Special Release Notice:

DG/UX for AViiON Systems
dgux_sr.940217

Patches dgux_5.4.2.p107, dgux_5.4.2.p108, dgux_5.4R2.01.p77, dgux_5.4R2.01.p82, dgux_5.4R2.10.p30, dgux_5.4R2.10.p35, dgux_5.4R3.00.p09

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Part Number 017-600059-00

This Special Release Notice applies to Models:
P001
Q001

This special release is intended to protect your system from improper program execution or data corruption. Please install this special release immediately.

1. Introduction

This Special Release Notice describes Patches dgux_5.4.2.p107, dgux_5.4.2.p108, dgux_5.4R2.01.p77, dgux_5.4R2.01.p82, dgux_5.4R2.10.p30, dgux_5.4R2.10.p35, and dgux_5.4R3.00.p09 for DG/UX™ 5.4.2, 5.4R2.01, 5.4R2.10, and 5.4R3.00 Systems running on Data General's family of AViiON™ computers. In addition, this notice also includes information not currently available in the product manuals (e.g., information developed after the current manuals were printed, or corrections to current manuals).

This printed notice always accompanies the software. You may print additional copies of this notice after you have installed the product. A copy suitable for line printers can be found in the file /usr/release/dgux_sr.940217.pn. In the event of differences between the printed copy of the notice and the copy on the distribution medium, the printed copy takes precedence.

This Special Release consists of the following parts:

Part Description	Part Number
Special Release Notice for AViiON Systems Special Release dgux_sr.940217	017-600059-00
Special Release Tape Media for AViiON Systems Special Release dgux_sr.940217	079-600372-00
Special Release CD-ROM Media for AViion Systems Special Release dgux_sr.940217	068-600094-00

2. Environment

2.1 Hardware

Patches dgux_5.4.2.p107, dgux_5.4.2.p108, dgux_5.4R2.01.p77, and dgux_5.4R2.01.p82 of the DG/UX System will run on Data General AViiON series machines with revision E.2 or later of the MC88100 processor and a minimum of 12 MB of main memory, at least 322MB of disk storage, a system console (or graphics monitor for workstations), and a tape drive (for software distribution). On workstations, 16MB of main memory is recommended.

Patches dgux_5.42.10.p30 and dgux_5.4R2.10.p35 of the DG/UX System will run on Data General AViiON series machines with revision 4.1 or later of the MC88110 processor and a minimum of 12 MB of main memory, at least 322MB of disk storage, a system console (or graphics monitor for workstations), and a tape drive (for software distribution). On workstations, 16MB of main memory is recommended.

Patch dgux_5.4R3.00.p09 of the DG/UX System will run on Data General AViiON series machines with revision E.2 or later of the MC88100 processor and revision 4.1 or later of the MC88110 precessor and a minimum of 16 MB of main memory, at least 322 MB of disk storage, a system console (or graphics monitor for workstations), and a tape drive or CD-ROM drive (for software distribution).

These DG/UX System patches may also be run on a "diskless" AViiON workstation. This requires a console or workstation monitor, but does not require any disk or tape drive units.

2.2 Software

This Special Release dgux_sr.940217 contains patches and patch levels for four different DG/UX Releases 5.4.2, 5.4R2.01, 5.4R2.10, 5.4R3.00. This special release notice contains information for each DG/UX Release. You should refer to the information regarding your specific DG/UX Release.

The load instructions direct you to load a script from your release medium for installing this special release. The script will automatically determine the revision of DG/UX running on your system and then load the latest applicable Patch Level and specific individual patches. The descriptions of the required individual patches are documented below on a per patch basis. Please refer to the Patch Level Notice provided in printed form with this Special Release for additional documentation on the provided patch level.

This Special Release must not be installed on any Trusted release of DG/UX 5.4.2T, 5.4R2.01T, 5.4R2.10T, or 5.4R3.00T. Data General will release at a later date a special release for the DG/UX Trusted family of products.

2.2.1 dgux_5.4.2.p107 and dgux_5.4.2.p108

These patches will run on DG/UX 5.4.2 System software. These patches will be installed automatically ONLY on that revision. The latest Patch Level op-sys-x_5.4.2.931203 will also be installed on your system as a part of this special release.

2.2.2 dgux_5.4R2.01.p77 and dgux_5.4R2.01.p82

These patches will run on DG/UX 5.4R2.01 System software. These patches will be installed automatically ONLY on that revision. The latest Patch Level op-sys-x_5.4R2.01.931008 will also be installed on your system as a part of this special release.

2.2.3 dgux_5.4R2.10.p30 and dgux_5.4R2.10.p35

These patches will run on DG/UX 5.4R2.10 System software. These patches will be installed automatically ONLY on that revision. The latest Patch Level op-sys-x_5.4R2.10.940201 will also be installed on your system as a part of this special release. The single patch dgux_5.4R2.10.p30 is included as a part of the Patch Level package.

2.2.4 dgux_5.4R3.00.p09

This patch will run on DG/UX 5.4R3.00 System software and will be installed automatically ONLY on that revision.

3. Patches

The subsection headings below correspond to the individual patches that are included in this special release. The description for each revision-specific patch contains a list of all fixes included in the patch. These descriptions may differ due to revision differences.

IT IS IMPORTANT THAT THIS SPECIAL RELEASE BE INSTALLED.

3.1 dgux_5.4.2.p107

Patch dgux_5.4.2.p107 corrects a data corruption problem that can occur when using DG/UniVerse or executing the system calls below, in the order listed.

The problem occurs when there is a file whose file size is less than the data element size and the system calls below are issued as follows:

1. truncate(2) for some value less than the data element size,

2. lseek(2) past the previous end of file, and

3. write(2) for some value less than the data element size.

In these circumstances, DG/UX fills the next data element with nulls, which can corrupt data in a user's data file or file system meta data. When the file system meta data is corrupted, the following message usually appears in the file /usr/adm/messages:

> "FS tried to read buffer size 1 at logical offset xxxxxxx of the FS identified by fsid yyy (status=4026027)."

Note that special loading instructions for this patch are included in the "Installation Instructions" section of this notice. You will be instructed to run the fsck command with the -y option before rebuilding and rebooting your kernel in order to correct any meta data problems which might exist currently on your system.

3.2 dgux_5.4.2.p108

Patch dgux_5.4.2.p108 corrects a problem whereby a process which is using file locking to append to a file via an NFS mounted filesystem uses stale file attributes. If two NFS clients are simultaneously appending to the same file and at least one client is performing locking, then it is possible for a client doing locking to overwrite the other client's data since an incorrect End-of-File mark could be in the locking client's cache.

This patch eliminates this problem. The patch invalidates the NFS client cached attributes once the file lock is obtained, which forces the client to get the correct, up-to-date attributes from the server. This patch is only applicable if you are using file locking on an NFS mounted file system.

This patch also includes a previous patch to nfm.a that closes a small window where a biod server could perform a read ahead on a closed file at the same time the file is being reopened. This reopen race results in a 2000075 nfm.a panic.

3.3 dgux_5.4R2.01.p77

Patch dgux_5.4R2.01.p77 corrects a data corruption problem that can occur when using DG/UniVerse or executing the system calls below, in the order listed.

The problem usually occurs when there is a file whose file size is less than the data element size and the system calls below are issued as follows:

1. truncate(2) for some value less than the data element size,

2. lseek(2) past the previous end of file, and

3. write(2) for some value less than the data element size.

In these circumstances, DG/UX fills the next data element with nulls, which can corrupt data in a user's data file or file system meta data. When the file system meta data is corrupted, the following message usually appears in the file /usr/adm/messages:

> "FS tried to read buffer size 1 at logical offset xxxxxxx of the FS identified by fsid yyy (status=4026027)."

Note that special loading instructions for this patch are included in the "Installation Instructions" section of this notice. You will be instructed to run the fsck command with the -y option before rebuilding and rebooting your kernel in order to correct any meta data problems which might exist currently on your system.

3.4 dgux_5.4R2.01.p82

Patch dgux_5.4R2.01.p82 corrects a problem whereby a process which is using file locking to append to a file via an NFS mounted filesystem uses stale file attributes. If two NFS clients are simultaneously appending to the same file and at least one client is performing locking, then it is possible for a client doing locking to overwrite the other client's data since an incorrect End-of-File mark could be in the locking client's cache.

This patch eliminates this problem. The patch invalidates the NFS client cached attributes once the file lock is obtained, which forces the client to get the correct, up-to-date attributes from the server. This patch is only applicable if you are using file locking on an NFS mounted file system.

3.5 dgux_5.4R2.10.p30

Patch dgux_5.4R2.10.p30 corrects a data corruption problem that can occur when using DG/UniVerse or executing the system calls below, in the order listed.

The problem usually occurs when there is a file whose file size is less than the data element size and the system calls below are issued as follows:

1. truncate(2) for some value less than the data element size,

2. lseek(2) past the previous end of file, and

3. write(2) for some value less than the data element size,

In these circumstances, DG/UX fills the next data element with nulls, which can corrupt data in a user's data file or file system meta data. When the file system meta data is corrupted, the following message usually appears in the file /usr/adm/messages:

> "FS tried to read buffer size 1 at logical offset xxxxxxx of the FS identified by fsid yyy (status=4026027)."

Note that special loading instructions for this patch are included in the "Installation Instructions" section of this notice. You will be instructed to run the fsck command with the -y option before rebuilding and rebooting your kernel in order to correct any meta data problems which might exist currently on your system.

Also included in this patch are the following changes:

This patch modifies the NFS server write code path to ensure all incoming requests are buffered. This will collate NFS packets that have been fragmented by a single or multiple IP routers. Without this patch, if the fragmentation is severe enough causing a single 8 KB NFS write request to be broken up into more than 16 IP fragments (i.e. if it was sent through a SL/IP link), DG/UX may panic with a 53000052 panic code depending on the destination disk device.

This patch implements additional DG/UX NFS performance tuning.

This patch corrects a problem that occurs when using the sigstack() call. Sigstack did not properly change the signal stack to the user provided signal stack address, instead the original stack was used.

This patch also closes a small window where a biod server could perform a read ahead on a closed file at the same time the file is being reopened. This reopen race results in a 2000075 nfm.a panic.

3.6 dgux_5.4R2.10.p35

Patch dgux_5.4R2.10.p35 corrects a problem whereby a process which is using file locking to append to a file via an NFS mounted filesystem uses stale file attributes. If two NFS clients are simultaneously appending to the same file and at least one client is performing locking, then it is possible for a client doing locking to overwrite the other client's data since an incorrect End-of-File mark could be in the locking client's cache.

This patch eliminates this problem. The patch invalidates the NFS client cached attributes once the file lock is obtained, which forces the client to get the correct, up-to-date attributes from the server. This patch is only applicable if using file locking on an NFS mounted file system.

3.7 dgux_5.4R3.00.p09

This patch corrects three problems, two of which may cause data corruption of the DG/UX file system.

IT IS IMPORTANT THAT YOU INSTALL THIS PATCH.

The first problem may cause null characters (zero) to be incorrectly written to user data files. When extending the end-of-file (EOF) it is possible for the virtual memory manager (VM) to write a partial buffer to disk. When reading the buffer back into memory, the extended EOF has not been updated to the file system and the VM returns zero-filled buffers between the original and extended EOF pointers. Thus when the buffer is again flushed to disk, the user file could be corrupted with nulls. The only time VM writes a partial buffer to disk would be when it takes a page fault and then it is only a concern if the buffer contains the EOF. The first problem has been corrected in the vmc subsystem.

The second problem may cause corruption to file system meta-data not, user data. This is indicated in the /var/adm/messages file with the following message:

> "FS tried to read buffer size 1 at logical offset xxxxxxx of the FS identified by fsid yyy (status=4026027)."

The file system meta-data is corrected by running fsck -y on the indicated file system. The user data file will not be corrupted; however fsck may reconnect an unreferenced inode in the /lost+found directory. The unreferenced inode could point to a valid user data file that appears to be missing, but can be found in the /lost+found directory. The problem occurs in a timing window where a close(2) of a file may cause a flush of an inode from memory even though the file has just been re-opened. This problem has been corrected in the ufm subsystem.

A third improvement is to the dg_unbuffered_read(2) system call. When the end-of-file (EOF) was encountered, the system call incorrectly returned the offset value instead of zero. This improvement has been added the ufm subsystem.

Note that special loading instructions for this patch are included in the "Installation Instructions" section of this notice. You will be instructed to run the fsck command with the -y option before rebuilding and rebooting your kernel in order to correct any meta data problems which might exist currently on your system.

4. Files

A list of files for each patch included in this Special Release is contained in a file in the /usr/release directory. To be able to back out of any one of these patches, these files should be saved prior to loading the patch. Refer to the applicable revision Patch Level notice for a list of files being delivered in the applicable Patch Level.

Patch dgux_5.4.2.p107

/usr/options/dgux_5.4.2.p107.name

/usr/release/dgux_5.4.2.p107.fl
/usr/release/dgux_sr.940217.pn
/usr/src/uts/aviion/lb/ffm.a

Patch dgux_5.4.2.p108

/usr/options/dgux_5.4.2.p108.name
/usr/release/dgux_5.4.2.p108.fl
/usr/release/dgux_sr.940217.pn
/usr/src/uts/aviion/lb/nfm.a

Patch dgux_5.4R2.01.p77

/usr/options/dgux_5.4R2.01.p77.name
/usr/release/dgux_5.4R2.01.p77.fl
/usr/release/dgux_sr.940217.pn
/usr/src/uts/aviion/lb/ffm.a

Patch dgux_5.4R2.01.p82

/usr/options/dgux_5.4R2.01.p82.name
/usr/release/dgux_5.4R2.01.p82.fl
/usr/release/dgux_sr.940217.pn
/usr/src/uts/aviion/lb/nfm.a

Patch dgux_5.4R2.10.p30

/usr/etc/master.d/dgux
/usr/options/dgux_5.4R2.10.p30.name
/usr/release/dgux_5.4R2.10.p30.fl
/usr/release/dgux_sr.940217.pn
/usr/src/uts/aviion/lb/bm.a
/usr/src/uts/aviion/lb/conf.a
/usr/src/uts/aviion/lb/ffm.a
/usr/src/uts/aviion/lb/nc.a
/usr/src/uts/aviion/lb/nfm.a
/usr/src/uts/aviion/lb/pm.a
/usr/src/uts/aviion/lb/sci.a

Patch dgux_5.4R2.10.p35

/usr/options/dgux_5.4R2.01.p35.name
/usr/release/dgux_5.4R2.01.p35.fl
/usr/release/dgux_sr.940217.pn
/usr/src/uts/aviion/lb/nfm.a

Patch dgux_5.4R3.00.p09

/usr/options/dgux_5.4R3.00.p09.name
/usr/release/dgux_5.4R3.00.p09.fl
/usr/release/dgux_sr.940217.pn
/usr/src/uts/aviion/lb/vmc.a
/usr/src/uts/aviion/lb/ufm.a

5. Installation Instructions

There are five (5) basic steps to installing this special release. Not all of the steps will apply to each revision of DG/UX being provided on this special release media. Please review each section for your specific DG/UX revision to determine which steps are applicable. The general steps are as follows:

1. Verify that your kernel is configured to support the device which you will load the supplied release media.

2. Boot standalone diskman (standalone sysadm on DG/UX 5.4R3.00) from the FCS release tape and run fsck on all file systems including root and usr.

3. Load the revision specific packages from the special release media.

4. Setup the newly loaded packages.

5. Configure and rebuild the DG/UX kernel.

6. Customize DG/UX.

This special release consists of those packages listed in the section titled "Patches", which contain the files (listed by package) in the "Files" Section of this document. TO BACK OUT OF THIS SPECIAL RELEASE, FILES LISTED IN THE "Files" SECTION OF THIS DOCUMENT SHOULD BE SAVED TO ANOTHER NAME OR BACKED UP BEFORE PROCEEDING. REFER TO THE PATCH LEVEL NOTICE FOR THE FILE LIST FOR THE PATCH LEVEL.

5.1 Running fsck on All Your File Systems

This special release is intended to protect your system from improper program execution or data corruption. As such, it is necessary to run fsck to correct any problems found with the file system meta data.

Before loading your revision-specific patches, execute the following steps to boot standalone diskman and run fsck on all file systems. Standalone diskman is available on your DG/UX System release tape. For DG/UX 5.4R3.00 you will use standalone sysadm instead of diskman.

NOTE: DO NOT BOOT THIS SPECIAL RELEASE PATCH TAPE TO RUN STANDALONE SYSADM (5.4R3.00) OR STANDALONE DISKMAN. USE YOUR ORIGINAL DG/UX SYSTEM RELEASE TAPE.

Bring your system down to the SCM:

```
# cd /
# shutdown -g0 -y
# halt -q
```

Boot the DG/UX System Release tape for the revision of DG/UX running on your system, using the correct device specification for your tape drive. The following instructions assume that your tape drive is configured at SCSI ID 4.

To boot the tape on an AViiON model 100, 200, 300, 400, 3000, 4000 or 4300:

```
SCM> b st(insc(),4)
```

To boot the tape on the Ciprico SCSI tape drive of an AViiON model 5000, 6000, 7000 or 8000:

```
SCM> b st(cisc(),4)
```

To boot the tape on the SCSI II tape drive of an AViiON model 5000, 6000, 7000 or 8000:

```
SCM> b st(dgsc(),4)
```

To boot the tape on an AViiON model 530, 550, 4600, 5500, 8500, or 9500:

    SCM> b st(ncsc(),4)

To boot and execute diskman from CD-ROM systems, determine the device the CD-ROM is attached, boot to init s and execute diskman. For example if the CD-ROM is connected to the insc controller and set for SCSI id 2, you would use the following commands:

    SCM> b sd(insc(),2) -s

After booting to init s, execute diskman and follow the steps below.

    # diskman

To run fsck on your file systems:

1. Choose the option "File System Management Menu" from the Diskman/Sysadm Main Menu

2. Choose the option "Check a File System" from the File System Management Menu

3. Perform this step on all file systems, including root and usr. When prompted for Fsck Options: just press enter. The default response will use the -p switch of fsck. Should additional errors continue to be reported, execute fsck a second time on the affected file system using the -y option.

4. When you are finished, exit diskman/sysadm to return to the SCM, and boot your system to run level 1.

5.2 Loading the Special Release

This special release does not use the standard sysadm loadpackage format used to load standard DG/UX releases, patch kits, maintenance updates or individual patches. Instead it uses a special load script called patch_script. When you execute patch_script as instructed below, you will be prompted for a list of packages to install. You should select all the packages which you have installed on your system.

5.2.1 Loading the Special Release from Tape

You should be in run level 1 when loading this Special Release to avoid overwriting a program that is currently running.

To load the Special Release, perform the following steps:

1. Change to tmp directory

    # cd /tmp

2. Insert the Special Release tape and rewind it

    # mt -f <tape_device> rewind

3. Advance to the patch_script which is the fourth file on the tape

    # mt -f /dev/rmt/<tape_device>n fsf 4

4. Copy the patch_script from the tape to the tmp directory

    # dd if=<tape_device>n of=patch_script bs=16k conv=sync

5. Set execute permissions

```
# chmod +x patch_script
```

6. Execute the patch script, providing the name of the tape device

```
# ./patch_script <tape_device>
```

7. If you have multiple release areas on your server, you must repeat this installation step for each secondary release area. You must supply two additional arguments to the patch_script, release area name and revision of DG/UX contained in that release area.

```
# ./patch_script <tape_device> <release_area_name> <dgux_revision>
```

For example, your server may be running DG/UX 5.4R3.00 and you have a secondary release area for DG/UX 5.4R2.10 (/srv/release/R210). You would use the following command:

```
# ./patch_script /dev/rmt/0 R210 5.4R2.10
```

5.2.2 Loading the Special Release from CD-ROM

To load this patch, perform the following steps:

1. Change to the tmp directory

```
# cd /tmp
```

2. Insert the CD-ROM and register the CD-ROM device with the admpdisk command if the device is not registered:

```
# admpdisk -o register "<CD-ROM_device>"
```

If installing on DG/UX 5.4 Release 3.00 you must use the command which registers the CD-ROM in compatibility mode:

```
# admpdisk -c -o register "<CD-ROM_device>"
```

3. Create a mount point and mount the file system:

```
# mkdir /release
# mount -o ro /dev/dsk/+release /release
```

4. Copy the patch script from the CD-ROM to the tmp directory

```
# cp /release/dgux_sr.940217/4.patch_script patch_script
```

5. Set execute permissions

```
# chmod +x patch_script
```

6. Execute the patch script, providing the full patch name to the directory containing the special release.

```
# ./patch_script /release/dgux_sr.940217
```

7. If you have multiple release areas on your server, you must repeat this installation step for each secondary release area. You must supply two additional arguments to the patch_script, release area name and revision of

DG/UX contained in that release area.

./patch_script <release_media> <release_area_name> <dgux_revision>

For example, your server may be running DG/UX 5.4R3.00 and you have a secondary release area for DG/UX 5.4R2.10 (/srv/release/R210). You would use the following command:

./patch_script /release/dgux_sr.940217 R210 5.4R2.10

8. Unmount the release directory

    # umount /release

9. Deregister the CD-ROM device with the admpdisk command:

    # admpdisk -o deregister "<CD-ROM_device>"

5.3 Setting up DG/UX After Loading the Software

You must perform the sysadm setuppackage operation for DG/UX 5.4 Release 2.01 and DG/UX 5.4 Release 2.10 System. Do not perform this step for DG/UX Release 5.4.2 or DG/UX 5.4 Release 3.00 Systems.

5.3.1 Setting up DG/UX 5.4 Release 2.01 Systems

PERFORM THIS STEP ONLY FOR DG/UX 5.4 RELEASE 2.01 SYSTEMS.

After loading the package using sysadm loadpackage, you must set up a patch by running sysadm setuppackage.

To setup the patch, perform the following setups:

```
# sysadm setuppackage
Package Name(s): [all] (Type "?" to see packages to setup)
OK to perform operation? [yes]
Setting up dgux in MY_HOST root.
Setting up patch: dgux_5.4.1.p26.
Setting up patch: dgux_5.4.1.p58
Package dgux has been successfully set up in MY_HOST root.
Package setup for dgux is complete.
```

5.3.2 Setting up DG/UX 5.4 Release 2.10 Systems

PERFORM THIS STEP ONLY FOR DGUX 5.4 RELEASE 2.10 SYSTEMS.

After loading the package using sysadm loadpackage, you must set up a patch by running sysadm setuppackage.

To setup the patch, perform the following steps:

```
# sysadm setuppackage
Package Name(s): [all] (Type "?" to see packages to setup)
OK to perform operation? [yes]
Setting up dgux_5.4R2.10.p21 in MY_HOST root.
..

..
Package dgux_5.4R2.10.p21 has been successfully set up in MY_HOST root.
```

Package setup for dgux_5.4R2.10.p21 is complete.

5.4 Building a Kernel

For all DG/UX revisions on this special release after the software has been loaded and setup you must reconfigure your system and rebuild the DG/UX kernel.

See Chapter 4 of the *Managing the DG/UX System* manual for instructions on reconfiguring the system. Use **sysadm newdgux** to build a new kernel. If you are a diskless server, your client kernels must be rebuilt or the new **dgux.diskless** in **/usr/stand** must be hard linked to the appropriate client's root area.

5.5 Customizing Your DG/UX System

PERFORM THESE STEPS ONLY FOR DG/UX RELEASE 5.4.2 SYSTEMS. If you are using DG/UX 5.4 Release 2.01, Release 2.10, or Release 3.00 you are not to perform the steps listed in this section.

5.5.1 For DG/UX Release 5.4.2 Systems - Installing bootstrap

In order to install the bootstrap delivered with this patch level, you must bring your system down to the SCM and boot standalone diskman. To bring your system down to the SCM, perform the following steps:

```
# cd /
# shutdown -g0 -y
# halt -q
```

Boot standalone diskman. For example:

```
SCM> b sd(insc(0),0,0)usr:/stand/diskman
```

Follow the instructions below to install the bootstrap:

1. From the Diskman Main Menu select the "Physical Disk Management Menu".

2. From the Physical Disk Management Menu select the "Format a Physical Disk" option.

3. From the Format a Physical Disk Menu select the "Install a Bootstrap on a Physical Disk" option.

4. The system will prompt you for the disk specification of the disk where the bootstrap is to be installed:

   Enter the physical disk specification in DG/UX common format:

   Type in the physical disk specification, for example sd(insc(0),0,0).

5. The system will then ask if you want to install the bootstrap:

   Physical disk sd(insc(),0) does not have an up-to-date bootstrap.
   Do you want to install one? [yes]

   Answer "yes" to this question.

6. The system will then ask for the pathname of the bootstrap image:

   Enter the pathname of the bootstrap image file: [/usr/stand/boot.aviion]

   Accepting this default will install the bootstrap on the selected physical disk. This procedure can be repeated for other bootable disks in the system by returning to step 4.

7. After installing the bootstrap, exit Diskman by entering "q" at any menu option prompt. When you are asked the question:

    Do you want to quit Diskman? [yes]

    accept the default and exit to the SCM prompt.

8. At the SCM prompt, you are ready to reboot your system using a command similiar to:

    b sd(insc(0),0,0)root:/dgux -3

5.5.2 For DG/UX Release 5.4.2 Systems with Modems

PERFORM THIS STEP ONLY FOR DG/UX RELEASE 5.4.2 SYSTEMS. If your system currently does not have a modem installed, it is not necessary to perform this step.

If a ttymon on your system controls a tty line with a modem, then you must check and possibly modify the settings on this line. You should do this before rebooting the system.

This patch requires that "Hangup" be set to "Yes" for all modem lines. This ensures that the modem will be hung up. If you do not set "Hangup" to yes, the modem will not hangup. To check the current status of the Hangup flag on your modem line use "admportservice -o list service_tag" where "service_tag" is usually the tty line associated with the modem. An example follows which shows how to check the settings on tty14.

```
# admportservice -o list tty14
PMTAG   PMTYPE  SVCTAG  FLGS  ID    <PMSPECIFIC>
ttymon1 ttymon  tty14   u     root  /dev/tty14 bh \
- /usr/bin/login 10 M2400 - login:  ==tty14 disabled==\
#tty14--bi-directional uucp line
```

The presence of the "h" under <PMSPECIFIC> indicates that Hangup is set to No. Absence of an "h" under <PMSPECIFIC> indicates the line is configured correctly. As an "h" is present in this example, this port service must be modified.

To modify the port service use sysadm and select Device -> Port -> Port Service -> Modify.

           Port Service Menu

    1 Add ...   Add port service
    2 Delete ...   Delete port service(s)
    3 Modify ...   Modify port service
    4 List   List port services

    5 Enable ...   Enable port service(s)
    6 Disable ...   Disable port service(s)

Enter a number, a name, ? or <number>? for help, <NL> to redisplay menu,
^ to return to previous menu, or q to quit: 3

Controlling port monitor for service: [tcp (listen)] ttymon1
Service to Modify: [tty01] tty14
Port service tag: [tty14]
Service Userid: [root]
Create utmp entry? [yes]

File name of configuration script:
Comment: [tty14--bi-directional uucp line]
Path name of terminal device: [/dev/tty14]
TTY Definition Label: [M2400]
Service command: [/usr/bin/login]
Hangup? [no] y
Connect on Carrier? [no]
Bidirectional? [yes]
Wait-read value: [none]
Timeout: (0-600) [10]
Prompt message: [login:]
Modules to be pushed:
Disabled response message: [==== tty14 disabled ====]
OK to perform operation? [yes]
Service tty14 for port monitor ttymon1 has been modified.

Once you have modified the hangup setting on all your modem lines you can move onto the next installation step.

--- End of Special Release Notice ---