

Symantec™ Storage Foundation and High Availability Solutions 6.2.1 Installation Guide - Linux

Platform Release

SLES 12

Symantec Storage Foundation and High Availability Installation Guide

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Documentation

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About Symantec™ Storage Foundation and High Availability Solutions

This chapter includes the following topics:

- [About Symantec™ Storage Foundation and High Availability Solutions 6.2.1](#)
- [Supported operating systems and database software](#)

About Symantec™ Storage Foundation and High Availability Solutions 6.2.1

Symantec™ Storage Foundation and High Availability Solutions 6.2.1 provides the following products:

- Symantec Dynamic Multi-Pathing (DMP)
- Veritas Volume Manager (VxVM)
- Veritas File System (VxFS)
- Symantec Storage Foundation (SF)
- Symantec Cluster Server (VCS)
- Symantec Storage Foundation and High Availability (SFHA)
- Symantec Storage Foundation Cluster File System and High Availability (SFCFSHA)
- Symantec Storage Foundation for Oracle RAC (SF Oracle RAC)
- Symantec ApplicationHA (ApplicationHA)

Supported operating systems and database software

For information on supported operating systems and database software, see the *Symantec™ Storage Foundation and High Availability Solutions 6.2.1 Release Notes - Linux*.

Installing the products

This chapter includes the following topics:

- [Supported types of Installation](#)
- [Installing the Symantec software using the script-based installer](#)
- [Installing the Symantec software using the Web-based installer](#)

Supported types of Installation

SFHA Solutions 6.2.1 supports the following types of Installation:

- Installing Symantec products with the script-based installer
- Installing Symantec products with the web-based installer.

Installing the Symantec software using the script-based installer

This section describes the 6.2.1 Symantec Storage Foundation and High Availability Solutions product script-based installer. Download the latest patches for the installer before you install the product.

About the script-based installer

You can use the script-based installer to install Symantec products (version 6.1 and later) from a driver system that runs any supported platform to a target system that runs different supported platforms.

You can either use the general product installer or the product-specific installation scripts to install your Symantec product:

- The general product installer (`installer`). The general product installer script provides a menu that simplifies the selection of installation and configuration options. Use the general product installer if you want to install multiple products from a disc.

Note: The general product installer (`installer`) script does not include the product version.

- Product-specific installation scripts (`install<productname>`). The product-specific installation scripts provide command-line interface options. Installing and configuring with the `install<productname>` script is identical to running the general product installer and then specifying specific product name from the list of products to install. Use the product-specific installation scripts to install or configure individual products you download electronically. You can find these scripts at the root of the product media. These scripts are also installed with the product.

Table 2-1 Product installation scripts

| Symantec product name | Script name in the media | Script name after an installation |
|---|-----------------------------------|--------------------------------------|
| For all SFHA Solutions products | <code>installer</code> | N/A |
| Veritas File System | <code>installfs</code> | <code>installfs621</code> |
| Veritas Volume Manager | <code>installvm</code> | <code>installvm621</code> |
| Symantec ApplicationHA | <code>installapplicationha</code> | <code>installapplicationha621</code> |
| Symantec Cluster Server (VCS) | <code>installvcs</code> | <code>installvcs621</code> |
| Symantec Storage Foundation (SF) | <code>installsf</code> | <code>installsf621</code> |
| Symantec Storage Foundation and High Availability (SFHA) | <code>installsfha</code> | <code>installsfha621</code> |
| Symantec Storage Foundation Cluster File System High Availability (SFCFSHA) | <code>installsfcfsha</code> | <code>installsfcfsha621</code> |

Table 2-1 Product installation scripts (*continued*)

| Symantec product name | Script name in the media | Script name after an installation |
|--|--------------------------|-----------------------------------|
| Symantec Storage Foundation for Oracle RAC (SF Oracle RAC) | installsfrac | installsfrac621 |
| Symantec Dynamic Multi-pathing (DMP) | installdmp | installdmp621 |

For example, for the 6.2.1 version:

```
# /opt/VRTS/install<productname>621 -configure
```

For configuration procedures, refer to *6.2 Installation Guide* for your product.

At most points during the installation you can type the following characters for different actions:

- Use `b` (back) to return to a previous section of the installation procedure. The back feature of the installation scripts is context-sensitive, so it returns to the beginning of a grouped section of questions.
- Use `Ctrl+c` to stop and exit the program if an installation procedure hangs. After a short delay, the script exits.
- Use `q` to quit the installer.
- Use `?` to display help information.
- Use the Enter button to accept a default response.

See “[The installer script options](#)” on page 23.

Installing the 6.2.1 Symantec Storage Foundation and High Availability Solutions product

This section describes how to install 6.2.1 Symantec Storage Foundation and High Availability Solutions product using the script-based installer.

Installing the 6.2.1 Symantec Storage Foundation and High Availability Solutions product

- 1 Download Storage Foundation and High Availability Solutions 6.2.1 Platform Release from <http://fileConnect.symantec.com>.
- 2 Extract it to a directory called `/tmp/sfha6.2.1`.

- 3 Check <https://sort.symantec.com/patches> to see if there are patches available for the 6.2.1 installer. Download applicable P-patches and extract them to the `/tmp` directory.

- 4 Move to the top-level directory on the disc.

```
# cd /mnt/install_media/dist_arch
```

Where *dist* is `sles12`, and *arch* is `x86_64` for RHEL and SLES.

- 5 If you install Symantec Storage Foundation and High Availability Solutions product using the product installer, perform the following steps:

- Start the installer.

```
# ./installer
```

The installer starts with a copyright message and specifies the directory where the logs are created.

- From the opening Selection Menu, choose `1` for "Install a Product."
- From the displayed list of products to install, select the product you want to install.

If you install Symantec Storage Foundation and High Availability Solutions product using `install<productname>`, perform the following steps:

- Navigate to the folder that contains the `install<productname>` script.

```
# cd install_media/dist_arch/<product_directory>
```

where *dist* is `SLES12` and *arch* is `x86_64`.

- Start the `install<productname>` program

```
# ./install<productname>
```

The installer starts with a copyright message and specifies the directory where the logs are created.

See "About the installation script" on page 23.

- 6 If you do not want to configure the product now, answer `n` when prompted. To configure the product in the future, run the product installation script from `/opt/VRTS/install` directory with the `-configure` option.

Note: ApplicationHA is not supported for configuration with the `/opt/VRTS/install/installapplicationha621` script.

For configuration procedures, refer to *6.2 Installation Guide* for your product.

Installing the Symantec software using the Web-based installer

This section describes how to install a Symantec Storage Foundation and High Availability Solutions product for the first time on a host and then to install 6.2.1 using the Web-based installer.

Starting the Veritas Web-based installer

This section describes starting the Veritas Web-based installer.

To start the Web-based installer

- 1 Start the Veritas XPortal Server process `xprtlwid`, on the installation server:

```
# ./webinstaller start
```

The webinstaller script displays a URL.

- 2 Start the Web browser on the system from which you want to perform the installation.
- 3 Navigate to the URL displayed from step 1.
- 4 The browser may display the following message:

```
Secure Connection Failed
```

Obtain a security exception for your browser.

- 5 When prompted, enter `root` and root's password of the installation server.

Obtaining a security exception on Mozilla Firefox

You may need to get a security exception on Mozilla Firefox.

To obtain a security exception

- 1 Click **Or you can add an exception** link.
- 2 Click **Add Exception** button.
- 3 Click **Get Certificate** button.
- 4 Uncheck **Permanently Store this exception checkbox (recommended)**.

- 5 Click **Confirm Security Exception** button.
- 6 Enter root in User Name field and root password of the web server in the Password field.

Installing 6.2.1 with the Veritas Web-based installer

This section describes installing SFHA Solutions with the Veritas Web-based installer.

To install SFHA Solutions

- 1 On the **Select a task and a product** page, select **Install 6.2.1** from the **Task** drop-down list, then select the product you want to install from the product drop-down list and click **Next**.
- 2 Indicate the systems on which to install. Enter one or more system names, separated by spaces. Click **Next**.
- 3 You have the option to let the installer configure SSH or RSH communications between the systems. If you choose to allow this configuration, select the communication type and provide the root passwords for each system.
- 4 After the validation completes successfully, click **Next** to install 6.2.1 RPMs on the selected system.
- 5 For Storage Foundation, click **Next** to complete the RPM installation.

For Storage Foundation High Availability, if the product is not yet configured, the installer prompts you to configure the cluster.

If you select **n**, you can exit the installer. You must configure the product before you can use Storage Foundation High Availability.

For configuration procedures, refer to *6.2 Installation Guide* for your product.

After the installation completes, the installer displays the location of the log and summary files. If required, view the files to confirm the installation status.

- 6 After the product is registered, reboot the systems.

After the systems come up after reboot, you can start Symantec Dynamic Multi-Pathing, either through the command line or webinstaller.

For information about migrating your data volumes to DMP devices, refer to the *Symantec Dynamic Multi-Pathing Administrator's Guide*.

- 7 Select the checkbox to specify whether you want to send your installation information to Symantec.

Would you like to send the information about this installation to Symantec to help improve installation in the future?

Click **Finish**.

Removing Symantec Storage Foundation and High Availability Solutions 6.2.1

This chapter includes the following topics:

- [Uninstalling Symantec Storage Foundation and High Availability Solutions product with the script-based installer](#)
- [Uninstalling Symantec Storage Foundation and High Availability Solutions product with the web-based installer](#)

Uninstalling Symantec Storage Foundation and High Availability Solutions product with the script-based installer

You can use the script-based installer to uninstall Symantec products from a driver system that runs any supported platform to a target system that runs different supported platforms.

For more information, see *6.2 Installation Guide* for your product.

About the script-based installer

You can either use the general product installer or the product-specific installation scripts to uninstall your Symantec product:

- The general product installer (`installer`) provides a menu that simplifies the selection of uninstallation. Use the general product installer if you want to uninstall multiple products from a disc.
- Product-specific uninstallation scripts (`uninstall<productname>`) provide command-line interface options. Uninstalling with the `uninstall<productname>` script is identical to running the general product installer and then specifying specific product name from the list of products to uninstall. Use the product-specific uninstallation scripts to uninstall individual product. You can find these scripts at the root of the product media. These scripts are also installed with the product.

Table 3-1 Product uninstallation scripts

| Symantec product name | Script name in the media | Script name after an installation |
|---|-------------------------------------|--|
| For all SFHA Solutions products | <code>installer</code> | N/A |
| Veritas File System | <code>uninstallfs</code> | <code>uninstallfs621</code> |
| Veritas Volume Manager | <code>uninstallvm</code> | <code>uninstallvm621</code> |
| Symantec ApplicationHA | <code>uninstallapplicationha</code> | <code>uninstallapplicationha621</code> |
| Symantec Cluster Server (VCS) | <code>uninstallvcs</code> | <code>uninstallvcs621</code> |
| Symantec Storage Foundation (SF) | <code>uninstallsf</code> | <code>uninstallsf621</code> |
| Symantec Storage Foundation and High Availability (SFHA) | <code>uninstallsfha</code> | <code>uninstallsfha621</code> |
| Symantec Storage Foundation Cluster File System High Availability (SFCFSHA) | <code>uninstallsfcfsha</code> | <code>uninstallsfcfsha621</code> |
| Symantec Storage Foundation for Oracle RAC (SF Oracle RAC) | <code>uninstallsfrac</code> | <code>uninstallsfrac621</code> |
| Symantec Dynamic Multi-pathing (DMP) | <code>uninstalldmp</code> | <code>uninstalldmp621</code> |

Uninstalling the 6.2.1 Symantec Storage Foundation and High Availability Solutions product

This section describes how to uninstall 6.2.1 Symantec Storage Foundation and High Availability Solutions product using the script-based installer.

Uninstalling the 6.2.1 Symantec Storage Foundation and High Availability Solutions product

- 1 Comment out or remove any Veritas File System (VxFS) entries from the file system table `/etc/fstab`. Failing to remove these entries could result in system boot problems later.

- 2 Unmount all mount points for VxFS file systems.

```
# umount /mount_point
```

- 3 If the VxVM RPM (`VRTSvxvm`) is installed, use the following steps to remove rootability:

- 1) Check if the system's root disk is under VxVM control by running this command:

```
# df -v /
```

The root disk is under VxVM control if `/dev/vx/dsk/rootdg/rootvol` is listed as being mounted as the root (`/`) file system. If so, `unmirror` and `unencapsulate` the root disk as described in the following steps:

- 2) Use the `vxplex` command to remove all the plexes of the volumes `rootvol`, `swapvol`, `usr`, `var`, `opt` and `home` that are on disks other than the root disk.

For example, the following command removes the plexes `mirrootvol-01`, and `mirswapvol-01` that are configured on a disk other than the root disk:

```
# vxplex -o rm dis mirrootvol-01 mirswapvol-01
```

Warning: Do not remove the plexes that correspond to the original root disk partitions.

- 3) Enter the following command to convert all the encapsulated volumes in the root disk back to being accessible directly through disk partitions instead of through volume devices:

```
# /etc/vx/bin/vxunroot
```

Following the removal of encapsulation, the system is rebooted from the unencapsulated root disk.

- 4 If a cache area is online, you must take the cache area offline before uninstalling the VxVM RPM. Use the following command to take the cache area offline:

```
# sfcache offline cachename
```

- 5 Make sure you have performed all of the prerequisite steps.
- 6 For SFHA and SFCFSHA, stop VCS processes on either the local system or all systems.

To stop VCS processes on the local system:

```
# hastop -local
```

To stop VCS processes on all systems:

```
# hastop -all
```

- 7 Move to the top-level directory on the disc.

```
# cd /mnt/install_media/dist_arch
```

Where *dist* is SLES12, and *arch* is x86_64.

- 8 If you uninstall Symantec Storage Foundation and High Availability Solutions product using the product installer, perform the following steps:

- Start the installer.

```
# ./installer
```

The installer starts with a copyright message and specifies the directory where the logs are created.

- From the opening Selection Menu, choose **U** for "Uninstall a Product."
- From the displayed list of products to uninstall, select the product you want to uninstall.

If you uninstall Symantec Storage Foundation and High Availability Solutions product using `uninstall<productname>`, perform the following steps:

- Move to the `/opt/VRTS/install` directory and run the uninstall script.

```
# cd /opt/VRTS/install
```

```
# ./uninstall<productname>621
```

Where `6.2.1` is the specific release version.

- 9 The uninstall script prompts for the system name. Enter one or more system names, separated by a space, from which to uninstall *<productname>*, for example, `sys1`:

```
Enter the system names separated by spaces: [q?] sys1 sys2
```

- 10 The uninstall script prompts you to stop the product processes. If you respond yes, the processes are stopped and the RPMs are uninstalled.
- 11 The uninstall script creates log files and displays the location of the log files.

Uninstalling Symantec Storage Foundation and High Availability Solutions product with the web-based installer

This section describes how to uninstall using the web-based installer.

Note: After you uninstall the product, you cannot access any file systems you created using the default disk layout version in 6.2.1 with a previous version of Symantec Storage Foundation and High Availability Solutions product.

To uninstall a product

- 1 Perform the required steps to save any data that you want to preserve. For example, take backups of configuration files.
- 2 Start the web-based installer.
- 3 On the **Select a task and a product** page, select **Uninstall a Product** from the Task drop-down list.
- 4 Select the product from the Product drop-down list, and click **Next**.
- 5 Indicate the systems on which to uninstall. Enter one or more system names, separated by spaces. Click **Next**.
- 6 After the validation completes successfully, click **Next** to uninstall your product on the selected system.
- 7 If there are any processes running on the target system, the installer stops the processes. Click **Next**.
- 8 After the installer stops the processes, the installer removes the products from the specified system.

Click **Next**.

9 After the uninstall completes, the installer displays the location of the summary, response, and log files. If required, view the files to confirm the status of the removal.

10 Click **Finish**.

Most RPMs have kernel components. To ensure their complete removal, a system restart is recommended after all the RPMs have been removed.

About the installation script

This appendix includes the following topics:

- [About the installation script](#)

About the installation script

Symantec™ Storage Foundation and High Availability Solutions 6.2.1 provides an installation script. To install the patches that are included in this release, you can use the `installer` script. The `installer` script lets you install all the RPMs that are associated with the packages installed.

The installer script options

The following table lists the command line options for the installer script:

Table A-1 The command line options for the product installer script

| Command Line Option | Function |
|---------------------------------|--|
| <code>system1 system2...</code> | Specifies the systems on which to run the installation options. A system name is required for all options. If not specified, the command prompts for a system name. |
| <code>-patch_path</code> | Defines the path of a patch level release to be integrated with a base or a maintenance level release in order for multiple releases to be simultaneously installed. |
| <code>-precheck</code> | Performs a preinstallation check to determine if systems meet all installation requirements. Symantec recommends doing a precheck before installing a product. |

Table A-1 The command line options for the product installer script (*continued*)

| Command Line Option | Function |
|---|---|
| <code>-postcheck</code> | Checks any issues after installation or upgrading on the system. |
| <code>-responsefile <i>response_file</i></code> | Automates installation and configuration by using system and configuration information stored in a specified file instead of prompting for information. The <i>response_file</i> must be a full path name. You must edit the response file to use it for subsequent installations. Variable field definitions are defined within the file. |
| <code>-logpath <i>log_path</i></code> | Specifies a directory other than <code>/opt/VRTS/install/logs</code> as the location where installer log files, summary files, and response files are saved. |
| <code>-tmppath <i>tmp_path</i></code> | Specifies a directory other than <code>/var/tmp</code> as the working directory for the installation scripts. This destination is where initial logging is performed and where RPMs are copied on remote systems before installation. |
| <code>-timeout <i>timeout_value</i></code> | The <code>-timeout</code> option is used to specify the number of seconds that the script should wait for each command to complete before timing out. Setting the <code>-timeout</code> option overrides the default value of 1200 seconds. Setting the <code>-timeout</code> option to 0 will prevent the script from timing out. The <code>-timeout</code> option does not work with the <code>-serial</code> option. |
| <code>-keyfile <i>ssh_key_file</i></code> | Specifies a key file for secure shell (SSH) installs. This option passes <code>-i <i>ssh_key_file</i></code> to every SSH invocation. |
| <code>-hostfile <i>full_path_to_file</i></code> | Specifies the location of a file that contains a list of hostnames on which to install. |
| <code>-require</code> | The <code>-require</code> option is used to specify a installer hot fix file. |

Table A-1 The command line options for the product installer script (*continued*)

| Command Line Option | Function |
|---------------------|---|
| -serial | Specifies that the installation script performs install, uninstall, start, and stop operations on each system in a serial fashion. If this option is not specified, these operations are performed simultaneously on all systems. |
| -rsh | Specifies this option when you want to use RSH and RCP for communication between systems instead of the default SSH and SCP. |
| -redirect | Displays progress details without showing the progress bar. |
| -pkgset | Discovers and displays the RPM group (minimum, recommended, all) and RPMs that are installed on the specified systems. |
| -pkgtable | Displays product's RPMs in correct installation order by group. |
| -makeresponsefile | Use the <code>-makeresponsefile</code> option only to generate response files. No actual software installation occurs when you use this option. |
| -comcleanup | The <code>-comcleanup</code> option removes the secure shell or remote shell configuration added by installer on the systems. The option is only required when installation routines that performed auto-configuration of the shell are abruptly terminated. |
| -version | Checks and reports the installed products and their versions. Identifies the installed and missed RPMs and patches where applicable for the product. Provides a summary that includes the count of the installed and any missed RPMs and patches where applicable. Lists the installed patches, hotfixes, and available updates for the installed product if an Internet connection is available. |

Table A-1 The command line options for the product installer script (*continued*)

| Command Line Option | Function |
|-----------------------------|--|
| -nolic | Allows installation of product RPMs without entering a license key. Licensed features cannot be configured, started, or used when this option is specified. |
| -rolling_upgrade | Starts a rolling upgrade. Using this option, the installer detects the rolling upgrade status on cluster systems automatically without the need to specify rolling upgrade phase 1 or phase 2 explicitly. |
| -rollingupgrade_phase1 | The <code>-rollingupgrade_phase1</code> option is used to perform rolling upgrade Phase-I. In the phase, the product kernel RPMs get upgraded to the latest version |
| -rollingupgrade_phase2 | The <code>-rollingupgrade_phase2</code> option is used to perform rolling upgrade Phase-II. In the phase, VCS and other agent RPMs upgrade to the latest version. Product kernel drivers are rolling-upgraded to the latest protocol version." |
| -disable_dmp_native_support | Disables Dynamic multi-pathing support for native the LVM volume groups/ZFS pools during an upgrade. Retaining Dynamic multi-pathing support for the native LVM volume groups/ZFS pools during an upgrade increases package upgrade time depending on the number of LUNs and native LVM volume groups/ZFS pools configured on the system. The <code>-disable_dmp_native_support</code> option is supported in upgrade scenario only. |
| -noipc | Disables the installer from making outbound networking calls to Symantec Operations Readiness Tool (SORT) in order to automatically obtain hot fixes and release information updates. |