



Solaris System Recovery Guide

Version 8.2



Network

Use this option to create a **network boot image** to be used with various *network boot loaders* to boot a client system over the network from a *network boot server*.

To create a network boot image on any configured client or server and save the image on the boot server, select either:

[Configure](#)→[Network Boot/Install](#)→[Create/Update a Network Boot Image](#) or
[Utilities](#)→[Create System Installation Boot Media](#)→[Network Boot Media](#)

Boot Server Name: woody
CDROM Boot Image Name: solaris9_x86

Client System Information

Client Name: nemo Solaris
Solaris OS Level: 9
Platform Type: i386 i86pc
User Description: solaris 9 x86 network boot image Clear

System Installation Mode

No-Prompt Menus (set defaults) Menus (no defaults)

Create/Update Remove X



Solaris clients may only be set to network boot from a Solaris boot server.

Select the **Boot Server Name**. This is the server on which the network boot image will be stored after it is created. The network boot server may be the same system from which the network boot image is created.

Next, type the name of the boot image in the **Network Boot Image Name** field or select the name of an existing image to overwrite by pressing the arrow button to the right of the entry field. If you enter a unique name, a new image will be created using that name. Note that the network boot “*image*” actually consists of several files on disk, but will always be referred to within the application as a single image by a unique **boot image name**. The files are copied into the directory specified as the “**Directory for Client CDROM & Network Boot Images**” directory when the server was configured. You may also use the select button to the right to choose an existing name. The named image will be overwritten.

Upon successful completion, the network boot image will be created and transferred, if necessary, to the boot server. It will now be possible to configure any client to boot from this image using the option “[Enable/Disable Network Installation of a Client](#)” below.

When all selections are complete, press the **Create/Update** button. A new window will appear with the output of the command to create the media and any error message if they should occur.

No-prompt Installation

CDROM and **Network** boot media may be created with the default installation options set, also allowing the system to be installed as soon as a system is booted from this media. This allows an installation to take place simply by booting from a network boot image, for instance, with no operator intervention required.

ASCII (text) key (or press Enter to reselect key type)", enter the key, or press Enter to return to the options above.

The key you enter will be converted to an appropriate hexadecimal number and used to decrypt the data, just as if you entered the hex key yourself.

Upon entry of a valid key, the restoration of the data will continue. If an invalid key is entered, you will be informed so, and returned to the above menu of options.

System Installation Process

After booting from a network boot server

When the system is booted from the network, the client network installation options will also be copied from the boot server to the client. Any installation options setup when the client was configured for network boot (see [Enable/Disable Network Installation of a Client](#)) will be used by default for the installation. These pre-set defaults may include the install server and device, the console device and terminal type, the backup sequence number, or anything else required for the installation to proceed with no required input from the user. If the user selected a no-prompt installation (see [No-Prompt Installation](#) above) the installation will continue automatically. Otherwise, the installation menus will appear and the user may manually change any prior defaults, add any settings that were not pre-configured, or continue the installation process with the current settings.

Verifying the hardware configuration

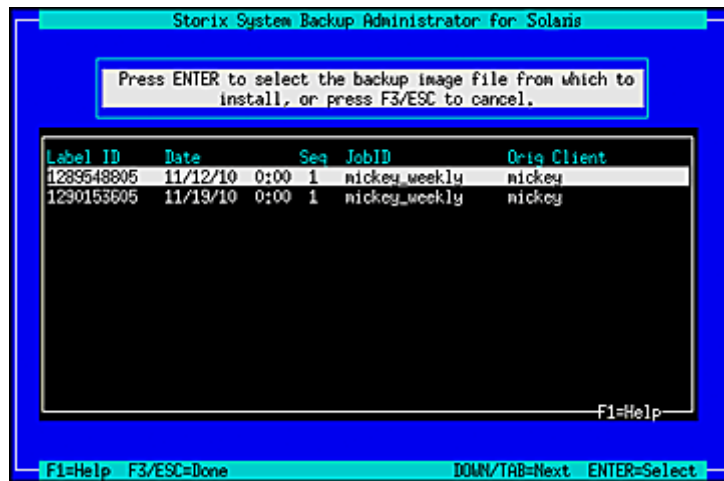
Once the backup media is selected, and you chose to either continue the installation with the current settings or to change the volume group, logical volume or filesystem information, the following will occur:

1. The disks defined on the backup are compared against the current system's hardware configuration. If there are problems that would prevent the backup from being installed onto the system, such as missing disks or disks that are too small to contain the backup data, a list of messages indicating the problems will be displayed and the user will be required to either make changes manually or may select to **automatically fix** any problems that are non-fatal.
2. Non-fatal errors are those that require changes to the configuration in order to allow the data to be restored, although some settings may differ from those of the original system. There are errors that may be automatically fixed by the installation process. For instance, there may not be enough space on the newly detected disks to build the partitions, slices or filesystems as they were previously defined. If such a situation occurs, you will be provided the option of automatically fixing the errors. This might include automatically reducing filesystem sizes to make them fit onto the new hardware. You may also choose to change any system installation settings manually to either add more disk space or change other SVM, ZFS or filesystem attributes that would allow the system storage to be created as desired.

More details of the verification that takes place is described later in [Verification Process](#).

The System Installation and Maintenance Menu

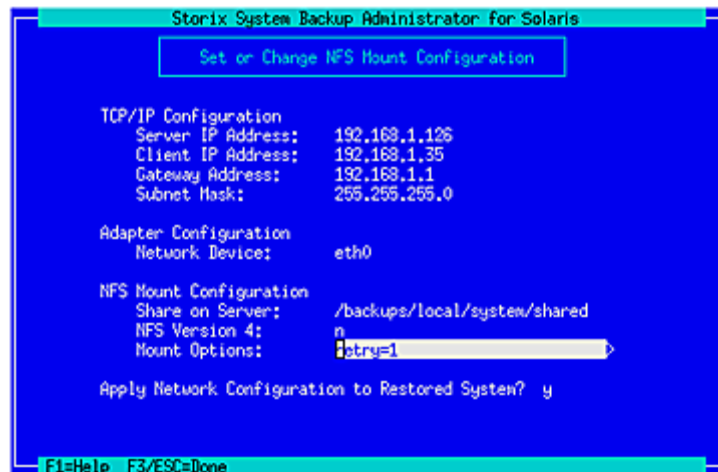
When the boot process has completed, the [System Installation and Maintenance Menu](#) will appear:



Select a backup by highlighting the desired line and pressing **ENTER**, or press **F3** or **ESC** key to cancel the selection. After making your selection, you are returned to the [Change Installation Server or Device menu](#).

Install From Local NFS Mount

If the system backup you wish to use for the recovery is located on a remote NFS share, you may use this option to get access to the backup by performing a NFS mount of the share to the local system. Performing recovery from local NFS mount is supported with **Network Edition** and **Workstation Edition** licenses only. You must first select the [Set or Change NFS Mount Configuration](#) option which will display a screen similar to the following:



To restore from a NFS mounted backup the **Server IP Address**, the **Client IP Address**, the **Network Device**, and the **Share on Server** fields must be filled in. If the client requires a gateway to reach the NFS server enter the **Gateway Address**. When selecting the network device, use the **F4** key to list the adapters available on the system. The option to **Apply Network Configuration to Restored System** indicates whether you wish to migrate the above client network settings to the restored system.

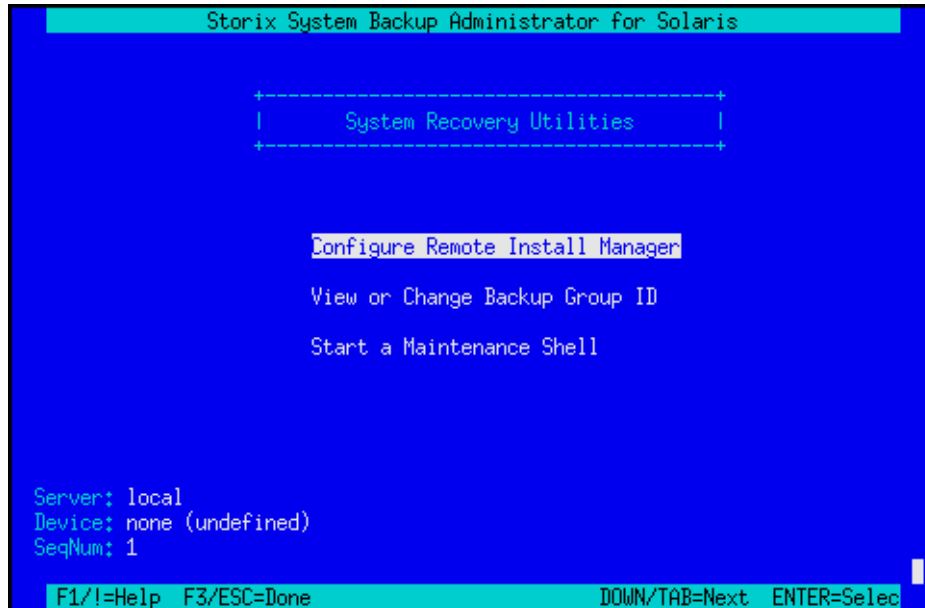


If you receive a message that no network devices are found, then you probably need to [Load Additional Network Device Modules](#).

You should enter "y" in the **NFS Version 4** option if the share you will be accessing is to be mounted using NFS v4 (NFS v2, v3, and v4 are supported). The **Mount Options** field allows you to enter any *mount* command "-o" options necessary to mount the remote share. Press **F3** or **ESC** to save the options and configure the network.

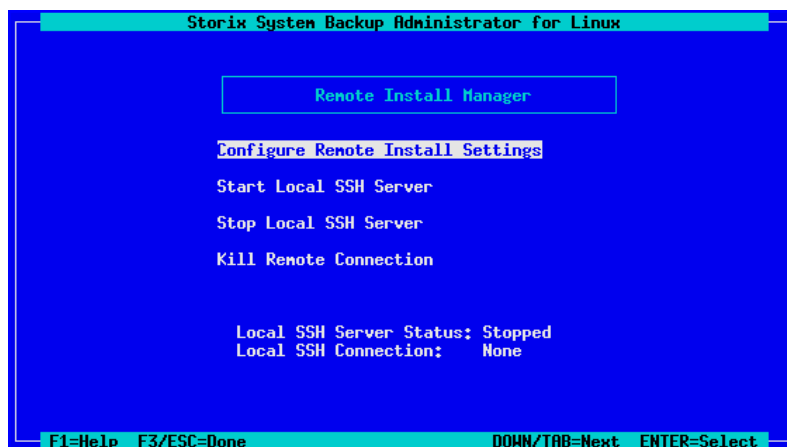
8. System Recovery Utilities

From the [System Installation and Maintenance Main Menu](#), select **System Recovery Utilities** to display the following options:

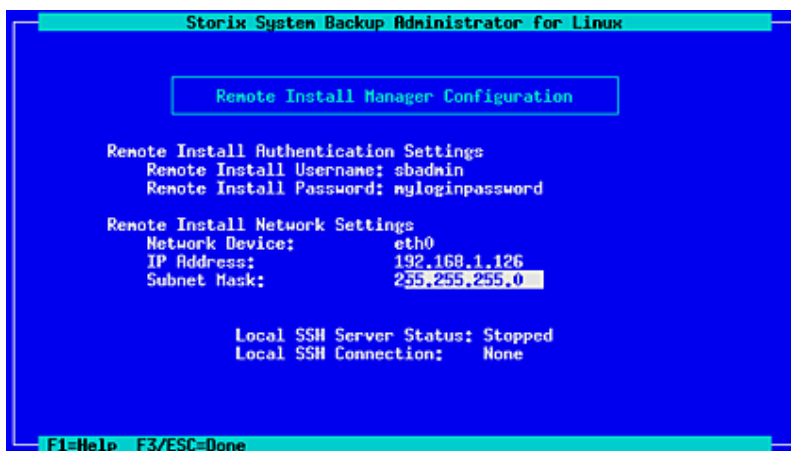


Configure Remote Install Manager

If you configured RIM at the time you created the boot media, it will be automatically enabled and it will not be necessary to configure in this option. If, however you did not pre-configure RIM, or if you need to change the RIM configuration (network adapter, IP address or subnet, or if you forgot the password you previously assigned), you can configure and enable RIM from within the *system Installation menus* after booting from the SBAAdmin boot media. To do so, select the **System Recovery Utilities** option from the main menu to display the following:



Select **Configure Remote Install Manager**. The following screen will display:



1. The **Remote Install Username** is set to “sbadmin” and may not be changed. Enter a password in the **Remote Install Password** field. The password will be necessary to login to the remote install client.
2. Select the **Network Device** (adapter) that should be configured to connect to the remote install client.
3. Enter the **IP Address** used to configure the network adapter. Note that, if the selected adapter is already configured (as a boot or install device) and you enter a different IP address than the adapter is currently using, you will be provided a warning and allowed to continue. If you do so, however, the previous settings will no longer apply, and the adapter will be reconfigured under the new IP address.
4. Enter the **Subnet Mask** (if necessary) used when configuring the network adapter. As with the IP Address, if the adapter is currently configured under a different subnet mask, you will be warned and allowed to reconfigure the adapter under the new subnet mask.

When you have finished your selections, press **ESC** or to return to the [RIM Menu](#). Then select [Start Local SSH Server](#). The network adapter will be configured with these settings and the RIM server will be started. You can see the current status of the RIM server by looking at the **Local SSH** settings which appear on the screen.

View or Change Backup Group ID

This option is used if you have configured a server with an “Optional client with access to all groups”. For further information about configuring the server this way please see the SBAdmin User guide.

If a backup has been copied to a shared server, the new group id will not match the group id of the original client backup. When restoring from the shared server, you will need to ensure a client is configured with access to all groups, and you have the appropriate group ID to enter on the boot media.

```
Storix System Backup Administrator for Solaris

+-----+
|               |
|   Configure Backup Group ID   |
|               |
+-----+

Enter the backup group ID you wish to restore from

Backup Group ID: f7a22bb15430fbd

Server: local
Device: none (undefined)
SeqNum: 1

F1=Help F3/ESC=Done
```

To change the groups ID simply begin typing and it will replace the old group id. Press the escape key to save the new setting and return to the previous menu.

Start a Maintenance Shell

Selecting this option will put you at a **Korn (*ksh*)** shell, from which you can enter various system maintenance commands. Should any error occur during the system installation that prevents the process from continuing, you will be automatically placed at this prompt.

When entering the shell from the installation menus, you can simply return to the installation menus by exiting (typing "exit") from the shell.

Index

A

ascii
 encryption key, 24

B

backup sequence number, 28
 network install, 16
BIOS, 20
 CDROM boot, 20
 networkboot, 21
boot
 booting to install process, 20
 problems, 57
boot loader, 5
 definition, 5
boot media
 cdrom, 8
 creating, 7–19
 disk, 9
 network, 10
 when to make, 7
boot server. *See* network boot server
booting, 20, *See also* network boot
broadcast boot, 16, 21

C

cdrom
 create ISO image, 8
CDROM
 booting, 20
client
 booting for system installation, 20
 network installation, 14
cloning systems, 23
configure
 network boot/install, 14
 network boot/install client, 15

D

dataset. *See* ZFS dataset
decrypt. *See* encryption
disk
 configure boot disk, 9
disk backup file
 local install device, 29
disks
 selecting for installation, 37–41

E

encryption, 24, 57
 installing, 24
 software, 2

F

filesystems
 adding, changing, removing, 53
 definition, 6
 types, 53
firmware, 5
 definition, 5

H

hard disk. *See* boot media: disk
help, 26
 system installation menu, 26
hex
 encryption key, 24
hot spare pool
 assigning, 44, 45
 description, 42
 meta-device, 46

I

install
 from system backup. *See* system installation
install device
 parallel virtual device, 29
 sequential virtual device, 29
install server. *See* network install server
installation. *See* system installation
ISO. *See* boot media: cdrom

K

keys. *See* encryption

L

LVM
 definition, 6

M

MAC address, 16
menu
 system installation and maintenance, 21
meta-device
 definition, 41
 terminology, 41
meta-devices
 swap device, 54
mirror
 meta-device, 44
 meta-device description, 41
 ZFS virtual device, 50
mount point
 ZFS dataset, 51
MSDOS

filesystem, 6

N

- network, 14
 - adapter hardware address, 16
 - alternate install server, 16
 - re-configuration after system install, 58
- network adapter
 - hardware address, 21
 - remote installation manager, 13, 60
- network boot, 21
- network boot server, 10, 14, 15, 17, 18, 21, 25
- network boot/install, **14**
 - alternate install server, 17
 - boot image
 - creating, 10
 - updating, 19
 - boot loaders, 10
 - boot server, 10, 14, *See* network boot server
 - install device, 16
 - install server. *See* network install server
 - installing different AIX levels, 18
 - unconfigure install client, 16
 - using alternate network, 17
 - using different boot and install servers, 17
- network install device
 - tape, 32
- network install server, 14, 16, 17, 18, 32
 - changing during install, 27
- nfs mount backup file
 - local install device, 30
- no-prompt install, 10
- no-prompt install, 15
- no-prompt install, 21
- no-prompt install, 23

O

- OpenBoot, 20
 - CDROM boot, 20
 - networkboot, 21
- OpenFirmware, 5

P

- paging space. *See* swap devices
- parity
 - meta-device, 45
 - meta-device description, 41
- partition
 - migrating, 39
 - PCFS, 6
- partition table
 - changing, 38, 39
- partition table, 56
- PCFS, 6, 53

R

RAID

- level 0
 - ZFS virtual device, 50
 - level 0 meta-device. *See* stripe
 - level 0+1, 47
 - level 1
 - ZFS virtual device, 50
 - level 1 meta-device. *See* mirror
 - level 5
 - ZFS virtual device, 50
 - level 5 meta-device. *See* parity
 - level 6
 - ZFS virtual device, 50
- raid devices
- descriptions, 41
- RAID devices
- meta-devices, 43
- raidz1
- ZFS virtual device, 50
- raidz2
- ZFS virtual device, 50
- recovery. *See* system installation
- remote install manager
- configuring from install menus, 59, 60
- remote installation manager, 12
- replication database
- adding, changing, removing, 42
- reservation
- ZFS dataset, 51
- RIM. *See* remote installation manager

S

- slice, 41, 42, 45, 46, 47, 48, 50, 54
 - filesystems, 6
 - install settings, 35
 - migrating, 39
 - position, 41
 - SVM, 6
 - ZFS, 6
- slice table
 - changing, 38, 40
- slice table, 56
- soft partition, 41, 45, 47
 - description, 42
 - meta-device, 46
- Solaris Volume Manager. *See* SVM
- spare
 - ZFS virtual device, 50
- ssh program, 13
- strimsh program**, 13
- stripe
 - meta-device, 43
 - meta-device description, 41
 - ZFS virtual device, 50
- SVM, 41
- swap devices, 54

- system backup
 - network install, 14
 - system installation, 23
- system backup disk
 - local install device, 29
- system backup nfs
 - local install device, 30
- system installation
 - booting, 20
 - booting in installation mode, 20
 - cloning systems, 23
 - device, 27
 - errors, 57
 - install device
 - changing, 27
 - selecting a remote device, 32
 - installing the system, 56
 - main menu, 22
 - mode, 15
 - network install server
 - changing, 27, 31
 - no-prompt install, 10, 23
 - settings, 35, 55
 - starting, 57
 - verification, 56
- system recovery. *See* system installation
- system recovery utilities, 59–60

T

- tape
 - autoloader, 28
 - network install device, 32
- tape drive
 - remote, 32
- text
 - encryption key, 24
- Tivoli. *See* TSM
- TSM
 - administrative user, 35
 - client, 35

- configuration, 33
- server, 35

U

- UDFS, 6, 53
- UFS, 6, 48, 53
- utilities. *See* system recovery utilities
 - configure remote install manager, 59, 60

V

- verify
 - hardware configuration, 25
- virtual device. *See* ZFS virtual device
- virtual devices
 - parallel, 29
 - sequential, 29

Z

- Zettabyte File System. *See* ZFS
- ZFS
 - description, 48
 - filesystem type, 53
- ZFS dataset
 - description, 48
 - filesystems, 50
 - name, 51, 52
 - volumes, 52
- ZFS filesystems
 - adding, changing, removing, 50
- ZFS pool
 - adding, changing, removing, 49
 - description, 48
- ZFS virtual device
 - adding, changing, removing, 50
 - description, 48
- ZFS volumes
 - adding, changing, removing, 52
- zpool. *See* ZFS pool