Chapter 1

Read this before installation

UnixWare 7.0.1 is an update to the UnixWare 7 Operating System that provides significant new features and enhancements. UnixWare 7.0.1 can be installed in either of these ways:

- By performing a full installation of UnixWare from the UnixWare 7.0.1 installation media. Refer to the notes in this chapter and the instructions in Chapter 3, "Installing a UnixWare 7 system", in the *Installation Guide*.
- By performing a layered installation of the UnixWare 7.0.1 update packages on top of a previously installed UnixWare 7 system. Refer to the installation instructions in Chapter 3, "Updating your system" (page 29).

This chapter covers the following areas:

Installation hardware requirements

Before installing UnixWare, make sure your system has at least the minimum required system memory and hard disk space. See the *Installation Guide* for information.

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NOTE A primary hard disk of 1GB or larger is recommended.

The minimum supported hard disk size is 500MB, but a full installation is not possible on this size disk.

Network installations

The UnixWare 7.0.1 Installation CD-ROM contains images of all diskettes used to install and troubleshoot UnixWare. These are found in the */info/images* directory.

Your distribution does not contain media for the Magic diskette or the Network Installation Utilities diskettes. If you want to create diskettes from the images on the CD-ROM:

1. Log onto your UnixWare system as *root*.
2. Mount the CD-ROM. Enter:

   mount -F cdfs -r /dev/cdrom/c*C*b*B*t*T*l*L* /mnt

   where ***C, B, T, L*** are the controller, bus, target (SCSI ID), and logical unit number (LUN) of your CD-ROM device.

   NOTE In many cases, you can substitute the wildcard * in place of the full device name; for example **/dev/cdrom/***.

   Once the update has been installed, the CD-ROM drives can be accessed as cdrom1, cdrom2, cdrom3 and so on.
3. Enter:

   cd /mnt/info/images/
4. Format a blank diskette by inserting it into the primary diskette drive and entering:

   format -V /dev/rdsk/f03ht

   You can skip this step if the diskette is already formatted.
5. With a formatted diskette in the primary drive, enter:

   dd if=*image* of=/dev/rdsk/f0t bs=32b

   where ***image*** is the name of the source file for the diskette you are creating (for example, *netinstall.image.1*).
6. Verify the checksum, by comparing the value listed in */mnt/info/images/sums* with the result of this command:

   sum -r /dev/rdsk/f03ht

   The checksums should match.

From an SCO OpenServer™ machine, the syntax in steps 2, 4, 5, and 6 is:

> **mount -f HS,r /dev/cd0 /mnt**
> **format /dev/rfd0135ds18**
> **dd if=image.name of=/dev/rfd0 bs=32b**
> **sum -r /dev/rfd0**

Network installation onto systems of 16MB or less is not supported in this release.

> **NOTE** This version of UnixWare 7 does not provide any drivers for PC CARD (PCMCIA) network interface adapters. This means that while UnixWare 7 can be installed from CDROM onto a laptop computer, network installations onto a laptop computer are not currently supported.
>
> PCMCIA drivers from SCO® UnixWare® 2.1 will work on UnixWare 7, but these must be added after installation and cannot be used for network installations. In addition, SCO is continually updating the available drivers for UnixWare 7. See the SCO Compatible Hardware Web Pages (*http://www.sco.com/chwp*) for the latest information on PCMCIA network adapter drivers for UnixWare 7.

Installable components

See Appendix A, "System profiles, services, and packages" (page 95) for a list of installable components.

Upgrading SCO UnixWare 2.1 VxVM to UnixWare

You can preserve a VxVM filesystem that is not your root or */usr* filesystem from SCO UnixWare 2.1. To do so, follow this procedure:

1. Ensure that the VxVM ODM packages are installed and the filesystem is configured as you require it on SCO UnixWare 2.1.
2. Mount the filesystem.
3. Create an s5 filesystem on a floppy diskette as follows:

   # **format /dev/rdsk/f03ht**
   # **mkfs -F s5 /dev/dsk/f03ht 2880**

4. Mount the diskette and copy the necessary files and directories as follows:

```
# mount -Fs5 /dev/dsk/f0t /mnt
# find    /etc/vx/reconfig.d \
/etc/vx/tempdb  \
/etc/vx/volboot \
/etc/vfstab | cpio -pd /mnt
```

5. Unmount the diskette and install UnixWare 7:

```
# umount /mnt
```

NOTE After the installation of UnixWare 7 do not perform a **vxinstall**.

6. Copy the files from the diskette back to the UnixWare system:

```
# mount -Fs5 /dev/dsk/f0t /mnt
# cd /mnt
# find    /etc/vx/reconfig.d \
/etc/vx/tempdb  \
/etc/vx/volboot | cpio -pd /
```

   Merge */mnt/vfstab* and */etc/vfstab* by hand.

7. If the mountpoint used in SCO UnixWare 2.1 (in step 2) does not exist, create it: # **mkdir** ***mount_point***

8. Remove the file */etc/vx/reconfig.d/state.d/install-db*:

```
# rm /etc/vx/reconfig.d/state.d/install-db
```

9. Reboot the system.

10. Mount the VxVM filesystem or volume:

```
# mount /mount-point
```

Installation limitations and workarounds

SCO has tested the installation of UnixWare 7 on a wide range of hardware. Note the following possible problems that have been identified during testing. These notes supplement or correct the installation instructions in the *Installation Guide*.

NOTE Before you install any new system software, you should always back up your current system and verify that the backup was successful.

NOTE In some cases, you may need to switch to the character console (vt0) to resolve installation problems. To do this, press ⟨Alt⟩⟨SysReq⟩**H**. To return to the graphical installation screen, press ⟨Alt⟩⟨SysReq⟩⟨F1⟩.

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- Please note that the fix incorporated into SCO UnixWare 2.1.3 to allow disks greater than 2GB in size to be backed-up with the **-e** option to **emergency_rec** has not been included in UnixWare 7.0.1. A PTF may be created to fix this — please check the SCO BBS.
- If you configure a non-existent network adapter then try to remove it and configure the correct one, the system may hang. If this happens, you must restart the system.
- If you do not know or are unsure of the network parameters for your network adapter, TCP/IP, IPX/SPX, or NIS, you should defer configuration until after installation rather than misconfigure these components. In most cases, the ⟨F8⟩ option is displayed at the bottom of the screen when you are able to defer configuration.
- Debugging is set switched off by default during installation. To switch debugging on, set the boot parameter **IVAR_DEBUG_ALL=1**. See **boot**(1M) for information on setting boot parameters.

  When debugging is switched on, the installation process stores logs for each of the **ui_modules** in separate files in either */tmp/log* or */isl/log* directories. (Logs are no longer written to **stderr**, which used to reside in the */tmp* directory.)

  The logs are in two different locations depending on where you are during the installation:

  - If you have not mounted the hard disk the logs are stored in */tmp/log*.
  - If the hard disk has been mounted the logs are stored in */isl/log*, or */mnt/isl/log* in the **chroot** environment, during packaging installation.

  The hard disk is mounted at the point when the installation process displays the message `Making Filesystems`. This occurs shortly after you have reached the final confirmation screen of the installation questions.

  Once you have passed the final confirmation screen, all the information in the logs is transferred onto the hard disk.

  To extract files from the machine, switch to the character console on vt0. At the prompt in the appropriate directory (*/tmp*, */isl* or */mnt/isl*) enter the following command:

  ls log/* | cpio -ocuvO /dev/rdsk/f03ht

  To extract the files from the floppy diskette, enter the following command:

  cpio -icuvI /dev/rdsk/f03ht

- The default size for the swap slice, as calculated during the installation, is based on the total amount of memory in the system. If you intend to allocate a sizeable amount of system memory for use as dedicated memory, more swap will be allocated than is necessary. By entering the "Customize filesystems and slices" screen, you can resize the swap to a more reasonable value and allocate the space you free up to other slices or filesystems. As a rough guide, start with twice the amount of non-dedicated memory as swap.

- UnixWare cannot install on a device that is not detected. If you do not pay attention to the device information presented on the installation screens, you may wind up installing UnixWare on a secondary disk (if one is present) because the primary disk was not found. If a secondary disk is not present, an error message is given that indicates the installation cannot proceed.

  UnixWare is installed on the primary hard disk found for the primary Host Bus Adapter (HBA). Typically, rules for determining which HBA, or which disk, is primary are as follows:

  - IDE HBAs always take precedence over SCSI HBAs.
  - IDE HBAs are designated primary and secondary usually in their physical setup (jumpers, for example).
  - With IDE devices, disks are designated as master and slave usually by jumper settings on the disk drive.
  - When multiple SCSI HBAs are present, usually the HBA in the lowest numbered bus slot is primary.
  - With SCSI disks, the lowest numbered target id on the primary HBA is the primary disk.
  - The secondary SCSI disk is the next lowest assigned target id starting with the primary HBA, until all HBAs are scanned and no further disks are found.

  You must be familiar with your system's physical configuration before you begin the installation. When the hardware diagnostics are run as the system first powers up, check the console messages for recognition of your devices. If you do not see what you expect, check the system BIOS setting to make sure there are no conflicts. Check power and bus cables to make sure they are well attached.

  Once the UnixWare HBA autodetection is complete during the installation interview process, you can switch to the system console screen to see diagnostic messages for devices that successfully load. HBA and disk information may be present on the screen.

  When configuring disk setup, verify the disk sizes being reported on the screen as well as the device names being presented. Device names contain the information about the controller and target id for the disk it refers to. See **disk**(7) for details.

In Compaq servers, the system BIOS will boot from the HBA assigned the "Controller order" of "first", using the System Configuration Utility. Any controller may be selected as the first controller regardless of slot. The UnixWare HBA drivers for Compaq controllers will request HBA number 0 for this first controller. It is important that HBA 0 be assigned to the "primary" or "boot" controller. Problems with */stand* can result when the boot controller is not HBA 0.

- If you need to install an HBA, you should install it when the ISL procedure first asks you to. If you forget to install it at this time, and then try to retrieve the situation by going back to the screen, using ⟨F9⟩, the ISL will appear to accept the HBA, but will actually fail to copy the HBA to the link kit.

  If the HBA is then used for the boot device, the system will panic on the first post install boot of the OS with a message indicating that the root file system cannot be mounted. At that point the only option is to restart the installation.

- If you choose to install the NetWare Services package during installation, you are asked for an IPX network number and frame type. If this is the first IPX/SPX installation on your subnet, it is recommended that you specify the network number and IEEE 802.2 framing. If another system is already configured to use IPX/SPX on your subnet, you can make your system use autodiscovery to configure its IPX parameters by setting the network number to 0 and the frame type to AUTO_DISCOVER.

  > **NOTE** Do not use autodiscovery if the same cable segment is hosting more than one IPX subnet number or frame type. Autodiscovery is also not recommended if it is possible that there may be misconfigured systems on the same cable segment as the system that you are configuring.

- Installation fails on a system that has multiple paths to a CLARiiON system when some of the paths are inactive.

  To resolve this, turn the CLARiiON system off and proceed with installation. When the system is up turn the CLARiiON system back on, then hot add it or reboot.

- It is not possible to do network installations over non-Ethernet media, for example, Token-Ring or FDDI networks.

- The maximum functional year for installation is Year 2037 (2^31-1) . It is not Year 2070, as stated in the help for the Installation Year screen.

- During installation, the initial system load fails to configure token ring. After the first reboot, you will first need to use the Network Configuration Manager to remove token ring; then you must use the Network Configuration Manager to add token ring.
- On a DECpc XL566 Pentium with the Symbios Logic NCR53c810, while the system is rebooting, after the message

  ```
  The system is coming is coming up. Please wait.
  ```

  the following message is displayed:

  ```
  WARNING: C8XX: Attempting to Send_ABORT to ha=0 id=0 lun=0 tag=FC
  ```

  This message can be ignored.
- ISL remains limited to 2 disks and 1 swap slice, sized to the entire main memory size present below 4GB. If you want to dedicate memory (that is, tune up **DEDICATED_MEMORY**), stripe your swap space across multiple slices, or both, then you must create a swap slice of the appropriate size at installation time. An appropriate way of calculating this is:

  ```
  swap_slice_size = (general_memory * 2) / stripe_width.
  ```

  where ***swap_slice_size*** gives the size of the swap slice to be reserved on the root disk. It is assumed here that the administrator will configure in the additional disks, and their associated swap slices, following the first reboot.
- Although the ISL seems to allow you to create a */stand* that is greater than 128MB, it will not actually do it. If you do set the size of */stand* to be greater than 128MB, the installation will fail when it tries to create */stand*. The error message does not give any indication why it failed.
- The ISL will only allow dump slices that are less than 2GB.
- The largest file system supported by UnixWare is 131104MB (128GB+).
- If you want to create a set of emergency floppies and you have not mounted */var*, you will be unable to create the floppies. To successfully create the emergency floppies, you must first mount */var*.
- When you try to create a set of emergency floppies, you may fail and encounter messages stating that modules such as */dev/dsk/c0b0t0d0s?* and */home2* could not be found. If this occurs, you should comment out the */home2* line in */etc/vfstab*.

The following may occur during reboot:

- The system may appear to hang during reboot because of the time that the documentation indexing process takes. If this occurs, switch the power off on your system, then switch it on again and let it reboot.

- The system may panic or reboot in some circumstances while the boot process is running from the first diskette. This may be due to an incorrect detection of memory. If this occurs, you should use the **MEMADJUST** command via the boot menu to specify the memory configuration manually. See "Boot problems, hangs, and panics" (this page) for details.
- Your Intel Extended Express system may panic during reboot.

  To prevent this, after you install the osmp package, ensure that the Advanced Programmable Interrupt Controllers (APICs) in the machine are enabled from the BIOS.

Installation troubleshooting

This section describes some problems that you may encounter during installation, and their solutions, under the following headings:

Boot problems, hangs, and panics

The following items explain how to solve some of the problems you may encounter during system boot or reboot. These are:

Starting UnixWare message is not displayed

Problem

When booting your system the `Starting UnixWare...` message is not displayed.

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Solution

Check whether the boot disk drive contains a diskette. If so, remove the diskette and reboot your system. Otherwise, you may have a system hardware problem. See the documentation provided with your hardware.

Many add-on devices and cards come with configuration utilities. Check all the connections and run the configuration utilities.

Panics or resets while booting from install diskette

Problem

After booting your system with the Install Diskette, the UnixWare logo screen is displayed and then the system either displays a panic message or resets (system firmware messages are displayed again).

Solution

This problem is typically the result of not running a hardware configuration program, such as the ECU or the CMOS setup program, before installing UnixWare. To fix the problem, run all machine and peripheral hardware setup programs provided by your hardware vendor and verify that your hardware is correctly configured. In particular, check your memory size/control, cache control, bus speed, and video specifications. See your hardware documentation for details.

For example, this problem may occur if the correct amount of memory is not configured.

If running hardware setup programs does not solve the problem, then there may be a memory problem. You can try to set the amount of memory on your system manually as follows:

1. Press the reset button (or power the computer off, then on again if you do not have a reset button).
2. When the `Starting UnixWare...` prompt or the SCO logo is displayed, press ⟨Space⟩.

   The interactive boot session prompt, `[boot]#`, is displayed.
3. Use the command **show memory** to display the memory ranges found by the boot loader, and identify the range of memory that is causing the problem.
4. Remove incorrect ranges of memory from use. Use **MEMADJUST** as follows:

   `MEMADJUST=-`***range***

   where ***range*** is:

   low_address-high_address

   Addresses are in decimal, and may be specified in bytes, or suffixed with “K” to indicate kilobytes (1024 bytes), “M” for megabytes, or “G” for gigabytes. Addresses may not exceed 4G.

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For example, use this command to remove memory between 15MB and 16MB:

```
MEMADJUST=-15M-16M
boot
```

Alternatively, you can use **MEMADJUST** to add more memory. For example, if the boot does not detect memory between 16MB and 64MB, set **MEMADJUST** as follows:

```
MEMADJUST=+16M-64M
boot
```

NOTE Only the last setting of **MEMADJUST** takes effect.

You cannot use **MEMADJUST** to configure memory above 4GB.

NOTE Using **MEMADJUST** during the installation process will cause the **MEMADJUST** setting to be added to */stand/boot*. If it remains there, the memory will be configured every time the system is booted. Delete the line that contains **MEMADJUST** line from */stand/boot* after installation if it is no longer needed.

5. Continue the installation.

In other reset conditions, you may need to set **DISABLE_CACHE=yes** to fix the problem.

Problem

After booting your system with the Install Diskette, the UnixWare logo screen is displayed, followed by a machine exception error.

Solution

You may need to perform the interactive boot process as in the previous problem, but instead of using **MEMADJUST** to adjust memory, set **IGNORE_MACHINE_CHECK=yes**.

Problem

When installing UnixWare, and using a HBA diskette that is not actually needed by the installation, the following message is repeatedly displayed after the software loads:

```
Drivers on HBA diskette are not needed
```

Solution

You must reboot the system to clear this error. Do not insert the HBA diskette when you re-install the system.

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System hangs during installation

Problem

Your system hangs during installation. The gauge showing the percentage of files installed does not appear.

Solution

This occurs under the following circumstances:

- If your computer is not accessing your diskette drive, check in CMOS that your diskette drive type is properly configured. For example, if a 1.44MB diskette drive is configured as a 1.2MB drive, the diskette drive will not be accessed. Also check that your system memory is installed properly.
- If you suspect a hardware problem (SCSI or non-SCSI CD-ROM) or loose cable, check your system hardware.

If you are sure that your system has none of these problems, contact your SCO software reseller and exchange your installation media for new media.

System hangs during reboot

Problem

After the system self-test completes, the `Starting UnixWare...` message does not appear. The system may be hung.

Solution

To correct this, try one of the following solutions:

- If there is a diskette in diskette drive 1, remove it. Press any key on the keyboard and the system should come up properly. If it does not, use ⟨Ctrl⟩⟨Alt⟩⟨Del⟩ or press reset to reboot the system.
- If you recently installed an add-on card, and if your computer worked properly before installing the card, remove the new card and see if you can reboot the system. If this solves the problem, there is probably an IRQ or address conflict. Reconfigure the card with a non-conflicting IRQ or address and then reinstall the card.
- If your computer uses system shadow RAM or video shadow RAM, access your CMOS configuration and turn off the shadow function(s). While use of shadow memory improves performance for DOS systems, it has no useful effect on the performance of UnixWare.
- If your computer is not accessing your diskette drive, check in CMOS that your diskette drive type is properly configured. For example, if a 1.44MB diskette drive is configured as a 1.2MB drive, the diskette drive will not be accessed. Also check that your system memory is installed properly.

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- If your computer has BIOS caching enabled, disable BIOS caching.
- If your system has an IDE disk drive that is larger than 512MB, and your disk head parameters are defined as greater than 16, verify that your system BIOS supports disk drive parameters with more than 16 heads. If your system BIOS does not support large disk drives, redefine your disk drive parameters using 16 or fewer heads. See your hardware documentation for details.
- If your computer has a hard disk drive greater than one gigabyte and you have an Adaptec 1542 SCSI controller with extended translation enabled, disable the extended translation.
- If your computer had another operating system installed before installing UnixWare, especially an earlier version of SCO UnixWare, it may have placed master boot code on the hard disk that is incompatible with UnixWare. If this is the case, UnixWare will not boot. In most cases, there will be no error message; the system will just hang. To resolve this problem, see the following section.

System has incompatible boot code

Problem

You did not choose to overwrite the boot code in response to the "Configure special disk operations?" when installing UnixWare and the boot code from your previous system will not boot UnixWare.

Solution

Install UnixWare again. This time, do not change the default setting for the "Overwrite system master boot code:" choice on the "Disk Operations" screen; it should be set to "Yes".

System hangs or panics during reboots

Problem

The kernel builds successfully but the system does not boot or the system panics.

A system panic may occur when there is a fatal error that the system cannot correct. This is most often caused by an improperly configured device or device driver. In a panic situation, the system prints a panic message. If the Kernel Debugger (**kdb**) package is installed, control transfers to the kernel debugger program.

Solution

If you have just installed new hardware, there may be an address or interrupt conflict with other hardware on the system. Power down the computer and verify that all controllers are properly seated and jumpered. Use vendor-supplied software to diagnose hardware conflicts and change address or interrupt values as needed.

Problems with DPT controller with old firmware

Problem

On UnixWare systems with old DPT controllers, the installation ends just after the HBA drivers are loaded (when it says `Checking Hardware Configuration...`), with the message:

```
Error: could not determine the size of the main disk
press any key
```

Then pressing any key displays the screen:

```
Internal sequencer error: sequencer failed (first call, UI mapfile)
```

Solution

If you have one of the old DTP controllers, you can not use it with the IDE. If you want to use IDE, take this DPT controller out of the machine (otherwise this DPT controller will respond to the IDE driver as it tries to emulate IDE).

If you want to use one of these old DPT controllers with UnixWare 7, you must disable the IDE driver even if you do not have an IDE controller in the system (otherwise this DPT controller will respond to the IDE driver as it tries to emulate IDE).

The IDE emulation mode of DPT does not work under UNIX (it is supposed to work under DOS).

Problem

Some old DPT controllers support only LUN 0-5. However, when the SDI subsystem probes the controller at LUN 6 and beyond, the controller responds as if there is a unit attached at LUN 6. Later when SDI reads the capacity of the UNIT at LUN 6, the controller returns 0. This value gets used in a computation somewhere in UnixWare 7 and causes a "Divide by Zero" panic.

Solution

If IDE devices are present, edit the **LUNSEARCH** boot parameter to prevent the controller from returning 0.

Problem

The system panics at boot up after install on systems with a DPT controller. It gives the `VT0>` prompt and the "divide by zero trap" message.

Solution

The **LUNSEARCH** boot parameter limits device searching beyond a specified logical unit number. Most devices do not have logical unit numbers greater than 0. If you have any device which has logical unit numbers whose values are greater than 0, the **LUNSEARCH** parameter can be modified to specify that.

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The format for the **LUNSEARCH** parameter is:

```
LUNSEARCH=(c:b,t,l)[,...]
```

For example,

```
LUNSEARCH=(0:1,3,5),(1)
```

means that on controller 0 bus 1 device 3 (SCSI ID 3), logical units should not be searched beyond LUN 5 and no devices on controller 1 should be searched beyond logical unit 0.

For more information on the use of **LUNSEARCH** and other boot parameters, refer to *boot*(4).

Power saver option enabled

Problem

Installation fails at random points after the hard disk is set up (or the message

```
WARNING: Disk Driver Request Timed Out,
Resetting Controller
```

is displayed after a successful installation) on systems with the "Power Saver" option (also referred to as "Power Management" or "Green PC") enabled.

Solution

Turn off the "green/energy star" power-saving time outs in the system BIOS. (Refer to your hardware manual for details.)

Internal errors

The following item explains what to do if you encounter a system error.

Internal error in system installation. Cannot continue.

Problem

This message indicates a fatal and probably unrecoverable error.

Solution

Perform an installation from the beginning to clear the problem.

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Driver problems

The following item explains what to do if you encounter a driver problem.

HBA driver problems

On some platforms, attempting to load a driver for a board that is not installed on your system can cause installation failure. If this happens, disable loading of the offending driver during installation by entering the Device Configuration Utility (DCU) during the installation process. From within the DCU:

1. Select **Software Device Drivers**.
2. Select **Host Bus Adapters**.
3. Highlight the driver that is causing the problem.

   If you are not sure which driver is causing the problem, try switching virtual terminals using ⟨Alt⟩⟨SysReq⟩**H** and look for the driver name in the error message. Use ⟨Alt⟩⟨SysReq⟩**F1** to return to the virtual terminal you were in.
4. Deselect the driver by pressing ⟨Space⟩.
5. Press ⟨Enter⟩ to exit the menu.
6. Select **Return to DCU Main Menu**.
7. Select **Apply Changes & Exit DCU**.
8. Proceed with the installation.

Kernel build

The following item explains how to solve a problem you may encounter when the UnixWare kernel is built.

Kernel build fails

Problem

Kernel build fails during installation.

Solution

If a kernel build fails during installation, review the error messages in the */tmp/kernel.build* error file for details.

If a failure occurs while rebuilding the UnixWare kernel, this may be the result of a corrupted kernel file or **idbuild** tool caused by bad media or a malfunctioning device. The installation halts at this point.

Determine if your hardware (CD-ROM, diskette, or network) is working properly. To do so, run any hardware and vendor diagnostic utilities or contact your network administrator. If necessary, replace the installation media and restart the installation.

Problem

The kernel build gives a warning message about a circular dependency in module “event”.

Solution

This is a harmless message and can be safely ignored.

Media errors

The following items explain what to do if a media error is displayed or if the media you want to install UnixWare from is not listed.

Error reading media

Problem

A fatal error message indicates that there was a problem reading your installation or HBA diskette media.

Solution

Such error messages can be a hardware problem, or a problem with your network (if you are performing a network installation), or a problem with your media. Do the following:

1. If you are performing a network installation, contact your network administrator to verify that there is not a problem with the Install Server or network. If there is a problem with either the Install Server or your network, you may have to perform the installation again.
2. If the problem was not resolved in Step 1, shut down your system and check for hardware problems. Check all connections and run the diagnostic utilities provided with your system hardware.
3. If the problem is still not resolved, contact your SCO reseller to obtain replacement media. (If you used an HBA diskette from a third-party vendor, contact that vendor for a replacement diskette.)

Installation devices not listed

Problem

You are installing from CD-ROM and CD-ROM is not listed as an installation device.

Solution

If UnixWare does not list your install device, check the following:

- Make sure the hardware in your system is supported. See “Supported hardware” (page 37) and the SCO Compatible Hardware Web Pages (*http://www.sco.com/chwp*) for information.
- Make sure the device is powered on at boot time.
- Check the cabling to the device.

- Make sure your controller and devices are set up properly.
- If you are using a SCSI device, ensure that SCSI termination rules are followed.
- Restart the installation and enter the DCU. Check whether the device driver for this device has been configured.
- Run diagnostic software on that device to make sure it is not faulty.
- If necessary, swap that install device with another make or model.

Memory problems

The following items explain how to solve some of the system memory problems you may encounter.

Insufficient memory during installation

Problem
: During installation on EISA systems, an error message indicates that there is insufficient memory to load UnixWare.

Solution
: Run the ECU provided by your hardware vendor and set the correct amount of memory.

Incorrect amount of RAM memory detected

Problem
: On EISA systems with exactly 16MB or less of RAM, the incorrect amount of RAM may be detected if ECU is incorrectly configured. This can lead to panics when non-existent memory is used.

Solution
: You can determine the amount of memory detected by pressing any key while UnixWare is booting and the logo screen is showing, then typing "show memory" at the `[boot]` prompt; the last value shown will be the highest detected memory address. If this value is greater than 16MB on a system with only 16MB of RAM, run the ECU provided by your hardware vendor and make sure the memory size is correctly set to 16MB, then reboot. If this does not fix your problem, see "Boot problems, hangs, and panics" (page 13) for details of how to use **MEMADJUST** to change the amount of memory used by UnixWare.

Memory above 4GB not recognized

Problem

Memory above 4GB is not recognized.

Solution

Add **ENABLE_4GB_MEM=Y** to */stand/boot* and reboot the system. See "Large physical memory" in *Understanding system administration* for information.

Network installation problems

The following items explain how to solve some problems you may encounter while performing a network installation.

Network Utility Diskette not recognized

Problem

The Network Utility Diskette is not recognized. The installation process asks you to insert the first Network Utility Diskette even when it is already in the drive.

Solution

This problem occurs when your computer has a GSI model 21 Enhanced IDE/floppy diskette/tape controller. When this is installed according to the instructions, the diskette devices in the CMOS are set to "Not installed".

To install UnixWare, define the floppy diskette drive in the system CMOS as well as with the controller's BIOS. Some machines may report floppy-diskette drive errors on boot as a result, but the boot should continue successfully.

Cannot configure network interface card

Problem

When prompted to provide your network interface adapter configuration data, the value for one or more of your adapter's hardware parameter settings is not listed (for example, the IRQ, I/O address range, memory address range, and/or DMA channel).

Solution

Only hardware parameter values not already in use are listed. If the value for a hardware parameter is not listed, then another hardware controller is configured to use the same hardware setting. There are several ways to fix this problem:

- Repeat the installation from CD-ROM or diskette.
- Repeat the installation and use the DCU to disable hardware controllers that are not needed during installation (for example, a cartridge tape drive).

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- Record the choices that are listed and then shut down your system. Reconfigure your networking card to use one of the values you recorded and then repeat the installation.

Problem
When running the networking configuration manager a smart-bus board (PCI, EISA, MCA) is not autodetected.

Solution
Run **dcu**(1M) and ensure that an ISA device is not using the same IRQ. If it is, you must disable the ISA device using **dcu** and also in BIOS if necessary. After doing this the card will appear as a selectable option.

Error when configuring network

Problem
When performing a network installation, an error message is displayed following the `Configuring Network` message.

Solution
The last line of the error message explains the cause of the problem:

- If the message indicates a problem with your networking card selection, then either the wrong networking card or the wrong networking parameters were selected. Press ⟨Enter⟩ to restart installation from the beginning.
- If the message indicates a problem contacting an Install Server, first check that your networking cable is securely attached to your system.

  If the cable is securely attached to your system, ask your network administrator to check whether your network is up and whether an Install Server is enabled for network installation. Then select whether to return to the previous menu or to cancel the installation.
- If the cable is not securely attached to your system, attach the cable. Then select whether to return to the previous menu or to cancel the installation.

Installing osmp from NFS filesystems

Problem
Network installation of the osmp package from an NFS filesystem fails because some files are accessible only with root privileges, which are not available via NFS.

Solution
Copy the osmp package to the local machine and install it from there.

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