

# *Solstice™ AutoClient™ 2.1 Installation and Product Notes*



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# *Solstice AutoClient 2.1*

## *Product Notes*

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This chapter provides the following information for the Solstice™ AutoClient™ 2.1 product.

<i>Solstice AutoClient 2.1 Overview</i>	<i>page 2</i>
<i>What's New in the Solstice AutoClient 2.1 Product</i>	<i>page 2</i>
<i>Solstice AutoClient 2.1 Documentation</i>	<i>page 3</i>

## *Solstice AutoClient 2.1 Overview*

The Solstice AutoClient product allows you to set up AutoClient systems and provide centralized administration for these systems. The AutoClient technology improves ease of administration, enabling system administrators to maintain many AutoClient systems from a server.

The Solstice AutoClient software provides Host Manager, a Motif® graphical user interface tool that can be used on a host running an X Window System™, such as the OpenWindows™ environment. Using Host Manager, you can configure system information and add server support for AutoClient systems.

## *What's New in the Solstice AutoClient 2.1 Product*

The Solstice AutoClient 2.1 product provides new features described in Table 1-1.

*Table 1-1* New Solstice AutoClient 2.1 Features

<b>Feature</b>	<b>Description</b>
Improved installation script	A new installation script makes it easier for users to install Solstice AdminSuite and AutoClient software. The new script enables you to set up systems to run AdminSuite remotely and also to set up systems to be administered by AdminSuite. The installation script can now also be run as root.
Improved password functionality	You can now set diskless client's and AutoClient's root password using Host Manager.
JavaStation™ support	Using Host Manager, you can now add JavaStations to your network.
OS services removal support	Host Manager now allows you to remove OS services from an OS server.
Script enabler feature	Host Manager now has the capability to run scripts that you have created to customize your operations.
AutoClient disk profile documentation	Information about how to setup your AutoClient disk profile has now been included in the <i>Solstice AutoClient 2.1 Administration Guide</i> .

---

## *Solstice AutoClient 2.1 Documentation*

For your convenience, the documentation for the AutoClient software has been provided in two formats: HTML and PostScript™. The following sections describe what documents have been provided and where you can find them on the CD-ROM.

### *Hypertext Markup Language (HTML) 2.0 Format*

Documentation for the Solstice AutoClient 2.1 product is available in HTML format in the `/cdrom/solstice_sysmgt_2_3/Manuals/html` directory. The following documents are available in HTML format:

- *Solstice AdminSuite 2.3 Installation and Product Notes* – Contains overview, installation procedures, troubleshooting, and known bug lists for the Solstice AdminSuite software and software usage monitoring.
- *Solstice AutoClient 2.1 Installation and Product Notes* – Contains overview, installation procedures, troubleshooting, and known bug lists for the Solstice AutoClient software.
- *Solstice AdminSuite 2.3 Administration Guide* – Contains product overview, task, and reference information for the Solstice AdminSuite software.
- *Solstice AutoClient 2.1 Administration Guide* – Contains the administrative tasks required for the successful operation of the Solstice AutoClient product. It includes information on how to administer AutoClient systems with Host Manager.
- *Solstice AdminSuite Print Administration Guide* - Contains product overview information about the SunSoft Print Client software, task and reference information for setting up and modifying print client software.

To view this documentation, use an HTML 2.0 compliant Web browser such as Netscape Navigator™.

---

**Note** – A Web browser is not provided with the Solstice AutoClient 2.1 product.

---

Choose Open File from the File menu in your Web browser and type in the following path.

```
/cdrom/solstice_sysmgt_2_3/Manuals/html/index.html
```

The HTML index page is displayed. Click on the desired product name to view the documentation for that product.

For faster access to the Solstice AutoClient 2.1 documentation in HTML format, copy the directory where the HTML files are stored to a directory in the local file system, as shown in the example.

```
# cp -r /cdrom/solstice_sysmgt_2_3/Manuals/html /local-path
```

Subsequently, access the HTML index page using the local file system path with your Web browser instead of using the path to the files stored on the CD-ROM.

## *PostScript Format*

For users who do not have access to browsers, the documentation has been provided in PostScript format. The following files are provided in the `/cdrom/solstice_sysmgt_2_3/Manuals/postscript` directory.

The PostScript files included on the CD-ROM are:

- `Sol_AS2.3_Install.ps`

*Solstice AdminSuite 2.3 Installation and Product Notes* – Contains overview, installation procedures, troubleshooting, and known bug lists for the Solstice AdminSuite software and software usage monitoring.

- `Sol_AC2.1_Install.ps`

*Solstice AutoClient 2.1 Installation and Product Notes* – Contains overview, installation procedures, troubleshooting, and known bug lists for the Solstice AutoClient software.

- Sol\_AS2.3\_Admin\_Guide.ps

*Solstice AdminSuite 2.3 Administration Guide* – Contains product overview, task, and reference information for the Solstice AdminSuite software.

- Sol\_AC2.1\_Admin\_Guide.ps

*Solstice AutoClient 2.1 Administration Guide* – Contains the administrative tasks required for the successful operation of the Solstice AutoClient product. It includes information on how to administer AutoClient systems with Host Manager.

- Sol\_ASPrint\_Admin\_Guide.ps

*Solstice AdminSuite Print Administration Guide* – Contains product overview information about the SunSoft Print Client software, task and reference information for setting up and modifying print client software.

### *Documentation Comment Email Alias*

If you have comments that you would like to make about our documentation, or any questions, you may email us at the following email alias:

`doc-comments@RMT.Central.Sun.Com`



# *Solstice AutoClient 2.1*

## *Dependencies*

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This chapter provides the following information for the Solstice AutoClient 2.1 product.

<i>Supported Platforms</i>	<i>page 8</i>
<i>Supported Operating Systems</i>	<i>page 8</i>
<i>Disk Space Availability</i>	<i>page 9</i>
<i>Required Software Packages</i>	<i>page 10</i>
<i>AdminSuite and Patches</i>	<i>page 12</i>

## Supported Platforms

The Solstice AutoClient 2.1 software used to set up AutoClient systems can be installed on the standalone or server systems described in Table 2-1.

*Table 2-1* Solaris™ OS Releases and Platforms Supported by Solstice AutoClient 2.1

Solaris OS Release	Platform
Solaris 2.3	SPARC™
Solaris 2.4 and later	SPARC x86

## Supported Operating Systems

Each operating system has various levels of support with AutoClient 2.1. The following sections describe the support available with each operating system.

### Solaris 2.4 Systems

Before installing the Solstice AutoClient 2.1 software on a system running the Solaris 2.3 or Solaris 2.4 release, verify that the NFS `mountd` process is active with the following command.

```
# ps -ef | grep mountd
```

If the `mountd` process is not displayed in the output, start it by using this command.

```
# /usr/lib/nfs/mountd
```

Ensuring that the `mountd` process is running will prevent the installation script from hanging.

## *Solaris 2.3 End-of-Support*

Support for Solaris 2.3 will be dropped from the next release of AdminSuite and AutoClient. Users running AdminSuite or AutoClient on systems running Solaris 2.3 should plan on upgrading the system to a new release during this transition period.

## *4.x Client Support*

If you plan on having 4.x clients and your server is running a version of Solaris later than 2.5.1, you will need to manually install the SUNWhinst package that is now included on the Solstice AdminSuite 2.3 CD-ROM.

## *Disk Space Availability*

To perform a full installation of the Solstice AutoClient 2.1 software on a Solstice station manager system, you need 35 Mbytes of free disk space for the spooled software area and an additional 7 Mbytes of disk space for each architecture (SPARC and x86). Type this command to find the amount of empty disk space.

```
% /usr/bin/df -k
```

Filesystem	kbytes	used	avail	capacity	Mounted on
/dev/dsk/c0t2d0s0	905070	239227	575343	30%	/
/dev/dsk/c0t3d0s0	288102	186690	72602	72%	/usr
/proc	0	0	0	0%	/proc
fd	0	0	0	0%	/dev/fd
/dev/dsk/c0t3d0s1	201583	68385	113048	38%	/export
swap	57840	12	57828	1%	/tmp

The `avail` column shows the number kilobytes of available disk space. In this example, the `/export` directory has 113048 Kbytes (approximately 113 Mbytes) free, more than enough to install the Solstice AutoClient 2.1 software (you can install the software in directory locations other than the `/export` directory).

---

**Note** – A full installation is not required to use the Solstice AutoClient 2.1 software on each system. You can perform a full installation on one system, and use the installation program to set up other systems to access the Solstice AutoClient 2.1 software installed on this system.

---

## *Required Software Packages*

### *Solstice AutoClient 2.1*

The Solstice AutoClient 2.1 product verifies that the following software packages are installed on systems running the Solaris 2.5 or later operating environment:

- SUNWadmc
- SUNWadmfw
- SUNWsadml
- SUNWmfrun

The SUNWsadml and SUNWmfrun software packages are automatically installed on systems running the Solaris 2.3, Solaris 2.4, Solaris 2.5, or Solaris 2.5.1 release. For systems running a version later than 2.5.1, you must go back to the Solaris CD-ROM and install these packages before you can install Solstice AutoClient 2.1.

### *Removing Previously Installed AutoClient Software*

If you have installed an earlier release of the Solstice AutoClient software, you must remove the old version prior to installing your new software. Refer to “Removing Previously Installed AutoClient Software” on page 18 for information about how to remove this software.

---

## *sysadmin Group Membership*

To run `admin_install`, you must be a member of the `sysadmin` group (group 14). Additionally, you must belong to the `sysadmin` group on each host you specify during installation. See “Becoming a Member of the `sysadmin` Group” on page 19 for more information.

---

## AdminSuite and Patches

Support for automatically patching new diskless and AutoClient clients is now integrated into the AdminSuite and AutoClient tools. A command line interface, `admclientpatch`, is also provided to allow you to patch existing clients with one operation.

A small number of required patches for different releases of Solaris are shipped with the AdminSuite product. The appropriate patches will be applied as you create new clients. You can use the `admclientpatch` command to spool additional patches or you can remove patches from the spool area that you no longer need. However, you should be careful when removing one of the patches that is shipped with Solstice AutoClient 2.1 since new clients may not work properly if a required patch is missing.

Because patches are now applied automatically when a client is created, there are some additional things to be aware of. If you have existing clients, including dataless clients, that share the OS service with the new client, these existing clients will now also have the patch. You can use the `admclientpatch` command to be sure that all of the diskless and AutoClients also have the patch applied to their root filesystem. For dataless clients, you may need to go to each client and apply the patch to ensure that the dataless root is patched properly to match the shared OS service.

The disconnectable patch will also affect any dataless clients that use CacheFS™ and that share the OS service. The disconnectable patch will need to be applied to the dataless client's root for the client to work properly. The patches can be found in the spool area: `/opt/SUNWadmd/Patches`. The patch that needs to be applied to the dataless client root is shown in Table 2-2.

*Table 2-2* Disconnectable Patches

Patch	Number
Solaris 2.5 SPARC	102906-02
Solaris 2.5.1 SPARC	103006-02
Solaris 2.5 i386	102939-02
Solaris 2.5.1 i386	103007-02

---

### *Slower Installations*

Because of the integrated patching support that is now in the Host Management tools, adding AutoClients or diskless clients will take longer than in the previous release. This impact is due to the time needed to run `installpatch` for appropriate spooled patches. Once the client is created, there should be no noticeable performance difference from the earlier release.



# *Solstice AutoClient 2.1 Installation Procedures*

---



This chapter provides the following information for the Solstice AutoClient 2.1 product.

<i>Solstice AutoClient 2.1 Installation Overview</i>	<i>page 16</i>
<i>Installation Process</i>	<i>page 17</i>
<i>Removing Previously Installed AutoClient Software</i>	<i>page 18</i>
<i>Becoming a Member of the sysadmin Group</i>	<i>page 19</i>
<i>Installing the Solstice AutoClient Software</i>	<i>page 24</i>
<i>Setting Up Systems to Use AutoClient</i>	<i>page 34</i>
<i>Troubleshooting</i>	<i>page 43</i>

## *Solstice AutoClient 2.1 Installation Overview*

The Solstice AutoClient 2.1 software is installed using the `admin_install` script, found at the root level directory of the CD-ROM. You can use the installation script to install the software on systems in the network, as well as standalone systems. Help is available when you run the script, and the script is designed for you to easily install the Solstice AutoClient 2.1 product.

The installation script provides the following options:

- Install AdminSuite 2.3 and AutoClient 2.1
- Set up systems to use AdminSuite and AutoClient

The Solstice AutoClient 2.1 product can be installed on a single system and shared with others systems using the NFS distributed file system

Though the script uses a self-documenting interface, this section describes the major options used by the script during the installation process.

---

**Note** - The `admin_install` installation program cannot be used to install the software on diskless, dataless, or AutoClient system types.

---

## Installation Process

The installation process involves a number of tasks, which are listed in Table 3-1. Some of these tasks may or may not be required to be performed, depending upon your system configuration. Review the tasks listed in Table 3-1 and perform them in the order that they are listed. If one task is not required, simply skip to the next task.

*Table 3-1* Task Map: Installing the Solstice AutoClient 2.1 Software

Activity	Description	For Instructions, Go To
<b>Remove Previously Installed Software</b>	Before installing your new Solstice AutoClient software, you must remove the old version of AutoClient (AutoClient 2.0, 1.0 or 1.0.1). Skip this activity if you do not have a previous version of Solstice AutoClient installed.	▼ How to Remove Previously Installed AutoClient Software page 18
<b>Become a Member of the sysadmin group</b>	Before you can run the <code>admin_install</code> script, you must be a member of the <code>sysadmin</code> group on each host you wish to install. Skip this activity if you are already a member of the <code>sysadmin</code> group.	▼ How to Add Users to the sysadmin Group Using NIS+ page 19 ▼ How to Add Users to the sysadmin Group Using NIS page 21 ▼ How to Add Users to the sysadmin Group Using Local /etc files page 23
<b>Install Solstice AutoClient</b>	Use the <code>admin_install</code> script to install the Solstice AutoClient 2.1 software on a Solstice file server or administration system.	▼ Installing the Solstice AutoClient Software page 24
<b>Set Up Automounter Support</b>	(Optional) If you selected the automounter mount method during the installation process, you must add entries to the automounter maps that indicate the location of the Solstice AutoClient 2.1 software.	▼ How to Add Automount Support by Using NIS+ page 58 ▼ How to Add Automount Support by Using NIS page 61 ▼ How to Add Automount Support by Using Local /etc Files page 65

## *Removing Previously Installed AutoClient Software*

Before you can install your new AdminSuiteAutoClient software, you must remove the previously installed AutoClient software using the following procedure.

### ▼ How to Remove Previously Installed AutoClient Software

- 1. Log in as root on the client running the old AutoClient software.**
- 2. Change directories to the `/cdrom/cdrom0` directory.**
- 3. Remove the AutoClient software using the following command line.**

```
# ./rm_admin -a -d /opt
```

This command is found in the top level of the Solstice CD. In this command,

<code>-a</code>	Specifies that you wish to remove the AutoClient software
<code>-d /opt</code>	Specifies the directory in which the AutoClient software is installed

## *Becoming a Member of the sysadmin Group*

To install the Solstice AutoClient 2.1 software, you must be a member of the sysadmin group for each host you specify during installation. The following procedures describe how to become a member of the sysadmin group for each name service the hosts can use. To learn more about the sysadmin group and security in the Solstice AutoClient product, see the *Solstice AutoClient 2.1 Administration Guide*.

---

**Note** – You can now install the Solstice AdminSuite and AutoClient software as root on local systems; however, to install the software remotely, you must be a member of the sysadmin group.

---

### ▼ How to Add Users to the sysadmin Group Using NIS+

1. **Log in to a system in your NIS+ domain as an authorized user with read and write access rights to the group table.**
2. **Save the group table to a temporary file.**

```
$ niscat group.org_dir > /var/tmp/group-file
```

3. **Edit the file, adding the users you want to authorize to install the Solstice AutoClient 2.1 software.**

The following sample shows users added to the sysadmin entry in the group file.

```
.  
.   
.   
sysadmin: :14: user1,user2,user3
```

In this example,

*user1,user2,user3*

Represent the users you are adding to the sysadmin group.

**4. Merge the file with the NIS+ group table.**

```
$ /usr/lib/nis/nisaddent -mv -f /var/tmp/group-file group
```

The results of the merge are displayed.

**5. Remove the temporary file.**

```
$ rm /var/tmp/group-file
```

***Verification of Adding Users to the sysadmin Group Using NIS+***

Verify that the user is a member of the sysadmin group by entering the following commands. Perform this step for each user you added to the file.

```
# su - user1  
$ groups  
staff sysadmin  
$ exit
```

---

## ▼ How to Add Users to the sysadmin Group Using NIS

1. Log in to the NIS master server as root.
2. Edit the `group` file (the default directory location is `/etc`), adding the users you want to authorize to install the Solstice AutoClient 2.1 software.

The following sample shows users added to the `sysadmin` entry in the `group` file.

```
.  
.   
.   
sysadmin::14:user1,user2,user3
```

In this example,

`user1,user2,user3`

Represent the users you are adding to the `sysadmin` group.

---

**Note** – The directory location of the `group` file is specified in the NIS `makefile` using the `$DIR` variable. Consult this file if you are uncertain of the location of the `group` file.

---

3. Change directory to the location of the NIS `makefile` (the default is `/var/yp`) and rebuild the NIS map.

```
# cd /var/yp  
# make group
```

---

**Note** – Depending on the size of the NIS map, it may take several minutes or several hours to update the maps and propagate the changes throughout the network.

---

### *Verification of Adding Users to the sysadmin Group Using NIS*

Verify that the user is a member of the sysadmin group by entering the following commands. Perform this step for each user you added to the NIS master.

```
# su - user1
$ groups
staff sysadmin
$ exit
```

## ▼ How to Add Users to the sysadmin Group Using Local /etc files

Perform these steps for each system on which you want to use the Solstice AutoClient 2.1 software.

1. **Log in as root to the system.**
2. **Edit the /etc/group file, adding the users you want to authorize to install the Solstice AutoClient 2.1 software.**

The following sample shows users added to the sysadmin entry in the group file.

```
.  
.   
.   
sysadmin::14:user1,user2,user3
```

In this example,

*user1,user2,user3*

Represent the users you are adding to the sysadmin group.

### *Verification of Adding Users to the sysadmin Group Using Local /etc Files*

Verify that the user is a member of the sysadmin group by entering the following commands. Perform this step for each user you added to the system.

```
# su - user1  
$ groups  
staff sysadmin  
$ exit
```

## *Installing the Solstice AutoClient Software*

The following procedures describe how to install the Solstice AdminSuite and AutoClient software. To learn more about Solstice AutoClient product, see the *Solstice AutoClient 2.1 Administration Guide*.

### ▼ How to Install Solstice AutoClient Software

#### 1. Insert the product CD into your CD-ROM drive.

If your system is not running Volume Management, you must mount the CD with the following commands before accessing it:

```
# mkdir /cdrom
# mount -F hsfs -o ro /dev/dsk/c0t6d0s0 /cdrom
```

#### 2. Log in as a member of the sysadmin group for that system (group 14).

**Note** – If you are installing the software on a local system, you do not have to be a member of the sysadmin group; you can install the software as root.

#### 3. Verify that you are a member of the sysadmin group.

```
$ groups
```

If the sysadmin group is listed in the output, proceed to the next step. If not, follow the instructions in “Becoming a Member of the sysadmin Group” on page 19.

#### 4. Change directories to the product directory on the CD.

```
$ cd /cdrom/solstice_sysmgt_2_3
```

- 5. Run the `admin_install` script in the product directory.**  
Help is available during the installation.

```
$ ./admin_install
```

The main installation window shown below appears.

```
Welcome to the Solstice Installation Program ...
```

```
To exit the installation process at any time, type 0  
and press the Return key.
```

1. Install AdminSuite 2.3 and AutoClient 2.1
2. Install SunSoft Print Client (Solaris 2.3 - 2.5.1 only)
3. Install Software Usage Monitoring Toolkit
4. Set up systems to use AdminSuite and AutoClient
5. Installation Help

```
Enter the number for one or more choices, separated by a space and  
then press the Return key.
```

```
[default: 1]>>>
```

- 6. Enter option number 1** - Install AdminSuite 2.3 and AutoClient 2.1.  
The AdminSuite Software Location window shown below appears.

```
AdminSuite Software Location

1. /opt

   Choose this option if you intend to support only one architecture
   of the software.

2. /export/opt

   Choose this option if you need to support multiple architectures
   and if you will set up other systems that will NFS mount AdminSuite.

3. Specify location

   Choose this option if you intend to set up other systems to NFS mount
   AdminSuite but you do not want to install the software in /export/opt.

4. Installation Help

Type 1, 2, 3, or 4 and press the Return key.

[default: 1]>>>
```

**7. Choose one of the following options that will install the software in the appropriate directory.**

**Option 1:** /opt

This installation directory is the recommended directory; with this option, only one architecture can be used with the software. Once this option has been chosen, the following Installation Summary window appears.

```
==== Installation Summary ====

Product(s):      AdminSuite/AutoClient
Install Directory: /opt
Host(s):         your_host_name

Start Installation
-----

Do you want to start the installation?
    1. Start installation
    2. Cancel installation

>>>
```

After confirming that the directory and host are correct, enter 1 to continue with the installation. You will see a scrolling list of the log activities. If the installation is successful, the following message will display in your installation window:

```
Successfully installed product: AdminSuite/AutoClient
```

**Option 2:** /export/opt

This option enables you to support multiple architectures and enables you to set up other systems that use NFS to mount AdminSuite. Once this option is chosen, you have to specify how clients will mount the AdminSuite software. The following window appears.

```
How will clients mount this software?
```

1. Systems will use the automounter

```
Choose this option if you will be configuring the automounter
for clients to access the software.
```

2. Systems will mount via /etc/vfstab file

```
Choose this option if you will be setting up clients to use
the /etc/vfstab to mount the software. A symlink will be made
on the file server in /opt to point to the installation directory.
```

3. Installation Help

```
Type 1, 2 or 3 and press the Return key.
```

```
[default: 1]>>>
```

**a. Choose the desired mount method.**

---

**Note** – If you choose Option 1: Systems will use the automounter, this option enables clients to access the AdminSuite software using the automounter mount method. If you choose this method, you will need to add entries indicating the location of the Solstice AdminSuite software to the automounter maps. Refer to Chapter 5, “Adding Solstice AutoClient 2.1 Support to the Automounter,” for information about how to configure your automounter maps.

A note appears reminding you that you will have to add entries to your automounter map indicating where AdminSuite is installed. Press the Return key to continue.

---

The following AdminSuite Supported Platforms window appears.

```
AdminSuite Supported Platforms

1. sparc

    Choose this option if you intend to manage systems based
    on the SPARC platform.

2. i386

    Choose this option if you intend to manage systems based
    on the Intel x86 or Pentium platform.

Enter one or more choices separated by a space and then press the
Return key.

[default: 1]>>>
```

**b. Choose the appropriate platform or platforms.**

An Installation Summary window appears that looks similar to the following window.

```
==== Installation Summary ====

Product(s):           AdminSuite/AutoClient
Install Directory:    /export/opt
Architecture(s)       sparc    i386
Mount method          Edit client vfstab or User configured automounter
Host(s):              your_host_name

Start Installation
-----

Do you want to start the installation?
1. Start installation
2. Cancel installation

>>>
```

**c. After confirming the information provided in the Installation Summary window, type 1 and press Return to continue with the installation.**

You will see a scrolling list of the log activities. If the installation is successful, the following message will display in your installation window:

```
Successfully installed product: AdminSuite/AutoClient
```

**Option 3:** Specify location

This option enables you to specify the location of the AutoClient software. If you chose this option, you must enter the path where you wish to have the AutoClient software installed.

---

**Note** – If you install additional software, you must use the location that you specified in this step.

---

**a. Enter the full pathname to the directory where you wish to install AutoClient and then Press Return.**

The following window appears.

```
How will clients mount this software?

1. Systems will use the automounter

    Choose this option if you will be configuring the automounter
    for clients to access the software.

2. Systems will mount via /etc/vfstab file

    Choose this option if you will be setting up clients to use
    the /etc/vfstab to mount the software. A symlink will be made
    on the file server in /opt to point to the installation directory.

3. Installation Help

Type 1, 2 or 3 and press the Return key.

[default: 1]>>>
```

**b. Choose the desired mount method.**

**Note** – If you choose option 1: Systems will use the automounter, this option enables clients to access the AutoClient software using the automounter mount method. If you choose this method, you will need to add entries indicating the location of the Solstice AutoClient software to the automounter maps. Refer to Chapter 5, “Adding Solstice AutoClient 2.1 Support to the Automounter,” for information about how to configure your automounter maps.

A note appears reminding you that you will have to add entries to your automounter map indicating where AdminSuite is installed. Press the Return key to continue.

The following AutoClient Supported Platforms window appears.

```
AdminSuite Supported Platforms
```

```
1. sparc
```

```
    Choose this option if you intend to manage systems based  
    on the SPARC platform.
```

```
2. i386
```

```
    Choose this option if you intend to manage systems based  
    on the Intel x86 or Pentium platform.
```

```
Enter one or more choices separated by a space and then press the  
Return key.
```

```
[default: 1]>>>
```

**c. Choose the appropriate platform or platforms.**

An Installation Summary window appears that looks similar to the following window.

```
==== Installation Summary ====

Product(s):           AdminSuite/AutoClient
Install Directory:    /export
Architecture(s)      sparc      i386
Mount method         Edit client vfstab or User configured automounter
Host(s):              your_host_name

Start Installation
-----

Do you want to start the installation?
  1. Start installation
  2. Cancel installation

>>>
```

**d. Verify the information provided in the Installation Summary window; type 1 and press Return to continue with the installation.**

You will see a scrolling list of the log activities. If the installation is successful, the following message will display in your installation window:

```
Successfully installed product: AdminSuite/AutoClient
```

**8. Update your shell search path to include the location of the Solstice AutoClient commands.**

If you use the C shell, type:

```
% set path = ( $path /opt/SUNWadm/bin )
% set MANPATH = ( $MANPATH /opt/SUNWadm/man )
```

To permanently affect these changes to your shell search path, edit your `.cshrc` or `.login` startup file.

---

If you use the Bourne or Korn shell, type:

```
$ PATH = $PATH:/opt/SUNWadm/bin  
$ MANPATH = $MANPATH:/opt/SUNWadm/man
```

To permanently affect these changes to your shell search path, edit your `.profile` startup file.

**9. Start the Solstice Launcher (which now contains the Solstice AutoClient application).**

```
$ /usr/bin/solstice &
```

## *Setting Up Systems to Use AutoClient*

If you wish to run AutoClient software on a system or wish to administer systems using AutoClient software, you must initially set these up. You can set up these systems using the installation script you used to install AutoClient. The following procedure describes how to set up these systems.

### ▼ How to Set Up Systems to Use AutoClient

#### 1. Insert the product CD into your CD-ROM drive.

If your system is not running Volume Management, you must mount the CD with the following commands before accessing it:

```
# mkdir /cdrom
# mount -F hsfs -o ro /dev/dsk/c0t6d0s0 /cdrom
```

#### 2. Log in as a member of the sysadmin group for that system (group 14).

---

**Note** – If you are running the installation script on a local system, you do not have to be a member of the sysadmin group; you can run the installation script as root.

---

#### 3. Verify that you are a member of the sysadmin group.

```
$ groups
```

If the sysadmin group is listed in the output, proceed to the next step. If not, follow the instructions in “Becoming a Member of the sysadmin Group” on page 19.

#### 4. Change directories to the product directory on the CD.

```
$ cd /cdrom/solstice_sysmgt_2_3
```

- 5. Run the `admin_install` script in the product directory.**  
Help is available during the installation.

```
$ ./admin_install
```

The main installation window shown below appears.

```
Welcome to the Solstice Installation Program ...

To exit the installation process at any time, type 0
and press the Return key.

  1. Install AdminSuite 2.3 and AutoClient 2.1
  2. Install SunSoft Print Client (Solaris 2.3 - 2.5.1 only)
  3. Install Software Usage Monitoring Toolkit
  4. Set up systems to use AdminSuite and AutoClient
  5. Installation Help

Enter the number for one or more choices, separated by a space and
then press the Return key.

[default: 1]>>>
```

**6. Select Option 4 - Set up systems to use AdminSuite and AutoClient.**  
The following menu appears.

```
Set up systems to use AdminSuite and AutoClient
```

```
1. Set up systems to run AdminSuite
```

```
Configure systems to NFS mount AdminSuite from a file server  
so that they can run the AdminSuite applications.
```

```
2. Set up systems to be managed
```

```
Configure systems to NFS mount AdminSuite from a file server  
so that they can be managed by the administration applications.
```

```
3. Installation Help
```

```
Type 1 or 2 and press the Return key.  
[default: 1]>>>
```

**7. Choose one of the following options that will either allow systems to run AdminSuite or be managed by AdminSuite.**

**Option 1:** Set up systems to run AdminSuite

This option enables you to specify the systems you wish to be able to run AdminSuite from the server. The following menu appears when you choose this option.

```
How should clients mount AdminSuite?
```

```
1. Software access will be via the automounter
```

```
Choose this option if you want to configure the  
automounter for systems to access the software.
```

```
2. Systems will mount via /etc/vfstab file
```

```
Choose this option to have this program update each  
systems /etc/vfstab file to access the software.
```

```
3. Installation Help
```

```
Type 1, 2 or 3 and press the Return key.
```

```
[default: 1]>>>
```

**a. Choose the method in which the clients will mount the AdminSuite software from the server.**

Option 1: Software access will be via the automounter

This option enables clients to access the AdminSuite software using the automounter mount method. If you choose this method, you will need to add entries indicating the location of the Solstice AdminSuite software to the automounter maps. Refer to Chapter 5, “Adding Solstice AutoClient 2.1 Support to the Automounter,” for information about how to configure your automounter maps.

A note appears reminding you that you will have to add entries to your automounter map indicating where AdminSuite is installed. Press the

Return key to continue.

Option 2: Systems will mount via `/etc/vfstab` file

This option enables clients to access the AdminSuite software using the `/etc/vfstab` file on the server where AdminSuite is installed. If you choose this method, the following window appears.

```
File Server Name
```

```
The File Server is the system already installed with AdminSuite software that systems will access.
```

```
Type the host name of the File Server and press the Return key.
```

```
>>>
```

Type the name of the file server that has AdminSuite installed and then press the Return key.

- b. The Systems for Installation menu is now in your window (see the following menu); enter the systems you wish to be able to remotely run AdminSuite.**

```
Systems for Installation

Type the host names of the systems for installation.
List hosts separated by a single space (for example, hosta hostb hostc)
and press the Return key.
You can also specify the path to a file that contains a list of host
names (for example, /path/to/file).

[default: your_host_name]>>>
```

An Installation Summary screen appears.

```
==== Installation Summary ====

Product(s):          Set up systems to run AdminSuite
Host(s):             lorna

Start Installation
-----

Do you want to start the installation?
    1. Start installation
    2. Cancel installation

>>>
```

**c. Verify the information on the screen and, if it is correct, enter 1 to start the installation.**

**Option 2:** Set up systems to be managed

This option enables you to specify the systems you wish to be able to manage using AdminSuite. The following menu appears when you choose this option.

```
How should clients mount AdminSuite?
```

```
1. Software access will be via the automounter
```

```
Choose this option if you want to configure the automounter for systems to access the software.
```

```
2. Systems will mount via /etc/vfstab file
```

```
Choose this option to have this program update each systems /etc/vfstab file to access the software.
```

```
3. Installation Help
```

```
Type 1, 2 or 3 and press the Return key.
```

```
[default: 1]>>>
```

**a. Choose the method in which the clients will mount the AdminSuite software from the server.**

Option 1: Software access will be via the automounter

This option enables clients to access the AdminSuite software using the automounter mount method. If you choose this method, you will need to add entries indicating the location of the Solstice AdminSuite software to the automounter maps. Refer to Chapter 5, “Adding Solstice AutoClient 2.1 Support to the Automounter,” for information about how to configure your automounter maps.

A note appears reminding you that you will have to add entries to your automounter map indicating where AdminSuite is installed. Press the

Return key to continue.

Option 2: Systems will mount via `/etc/vfstab` file

This option enables clients to access the AdminSuite software using the `/etc/vfstab` file on the server where AdminSuite is installed. If you choose this method, the following window appears.

```
File Server Name
```

```
The File Server is the system already installed with AdminSuite  
software that systems will access.
```

```
Type the host name of the File Server and press the Return key.
```

```
>>>
```

Type the name of the file server that has AdminSuite installed and then press the Return key.

**b. The Systems for Installation menu is now in your window (see the following menu); enter the systems you wish to be able to remotely run AdminSuite.**

```
Systems for Installation

Type the host names of the systems for installation.
List hosts separated by a single space (for example, hosta hostb hostc)
and press the Return key.
You can also specify the path to a file that contains a list of host
names (for example, /path/to/file).

[default: your_host_name]>>>
```

An Installation Summary screen appears.

```
==== Installation Summary ====

Product(s):          Set up systems to run AdminSuite
Host(s):             lorna

Start Installation
-----

Do you want to start the installation?
  1. Start installation
  2. Cancel installation

>>>
```

**c. Verify the information on the screen and, if it is correct, enter 1 to start the installation.**

## Troubleshooting

This section describes problems that you may encounter when you use the Solstice AutoClient product. If you run into any of these problems, follow the advice that is provided.

### *Running the admin\_install Script*

- If the `admin_install` script hangs, try re-running the script after waiting a few minutes. If the script continues to hang, try running it using another UID in the `sysadmin` group. If this fails, try adding yourself to the `sysadmin` entry in the `/etc/group` file on the system you wish to install.
- If the `admin_install` script (running on system installed with Solaris 2.3 or 2.4 release) hangs after the following message is displayed:

```
Installing Solstice enabling packages ...
```

You can recover by becoming `root` and using the following commands.

```
# /usr/lib/nfs/mountd
# umount /usr/snadm/classes/tmp_system.2.1
```

### *Launching Solstice AutoClient*

- If you logged in as `root` and used the `su` command to become a member of group 14, the Solstice AutoClient software may reject your requests. Log in as a user who is a member of group 14 rather than as `root`.
- If you attempt to launch the Solstice AutoClient software on a station manager using the `solstice` command and receive the following error message:

```
Solstice Registry Error [-14]: unable to locate registry
```

There are two possible conditions that can cause this error to arise.

- The administration system was not installed with the software supporting its native platform. Reinstall the Solstice AutoClient 2.1 software using the `admin_install` script, and add the software for the administration system's platform (for example, SPARC or x86).
- The administration system was inadvertently installed using the automounter managed host mount method, when the `/etc/vfstab` file option should have been selected. Create the following links:

```
# ln -s /basedir/platform/SUNWadm /opt/SUNWadm
# ln -s /basedir/all/SUNWadmd /opt/SUNWadmd
```

In these commands,

<i>basedir</i>	Is the directory where the software is installed.
<i>platform</i>	Is the station manager platform (either <code>sparc</code> or <code>i386</code> ).

# Licensing Solstice AutoClient 2.1

---



This chapter contains these topics:

<i>Licensing Overview</i>	<i>page 45</i>
<i>How to Select the License Server(s)</i>	<i>page 50</i>
<i>How to Gather Information for Your License</i>	<i>page 51</i>
<i>Installing Your License Software and Enabling Your Licenses</i>	<i>page 52</i>
<i>Getting Help</i>	<i>page 55</i>

## *Licensing Overview*

When you add an AutoClient system to a server using Host Manager, a license, if one is available, is automatically checked out by the server. Solstice AutoClient 2.1 uses the latest Globetrotter FLEXlm™ licensing packages to make licensing as easy as possible.

---

**Note** – Solstice AutoClient 2.1 licensing does *not* deny service. An AutoClient system can function without licensing.

---

## *Solstice AutoClient 2.1 License Components*

Solstice AutoClient 2.1 product licensing entails the following system components.

- **AutoClient server (OS server)**

A license request is generated by the AutoClient server in the following cases:

- When an AutoClient system is added to the AutoClient server
- When the AutoClient server is booted

The AutoClient server requests a license for each AutoClient system it is configured to support. It obtains this information from the `bootparams` database.

- **License server**

The license server receives the request to provide a license for an AutoClient system from the AutoClient server, and it grants or denies this request.

Figure 4-1 describes the events that cause the AutoClient server to request a license.

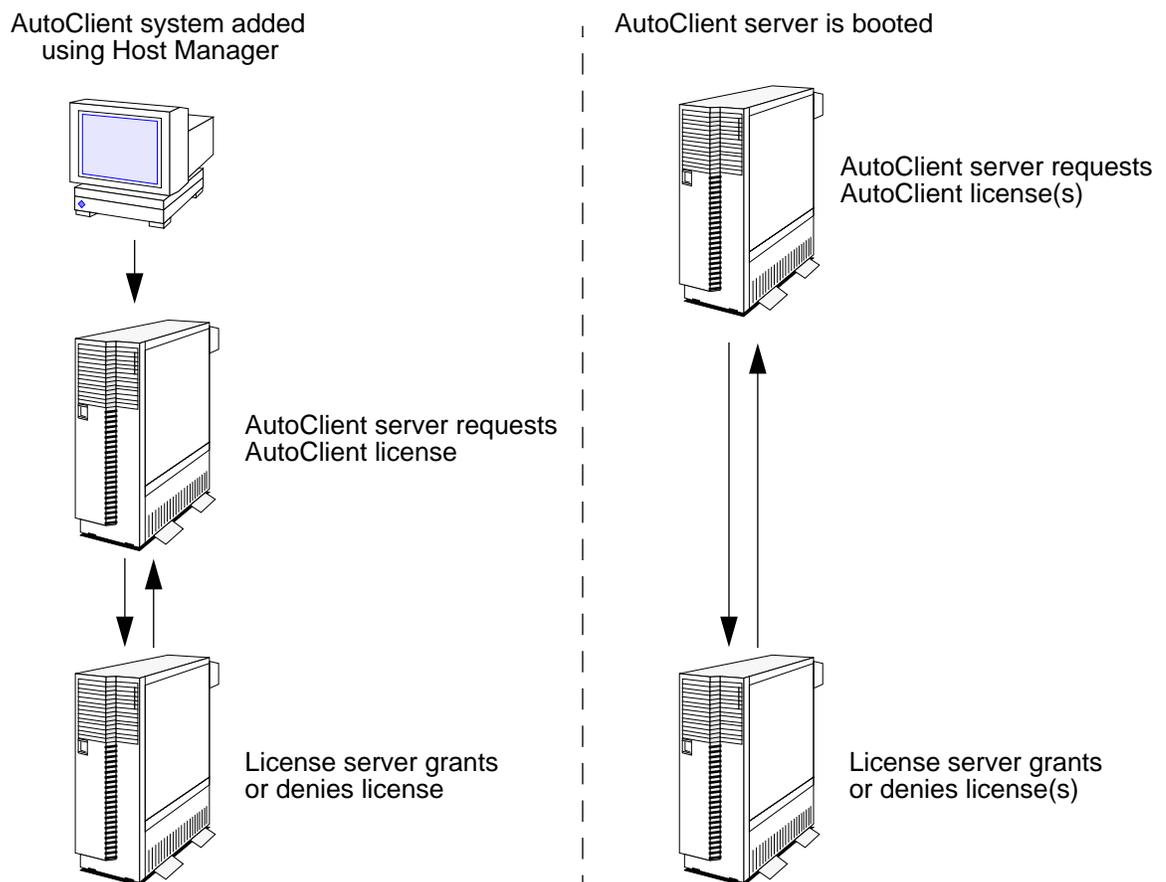


Figure 4-1 The Solstice AutoClient 2.1 License Process

If the AutoClient server is not configured to contact the license server and request a license, a message similar to the following is displayed.

```
Dec 22 13:34:53 server-name License Error : Cannot find license file
(/usr/local/flexlm/licenses/license.dat)
Dec 22 13:34:53 server-name which contains the feature solstice.autoclient.
Dec 22 13:34:53 server-name Cannot find license file (-1,73:2) No such file or directory
Dec 22 13:34:53 server-name ac_licensed[194]: [uid=0]
Dec 22 13:34:53 server-name The product has not been installed properly.
Dec 22 13:34:54 server-name Cannot find license file (-1,73:2) No such file or directory
Dec 22 13:34:53 server-name ac_licensed[194]: [uid=0] There are no license files in
following path :
Dec 22 13:34:54 server-name /opt/SUNWadm/license_dir/sunpro.lic,1
Dec 22 13:34:54 server-name Cannot find license file (-1,73:2) No such file or directory
Dec 22 13:34:53 server-name ac_licensed[194]: [uid=0] license refused for client-name
```

This message is also written to the message file stored in the `/var/adm` directory on the AutoClient server.

Since the Solstice AutoClient 2.1 product does not deny service if a license is unavailable, the functionality provided by the AutoClient server to the AutoClient systems it supports is unaffected.

## *AutoClient Server License Configuration*

Host Manager automatically installs the AutoClient server with the supporting software required by the license process described in Figure 4-1. This occurs when an AutoClient system is first added to the server.

Licensing is managed on the AutoClient server by the following software components.

- **License Daemon** - `ac_licensed`

This is the Solstice AutoClient 2.1 license daemon. It is located in the `/usr/opt/SUNWadm` directory, and it is started automatically at boot time by the `S86ac_licensed` script, or it can be started by Host Manager when an AutoClient system is first added to the server.

- **License Script** – `S86ac_licensed`

This is the Solstice AutoClient 2.1 license daemon startup script. It is located in the `/etc/rc2.d` directory. It runs automatically when the AutoClient server is rebooted, and it can also be executed manually with the `start` or `stop` option to manage the Solstice AutoClient 2.1 license daemon.

- **License File** – `sunpro.lic,1`

This is the Solstice AutoClient 2.1 license file (also known as the elementary license file) used to store information about the license server. It is created during the license server installation process described in Table 4-1, and it is stored on the station manager system that is installed with the Solstice AutoClient 2.1 software.

When the Solstice AutoClient 2.1 license daemon startup script runs, it looks for this file in the `/opt/SUNWadm/license_dir` directory. The first time the file is found, the script creates a local copy in the `/usr/opt/SUNWadm` directory and reads the license information stored in the file.

If the license file subsequently becomes unavailable in the `/opt/SUNWadm/license_dir` directory, the license daemon startup script attempts to read the local copy in the `/usr/opt/SUNWadm` directory.

If the license file is unavailable in either directory, an error message is displayed.

---

**Note** – If you remove or unmount the `/opt/SUNWadm/license_dir` directory, the Solstice AutoClient 2.1 license file will be unavailable. Verify that a backup copy of this file (`sunpro.lic,1`) is located in the `/usr/opt/SUNWadm` directory. Otherwise, AutoClient server license requests will fail.

---

## License Server Configuration

Table 4-1 shows tasks you perform to set up the license server.

Table 4-1 Task Map: Setting Up The License Server

Activity	Description	For Instructions, Go To
<b>Selecting the License Server(s)</b>	Determine which system(s) are best suited to run the license management software.	▼ How to Select the License Server(s) page 50
<b>Gathering License Information</b>	Obtain the information from the license management server(s) and the software license certificate needed to contact the License Distribution Center.	▼ How to Gather Information for Your License page 51
<b>Installing the License Software and Setting Up Your License</b>	Run the license installation program to install and enable your software license on your license management server(s).	▼ How to Install and Enable the License Software Using a License File page 52

### ▼ How to Select the License Server(s)

If you are installing the product and the license on the same server, you can skip this section, and go to “How to Gather Information for Your License” on page 51.

Before you can get the license passwords for your Solstice AutoClient 2.1 product, you must select the machines you will use as a license servers. Select the most stable machines to serve as license servers. Do not select a machine that is frequently shut down and rebooted.

With the FLEXlm license management software, you can use any of the following types of server configurations:

- **Single independent server** – All product licenses are handled by a single server.
- **Multiple independent servers** – Each server acts separately to administer a subset of the product licenses.
- **Three redundant license servers** – A collection of servers, effectively acting as one server, jointly administering a set of product licenses.

The default is a single server. This is the easiest to install and the most widely used configuration. Your license servers can administer licenses for multiple products.

## ▼ How to Gather Information for Your License

Before you contact the License Distribution Center to get your password, gather the following information:

### 1. Locate the serial number on your Solstice AutoClient 2.1 license certificate.

A sample serial number is listed in the licensing information below.

```
Product Name:      Solstice AutoClient
Version:           2.1
Rights to Use:     10
Serial Number:     1213 6212 2013 0418
```

### 2. To display the SunOS release number, host information, and additional information you need when you get your license, type:

```
% showrev
```

Your screen shows information similar to the following:

```
Hostname: notalone
Hostid:   530110ab
Release:  5.5
Kernel architecture: i86pc
Application architecture: i386
Hardware provider:   Sun_Microsystems
Domain:   XYZ.DIV.Company.COM
Kernel version:   SunOS 5.5 Generic. May 1995
```

## *Installing Your License Software and Enabling Your Licenses*

A single script, `lic_install`, installs your license software and starts the license install tool (`lit`) which is used to enable your licenses. If you have more than one license server, you must use the following procedure on each license server.

### *Prerequisites*

This procedure assumes the following conditions are true:

- Solstice AutoClient 2.1 software is installed.
- The Solstice AutoClient 2.1 CD is accessible by the license server.
- The email returned from the Sun license center, if you chose this method to contact the license distribution center, has been saved to a file.

### ▼ **How to Install and Enable the License Software Using a License File**

If you received the license information by email, follow these steps:

- 1. Log in as root on the system that will be the license server.**
- 2. Run the `lic_install` script in the top-level product CD directory.**

```
# ./lic_install
```

- 3. Select License Server Installation to install the license server packages.**  
Answer yes to any `pkgadd` questions.
- 4. After the license server packages are installed, select Product License Setup to set up the individual product licenses.**
- 5. Select the OpenWindows Graphical User Interface to run the Product License Tool.**
- 6. When the License Installation Tool window is displayed, select Solstice AutoClient 2.1 from the Products menu.**

7. **Click on Select License From File button and supply the path name to the (saved email) license file in the space provided.**  
A pop-up window displays the product to be licensed.
8. **Click on Continue to continue installing the license.**
9. **Click on OK in the confirmation window that appears.**
10. **Click on the Exit-Install Licences button to the install the license and exit the tool.**
11. **Click on the Quit button in the pop-up window.**  
A pop-up window that confirms that the product is successfully licensed is displayed.
12. **Follow the instructions displayed by the `lic_install` script to create the elementary license file on the AutoClient product servers.**  
The AutoClient product servers are the station manager systems installed with the Solstice AutoClient 2.1 software on the local filesystem. Copy the `/etc/opt/licenses/LIC_CONFIG_SCRIPT` to each product server and execute it to create the elementary license file.

#### ▼ How to Install and Enable the License Software Without a License File

If you received the license information in a fax or over the phone, follow these steps:

1. **Log in as root on the system that will be the license server.**
2. **Run the `lic_install` script in the top-level product CD directory.**

```
# ./lic_install
```

3. **Select License Server Installation to install the license server packages.**  
Answer yes to any `pkgadd` questions.
4. **After the license server packages are installed, select Product License Setup to set up the individual product licenses.**
5. **Select the OpenWindows Graphical User Interface to run the Product License Tool.**

- 6. When the License Installation Tool window is displayed, select Solstice AutoClient 2.1 from the Products menu.**
- 7. Enter the information requested.**  
Use the license information you received from the license distribution center.
- 8. Verify that the Data and Password Checksum fields match the information you received from the license distribution center.**
- 9. Select Done With License.**
- 10. Click on the Exit-Install Licences button to the install the licenses and exit the tool.**
- 11. Click on the Quit button in the pop-up window.**  
A pop-up window that confirms that the products are successfully licensed is displayed.
- 12. Follow the instructions displayed by the `lic_install` script to create the elementary license file on the AutoClient product servers.**  
The AutoClient product servers are the station manager systems installed with the Solstice AutoClient 2.1 software on the local filesystem. Copy the `/etc/opt/licenses/LIC_CONFIG_SCRIPT` to each product server and execute it to create the elementary license file.

### *Verifying That Licensing Was Set Up Correctly*

After installing and configuring the licensing software, try adding an AutoClient system and see if license error messages are displayed. If they are, licensing was not set up correctly. Look for errors (for example, encryption errors) in the start-up file `/tmp/license_log`.

---

## *Getting Help*

If you have problems installing or using the license system, call your authorized service provider. Have the following information ready:

- Model number of the machine
- Serial number of the machine
- SunOS release number (for example, SunOS 5.5)
- Release number of the software product (for example, Solstice AutoClient 2.1)
- Product serial number (on the license certificate)
- Host name and host id of the license server
- Copy of the `licenses_combined` file
- Copy of the license that you received
- Copy of the `/tmp/license_log` file

To obtain the SunOS release number, host information, and additional host information, see Step 2 in “How to Gather Information for Your License.”



# *Adding Solstice AutoClient 2.1 Support to the Automounter*



This chapter contains these topics:

<i>Automounting Overview</i>	<i>page 57</i>
<i>How to Add Automount Support by Using NIS+</i>	<i>page 58</i>
<i>How to Add Automount Support by Using NIS</i>	<i>page 61</i>
<i>How to Add Automount Support by Using Local /etc Files</i>	<i>page 65</i>

## *Automounting Overview*

The Solstice AutoClient `admin_install` installation script enables you to install administration systems and distributed administration systems using the automounter mount method for software access.

If you selected the automounter mount method, you must add entries indicating the location of the Solstice AutoClient software to the automounter maps. The procedures for updating the maps are described in this section for each name service type. Perform these steps only after using the installation script to install the AdminSuite and AutoClient software.

## ▼ How to Add Automount Support by Using NIS+

### 1. Log in to the NIS+ domain as an authorized user.

You must have read and write access to the tables in the NIS+ `org_dir` directory.

### 2. Ensure that the `auto_master` table includes an entry for the `auto_direct` automount map.

```
$ niscat auto_master.org_dir
/net      -hosts  -nosuid
/home     auto_home
/-        auto_direct
```

If the `auto_direct` entry appears in the output, proceed to Step 4. If the entry does not appear, go to the next step.

### 3. Add the `auto_direct` entry to the `auto_master` table.

```
$ nistbladm -a key=/- value=auto_direct auto_master.org_dir
```

Verify that the entry has been added to the table.

```
$ niscat auto_master.org_dir
/net      -hosts  -nosuid
/home     auto_home
/-        auto_direct
```

### 4. Ensure that the `auto_direct` table exists.

```
$ nisls auto_direct.org_dir
auto_direct.org_dir.your-domain.
```

If the `auto_direct` table appears in the output, proceed to Step 6. If the table does not appear, go to the next step.

### 5. Create the `auto_direct` table.

```
$ nistbladm -D access=og=rmcd,w=r,n= -c automount_map key=S,\
nogw= value=,nogw= auto_direct.org_dir.`nisdefaults -d`
```

Verify that the table has been created.

```
$ nisl auto_direct.org_dir
auto_direct.org_dir.your-domain.
```

Proceed to Step 7.

### 6. Look for a pre-existing Solstice AutoClient entry.

A table entry supporting an earlier version of the Solstice AutoClient software may be present.

```
$ niscat auto_direct.org_dir | grep SUNWadm
```

If an entry similar to the following appears, proceed to Step 8.

```
/opt/SUNWadm server-name: /install-dir/$CPU/SUNWadm
```

In this example,

<i>server-name</i>	Is the Solstice administration system host name.
<i>install-dir</i>	Is the path to the Solstice AutoClient 2.1 software location (usually <code>/export/opt</code> ).

If the entry does not appear, go to the next step.

### 7. Add the entry designating the location of the Solstice AutoClient 2.1 software.

**Note** – If you chose an installation location other than the `/export/opt` directory, be sure to indicate the correct path in this command.

---

```
$ nistbladm -a key=/opt/SUNWadm \  
value=server-name:/export/opt/\$CPU/SUNWadm \  
auto_direct.org_dir.'nisdefaults -d'
```

In this command,

*server-name* Is the Solstice administration system host name.

Verify that the entry has been added to the table.

```
$ niscat auto_direct.org_dir  
/opt/SUNWadm server-name: /export/opt/$CPU/SUNWadm
```

#### 8. Add the entry designating the location of the Solstice AutoClient 2.1 data area.

**Note** – If you chose an installation location other than the `/export/opt` directory, be sure to indicate the correct path in this command.

---

```
$ nistbladm -a key=/opt/SUNWadmd \  
value=server-name:/export/opt/all/SUNWadmd \  
auto_direct.org_dir.'nisdefaults -d'
```

In this command,

*server-name* Is the Solstice administration system host name.

Verify that the entry has been added to the table.

```
$ niscat auto_direct.org_dir  
/opt/SUNWadm server-name: /export/opt/$CPU/SUNWadm  
/opt/SUNWadmd server-name: /export/opt/all/SUNWadmd
```

- 9. Log in as root to all Solstice administration systems in the NIS+ name service domain and run the `automount` command.**

```
# /usr/sbin/automount
```

Running this command enables the system to use the new (or updated) automount table.

## ▼ How to Add Automount Support by Using NIS

- 1. Log in as root to the NIS master for your name service domain.**
- 2. Ensure that the `auto.master` map has an entry for the `auto_direct` automount map.**

```
# ypcat -k auto.master
/net      -hosts  -nosuid
/home     auto_home
/-        auto_direct
```

If the `auto_direct` entry appears in the output, proceed to Step 4. If the entry does not appear, go to the next step.

- 3. Add the `auto_direct` entry to the `auto.master` map.**
  - a. Edit the `/etc/auto.master` file and add the following entry.**

```
/-        auto_direct
```

- b. Rebuild the NIS map.**

This make take several minutes.

```
# cd /var/yp;make auto.master
```

Verify that the entry has been added.

```
# ypcat -k auto.master
/net      -hosts  -nosuid
/home     auto_home
/-        auto_direct
```

**4. Ensure that the `auto_direct` map exists.**

```
# ypcat -k auto_direct
```

If the map is found, proceed to Step 8. If the map is not found, go to the next step.

**5. Insert the Solstice AutoClient 2.1 CD into your CD-ROM drive.**

This step assumes that your system is running Volume Management.

**6. Copy the makefile excerpt to the directory where the NIS maps are stored.**

```
# cp /cdrom/solstice_sysmgt_2_3/Examples/Makefile.direct
/var/yp
```

---

**Note** – If the NIS maps are stored in a location other than the `/var/yp` directory, be sure to indicate the correct path in this command.

---

**7. Create the `/etc/auto_direct` file.**

```
# touch /etc/auto_direct
```

Proceed to Step 9.

**8. Look for a pre-existing Solstice AutoClient entry.**

A table entry supporting an earlier version of the Solstice AutoClient software may be present.

```
# ypcat -k auto_direct | grep SUNwadm
```

If an entry similar to the following appears, proceed to Step 10.

```
/opt/SUNWadm server-name: /install-dir/$CPU/SUNWadm
```

In this example,

*server-name* Is the Solstice administration system host name.

*install-dir* Is the path to the Solstice AutoClient 2.1 software location (usually /export/opt).

If the entry does not appear, go to the next step.

**9. Edit the /etc/auto\_direct file, adding the entry designating the location of the Solstice AutoClient 2.1 software.**

---

**Note** – If you chose an installation location other than the /export/opt directory, be sure to indicate the correct path in this entry.

---

```
/opt/SUNWadm server-name: /export/opt/$CPU/SUNWadm
```

In this entry,

*server-name* Is the Solstice administration system host name.

**10. Edit the /etc/auto\_direct file, adding the entry designating the location of the Solstice AutoClient 2.1 data area.**

---

**Note** – If you chose an installation location other than the /export/opt directory, be sure to indicate the correct path in this command.

---

```
/opt/SUNWadmd server-name: /export/opt/all/SUNWadmd
```

In this command,

*server-name* Is the Solstice administration system host name.

**11. Specify how to process the files.**

Choose one of the following commands, based on whether the `auto_direct` map is available.

- If the `auto_direct` map was found in Step 4, rebuild the NIS map using this command.

```
# cd /var/yp; make auto_direct
```

- If the `auto_direct` map was not found in Step 4, rebuild the NIS map using this command.

```
# make -f /var/yp/makefile -f /var/yp/Makefile.direct \
auto_direct
```

---

**Note** – If the NIS maps are stored in a location other than the `/var/yp` directory, be sure to indicate the correct path in this command.

---

Verify that the entries have been added.

```
# ypcat -k auto_direct
/opt/SUNWadm server-name:/export/opt/$(CPU)/SUNWadm
/opt/SUNWadmd server-name:/export/opt/all/SUNWadmd
```

**12. Log in as root to all Solstice administration systems in the NIS name service and run the `automount` command.**

```
# /usr/sbin/automount
```

Running this command enables the system to use the new (or updated) automount map.

## ▼ How to Add Automount Support by Using Local /etc Files

Perform these steps for each system on which you want to use the Solstice AutoClient 2.1 software.

1. **Log in to the Solstice administration system or managed client as root.**
2. **Ensure that the `auto_direct` entry exists in the `/etc/auto_master` file.** A sample `auto_master` file with the `auto_direct` entry is displayed below.

```
# cat /etc/auto_master
# Master map for automounter
#
/net          -hosts          -nosuid
/home         auto_home
/-           auto_direct
```

If the `auto_direct` entry appears in the output, proceed to Step 4. If the entry does not appear, go to the next step.

3. **Edit the `/etc/auto_master` file, adding the `auto_direct` entry.**

```
/-           auto_direct
```

4. **Ensure that the `/etc/auto_direct` file exists.**

```
# ls /etc/auto_direct
```

If the file is found, proceed to Step 6. If the file is not found, go to the next step.

5. **Create the `/etc/auto_direct` file.**

```
# touch /etc/auto_direct
```

Proceed to step Step 7.

**6. Look for a pre-existing Solstice AutoClient entry.**

A table entry supporting an earlier version of the Solstice AdminSuite software may be present.

```
$ cat /etc/auto_direct | grep SUNWadm
```

If an entry similar to the following appears, proceed to Step 8.

```
/opt/SUNWadm server-name: /install-dir/$CPU/SUNWadm
```

In this example,

<i>server-name</i>	Is the Solstice administration system host name.
<i>install-dir</i>	Is the path to the Solstice AutoClient 2.1 software location (usually <code>/export/opt</code> ).

If the entry does not appear, go to the next step.

**7. Edit the `/etc/auto_direct` file, adding the entry designating location of the Solstice AutoClient 2.1 software.**

---

**Note** – If you chose an installation location other than the `/export/opt` directory, be sure to indicate the correct path in this entry.

---

```
/opt/SUNWadm server-name: /export/opt/$CPU/SUNWadm
```

In this entry,

<i>server-name</i>	Is the Solstice administration system host name.
--------------------	--

**8. Edit the `/etc/auto_direct` file, adding the entry designating the location of the Solstice AutoClient 2.1 data area.**

---

**Note** – If you chose an installation location other than the `/export/opt` directory, be sure to indicate the correct path in this command.

---

```
/opt/SUNWadmd server-name: /export/opt/all/SUNWadmd
```

In this command,

*server-name*                      Is the Solstice administration system host name.

**9. Run the automount command.**

Running this command enables the system to use the new automount map.

```
# /usr/sbin/automount
```

