Solaris Patches 4.2.1.10 Installation Instructions

Overview

Introduction

This document provides the step-by-step instructions to install the Solaris Patch Set 4.2.1.10 on a DNCS system running System Releases 2.7/3.7/4.2 SP2 or SP3.

Important: Depending on the size of your system, the patch process can take over an hour to complete. If your system is an E450, the patch process can take over 4 hours to complete.

Purpose

The DNCS System Release versions 2.7/3.7/4.2 SP2 and SP3 require the Solaris patches 4.2.1.10 to function correctly. This document steps you through the process of applying the Solaris Patch Set 4.2.1.10.

Audience

This document was written for headend technicians. Field service engineers and Cisco® Services engineers may also find the information in this document helpful.

Document Version

This is the second formal release of this document.

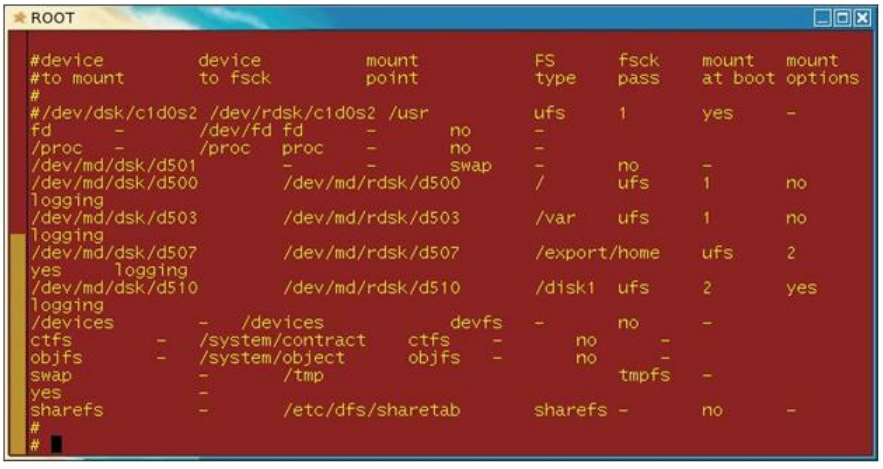
In This Document

Pre-Installation Checks

Follow these instructions before installing the Solaris Patch Set.

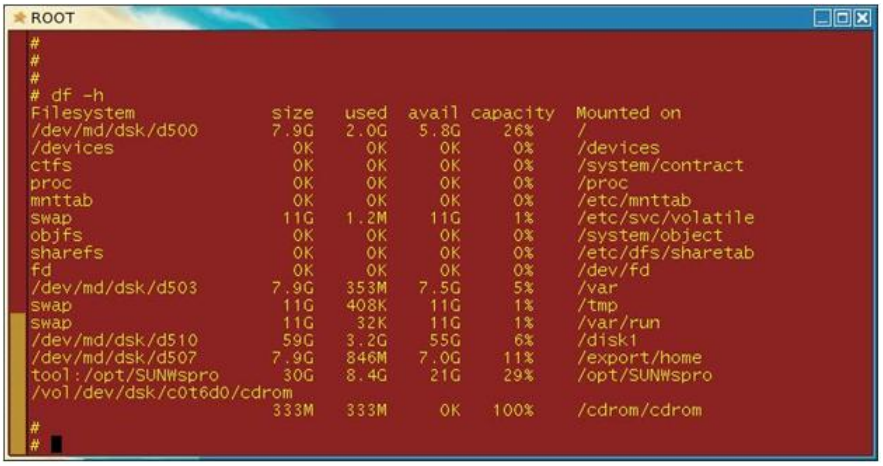
1. Log into the CDE login screens as **dncs** user.
2. Type `xterm -sb -sl 10000 -sk -si -T ROOT -bg red -fg yellow -e su - &` and press **Enter**. A new root window appears and prompts you for the root password.
3. Type the **root password** and press **Enter**. You are now logged into the DNCS as root user.
4. Type `./dvs/dncs/bin/dncsSetup` and press **Enter**.
5. Type `metastat | more` and press **Enter**. The system displays the status of all the metadevices on the DNCS.

   Note: If necessary, press the spacebar to page through the entire output.
6. Does the designation **Okay** appear in the **State** column next to each metadevice?
   - If **yes**, go to the next step.
   - If **no**, contact Cisco Services for assistance in resolving this issue.
7. If your system is an E450, do all Hot Spares indicate that they are **Available**?
   - If **yes**, go to the next step.
   - If **no**, contact Cisco Services for assistance in resolving this issue.
8. Verify that the **/etc/vfstab** file contains the correct mount information. Type `cat /etc/vfstab` and press **Enter**. You should see a response similar to the following.



Note: The output should show devices to be mounted as **/dev/md/dsk/d5xx** devices. If it shows devices such as **c1t0d0s#** or **c2t8d0s#**, the file contains the incorrect mounting information. Contact Cisco Services for assistance.

9 Verify that the devices shown in the vfstab file are actually mounted. Type `df -h` and press **Enter**. You should see a response similar to the following.



Note: The **/,/var,/export/home** and **/disk1** should be mounted on the /dev/md/dskd5xx filesystems (as shown in the above example). If they are not, contact Cisco Services for assistance.

10 Type `format </dev/null` and press **Enter** to confirm that all disks are present and readable.

Example: You should see output similar to the following, assuming that your system is a Sun Fire V880 server with a 6-disk configuration:

```
AVAILABLE DISK SELECTIONS:
0. c1t0d0 <SUN72G cyl 14087 alt 2 hd 24 sec 424>
/pci@8,600000/SUNW,qlc@2/fp@0,0/ssd@w500000e0108977d1,0
1. c1t1d0 <SUN72G cyl 14087 alt 2 hd 24 sec 424>
.
.
.
11. c2t5d0 <SUN72G cyl 14087 alt 2 hd 24 sec 424>
/pci@9,600000/pci@1/SUNW,qlc@4/fp@0,0/ssd@w2200000c5056c543,0
```

Note: If any disks indicate that they are **not available** or **unknown**, contact Cisco Services for assistance.

11 Is your DNCS platform a Sun Fire V880 or V890?

- If **yes**, type `luxadm display FCloop` and press **Enter** to verify that all slots with disks have a **Disk Status** of **OK**. You should see an output similar to the following:

```
SUNWGS INT FCBPL
Disk Status
Slot Disks (Node WWN)
0 On (OK) 500000e0108977d0
1 On (OK) 20000004cf2bf3f1
2 On (OK) 500000e010897d30
3 On (OK) 500000e010898090
4 On (OK) 500000e010894d90
5 On (OK) 2000000c5056c543
6 Not Installed
```

```
7 Not Installed
8 Not Installed
9 Not Installed
10 Not Installed
11 Not Installed
```

- If **no**, go to the next step.

12 Type `eeprom boot-device` and press **Enter**. Do the results show that **disk:a** is the first entry listed as a boot device?

- If **yes**, the boot device is configured properly.
- If **no**, type `eeprom boot-device=disk:a` and press **Enter** to reset the boot device to the original disk.

13 Type `dumpadm -d swap` and press **Enter** to set the dump device to swap.

14 Type `dumpadm` and press **Enter** to verify that the dump device is set to swap and that savecore is enabled.

Example:

```
# dumpadm
    Dump content: kernel pages
    Dump device: /dev/md/dsk/d501 (swap)
Savecore directory: /var/crash/vod7
    Savecore enabled: yes
```

Copy Critical Files

Use these files for comparison after the upgrade. If required, these files contain the data required to fix any discrepancies.

1. Open an xterm window on the DNCS.
2. Log into the system as root:
   a. At the prompt, type `su -` and press **Enter**.
   b. Type the **root password** and press **Enter**.
3. Type `cd /export/home/dncs` and press **Enter**. The /export/home/dncs directory becomes the working directory.
4. Type `mkdir network.preSolarisPatch` and press **Enter**. The system creates a directory called **network.preSolarisPatch**.
5. Type `cd network.preSolarisPatch` and press **Enter**. The /export/home/dncs/network.preSolarisPatch directory becomes the working directory.
6. Type the following commands to copy the necessary files to this newly created directory. Press **Enter** after you type each command.
   - `netstat -nrv > netstat.out`
   - `ifconfig -a > ifconfig.out`

     Note: All the IP addresses and network masks should be the same in this file and in your network after the upgrade.
   - `cp -p /etc/inet/ipnodes .`
7. Type `ls -ltr` and press **Enter** to verify that each file copied successfully to the /export/home/dncs/network.preSolarisPatch directory and that no file has a size of 0 (zero).

   Note: The **l** in `ls and -ltr` is a lowercase letter **L**.

Update the /etc/hosts File

In older versions of Solaris 10, the /etc/hosts file was the definitive data store for hostname/IP address translation data. With the patches introduced in 4.2.1.10, the /etc/inet/hosts (EIH) is now the definitive data store and the /etc/hosts file and the /etc/inet/ipnodes file are symbolic links to it. As such, the last step in the installation script of the 4.2.1.10 update takes the contents of /etc/hosts and places it into /etc/inet/hosts and creates the correct symbolic links.

To ensure the integrity of your network, you need to make sure that the /etc/hosts file contains all the IP addresses and their correct network masks in your system before you install the patches.

You should already have an xterm window open on the DNCS and be logged in as root from the previous procedure.

1. Open the /etc/inet/ipnodes file in a text editor.
2. Open a new xterm window.
3. In the new xterm window, open the /etc/hosts file in a text editor.
4. Position the windows so that you can view the contents of each file.
5. Make sure that all the IP addresses and their network masks that are in the /etc/inet/ipnodes file are in the /etc/hosts file. If some are missing or incorrect, make the necessary adjustments.
6. Save the /etc/hosts file.
7. Close both files.

Verify Network Interface Card Type

Follow these instructions to verify the type of NIC installed in your system.

1. Type `prtconf -vp | egrep 'Node | device_type: | version: | board-model: | ^$' | less` and press **Enter**.
2. Review the output and verify that the board-model matches the network device displayed on the screen.

   Note: Multiple devices will display as an output of this command.

Board Model

For V880

- Sun PCI Dual Gigabit Ethernet 10/100/1000BASE-T
- Sun part number: X4422A
- Board model: '501-6635'

For V890

- Sun Quad Gigaswift PCI-X adapter
- Sun part number: X4445A
- Board model: '501-6738'

Example Output

```
       Node 0xf00fa2ac
              Node 0xf0100420
                     Node 0xf0102014
                     Node 0xf0107a78
       Node 0xf0109bd8
              device_type:  'pci'
              Node 0xf010ae70
                     device_type:  'network'
                     version: 'Sun PCI Dual Gigabit Ethernet 10/100/1000Base-T
FCode 2.12 03/11/21'
                     board-model:  '501-6635'
              Node 0xf0112fa8
                     device_type:  'network'
                     version: 'Sun PCI Dual Gigabit Ethernet 10/100/1000Base-T
FCode 2.12 03/11/21'
```

```
        board-model:  '501-6635'
Node 0xf011b0e0
        device_type:  'scsi-2'
```

Backup the DNCS and Application Server File System

Perform a complete backup of the DNCS and Application Server file system now. Procedures for backing up the file system are contained in *DBDS Backup and Restore Procedures For SR 2.2 Through 4.3 User Guide* (part number 4013779). The backup procedures have been modified so that you no longer have to shut down the DNCS or the Application Server to complete the backup. If necessary, call Cisco Services to obtain a copy of these backup and restore procedures.

Notes:

- Procedures for backing up the file system are found in the **Backing Up and Restoring the DNCS and Application Server** chapter of the *DBDS Backup and Restore Procedures For SR 2.2 Through 4.3 User Guide* (part number 4013779).
- It may take up to 2 hours to back up a DNCS file system; you can usually back up an Application Server file system in about 30 minutes.

Install the Solaris Patch Set

After you have completed the pre-installation checks and verified your system's NIC type, follow these instructions to install the Solaris Patch Set 4.2.1.10.

1 Insert the Solaris patch CD into the DNCS CD/DVD drive.

2 Type `df -h` and press **Enter** to verify that the CD is mounted. You should see a response similar to **/cdrom/cdrom0** in the far left column of the output.

3 Did the CD auto-mount?

- If **yes**, go to the next step.
- If **no**, follow these instructions to manually mount the CD.

a Type `svcadm -v disable -s volfs` and press **Enter** to disable the Volume Management File System.

b Type `svcadm -v enable -rs volfs` and press **Enter** to enable the Volume Management File System.

c Did the CD auto-mount?

– If **yes**, go to step 4.

– If **no**, continue with the next sub-step.

d Type `rmformat -l` and press **Enter** to view the CD drive path.

Example:

```
Looking for devices...
    1. Logical Node: /dev/rdsk/c0t0d0s2
    Physical Node: /pci@1f,700000/pci@0/pci@1/pci@0/ide@1f/sd@0,0
    Connected Device: TSSTcorp CD/DVDW TS-T632A SR03
    Device Type: CD Reader/Writer
```

e Type `mount -F hsfs /dev/dsk/c0t0d0s0/cdrom` and press **Enter**.

Note: Note that we use **dsk** in the above command.

f Type `df -h | grep cdrom` and press **Enter** to verify that the CD is mounted.

Example:

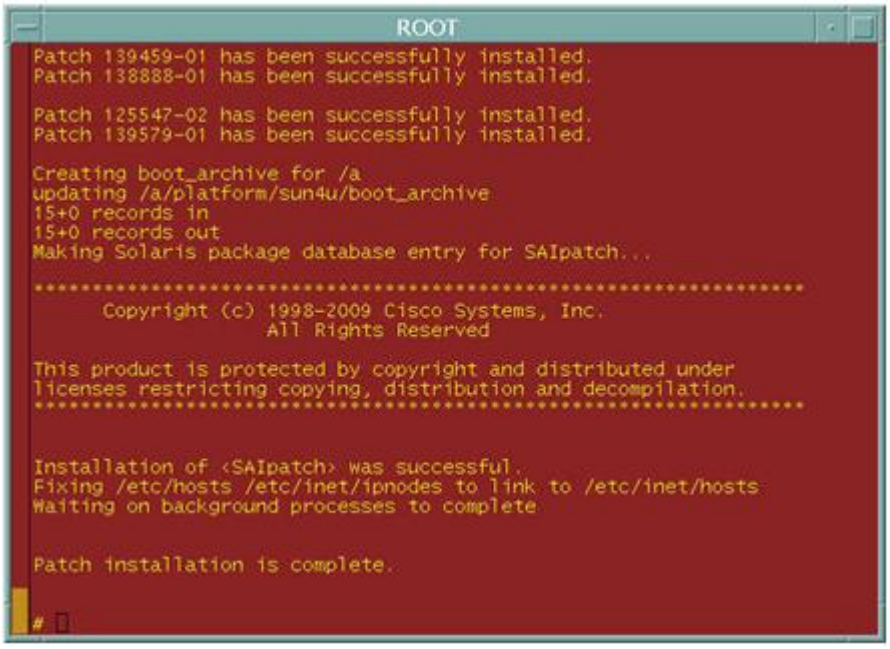
```
/dev/dsk/c0t0d0s0      585M   585M     0K   100%    /cdrom
```

4 Close the File Manager window.

5 Did the CD auto-mount?

- If **yes**, type `/cdrom/cdrom/installd7` and press **Enter**.
- If **no**, you had to manually mount the CD. Type `/cdrom/installd7` and press **Enter**.

Important: Pay attention to the screen output. Watch for any errors or failures.



Notes:

- An orange dialog box showing the d500 and d502 devices in a one-way state will appear. Click **OK**.
- The following message is expected:

  Patch 122660-10 needs to be installed before this patch can be
- Depending on the size of your system, the patch process could take more than an hour to complete. If your system is an E450, it can take over 4 hours to complete.
- When the patch process completes, a **Patch installation is complete** message appears.

6 Did the **Patch installation is complete** message appear?

- If **yes**, go to the next step.
- If **no**, contact Cisco Services for assistance.

7 Type `cd /a/var/sadm/system/logs` and press **Enter**.

8 Open the **SAIpatch** log file (SAIpatch_4.2.1.10.log) and look for any errors, warnings, or failures.

9 Are there any errors, warnings, or failures in the log file?

- If **yes**, contact Cisco Services for assistance.
- If **no**, go to ***Activate the Solaris Patch Set*** (on page 13).

Activate the Solaris Patch Set

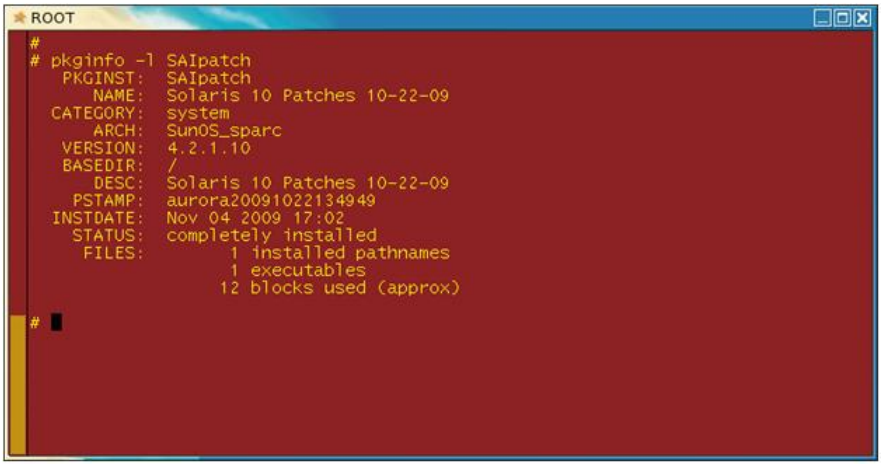
After you have installed the Solaris patch set, follow these instructions to activate the patch.

Important: These instructions should be completed inside a maintenance window.

1. From a dncs xterm window on the Application Server, type `appStop` and press **Enter**. The application server processes stop.
2. From a dncs xterm window on the DNCS, type `dncsStop` and press **Enter** to stop processes on the DNCS.
3. When all processes are stopped, type `dncsKill` and press **Enter**.
4. From a root xterm window on the Application Server, type `shutdown -y -g0 -i0` and press **Enter**. The Application Server shuts down to an OK prompt.
5. From a root xterm window on the DNCS, type `/etc/init.d/informix stop` and press **Enter** to stop Informix.
6. Type `ps -aef | grep oninit` and press **Enter** to verify that Informix has stopped. The output should be similar to the following:
   ```
   root 18735 18695   0 09:55:04 pts/3       0:00 grep oninit
   ```
7. From a root xterm window, type `svcadm -v disable -s cron` and press **Enter** to disable cron jobs on the DNCS.
8. In the root window, boot from the Solaris patch disk.
   - If the CD auto-mounted, type `/cdrom/cdrom/bootd7` and press **Enter**.
   - If you manually mounted the CD, type `/cdrom/bootd7` and press **Enter**.

   Notes:
   - Several errors appear during the reboot. Ignore these errors as they will disappear after the next reboot.
   - If the CD drive opens during the reboot, close the CD drive.
9. When the CDE window appears, log on as **dncs** user.
10. Open an xterm window and change to root user (`su -`).

11 Type `pkginfo -l SAIpatch` and press **Enter** to verify that the package installed. You should output similar to the following.



12 Type `df -h` and press **Enter** to verify that the CD is mounted. You should see output similar to **/cdrom/cdrom0** in the far left column of the output.

Important: Also verify that the d700 and d703 devices are mounted as **/** and **/var**.

13 Is the CD mounted?

- If **yes**, go to the next step.
- If **no**, follow these instructions:

a Type `svcadm -v disable -s svc:/system/filesystem/volfs:default` and press **Enter** to disable the Volume Management File System.

b Type `svcadm -v enable -rs svc:/system/filesystem/volfs:default` and press **Enter** to enable the Volume Management File System. The File Manager window appears indicating that the CD is mounted.

14 Close the File Manager window.

15 Type `/cdrom/cdrom/tools/install_patch` and press **Enter** to install the SAItools package. The **Are you SURE you want to continue?** message appears.

16 Type **y** and press **Enter**. The package is installed on the DNCS.

17 Did the following message appear: **Installation of <SAItools> successful**?

- If **yes**, go to the next step.
- If **no**, contact Cisco Services for assistance.

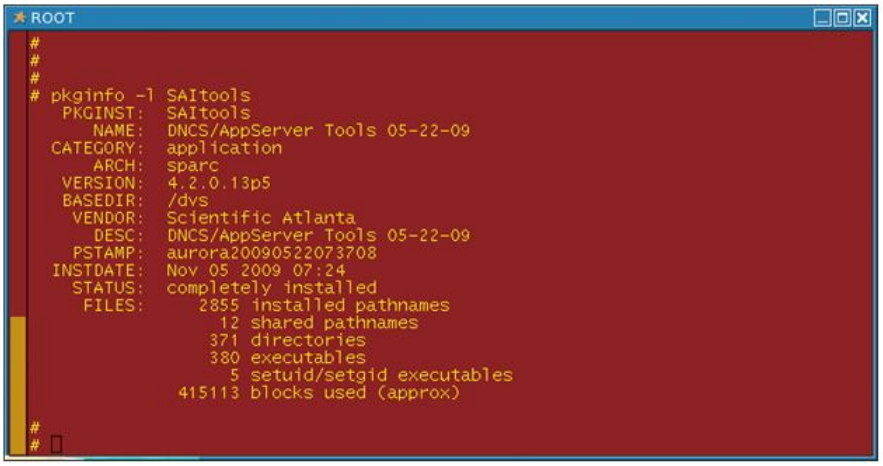
18 Type `cd /var/sadm/system/logs` and press **Enter**.

19 Open the **SAItools** log file and look for any errors, warnings, or failures.

20 Are there any errors, warnings, or failures in the log file?

- If **yes**, contact Cisco Services for assistance.
- If **no**, go to the next step.

21 Type `pkginfo -l SAItools` and press **Enter** to verify that the SAItools package is completely installed. The result should resemble the following.



22 From a root xterm window, type `/etc/init.d/informix stop` and press **Enter** to stop Informix.

23 Type `ps -ef | grep oninit` and press **Enter** to verify that Informix has stopped. The output should resemble the following example:

```
root 18735 18695   0 09:55:04 pts/3       0:00 grep oninit
```

24 From a root xterm window, type `svcadm -v disable -s cron` and press **Enter** to stop the cron jobs on the DNCS.

25 From a root xterm window, type `/cdrom/cdrom/bootd5` and press **Enter**.

Notes:

- Several errors appear during the reboot. Ignore these errors as they will disappear after the next reboot.
- If the CD drive opens during the reboot, close the CD drive.

26 When the CDE window appears, log in as **dncs** user.

27 Open an xterm window and type `df -h` and press **Enter** to verify that d500 and d503 are now mounted as **/** and **/var**.

Note: If d500 and d503 are not mounted, contact Cisco Services for assistance.

28 Type `xterm -sb -sl 10000 -sk -si -T ROOT -bg red -fg yellow -e su - &` and press **Enter** to login to a window as root.

29 Type `svcadm -v enable -rs cron` and press **Enter** to enable cron.

30 From the OK prompt on the Application Server, type `boot` and press **Enter**. The Application Server boots up.

31 From a dncs xterm window, type `dncsStart` and press **Enter** to start the DNCS processes.

32 From the CDE window on the Application Server, log in as **dncs** user.

33 From an dncs xterm window on the Application Server, type `appStart` and press **Enter**. The application server processes start.

CAUTION: Do not continue until you are satisfied with the performance and stability of your DNCS.

- If you are satisfied, go to ***Post-Soak Instructions*** (on page 17).
- If you encounter problems, go to ***Backout Instructions*** (on page 18).

Post-Soak Instructions

Important: There is absolutely NO BACKOUT AFTER THESE INSTRUCTIONS ARE EXECUTED.

1. Open an xterm window on the DNCS.
2. Log into the system as root:
   a. At the prompt, type `su -` and press **Enter**.
   b. Type the **root password** and press **Enter**.
3. Type `metaattach d500 d400` and press **Enter**. The d400 submirror attaches to the d500 mirror.
4. Type `metaattach d503 d403` and press **Enter**. The d403 submirror attaches to the d503 mirror.

Backout Instructions

Follow these instructions if you have encountered problems with the patch and you need to back the installation out. The process for backing out of this patch consists of booting off the original submirrors and resynching the disks.

1. From a dncs xterm window on the Application Server, type `appStop` and press **Enter** to stop the processes on the Application Server.
2. From a dncs window on the DNCS, type `dncsStop` and press **Enter** to stop the processes on the DNCS.

   Important: Wait until all processes on the DNCS have stopped before going to the next step.
3. From a root xterm window on the Application Server, type `shutdown -y -g0 -i0` and press **Enter**. The server shuts down to the OK prompt.
4. From a root xterm window on the DNCS, type `/cdrom/cdrom/tools/backout_patch SAItools` and press **Enter**. This command executes the backout SAItools script.
5. From a root xterm window, type `/etc/init.d/informix stop` to stop Informix.
6. Type `ps -ef | grep oninit` and press **Enter** to verify that Informix has stopped. The output should be similar to the following:

   ```
   root 18735 18695   0 09:55:04 pts/3       0:00 grep oninit
   ```
7. Type `shutdown -y -g0 -i6` and press **Enter**. The system reboots to the original disks.

   Note: The DNCS will automatically reboot one time after the initial reboot to reattach the d40x submirrors.
8. When the CDE window appears, log in as **dncs** user and then change user to **root** user.
9. From a root xterm window, type `metattach d500 d700` and press **Enter**. The d700 submirror attaches to the d500 device.
10. Type `metattach d503 d703` and press **Enter**. The d703 submirror attaches to the d503 mirror.
11. From the OK prompt on the Application Server, type `boot` and press **Enter**. The Application Server boots up.
12. From a root xterm window on the DNCS and the Application Server, type `svcadm -v -rs cron` and press **Enter** to enable cron.

For Information

If You Have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.

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