# *Solaris™ Data Backup Utility Installation and Product Notes*


THE NETWORK IS THE COMPUTER®

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Part No.: 805-1092-10
Revision A, April 1997

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# *Contents*

# *Preface*

The Solaris Data Backup Utility (hereafter abbreviated *SDBU*) is based on the Solstice Backup technology that provides backup and recovery for heterogeneous, enterprise-wide networks.

Information about SDBU is included in the Solstice Backup documents, both of which are on the CD-ROM in Post Script form: a *Quick Installation Guide* and the larger, more comprehensive *Administration Supplement*.

The CD-ROM also contains some documents from Solstice Backup version 4.2 as reference information: a *User's Guide*, an *Installation and Maintenance Guide*, and an *Administration Guide.*

## *Purpose of this Document*

This document, *Solaris Data Backup Utility Installation and Product Notes*, explains the Solaris Data Backup Utility that is bundled with Solaris.

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**Note –** SDBU was previously called *Single Server.*

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This document:

- 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 document contains the following:

- Additional information and configuration tips.
- 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 *Solstice Backup* and *NetWorker* refer to the same product.

## *Media and Contents*

SDBU is bundled with Solaris. SDBU is a “lite” version of Solstice Backup with limited features. SDBU enables you to back up one server to one device. The media contains both SDBU and Solstice Backup, both of which can be evaluated free of charge for 45 days.

If you want a more robust solution, you can purchase Solstice Backup Network or Server Edition. There is no reduced price upgrade from SDBU to Solstice Backup. Contact your Sun reseller for more information.

## *Where to Go From Here*

If you are evaluating Solstice Backup for the first time, begin at “Evaluation Period and Enabler Codes” on page 1.

If you are upgrading from an earlier release of SDBU to SDBU 4.2.6, see “Upgrading SDBU Server or Clients” on page 5. Be sure to install the new software in the same location as your existing SDBU executables.

## *Product Matrix*

The following table provides a high level comparison of the key capabilities of SDBU as well as the Solstice Backup 4.2.6 base products:

| Capability | SDBU | Backup Network Edition | Backup Server Edition |
|---|---|---|---|
| **Backup Server and clients** | Server only | Yes | Server only |
| **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 |
| **Number of backup devices supported** | 1 single tape device 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 |
| **Media Pools—Means of organizing backups** | Preconfigured pools only | Advanced, customizable | Advanced, customizable |
| **Available separately** | No, only available co-packaged w/ Solaris APPLICATION and ENT servers | Yes, available through all Sun channels. | Yes, available through all Sun channels. |
| **Upgrade functionality** | Does not support other options or applications. Purchase Network or Server Edition; | Purchase other options or applications. Upgradeable to StorageSuite. | Upgradeable to Network Edition |

## *Typographic Conventions*

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

*Table 0-1*

| Typeface or Symbol | Meaning | Example |
|---|---|---|
| `AaBbCc123` | The names of commands, files, and directories; on-screen computer output | Edit your `.login` file.<br>Use `ls -a` to list all files.<br>`machine_name% You have mail.` |
| **`AaBbCc123`** | What you type, contrasted with on-screen computer output | `machine_name% su`<br>`Password:` |
| *AaBbCc123* | Command-line placeholder: replace with a real name or value | To delete a file, type `rm` *filename*. |
| *AaBbCc123* | Book titles, new words or terms, or words to be emphasized | Read Chapter 6 in *User's Guide*.<br>These are called *class* options.<br>You *must* 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 0-2*

| 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 | `#` |

# *Installation and Product Notes*

SDBU is a subset of Solstice Backup 4.2.6. SDBU enables you to back up a single server to a single backup device (not a jukebox).

You must purchase Solstice Backup Network or Server Edition if you need any of the following:

- Network backups.
- Advanced storage management, such as HSM.
- Support for automated tape devices (jukeboxes).

Solstice Backup Network or Server Edition both support all available options.

## *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 45 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 SDBU, are installing it for the first time, and want to evaluate options you did not purchase, *do not* enable SDBU 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 SDBU 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:

```
% nsrcap -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.

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**Note –** From this point forward in this document, *Solstice Backup* and *SDBU* are used interchangeably.

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# *Installation Flow Chart*

Follow this flow chart to install and enable SDBU or Solstice Backup.

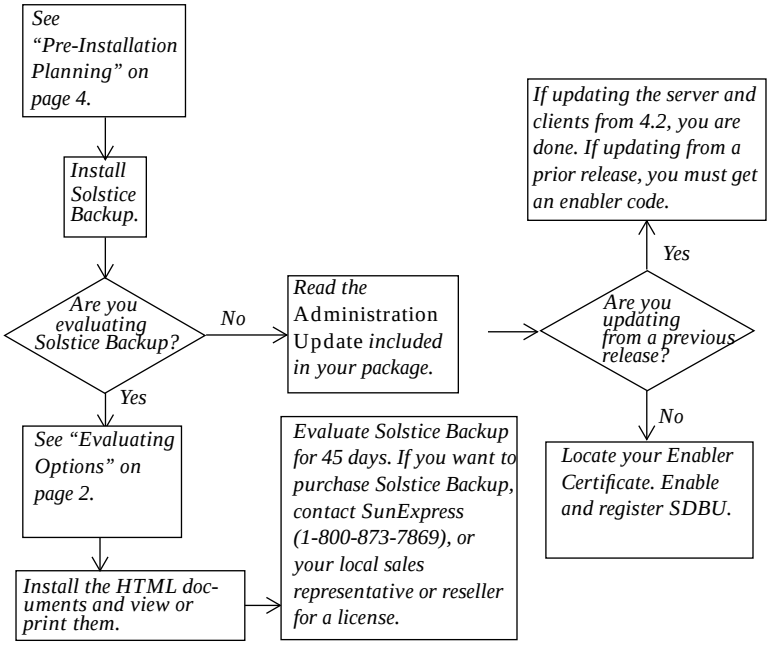


*Figure 1* Installation Flow Chart

# 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 SDBU 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.

## Pre-Installation Note

SDBU 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 SDBU, you need the following:

- System pathname for the CD-ROM drive.
- Appropriate backup device with proper cabling and termination installed.
- Destination directory for the SDBU 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) | `/usr/etc` | 23 Megabytes |
| SPARC (Solaris) | `pkgadd` 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 SDBU Server or Clients” on page 5.

- 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. 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 SDBU.

## *Upgrading SDBU 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 SDBU (Single Server) *to* SDBU 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 any one of the following products have been previously installed, either on a SunOS or Solaris system:

- NetWorker for Solaris 4.0.2
- Solstice Backup Single Server 4.1.2
- Solstice Backup Single Server 4.2.2

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 Solstice Backup installation.

## *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*

If you are replacing or upgrading your Backup software—for example, if you are replacing SDBU with Backup Server Edition, or upgrading 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 `xxxxxx-xxxxxx-xxxxxx`:

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

See “Evaluation Period and Enabler Codes” on page 1 if you need more information about enabler codes.

### *Upgrading From SDBU Utility Bundled With Solaris Server*

If you are upgrading from the SDBU utility that you received with your Solaris server, begin at the preceding section, “Preparing to Upgrade” on page 6.

#### ▼ How to Upgrade From SDBU

If you are currently running the SDBU 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 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 |
|---|---|---|
| `savegroup` | `savegrp` | Important for disaster recovery; see “Server Online Index” on page 8. Has new `-o` option; see man page for details. |
| `daemonlog` | `daemon.log` | (none) |
| `recoverindex` | `mmrecov` | (none) |
| `saveindex` | `[no equivalent]` | Obsolete, removed. This function is now performed automatically by `savegrp`. |

## *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.

## *SunOS and Solaris Compatibility*

The following table summarizes the compatibility of SDBU (formerly *Solstice Backup Single Server*) releases with SunOS and Solaris releases.

| SunOs | Solaris | Solstice Backup Single Server 4.0.2, 4.1.2, 4.2 | SDBU 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 4.1.x 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:** SDBU stores the messages displayed within the Solstice Backup Administrator window in a message file within the `/nsr/logs` directory. Sometimes SDBU'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 SDBU's log file. The modified script maintains a three-file history of SDBU's `daemon.log` file. To manage your SDBU 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 SDBU 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 SDBU finishes writing to the volume, which may occur when a volume becomes full or when SDBU no longer needs the volume for saving data.
  To verify media, `nsrmmd` 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 Solstice Backup 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. SDBU continues to attempt to find the proper position. If SDBU is able to find the correct position, media verification succeeds and a successful completion message appears.

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

  In this case the earlier messages only indicate that SDBU 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:** 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 Solstice Backup 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 –** Do not put aliases that are shared by other hosts on this line.

---

- **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 Solstice Backup 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 Solstice Backup 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 20.

## *Solaris-Specific Notice*

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

## *Backup Device Notices*

With the Solaris operating system it is possible to use two types of device semantics for backups: System V or Berkeley. SDBU 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 20.

## *Man Pages*

The man pages are distributed online. After you install SDBU, 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 eighth `nsr` man page, which provides a system overview.)

To print a hard copy of the Solstice Backup 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 Solstice Backup commands you can invoke from the system prompt.

## *HTML Documents*

Documentation for the Solstice Backup 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 Solstice Backup.

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 17.
- 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 18.

## ▼ 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 SDBU 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 SDBU and Solstice Backup products 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 Image Tool.

A PostScript viewer is not provided with SDBU or Solstice Backup.

### ▼ 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 SDBU 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.

# *Index*

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