

Installing or Replacing a CompactFlash™ Card

This flyer describes the following tasks for replacing the CompactFlash card from spare kits X/SP-1413A or X/SP-1414A:

- ◆ “Installing Kit X/SP-1413A”
 - ❖ “Installing in FAS3000 Series, V-Series 3000, C3300 or C2300 NetCache, and R210 Appliances”
 - ❖ “Installing in Systems Other Than FAS3000, V-Series 3000, C3300 or C2300, and R210”
 - ❖ “Placing a Boot Image On the CompactFlash Card”
- ◆ “Installing Kit X/SP-1414A”
 - ❖ “Replacing the CompactFlash Card in the C2100 NetCache appliance”
- ◆ “Updating the Image on the CompactFlash Card”
- ◆ “Completing the Replacement Process”

Verifying System Requirements

Kit Number	System Type	Requirements
X/SP-1413A	◆ Storage appliances that use CompactFlash cards ◆ NearStore® systems that use CompactFlash cards ◆ NetCache® systems that use CompactFlash cards ◆ gFiler™/V-Series systems that use CompactFlash cards	◆ Firmware—OFW 4.2.1 (CFE not applicable) ◆ Diagnostics 4.0 or later
X/SP-1414A	C2100 NetCache appliance	NetCache software 5.5R2 or later

Note

For software release information and downloads, including Data ONTAP™ software, firmware, and diagnostics upgrades, go to the NOW™ site at <http://now.netapp.com>.

Platform	Required software version
V-series	Data ONTAP 7.1
R210	Data ONTAP 7.0.2 (not supported on 7.1)
FAS3000 series	Data ONTAP 7.0.1
C2300, C3300	NetCache 6.0.1

Installing Kit X/SP-1413A

You can install kit X/SP-1413A in the following systems:

- ◆ [“Installing in FAS3000 Series, V-Series 3000, C3300 or C2300 NetCache, and R210 Appliances”](#) on page 2
- ◆ [“Installing in Systems Other Than FAS3000, V-Series 3000, C3300 or C2300, and R210”](#) on page 5

Installing in FAS3000 Series, V-Series 3000, C3300 or C2300 NetCache, and R210 Appliances

Installing a CompactFlash card in a FAS3000 series system, V-Series 3000 system, and a C3300 or C2300 NetCache appliance consists of the following tasks:

- ◆ [“Removing the CompactFlash Card”](#) on page 2
- ◆ [“Installing the CompactFlash Card”](#) on page 4
- ◆ [“Placing a Boot Image On the CompactFlash Card”](#) on page 5

Removing the CompactFlash Card

To remove the CompactFlash card, complete the following steps:

1. Perform a clean system shutdown by entering the following command from the system console:

```
halt
```

Caution

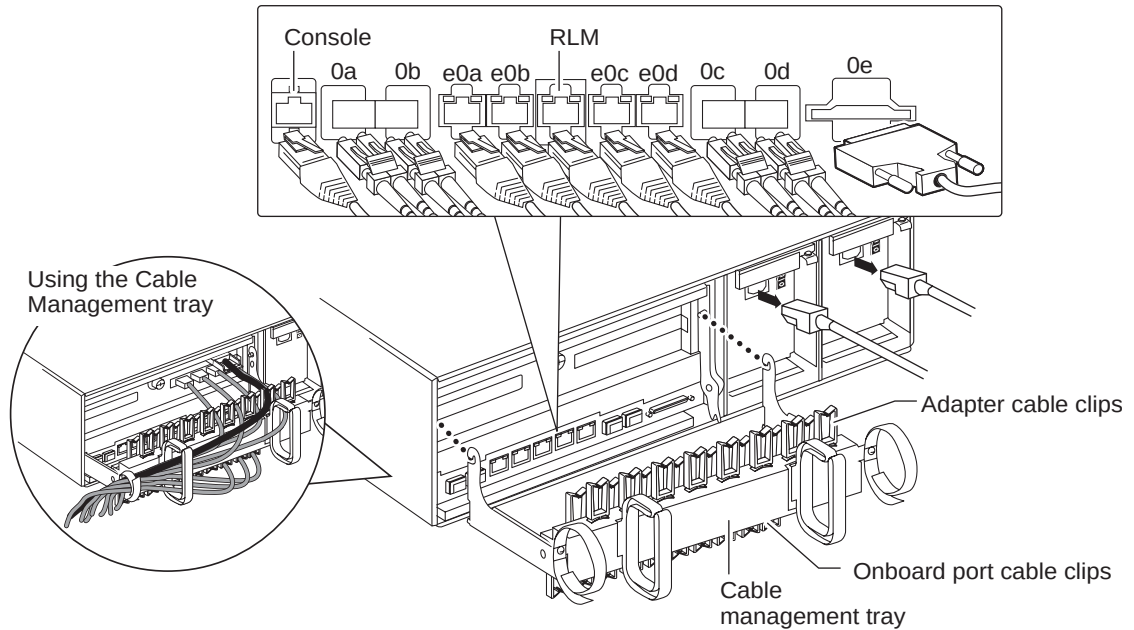
You must perform a clean shutdown to replace components inside your appliance.

2. Ground yourself to the system chassis using the grounding leash, and then turn off the power to the system.

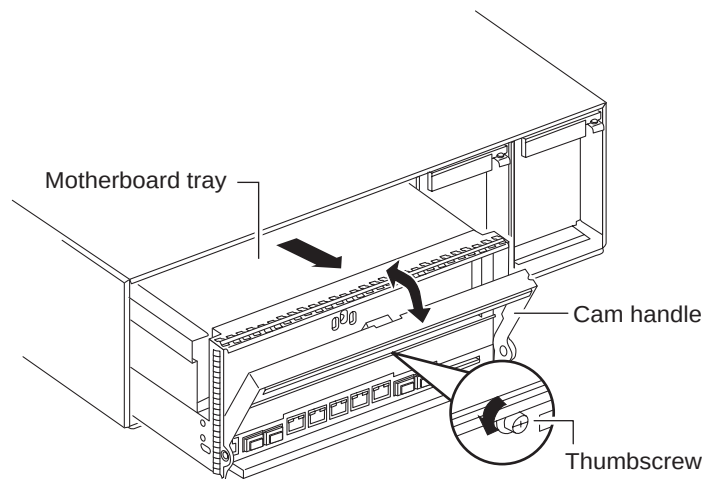
IF your system uses AC power, unplug the power cords from the power source, and then remove the power cords.

IF your system uses DC power supplies, remove the power at the DC source. Remove the DC wires, if necessary.

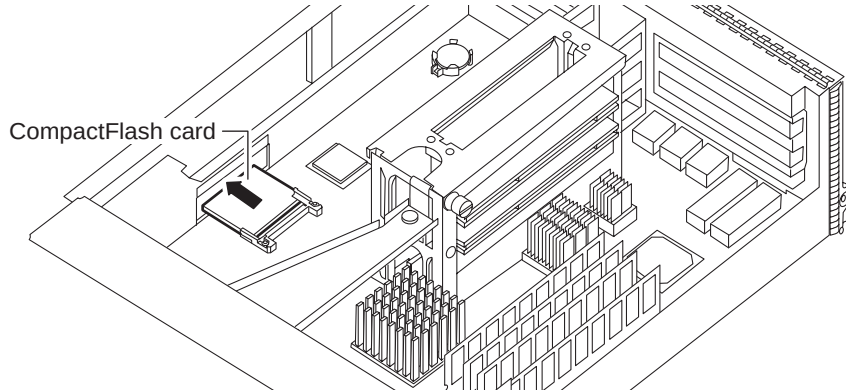
3. Remove the cable management tray by completing the following substeps, using the figure for reference:



- a. Unplug all the cables from the back of the motherboard tray.
Do not remove the cables from the cable clips. That way, when you reinstall the cable management tray, the cables are already aligned with the correct ports on the system.
 - b. Grasp the cable management tray by the side, gently push one side of the tray so that the arm slides across and off the retaining pin, and then lift it off the back of the motherboard tray and set it aside.
4. Loosen the thumbscrew on the cam handle, shown in the figure in Step 5.
5. Open the motherboard tray by pulling the cam handle downward and sliding the tray out of the system until it catches. Make sure that you support the bottom of the motherboard tray with your free hand.



6. Release the motherboard tray from the system by gently lifting the retaining latch under the motherboard tray. Then slide the motherboard tray all the way out of the system, and place the motherboard tray on a stable, grounded surface.
7. Locate the CompactFlash card on the side of the motherboard tray and gently pull the card straight out of the system.



8. Set the CompactFlash card aside.

Installing the CompactFlash Card

To install the CompactFlash card into the motherboard, complete the following steps:

1. Turn the motherboard tray so that you can easily see the slot on the side where the CompactFlash card is inserted.
2. Align the CompactFlash card, face up, with the CompactFlash connector inside the system chassis.
3. Seat the CompactFlash card by pushing it firmly into the CompactFlash connector. The CompactFlash card should be squarely seated and should not move when you wiggle it. Reseat the CompactFlash card, if necessary.
4. Reinstall the motherboard tray by completing the following substeps:
 - a. Align the end of the motherboard tray with the opening in the system chassis.
 - b. Gently push the motherboard tray into the system chassis. The cam handle begins to engage when the motherboard tray is properly seated all the way inside the system chassis.
 - c. Firmly push the cam handle to finish seating the motherboard tray in the system chassis, and then lift the cam handle to the closed position.
 - d. Tighten the thumbscrew on the cam handle.
5. Reinstall the cable management tray and recable the system, as needed.
6. Go to [“Placing a Boot Image On the CompactFlash Card”](#) on page 5.

Installing in Systems Other Than FAS3000, V-Series 3000, C3300 or C2300, and R210

To install the CompactFlash card in a system other than a FAS3000, V-Series 3000, C3300 or C2300, or R210, complete the following steps:

1. Perform a clean system shutdown by entering the following command from the system console:

```
halt
```

Caution

You must perform a clean shutdown to replace components inside your appliance.

2. Ground yourself to the system chassis, then shut off the power to the system and unplug the power cords from the power supplies.
3. Open the system and remove the old CompactFlash card, as described in the appropriate Hardware and Service Guide.
4. Install the CompactFlash card from the kit, as described in the appropriate Hardware and Service Guide.
5. Close the system, recable the power supplies, and then turn on the system.
6. Go to [“Placing a Boot Image On the CompactFlash Card”](#) on page 5.

Placing a Boot Image On the CompactFlash Card

The X/SP-1413A CompactFlash card arrives blank. Before you use it, you must transfer a boot image to it. You can transfer the boot image to the CompactFlash card in one of two ways:

- ◆ [“Transferring a Boot Image Using a PC or Laptop”](#) on page 5
- ◆ [“Transferring a Bootable Kernel Image Using Netboot”](#) on page 6

Transferring a Boot Image Using a PC or Laptop

To transfer a boot image to the CompactFlash card using a PC or laptop, complete the following steps:

1. Copy the bootable kernel image on to the PC or laptop. You can copy the boot image from the system boot directory, at /etc/boot/netapp-mips, or you can download the boot image from NOW at <http://now.netapp.com>. Contact technical support if you cannot get a boot image from these sources.
2. Insert the CompactFlash card into the CompactFlash card reader, and then access the CompactFlash card from inside Windows® Explorer.
3. Create a folder called X86 in the root partition of the CompactFlash card, and then create a subfolder called KERNEL in the X86 folder.
4. Move the bootable kernel image into the KERNEL folder in Windows Explorer. The bootable kernel image is called `netapp_<rlse>-x86`, where `rlse` is the Data ONTAP release number.
5. Rename the `netapp_<rlse>-x86` image to `Primary.KRN`.
6. Move the CompactFlash card from the PC or laptop and install it into the system, as described in [“Installing the CompactFlash Card”](#) on page 4.

7. Turn on the system and boot the kernel image off the CompactFlash card, and then verify that the booted kernel image is correct by entering the following command:

```
version -b
```

8. Download the boot image to the CompactFlash card and reboot the system by entering the following commands:

```
download
```

```
reboot
```

9. Go to “[Completing the Replacement Process](#)” on page 7.

Transferring a Bootable Kernel Image Using Netboot

To transfer a bootable kernel image to the CompactFlash card using netboot, complete the following steps:

1. Place a boot image on the server you use for netbooting. You can copy the boot image from the system boot directory, at /etc/boot/netapp-mips, or download it from NOW at <http://now.netapp.com>.
2. Turn on your system and press Ctrl-C to stop the boot process at the CFE prompt.
3. Configure your network connection, if needed.

IF you have DHCP running on your network, enter the following command:

```
ifconfig e0a -auto
```

IF you do not have DHCP running, configure the connection by entering the following command:

```
ifconfig e0a -addr=filer_addr -mask=netmask -gw=gateway -dns=dns_addr-  
domain=dns_domain
```

filer_addr is the IP address of the system.

netmask is the network mask of the system.

gateway is the gateway for the system.

dns_addr is the IP address of a name server on your network.

dns_domain is the DNS domain name.

4. Enter the following command at the CFE> prompt:

```
netboot URL
```

URL is the location of the remote boot image. It can be either an HTTP or a TFTP network path.

5. Download the boot image to the CompactFlash card by entering the following command at the prompt:

```
download
```

6. Reboot the system by entering the following command at the prompt:

```
boot_ONTAP
```

7. Go to “[Completing the Replacement Process](#)” on page 7.

Installing Kit X/SP-1414A

Kit X/SP-1414A is used only with the C2100 NetCache appliance. Installing this kit consists of the following tasks:

- ◆ “[Replacing the CompactFlash Card in the C2100 NetCache appliance](#)” on page 7
- ◆ “[Updating the Image on the CompactFlash Card](#)” on page 7

Note

You need the *C1200 and C2100 Hardware and Service Guide* to complete the installation. You can get a copy of the guide from NOW at <http://now.netapp.com/NOW/knowledge/docs/docs.shtml>.

Replacing the CompactFlash Card in the C2100 NetCache appliance

To install kit X/SP-1414A into your C2100 NetCache appliance, complete the following steps:

Note

The CompactFlash card in this kit has GRUB loaded on it.

1. Shut down the NetCache appliance, and then open it as described in the *C1200 and C2100 Hardware and Service Guide*.
2. Remove the NVRAM4 adapter, as described in the *C1200 and C2100 Hardware and Service Guide*.
3. Remove the CompactFlash card from the NVRAM4 adapter.
4. Install the CompactFlash card from kit X/SP-1414A into the NVRAM4 adapter, then reinstall the NVRAM4 adapter in the system, as described in the *C1200 and C2100 Hardware and Service Guide*.
5. Close the system, recable it as necessary, and then reboot it, as described in the *C1200 and C2100 Hardware and Service Guide*.
6. Go to “[Completing the Replacement Process](#).”

Updating the Image on the CompactFlash Card

The CompactFlash card arrives with an image that you might need to update. You can transfer it in either of the following ways:

- ◆ “[Transferring a Boot Image Using a PC or Laptop](#)” on page 5
- ◆ “[Transferring a Bootable Kernel Image Using Netboot](#)” on page 6

After completing the image transfer, go to “[Completing the Replacement Process](#).”

Completing the Replacement Process

Return the failed part to Network Appliance, as described in the SRA instructions shipped with the kit. Contact NetApp® technical support at 408-822-6686 if you need the SRA or additional help with the replacement procedure.