguments you can use with some of the following commands.

Using the show Command

To display information about compact flash format, use the **show [slot0: | bootflash:]** command:

```
System# show slot0:
```

Using the pwd Command

To find the directory you are in, use the **pwd** command:

```
System# pwd
bootflash:/
System#
```

The preceding example indicates that you are currently in the working directory called bootflash:, which is the internal flash on the Supervisor Engine.

Using the dir Command

To list the directory structure and contents of the memory from which you are currently working, use the **dir** command with no arguments:

```
Switch#dir
Directory of bootflash:/
  1  -rwx   12495228   Oct 4 2006 15:49:56 +00:00  cat4000-i9s-mz.122-25.EWA4.bin
  2  -rwx   13639628   Mar 1 2007 18:33:27 +00:00  cat4500-entservices-mz.122-31.SGA
  3  -rwx   13671076   Apr 20 2007 21:26:04 +00:00  cat4500-entservices-mz.122-37.SG
61341696 bytes total (21535380 bytes free)
Switch#
```

Here is another example showing a directory of a flash memory:

```
Switch#dir
Directory of slot0:/
 1 -rwx 13671076 Jul 9 2007 01:56:25 +00:00 cat4500-entservices-mz.12-37.SG
 2 -rw- 68569 Jul 9 2007 02:19:57 +00:00 ipsg.txt
 3 -rw- 76572 Jul 9 2007 02:20:21 +00:00 dhcp2.txt
127795200 bytes total (113978596 bytes free)
Switch#
```

Note that the size of the memory device is shown in the output of the **dir** command. You can also view the contents of other directories and file systems using specific optional arguments with the **dir** command. (See [Table 2](#).)

Using the format Command

To format a new compact flash disk, use the **format [slot0:]** command.

You must format a new compact flash disk before you can use it. If you plan to use a compact flash disk that was formatted and used on another type of system, you must first reformat the compact flash disk for your current system.



Caution

The formatting procedure erases all information on the compact flash disk. To prevent the loss of important data that might be stored on a compact flash disk, proceed carefully. If you want to save data that is currently on your compact flash disk, copy the data to a TFTP server or to another device before you format the new compact flash disk.

A compact flash disk is shipped blank; therefore, you must format it before you can use it.

Use the following procedure to format a new compact flash disk using the **format** command. (The procedure assumes you have already booted your system.)

-
- Step 1** Insert the compact flash disk into the compact flash slot on your Supervisor Engine.
- Step 2** Enter the **format slot0:** command to format the compact flash disk in slot 0 as follows:

```
Switch#format slot0:
Format operation may take a while. Continue? [confirm]
Format operation will destroy all data in "slot0:". Continue? [confirm]

Enter volume ID (up to 64 chars)[default slot0]:
Formatting sector 950
Format of slot0 complete
```

The new compact flash disk is now formatted and ready to use in the system on which you formatted it.

Using the copy Command

To copy an image from a compact flash disk to another file system or from another file system, enter the **copy** command:

```
copy [tftp: | bootflash: | slot0:]source-filename [tftp: | bootflash: | slot0:]destination-filename
```

In this example:

- The file you want to copy is located in a file system (**tftp:**, **bootflash:**, and so forth).
- The variable *source-filename* is the name of the file you want to copy to another file system (**tftp:**, **bootflash:**, and so forth).
- The variable *destination-filename* is the name you want to apply to this file after it is copied.

Changing the filename is optional.

Using the delete Command

To delete a file from a compact flash disk, use the **delete** command. Use the **dir** command to find the file you want to delete, and then use the **delete** command to delete it.

The following procedure shows how to find a file (called *fun1*) on the compact flash disk in slot 0, delete the file, and then verify that it is deleted:

-
- Step 1** Find the file you want to delete:

```
Switch# dir
Directory of slot0:/

   1  -rw-          6051   Feb 22 2000 22:31:18  fun1

63897600 bytes total (63891420 bytes free)
```

- Step 2** Delete the file *fun1*:

```
Switch#del slot0:fun1
Delete filename [fun1]?
Delete slot0:fun1? [confirm]
```

Step 3 Verify that the file *fun1* is deleted:

```
Switch# dir
Directory of slot0:/

No files in directory

63897600 bytes total (63891420 bytes free)
Switch#
```

Using the squeeze command

Use the **squeeze** command to reclaim space on bootflash: or slot0: devices after files have been deleted using the **delete** command. The **squeeze** command does not have to be used after every deletion, only when you start running out of space on bootflash: or slot0:.



Note

The Supervisor Engine 6-E does not need or use the **squeeze** command to reclaim memory.

Enabling Booting from Compact Flash

To enable booting from compact flash, set the configuration register option to boot from the BOOT environment variable in conjunction with the boot system [slot0:]filename configuration command. This section includes only descriptions of **boot** commands specific to the compact flash. (You can use either the **bootflash:** argument or the **tftp** argument for **boot** commands.)

The **boot system flash slot0:filename** command makes slot0:filename part of the BOOT environment variable. During boot up, this command causes the ROM monitor to boot from files specified in BOOT.

For more information about BOOT and boot procedures, refer to the configuration note for your supervisor engine.

Related Documentation

For more detailed installation and configuration information, refer to publications at:

http://www.cisco.com/en/US/products/hw/switches/ps4324/tsd_products_support_series_home.html

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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