NEXTSTEP for PA-RISC

Title: PA-RISC Frequently Asked Questions
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Introduction

Welcome to the Frequently Asked Questions (FAQ) list for NEXTSTEP Releases 3.2 and 3.3 for PA-RISC.   This document is updated regularly to reflect NeXT Technical Support's most commonly-asked technical questions about NEXTSTEP for PA-RISC.   You can use this document as a quick reference guide for issues that may or may not be readily available in other documentation.

We update this document regularly, and we welcome comments and suggestions.   You can contact Technical Support by phone at +1 (800) 955-NEXT or +1 (415) 780-2922, by fax at +1 (415) 780-2801, or by e-mail at nextanswers-request@next.com.   Hewlett Packard hardware technical support can be reached at +1 (800) 633-3600.

PA-RISC Supported Configurations

Q: Which HP PA-RISC systems are supported by NEXTSTEP Release 3.3 for PA-RISC, and how should they be configured?

A: See NeXTanswers document 1844_3.3_HP_Compatibility_Guide.rtfd.

HP-UX and NEXTSTEP

Q: Can I install HP-UX and NEXTSTEP onto separate partitions of the same hard disk?

A: HP-UX and NEXTSTEP use incompatible partitioning schemes and cannot be installed on the same disk.   The only way to set up a dual-boot machine is by using separate hard disks for HP-UX and NEXTSTEP.

Q: Okay, I've set up a dual-boot machine using one disk for NEXTSTEP and another for HP-UX.   Whenever I log in under NEXTSTEP, I get a panel which says "This disk is damaged: initialize?" with options to initialize, repair, or ignore.   The default option is "Initialize."   What should I do?

A: Under NEXTSTEP 3.2, this happens because NEXTSTEP attempts to mount the HP-UX disk but does not know how to read its filesystem.   You should click "Ignore."   *Choosing either of the other options may result in irreparable data loss on the HP-UX disk.*

     This has been fixed in NEXTSTEP 3.3, you are able to add an entry in /etc/fstab that will force NEXTSTEP to ignore the HP-UX disk automatically. The disk type for the HP-UX disk should be 'ignore'. See the mntent(5) UNIX manual page for more information.

CD-ROM Compatibility

Q: What CD-ROM drives can be used to install NEXTSTEP?

A: Due to restrictions in the HP ROMs, only certain HP and Toshiba CD-ROM drives can be used to install NEXTSTEP.   The recommended CD-ROM drive is the HP A2655A.   The HP A1999A can be used with 7x5 systems but is incompatible with 712 systems.

The HP A2655A uses the same mechanism as the Toshiba XM-3401TA, while the HP A1999A uses the same mechanism as the Toshiba XM-3301TA.   These drives may be used instead of the equivalent HP drives, but NeXT recommends contacting HP to be sure your firmware revision is compatible.

Q: Can a wider range of CD-ROM drives be used to read CD-ROMs once NEXTSTEP has been installed?

A: Yes.

Hard Drive Compatibility

Q: I've encountered some suspicious problems such as errors during installation, SCSI timeouts, and a wait of several minutes to log in to the Workspace.   What's going on?

A: NeXT has discovered SCSI incompatibilities with one specific hard drive model, the Quantum LPS1080S with firmware revision 111B.   The following tables summarize our findings to date.

Compatible:

Vendor	Model	Capacity	FW rev.	Verification status
HP	C2247	1.0GB	0BQ3	NeXT-tested
Micropolis	2112	1.0GB	4024	NeXT-tested
Seagate	ST11200N	1.0GB	8104	NeXT-tested
Digital	DSP3107L	1.0GB	441I	HP-tested
Digital	DSP3210	2.0GB	441G	HP-tested *
Quantum	LPS525S	0.5GB	9656	HP-tested
Seagate	ST12400N	2.0GB	8712	HP-tested *
Seagate	ST31200N	1.0GB	8714	HP-tested
Seagate	ST12550N	2.0GB	0013	customer report *

Not Compatible:

Vendor	Model	Capacity	FW rev.	Verification status
Quantum	LPS1080S	1001MB	111B	HP-tested
Seagate	ST3600N	0.5GB	9686	customer report
Seagate	ST3600N	0.5GB	4686	customer report

* subject to limitations affecting hard drives of 2GB or greaterÐsee below

NeXT has received conflicting information about the compatibility of the Seagate ST3600N.   If you are encountering problems with the Quantum LPS1080S, please contact your HP Sales Representative for a replacement drive.   In addition, if you have any additional information related to these tables, please contact NeXT Technical Support by the means listed in the Introduction.

Q: I couldn't install on my hard drive which is two gigabytes or larger.   Why not?

A: There was a bug in NEXTSTEP Release3.2 in which the UNIX File System imposes a 2GB limit for disk partitions, the UNIX newfs command fails when attempting to create a filesystem on these drives.   (Note that "two-gigabyte" drives are actually slightly larger than 2GB, so that they are susceptible to this problem.)   Consequently these drives may be used by partitioning with the UNIX disk command, but they cannot be used as boot devices.   See NeXTanswer 1533_initializing_and_partitioning_big_disks for more information.

This has been fixed in NEXTSTEP Release 3.3.

SCSI Device Numbering

Q: How are SCSI device numbers assigned on HP hardware?

A: Unlike NEXTSTEP on NeXT and Intel-based hardware, NEXTSTEP for PA-RISC assigns SCSI device numbers in order of *decreasing* SCSI ID numbers.   In other words, NEXTSTEP scans down by SCSI ID, assigning device number 0 to the first device encountered, device number 1 to the second, etc.

For example, a typical HP SCSI setup consists of a hard disk at SCSI ID 6 and a CD-ROM drive at SCSI ID 2.   In this example, the hard disk is assigned SCSI device number 0, while the CD-ROM drive is assigned device number 1.   A second hard disk added at ID 1 would then be assigned device number 2.

Fast-Wide SCSI Support

Q: Is the fast-wide SCSI interface supported on the higher-end HPPA workstations?

A: No, fast-wide is not supported by NEXTSTEP.   There are no announced plans to support it at this time.

Video Support

Q: What video cards can I use with my HP workstation and what modes will it work in?

A: The following are the HP PA-RISC workstations and video systems supported by NEXTSTEP 3.3:

HP 712(/60 or /80)
Built-in (Artist)
RGB:888/32   using HP's Color Recovery technology
RGB:256/8
BW:8
Add on card for two headed system
RGB:888/32   using HP's Color Recovery technology
RGB:256/8
BW:8
HP 715(/33, /50, or /75) and HP 725/50
Built-in (TimberC)
RGB:256/8
BW:8
CRX-24 graphics adaptor card
RGB:888/32
RGB:256/8
BW:8
CRX graphics adaptor card
RGB:256/8
BW:8
HP 715(/64, /80, or /100) and HP 725/100
Built-in (Artist)
RGB:888/32   using HP's Color Recovery technology
RGB:256/8
BW:8
NOTE: *The HCRX cards are not currently supported in NEXTSTEP 3.3. A driver is currently being written for the HCRX 8 and 24 bit graphic adaptors.*

HP 735 and HP 755
CRX-24 graphics adaptor card
RGB:888/32
RGB:256/8
BW:8
CRX graphics adaptor card
RGB:256/8
BW:8
NOTE: the CRX card for the 735 and 755 is a different card than is used in 715's.

Resolution and Refresh Rate
All the HP's support the following resolution and refresh rate in Configure.app:
1280x1024   72Hz
However, on the machines with the Artist graphics system, 712(/60 or /80) and   715(/64, /80, or /100), it is possible to choose different resolutions and refresh rates during the HP boot process. The following are supported by the hardware:
1280x1024   72Hz
1024x76875Hz
1024x76870Hz
1024x76875Hz   Flat Panel
1280x1024   60Hz
1024x76860Hz
 640x480   60Hz
1280x1024   75Hz
1024x76875Hz
 800x600   75Hz
 640x480   75Hz
Of course, you would also need a monitor that supports one on these.
NOTE: a video memory upgrade is required for for an HP model 712 to have a resolution of 1280x1024.