

**Chapter
1**

**INSTALLATION:
OVERVIEW**

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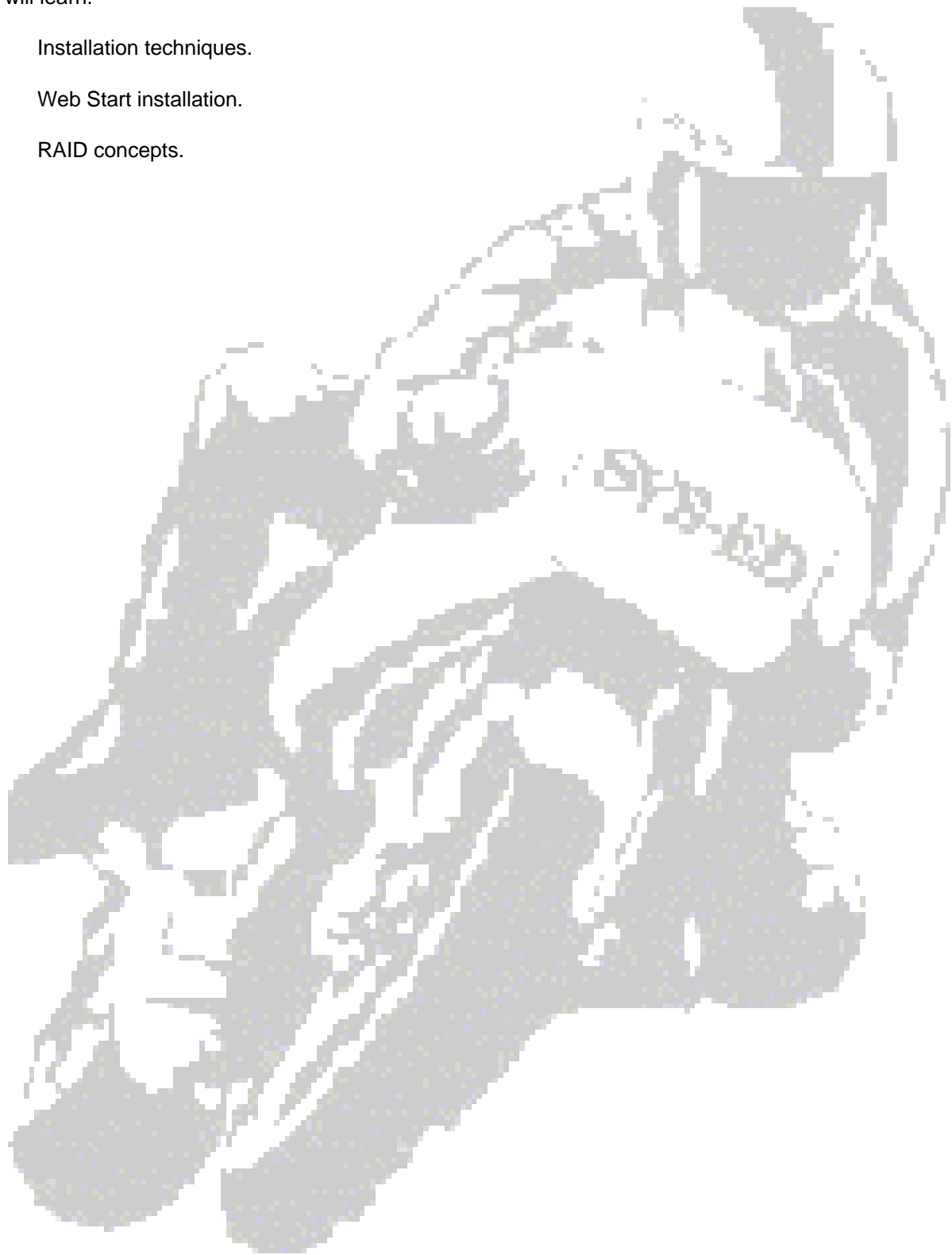


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Objectives

You will learn:

- Installation techniques.
- Web Start installation.
- RAID concepts.



1 Installation Methods

The Solaris operating environment provides several methods for installation or upgrade. Each method offers different features that are designed for specific installation requirements and environments.

The most widely used installation technologies include:

- Solaris Web Start Installation Program
- Solaris suninstall Program
- Custom JumpStart Installation Method
- Solaris Flash Installation Feature
- WAN Boot Installation Method
- Solaris Live Upgrade Method
- SPARC: Factory JumpStart Installation Method

1.1 Solaris Web Start Installation Program

The Solaris DVD or Solaris Installation CD includes the Solaris Web Start installation program. It can be run with a GUI - graphical user interface or with a CLI: command-line interface.

The Solaris Web Start program provides instructions for:

- Installation
- Upgrading the Solaris software
- Additional software

The install can be performed with the default option, or the customize option can be used for installing specified software.

1.2 Solaris suninstall Program

The Solaris suninstall program is provided on the Solaris Software CD. It is run with a CLI: command-line interface. The Solaris suninstall program provides the procedures for installing or upgrading to the Solaris 9 software.

When there is insufficient memory to run a GUI and there are international locales which will be supported, this would be the preferred installation method.

1.3 Custom JumpStart Installation Method

The custom JumpStart installation method is a command-line interface that provides the capability to automatically install or upgrade several systems, based on profiles that have been created. The profiles define specific software installation requirements.

Shell scripts can include preinstallation and postinstallation tasks. A profile can be chosen to You choose which profile and scripts to use for installation or upgrade. The custom JumpStart installation method then installs or upgrades the system.

1.4 Solaris Flash Installation Feature

The Solaris Flash installation feature provides the capability to install several systems, based on a configuration that has been installed on a master system. After the master system has been installed and configured, a Solaris Flash archive is created from the master system. As many Solaris Flash archives as necessary can be created.

It will be necessary to choose which Solaris Flash archive to install on each different system. This installation method provides the install several systems with the same software and configuration.

1.5 WAN Boot Installation Method

The WAN boot installation method provide the capability to boot and install software over a wide area network by using the HTTP: Hypertext Transfer Protocol.

The WAN boot can be used for installing the Solaris operating environment on systems over the Internet or other large public data networks whose network infrastructure might be untrustworthy. Different security features can be used for protecting data confidentiality and installing image integrity.

1.6 Solaris Live Upgrade Method

The Solaris Live Upgrade enables a duplicate boot environment to be upgraded while the active boot environment is still running. This will eliminate downtime of the production environment.

Solaris Live Upgrade can be run with a CUI or CLI. The first step is to create a duplicate boot environment. After a duplicate boot environment has been created, the boot environment is then upgraded.

It is also possible to install a Solaris Flash archive or differential archive on the inactive boot environment. This is done by activating the inactive boot environment and at the next reboot, the inactive boot environment is switched to become the active boot environment.

When a failure occurs, the original boot environment can be recovered with a activate and reboot.

1.7 SPARC: Factory JumpStart Installation Method

The JumpStart installation method automatically installs the Solaris software on a new SPARC system when the Solaris DVD or Solaris Software 1 of 2 CD has been inserted into the drive and the system turned on.

A default profile is selected that is based on the model and disk size of the system. The profile determines which software components are installed on the system. There will not be a prompt for system configuration information and it is not possible to choose which software is installed.

2 Mirrored File Systems

During an installation or upgrade, mirrored file systems can be created to duplicate system data over multiple physical disks. The duplication of data over separate disks will serve to protect data from disk corruption or a disk failure.

Mirrored file systems can be created during an installation or upgrade. This will eliminate the need to create the mirrored file system after the installation.

The custom JumpStart and Solaris Live Upgrade installation methods only support the creation of RAID-0 and RAID-1 volumes. Other Solaris Volume Manager components are not supported.

2.1 Mirroring: How it Works

Solaris Volume Manager uses virtual disks to manage physical disks and their associated data.

In Solaris Volume Manager, a virtual disk is known as a volume. A volume is a name for a group of physical slices that appear to the system as a single, logical device; in UNIX this is known as a virtual device.

A volume is functionally identical to a physical disk in the view of an application or a file system (such as UFS). Solaris Volume Manager converts I/O requests directed at a volume into I/O requests to the underlying member disks.

Solaris Volume Manager volumes are built from slices (disk partitions) or from other Solaris Volume Manager volumes. Volumes are used for increasing performance and data availability. In some instances, volumes can also increase I/O performance.

Volumes look and behave like slices; they are transparent to end users, applications, and file systems. As with physical devices, Solaris Volume Manager software can be used for accessing volumes through block or raw device names. The volume name changes, depending on whether the block or raw device is used.

3 Solaris Web Start Installation

Task	Comment	Description
Verify system requirements	Standard	Verify that the system meets the requirements to install or upgrade with the Solaris Web Start program.
Gather the necessary information.	Standard	Follow the checklist and complete the worksheet.
Preconfigure system configuration information.	Optional	Use the sysidcfg file or the name service to preconfigure installation information for a system. Preconfiguring system information will prevent the installation program from prompting for additional information during the installation.
Prepare to upgrade the system.	Upgrade	Back up the system.
Set up the system to install from the network.	Optional	In order to install a system from a remote DVD or CD net installation image, it will be necessary to set up the system to boot and install from an install server or boot server.
Install or upgrade.	Standard	Boot the system and follow the prompts to install or upgrade the Solaris software.
Perform post-upgrade tasks	Upgrade	Correct any local modifications that were lost during the upgrade.

3.1 Installation or Upgrade - Example

The program can be installed by using the DVD-ROM or CD-ROM drive or a net image.

Boot the System

1. In order to boot from the local DVD or CD, type the following command:

`ok boot cdrom [[- nowin]]`

2. In order to boot from an install server on a network, type the following command.

`ok boot net [[- nowin]]`

nowin : Specifies to run the Solaris Web Start program in CLI mode.

3. A decision will have to be made whether to reboot the system automatically and to automatically eject the disc.

4. Click NEXT.

5. Specify the media that will be used for the install.

6. Decide whether this will be an initial installation or an upgrade.

7. Follow the instructions on the screen to install the Solaris software.

8. If a Solaris Flash archive is NOT being installed, additional software can also be installed.