

Zenoss Installation

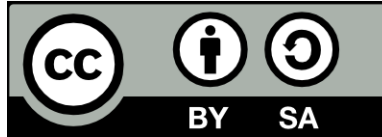
Core Version 2.4



Zenoss Installation for Core 2.4

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Chapter 1. Installing Zenoss for RHEL 5 or CentOS 5

1.1. Prerequisite Tasks

 Run all commands as `root`, from the machine where you want to install Zenoss.


Before you install:

1. Run the Yellowdog Updater, Modified (YUM), which you will use to install Zenoss. To run YUM, enter this command:

```
# yum -y install mysql-server net-snmp net-snmp-utils gmp libgomp libgcj liberation-fonts
```

2. Download the Zenoss installation files.
3. If you have just installed MySQL, then use the following commands to adjust the permissions:

```
# /etc/init.d/mysqld restart
# /usr/bin/mysqladmin -u root password ''
# /usr/bin/mysqladmin -u root -h YOUR_SERVER_NAME password ''
```

 Initially, the MySQL password must be blank so that Zenoss can correctly create the database. After you have installed and started Zenoss, you can change this password.

1.2. Install the Zenoss Software

Follow these steps to install Zenoss for Red Hat Enterprise Linux 5 or CentOS 5.

1. Enter one of the following commands to install the Zenoss RPM.

For 32-bit:

```
# rpm -ivh zenoss-Version.el5.i386.rpm
```

For 64-bit:

```
# rpm -ivh zenoss-Version.el5.x86_64.rpm
```

Where *Version* is the current Zenoss version.

2. If MySQL is running on a different server, or has a different root user password, edit the `/opt/zenoss/bin/zenoss_init_pre` file and adjust the `MYSQLHOST`, `MYSQLROOTUSER`, and `MYSQLROOTPASSWD` values.
3. Enter this command to start Zenoss.

```
# service zenoss start
```

4. Install the Zenoss Core ZenPacks. Enter one of these commands.

For 32-bit:

```
# rpm -ivh zenoss-core-zenpacks-Version.el5.i386.rpm
```

For 64-bit:

```
# rpm -ivh zenoss-core-zenpacks-Version.el5.x86_64.rpm
```

1.3. Disable or Configure the Firewall

To operate, Zenoss requires that several ports be open.

Open these ports in your firewall.

Port	Protocol	Direction to Zenoss Server	Description
8080	HTTP	Inbound	Zenoss Web interface
514	UDP	Inbound	syslog
162	UDP	Inbound	SNMP Traps

Table 1.1. Zenoss Ports

Alternatively, you can choose to disable the firewall. Use the following commands:

```
# service iptables stop
# chkconfig iptables off
```

1.4. What's Next?

After installing Zenoss, go to the section titled "Quick Start" in the guide titled *Getting Started with Zenoss*. There you will find instructions for initial setup tasks and basic information to help you begin using Zenoss.

Download the Getting Started guide (in Portable Document Format) from the Documentation area of the Zenoss Web site:

<http://www.zenoss.com/community/docs>

Chapter 2. Installing the Zenoss Virtual Appliance

2.1. System Requirements

The system requirements for running the Zenoss Virtual Appliance are largely based on the requirements for running the VM Player itself. A typical host system used for a VMware installation should meet these specifications:

- Dual core system
- Minimum RAM - 1 GB
- Available disk space - 4 GB

2.2. Installing the Zenoss Appliance

Follow these steps to download and install the Zenoss appliance.

1. Download the Zenoss Virtual Appliance file from <http://www.zenoss.com/download>:

```
zenoss-Version-x86.vmware.zip
```

2. After download, unzip the file into the directory where you want to work.
3. Install and start the VMware player. (Refer to the instructions provided by the player.)
4. When prompted, use the VMware player to navigate to the directory where you unzipped the Zenoss Virtual Appliance package, and then open the Zenoss Virtual Appliance.

After loading the appliance, the URL you will use to connect to the Zenoss management console is listed in the virtual machine window. The message is similar to:

```
Management console is available at: http://xxx.xxx.xxx.xxx:8080/zport/dmd
```

5. Log in as user `root`. (Local host login: `root`)

No password is required.

6. Open a new Web browser, and then enter the URL that appears in the login screen.

The Zenoss Setup Wizard appears.

2.3. What's Next?

After installing Zenoss, go to the section titled "Quick Start" in the guide titled *Getting Started with Zenoss*. There you will find instructions for initial setup tasks and basic information to help you begin using Zenoss.

Download the Getting Started guide (in Portable Document Format) from the Documentation area of the Zenoss Web site:

<http://www.zenoss.com/community/docs>

2.4. Converting the Zenoss Virtual Appliance to ESX

From the command line of an ESX server, you can use the following command:

```
vmkfstools -i <ImageName>.vmdk <NewImageName>.vmdk
```

VMware also ships a conversion tool, VMware vCenter Converter, that can convert the appliance to a proper ESX VM. For more information about this tool, go to:

<http://www.vmware.com/products/converter>

Chapter 3. Installing Zenoss from the Stack Installers

3.1. Install Zenoss for SUSE Linux Enterprise Server

Follow these instructions to install Zenoss and the Zenoss stack for SUSE Linux Enterprise Server (SLES).

3.1.1. Download the Installer

If installing Zenoss Core, download the Zenoss installation files from this location:

<http://zenoss.com/download>

Download the Zenoss Enterprise installation files from the `suse/` directory at the Zenoss download site:

<http://support.zenoss.com/download>

 Contact your Zenoss representative for site login credentials.


3.1.2. Launch the Installer

Choose one of the following methods to launch the installer, depending on your preference or environment:

- Command line
- KDE
- Gnome

3.1.2.1. Command Line

Follow these steps to open the installer from the command line.

 `zenoss*.bin` is the current installation file.

1. Open a command line prompt, and then change to the directory where you downloaded the installer:

```
$ cd <YourDownloadDirectory>/
```

2. Make the installer executable. Use this command:

```
$ chmod +x zenoss*.bin
```

3. Run the Zenoss installer. Zenoss requires that you perform this installation as the root user.

If you know your root password, then use the `su` command:

```
$ su root -c ./zenoss*.bin
```

If you do not know your root password, then use the `sudo` command:

```
$ sudo ./zenoss*.bin
```

3.1.2.2. KDE

Follow these steps to open the installer in KDE:

1. Make the file executable:
 - a. Right-click the downloaded file, and then select Properties from the actions menu.
 - b. Click the Permissions tab.
 - c. Select the "Is executable" option.
 - d. Click **OK**.

2. Run the program as root. Right-click the file, and then select the Open With menu item.
3. Enter this command to open the Zenoss installer:

```
kdesu
```

3.1.2.3. Gnome

Follow these steps to open the installer in Gnome:

1. Make the file executable:
 - a. Right-click the downloaded file, and then select Properties from the actions menu.
 - b. Click the Permissions tab.
 - c. Select the "Allow executing file as program" option.
 - d. Click **OK**.
2. Run the program as root. Right-click the file, and then select the Open with Other Application menu item.
3. Select Use a custom command, then enter this command to open the Zenoss installer:

```
gksu
```

3.1.3. Install Zenoss

The installer prompts for this basic configuration information at startup:

- Installation location (the default location is `/usr/local/zenoss`)
- Root password for MySQL

If you run the installer from a desktop, it provides graphical dialog prompts. If the installer is run from a headless or remote location, it uses simple, command-line prompts.

After launching the installer, the initial Zenoss installer screen appears.

1. Click **Forward**.
2. Choose the installation location for Zenoss.

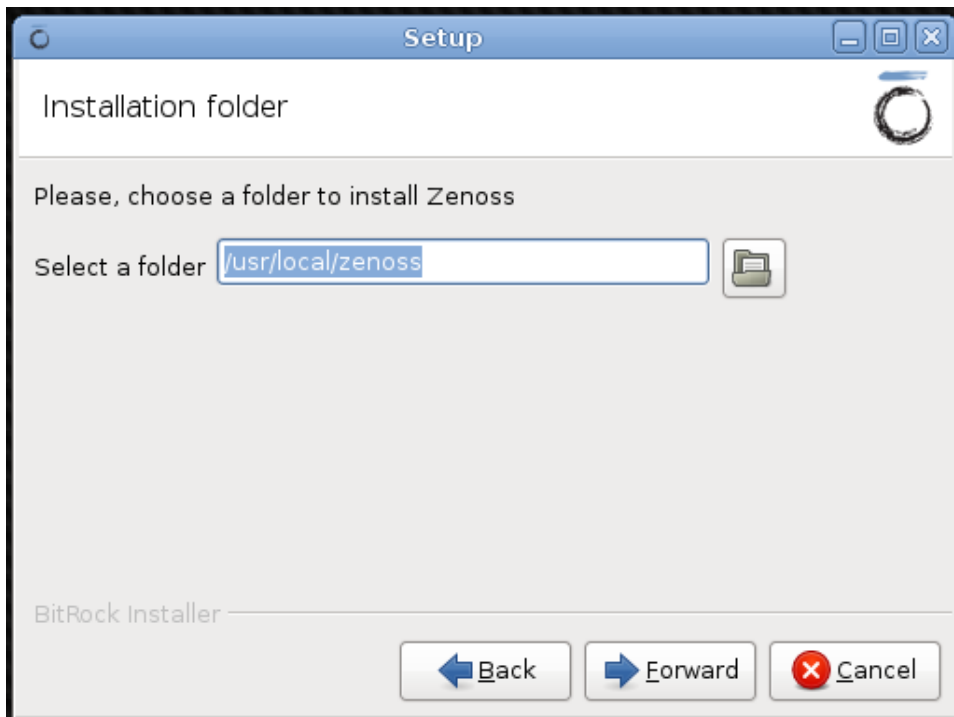


Figure 3.1. Zenoss Installer Screen Location

3. The MySQL Credentials screen appears and prompts you for MySQL password information.

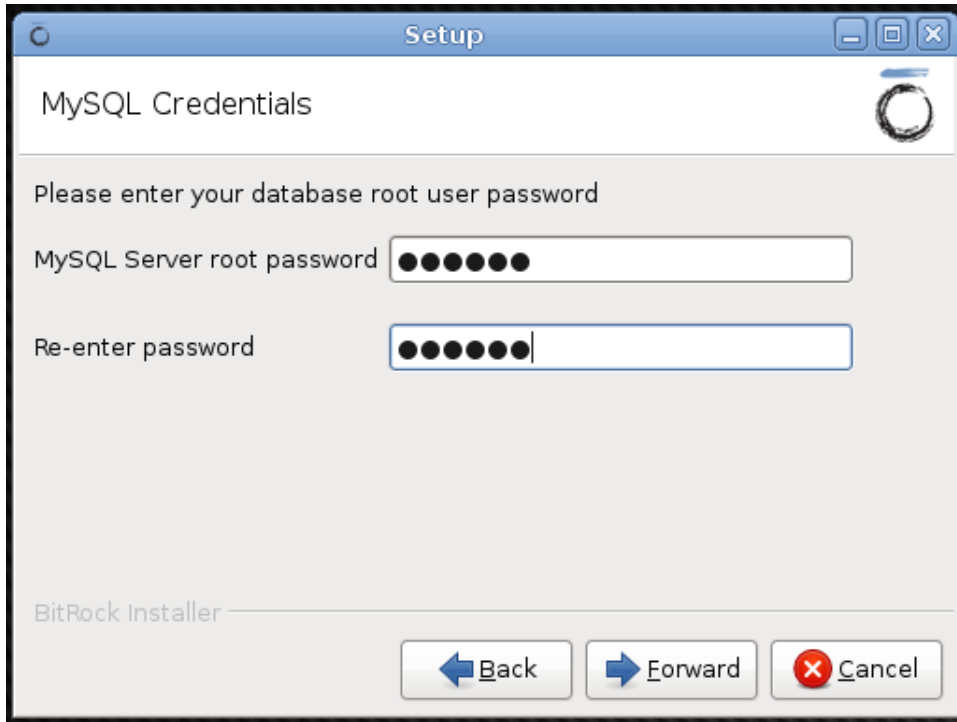


Figure 3.2. Zenoss Installer Screen - MySQL Password

The root password for MySQL is for a fresh installation of MySQL dedicated exclusively to Zenoss. It is not the root password for the computer, or the root password to any existing MySQL installation. You can use any non-empty password; this password is not stored by the Zenoss installer.

Click **Forward**.

4. You are now ready to Install Zenoss.

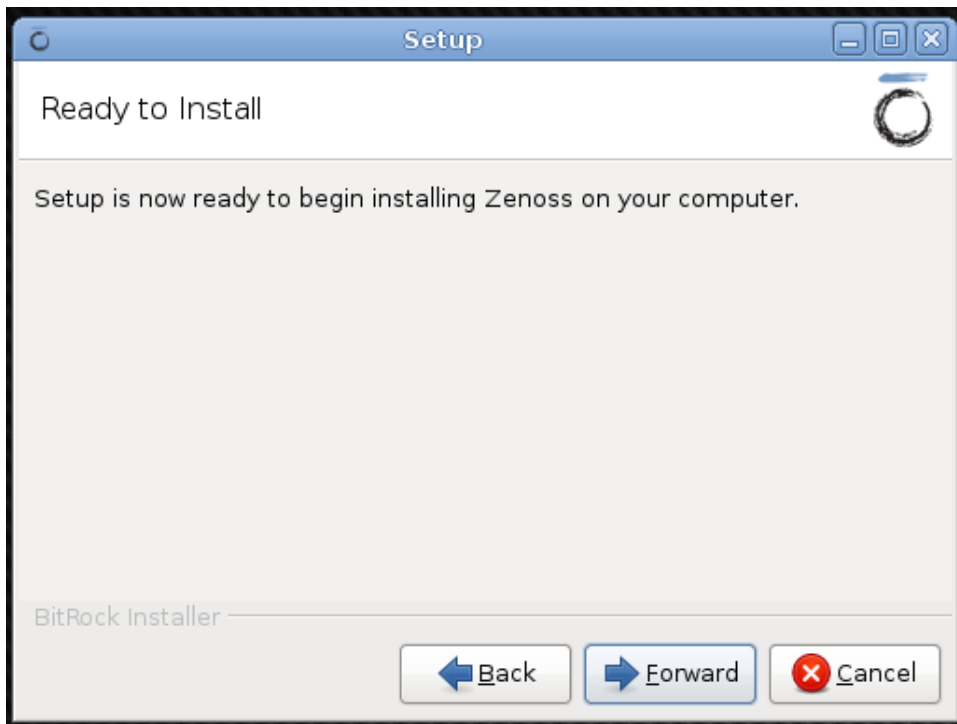


Figure 3.3. Zenoss Installer Screen - Ready to Install

Click **Forward** to start the install process.

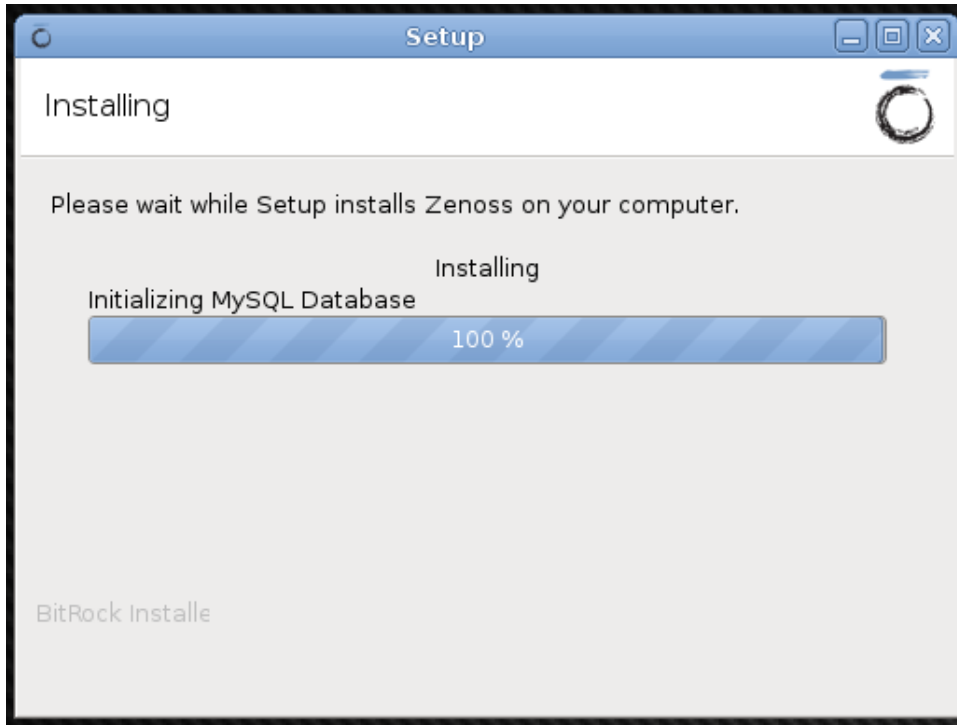


Figure 3.4. Zenoss Installer Screen - Progress Bar

This point in the installation process may take several minutes without showing any change. Note that there is a long pause (up to several minutes) near the end of the installation as Zenoss initializes.

5. When installation is complete, the following dialog appears.

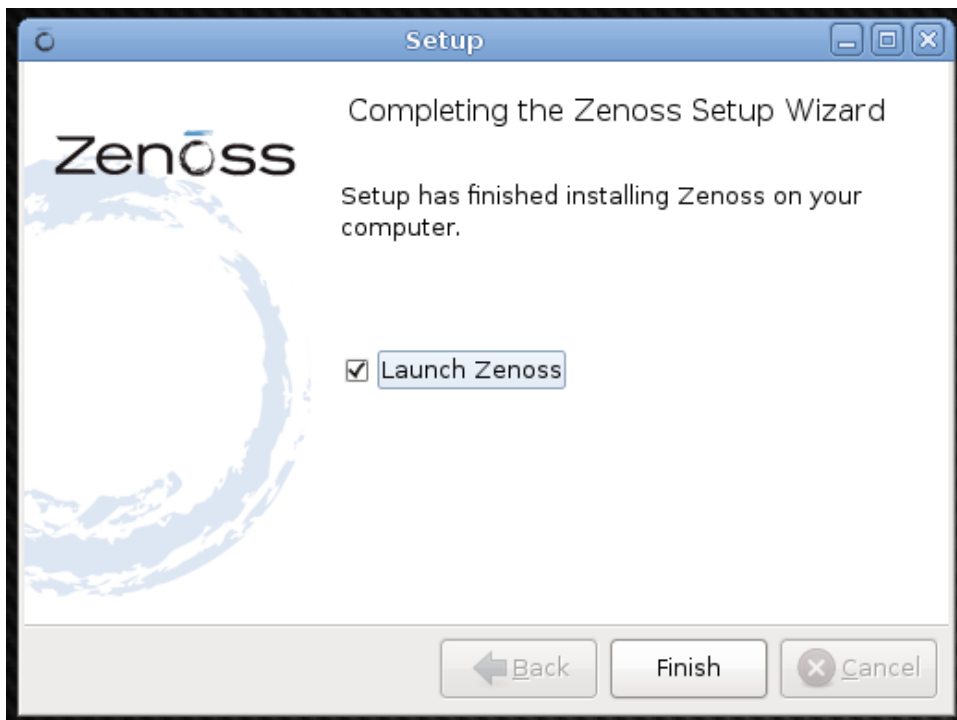


Figure 3.5. Zenoss Installer Screen - Finish and Launch Zenoss

If you select "Launch Zenoss" the installer will attempt to run your Web browser and point it to Zenoss. If this fails (usually because your browser is already running), then direct your browser to this location:

<http://localhost:8080/>

If port 8080 is already in use, the installer prompts for a new port on installation. For example, if you installed on your local computer, and selected port 8888 as the new port for the Zope server, then use the following location:

<http://localhost:8888>

6. Click **Finish**. The Zenoss setup wizard appears.

3.1.4. What's Next?

After installing Zenoss, go to the section titled "Quick Start" in the guide titled *Getting Started with Zenoss*. There you will find instructions for initial setup tasks and basic information to help you begin using Zenoss.

Download the Getting Started guide (in Portable Document Format) from the Documentation area of the Zenoss Web site:

<http://www.zenoss.com/community/docs>

Chapter 4. Installing from the Zenoss Debian Stack Installer

4.1. Install from the zenoss-stack DEB

Use one of the following procedures to install Zenoss and the Zenoss stack (from the zenoss-stack DEB) for Debian or Ubuntu.

Using apt (Command Line)

1. Add the Zenoss repository to the `/etc/apt/sources.list` file. Add the following line at the bottom of the file:

```
# Zenoss repository
deb http://dev.zenoss.org/deb main stable
```

2. Enter the following commands:

```
apt-get update
apt-cache search zenoss-stack
```

This should return:

```
zenoss-stack - Zenoss Stack with all requirements.
```

3. Enter this command to install the Zenoss stack:

```
apt-get install zenoss-stack
```

Zenoss is installed in the `/usr/local/zenoss` directory.

4. Start Zenoss with this command:

```
# /etc/init.d/zenoss-stack start
```

Using dpkg

1. Browse to the following location and download the desired Zenoss version to your local file system:

<http://dev.zenoss.org/deb/dists/main/stable/binary-i386/>

2. Install the downloaded file:

```
# dpkg -i FileName
```

3. Zenoss is installed in the `/usr/local/zenoss` directory.

Start Zenoss with this command:

```
# /etc/init.d/zenoss-stack start
```

Chapter 5. Installing Zenoss for Mac OS X


Use the following information and procedures to install Zenoss for Mac OS X 10.5 Leopard.

5.1. Installation Notes

- The Zenoss installer creates the user "zenoss" and runs the application as that user.
- MySQL and all dependencies are installed in the directory you select during installation (by default, the `/usr/local/zenoss` directory).
- MySQL (`zenoss-stack-mysql.plist`) and Zenoss (`zenoss-stack.plist`) start scripts are automatically launched at startup. These scripts are located in the `/Library/LaunchDaemons` directory.
- To remove an installation of Zenoss, use `uninstall.app`, located in the directory where you installed Zenoss (by default, the `/usr/local/zenoss` directory).

5.2. Installation Procedure

Follow these steps to install Zenoss for Mac OS X.

 Depending on your firewall configuration, inbound network connections may be restricted. In this case, one or more related dialogs may appear during Zenoss installation and launch. To successfully complete the installation process, click **Allow** in each dialog that appears.

1. Download the `zenoss-stack-2.4.0.app.tar.gz` file from the Zenoss download site.
2. Double-click the `zenoss-stack-2.4.0.app.tar.gz` file to expand it.
3. Double-click the `zenoss-stack-2.4.0.app` file.
4. When prompted, enter your administrative password.

The Zenoss Setup Wizard appears.

5. Click **Next**.

The Installation Folder panel appears.



Figure 5.1. Installation Folder

6. Choose the location where you want to install Zenoss, and then click **Next**. By default, Zenoss is installed in `/usr/local/zenoss`.

The Ready to Install dialog appears.

7. Click **Next** to start installation.

A progress dialog appears. Click **Cancel** at any time to stop installation.

When installation is complete, the Completing the Zenoss Setup Wizard dialog appears.

8. Leave the Launch Zenoss option selected and click **Finish**.

Zenoss launches in the following browser location:

`http://localhost:8080`

5.3. What's Next?

After installing Zenoss, go to the section titled "Quick Start" in the guide titled *Getting Started with Zenoss*. There you will find instructions for initial setup tasks and basic information to help you begin using Zenoss.

Download the Getting Started guide (in Portable Document Format) from the Documentation area of the Zenoss Web site:

`http://www.zenoss.com/community/docs`

Chapter 6. Installing Zenoss from Source

6.1. Zenoss Source Installation

This section describes the process for installing Zenoss from source.

6.2. Major Dependencies

To install Zenoss from source, you need:

- A build environment including binutils, gcc/g++.
- MySQL 5.0.x

Where $x \geq 22$.

Make sure you assign a password to root and that `mysql_config` is in the path.

- GNU build environment (GNU Make)
- SWIG ≥ 1.3
- Autoconf ≥ 2.53

6.3. System Setup

Follow these steps to set up your system before installing.

1. Create the user "zenoss" under which most of the Zenoss daemons will run:

```
bash$ useradd zenoss
```

2. Set ZENHOME and PYTHONPATH environment variables in the Zenoss user environment

Add the following lines to the appropriate rc or profile for your shell (for example, `.bashrc`, or `.profile`):

```
export ZENHOME=/usr/local/zenoss
export PYTHONPATH=$ZENHOME/lib/python
export PATH=$ZENHOME/bin:$PATH
```

ZENHOME is the path to your Zenoss install. PYTHONPATH lets Python find the libraries used by Zenoss.

Zenoss recommends installing in a directory other than the zenoss user's home directory. Do not use `/home/zenoss`. If you need to reinstall Zenoss in the future, this is made easier by a dedicated installation directory.

When you run the installation script, you must first log in as the zenoss user.

3. Create the Zenoss install directory and set the ownership:

```
bash$ mkdir /usr/local/zenoss
bash$ chown zenoss /usr/local/zenoss
```

4. Start MySQL.

6.4. Build and Install Zenoss

Follow these steps to build and install Zenoss.

1. Log in as the user `zenoss`.
2. Use one of the following commands to install Zenoss:

To build from the source tarball:


```
bash$ tar -xzvf zenoss-Version.tar.gz
```

```
bash$ cd zenoss-Version
bash$ ./install.sh
```

To build from the latest source in Subversion on the stable 2.4 branch:

```
bash$ svn co http://dev.zenoss.org/svn/branches/zenoss-2.4.x/inst zenossinst-2.4.x
bash$ cd zenossinst-2.4.x
bash$ SVN_TAG=branches/zenoss-2.4.x ./install.sh
```

To build from the latest source in Subversion on the trunk:

 You should not use this procedure for production versions.

```
bash$ svn co http://dev.zenoss.org/svn/trunk/inst zenossinst
bash$ cd zenossinst
bash$ ./install.sh
```

Notes:

- To clean a failed install, execute the following command:

```
bash$ make clean
```

- All files needed for execution are built and installed under \$ZENHOME, including Zenoss and other components such as Zope, RDD, and Twisted.
- This script creates several tables, as well as a trigger to move events from status -> history on deletion. This trigger requires "SUPER" permission which is granted to root by default (but can be granted to other users manually).
- By default, the zenoss Web server listens on port 8080 for Web connections. You can change this by modifying \$ZENHOME/zope.conf and other references to the port number in daemon configs.
- zensocket needs to be setuid to open raw sockets. As root, run:

```
chown root:zenoss /usr/local/zenoss/bin/zensocket
chmod 04750 /usr/local/zenoss/bin/zensocket
```

- To access the Zenoss portal:

In a Web browser, browse to:

http://hostname:8080

Username: admin

Password: zenoss

3. Start the Zenoss daemons.

Use the zenoss script to stop and start the system. To start, enter:

```
bash$ $ZENHOME/bin/zenoss start
```

To check that all daemons are running, enter:

```
bash$ $ZENHOME/bin/zenoss status
```

The system should respond with output similar to this:

```
Daemon: zeoctl program running; pid=4295
Daemon: zopectl program running; pid=4299
Daemon: zenhub program running; pid=1093
Daemon: zenping program running; pid=8721
Daemon: zensyslog program running; pid=8726
Daemon: zenstatus program running; pid=8731
Daemon: zenactions program running; pid=8736
```

```
Daemon: zentrap program running; pid=8742
Daemon: zenmodeler program running; pid=8751
Daemon: zenperfsnmp program running; pid=8757
Daemon: zencommand program running; pid=8765
Daemon: zenprocess program running; pid=8770
```

6.5. Platform-Specific Notes

6.5.1. Setting Socket buffers on Unix platforms

You may want to increase the size of the systems net buffers.

on Linux in the file `/etc/sysctl.conf`, add:

```
net.core.rmem_default=1048576
net.core.rmem_max=1048576
net.core.wmem_default=1048576
net.core.wmem_max=1048576
```

to configure without a reboot:

```
sysctl -w net.core.rmem_default=1048576
sysctl -w net.core.rmem_max=1048576
sysctl -w net.core.wmem_default=1048576
sysctl -w net.core.wmem_max=1048576
```

6.5.2. Setting up Zenoss to run with a remote MySQL Instance


See the section titled "Using Zenoss with a Remote MySQL Instance" in *Zenoss Administration*.

Chapter 7. Other Zenoss Installations

7.1. RHEL4 Installation Instructions

Follow these instructions to install Zenoss for Red Hat Enterprise Linux 4 or CentOS 4.

7.1.1. Prerequisite Tasks

 Run all commands as root, from the machine where you want to install Zenoss.

Before you install:

1. Run one of the following commands, depending on whether you are installing for RHEL 4 or CentOS 4.

RHEL 4

```
# up2date net-snmp net-snmp-utils gmp libgcj libgomp liberation-fonts
```

CentOS4

```
# yum -y install net-snmp net-snmp-utils gmp libgcj libgomp liberation-fonts
```

2. Download the Zenoss installation files.
3. Download the MySQL 5.0 packages (MySQL-server-standard, MySQL-client-standard, and MySQL-dev-el-standard) for your platform.

For 32-bit:

```
$ wget http://downloads.mysql.com/archives/mysql-5.0/MySQL-server-standard-5.0.22-0.rhel4.i386.rpm \  
http://downloads.mysql.com/archives/mysql-5.0/MySQL-client-standard-5.0.22-0.rhel4.i386.rpm \  
http://downloads.mysql.com/archives/mysql-5.0/MySQL-devel-standard-5.0.22-0.rhel4.i386.rpm
```

For 64-bit:


```
wget http://downloads.mysql.com/archives/mysql-5.0/MySQL-server-standard-5.0.22-0.rhel4.x86_64.rpm \  
http://downloads.mysql.com/archives/mysql-5.0/MySQL-client-standard-5.0.22-0.rhel4.x86_64.rpm \  
http://downloads.mysql.com/archives/mysql-5.0/MySQL-devel-standard-5.0.22-0.rhel4.x86_64.rpm
```

4. Install the MySQL packages:

```
rpm -Uvh MySQL*.rpm
```

5. If you have just installed MySQL, then use these commands to adjust the permissions:

```
# /etc/init.d/mysqld restart  
# /usr/bin/mysqladmin -u root password ''  
# /usr/bin/mysqladmin -u root -h YOUR_SERVER_NAME password ''
```

 Initially, the MySQL password must be blank so that Zenoss can correctly create the database. After you have installed and started Zenoss, you can change this password as desired.

7.1.2. Install the Zenoss Software

Follow these steps to install Zenoss for Red Hat Enterprise Linux 4 or CentOS4.

1. Enter this command to Install the Zenoss RPM:

```
# rpm -ivh zenoss-Version.el4.i386.rpm
```

where *Version* is the current Zenoss version.

2. If MySQL is running on a different server, or has a different root user password, edit the `/opt/zenoss/bin/zenoss_init_pre` file and adjust the `MYSQHOST`, `MYSQROOTUSER`, and `MYSQROOTPASSWD` values.

- Use this command to start Zenoss:

```
# service zenoss start
```

- Install the Zenoss Core ZenPacks. Enter these commands:

```
# rpm -ivh zenoss-core-zenpacks-Version.el4.i386.rpm
```

7.1.3. Disable or Configure the Firewall

To operate, Zenoss requires that several ports be open.

Open these ports in your firewall.

Port	Protocol	Direction to Zenoss Server	Description
8080	HTTP	Inbound	Zenoss Web interface
514	UDP	Inbound	syslog
162	UDP	Inbound	SNMP Traps

Table 7.1. Zenoss Ports

Alternatively, you can choose to disable the firewall. Use the following commands:

```
# service iptables stop
# chkconfig iptables off
```

Alternatively, open the following ports in your firewall.

7.1.4. What's Next?

After installing Zenoss, go to the section titled "Quick Start" in the guide titled *Getting Started with Zenoss*. There you will find instructions for initial setup tasks and basic information to help you begin using Zenoss.

Download the Getting Started guide (in Portable Document Format) from the Documentation area of the Zenoss Web site:

<http://www.zenoss.com/community/docs>

7.2. FreeBSD Installation Instructions

7.2.1. FreeBSD 6.1 Installation

Installation Technique: Manual Install

- Log in as root, run `sysinstall`, and configure DHCP networking:

```
# sysinstall
```

- Add the following line to the `/etc/fstab` file:

```
proc    /proc    procfs   rw    0    0
```

- Reboot to get a network and `procfs`, and then add some needed packages:

```
pkg_add -r bash pkg_add -r gmake pkg_add -r sudo pkg_add -r python pkg_add -r
mysql50-server mysql50-client pkg_add -r net-snmp pkg_add -r patch
```

- Edit the `/usr/local/etc/sudoers`. In general, you will un-comment the wheel line with `NOPASSWD`.

```
# adduser zenoss
```

- Add zenoss to the wheel group. Use `/usr/local/bin/bash` as shell. Configure `snmpd`:

```
# cp /usr/local/share/net-snmp.conf.example \ /usr/local/etc/snmp/snmpd.conf
```

Change "localhost" to be "default" and "COMMUNITY" to be "public".

6. Add these lines to the `rc.conf` file:

```
snmpd_enable="YES" snmpd_flags="-a -p /var/run/snmpd.pid" syslog_enable="NO"
mysql_enable="YES"
# mkdir /usr/local/zenoss # chown -R zenoss /usr/local/zenoss
```

7. Reboot to start and stop all servers. Log in as the zenoss user and install Zenoss from the tarball or SVN. If you install from SVN, you need to add subversion:

```
# pkg_add -r subversion
```

You can use `portinstall -R` to resolve dependencies.

7.2.2. FreeBSD 6.2 Installation

Installation Technique: Manual Install

1. Login as root, run `sysinstall`, and configure DHCP networking

```
# sysinstall
```

2. Add the following line to the `/etc/fstab` file:

```
proc /proc procfs rw 0 0
```

3. Reboot to get a network and `procfs`. Add some needed packages:

```
pkg_add -r bash ln -s /usr/local/bin/bash /bin pkg_add -r gmake pkg_add -r sudo
pkg_add -r python pkg_add -r mysql50-server mysql50-client pkg_add -r net-snmp
pkg_add -r patch pkg_add -r swig pkg_add -r autoconf259
```

4. Edit `/usr/local/etc/sudoers`. Generally, you will uncomment the wheel line with `NOPASSWD`.

```
# adduser zenoss
```

5. Add zenoss to the wheel group. Use `/usr/local/bin/bash` as shell. Configure `snmpd`:

```
# cp /usr/local/share/snmp/snmp.conf.example \ /usr/local/etc/snmp/snmpd.conf
```

Change "localhost" to be "default", "COMMUNITY" to be "public".

6. Add in these lines to the `rc.conf` file:

```
snmpd_enable="YES" snmpd_flags="-a -p /var/run/snmpd.pid" syslog_enable="NO"
mysql_enable="YES"
# mkdir /usr/local/zenoss # chown -R zenoss /usr/local/zenoss
```

7. Reboot to start and stop all servers. Log in as the zenoss user, install Zenoss from the tarball or SVN. If you install from SVN, you need to add subversion:

```
# pkg_add -r subversion
```

You can use `portinstall -R` to resolve dependencies.

8. Follow the instructions for a source-based SVN install.
9. There are some changes that need to be made to build the Nagios plugins properly.

See this thread on the Zenoss community web site for fixes:

<http://community.zenoss.com/forums/viewtopic.php?p=4314&sid=0dbfb5d7ef70df79c2ee41d4c0de4a51>

10. There is a problem loading `libnetsnmp.so` in Zope. The workaround is to add this line to the top of the `$ZENOSS/bin/zenfunctions` script:

```
export LD_PRELOAD=/lib/libcrypto.so.4
```

7.2.3. FreeBSD 6.3 Installation

Installation Technique: Manual Install

1. Login as root, run sysinstall, configure dhcp networking

```
# sysinstall
```

2. Add the following /etc/fstab

```
proc    /proc    procfs   rw    0    0
```

3. Reboot to get a network and procfs. Add in some needed packages:

```
pkg_add -r bash ln -s /usr/local/bin/bash /bin pkg_add -r gmake pkg_add -r sudo
pkg_add -r python pkg_add -r mysql50-server mysql50-client pkg_add -r net-snmp
pkg_add -r patch pkg_add -r swig pkg_add -r autoconf259
```

4. Create a new alloca.h in /usr/include with the following:

```
#ifndef _ALLOCA_H
/* #include <stdlib/alloca.h> */
#undef __alloca
/* Now define the internal interfaces. */
extern void *__alloca (size_t __size);
#ifdef __GNUC__
# define __alloca(size) __builtin_alloca (size)
#endif /* GCC. */
#endif
```

5. Edit the /usr/local/etc/sudoers file. Generally, you will un-comment the wheel line with NOPASSWD.

```
# adduser zenoss
```

6. Add zenoss to the wheel group. Use /usr/local/bin/bash as shell. Configure snmpd:

```
# cp /usr/local/share/snmp/snmp.conf.example \ /usr/local/etc/snmp/snmpd.conf
```

Change "localhost" to be "default" and "COMMUNITY" to be "public".

7. Add in these lines to the rc.conf file:

```
snmpd_enable="YES" snmpd_flags="-a -p /var/run/snmpd.pid" syslog_enable="NO"
mysql_enable="YES"
```

```
# mkdir /usr/local/zenoss # chown -R zenoss /usr/local/zenoss
```

8. Reboot to start and stop all servers. Log in as the zenoss user and install Zenoss from the tarball or SVN. If you install from SVN, you need to add subversion:

```
# pkg_add -r subversion
```

You can use portinstall -R to resolve dependencies.

9. Follow the instructions for a source-based SVN install with this modification:

```
--- GNUmakefile.orig    2008-05-22 05:35:26.000000000 -0500
+++ GNUmakefile         2008-05-22 03:47:41.000000000 -0500
@@ -58,7 +58,7 @@
  NAGIOSLIBS=-ldl -lm
  NAGIOSCONF=--with-openssl=/usr/sfw
  else
  -NAGIOSLIBS=-ldl
  +NAGIOSLIBS=-lc
  NAGIOSCONF=
  endif
```

10. There is a problem loading libnetsnmp.so in Zope. The workaround is to add this line to the top of the \$ZENOSS/bin/zenfunctions script:

```
export LD_PRELOAD=/lib/libcrypto.so.4
```

7.2.4. FreeBSD 7.0 Installation

Installation Technique: Manual Install

1. Login as root, run sysinstall, and configure DHCP networking:

```
# sysinstall
```

2. Add the following line to the `/etc/fstab` file:

```
proc    /proc    procfs   rw      0      0
```

3. Reboot to get a network and procfs. Add in some needed packages:

```
pkg_add -r bash ln -s /usr/local/bin/bash /bin pkg_add -r gmake pkg_add -r sudo
pkg_add -r python pkg_add -r mysql50-server mysql50-client pkg_add -r net-snmp
pkg_add -r patch pkg_add -r swig pkg_add -r autoconf259
pkg_add -r subversion pkg_add -r bazaar-ng
```

4. Create a new `alloca.h` in `/usr/include` with the following:

```
#ifndef _ALLOCA_H
/* #include <stdlib/alloca.h> */
#undef __alloca
/* Now define the internal interfaces. */
extern void *__alloca (size_t __size);
#ifdef __GNUC__
# define __alloca(size) __builtin_alloca (size)
#endif /* GCC. */
#endif
```

5. Edit `/usr/local/etc/sudoers`. Generally, you will un-comment the wheel line with NOPASSWD.

```
# adduser zenoss
```

6. Add zenoss to the wheel group. Use `/usr/local/bin/bash` as shell. Configure snmpd:

```
# cp /usr/local/share/snmp/snmp.conf.example \ /usr/local/etc/snmp/snmpd.conf
```

Change "localhost" to be "default", "COMMUNITY" to be "public".

7. Add in these lines to the `rc.conf` file:

```
snmpd_enable="YES" snmpd_flags="-a -p /var/run/snmpd.pid" syslog_enable="NO"
mysql_enable="YES"
```

```
# mkdir /usr/local/zenoss # chown -R zenoss /usr/local/zenoss
```

8. Reboot to start and stop all servers. Log in as the zenoss user and install Zenoss from the tarball or SVN. If you install from SVN, you need to add subversion:

```
# pkg_add -r subversion
```

You can use `portinstall -R` to resolve dependencies.

9. Follow the instructions for a source-based SVN install with this modification:

```
--- GNUmakefile.orig    2008-05-22 05:35:26.000000000 -0500
+++ GNUmakefile 2008-05-22 03:47:41.000000000 -0500
@@ -58,7 +58,7 @@
  NAGIOSLIBS=-ldl -lm
  NAGIOSCONF=--with-openssl=/usr/sfw
  else
-NAGIOSLIBS=-ldl
+NAGIOSLIBS=-lc
  NAGIOSCONF=
  endif
```

10. There is a problem loading `libnetsnmp.so` in Zope. The workaround is to add this line to the top of the `$ZENOSS/bin/zenfunctions` script:


```
export LD_PRELOAD=/lib/libcrypto.so.4
```

7.2.5. What's Next?

After installing Zenoss, go to the section titled "Quick Start" in the guide titled *Getting Started with Zenoss*. There you will find instructions for initial setup tasks and basic information to help you begin using Zenoss.

Download the Getting Started guide (in Portable Document Format) from the Documentation area of the Zenoss Web site:

<http://www.zenoss.com/community/docs>

Chapter 8. Upgrading Zenoss

8.1. Overview

Use the instructions in this chapter to upgrade your Zenoss instance. Depending on how you installed Zenoss, follow the instructions in one of these sections to upgrade:

- Stack Installer
- Zenoss Virtual Appliance
- RHEL 4 or RHEL 5 RPMs

8.1.1. Upgrade Paths

Refer to the following table to determine the upgrade path you must follow when upgrading to a newer version of Zenoss.

If your current version is:	You can upgrade directly to this version:
2.1.x	2.1.3
2.1.3	2.2.4
2.2.x	2.2.4
2.2.4	2.3.3
2.3.x	2.4

Table 8.1. Zenoss Upgrade Paths

8.1.2. Back Up Zenoss Data

Before upgrade, back up your Zenoss data.

1. As the `zenoss` user, use the following commands to back up the Zenoss files. Use both backup methods for maximum recovery options.

```
zenoss$ zenbackup --save-mysql-access --file /tmp/zenoss-backup.tgz
zenoss$ tar czf complete-backup.tar.gz $ZENHOME
```


2. Save the backup files to a location other than `$ZENHOME`.

8.1.3. After Upgrading

Important! After upgrading, you must delete your browser cache. For example, if using Firefox, press Ctrl-Shift-R to clear your cache.

8.2. Upgrading the bin Stack Installer

Use these instructions to install an updated version of Zenoss for SLES.

 When updating the stack installer, you must install in the same location as originally installed.

1. Back up your Zenoss data files, as outlined in the previous section titled "Back Up Zenoss Data."
2. As root, download the updated stack installer version from the Zenoss site:

```
http://www.zenoss.com/download
```

3. As root, run this command:

```
# chmod +x zenoss*.bin
```

4. Launch and run the installer.

Follow the procedures outlined in Chapter 3, "Installing Zenoss from the Stack Installers," beginning with Section 3.1.2 "Launch the Installer."

8.3. Upgrading the Debian Stack Installer

Use one of the following procedures to install an updated version of Zenoss from the Debian stack installer.

Using apt (Command Line)

1. Enter the following commands:

```
apt-get update
apt-get upgrade zenoss-stack
```

Zenoss is installed in the `/usr/local/zenoss` directory.

2. Start Zenoss with this command:

```
# /etc/init.d/zenoss-stack start
```

Using dpkg

1. Browse to the following location and download the desired Zenoss version to your local file system:

<http://dev.zenoss.org/deb/dists/main/stable/binary-i386/>

2. Install the downloaded file:

```
# dpkg -i FileName
```

3. Zenoss is installed in the `/usr/local/zenoss` directory.

Start Zenoss with this command:

```
# /etc/init.d/zenoss-stack start
```

8.4. Upgrading the Zenoss Virtual Appliance Image

This section provides instructions for upgrading the Zenoss Virtual Appliance.

If you have customized your appliance by installing other conary packages not included with Zenoss, you may want to preserve them by "pinning" them. Run the following command to list other installed conary packages:

```
root# conary updateall --items | grep -v group-zenoss
```

For each software package you want to keep, run this command:

```
root# conary pin packagename
```

where *packagename* is the name of the installed software package.

To upgrade the Zenoss Virtual Appliance, navigate to the console of your virtual appliance, and then follow these steps:

1. Back up your Zenoss data files, as outlined in the previous section titled "Back Up Zenoss Data."
2. Shut down the Zenoss server:

```
root# service zenoss stop
```

3. Run the following command to make sure all of the Zenoss processes have stopped. Verify that no results return from the command.

```
root# ps ax|grep zenoss
```

4. Start the zeo database so that a migrate can be run:

```
root# su - zenoss -c "/home/zenoss/bin/zeoctl start"
```

5. *If upgrading from Version 2.1 to Version 2.2*, run this command to upgrade your Zenoss instance:

```
conary migrate --interactive --resolve \  
group-zenoss=/zenoss-project.zenoss.loc@zenoss:core-2.2
```

6. *If upgrading from Version 2.2 to Version 2.3*, run this command to upgrade your Zenoss instance:

```
conary migrate --interactive --resolve \  
group-zenoss=/zenoss-project.zenoss.loc@zenoss:core-2.3
```

7. *If upgrading from Version 2.3 to Version 2.4*, run this command to upgrade your Zenoss instance:

```
conary migrate --interactive --resolve \  
group-zenoss=/zenoss-project.zenoss.loc@zenoss:core-2.4
```

8. Reboot your system.
9. Zenoss should start automatically after reboot, and will display URLs on the console for accessing the interface. You can verify that the service has started by entering the following command:

```
root# service zenoss status
```

If the service does not start automatically, then use the following command to start it:

```
root# service zenoss start
```

8.5. Upgrading RHEL 4 / CentOS 4 or RHEL 5 / CentOS 5 RPMs

Use these instructions to install an updated version of the Zenoss RPM for RHEL 4 / CentOS 4 or RHEL 5 / CentOS 5.

1. Back up your Zenoss data files, as outlined in the previous section titled "Back Up Zenoss Data."
2. Install the libraries. Use one of the following commands:

RHEL 4

```
up2date libgomp libgcj liberation-fonts
```

RHEL 5, CentOS 5 or CentOS 4

```
yum -y install libgomp libgcj liberation-fonts
```

3. Download the Zenoss software from the update site:

<http://support.zenoss.com/download>

4. Shut down your existing Zenoss instance. Use this command:

```
root# service zenoss stop
```

5. Run the following command to make sure all of the Zenoss processes have stopped. Verify that no results return from the command.

```
root# ps ax|grep zenoss
```

 If you see processes owned by MySQL, do not stop them.

6. Install the RPM. (If you have the zenoss-core-zenpacks RPM already installed, use the `--nodeps` option with this command.)

```
root# rpm -Uvh zenoss-Version.rpm --nodeps
```

where *Version* is the current version of Zenoss.

7. Start Zenoss:

```
root# service zenoss start
```

8. Upgrade the Core ZenPacks:

```
# rpm -Uvh zenoss-core-zenpacks-Version.elX.i386.rpm --nodeps
```

where *Version* is the current version of Zenoss and X is "4" or "5," depending on your OS.

8.6. Upgrading a Source Tarball Install

To upgrade a Zenoss source tarball:

1. Download and extract the new tarball, and then (user "zenoss") run `install.sh`:

```
zenoss$ tar xzf zenoss-Version.tar.gz
zenoss$ cd zenoss-Version
zenoss$ ./install.sh
```

Where *Version* is the current Zenoss version.

2. After installation completes, migrate your data (as user "zenoss"):

```
zenoss$ zenmigrate
```

8.7. Upgrading a Subversion Source Checkout

If you have a subversion checkout of the Zenoss installer code, you can update it by following these steps:

1. Log in as the user "zenoss."
2. Upgrade from the latest source.

To upgrade from the latest source in Subversion on the stable 2.4 branch:

- a. Enter the following commands:

```
bash$ cd zenossinst-2.4.x
bash$ svn update
```

- b. Run the installation script:

```
bash$ SVNTAG=branches/zenoss-2.4.x ./install.sh
```

To upgrade from the latest source in Subversion on the unstable trunk:

- a. Enter the following commands:

```
bash$ cd zenossinst
bash$ svn update
```

- b. Run the installation script:

```
bash$ SVNTAG=branches/zenoss-2.4.x ./install.sh
```

3. After installation is complete, migrate your data as the "zenoss" user:

```
bash$ zenmigrate
```

Chapter 9. Upgrading from a Source Install to a Stack Install

9.1. Upgrading From a Source Install to a Stack Install

Follow these steps to upgrade from a source-based install to a zenoss-stack .deb or rpm.

Note: For all commands, the prompt "#" indicates "run as root" and "\$" indicates the zenoss user.

1. Get the Zenoss .deb (for Debian) or .rpm (for RHEL and SuSE).
2. The Zenoss stack includes its own copy of MySQL, which, by default, will run on port 3307. Change your current configuration to point to port 3307.

In the Zenoss interface, from the Event Manager choose Edit, and then change the port from 3306 to 3307

3. Back everything up.

```
$ zenbackup --file=/tmp/zenbackup.tgz
```

4. Make a note of which ZenPacks you have installed.

 From the Zenoss interface, go to Settings > ZenPacks for a list of installed ZenPacks.

5. Shut down Zenoss:

```
$ zenoss stop
```

6. Move the current Zenoss to a new name:

```
$ mv /usr/local/zenoss /usr/local/zenoss-2.1.3
```

7. Install the stack on Debian by using the .deb:

```
# dpkg -i zenoss-stack*.deb
```

Alternatively, follow the instructions in Chapter 2 to install the .bin.

8. Copy the configuration files to a backup directory:

```
$ cd /usr/local/zenoss/zenoss/etc  
$ cp zeo.conf zope.conf /tmp
```

9. For each ZenPack installed on the old install, copy its directory to the new installation:

```
$ cp -r $OLD_ZENHOME/Products/SomeZenPack $ZENHOME/Products/
```

10. Start MySQL:

```
# /usr/local/zenoss/mysql/scripts/ctl.sh start
```

11. Load your data back with zenrestore:

```
$ zenrestore --dbuser=zenoss --dbpass=zenoss --file /tmp/zenbackup.tgz
```

12. Copy the configuration files back:

```
$ cp /tmp/zope.conf /usr/local/zenoss/zenoss/etc  
$ cp /tmp/zeo.conf /usr/local/zenoss/zenoss/etc
```

13. Start zeo:

```
$ zeoctl start
```

14. Migrate the data:

```
$ zenmigrate
```

15. Re-register the portlets:

```
$ zendmd
>>> from Products.ZenWidgets.ZenossPortlets.ZenossPortlets \
    import register_default_portlets
>>> register_default_portlets(zport.ZenPortletManager)
>>> commit()
```

16. Start Zenoss:

```
$ zenoss start
```

Chapter 10. Removing a Zenoss Instance

10.1. Before You Begin

Before removing your Zenoss instance, you may want to save Zenoss data files. For information about saving your files, refer to the backup and archive instructions in the *Zenoss Administration* guide.

Use the instructions in one of the following sections to remove a Zenoss instance.

10.2. Remove a Zenoss RPM Installation

Use these instructions to remove a Zenoss RPM installation and all of its components from your system.

1. Use the following command to verify the Zenoss components you will remove. (This depends on your specific implementation.)

```
rpm -qa | grep -i zenoss
```

2. As root, enter the following command, where *Components* is one or more Zenoss components listed in the order identified by the response to Step 1:

```
rpm -e Components
```

For example, if you are removing an Enterprise installation, you would enter a command similar to:

```
rpm -e zenoss-enterprise-zenpacks zenoss-core-zenpacks zenoss
```

3. Then enter:

```
rm -rf /opt/zenoss
userdel zenoss
mysql -u root
```

4. Enter the following commands at the `mysql` prompt:

```
> drop database events;
> delete from user where username="zenoss";
```

10.3. Remove a Zenoss bin Stack Installation

Use these instructions to remove a Zenoss bin stack installation and all of its components from your system:

1. Log in as `root`.
2. From the command line, change to the location where Zenoss is installed (for example, `/usr/local/zenoss`).
3. Enter the following command:

```
./uninstall
```

4. Follow the prompts to remove the installation.

10.4. Remove a Zenoss Debian Stack Installation

To remove a Zenoss instance and all of its files:

1. In the `/usr/local/zenoss` folder, locate an executable file named `uninstall`.
2. Run the `uninstall` command and follow the prompts. Zenoss is removed from your system.

To remove the Zenoss deb files, the removal process uses the `dpkg uninstall` command:

```
dpkg -r zenoss-stack-VERSION
```

Where `VERSION` is the Zenoss version you are removing.

10.5. Remove a Zenoss Stack Installation (Mac OS/X)

To remove an instance of Zenoss installed by using the OS/X Stack installer:

1. In the Go menu of the Finder, select Go to Folder.
2. In the dialog that appears, enter:

```
/usr/local/zenoss
```

A new finder window installs and shows the contents of that folder. It contains an application called `uninstall.app`.

3. Run the application. Follow the screen prompts to remove Zenoss from your system.
4. After removing Zenoss, you must also remove the "

After removing Zenoss, you should also remove the "zenoss" user and group. To do this:

1. Remove the "zenoss" user from the "zenoss" group:

```
sudo dscl . delete /groups/zenoss GroupMembership zenoss
```

2. Delete the "zenoss" user and the user's directory:

```
sudo dscl . delete /Users/zenoss  
sudo rm -rf /Users/zenoss
```

3. Delete the "zenoss" group:

```
sudo dscl . delete /groups/zenoss
```