



StoneBeat® WebCluster™ 2.0

HOW-TO GUIDELINES

Installing StoneBeat WebCluster 2.0 on Caldera OpenLinux

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Purpose of this Document

This document describes StoneBeat[®] WebCluster[™] 2.0 installation steps for Caldera OpenLinux[®].

The structure of the document is as follows:

- Section *“Before Installation” on page 3* describes the necessary steps to be taken before starting StoneBeat WebCluster installation.
- Section *“Installation Steps for StoneBeat WebCluster” on page 4* explains the general installation steps for StoneBeat WebCluster installation.
- Section *“Installation on Caldera OpenLinux” on page 5* describes the StoneBeat WebCluster installation steps on Caldera OpenLinux system.
- Section *“Uninstalling on Caldera OpenLinux” on page 8* describes how to remove StoneBeat WebCluster from Caldera OpenLinux system.

For more information on StoneBeat FullCluster installation, configuration, and operation, see *StoneBeat WebCluster Manual*.

For the latest product information, documents, and news, visit the Stonesoft Web site at <http://www.stonesoft.com>.

For more information on Caldera OpenLinux, see the Caldera Web site at <http://www.caldera.com>.

Before Installation

To ensure system's operability, few issues must be checked before starting StoneBeat WebCluster installation. See the *StoneBeat WebCluster Release Notes* (available at <http://www.stonesoft.com>) to check that:

1. the operating system and the hardware are supported.
2. the Web server is supported.
3. the surrounding network components are tested for interoperability with StoneBeat WebCluster.

Before installing StoneBeat WebCluster, install the operating systems and web servers on all the machines involved in the WebCluster system. A fresh installation of the operating system is recommended.

Installation Steps for StoneBeat WebCluster

The general steps to install StoneBeat WebCluster are as follows:

1. Install all the necessary hardware according to the hardware vendor's documentation.
2. Install the operating system according to the operating system vendor's documentation.
3. Install the Web server software according to the software vendor's documentation.
4. Configure all the Web server nodes.
5. Install the StoneBeat WebCluster software by following the instructions in this document.
6. Configure the StoneBeat WebCluster software.
7. Configure the switches on the same network to forward frames to the operative interfaces of all Web server nodes. Configure static or dynamic multicast groups to avoid flooding the multicast traffic.
8. For the directly connecte Cisco routers, add static ARP entries for the cluster IP addresses. This is because these routers are not able to learn the multicast MAC address using ARP protocol.
9. Verify that the system operates as planned.

Installation on Caldera OpenLinux

Before installation, you need to make sure that Caldera OpenLinux is correctly installed for operation with StoneBeat WebCluster 2.0.

To check the Caldera OpenLinux Installation:

1. Install the Linux operating system following the instructions in the Caldera OpenLinux documentation.
2. You should configure naming services to use local databases instead of any external services. You can use DNS as a secondary resolving method for hosts if necessary:
3. Define all the StoneBeat WebCluster nodes and control workstations in the `/etc/hosts` file. The host name on the control interface should be the same as the one returned by the `hostname` command.
4. Edit a boot script for modifying the routing table using the `route` command, for example, `/etc/sysconfig/static-routes`.
 - 4.1 Delete the route to the directly connected subnetwork through the cluster IP address.
 - 4.2 Define also static ARP entries for the cluster IP addresses to the directly connected Cisco routers.

Installing StoneBeat WebCluster on Caldera OpenLinux

You have to be logged on as root user for installing StoneBeat WebCluster. If you have used `su` command for superuser privileges, make sure that directories `/sbin` and `/usr/sbin` are included in your `PATH` environment variable.

To install StoneBeat WebCluster on a Caldera OpenLinux system:

1. Insert the StoneBeat WebCluster CD-ROM into the drive.
2. To mount the CD-ROM, type `mount /mnt/cdrom`.
3. To change to the linux directory, type `cd /mnt/cdrom/WebCluster/linux/Module`.
4. Select the packages you want to install according to the role of the machine you are installing on.

- To install StoneBeat WebCluster control workstation, type **rpm -i SBFCbase***. If you wish to install the StoneBeat SNMP utilities, you also have to install the SBFCsnmp package by typing **rpm -i SBFCsnmp***.
- To install StoneBeat WebCluster cluster node, install at least SBFCbase, SBFCdrv and SBFCmod packages. Additionally, you can also install the Stonesoft ClusterManager, the Web Configuration GUI and the SNMP Agent.

TABLE 1.1 *Install commands for packages*

Package to be installed	Install command
All packages	rpm -i SBFC*
Base	rpm -i SBFCbase*
Web Configuration GUI	rpm -i SBFCconf*
StoneBeat driver	rpm -i SBFCdrv*
StoneBeat module	rpm -i SBFCmod*
SNMP Agent	rpm -i SBFCsnmpd*
Stonesoft ClusterManager (GUI)	rpm -i SBFCgui*

5. After installing the packages, type **cd / ; umount /mnt/cdrom** to unmount the CD-ROM.
6. Remove the CD-ROM from the drive.
7. Set the SBFCHOME environment variable to contain the new StoneBeat WebCluster home directory /opt/webcluster and add \$SBFCHOME/bin to the search path:
 - If you are using the sh, ksh or bash shells, type:


```
SBFCHOME=/opt/webcluster
export SBFCHOME
PATH=${PATH}:${SBFCHOME}/bin
export PATH
```

- If you are using the csh or tcsh shells, type:
setenv SBFHOME /opt/webcluster
setenv PATH "\${PATH}:\${SBFHOME}/bin"



Note: You do not need to insert these commands to the `~/ .profile` or the `~/ .cshrc` files. The environment variables and the search path are automatically set for the default login environment.

Proceed with StoneBeat WebCluster configuration using the *StoneBeat WebCluster Manual*.

Uninstalling on Caldera OpenLinux

To completely remove StoneBeat FullCluster, uninstalling the software and removing the configuration files and the `$SBFCHOME` environment variable are required.

To uninstall StoneBeat WebCluster from a Caldera OpenLinux system, take the following steps:

1. Invoke the `rpm` command to remove the installed packages:

TABLE 1.2 *Uninstall commands for packages*

Package to be uninstalled	Uninstall command
All packages	<code>rpm -e SBFC*</code>
Base	<code>rpm -e SBFCbase</code>
Web Configuration GUI	<code>rpm -e SBFCconf</code>
StoneBeat driver	<code>rpm -e SBFCdrv</code>
StoneBeat module	<code>rpm -e SBFCmod</code>
SNMP Agent	<code>rpm -e SBFCsnmpd</code>
Stonesoft ClusterManager (GUI)	<code>rpm -e SBFCgui</code>

2. Reboot.

Now, the StoneBeat software is uninstalled, except that the configuration files are left in the `$SBFCHOME/etc/` directory, and a new StoneBeat WebCluster installation would preserve the previous configuration.

To clean up StoneBeat WebCluster installation completely:

1. Remove the `$SBFCHOME` environment variable.
2. Remove all the files and directories under the StoneBeat WebCluster directory (by default, `/opt/webcluster/`).