

Solstice Backup™ 4.2.6 Quick Installation Guide



THE NETWORK IS THE COMPUTER™

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Preface

NetWorker is a family of products that provides backup and recovery for heterogeneous networks. It is an enterprise-wide backup and recovery solution.

NetWorker comes with two documents: this *Quick Installation Guide* and the larger, more comprehensive *Administration Supplement*. Both documents explain features new to this release (4.2.6).

Your package will also contain some documents from version 4.2 as reference information: a *User's Guide*, an *Installation and Maintenance Guide*, and an *Administration Guide*.

Purpose of this Document

This *Quick Installation Guide*:

- Explains the evaluation period.
- Will help you prepare for and perform a basic installation.
- Tells you how to evaluate Backup options.
- Directs you to sources of technical support should you need it.

In addition, this *Guide* contains the following:

- Additional information and configuration tips.
- Known limitations and notices for Hierarchical Storage Management (HSM) and for Backup Archive.

-
- Special instructions for different upgrade scenarios, including upgrades or repairs to your Backup server.
 - Special information for X86 customers.
 - Instructions for obtaining technical support.

Note – In this document, the terms NetWorker and NetWorker refer to the same product.

Where to Go From Here

If You...	Then Do This
Are evaluating Solstice Backup for the first time	Begin at “Evaluation Period and Enabler Codes” on page 3.
Have purchased Solstice Backup and are installing it for the first time	Begin at page 1 of this <i>Quick Installation Guide</i> . Then refer to the <i>Solstice Backup 4.2 Installation and Maintenance Guide</i> included in the product package.
Are upgrading from an earlier release	See “Upgrading Solstice Backup Server or Clients” on page 7. Be sure to install the new software in the same location as your existing Solstice Backup executables.

How Solstice Backup is Distributed

NetWorker 4.2.6 is distributed on the Solstice for System Management product set CD. There are a number of products on this CD. Only NetWorker is discussed herein.

Solstice Backup 4.2.6 is also distributed on its own, separate CD (“point product” CD).

Media and Contents

The NetWorker software is distributed on one of two CD-ROMs as explained in the previous section. In either case, the CD-ROM contains the full NetWorker product—not a “lite” version with limited features. The following components are included:

- NetWorker Administrator, Backup, and Recover programs
- NetWorker Server Edition
- NetWorker Network Edition
- Support for additional client connections
- Optional NetWorker Autochanger Software Module
- Optional NetWorker Archive Application
- Optional NetWorker Hierarchical Storage Management (HSM) Application
- Optional NetWorker Simple Network Management Protocol (SNMP) Module
- Optional Silo Support Module
- Optional High Speed Device Support Module
- Optional database module support
- Electronic versions of the NetWorker documentation set in HTML.

Product Matrix

The following table provides a high level comparison of the key capabilities supported by the NetWorker 4.2.6 base products:

Capability	Backup Server Single	Backup Network Edition	Backup Server Edition	Network Edition Plus Turbo
Backup Server and clients	Server only	Yes	Server only	Yes
Back up heterogeneous (UNIX, PC, Netware, NT, Mac) clients over the network	No	Yes. Comes with support to back up 10 clients; option for more clients available	No	Yes. Comes with support to back up 10 clients; option for more clients available
Number of backup devices supported	1 single tape device local to the server	2 non-automated tape devices local to the server	Up to 16 tape devices and jukeboxes can be used concurrently	Up to 16 tape devices and jukeboxes can be used concurrently
Scheduling	Preconfigured schedules only	Advanced, customizable	Advanced, customizable	Advanced, customizable
Media Pools—Means of organizing backups	Preconfigured pools only	Advanced, customizable	Advanced, customizable	Advanced, customizable
Available separately	No, only available co-packaged w/ Solaris WG and ENT servers	Yes, available through all Sun channels.	Yes, available through all Sun channels.	Yes, available through all Sun channels.
Upgrade functionality	Purchase Network or Server Edition; Does not support other options or applications	Purchase Turbo, or other options or applications	Upgradeable to Network Edition plus Turbo	Purchase other options and applications

Typographic Conventions

The following table describes the typographic changes used in this book.

Table P-1 Typographic Conventions

Typeface or Symbol	Meaning	Example
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. machine_name% You have mail.
AaBbCc123	What you type, contrasted with on-screen computer output	machine_name% su Password:
<i>AaBbCc123</i>	Command-line placeholder: replace with a real name or value	To delete a file, type <code>rm filename</code> .
<i>AaBbCc123</i>	Book titles, new words or terms, or words to be emphasized	Read Chapter 6 in <i>User's Guide</i> . These are called <i>class</i> options. You <i>must</i> be root to do this.

Shell Prompts in Command Examples

The following table shows the default system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

Table P-2 Shell Prompts

Shell	Prompt
C shell prompt	machine_name%
C shell superuser prompt	machine_name#
Bourne shell and Korn shell prompt	\$
Bourne shell and Korn shell superuser prompt	#

Quick Installation Guide



NetWorker 4.2.6 enhances performance, index management, scalability, functionality, and device support. Following is a summary of new features:

- Support for Solstice DiskSuite and Veritas file managers. These programs enhance the availability, flexibility, safety, and performance of UNIX storage subsystems.

This support adds another level of parallel backup by `savegrp`. NetWorker can now recognize filesystems created using these volume managers, thereby allowing `savegrp` to back up logical volumes in parallel.

The `savegrp` command can run multiple saves on logical volumes, one save per logical partition, up to a maximum of the parallelism value set in the Client Setup window.

- Support for `rawasm`, an Application Specific Module (ASM) that enables NetWorker to process data in raw disk partitions. Using `rawasm` enables NetWorker to read from and write to appropriate raw partitions.
- Support for high-speed, high-performance storage devices (requires High Speed Device Module). For detailed information about this feature, refer to the *Solstice Backup Administration Update* included with your software.

Refer to the *Legato Compatibility Guide* for a complete list of supported devices. To obtain this guide, use one of the following methods:

- Visit the *Document Library* at Legato's World Wide Web (WWW) site, <http://www.legato.com>, and select *Legato Compatibility Guide*.
- Dial Legato's FaxWorker, 415-812-6156, and follow the instructions to obtain FaxWorker Document #1905.
- Support for StorageTek silos and EMASS Grau automated cartridge libraries (requires Silo Support Module). Refer to the *Legato Compatibility Guide* (see above) for a complete list of supported devices.
- Improved performance.
 - NetWorker CPU utilization has been reduced and throughput has been improved for both server-based and network-based backups.



- Index checking and repair is improved, reducing the amount of server downtime needed to maintain the system.
- Support for optional database modules (purchased separately):
 - Database Module for Oracle.
 - Database Module for SAP.

Additional Client Support

This software supports UNIX clients using TCP/IP protocol. If you need support for other platforms, you can purchase NetWorker ClientPaks™ separately. The following ClientPaks are available for this release of NetWorker:

- ClientPak for UNIX
- ClientPak for PC Desktops
- ClientPak for NetWare
- ClientPak for Windows NT
- ClientPak for Macintosh

Refer to the current *Legato Compatibility Guide* for detailed platform support. See the previous page for information on obtaining the *Guide*.

Contact Sun or your authorized reseller for information about ClientPaks. To order directly from Sun, you have several choices:

- Call SunExpress at 1-800-873-7869.
- Send orders via electronic mail to `customer@sun.com`.
- Mail company purchase orders to:

SUNEXPRESS TELESales
5 OMNI WY
CHELMSFORD MA 01824-4165

All ClientPaks come with their own documentation. Neither this document nor the *Administration Update* explain the ClientPaks in detail.



Customer Support

SunSoft and SMCC support programs are designed to meet customers' complete system needs. The programs support a wide range of needs.

For detailed information about our services, support policies, and software subscriptions, contact your local customer support office for programs and their availability.

Evaluation Period and Enabler Codes

This software has a 45-day evaluation time limit. This means you can use the software and evaluate it for 45 days without charge. After that, you must purchase the software and receive an Enabler Certificate and an authorization code. These two items, along with the host ID of your backup server, will enable you to fully register the software and use it indefinitely.

Evaluation Process

Following is a summary of the evaluation process:

1. You may evaluate the software and options of your choice free of charge for 30 days.
2. To permanently enable the software, purchase the appropriate license, which will come with the enabler(s).
3. Contact the Licensing Center and give them the host ID and enabler codes of your backup server(s).

E-mail: license@sun.com

Phone: (800) 872-4786

Fax: (801) 431-3657

4. The Licensing Center gives you an authorization code for the software and/or options you purchased. This code is registered to your host ID and enables that host indefinitely.



Evaluating Options

If you have purchased NetWorker, are installing it for the first time, and want to evaluate options you did not purchase, *do not* enable NetWorker until after you evaluate all the options you are interested in. You have 45 days to evaluate options before you must enable the product.

If you are updating from a previous version of NetWorker and want to evaluate options you did not purchase, call your sales representative for a special evaluation enabler.

Enabler Code Format

SunSoft uses the hexadecimal numbering system for the 18-digit enabler code numbers. Therefore, the enabler codes consist of some combination of the letters a-f and the numbers 0-9. For example:

```
% nsrkap -v -u xxxxxx-xxxxxx-xxxxxx
```

Enabler Codes for Releases 4.0.2 or 4.1.2

If you are updating from release 4.0.2 or 4.1.2, you *must* have a 4.2.6 update enabler code and authorization number to successfully install the software. Regardless of the number of enablers you have for your existing Backup products, you will receive only one enabler for the 4.2.6 software release. After you install release 4.2.6, the enabler automatically "inherits" all the existing properties of your 4.x server.

You do not need a separate update enabler if updating from 4.2.2 to 4.2.6.



Installation Flow Chart

Follow this flow chart to install and enable NetWorker.

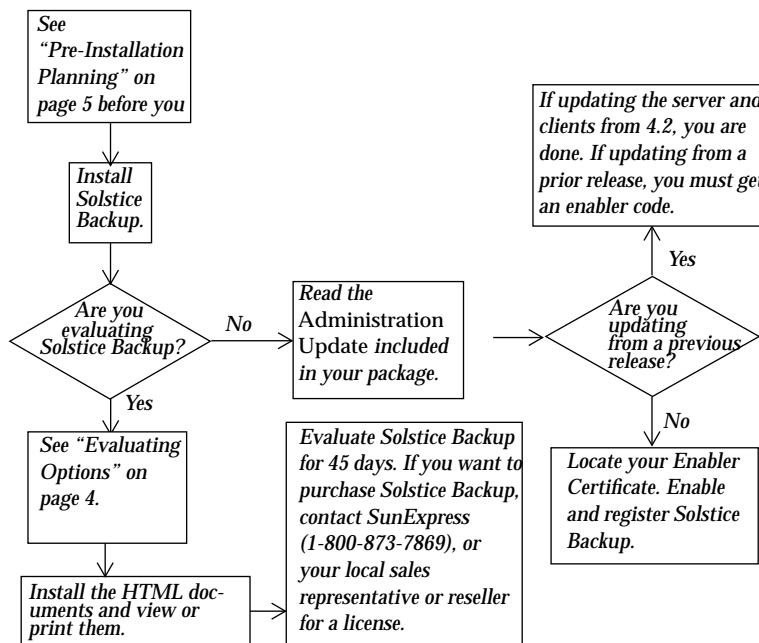


Figure 1 Installation Flow Chart

Pre-Installation Planning

This section explains one of two installation methods, provides a checklist to help you prepare for the installation, and directs you to online documentation that you should read after installation.

Installation Methods

You can install NetWorker two ways:

- On a server with a local CD-ROM drive (*local installation*).
- Remotely by using a CD-ROM drive attached to another UNIX workstation on your network (*remote installation*).



This guide explains only local installation. If you want to do a remote installation, see the *Administration Update* included in this product package.

Pre-Installation Note

NetWorker release 4.2 or higher requires a `/nsr` directory on the client as well as the server. If the `/nsr` directory is not already there, the installation script prompts you to create this directory during the installation process.

Pre-Installation Tasks

Before you install NetWorker, you need the following:

- System pathname for the CD-ROM drive.
- Appropriate backup device with proper cabling and termination installed.
- Destination directory for the NetWorker software. The following table lists suggested directories and estimated space required, but you can use another directory if you wish, so long as it has enough space available. Be sure to check space availability *before* you begin the installation, and be prepared to provide the directory pathname.

Server System	Suggested Location	Estimated Space Required
SPARC (SunOS)	<code>/usr/etc</code>	23 Megabytes
SPARC (Solaris)	<code>pkgadd</code> automatically chooses location	23 Megabytes

Note – If you are updating from an earlier release, be sure to install the software in the same directory where it was previously installed. Also see “Upgrading Solstice Backup Server or Clients” on page 7.

- Directory with 741 kilobytes (KB) of space for the online man pages. Check `/usr/man` to verify there is enough space available for the man pages.
- Enabler Certificate (if you have purchased NetWorker). Locate the Enabler Certificate in your package. After you install the product, you’ll need the Enabler Certificate to enable and register it. Follow the instructions in Chapter 4 of the *Solstice Backup 4.2 Installation and Maintenance Guide* to enable and register NetWorker.



Note – If you are installing NetWorker for the first time and want to evaluate options you did not purchase, *do not* enable Backup until after you evaluate these products.

Upgrading Solstice Backup Server or Clients

If you are upgrading your server and/or clients, read the following sections as they apply to you.



Note – It is very important to follow the steps outlined in this section if you are upgrading from a previous release of NetWorker to NetWorker 4.2.6. Failure to follow the steps outlined in this chapter could give rise to a serious mismatch of binaries, which can result in backup failure and even system failure.

The steps outlined in these sections are meant for those sites where NetWorker for Solaris 4.0.2, NetWorker 4.1.2, or NetWorker 4.2.2 have been previously installed, either on a Solaris system or on a SunOS system. If you have some other version of NetWorker running other than NetWorker for Solaris 4.0.2, you need to contact your Sun Authorized Service representative for advice before proceeding with NetWorker installation.

Upgrading Your Backup Server

If you are upgrading your server to support more clients or jukeboxes, contact Sun for new enablers. Refer to the *NetWorker 4.2 Installation and Maintenance Guide* for instructions on enabling and registering your Backup products.

Solstice Backup Server Transfer Request in the Event of Disaster Recovery

Authorization codes are tied to a particular host ID, so you must request a new code if you are upgrading, repairing, or switching Backup servers.

When you request a new code, the License Center requires written confirmation that your old code is not being used on the original server anymore.



To request a new code, fill out the information on the form at the end of this document, sign it, and fax it to the License Center at (801) 431-3657. This fax number is different from the number used for routine correspondence with the License Center, and that is intentional.

Preparing to Upgrade From Single Server or Server Edition

If you are upgrading your Backup software from, for example, Single Server to Backup Server Edition, or from Backup Server Edition to Backup NetWork Edition, you do not need to remove and re-install the software. The online indexes Backup uses to track the backup data to the backup media are completely and transparently upward compatible. All you need to do is enter the new enabler code on the enabler certificate in your Backup package.

Log in as `root` and use the following command to enter the new enabler code, substituting your enabler code for `xxxxxxx-xxxxxxx-xxxxxxx`:

```
# nsrccap -v -u xxxxxx-xxxxxxx-xxxxxxx
```

See “Evaluation Period and Enabler Codes” on page 3 if you need more information about enabler codes.



Upgrading From Single Server Utility Bundled With Solaris Server

If you are upgrading from the Single Server utility that you received with your Solaris server, begin at the preceding section, “Preparing to Upgrade From Single Server or Server Edition” on page 8.

▼ **How to Upgrade From Single Server**

If you are currently running the Single Server utility and need a more robust solution, you can upgrade by purchasing either Solstice Backup Network Edition or Server Edition.

The configuration upgrade process is fairly straightforward. You don’t have to de-install and re-install the entire product. Following is a summary of the steps involved.

You must be logged in as root for this procedure (and for most others explained herein).

- 1. Purchase Solstice Backup Network or Server Edition to obtain appropriate enabler.**
- 2. Upgrade to the new base product.**
- 3. Run the following command using the new base enabler.**

```
# nsrcap -u xxxxxx-xxxxxx-xxxxxx
```

Upgrading Network Edition to Include Turbo Capabilities

If you are upgrading Network Edition (pre-4.2.6) to include turbo capabilities, refer to “How to Upgrade From Single Server” on page 9.

Upgrading From Server Edition to Network Edition

Refer to “How to Upgrade From Single Server” on page 9.

Upgrading From Network Edition to StorageSuite

Refer to “How to Upgrade From Single Server” on page 9.



Upgrading from Releases Prior to 4.2

This section explains how to upgrade from any Backup version earlier than 4.2. If you are installing Backup for the first time, or upgrading from 4.2 or later, ignore these instructions.



Note – The software update from 4.0.2 or 4.1.2 to 4.2.6 is *not* reversible. When you update to 4.2.6, you cannot go back to a 4.0.x or 4.1.x version of Backup. Therefore, make sure to back up your online indexes and configuration files (`nsr.res` and `nsrjb.res`) before you perform this update.

Command Changes

The following table summarizes command name and filename changes in release 4.2 and later, and pertains to you only if you are upgrading from any version earlier than 4.2.

If you are installing a jukebox, you should also see “Replacements for the `pscinfo` Command” in the *Solstice Backup 4.2.6 Administration Update*.

Pre-4.2 Command or File	New Command or File	Comment
<code>savegroup</code>	<code>savegrp</code>	Important for disaster recovery; see “Server Online Index” on page 11. Has new <code>-o</code> option; see man page for details.
<code>daemonlog</code>	<code>daemon.log</code>	(none)
<code>recoverindex</code>	<code>mmrecov</code>	(none)
<code>saveindex</code>	[no equivalent]	Obsolete, removed. This function is now performed automatically by <code>savegrp</code> .



Server Online Index

A copy of the server online index is backed up as part of your scheduled backups. This backed up copy of the server online index is used for disaster recovery in the event of a disk crash. If you have not completed a scheduled backup using the `savegrp` command recently, your index may be out of date. Complete a successful scheduled backup (using `savegrp`) *before* updating your software to ensure that you have a recent backup of the server online index.

Notice for HSM

Following is a known limitation of HSM that will be fixed in a future release.

Problem: A tape assigned to the Migration pool during the labeling process will appear in the Devices window with (A) after the label name. The (A) indicates an archive tape. This happens because the code assumes that an expiration time of “forever” indicates an archive tape.

Solution: This will be fixed in a future release.

Notices and Limitations for Solstice Backup Archive

The sections below discuss limitations of NetWorker Archive, and provide solutions for problems, if known.

- **Problem:** You are not able to perform a remote archive request of a workstation from the server.
Solution: The archive client’s user name (for example, `root`) must appear in that client’s Archive users list, inside the Clients window.

Alternatively, NetWorker administrator privileges may be granted for `root@hostname` on the Administrator list, inside the Server window. (Substitute the client system for *hostname*.) This is a potential security issue, since NetWorker administrators can recover and retrieve data owned by other users on other clients.

- **Problem:** When you combine multiple save sets in an archive, such as `/home` and `/usr`, they end up in a single archive save set, which appears as `/` in the Archives list in the NetWorker Retrieve window.
Solution: If you want save sets to appear separately during retrieve, archive them separately.



- **Problem:** When you search for an annotation in the NetWorker Retrieve window, the Archives list does not display archive clones.
Solution: To locate clones, click the Query button with the Search annotation field empty. If that shows too many archives, use `mminfo` to locate the archive clone with the same save set ID (`ssid`) as the archive you want.
- **Problem:** You created multiple archive pools, and the one selected for archive is not the default archive pool.
Solution: When you create multiple archive pools, the last one created is the one selected for archive.
- **Problem:** You created two archive requests with the same name and only one executed.
Solution: Do not create two archive requests with the same name – the newer one will never be executed.
- **Problem:** When you run `nsrarchive` from the command line, after you type an annotation then `[Ctrl]+[D]`, archive does not begin as soon as expected.
Solution: Wait a while; there is a delay before archive starts. Do not press `[Ctrl]+[D]` multiple times.
- **Problem:** Empty annotations appear in the retrieve list when you search for annotations using a search string.

Cause: The NetWorker Archive software does not allow you to enter a null annotation string. As a consequence, empty annotations can appear in the retrieve list.

Cause: You used `nsrarchive` from the command line without the `-T` option and did not enter an annotation when prompted to do so.



SunOS and Solaris Compatibility

The following table summarizes the compatibility of NetWorker releases with SunOS and Solaris releases.

SunOs	Solaris	Solstice Backup 4.0.2, 4.1.2, 4.2	Solstice Backup 4.2.6
4.0.2	n/a	Not Supported	Not Supported
4.1.x	1.x	Client and Server	Client and Server
5.0	2.0	Not supported	Not Supported
5.1	2.1	Client (not recommended)	Client (not recommended)
5.2	2.2	Client	Client
5.3 or higher	2.3 or higher	Client and Server	Client and Server

Note – This is the last server release that will support SunOS and Solaris 2.3.



SunOS and Solaris Notices

This section contains notices and limitations you should know about for both Solaris and SunOS.

- **Problem:** During a backup, you attempt to stop the process by clicking Stop in the Group Control window. This should stop the process for all clients in the selected group, but sometimes a client is missed. Then a message is displayed saying the server is still busy.

Solution: On the client, determine which clients still have a `save` process running by using one of the following commands.

- when running Solaris, use this command:

```
ps -aef | grep save
```

- when running SunOS, use this command:

```
ps -aux | grep save
```

This command returns a process identification number (pid) for each process with `save`. Stop these processes by entering the following command for each pid.

```
kill -9 pid
```



- **Problem:** NetWorker stores the messages displayed within the NetWorker Administrator window in a message file within the `/nsr/logs` directory. Sometimes NetWorker's log file grows too large and automated administration is required.

Solution: SunOS and Solaris systems provide a two-part mechanism for managing the `syslog` message file (`/var/log/syslog`), consisting of a shell script (`/usr/lib/newsyslog`) and a `crontab` entry for `root` to periodically invoke the script.

The `newsyslog` script can be modified to manage and maintain a short history of NetWorker's log file. The modified script maintains a three-file history of NetWorker's `daemon.log` file. To manage your NetWorker log file, use your favorite text editor to add the following to

`/usr/lib/newsyslog`:

```
LOGDIR=/nsr/logs
LOG=daemon.log
if test -d $LOGDIR
then
    cd $LOGDIR
    test -f $LOG.1 && mv $LOG.1 $LOG.2
    test -f $LOG.0 && mv $LOG.0 $LOG.1
    test -f $LOG && mv $LOG $LOG.0
    cp /dev/null $LOG
    chmod 644 $LOG
fi
```

Next, add an entry to the `crontab` for `root` to control the frequency of running the `newsyslog` script. The entry shown in the following example invokes the `newsyslog` script every Saturday morning at 4:05 a.m.

```
5 4 * * 6 /usr/lib/newsyslog
```

If your system does not have the `newsyslog` script and `crontab` entry to invoke it, create the `newsyslog` script manually, and add the `crontab` entry for it. See the `crontab` man page for details on creating `crontab` entries.



- **Problem:** Enabling Auto media verify for a pool causes NetWorker to verify data written to volumes from the pool while saving. This is done by reading a record of data written to the media and comparing it to the original record. Media is verified after NetWorker finishes writing to the volume, which may occur when a volume becomes full or when NetWorker no longer needs the volume for saving data. To verify media, `nsrmmmd` must reposition the volume to read data previously written to the media. It does not always succeed in the first attempt. These warning messages may appear in the message display in the NetWorker Administrator window:

```
media warning: /dev/rmt2.1 moving: fsr 15: I/O error
media emergency: could not position talonp.007 to file 44,
record 16
```

Solution: No action is required. NetWorker continues to attempt to find the proper position. If NetWorker is able to find the correct position, media verification succeeds and a successful completion message appears.

```
media info: verification of volume "talonp.007" valid 30052
succeeded.
```

In this case the earlier messages only indicate that NetWorker had problems finding the desired position on the media and may be ignored. If the problem is serious, media verification will fail and a subsequent message will give the reason for the failure.

- **Problem:** When your server is waiting for a tape to be mounted or is in the process of changing a jukebox volume, you see the `PACKET RECEIVE BUFFER` and `NO ECB` counters increase on a NetWare client.

Solution: Upgrade the NetWare client with the most recent release of ClientPak for NetWare.

Solution: Use `nsr_shutdown` to shut down the NetWorker server.



- For servers running SunOS, edit the `/etc/rc.local` file and add the following line before the line that starts `nsrd`:

```
NSR_NO_PING=ok; export NSR_NO_PING
```

Then restart NetWorker manually by entering the following commands:

```
# nsrd &  
# nsrexecd &
```

- For servers running Solaris, edit the `/etc/init.d/networker` file and add the following line before the line that starts `nsrd`:

```
NSR_NO_PING=ok; export NSR_NO_PING
```

- Then restart NetWorker manually by entering the following command:

```
# /etc/init.d/networker start
```

- **Problem:** You are using the scanner command to rebuild the index of a backup volume, and scanner marks the volume read-only. This is a safety feature that prevents the last save set on the backup volume from being overwritten.

Solution: To write to the media without marking it read-only, use the `nsrmm -o` command.

```
nsrmm -o notreadonly volume_name
```



- **Problem:** You attempt to recover indexes to a directory other than the one where they were originally located, then receive the following error message.

```
WARNING: The on-line index for `client_name' was NOT fully
recovered. There may have been a media error. You can retry
the recover, or attempt to recover another version of the
`client_name' index.
```

Solution: Do not attempt to recover the indexes to a different directory. Once the indexes have been recovered to their original location, you can move them to another directory.

- **Problem:** You may be experiencing a client alias problem if the following occurs.
 - You receive the following error messages: “No client resource for...” or “Client xxx cannot back up client yyy files.”
 - A client machine always performs full backups, regardless of the level of the scheduled backup.
 - It appears that automatic index management according to the browse and retention policies is not occurring. This is indicated by the fact that the filesystem containing the indexes continuously increases in size.
 - In `/nsr/index`, the directory that contains the indexes, there are two directories for the same client using two different client names.

Solution: A client alias change is needed for the following situations.

- Machines that have two or more network interfaces
- Sites that mix short and “fully qualified” *hostnames* for the same machines; for example, `jupiter` and `jupiter.sun.com`
- Sites using both YP (NIS) and DNS

Use the NetWorker Administrator window or `nsradmin` to edit the client resource for the client(s) with this problem. Add **all** network names for this host to the Aliases attribute.

Note – Important: Do not put aliases that are shared by other hosts on this line.



- **Problem:** NetWorker 4.1.2 and later are more restrictive in the characters you are allowed to use for NetWorker configurations of directives, groups, policies, and schedules. You may no longer use the following characters when you create these configurations.

```
/\*?[]()$!^!;"'~><&|{ }
```

In addition, you cannot use the following characters in the Name field because they are used as separators in label templates:

_ . : -

Solution: Use only alphanumeric characters in the Name field when creating label templates.

This change was made because directives, groups, policies, and schedules are often passed as command line options to various NetWorker programs.

During installation of NetWorker 4.2.6, these characters in your current configuration names will be replaced with an underscore “_” in the windows where they were originally created.

However, in the Clients window where these configurations are applied, NetWorker automatically replaces the selected configuration with the pre-existing Default configuration.

Solution: You need to reselect the configurations whose names have changed and re-apply them to the individual clients.

- **Problem:** When attempting to label volumes, the label does not update to the next number in the sequence or you receive an error message that the volume is already in the media database.

Cause: In previous releases of Solstice Backup, the client software updated the label templates Next field. In release 4.2.6, the server updates the label templates Next field. If you are using a 4.2.6 client with a pre-4.2.6 server, the Next field is not being updated. In addition, if you use a pre-4.2.6 client with a 4.2.6 server, the Next field could be updated twice, and every second label name might be skipped.

Solution: Update the Next field manually or update the server to release 4.2.6.



- **Problem:** You are attempting to back up a 2 GB file and receive an “invalid argument” message.
Cause: Solaris 2.3, 2.4, and 2.5 have a bug that prevents Solstice Backup from backing up files larger than 2 GB minus 64 KB. Sun Microsystems has been notified of this problem.
Solution: Contact Sun for a solution.
- **Problem:** SPARC SLCs, under certain circumstances, reset the SCSI bus and write a block onto the front of the backup tape.
Solution:
 - Upgrade your server machine. SPARC SLCs are not recommended as NetWorker servers.
 - Make sure your tape subsystem is working properly with the `tapeexercise` command. Refer to the `tapeexercise` man page for details.
 - SunSoft suggests that only SCSI devices with the disconnect/re-connect feature be used.
 - If you are running Solaris 2.3 or 2.4 and NetWorker hangs during save execution, refer to Technical Bulletin 220 for information about available patches. For instructions on how to obtain Technical Bulletins, see “Bulletins and Patches” on page 26.

Solaris-Specific Notice

SunSoft recommends Solaris 2.3 or above for use with NetWorker. (Solaris 2.3 corresponds to SunOS 5.3.) NetWorker only supports jukeboxes with Solaris 2.3 and above.

StorageTek ACSLS Library Notice

Patch 4.25-001 provides the Silo Tape Library Interface (STLI) to StorageTek silos managed by the StorageTek ACSLS Silo Management Software package. The STLI, which is not part of the base StorageTek product, is dynamically linked with `nsrjb(8)` to provide Solstice Backup access to StorageTek silos.

The patch applies to Solaris systems running Solstice Backup server software, release 4.2.6, with the Silo Support Module.



For more information about downloading patches, see “Bulletins and Patches” on page 26.

Backup Device Notices

With the Solaris operating system it is possible to use two types of device semantics for backups: System V or Berkeley. NetWorker requires Berkeley device semantics, for example, `/dev/rmt/0mbn` (the “b” in the device name indicates it is Berkeley device semantics).

File Restore Notices

Filesystem Access Control Lists (ACLs) are correctly backed up and restored by Backup, but they are not implemented in the online index. Therefore a user that has read access via an ACL to a file or directory will not have access to those files in the index. Files and directories under ACL control can only be browsed and recovered by the file owner or root.

Security of file recoveries is maintained by the online index mirroring the owner, group and file permissions of files within the index. Therefore, a user can only browse and restore files for which they had read access via the filesystem at the time the backup was run.

Using Unsupported Tape Devices in Solaris and SunOS Systems

You may be able to use tape devices not specifically supported by Solaris and SunOS. For more information on unsupported devices, download Technical Bulletins 142 (Solaris) and 146 (SunOS). For instructions on how to obtain Technical Bulletins, see “Bulletins and Patches” on page 26.

Man Pages

The man pages are distributed online. After you install NetWorker, you can access a man page by entering `man command_name` at the system prompt.

Issue the `nsr_man -l` command at the system prompt to list the man pages. (For example, the command `man 8 nsr` (for SunOS) or `man -s 8 nsr` (for Solaris) displays the `nsr` man page, which gives you a system overview.)



To print a hard copy of the NetWorker man pages, issue this command at the system prompt:

```
% nroff -man `nsr_man -l ` | lpr -P <printer_name>
```

Refer to Appendix C, “Command Summary,” of the *Solstice Backup 4.2 Installation and Maintenance Guide* for a list of NetWorker commands you can invoke from the system prompt.

HTML Documents

Documentation for the NetWorker product is also available in HTML format in the following directory:

```
/cdrom/cdrom0/products/backup/sbu/Image/Manuals/html
```

To view this documentation, use an HTML 2.0-compliant web browser such as Netscape Navigator™. A web browser is not provided with NetWorker.

There are two ways to view this documentation, and both are explained below. The method you choose depends upon several factors.

- Viewing documents from the CD-ROM—This requires no hard disk space, but it is slower, and it ties up your CD-ROM drive. See page 22.
- Viewing documents locally—This requires some hard disk space and a few minutes to copy the files to disk initially. Thereafter, it is faster and does not tie up your CD-ROM drive. See page 23.

▼ Viewing Documents from the CD-ROM

1. Place the Solstice Backup CD-ROM in the CD-ROM drive.
2. Check to see whether the `vold` daemon (Volume Management) is running.
 - a. At the command line, type this command:

```
% ps -ef | grep vold
```



- b. Look at the output and see if `vold` is running. The `vold` daemon is running in the example below.**

```
cessna% ps -ef | grep vold
      root   191      1  0 15:02:30 ?          0:01 /usr/sbin/vold
      pilot2  787     353  0 07:54:13 pts/3    0:00 grep vold
cessna%
```

- 3. If `vold` is running, proceed to step 4**
If `vold` is not running, mount the CD-ROM as `/cdrom/cdrom0`.

```
% mount /cdrom/cdrom0
```

- 4. Launch your web browser.**
- 5. From your web browser's file menu, choose Open File (or equivalent) and type the following path.**

```
/cdrom/cdrom0/products/backup/sbu/Image/Manuals/html/index.html
```

The HTML index page is displayed.

▼ Viewing Documents Locally

- 1. Place the Solstice Backup CD-ROM in the CD-ROM drive.**
- 2. Check to see whether the `vold` daemon (Volume Management) is running.**
 - a. At the command line, type this command:**

```
% ps -ef | grep vold
```



- b. Look at the output and see if `vold` is running. The `vold` daemon is running in the example below.**

```
cessna% ps -ef | grep vold
   root   191      1  0 15:02:30 ?           0:01 /usr/sbin/vold
 pilot2   787     353  0 07:54:13 pts/3      0:00 grep vold
cessna%
```

- 3. If `vold` is running, proceed to step 4. If `vold` is not running, mount the CD-ROM as `/cdrom/cdrom0`.**

```
% mount /cdrom/cdrom0
```

- 4. Copy the directory where the HTML files are stored to a directory in the local file system, as shown in the following example.**

```
# cp -r /cdrom/cdrom0/products/backup/sbu/Image/Manuals/html /local-path
```

- 5. Remove the Solstice Backup CD-ROM from the drive. Hereafter, you won't need it to access the documentation.**
- 6. Launch your web browser.**
- 7. From your web browser's file menu, choose Open File (or equivalent) and type the path where you copied the HTML files to in Step 2.**

The HTML index page is displayed.

PostScript Documents

Documentation for the NetWorker product is also available in PostScript format in the following directory:

```
/cdrom/cdrom0/products/backup/sbu/Image/Manuals/PostScript
```

To view this documentation, use any PostScript viewer, such as ImageTool.

A PostScript viewer is not provided with NetWorker.



▼ Viewing Documents from the CD-ROM

Due to the size of PostScript files, it is not advisable to copy them to your hard disk and view them locally, as you can with the HTML files.

1. Place the Solstice Backup CD-ROM in the CD-ROM drive.
2. Check to see whether the `vold` daemon (Volume Management) is running.
 - a. At the command line, type this command:

```
% ps -ef | grep vold
```

- b. Look at the output and see if `vold` is running. The `vold` daemon is running in the example below.

```
cessna% ps -ef | grep vold
  root   191    1  0 15:02:30 ?           0:01 /usr/sbin/vold
 pilot2  787    353  0 07:54:13 pts/3     0:00 grep vold
cessna%
```

3. If `vold` is running, proceed to step 4
If `vold` is not running, mount the CD-ROM as `/cdrom/cdrom0`.

```
% mount /cdrom/cdrom0
```

4. Launch your PostScript viewer.
5. From your PostScript viewer's file menu, choose Open File (or equivalent) and type the following path.

```
/cdrom/cdrom0/products/backup/sbu/Image/Manuals/PostScript/index
```

The PostScript index page is displayed.



Bulletins and Patches

Legato provides Technical Bulletins containing the latest information about solutions for problems encountered and where to obtain binary patches, if necessary. You can obtain Technical Bulletins via the World Wide Web site, <http://www.legato.com>.

README File

Some minor changes to the software may be made too late for inclusion in this document. If that is the case, you will find those changes described in a file on the CD-ROM: `/cdrom/cdrom0/products/backup/README`.

If this file exists, you should read it to make sure you have all the last-minute information.



Solstice Backup Server Transfer Request

DATE: _____

TO: _____

SUN LICENSE CENTER
PO BOX 1782
LINDON UT 84059
USA
TEL: (800) USA-4SUN
(800) 872-4786
FAX: (801) 431-3657

To whom it may concern:

We understand that according to the current license agreement for our copy of SunSoft's NetWorker software, we may use the software on only one backup server system at a time and we may not transfer the software from the designated server to another server without SunSoft's prior written authorization.

The server on which our licensed copy of NetWorker currently resides, needs to be transferred for the following reason:

As such, we are requesting that you authorize us to transfer our copy of the NetWorker software to another backup server, and that you issue a new authorization code based on your unique enabler code and the host ID for the new server.

We understand the copy of NetWorker that we licensed from SunSoft may be used on only one server system at a time, and we agree not to use the new copy of NetWorker on any server at the same time we use the original copy of NetWorker on the any other server, unless we pay the appropriate additional license fee.

Below are the original server host ID and new server host ID. I understand the terms described above, and confirm this with my signature. Please issue a new authorization code to us as soon as possible. Thank you.

Original backup server host ID: _____



New backup server host ID: _____

signature of individual authorized to sign
(on behalf of the company)

(individual's printed name)

(individual's title)

Company name and address:

TEL: _____

FAX: _____

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