Sun™ Control Station 2.2 Software Installation Guide

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Installing the Sun Control Station 2.2 Software

This manual provides the information you need to install the Sun™ Control Station 2.2 software on a dedicated server and prepare each host that you want to manage.

Tasks covered in this manual include:

- "How to Install the Sun Control Station 2.2 Software" on page 9
- "How to Prepare a Host for Management" on page 11
- "How to Add Managed Hosts" on page 12
- "How to Upgrade a Managed Host From V2.0 or V2.1" on page 12
- "How to Access the Sun Control Station User Interface" on page 13
- "How to Uninstall the Sun Control Station 2.2 Software" on page 15
- "How to Access User Documentation" on page 16
- "How to Troubleshoot the Software Installation" on page 16

Background information covered in this manual includes:

- "About Installing the Sun Control Station Software" on page 2
- "Sun Control Station 2.2 Installation Tasks" on page 3
- "Installation Requirements" on page 3
- "Web Browsers" on page 7
- "Support Matrix" on page 8

Note – For known issues, refer to the *Sun Control Station 2.2 Release Notes* included with the Sun Control Station 2.2 software.

About Installing the Sun Control Station Software

The Sun Control Station 2.2 software package consists of two components, a core framework that is the engine for executing control modules and the following control modules: AllStart, Health Monitoring, Inventory, Lights Out Management (LOM) and Software Installer.

Install the Sun Control Station 2.2 software package on a server dedicated solely to running the software and storing package files. This dedicated server is referred to as the *Control Station.*

Note – You can safely run the Sun Java™ Desktop System Configuration Manager software on the same server as the Sun Control Station 2.2 software.

The Sun Control Station 2.2 software is distributed on CD-ROM so that you can install on a server that has a CD-ROM drive. The Sun Control Station 2.2 software is also .available to download from the Sun Download Center (SDLC).

The Sun Control Station 2.2 software makes modifications to certain areas of your operating system that can affect other programs that are running on the server. If you uninstall the software, certain programs and directories are deleted.

The Sun Control Station 2.2 software makes the following modifications to the OS:

- Installs Java™ Development Kit 1.4.2
- Installs `tomcat4` and uses that version
- Creates a `tomcat4` user and group
- Takes over the web server
- Inserts several `cron` jobs
- Sets up PostgreSQL
- Adds several `logrotate` files in `/var`

Sun Control Station 2.2 Installation Tasks

Table 1 is an overview of the tasks required to install the Sun Control Station 2.2 software on a dedicated server and set up hosts to be managed. Complete each task in the order listed.

TABLE 1 Sun Control Station 2.2 Software Installation Tasks

	Task	For instructions
1	Install the Sun Control Station 2.2 software on a dedicated server.	See "How to Install the Sun Control Station 2.2 Software" on page 9.
2	Run the `hostinstall.pl` script on each host to be managed.	See "How to Prepare a Host for Management" on page 11.
3	Add each managed host to the Control Station software.	See "How to Add Managed Hosts" on page 12.

Installation Requirements

This section lists the software and hardware requirements for the Sun Control Station server.

Software Requirements for the Control Station

TABLE 2 Control Station Server Software Requirements

Software Requirement	Description
Operating Systems	Sun Control Station 2.2 software has been tested on the following operating systems: • Red Hat EL 2.1 ES/AS on x86 • Red Hat EL 3 AS on x86 and x86_64 • Red Hat ES on x86 • Red Hat 8.0 on x86 • SuSe Linux 9.0 on x86 and x86_64
IP Address	The server on which you install the Sun Control Station software must have a static IP address.
Required Packages	The following packages must be installed on the server before you install the Sun Control Station 2.2 software: • Apache `httpd` 1.3 or 2.0.x • Perl 5.6 or later including CGI, DBD-Pg, DBI, and Digest components • PostgreSQL 7.2.x or later including `postgresql, postgresql-libs,` and `postgresql-server` components For Allstart: • `anaconda-runtime`-7.2-1 • `dhcp` (Version 3 or later) • `nfs-utils-0.3.3-3` • `tftp-server-0.17-14`

Note – The software installation program verifies that the packages listed in TABLE 2 are present. If any one of these packages is not found, the software installation program exits.

Hardware Requirements for the Control Station

TABLE 3 Control Station Server Hardware Requirements

Hardware Requirement	Description
Dedicated server	Install the Sun Control Station 2.2 software on a dedicated server (Control Station).
Recommended Configuration	Recommended configuration for the server running the Sun Control Station 2.2 software: • 1 GHz or higher x86 processor • 1 GB of RAM • Two 80-GB hard disk drives (HDDs), in a RAID-1 (mirroring) setup • At least 1 GB of free disk space in the root directory (/) • At least 1 GB of free disk space in the directory `/var` To create custom partitions on your HDD, create the directories `/scs` and `/var/tomcat`, and allocate as much space as possible to these two directories.
Minimum Configuration	Minimum configuration for the server running the Sun Control Station 2.2 software: • 600MHz x86 processor • 512 MB of RAM • One 40-GB hard disk drive • At least 1 GB of free disk space in the root directory • At least 250 MB of free disk space in the directory `/var`

Port Usage

A number of ports on the Control Station and on the managed hosts must be free for the Sun Control Station 2.2 software to use. The following table gives the details.

TABLE 4 .Control Station and Managed Host Port Usage

Port	Protocol	Used By	Notes
22	TCP	SSH	• Port must be open on the Control Station for *outgoing* connections. • Port must be open on the managed host for *incoming* connections.
68	UDP	DHCP	• Port must be open on the Control Station for *incoming* connections.
69	UDP	TFTP	• Port must be open on the Control Station for *incoming* connections.
80	TCP	HTTP (Apache)	• Port must be open on the Control Station for *incoming* connections. • Port must be open on the managed host for *outgoing* connections.
623	UDP	IPMI	• Port must be open on the Control Station for *outgoing* connections. • Port must be open on the managed host for *incoming* connections.
5434	TCP	PostgreSQL	• Port must be available on the Control Station.
8027	TCP	tomcat4	• Port must be available on the Control Station. Used for shutting down the browser-based user interface.
8080	TCP	tomcat4	• Port must be open on the Control Station for *incoming* connections. Used for the browser-based user interface.
8443	TCP	HTTPS (tomcat4)	• Port must be open on the Control Station for *incoming* connections. Used for an SSL connection to the user interface.

Web Browsers

To manage the Sun Control Station from the browser-based user interface (UI), you must enable cookies, cascading style sheets and JavaScript™ software on your browser (these features are normally enabled by default).

Tested Browsers

The Sun Control Station 2.2 software has been tested on the following combinations of Web browsers and platforms.

Linux (Red Hat 7.3, Red Hat Enterprise Linux 2.1 ES)

- Browser: Mozilla™ 1.2.1

Microsoft Windows (NT 4.0)

- Browser: Internet Explorer 6.0

Solaris™ Operating System (8.0 and 9.0)

- Browser: Netscape™ 7.0

Compatible Browsers

The Sun Control Station 2.2 software should function properly on the following browsers:

- All platforms: Netscape 7.0; Mozilla 1.0.1 and higher, Red Hat Enterprise Linux 3.0 ES, Mozilla Firefox 1.0
- Microsoft Windows 98/NT/2000: Internet Explorer 6.0
- Mac OS X: Internet Explorer 5.2; Safari 1.0 (v85); Camino 0.7; Mozilla 1.3.1

Released product versions of the browsers are usually more reliable than beta versions, and later versions typically work the most reliably. A browser program failure does not adversely affect your data on a Sun Control Station.

Note – Netscape 4.7x is not supported.

Support Matrix

The core SCS software and its different modules can be run on different platforms and support different operating environments. This section details the support provided by the various parts of SCS software.

Control Station Server	
Red Hat	EL 2.1 ES/AS on x86 EL 3 AS on x86 and x86_64 EL 3 ES on x86 8.0 on x86
SuSE	SuSE linux 9.0 on x86 and x86_64
Client Core, including the Health Monitoring and Inventory modules	
Solaris	Solaris 9 on sparc and x86
Red Hat	7.3, 8.0, 9 on x86 EL 2.1 WS/AS/ES on x86 EL 3 WS/AS on x86 and x86_64 EL 3 ES on x86
SuSE	SuSE linux 9.0 on x86 and x86_64
JDS	Java Desktop System Release 1/2 on x86
Software Installer module	
Red Hat	7.3, 8.0, 9 on x86 EL 2.1 WS/AS/ES on x86 EL 3 WS/AS on x86 and x86_64 EL 3 ES on x86
SuSE	SuSE linux 9.0 on x86 and x86_64
JDS	Java Desktop System Release 1/2 on x86
AllStart module	
Solaris	Solaris 9 on x86
Red Hat	7.3, 8.0, 9 on x86 EL 2.1 WS/AS/ES on x86 EL 3 WS/AS on x86 and x86_64 EL 3 ES on x86
SuSE	SuSE Linux Professional 8.2 on x86 SuSE Linux Professional 9.0, 9.1 on x86 and x86_64

JDS	Java Desktop System Release 2 on x86
LOM module	
Red Hat	7.3, 8.0, 9 on x86 EL 2.1 WS/AS/ES on x86 EL 3 WS/AS on x86 and x86_64 EL 3 ES on x86
SuSE	SuSE linux 9.0 on x86 and x86_64

How to Install the Sun Control Station 2.2 Software

Choose an installation method:

- Install the Sun Control Station 2.2 software from CD-ROM.
- Download SCS2.2 software from the Sun Download Center. See the *Sun Control Station 2.2 Release Notes* for instructions.

To install the SCS2.2 software from CD-ROM

1. **Choose a dedicated server for the Sun Control Station 2.2 software.**

   Make sure that the dedicated server meets the recommended requirements. See "Installation Requirements" on page 3. The installation program verifies that these software components are present. If any one of the components is not found, the installation program exits.

2. **Become the `root` user. Type:**

   ```
   su root
   ```

3. **Mount the CD.**

   If the following line is in your system `fstab` file:

   ```
   /dev/cdrom  /cd  iso9660  ro,user,noauto,unhide
   ```

   You can mount the CD with one of the two following commands:

   ```
   mount /dev/cdrom
   ```

   or

   ```
   mount /cd
   ```

4. **Move to the directory `<cd_mount>`. Type:**

   ```
   cd <cd_mount>
   ```

5. **Run the installation script. Type:**

   ```
   /bin/sh ./install/install
   ```

   The Installation program displays the Software License Agreement for the Sun Control Station 2.2. Carefully read the Software License Agreement. After the Software License Agreement has been displayed, the following message appears:

   ```
   Accept (A) / Decline (D)?
   ```

   Enter `A` on your keyboard to proceed with the installation, or enter `D` or `Q` to stop the installation.

   A number of information and installation messages appear on the screen as the installation proceeds.

   Once the installation is complete, the system displays a message stating so.

   Note – The log file generated during the installation process is saved to: `/var/log/scs-install.log`.

   ---

6. **Prepare each host to be managed.**

   See "How to Prepare a Host for Management" on page 11.

About Preparing a Host for Management

Unlike previous versions of the Sun Control Station, Sun Control Station 2.2 does not require that a special purpose agent be installed on each client. However, clients still require some preparation before they can be managed.

This process is automated by a script called `hostinstall.pl`, which is generated during installation of the Sun Control Station software.

The `hostinstall.pl` script is automatically configured when Sun Control Station 2.2 is installed for the specific Control Station network configuration. The `hostinstall.pl` script is made available from the Control Station's web server via HTTP.

To manage a host from this Control Station, the copy of `hostinstall.pl` generated for the Control Station must be run on the host to be managed.

Managing a single host from multiple Control Stations requires running multiple copies of the `hostinstall.pl` script, one from each Control Station.

Running the `hostinstall.pl` Script

You can use standard command-line tools such as `wget` to retrieve the `hostinstall.pl` script from the Control Station's web server. The `hostinstall.pl` script is accessible at the path `/pub/hostinstall.pl`.

For example, if the Control Station is accessible over TCP/IP at the host name *mycontrolstation*, then the `hostinstall.pl` script can be retrieved from the URL:

`http://`*mycontrolstation*`/pub/hostinstall.pl`

The `hostinstall.pl` script can also be transferred to the host using SCP, FTP, or similar tools. You can find the script on the Control Station at the path:

`/var/tomcat4/web/pub/hostinstall.pl`

Procedures in this manual assume that the `hostinstall.pl` script is located in the current working directory.

How to Prepare a Host for Management

For information about preparing a host to be managed, see "About Preparing a Host for Management" on page 10. If you are upgrading a managed host from Sun Control Station2.0 or Sun Control Station 2.1, see "How to Upgrade a Managed Host From V2.0 or V2.1" on page 12.

1. **Transfer the `hostinstall.pl` script from the Control Station to the host.**

   See "Running the hostinstall.pl Script" on page 11 for details.

2. **Make the `hostinstall.pl` script executable. Type:**

   ```
   chmod 700 ./hostinstall.pl
   ```

3. **Execute the `hostinstall.pl` script. Type:**

   ```
   ./hostinstall.pl install
   ```

   Information about the process of preparing the host for management will be displayed.

4. **Add each prepared host to the Sun Control Station software.**

   See "How to Add Managed Hosts" on page 12.

How to Upgrade a Managed Host From V2.0 or V2.1

During the installation process, the `hostinstall.pl` script checks for the presence of the client agent used under Sun Control Station 2.0 and 2.1. In order for Sun Control Station 2.2 to manage the host, the old agent software must be removed.

The `hostinstall.pl` script prompts for permission from the user before removing the old client agent and proceeding with setup. However, you can bypass this step and remove the old agent without waiting for user confirmation.

- **To remove the old agent without waiting for user confirmation, type:**

```
./hostinstall.pl -y install
```

To ease the process of verifying the SSH host keys of hosts to be managed, Sun Control Station software can automatically retrieve the published host keys from machines on the network.

If the SSH host key fingerprint for a host is already known, the host can be added to the Control Station for management directly.

How to Add Managed Hosts

As a security measure, the Sun Control Station 2.2 software requires a user to confirm the identity of managed hosts before the hosts can be added for management. This prevents potentially private information from being inadvertently revealed due to man-in-the-middle attacks or DNS spoofing. Sun Control Station 2.2 identifies hosts using the hosts SSH host keys.

If the SSH host key for a host is already known, the host can be added to the Control Station for management directly, bypassing the scanning process. Otherwise, you can add a managed host using one of these methods:

- Automated fingerprint scanning
- Add a single host manually
- Add managed hosts from a text file

- **To add managed hosts, access the Sun Control Station UI, then follow the instructions in the *Sun Control Station 2.2 Administrator Manual*.**

How to Access the Sun Control Station User Interface

Once you have installed the Sun Control Station 2.2 software on a dedicated server, you can access the features through a browser-based user interface (UI).

To access the Sun Control Station UI:

1. **Open a browser window and enter the following URL.**

   `http://<IP_address_of_server>`

   Note – If you do not want to use the SSL connection, enter the following URL instead: `http://<IP_address_of_server>:8080/sdui/`

   The Login page appears; see FIGURE 1.

   If you are unable to access the UI through a browser window, see "How to Troubleshoot the Software Installation" on page 16.

2. **Enter the user name** admin **and the password** admin**.**

   Note – Sun recommends that, once you log in, you change the `admin` password as soon as convenient. See the section "Password" in Chapter 2 of the *Sun Control Station 2.2 Administrator Manual.*

   ---

3. **Click Login.**

   The main splash page of the Sun Control Station 2.2 software appears; see FIGURE 2.

   You can change the *admin* password under the Station Settings menu item. For more information, see Chapter 2 of the *Sun Control Station 2.2 Administrator Manual.*

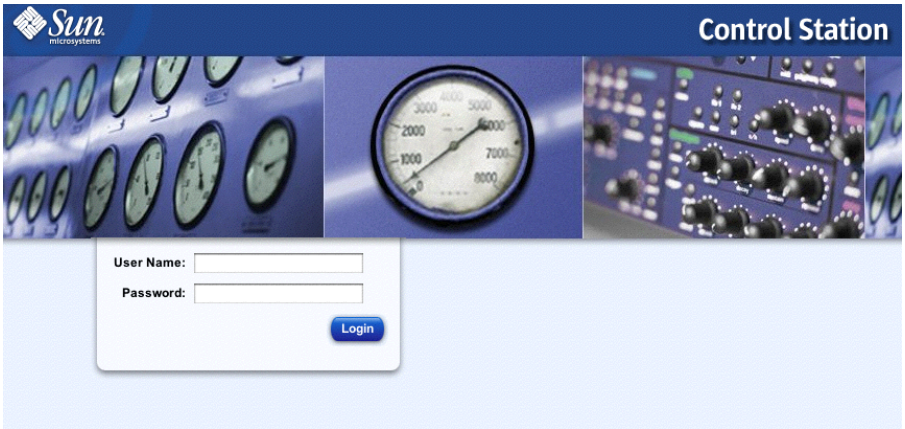

FIGURE 1 Sun Control Station Login Page

FIGURE 2 Main Splash Page

How to Uninstall the Sun Control Station 2.2 Software

Uninstalling the Sun Control Station 2.2 software removes all of the server-side components of the software from your server, as well as all of the control modules.

Note – The uninstall program does not remove the agent(s) or any client-side components of the software or control modules.

Note – When you uninstall Sun Control Station 2.2 software, the uninstall program asks whether you also want to remove `tomcat` and `jdk` from your server, backups of the control station state contained in `/scs/backups`, and logs of control station activity contained in `/scs/logs`.

To uninstall the Sun Control Station 2.2 software:

1. **Become the root user. Type:**

   ```
   su root
   ```

2. **Move to the uninstall directory. Type:**

   ```
   cd /scs/uninstall
   ```

3. **Run the uninstall program.Type:**

   ```
   ./uninstall
   ```

4. **The system asks you to confirm that you want to proceed with the uninstall process. The default is `N` (no).**

   Enter `Y`.

5. **In separate steps, the system asks you whether you also want to remove `tomcat` and `jdk`. The default for each of these prompts is `Y` (yes).**

   Enter `Y` or `N` for each prompt.

   If you enter `Y` (or accept the default value), the RPM or package for that component is removed.

   If you enter `N`, the RPM or package for that component is left intact.

6. **The uninstall operation proceeds.**

How to Access User Documentation

You can access the user manuals in PDF format from the UI. If you have installed third-party software on the Sun Control Station, the relevant documentation is also available.

To access the PDF file for a user manual:

1. **Click the help icon in the top right corner.**

   A separate browser window opens displaying a list of PDF files available.

2. **Click the link for a PDF file.**

   You can open the PDF file in the browser window or save it to your personal computer.

Localized Documentation

To access the user documentation for Sun Control Station 2.2 software in languages other than English, see: `http://docs.sun.com`.

How to Troubleshoot the Software Installation

You may experience some problems once the installation is complete.

If you are unable to access the UI through a browser window, `tomcat4` may not have started on the server. Perform the following steps to restart `tomcat 4`:

1. **Restart** `tomcat4`**:**

   a. `ssh` **in to the Sun Control Station server.**

   b. **Become the** `root` **user. Type:**

      su -

   c. **Stop** `tomcat4`**. Type:**

      ```
      /etc/init.d/tomcat4 stop
      ```

d. Start `tomcat4`**. Type:**

```
/etc/init.d/tomcat4 start
```

e. Verify that several java processes are now running.Type:

```
/bin/ps -ef | grep java
```

If there are no Java processes running, go on to Steps 2 and 3.

2. Check permissions for the file `catalina.out`

If the UI still does not appear, check the permissions on the file `/var/tomcat4/logs/catalina.out`.

The owner and group of the file should both be `tomcat4`. If they are not `tomcat4`, perform the following steps to set `tomcat4`:

a. `ssh` **in to the Sun Control Station server.**

b. Become the `root` **user. Type:**

```
su -
```

c. Change the ownership of the file. Type:

```
chown tomcat4:tomcat4 /var/tomcat4/logs/catalina.out
```

d. Stop `tomcat4`**. Type:**

```
/etc/init.d/tomcat4 stop
```

e. Start `tomcat4`**. Type:**

```
/etc/init.d/tomcat4 start
```

3. If the UI still does not appear, check whether the file `/var/lock/subsys/tomcat4` **exists.**

a. If the file `/var/lock/subsys/tomcat4` **exists, remove the file.**

b. Kill any currently running Java processes.

c. Stop and start `tomcat4` **again.**