Mounting and Unmounting the CD-ROM

This appendix describes how to mount and unmount the Essentials CD-ROM on a HP-UX 11.0 system. It contains general information only. For more detailed instructions, consult your HP-UX documentation.

You can install Essentials from a CD-ROM mounted on the Essentials server system or from a CD-ROM mounted on a remote HP-UX system.

The native HP-UX mount command does not support CD-ROM filesystem formats that conform to the ISO 9660 Rockridge extensions standard. All CiscoWorks2000 installation CDs use this format. To mount CiscoWorks2000 CD-ROMs, you must use Portable File System (PFS), which allows access to CD-ROM filesystems that use the ISO 9660 Rockridge extension format.

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Caution You *must* use this CD-ROM mounting procedure to successfully install the product. If you use the standard UNIX mount command to mount the CD-ROM, the software installation will fail.

This appendix contains:

- Prerequisites for Mounting the CD-ROM
- Mounting a Local CD-ROM Drive
- Unmounting the CD-ROM Drive
- Accessing the CD-ROM from a Remote Machine
- Unexporting the CD-ROM Filesystem

Prerequisites for Mounting the CD-ROM

The following are prerequisites for mounting the CD-ROM:

- You must install patch number PHCO_16438 or any superseding patch from HP *before* running PFS on an HP-UX 11.0 system.

- NFS client and server must be running.

- The system hostname and IP address must resolve correctly.

- You must have network loopback and networking in general configured before running PFS on HP-UX.

  The command netstat -rn shows the network routing tables; the entry lo0 is for the loopback interface.

Note   To verify or set up any of these prerequisites, you must become the superuser by entering **su** and the root password at the command prompt, or log in as root. The command prompt changes to the pound sign (#).

Verify or Install the Patch

Verify the correct patch is installed and configured on the system by entering:

```
# swlist -l fileset -a state | grep -i phco_16438
```

Output similar to the following is displayed:

```
PHCO_16438
PHCO_16438.PHCO_16438 configured
```

This indicates that the patch is installed and is in a configured state.

If the patch is shown to be in the "installed" state, configure the patch by entering:

```
# swconfig PHCO_16438
```

If the patch is shown to be "corrupt" or "transient," reinstall it by using the swinstall GUI and selecting both reinstall lines under Options.

Note   Both reinstall lines *must* be checked or the patch will not be reinstalled.

Verify NFS Client and Server Are Running

Both NFS and mountd must be running to mount the CD-ROM.

Verify NFS and mountd are running by entering:

```
# rpcinfo -p
```

Output similar to the following is displayed:

```
program    vers    proto    port
100000     2       tcp      111     rpcbind
100000     2       udp      111     rpcbind
100024     1       udp      789     status
100024     1       tcp      791     status
100021     1       tcp      795     nlockmgr
100021     1       udp      1035    nlockmgr
100021     3       tcp      799     nlockmgr
100021     3       udp      1036    nlockmgr
100020     1       udp      1037    llockmgr
100020     1       tcp      804     llockmgr
100021     2       tcp      807     nlockmgr
100068     2       udp      1040    cmsd
100068     3       udp      1040    cmsd
100068     4       udp      1040    cmsd
100068     5       udp      1040    cmsd
100083     1       tcp      1036    ttdbserver
100005     1       udp      831     mountd
100005     1       tcp      833     mountd
100003     2       udp      2049    nfs
```

If nfs or mountd is missing, do the following:

Step 1   Verify the /etc/rc.config.d/nfsconf file:

```
# more /etc/rc.config.d/nfsconf
```

Look for the following:

NFS_CLIENT=1
NFS_SERVER=1
NUM_NFSD=4
START_MOUNTD=1

If the values are different, edit the file and ensure that nfs and mountd are set to 1.

Step 2   Save the changes to the edited file and exit your text editor.

Step 3   Restart the nfs server and client processes by entering:

```
# /sbin/init.d/nfs.server start
# /sbin/init.d/nfs.client start
```

Step 4   Verify that nfs and mountd processes are present by entering:

```
# rpcinfo -p
```

Verify the System Hostname and IP Address Resolves

Verify that the system name is resolved by entering:

```
# nslookup hostname
```

The correct IP address must be displayed.

Verify the IP address is resolved by entering:

```
# nslookup IP address
```

The correct hostname must be displayed.

To resolve NIS issues, ensure the system uses the local /etc/hosts file. To do this, move the /etc/resolv.conf and /etc/nsswitch.conf files, if they exist, to their_name.old.

If the hosts file is large, you can shorten it to just the localhost and hostname and IP addresses as in the following example.

```
# more /etc/hosts
# @(#)hosts $Revision: 1.9.212.1 $ $Date: 95/10/12 19:28:22 $
#
# The form for each entry is:
#
#
# For example:
# 192.1.2.34 hpfcrm loghost
```

```
#
# See the hosts(4) manual page for more information.
XXX.XXX.XXX.XXX Your_host_name
127.0.0.1 localhost loopback
```

Verify the Network Loopback is Enabled

For HP-UX 11.0 systems, enable network loopback (if it is not already enabled) by adding LOOPBACK_ADDRESS=127.0.0.1 to the /etc/rc.config.d/netconf file.

Verify that network loopback is enabled by entering the following:

netstat -rn.

Output similar to the following is displayed:

```
Routing tables
Destination     Gateway         Flags   Refs     Use  Interface  Pmtu
PmtuTime
127.0.0.1       127.0.0.1       UH         0    2897  lo0        4608
171.69.217.60   127.0.0.1       UH         1    2299  lo0        4608
default         171.69.217.254  UG         5   86356  lan0       1500
171.69.217.0    171.69.217.60   U          0    7702  lan0       1500
```

The entry lo0 is for the loopback interface.

Undo Mistakes

To undo any mistakes, kill any PFS daemons that are running and restart them. If you had difficulty getting PFS to run or if you used the umount command instead of the pfs_umount command, then you must reboot the system to clean it up.

Note   A reboot is required whenever the umount command is used on the PFS-mounted CD-ROM instead of the pfs_umount command.

Mounting a Local CD-ROM Drive

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Caution   You *must* use this CD-ROM mounting procedure to successfully install the product.

Insert the Essentials CD-ROM into the CD-ROM drive and do the following:

Step 1   Enable PFS to determine the CD format and translate it to lowercase with no revision numbers by editing the /etc/fstab file.

For example, if the /etc/fstab file looked as follows, then copy the /etc/fstab to /etc/fstab.old. Then edit the /etc/fstab to remove the last line.

```
/dev/vg00/lvol3 / hfs rw,noquota 0 1
/dev/vg00/lvol1 /stand hfs rw,noquota 0 1
/dev/vg00/lvol6 /opt hfs rw,noquota 0 2
/dev/vg00/lvol7 /tmp hfs rw,noquota 0 3
/dev/vg00/lvol8 /usr hfs rw,noquota 0 2
/dev/dsk/c1t2d0 /cdrom cdfs ro,suid 0 0
```

Step 2   Create the PFS mount point by entering:

```
# mkdir /cdrom
```

Step 3   Make sure that the path /usr/sbin is in the path environment variable.

Step 4   Start the PFS daemons to allow network access on server and client by entering:

```
# nohup /usr/sbin/pfs_mountd &
# nohup /usr/sbin/pfsd 4 &
```

✎

Note   The order is very important. pfs_mountd *must* be started first.

Step 5   Verify the processes that are running on the system by entering:

```
# ps -ef | grep pfs
```

Output similar to the following is displayed:

```
root  1196  1195  0 14:07:28 ttyp1     0:00 pfs_mountd.rpc
root  1224  1208  0 14:07:47 ttyp1     0:00 pfsd.rpc
root  1210  1208  0 14:07:41 ttyp1     0:00 pfsd.rpc
root  1217  1208  0 14:07:44 ttyp1     0:00 pfsd.rpc
root  8669  7686  0 15:49:25 ttyp3     0:00 /usr/sbin/pfsd 4
root  8670  8669  0 15:49:25 ttyp3     0:00 pfsd.rpc
root  8617  7686  0 15:48:33 ttyp3     0:00 /usr/sbin/pfs_mountd
root  8739  7686  1 15:50:49 ttyp3     0:00 grep pfs
```

Step 6   Mount the CD-ROM by entering:

pfs_mount -o xlat=unix /dev/rdsk/cX**t**X**d0 /pfs_cdrom**

where *cXtXd0* is the CD-ROM device file on your machine. Replace the *X* with the correct numerical information for your machine. You can identify the device file by entering:

ioscan -funC disk

For example, the following command mounts the device /dev/rdsk/c1t2d0 to the /cdrom directory:

pfs_mount -0 xlat=unix /dev/rdsk/c1t2d0 /cdrom

Note   PFS must use the raw or rdsk device file.

Unmounting the CD-ROM Drive

To unmount the CD-ROM, log in as superuser:

Step 1   Enter:

cd /
pfs_umount /cdrom

Step 2   Press the eject button to eject the CD-ROM from the workstation.

Step 3   Remove the CD-ROM and store it in a safe place.

Accessing the CD-ROM from a Remote Machine

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Caution   You *must* use this CD-ROM mounting procedure to install the product successfully.

To access the CW2000 CD-ROM from a remote machine, you must be logged in as superuser.

Step 1   On the remote machine:

    a.   Mount the CD-ROM as described in the section "Mounting a Local CD-ROM Drive."

    b.   Add the following entry to file /etc/pfs_exports (create the file if it does not already exist):

```
/cdrom -access=client_hostname
```

where *client_hostname* is the name of the host on which you want to install the software and cdrom is the directory where you mounted the CD-ROM.

    c.   Enter the following command to export the directory that you just mounted:

```
# pfs_exportfs -a -v
```

Step 2   On the local machine (the machine on which you want to install the software):

    a.   Start the pfs daemons as described in the section "Mounting a Local CD-ROM Drive."

    b.   Mount the CD-ROM by entering:

```
# pfs_mount serverhost:server_mount_point local_mount_point
```

where *serverhost* is the name of the remote machine, *server_mount_point* is the name of the CD-ROM mount point on the server, and *local_mount_point* is the name of the CD-ROM mount point on the local machine.

For example, the command

```
# pfs_mount hello:/cdrom /cdrom
```

mounts the /cdrom directory of the remote machine named hello to the /cdrom directory of the local machine.

Unexporting the CD-ROM Filesystem

After you have finished installing CD One and the necessary device packages, you might want to unexport the exported CD-ROM filesystem.

Step 1   Log in to the local HP-UX workstation as root.

Step 2   Unmount the directory for the local workstation by entering:

```
# pfs_umount local_mount_point
```

For example, the command

```
# pfs_umount /cdrom
```

unmounts the /cdrom directory in the local machine.

Step 3   Log in to the remote HP-UX workstation as root.

Step 4   Remove the following line from the /etc/pfs_exports file:

```
/cdrom -access=client_hostname
```

where *client_hostname* is the name of the host on which you installed the software and cdrom is the directory where you mounted the CD-ROM.

Step 5   Enter the following command to unexport the filesystem:

```
# pfsexportfs -u /server_mount-point
```

For example, the command

```
# pfs_exportfs -u /cdrom
```

unexports the /cdrom directory on the remote server.

Step 6   Unmount the CD-ROM as described in the section "Unmounting the CD-ROM Drive."