

***Using StorageWorks Disk
Drives as System Devices
– HP Series 700 and 800
– HP-UX V9.05 and V9.04***



Application Note
EK-SMA05-AN. A01

This application note describes how to install HP-UX V9.04 and V9.05 operating systems on StorageWorks disk drives. The following notes apply to the installation procedures:

1. The following disk drives are qualified for use with HP-UX:
 - SWXD3-SC - 1GB Narrow, single ended
 - SWXD3-SB - 2 GB Narrow, single ended
 - SWXD3-SE - 4 GB Narrow, single ended
 - SWXD3-WC - 1 GB Wide, single ended
 - SWXD3-WB - 2 GB Wide, single ended
 - SWXD3-WE - 4 GB Wide, single ended
2. On the Series 800 servers, HP-UX V9.04 can not be installed on a partitioned disk since disktab information for StorageWorks drives is needed but not available on the installation media. An installation on Logical Volumes is the only kind possible.
3. On the Series 700 workstations, HP-UX V9.05 can not be installed on the 4 GB drive because of the operating system's inability to handle files greater than 2 GB or to access a raw section larger than 2 GB.
4. An operating system can be installed on a narrow drive mounted in a wide enclosure, providing the computer has a scsi adapter than supports the wide enclosure.
5. Approximate installation times are as follows:
 - Series 700 Workstations: Averages 40 - 50 minutes
 - Series 800 Servers: Averages 1 hour and 10 minutes to 1 hour and 40 minutes
 - Averages assume a full installation and do not include post installation activities
 - Post installation activities could run anywhere from a few minutes to many hours, depending on complexity of the working environment

Installation Procedure for Series 700 Workstations, HP-UX V9.05

1. Boot from Install media
2. Read information and instruction screens and then press any key to continue
3. Select disk to install to
4. After message about RZ drive not being found in disktab table, press 'enter' to continue
5. Continue responding to messages with 'enter' until you see a message about choosing long or short files. Make your selection and press 'enter'
6. Choose '4' to change ROOT Filesystem parameters
7. Following is a table to choose suggested StorageWorks disk parameters:

	SWXD3-SC SWXD3-WC	SWXD3-SB SWXD3-WB
Swap Space	100000	100000
1024 byte sectors / track	82	84
Tracks/cylinder	8	16
RPM	5400	5400

Note: Use default values for any that are not shown above.

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8. Enter '**Control X**', or any key, as appropriate until you get back to main menu, then choose '**I**' to continue installation process
 9. Press '**Control X**' to confirm swap space (notice it has changed slightly)
 10. Enter '**y**' to continue process if root device is displayed correctly. At this point system will reboot from target disk
 11. Replace media with Core Operating System media when asked and press '**enter**'
 12. Select All Filesets
 13. Select Start Loading Now
 14. Answer '**y**' to do update
 15. After update is complete, system will again boot from this disk
 16. Answer '**y**' or '**n**' to question about linking to network - your choice
 17. Answer network questions, if you chose '**y**'. Then answer questions about time
 18. Most likely, you will answer '**n**' to the font client question
 19. Set root password
 20. At console login prompt, log in as root and answer questions about console
 21. Edit /etc/inittab. Change first line to '**init:4:inittdefault**' to enable multi-user mode and the HP Visual User Environment
 22. Type '**reboot**' and you should come up in windows

The installation is now over and you may now use the system. It is suggested that you look at /tmp/update.log for suggestions as to what should be done for post-installation tasks. There may be other tasks that you will want to do also.

Installation Procedure for Series 800 Servers, HP-UX V9.04

Please note that many of the answers to questions below are only suggestions. You may wish to modify your selections to tailor to your needs.

1. Boot the computer and watch for opportunity to stop boot process from primary boot device by pressing any key within the 10 second opportunity
 2. Place install media in drive
 3. You are now at the console prompt. You may wish to change the primary or secondary boot device to the hardware address of the disk you are installing to or you may later boot from the specific device as shown in this procedure.
 4. At the console prompt, boot from the console media. If the boot media is the internal HP CD-ROM, this command might be '**boot 52.2.0**' or '**boot 56/52.2.0**'.
 5. Answer '**y**' to question about interacting with IPL
 6. At the ISL> prompt, type '**hpux install to (52.1.0)**' This is just an example, assuming that your StorageWorks drive is at hardware address 1. (Don't forget the parenthesis.)
 7. Do you wish a full install? Answer '**y**'
 8. Do you wish to install a Logical Volume system? Answer '**y**'
 9. Do you wish to continue? Answer '**y**'
 10. Do you wish to change size of Root or Swap? Answer '**y**'
 11. Enter root size in MB. Answer '**I**'
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12. Enter swap size. Answer **'96'**
 13. Enter file system filename type, long or short: [s]. Answer **'l'**
 14. At this point, you will be notified that the installation software does not recognize the disk you are installing to and asks you to select a disk type from a list. You should choose **'C2247'** for the StorageWorks 1 GB drive or **'C3010'** for the 2 GB or 4 GB StorageWorks drives
 15. Replace the Install media with the Core Operating System update media when asked
 16. The system will reboot. You will have to interrupt the boot process within the 10 second period and answer the following questions:
 17. Boot from primary path? Answer **'y'** only if you have set the primary path to the disk you are installing to, otherwise answer **'n'** and answer the following question:
 - Boot from alternate path? Answer **'y'** only if you have set the secondary path to the disk you are installing to otherwise answer **'n'**.
 - If you answered **'n'**, enter the boot path, for example: **'52.1.0'**
 18. Interact with IPL? Answer **'y'**
 19. At the ISL> prompt, type **'hpux -lm (;0)/hp-ux'** to enter maintenance mode
 20. Choose **'Modify Root Volume Group'** from the next screen
 21. Choose **'Change filesystem'**
 22. Choose **'Include a filesystem'**
 23. Add 3 filesystems using the information in the following table as a guideline:

Filesystem Name	/usr	/tmp	/users
Logical Volume Size (MB)	200	80	256
Logical Volume Name	/dev/vg00/lvol3	/dev/vg00/lvol4	/dev/vg00/lvol5

24. Answer **'OK'** to the next 2 questions
 25. Proceed with Root Volume Group Creation? Answer **'y'**
 26. After all 4 items in the top box are marked "done", hit **'tab'** and then **'enter'** for OK
 27. Press **'enter'** to continue
 28. Select all filesets on source media
 29. Click on "start loading now"
 30. Start loading filesets now? Answer **'y'**
 31. After all filesets are loaded and the system regenerated (this will take more than 1/2 hour), the system will again reboot. You will have to interrupt the boot process within the 10 second period and answer the following questions:
 32. Boot from primary path? Answer **'y'** only if you have set the primary path to the disk you are installing to, otherwise answer **'n'** and answer the following question:
 - Boot from alternate path? Answer **'y'** only if you have set the secondary path to the disk you are installing to otherwise answer **'n'**.
 - If you answered **'n'**, enter the boot path, for example: **'52.1.0'**
 33. Interact with IPL? Answer **'y'**
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34. At the ISL> prompt, type *'hpux (;0)/hp-ux'*
 35. After system comes up, answer the following question: "Are you ready to link this system to a network?" If you answer *'n'* you will skip this section. If you answer *'y'* continue with this section
 - Do you wish to continue? Answer *'y'*
 - Enter system name. Enter the network name you are assigning to this node
 - Enter your Internet Protocol address
 - Enter the subnetwork mask, for example: 255.255.255.0
 - If you wish to specify a gateway, do so
 - If you entered a gateway name, you must now enter its IP address
 - Enter bindserver information, if you wish
 36. Answer questions about timezone
 37. Set a root password
 38. Login as root and type the following to set the correct information in the autoexec lif file: *'mkboot -a "hpux (;0)/hp-ux" -v /dev/dsk/c0d0s2'*. The single quote should not be typed, but the double quote must be used.
 39. Reboot from this new system disk without using ISL

The installation is now over and you may now use the system. It is suggested that you look at /tmp/update.log for suggestions as to what should be done for post-installation tasks. There may be other tasks that you will want to do also.