

Solaris 2.0 Open Issues and Late-breaking News

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Open Issues



This chapter contains open issues or unresolved issues in the Solaris™ 2.0 environment and “work-arounds” to known problems, if available. The open issues are organized into these groups of tables:

- Hardware-Specific Open Issues, beginning on page 4, is information that applies to certain types of hardware or specific machine configurations.
- Installation Open Issues, beginning on page 7, is information that you will need, or a situation you will encounter during installation.
- Users’ Open Issues, beginning on page 11, is information about the DeskSet™, the Workspace, and widely used UNIX® user commands.
- System Administration Open Issues, beginning on page 16, is information about administering installations and using UNIX commands which require root access to administer and configure installations.
- Developers’ Open Issues, beginning on page 25, is information about tool kits, and system interfaces that you use compiling and writing applications and device drivers.

Who Should Read This:

This document may be helpful to all types of users. However, it is assumed that the reader has the experience of a system administrator and knows how to perform basic system administration commands, or is comfortable using the manual pages to find more information.

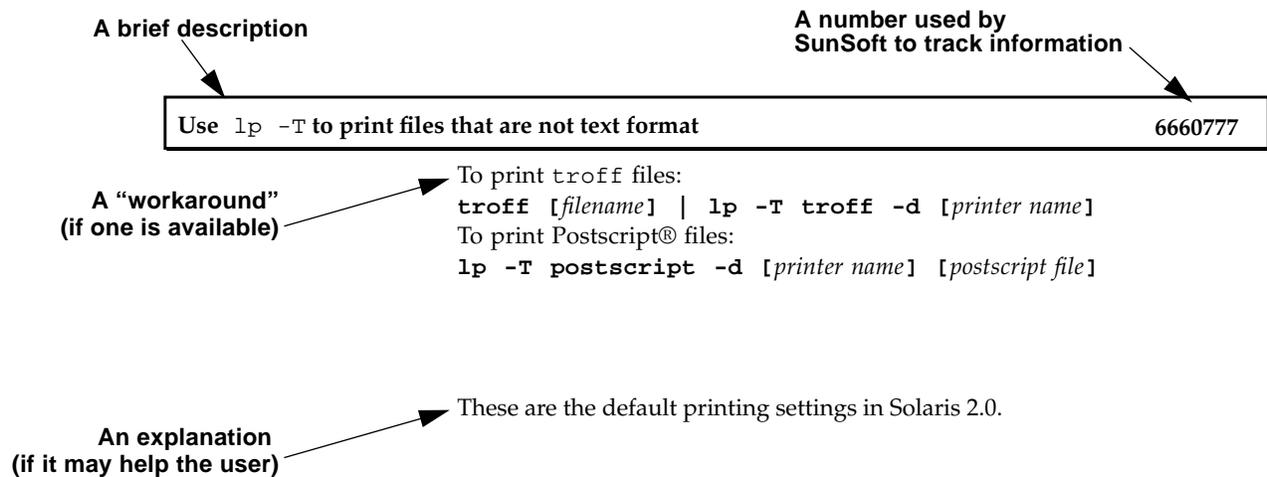
Conventions in this Document

The conventions used in the tables are:

- Commands for work-arounds are provided for the C-shell, unless stated otherwise.
- **Bold Courier type** shows you commands that you type, code that you enter, and corrections to documentation. (There may not be a system prompt shown before a command.)
- Courier type shows you messages that you read on the screen, commands, and filenames.
- *Italics type* shows you variable data that you replace with a name that is appropriate for your installation or configuration.
- **Bold Courier keyname-character** is used to show you special key sequences that you type. For example: simultaneously press the Control key and the letter a as follows: **CONTROL-a**

Not each table will contain the same types of information. For example, there may not be a workaround for a particular problem, or perhaps the reason why an open issues exists is of no help to you. You can scan the table headings for the descriptions that are important to your installation.

Figure 1-1 What the Tables Tell You



Hardware-Specific Open Issues

Maxtor 669MB drives may need a firmware upgrade (SUN0669)

1077506

Error messages you may see:

```
Warning esp0: disconnected command timeout for Target n lun n
esp0:          Timeout
              State=FREE Last State=CLEARING
              Latched stat=0x10<XZERO> intr=0x20<DISC> fifo 0x0 .....
NOTICE: /sbus@1,f8000000/esp@0,800000/sd@0,0 (sd0):
        device busy too long
```

If your disk is a SunOS 5.0 machine, first check the firmware revision as follows:

1. Become root and enter the format command:

```
# format
```

The following messages display:

```
Searching for disks...done
AVAILABLE DISK SELECTIONS:
0. c0t0d0 <SUN0207 cyl 1254 alt 2 hd 9 sec 36>
   /sbus@1,f8000000/esp@0,800000/sd@0,0
1. c0t1d0 <SUN0669 cyl 1614 alt 2 hd 15 sec 54> big
   /sbus@1,f8000000/esp@0,800000/sd@1,0
2. c0t3d0 <Micropolis 1355 cyl 1018 alt 2 hd 8 sec 34>
   /sbus@1,f8000000/esp@0,800000/sd@3,0
```

2. Specify the disk number of the SUN0669: (The example above shows the SUN0669 as number 1):
Specify disk (enter its number): **1**

The following messages display and you are returned to the format prompt:

```
selecting c0t1d0
[disk formatted]
format>
```

3. Enter the inquiry command from the FORMAT MENU to display the disk information:
format> **inquiry**

The following messages display telling you the revision of the prom:

```
Vendor: MAXTOR
Product: XT-8760S SUN0669
Revision: SUNE
```

If you have a revision less than SUNE, you can call your local service provider for a firmware upgrade to SUNE.

If your disk is on a SunOS 4.x machine, first check the revision level as follows:

1. Become root and enter the format command:

```
# format
```

The following message displays:

```
AVAILABLE DISK SELECTIONS:
```

```
0. sd0 at esp0 slave 24
   sd0: <SUN0207 cyl 1254 alt 2 hd 9 sec 36>
1. sd1 at esp0 slave 8
   sd1: <SUN0207 cyl 1254 alt 2 hd 9 sec 36>
2. sd7 at esp1 slave 0
   sd7: <SUN0669 cyl 1614 alt 2 hd 15 sec 54>
```

In the above example there is a 669 drive on esp1.

2. Bring down the system to the monitor prompt "ok"

```
sync;sync;halt
```

3. Turn off the power.
4. If the target is not on esp 0, then reconfigure the disks so that the drive is connected to the onboard SCSI port. Set the target ID of the disk to 0. (Consult your system documentation if needed.)
5. Turn the power on, and before booting starts press:

```
L1-a
```

6. If you do not see the OK prompt, type n for new mode.
7. Perform a probe-scsi:

```
probe-scsi
```

This is what the display looks like:

```
Target 0
Unit 0 Disk    MAXTOR XT-8760S  SUNH669SUNC
```

The last letter shows the firmware revision of the drive. In the example it is revision C.

Write this information down on a piece of paper.

8. Turn off the power and recable your system back the way it was. Then reboot.

If you have a revision less than SUNF, you can call your local service provider for a firmware upgrade to SUNF.

Systems with more than one CD drive attached require you to make links to the CDs

1090081

To fix:

1. Become root:
`su`
2. Change to the /dev directory:
`cd /dev`
3. Remove the incorrect links to sr0:
`rm sr0`
4. Make the correct links to the devices in the /dev directory as follows:
`ln -s dsk/cxyd0s2 sr0`
`ln -s dsk/cxyd0s2 sr1`

Note that `cxyd0s2` is the Solaris 2.0 device naming convention, where:

- *x* is the number of the system's controller that the device uses, if you have only one controller it is `c0`.
- *y* is the scsi target set by the dip switch on the back of the CD.
- `d0` is the disk number.
- `s2` is the slice or partition which is always set to 2 for a whole CD disk.

Why:

When two or more CD drives are attached to the system, `sr0` becomes linked to the wrong drive.

Wyse™ 60 / Wyse 50 terminals may not work for configuring some systems

1091803

To fix:

Don't use Wyse 60 terminal types as the console on a system being configured. The `sysIDtool` screens do not display all of the configuration prompts on the Wyse 60 terminal. If no other terminal type is available to serve as a console, set up the system's configuration ahead of time on the network using the `admintool`. This will normally prevent most of the prompts in `sysIDtool` where the problem is seen. (However, the root password prompt always displays.)

On a Wyse 50, if the up- and down-arrow keys do not work, use Control key sequences:

- **CONTROL-p** for the up-arrow
- **CONTROL-n** for down-arrow

Diskless SPARCstation™ 1 that has proms less than 1.1 may not boot unless it is configured using admintool

1029397

To fix:

First find out what proms are in your diskless client.

- Display the prom version of your machine from the new mode prompt (ok) by typing:

```
ok banner
```

Three lines display listing the memory, ethernet address, and the prom version.

If the diskless client proms revision are 1.1 or less: make this link on the server:

```
cd /tftpboot
ln -s . tftpboot
```

If you configure the machine using `admintool`, as described in the *SunOS System Configuration and Installation Guide* the link is made automatically.

Installation Open Issues

If you stop QuickInstall you must also exit SunInstall and restart installation

1091792

If you exit the SunInstall program, and continue in SunInstall, the disk configuration menu will not display disk information.

If you want to exit QuickInstall, exit the SunInstall program without installing.

Return to a shell and type:

```
EXIT
```

SunInstall should restart and the disk configuration screen should show the system disk properly.

Automatic reboot after installation may fail if boot device is not the system disk chosen for install

1091578

To fix:

If the initial reboot fails, issue an explicit boot command for the boot device.

On page 132 of Chapter 9: *Solaris 2.0 System Configuration and Installation Guide*, there should be a few more steps:

Steps that should follow Step 16.

1. After the system boots, if you want to use NIS, log in as root, and type this command:

```
mkdir /var/yp
```

2. To start NIS, run the `domain` command to edit the `/etc/defaultdomain` and add your domain name. For example if the domain is `ESG.ENG.Company.COM`:

```
domainname ESG.ENG.Company.COM
```

3. Start `ypbind` by typing:

```
/usr/lib/netsvc/yp/ypbind
```

You only need to do this once, next time the system reboots, NIS will start automatically.

tty host manager screen doesn't list all OS releases for diskless/dataless clients**1091193**

On pages 146 and 151 of Chapter 9: *Solaris 2.0 System Configuration and Installation Guide*, the list of OS releases should include:

```

sparc sun4c Solaris 2.0
sun4 sun4c SunOS 4.1.1
sun4 sun4 SunOS 4.1.1
sun3 sun3x SunOS 4.1.1
sun3 sun3 SunOS 4.1.1
sun4 sun4c SunOS 4.1.2
sun4 sun4 SunOS 4.1.2
sun4 sun4m SunOS 4.1.2

```

The OS release you choose should be compatible with the diskless/dataless client's architecture. Other OS versions besides those listed above may become available in the future.

Note: To actually be available on your system, the OS must have been previously installed. For Solaris releases select the `server` option when initially installing the system. For SunOS 4 releases, run the `install4x` script.

To check what's currently available:

1. Start the `admintool`
2. Select `Host Manager` then select `Edit ->ADD...`,
3. Select `Client Type: diskless` and display the menu under `OS Release:`. The OS name (for example: `Solaris`) and OS version (For example: `2.0`) fields are case sensitive. If you expect your selection to be available, but are told it can't be found, try it again with different capitalization.

convert4x script may not work in all cases when upgrading a server for existing 4.x clients**1090911**

On page 193 of Chapter 11: *SunOS 5.0 System Configuration and Installation Guide* explains using the `convert4x` script.

To fix:

If the script does not work for your installation, see the *SunOS 5.0 System Transition Guide for Administrators*, section "Upgrading a Server for Existing 4.1 Clients".

Use the `pkginfo(1)` command to list the installed packages on your system**1091828**

Instructions for listing packages installed on your system were omitted from the *SunOS 5.0 System Configuration and Installation Guide*. See the `pkginfo(1)` manual page.

SUNWbtool package was moved into the Core system support cluster**1092171**

The `SUNWbtool` package is listed in the developer cluster in the *SunOS 5.0 System Configuration and Installation Guide*; it was moved into the core system support cluster.

You must edit the `man.cf` file to be able to read manual page sections 3s, 3x, 4b, 9e, 9f, 9s**1091852**

To fix:

Edit the `man.cf` file in `/usr/share/man` to include all the manual page sections. The `MANSECTS` entry *must* all appear on one line, (not on two lines, as shown in this note):

```
MANSECTS=1,1m,1c,1f,1s,1b,2,3,3c,3x,3i,3n,3m,3k,3g,3e,3r,3b,3s,
9,9e,9f,9s,4,4b,5,7,6
```

Viewing the OpenWindows on-line manual pages before starting OpenWindows the first time**1091133**

To fix:

Before running OpenWindows for the first time, if you want to view the OpenWindows manual pages, do this:

```
man -M $OPENWINHOME/man
```

This is not required if you run OpenWindows before viewing it's on-line manual pages.

Why:

When the system is first booted after installation, the default `man` path does not include `$OPENWINHOME/man`. Once OpenWindows is started for the first time, the `openwin` command adds `OPENWINHOME/man` to the `MANPATH`. After running OpenWindows, the `MANPATH` will always contain `OPENWINHOME`.

Users' Open Issues

If a remote printer runs out of paper, the <code>lpstat(1)</code> command does not tell you	1077059
The <code>lpstat</code> command, which replaces <code>lpq</code> , neglects to say that the printer is out of paper.	
Using <code>lp</code> to print a file on an NFS mounted filesystem may not work correctly	1091285
If you encounter problems printing when the file is on an NFS filesystem, use <code>lp(1)</code> with the <code>-c</code> flag.	
<code>lp</code> prints ASCII text files unless you use <code>-T</code> to specify the type of file <code>lp</code> requires the printer name when using <code>-d</code> with <code>-T</code>	1090817
To print <code>troff</code> files: <code>troff [filename] lp -T troff -d [printer name]</code> To print Postscript files: <code>lp -T postscript -d [printer name] [postscript file]</code>	
Running multiple XGL, PHIGs or DGA applications causes OpenWindows to hang	1090921
Don't run more than one of these applications at a time. These applications run under binary compatibility in solaris 2.0 Versions of these applications that run in Solaris 2.0 native mode are not available.	
Remote Copy under the File option in File Manager may not work properly	1089133
To fix:	Make sure the destination machine has an entry in <code>.rhosts</code> for the source machine. For example, if the source machine is <code>hiho</code> , the <code>.rhosts</code> entries should be: Destination machine <code>silver's</code> <code>~/</code> <code>.rhosts</code> file: <code>hiho</code>

Problems using the Alarm and Hourly command line in Clock Properties Menu1088763

To Fix:

After you exit and re-enter OpenWindows, you can do two things:

- Edit the `.openwin-init` file in your home directory and delete the clock's Alarm and Hourly commands. (When you exit or save the Workspace in OpenWindows, the commands are written to the `.openwin-init` file and are corrupted with backslashes in the process).

or

- Edit the commands in the Clock Properties Menu to delete the backslashes before the double-quotes. For example, this command has been corrupted with two backslashes, each before the double quote (") mark:

Alarm command: `sh -c \"cat/usr/demo/SOUND/sounds/ring.au > /dev/audio\"`

Edit the command to remove the backslashes:

Alarm command: `sh -c "cat/usr/demo/SOUND/sounds/ring.au > /dev/audio"`

Why:

A problem with the functionality of the DeskSet Clock causes the Alarm and Hourly commands to be corrupted when you save the Workspace or exit OpenWindows.

Snapshots of color images displayed on black and white monitors may show strange patterns1082077

Why:

The screen images are being dithered from 8 bit to 1 bit (black and white), often a strange pattern may appear in the black and white image as a result of the dithering algorithm.

Don't save the OpenWindows workspace while running the Jet terminal demo1087148

There is a problem with the Jet terminal demo, and if you save the Workspace, the Jet terminal is placed in the `~/ .openwin-init` file that starts and configures Open Windows for your system. If Jet is started from `.openwin-init` the OpenWindows system will hang.

Using Mail Tool vacation from a 4.x server may not work

1091120

To fix:

If you get your mail on a 4.x server, do one of the following:

- Start vacation from the 4.x machine.

or

1. Start vacation from a 5.0 machine.
2. Edit the `.forward` file in your home directory, change it from:
`\[username], "/usr/bin/vacation [username]"`
to:
`\[username], "/usr/ucb/vacation [username]"`

Why:

If you start vacation from Mail Tool on SunOS 5.0 it assumes the place where the vacation program resides is `/usr/bin`, this is correct for a 5.0 machine. However, if you actually get your e-mail on a 4.x server there is no vacation in `/usr/bin`; it is in `/usr/ucb`.

Using Binder as root with `-system` or `-network` does not work

1090238

If you try to create a new binding, the tool disappears with the message:
XView Warning: Notifier error: Bad file number

Printing from a Solaris 2.0 Machine:

From a CD connected to your machine.

1. Become root, then make and mount a /cdrom directory:

```
mkdir /cdrom
mount -F ufs /dev/dsk/[CDdevice] /cdrom
```

In most cases the CD device name is *c0t6d0s2*

```
cd /cdrom
```

2. Print the Product Notes.

```
lp -T postscript SUNWabook_Notes.ps
```

From a remote CD:

If the CD is connected to a SunOS 5.0 machine, it must be mounted as a shared device. See the *share(1M)*.

If the CD is connected to a SunOS 4.x machine, it must be mounted and exported.

On your machine:

1. Become root, then make and mount a /cdrom directory:

```
mkdir /cdrom
mount -F nfs [servername]:/cdrom /cdrom
cd /cdrom
```

2. Print the Product Notes.

```
lp -T postscript SUNWabook_Notes.ps
```

Printing from a SunOS 4.x Machine

From CD connected to your machine

1. Become root, then make and mount a /cdrom directory:

```
mkdir /cdrom
mount -t ufs -r /dev/sr0 /cdrom
cd /cdrom
```

2. Print the Product Notes.

```
lpr SUNWabook_Notes.ps
```

AnswerBook requires environment variables and entries in .cshrc or .profile

1090820

The directory containing AnswerBook binaries must be in your environment.
Place the following information in your startup files before running AnswerBook:

For the .cshrc

```
csh%setenv BOOKINFO [AnswerBook_home]/bookinfo
csh%setenv HELPPATH [where AnswerBook help files are installed]
```

For the .profile

```
sh$ BOOKINFO=[AnswerBook_home]/bookinfo export BOOKINFO
sh$ HELPPATH=[where AnswerBook help files are installed] export HELPPATH
```

AnswerBook Navigator won't print some tables and illustrations and gives an error:

1079018

No document to print

To fix:

You can make a table print by printing the whole subsection that contains the page.

To display international letters and symbols on terminals requires you to use the stty command

1088716

To fix:

To support international characters on a terminal, run this command on the terminal or in the terminal window:

```
stty cs8 -istrip
```

Why:

The Extended Unix Codeset (EUC) which is used to express the symbols of different languages, requires that a terminal be set to process certain international characters. If this is not set, the international characters may be garbled or display incorrectly.

System Administration Open Issues

Use `lpsystem -t` when setting up a 4.x print client on a Sun OS 5.0 print server **1090751**

In *SunOS 5.0 Setting Up User Accounts, Printers, and Mail*, page 118, step 5 explains using the `lpsystem -t [type] [server system name]` command for a 5.0 print client. See page 126 of *SunOS 5.0 Setting Up User Accounts, Printers, and Mail* and use the `lpsystem -t [type] [server system name]` command after step 3, when setting up a 4.x print client:

```
su
lpsystem -t [type] [server system name]
```

Use `lpadmin -T unknown -I any` when setting up a 5.0 print client on a 4.x print server **1091660**

If you do not use printer type `unknown` and file content type `any`, printing will not work. See Chapter 3, page 118 of *SunOS 5.0 Setting Up User Accounts, Printers, and Mail* for instructions on using `lpadmin`. For example on a printer named `amber`, for a 5.0 client you would become root and type:

```
lpsystem -t bsd
lpadmin -p amber -T unknown -I any
```

Setting up a local PostScript printer **1091660**

In *SunOS 5.0 Setting Up User Accounts, Printers, and Mail*, page 105 the value `PSR` should not appear in the file-content type table. When you set up a local PostScript printer it should be configured as either printer type `-T PS` (PostScript) or `-T PSR` (PostScript reverse), but never both. For example:

- `lpadmin -p amber -T PS -I any`
- or
- `lpadmin -p amber -T PSR -I any`

Note that `PSR` works reliably only with PostScript files that conform to the standards set in Appendix C of the PostScript Language Reference Manual from Adobe Systems, Inc.

Printer classes only apply to local printers

1090857

This means that print jobs in the queue will only be distributed among a class of local printers, so for distribution to work the class must be local to a server. For information about setting up print classes see *SunOS 5.0 Setting Up User Accounts, Printers, and Mail*.

The ethernet address of some machines is incorrectly returned

1092050

To fix: Use `ifconfig -a` to read the ethernet address.

4.x XGL™ runtime libraries are not part of Solaris 2.0

1090813

The 4.x XGL runtime libraries are not packaged with the Solaris 2.0 product.

Adding new devices to a system using `boot -r`

1090747

After you add new devices to a system, reboot the system with `boot -r`; the system will reconfigure the kernel at boot-time. See the `kernel(1M)` and `boot(1M)` manual pages for other boot options. See the `add_drv(1M)` command for adding device drivers.

After booting the system with `boot -r`, if you reboot the system again, make sure you do a clean shutdown of the system using `halt` or `shutdown`. Failure to do so may render your system unbootable.

boot -r may not create tape devices (st) in the /devices directory

1084533

To fix:

- Halt the system and eject the tape before rebooting with: `boot -r`
See the `boot(1M)` and `kernel(1M)` manual pages.

or

- Use the `drvconfig(1M)` command:
`drvconfig -i st`

Why:

`boot -r` which adds new devices to the system at boot time, may not correctly add tape drives to the `/devices` directory.

devreserv(1M) unsupported

1089651

The following commands depend upon static device configurations and therefore should not be depended upon to work reliably:

`devreserv(1M)`
`devfree(1M)`
`devattr(1M)`
`getdev(1M)`
`getdgrp(1M)`
`getvol(1M)`
`listdgrp(1M)`
`putdev(1M)`
`putdgrp(1M)`

More importantly, these utilities are not formally supported and are likely to be removed in an upcoming release. Applications (and users) should not depend upon them.

Adjusting the system clock with `date -a` causes temporary disruption in system time

1086834

To fix: Use the command without the `-a` flag:
date

If you use `date -a` to adjust the system clock forward or backward, the system temporarily speeds up or slows down. For example:

- Setting the clock -10 seconds may cause the system to freeze for ten seconds
- Setting the clock +10 may cause the keyboard to repeat letters for a short period of time.

The larger the clock adjustment forward or backwards, the longer the system reacts before it functions properly again.

System may hang when using local UFS swap files

1090200

To fix: Use raw partitions (`/dev/rdisk/cntndnsn`) to increase user swap space instead of local UFS files. See the `swap(1M)` manual page. Swapping over NFS works correctly. Diskless clients using UFS swap files over NFS works correctly.

Add a dump entry to the `bootparams` specification for each of your 4.x clients

1085891

To fix: If you want dumps to be placed in the swap file, specify a null dump key (remember the colon):

```
client root=server:/export/root/[client] \
swap=server:/export/swap/[client] \
dump=:
```

If you want a dump file separate from the swap file specify the file as the dump key:

```
client root=server:/export/root/[client] \
swap=server:/export/swap/[client] \
dump=server:/export/dump/[filename]
```

Why: SunOS 5.0 diskless clients do not normally request a dump file. However, SunOS 4.x clients always request a dump file. The `bootparams` server program will not respond to clients' requests for dump files unless there is a dump file key in the `bootparams` database. Therefore, for SunOS 4.x clients, at least a null dump entry must exist. Otherwise, the client will seem to hang while booting.

Do not use `mknod(1M)` to configure devices**SBus devices incorrectly assigned minor numbers when added to or removed from the system****1075240**

To fix:

Rather than using `mknod`, make a symbolic link using `ln -s` to the device's name in the `/devices` directory. See the `add_drv(1M)` and `drvconfig(1M)` manual page to learn how to update the `/devices` directory.

If you use the `mknod(1M)` command to create a special file for a device, and later you add or remove any device of the same type as you specified using `mknod`, then the special file may no longer refer to the correct device. This is because adding or removing devices may change the minor numbers associated with devices in the system. The result is that you could erroneously write to, or perform a configuration command on the wrong device in your system because its minor number changed.

Running the SunDiag `fbtest` on two monitors can cause problems**1087874**

To fix:

Do not move the mouse while running simultaneous frame buffer tests (`fbtest`) on systems with two monitors attached. Moving the mouse interrupts the tests, which may cause the system to core dump.

Simultaneous frame buffer tests cannot be interrupted using **CONTROL-C**.

Disabling automounting on a specific point**1090510**

To disable automounting, replace the second parameter in the `/etc/auto_master` or `/etc/auto_home` file with `-null`. For example, to prevent `/amber` from being mounted by the automounter put this line in `/etc/auto_master`:

```
/amber          -null
```

`in.routed` is not started in space saving (-S) mode by default using TCP/IP**1090905**

The *SunOS 5.0 Administering TCP/IP and UUCP* manual incorrectly tells you that you must turn off space saving mode. You do not have to turn off space saving mode, because `in.routed` is not invoked in space saving mode.

Corrections to the SunOS 5.0 Administering TCP/IP and UUCP manual**1091221**

- Page 32 In Figure 3-1, there are missing spaces and or tabs between the IP addresses and the host names.
- Page 45 In the section, "Forcing a Machine to be a Router", the line at the bottom of the page should be changed from: `/usr/sbin/ndd_set/dev/ip ip_forwarding 0` to:
`/usr/sbin/ndd set /dev/ip ip_forwarding 1`
 Note the spaces before and after `set`, and the value of '1' at the end of the line.
- Page 46 In the section, "Forcing a Machine to be a Host",
1. When you comment out the line that begins:
`numifs='netstat -rn (etc...)`
 place `numifs=1` on a new line. The result is as follows:
`#numifs='netstat -rn (etc...)\`
`numifs=1`
 2. Change `/usr/sbin/ndd_set /dev/ip ip_forwarding 0`
 to:
`/usr/sbin/ndd set /dev/ip ip_forwarding 0`
 Delete the underscore and put a space before `set`.

NIS Plus Information Service

Running NIS+ in DES secure mode (`rpc.nisd -S 2`) diskless clients may not boot**1091783**

- To fix:
1. Login as root on the NIS+ master server:
`nischmod n+r 'domainname'`
`nischmod n+r 'org_dir.domain'`
 You only need to do this once, the command enables `nisinit -c`
 2. For each client, perform this on the NIS+ server
`nisaddcred -p unix.client-name@'domainname'\`
`-P client-name.'domainname'. des`
 Then enter the client's root password when prompted.
 3. As root on the client:
`keylogin -r`
 Enter the root password when prompted)

During NIS+ resynchronization, commands that access the NIS+ tables may not access the NIS+ data 1091692

To fix: This problem can be avoided disabling an NIS+ server during full resynchronization:

1. Kill and then restart `rpc.nisd` on the replica server.
2. Issue a `nisping(1M)` command on the replicated directory to initiate a full resynchronization.
`nisping [replicated_directory]`
3. After the resynchronization has started, deregister the NIS+ RPC service by issuing the command:
`rpcinfo -d 100300 3`
4. After the resynchronization has finished, kill and restart `rpc.nisd` on the replica server.

Why: Whenever synchronization of a NIS+ directory is requested using `nisping(1M)` and the replica server's record of the last operation on the directory predates all of the entries in the master server's log, the replica will initiate a "full resynchronization" of the directory. This means it will obtain from scratch the entire contents of the master's copy of the directory.

Such a full resynchronization will occur the first time a `nisping` command is issued on the directory after a replica has been added.

Before and during the period of resynchronization, the replica will answer NIS+ requests with partially empty copies of the NIS+ tables. For example, the request may be issued by simple `pwd` command that reads information from the automounter tables, or NIS+ specific commands that obviously read the tables.

Server Busy. Try Again **errors or poor performance may indicate NIS+ client limit overload** 1083873

To fix:

You can do two things:

- Configure additional swap space across NFS or to a local raw device (it must be a local raw device because of a problem in local swap and system hangs, documented herein - #1090200).
- or
- Replicate the server to handle additional NIS+ requests.

Other errors you may see are:

```
Feb 21 15:06:36 hostname unix: Feb 21 15:06:36 nisd[566]:
nis_list_svc: callback to username.root. returned RPC: Server
can't decode arguments
```

Administration Tool Programs

Upgrade the NIS RPC map when using NIS or not using NIS+ master servers to support admintool 1090853

The Administration Tool requires you to reserve a new RPC number if you are using only NIS, and you do not upgrade your master server to NIS+. You must update the NIS RPC map on the NIS master server to include:

```
admind          100087
```

After you upgrade the map, run the make command:

```
cd /var/yp
make
```

The clock is not set when you change or set timezones in sysIDtool 1070694

To fix:

Reboot the machine after you configure with sysIDtool. The normal system reboot after suninstall also corrects this problem.

Adding dataless or standalone client with Remote Install field enabled

1090147

If you are using the Edit->Add Host function of Host Manager to add a sun4c dataless or standalone client and choose to "Enable" Remote Install, the operation may fail with an error message ending with the words:

```
...Architecture/OS combination (sparc/sun4c/Solaris/2.0) not supported
```

To fix:

To work around this problem, change the Remote Install field to "Disable" and redo the operation. Then in a second separate operation use the Edit->Enable Remote Install function to enable remote install for the new client."

admintool is unable to start when system is NIS+ client

1092098

When the system is configured as an NIS+ client, admintool will be unable to start and will display the following error message:

```
admintool: could not start display method for this reason:
```

```
Received communication service error 4: Remote procedure call timed out: Can't send request
```

To fix:

You must start /usr/sbin/admind as a standalone server, rather than from inetd as it does by default. As root, type the command:

```
/usr/sbin/admind
```

To make this change permanent, edit /etc/init.d/rpc and add the following lines immediately following the lines which start nis_cachemgr inside the "if [-f /var/nis/NIS_COLD_START]; then":

```
if [ -x /usr/sbin/admind ]; then  
    /usr/sbin/admind  
    echo " admind\c"  
fi
```

Developers' Open Issues

cpp(1) manual page is incorrect.	1088808
<p>The path in the manual page currently reads: <code>/usr/lib/cpp [-BCHMpPRT] (etc.)</code></p> <p>It should read: <code>/usr/ccs/lib/cpp [-BCHMpPRT] (etc.)</code></p>	
Applications sending multiple KIOCSLED ioctl STREAMS to machines with some Type 4 keyboards causes the system to drop to the monitor prompt	1079350
To fix:	<p>If the machine unexpectedly exits into the monitor prompt, ok, type: <code>go</code></p> <p>If the machine exits to the > prompt, type: <code>c</code></p> <p>If you need to send multiple KIOCS[ED] commands to the keyboard in your application, use <code>sleep(3c)</code> with at least a .5 second interval between the commands.</p>
Incorrect error code returned when fcntl() call is interrupted	1081045
To fix:	<p>Check for three error codes, (not just EINTR):</p> <p>EINTR ENOLCK EINVAL</p>
Use add_drv(1M), not modload(1M) to add device drivers to the system.	1091855
To fix:	<p>The <code>modload(1M)</code> manual page should tell you to use <code>add_drv(1M)</code> for adding device drivers to the system.</p>
Why:	<p>The semantics of <code>modload(1M)</code> and device configuration have both changed in SunOS 5.0.</p>

Errors in the modldrv(9s) manual page regarding mod_pseudodrvops **1091839**

The manual page incorrectly states that `drv_modops` is always initialized to `mod_pseudodrvops`. The kernel contains no definition of `mod_pseudodrvops`; any driver which defines it will fail to load because of the undefined symbol.

gettimeofday() only has 10 millisecond resolution **1047535**

A bug in the implementation of the `gettimeofday(2)` system call results in the return of time values which only have 10ms resolution.

rt_dptbl(4) and ts_dptbl(4) man pages incorrect **1091278**

`rt_dptbl(4)`

To build `rt_dptbl`, enter:

```
cc -c -O -D_KERNEL rt_dptbl.c
ld -r -o RT_DPTBL rt_dptbl.o
```

`ts_dptbl(4)`

To build `ts_dptbl`, enter:

```
cc -c -O -D_KERNEL ts_dptbl.c
ld -r -o TS_DPTBL ts_dptbl.o
```

Why:

The instructions for building these kernel module are incorrect; the modules are not architecture dependent. The compile flags shown on the manual pages are not needed.

t_getstate(3N) network function may return -1, indicating failure when there is a current state **1090928**

To fix:

Use return value of `t_sync(3N)` to get the state of the protocol if `t_getstate` fails.

t_close(3N) is needed on a descriptor opened by t_open for correct TLI behavior

1090377

To fix:

Use `t_close(3N)` on the descriptor to restore TLI state.

When a process is forked/exec'ed, some programs close the file descriptors for the child process using the `close()` call (or a process may do it for other reasons). Some of these descriptors may have been opened by `t_open`. If they are reallocated in the other or same process by a `t_open`, the TLI protocol machine may inherit the old state or data pointers and cause protocol errors.

A `t_close()` is needed on a descriptor opened by a `t_open()` presently for correct TLI behavior. Since the `t_open()` followed by a `close()` may have been done by a parent process, the source of the problem may not be easily apparent.

Undocumented assembler (as) command line option -xF

1089755

-xF

Generates additional information for performance analysis of the executable using SPARCworks analyzer. If the input file does not contain any `stabs` (debugging directives), then the assembler will generate some default `stabs` which are needed by the SPARCworks analyzer. Also see the manual page `analyzer(1)`, `dbx(1)`, and `collector(1)`.

rpcgen's generated server main() routine creates code that does not work when the server is started via rsh

1086815

To fix:

If you expect that your server will be started via `rsh` and that it will *not* be started via a portmonitor (`inetd`), edit the generated `server main` code and delete the entire section that appears under the first "if" statement.

The following abbreviated example shows the beginning and ending lines of the generated code's "if" statement that you should delete. (Approximately 32 lines in the middle are not shown in the example, delete them from the code also.)

```
main()
{
    pid_t pid;
    int i;
    char mname[FMNAMESZ + 1];

    if (!ioctl(0, I_LOOK, mname) &&
        (!strcmp(mname, "sockmod") || !strcmp(mname, "timod"))){

        svc_run();
        exit(1);
        /* NOTREACHED */
    }
    else {

#ifdef RPC_SVC_FG
        int size;
        struct rlimit rl;

        [etc.]
    }
}
```

Begin deletion here

(approximately 32 lines not shown)

End deletion, and code continues

(Continued) **rpcgen's generated server main() routine creates code that does not work when the server is started via rsh**

1086815

An example follows showing the edited server main code:

```
main()
{
    pid_t pid;
    int i;

    {
#ifdef RPC_SVC_FG
        int size;
        struct rlimit rl;
```

Why:

The generated code incorrectly assumes that the file descriptor 0 is a network service request being passed from a port monitor, but under `rsh`, file descriptor 0 is standard in.

All windows application must be built with LD_RUN_PATH set to /usr/openwin/lib

1089997

This is a difference between version 3.0 and 3.0.1 of OpenWindows. OpenWindows 3.0.1 no longer sets the `LD_LIBRARY_PATH` if `$OPENWINHOME` is `/usr/openwin`. You must build applications with `LD_RUN_PATH` set to `/usr/openwin/lib` to make sure all OpenWindows libraries (`libxview`, etc) are found at runtime. See the `ld(1)` man page and the `-R` option.

SGTS and GKS4.1 demos may core dump on Solaris 2.0

1091093

Why:

At the time this document was printed, the reason for the core dump was unknown. These demos should not be used as templates for applications.

#include specification wrong in audio_device.h

1091939

To fix:

Include `-DSVR4` in the compile flags when compiling programs that include this header.

The audio driver does not reset the record sampler counter correctly

1091942

To fix:

A workaround is to set both play and record sample counts at the same time (if you actually want the two counters to be different, then you will have to reset the play sample count afterwards). For example, the program below can be 'fixed' as follows:

```
#include <sys/filio.h>
#include <fcntl.h>

#ifdef __sys_fcntlcom_h
#include <sys/audioio.h> /* SVr4 */
#else
#include <sun/audioio.h> /* 4.x */
#endif

main()
{
    int          fd;
    audio_info_t info;

    fd = open("/dev/audio", O_RDONLY);
    sleep(1); /* let some input samples accumulate */

    AUDIO_INITINFO(&info);
    info.play.samples = 0; /* Workaround record.samples bug */
    info.record.samples = 0;
    ioctl(fd, AUDIO_SETINFO, &info);

    ioctl(fd, AUDIO_GETINFO, &info);
    if (info.record.samples != 0)
        printf("record.samples was reset to %d\n",\
            info.record.samples);
}
```

ToolTalk's tt_status_message merely returns the error message number

1088499

There is a problem in the functionality of the ToolTalk™ tt_status_message such that it does not return a meaningful description of an error message, but only returns the error message number that you pass it.

Late-breaking News



This chapter tells you about late-breaking news that became known after other manuals in the Solaris 2.0 documentation set were printed. The late news is organized into groups of tables. Scan the table headings to find the information that is important to you.

The tables are organized into these sections:

- User News on page 31
- System Administration News on page 32
- Developer News on page 40
 - XView on page 41
 - OLIT on page 43
 - The NeWS® Tool Kit (TNT) on page 45

User News

The on-line manual pages that you read with the `man` command may have been updated

If you find any difference between the on-line manual pages, and the AnswerBook Manual Pages, the printed *Reference Manual - SunOS 5.0* or the *OpenWindows 3.0.1 Reference Manual - SunOS 5.0*. The pages viewed with the `man` command, have the most current information.

System Administration News

`ttyadm` **options -S, -I and -T** **1091044**

- S** The `-S` option can be used to set the software carrier attribute for a particular terminal line. If software carrier is enabled, the driver will ignore the state of carrier detect when opening the serial port.
- I** The `-I` option can be used with the `-S` option to initialize the port when no login service is desired.
- T** The `-T` option to `ttyadm` is used to configure the terminal type (see `term(5)`) associated with the terminal line.

Editing the `/etc/group` for global control of access to `admintool` with NIS servers **1090871**

1. Edit the `/etc/group` map on the NIS master server to create a `sysadmin` entry with a Group ID of 14.
2. Add the names of the people allowed to administer the system. The entry uses the following format:


```
sysadmin: :14: name, name, name . . .
```

 Note in Step 2, that the convention in Solaris 2.0 for representing “no group password” is `::`, not `:*`:
3. Push the updated group file to NIS clients:


```
yppush /etc/group  
cd /var/yp  
make
```
4. Remove `sysadmin` entries from the local `/etc/group` files of systems you want to be able to administer globally.

For more information on controlling access to admin tool, see *SunOS Administering NIS+ and DNS* and *SunOS 5.0 Administering Security, Performance, and Accounting*.

Disk space requirements for NIS+**1090504**

Before setting up the NIS+ service on a given server, most administrators will need to make `/var/nis` into a symbolic link pointing to a directory in a partition that has plenty of free disk space. In most case the root partitions will not have enough free space.

The disk space allotted to each NIS+ database entry is variable in length and depends on its contents. Consequently, disk space requirements for NIS+ databases vary widely at different sites.

For example, a domain that has about 3500 users, 11000 hosts, and 12000 aliases, 3100 `auto_home` entries, and about 8872 `netgroup` entries, with a number of smaller tables fits in approximately 35 megabytes of disk space, once the tables are stable. Use an additional 20 to 30 megabytes of disk space in the partition when creating the databases. This is to allow for large log files. The additional space requirements may be avoided by initiating a checkpoint after each large table is loaded. See `nisping(1m)`.

domain option for NIS+ nisaddcred(1)**1091693**

`nisaddcred` takes an additional optional domain argument at the end of the command line. If used, this option specifies a fully-qualified NIS+ domain name. `nisaddcred` adds these credentials to the `cred.org_dir` table in the specified domain. The usual access control restrictions apply.

New usage:

```
nisaddcred [-p principal] [-P nis_principal] auth_type [domain]
```

Using nisaddent to load NIS+ databases

1090504

- When using `nisaddent` to load NIS+ databases from a source file or map, note that the `-m` (merge) option has the same net effect on the data in the database as the `-r` (replace) option. In both modes, the final contents of the database will be the same as the contents of the source being loaded; only the process differs:
- r Option** This option first deletes all existing entries in the table, and then adds the entries from the source.
- m Option** This option adds entries that are not already in the database, modifies entries that are already in the database, and deletes any entries that are in the database but are not in the source.
- Use the `-m` option whenever the database is large and is replicated and the source file or map being loaded differs only in a small number of entries from the existing database.
- Using `-m` in such cases can greatly reduce the number of operations that must be sent to the replicas.

Maintaining secure RPC keys in NIS+: newkey and chkey

1090504

The `newkey` and `chkey` programs maintain a user's Secure RPC public and secret key pair (also called credentials). The `newkey` and `chkey` manual pages are obsolete in the Solaris 2.0 release.

The `newkey` program allows an administrator to add a new key pair for a user or host. The `chkey` program allows a user to change their own existing key pair.

Both of these programs will consult the `publickey` line in the name service switch configuration (see `nsswitch.conf(4)`) in an attempt to determine which naming service is being used to store secure RPC keys at the site where they are run.

If the `publickey` line in `/etc/nsswitch.conf` specifies a unique name service (either "nis" or "nisplus"), the `newkey` and `chkey` programs will create or change the keys in the specified name service.

However, if there are multiple name services listed in the name service configuration for `publickey`, these programs require the user to specify explicitly which source should be modified. Both programs take an option `-s [service]`, where `service` may be either `nis`, for NIS, or `nisplus`, for NIS+.

```
example% newkey -s nisplus -u johndough
example% chkey -s nisplus
example% chkey -s nis
```

In the case that the NIS name service is used, the `newkey` program must be run by the superuser on the master NIS server.

If the site uses the NIS+ name service, then `newkey` may be run from any NIS+ client machine in the domain. The user running the program must have sufficient permission to add new entries to the `cred.org_dir` table in the domain. Generally, this permission would be given only to members of an administrative NIS+ group defined when the NIS+ domain is set up.

The `chkey` program may be run from any client machine in the NIS+ or NIS domain. The user is required to `keylogin` before running `chkey`.

The `nisaddcred` program performs similar key maintenance functions, but works exclusively with the NIS+ name service.

Your password may be kept in any combination of . or in all three of these places:

- The NIS service
- NIS+ tables
- `/etc/passwd` and shadow files.

You must use the correct command to change your password for each place the password is kept. If you do not know where it is, check with your system administrator.

Command**Where your password resides**`yppasswd`

If your password is stored by the NIS service

`nispasswd`

If your password is stored by the NIS+ tables

`passwd`If your password is stored in `/etc/passwd` and shadow files

NIS+ group types: nisgrpadm(1)**1090504**

Three groups allow you to control access to different resources by including or excluding members.

The NIS+ groups administered by `nisgrpadm` control access only to data stored in NIS+. These are distinct from the NIS netgroups, which can be used to control access to logins, remote logins, and NFS partitions. NIS+ groups are also distinct from UNIX groups, defined in the group table, which control access to data stored in files on UFS filesystems.

Using NIS+ on 4.x servers: special setup instructions for the NISPLUS.TAR file**1091687**

The archive NISPLUS.TAR is provided to allow you to install and run the Solaris 2.0 NIS+ service on 4.x servers. This will replace the 4.x executables:

- `keylogin`
- `keylogout`
- `keyserv`

The complete list of NIS+ files is at the end of the note:

1. Backup up files that will be changed by the tar file.
2. Copy the NISPLUS.TAR file onto the 4.x system (or mount it via NFS from the SunOS 5.0 machine where it resides).
3. Next login in as root, then `cd` to `/` and extract the archive on to the system using the `tar` command:

```
cd /
tar -xvf NISPLUS.TAR
```

4. Create the `/var/nis` directory.
5. Follow the instructions in the *SunOS 5.0 Administering NIS+ and DNS* manual for setting up a NIS+ server. The commands in `/usr/lib/nis` on the 5.0 system are in `/usr/etc/nis` on the 4.1 system.
6. Edit your `/etc/rc.local` on the 4.x system to start the NIS+ server when the machine is rebooted, by adding the following lines after the invocation of NIS:

```
#Start NIS+ if the service is installed and initialized
#
if [ -d /var/nis/$HOST -a -x /usr/etc/rpc.nisd ]; then
    if [ -f /var/nis/$HOST/root.object ]; then
        rpc.nisd -r ; echo -n ' NIS+ (root server)'
    else
        rpc.nisd ; echo -n ' NIS+'
    fi
fi
```

Note: if you are starting the server in compatibility mode use:
`rpc.nisd -r -y`

The complete list of NIS+ files is:

```

rwxr-sr-x 0/10      0 Feb 12 15:58 1992 ./
rwxr-sr-x 0/10      0 Feb 12 15:58 1992 ./usr/
rwxr-sr-x 0/10      0 Feb 12 15:59 1992 ./usr/bin/
rwxr-xr-x 0/10    65646 Feb 12 15:59 1992 ./usr/bin/nisaddcred
rwxr-xr-x 0/10    49262 Feb 12 15:59 1992 ./usr/bin/niscat
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nismatch
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nistest
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nischmod
rwxr-xr-x 0/10    65646 Feb 12 15:59 1992 ./usr/bin/nisgrep
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nismkdir
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nisrmdir
rwxr-xr-x 0/10    65646 Feb 12 15:59 1992 ./usr/bin/nistbladm
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nisgrpadm
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nisln
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nisls
rwxr-xr-x 0/10    49262 Feb 12 15:59 1992 ./usr/bin/niserror
rwxr-xr-x 0/10    49262 Feb 12 15:59 1992 ./usr/bin/nispath
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nisdefaults
rwxr-xr-x 0/10    49262 Feb 12 15:59 1992 ./usr/bin/nisrm
rwxr-xr-x 0/10    98414 Feb 12 15:59 1992 ./usr/bin/nisaddent
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nischttl
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nischown
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/bin/nischgrp
rwxr-xr-x 0/10    49262 Feb 12 15:59 1992 ./usr/bin/keylogin
rwxr-xr-x 0/10    49262 Feb 12 15:59 1992 ./usr/bin/keylogout
rwxr-sr-x 0/10      0 Feb 12 16:00 1992 ./usr/etc/
rwxr-sr-x 0/10      0 Feb 12 15:59 1992 ./usr/etc/nis/
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/etc/nis/nisadm
rwxr-xr-x 0/10    49262 Feb 12 15:59 1992 ./usr/etc/nis/nisctl
rwxr-xr-x 0/10    49262 Feb 12 15:59 1992 ./usr/etc/nis/nisstat
rwxr-xr-x 0/10    49262 Feb 12 15:59 1992 ./usr/etc/nis/nisshowcache
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/etc/nis/nisupdkeys
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/etc/nis/nisping
rwxr-xr-x 0/10     4919 Feb 12 15:59 1992 ./usr/etc/nis/nissetup
rwxr-xr-x 0/10    82180 Feb 12 15:59 1992 ./usr/etc/nis_cachemgr
rwxr-xr-x 0/10    57454 Feb 12 15:59 1992 ./usr/etc/nisinit
rwxr-xr-x 0/10   393972 Feb 12 16:00 1992 ./usr/etc/rpc.nisd
rwxr-xr-x 0/10    57454 Feb 12 16:00 1992 ./usr/etc/nislog
rwxr-xr-x 0/10    73838 Feb 12 16:00 1992 ./usr/etc/keyserv
rwxr-sr-x 0/10      0 Feb 12 16:05 1992 ./usr/lib/
rwxr-xr-x 0/10   164410 Feb 12 15:59 1992 ./usr/lib/libnis.so.1.0
rwxr-xr-x 0/10     1610 Feb 12 16:05 1992 ./usr/lib/libnis.sa.1.0

```

Special steps for backward compatibility of passwd files from NIS+ to NIS**1090504**

To fix:	When you need to transfer the NIS+ passwd file (encrypted passwords) back to NIS 4.x format:
	<ol style="list-style-type: none"> 1. Install the NISPLUS.TAR on the 4.x machine. 2. Use the instructions above and in <i>SunOS 5.0 Administering NIS+ and DNS</i>, but only set up the machine as a 4.x client of a 5.0 NIS+ server. 3. Use the <code>nisaddent</code> command on the 4.x client (this is the command that came from the NISPLUS.TAR file).

NIS and NIS+ supported configuration matrix**1091687**

Server Mode	Name Service Clients		
	4.x NIS	5.x NIS	5.x NIS+
SunOS 4.x NIS (native)	Supported	Supported	Not Supported
SunOS 4.x NIS+	Not Supported	Not Supported	Supported
SunOS 5.0 NIS (emul)	Supported ¹	Supported ²	Supported
SunOS 5.0 NIS+	Not Supported	Not supported	Supported
SunOS 5.0 NIS (emul)	Supported ¹	Supported ¹²	Supported

Not Supported- No support for NIS requests to a NIS+ server that isn't running in compatibility mode. No support for NIS+ requests to a NIS server.

1 Does not chain requests to DNS for hosts. This means a 4.x client needing NIS behavior won't work.

2 For 5.0 clients add line to the `nsswitch.conf` file, `hosts:nisplus dns`, for more information see *SunOS 5.0 Administering NIS+ and DNS*.

Developer News

libc changes

1091266

Several classes of functions, formerly part of `libc.so` (pre Solaris 2.0), now are part of other libraries. This may cause the C compiler to flag one or more symbols as undefined when compiling a 4.x application under 5.0.

Lookup the function in the man pages. The synopsis lines of the manual page list both the `-l` linker option and the include files that you need to resolve the symbol.

setsockopt(3N) and getsockopt(3N) options via TLI

1092068

TLI applications using TCP or UDP may get and set all of the options that may be used via `getsockopt()` and `setsockopt()`. This is done by using the `opthdr` structure defined in `sys/socket.h` in the buffer portion of the `netbuf` in the “req” and “ret” arguments to `t_optmgmt()`. The three fields of the `opthdr` struct:

- `level`
- `optname`
- `optlen`

These values correspond to three of the four arguments to the `getsockopt()` and `setsockopt()` calls. The “value” of the option to be set or retrieved is placed into the `netbuf` immediately following the `opthdr` struct.

To set an option, the program should set the `flags` field of the `req netbuf` to `T_NEGOTIATE`, then fill the buffer portion of the `req netbuf` with a filled-in `opthdr` struct followed by the value that the option is to be set to. To get an option, the program should set the `flags` field of the `req netbuf` to `T_CHECK`, then fill the buffer portion of the `req netbuf` with a filled-in `opthdr` struct. The buffer in the `netbuf` in the “ret” argument will contain the `opthdr` struct passed in, followed by the option value.

Getting and setting options via TLI as explained above are:

- not generic to TLI
- not XPG or POSIX compliant
- not formally supported as part of the network programmers API

The interface for manipulating options via TLI will likely change in the future.

XView

Compiling and linking archive libraries

1091258

If you need to use the archive libraries when compiling and linking an XView™ application, link the libraries explicitly as follows:

```
cc foo.c -o foo -Bstatic -lxview -lolgx -lX11 \  
-Bdynamic -lintl -lnsl -lsocket
```

The archive libraries are:

```
-lxview  
-lolgx  
-lX11
```

Linking XView applications dynamically is unchanged under SunOS 5.0. Shared libraries may contain dependencies on other shared libraries; dynamic linking resolves the dependencies for you. If you choose to link against archive libraries, you must explicitly specify any dependent libraries.

New macro `notify_set_waitpid_func()` has been added

1091258

This macro is identical to `notify_set_wait3_func()`. When your `wait3/waitpid` function is called under the Solaris 2.0 environment, ignore the `rusage` structure; it is no longer used.

New panel drop target attribute `PANEL_DROP_DELETE` has been added

1091258

The default for `PANEL_DROP_DELETE` is true. If it is set to false all drag and drop operations dropped on the `PANEL_DROP_TARGET_ITEM` behave as if the duplicate key is pressed (a copy operation). The attribute can be set in the panel notify procedure which is called when a drop occurs. This allows you to decide while each drop is happening, whether to allow a drag move, or only a drag copy. This is a boolean attribute, and can be used with `xv_create()`, `xv_get()`, and `xv_set()`.

New resource, `Text.LineSpacing`, has been added **1091258**

Description	This resource is an integer that is the percentage of the maximum height of a character in the <code>Textsw</code> window font character. It is used to set the interline spacing of fonts.
Example	The maximum character height in the <code>Textsw</code> window font is 10. This will cause 2 pixels (1.5 rounded up) of white space between each line in the <code>Text</code> .

New command line X resource, `Window.PassiveGrab.Select`, has been added **1091258**

Argument(s):	<code>-wdpgs</code> , or <code>-disable_pass_grab_select</code>
Type	boolean
Resource Name:	<code>Window .PassiveGrab.Select</code>
Default:	TRUE
Description	<p>This option can be used to avoid windows hanging as a result of passive grabs on the SELECT button. When the SELECT button is pressed on an XView application, the passive grab will block all pointer and keyboard input to other windows. It is done to ensure that all events to other windows are held up until the input focus is transferred to the proper window (i.e. the window the SELECT button was clicked on). XView will return all pointer and keyboard input processing to normal after the selected window gets the focus.</p> <p>If an XView application is interrupted before the SELECT button is pressed on it, pointer and keyboard input to other windows will be blocked. At this point, there is a deadlock. All input will only be available to an application that is currently interrupted. Therefore, the entire screen is locked.</p>

(Continued)**New command line X resource, `Window.PassiveGrab.Select`, has been added** **1091258**

Example: To execute a cmdtool that does not perform any passive grabs on the SELECT button, type:

```
cmdtool -disable_pass_grab_select
```

To do the disable passive grabs using the X resources, add the following entry to the X resource database:

```
Window.PassiveGrab.Select:False
```

Note: The above option/resource can be used during development to avoid the locking up of screens or other effects of passive grabs that are done by XView.

It should be noted that the above option/resource should only be used by developers and is not for normal usage. The passive grabs are done for a specific reason, and are not meant to be customizable. Without the passive grabs, certain features in XView (those that depend on passive grabs) might not function properly.

OLIT

OLIT text widget is no longer supported **1087349**

Applications utilizing the text widget should be modified to utilize the `textedit` widget instead.

New applications resource, `XtNmouseless` had been added **1091262**

This resource enables and disables mouseless support; it is enabled by default. When `XtNmouseless` is set to `FALSE`, the default widget does not get highlighted with the red input focus color and widget traversal is disabled for all objects except text input widgets. Refer to `textedit(3W)` for more information on the behavior of input focus functions when `XtNmouseless` is set to `FALSE`.

New function, `OlTextEditMoveDisplayPosition()`, has been added**1091262**

This function enables you to move the display position in a `TextEdit` widget. It is the preferred method over setting the resource `XtNdisplayPosition` via `XtSetValues()`. It is a performance enhancement that eliminates unwanted flickering that happens when using `XtSetValues()`.

OLIT fully supports the C++ programming language**1091262**

C++ programmers may use the OLIT API from within their programs. OLIT provides bindings for C++ type-safe linkage. OLIT supports the C++ release level of `cfront` 2.1 or later.

Obsolete header files**1091262**

A number of header files in previous release of OLIT are obsolete in OLIT 3.0.1 See the `differences(3W)` manual page for a list of these files.

Compiling and linking archive libraries**1091262**

If you need to use OLIT archive libraries, you must link the libraries explicitly:

```
cc -Bstatic foo.c -o foo -lXol -lXt -lX11 \  
-Bdynamic -lnsl -lsocket
```

The archive libraries are:

```
-lXol  
-lXt  
-lX11
```

Shared libraries may contain dependencies on other shared libraries; dynamic linking resolves the dependencies for you. If you choose to link against archive libraries, you must explicitly specify any dependent libraries.

Virtual events

1091262

Virtual Events are not formally supported in Solaris 2.0.

The OLIT toolkit provides partial support for Level 3 Internationalization (I18N)

1091262

The OLIT toolkit provides partial support for Level 3 Internationalization (I18N). It currently implements all OPEN LOOK presentation text as widget resources. See the *differences(3W)* manual page for a list of the new resources. Applications can override the default (English) labels and mnemonics of OLIT with 8-bit text in order to implement foreign language user interfaces. The OLIT toolkit does not internationalize error and warning messages or provide locale announcement mechanisms.

The NeWS® Tool Kit (TNT)

Painting Textfields and Numeric Textfields in TNT 3.0.1

When you send `/setvalue` to a `textfield` or `numeric textfield`, the object repaints itself if it is valid. In TNT 3.0.1, these objects are more likely than in previous TNT releases to be valid upon creation.

If you have existing code in which you created a `textfield` as a child of a `framebuffer`, reshaped it, and called `/setvalue`, the object might now be painted on the `framebuffer`, whereas it was not painted before. To fix this problem, you can do two things:

- Create the object as a child of an instance of `ClassPanel`
- or
- Create the object as a child of the `framebuffer` and immediately do an `/addclient` to make it a child of an instance of `ClassPanel`

The idea is to put the object where you want it before you reshape it and set its value. If the panel on which you want the object placed does not exist when the object is created, delay reshaping the object until you are about to add it to the panel.

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