

# **Installing and Upgrading Zenoss**

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# Chapter 1. Downloading the Zenoss Files

## 1. Downloading the Zenoss Files

Download the Zenoss files for your particular install.

These files can be found at the following URL:

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

---

# Chapter 2. Installing Zenoss using the Stack Installers

## 1. Installing Zenoss from the Stack Installers

This document will step you through installing Zenoss and the Zenoss stack using the point and click stack installers. These installers work on the following Linux platforms and architectures.

1. Download the latest installation package from <http://www.zenoss.com/download>.
2. Choose from the following installation methods depending on your environment; Command Line, KDE, or Gnome. Then continue following the installation instructions with Step number 3 below.
  - a. To opening the installer using the Command Line:

Note that `zenoss*.bin` is the current file you are trying to install.

- i. Open a command-line prompt and change directories (`cd`) into the directory where you downloaded the installer.

```
$ cd <Your download directory>/
```

- ii. Make the installer executable using the command:

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

- iii. Execute the installer as root. If you know your root password, use the `su` command:

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

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

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

- iv. Answer the installation prompts (as described starting in step 3 below). The package will be installed in `/usr/local/zenoss`.

- v. The package will create a `zenoss` user with a home directory in `/home/zenoss`. In order to run commands that are specified in the Zenoss admin guide, you must become the `zenoss` user.

If you know your root password, use the `su` command to become root, then to become user `zenoss`:

```
$ su - root # su - zenoss
```

If you don't know your root password, use the `sudo` command:

```
$ sudo su - zenoss
```

If you would prefer not to become the `zenoss` user, you can also run:

```
$ /usr/local/zenoss/zenconsole
```

to enter a shell with the Zenoss environment. You can then start/stop daemons, enter `zendmd`, and perform other command line tasks.

- b. To open the installer in KDE:
  - i. Make the file executable. Locate the downloaded file, and right-click on it, and select the "Properties" menu item.
  - ii. Select the "Permissions" tab and check the "Is executable" check box. Select "Ok" to close the dialog.
  - iii. Run the program as root. Right click on the file and select the "Open With ..." menu item.
  - iv. Enter "kdesu" as the command to open the Zenoss installer.
- c. To opening the installer in Gnome:
  - i. Make the file executable. Locate the downloaded file, and right-click on it, and select the "Properties" menu item.
  - ii. Select the "Permissions" tab and check the "Allow executing file as program" check box. Close the dialog.
  - iii. Run the program as root. Right click on the file and select the "Open with Other Application..." menu item.
  - iv. Select the "Use a custom command" item. Enter "gksu".

3. The installer will prompt for the following basic configuration information upon startup.

- The installation location (default /usr/local/zenoss)
- The root password for MySQL

If your computer is already running programs that conflict with the Zenoss networking configuration, you will see additional prompts to choose alternative port numbers.

Once you install Zenoss, you can reach the web-based user interface with the url:

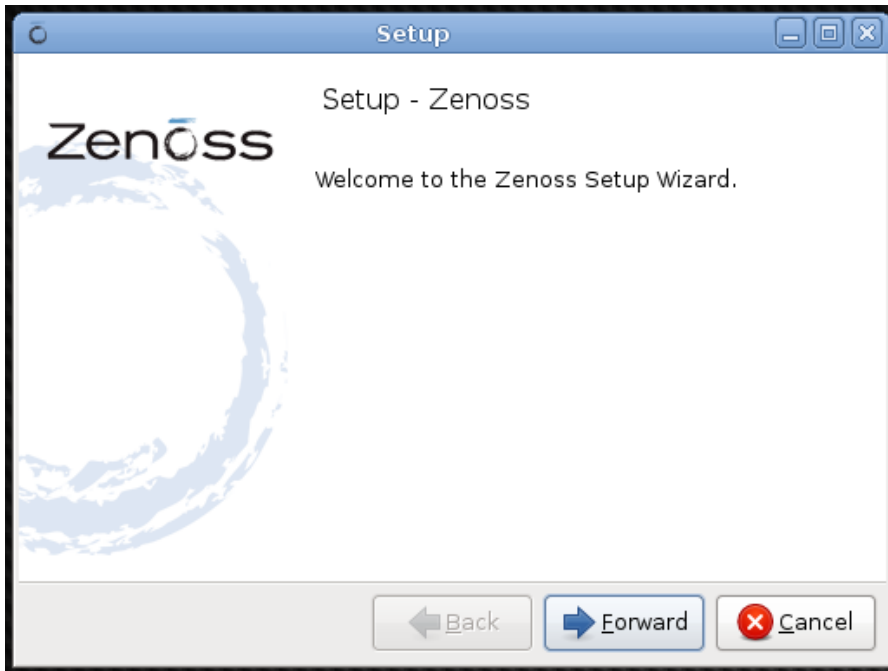
`http://<zenoss computer>:8080/`

If you already had something using port 8080, you will be prompted 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, you would use the following URL: `http://localhost:8888`

If the installer is run from a desktop, it will provide the following graphical dialog prompts. If the installer is run from a headless or remote location, it will use simple command-line prompts.

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

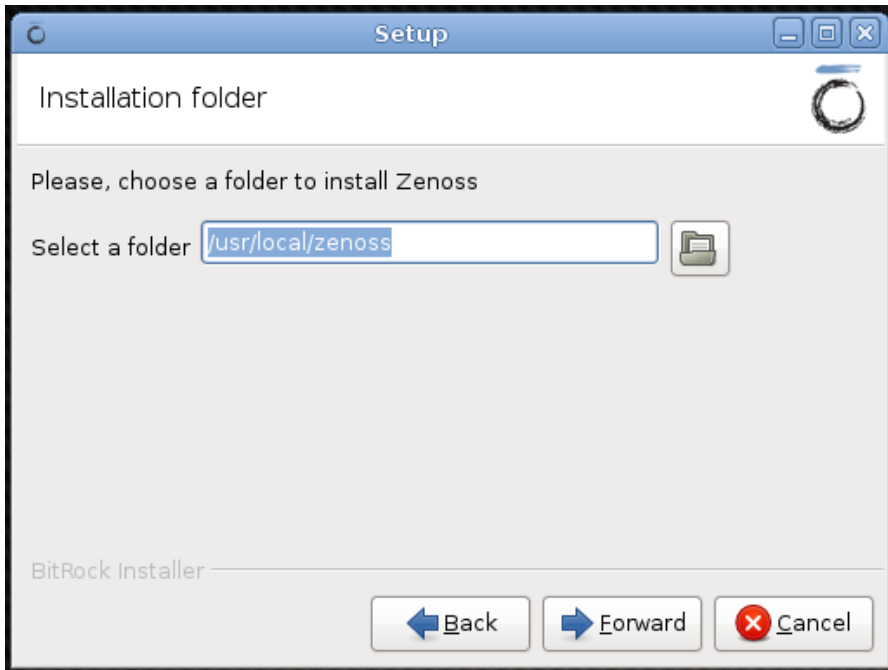
**Figure 2.1. Zenoss Installer Screen - Welcome**



Click Forward to proceed.

4. Choose the install location for Zenoss.

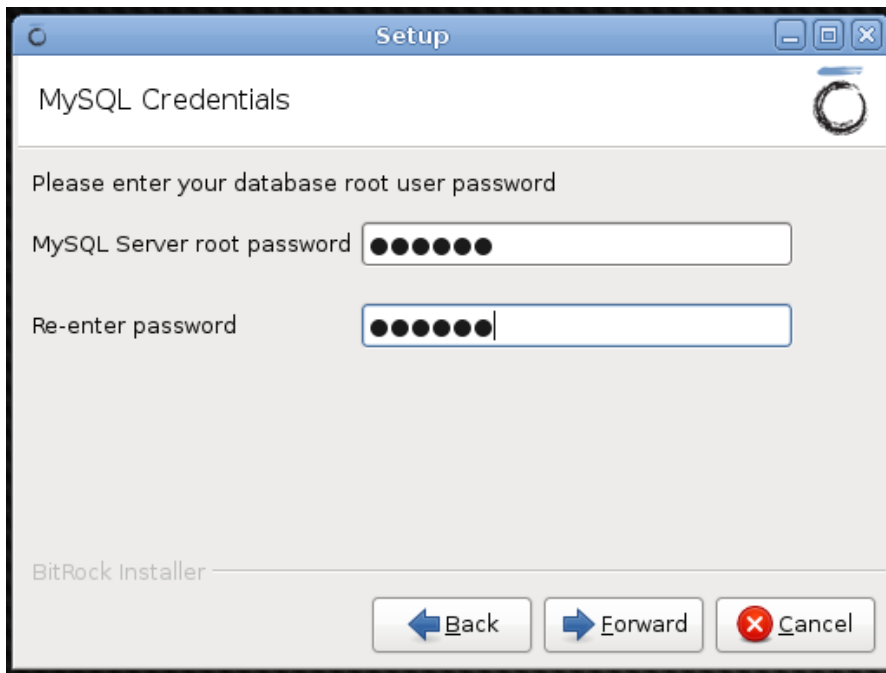
**Figure 2.2. Zenoss Installer Screen Location**



Click Forward.

5. The next Installer screen appears prompting you for the MySQL password information.

**Figure 2.3. Zenoss Installer Screen - MySQL Password**

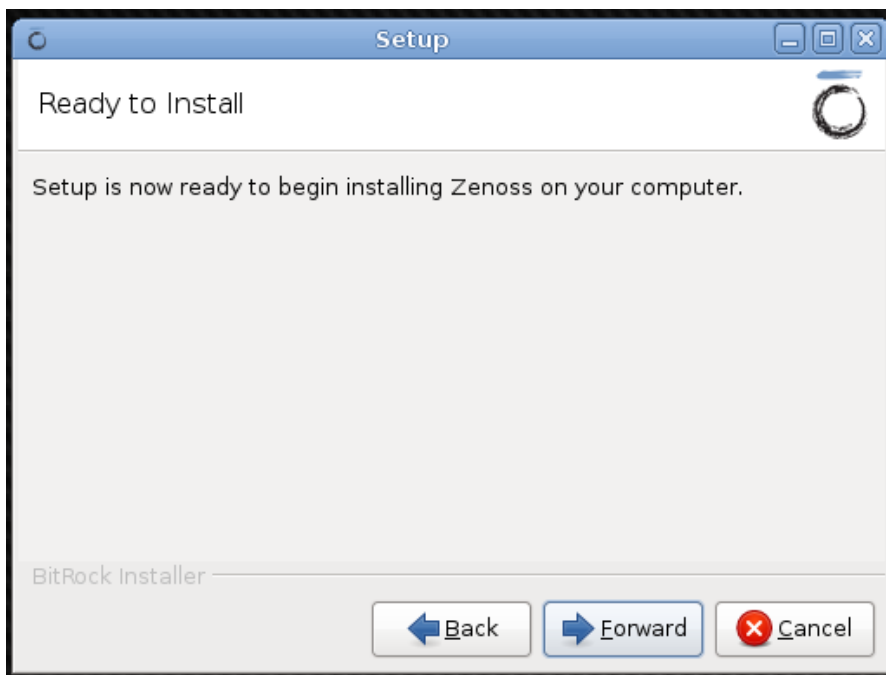


The root password for MySQL is for a fresh installation of MySQL dedicated exclusively to Zenoss and not the root password for the computer, or the root password to any existing MySQL installation. You may use any non-empty password, this password is not stored by the Zenoss installer.

Click Forward.

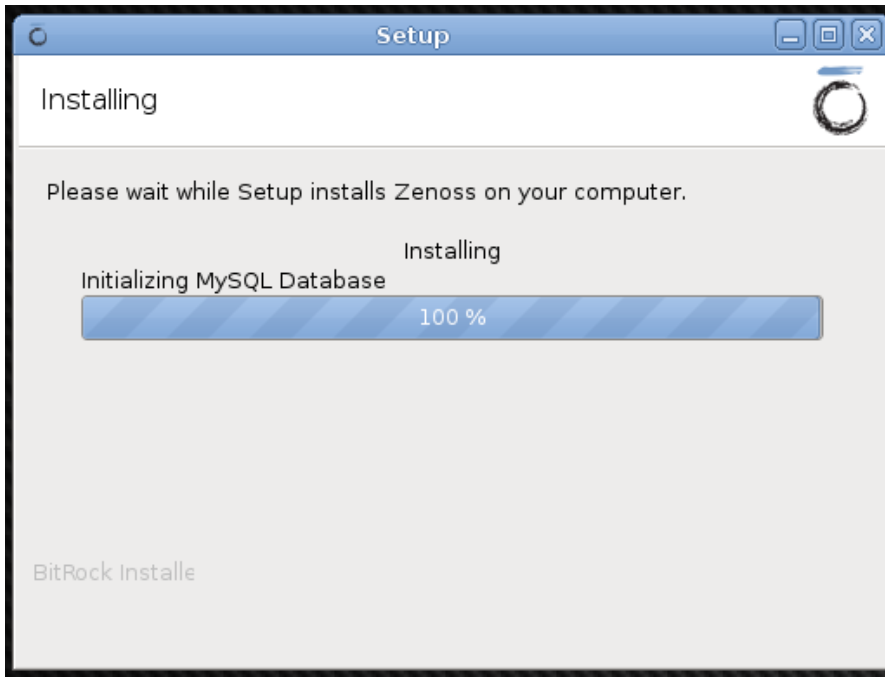
6. You are now ready to Install Zenoss.

**Figure 2.4. Zenoss Installer Screen - Ready to Install**



Click forward to start the install process.

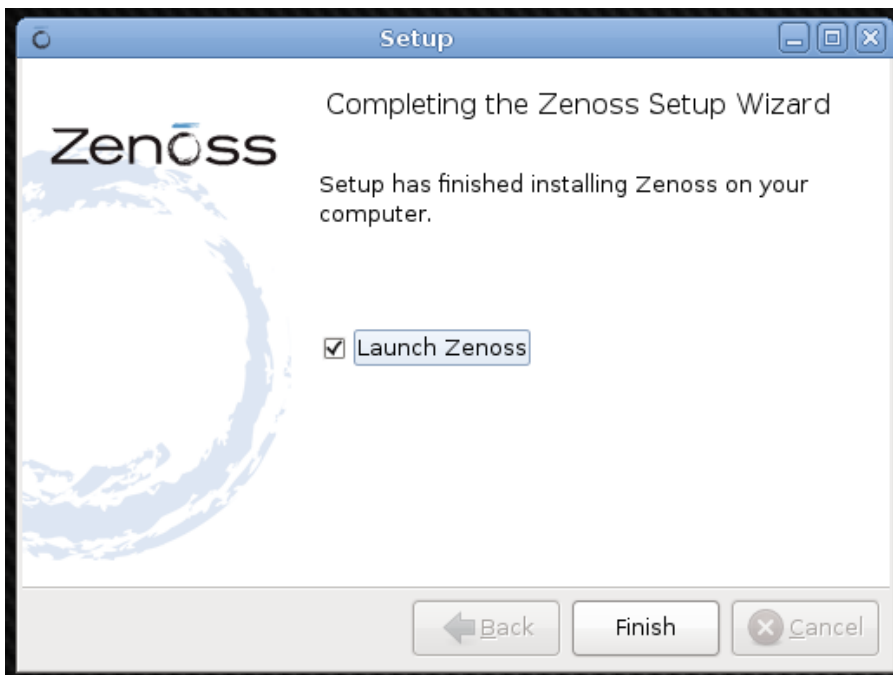
**Figure 2.5. Zenoss Installer Screen - Progress Bar**



This point in the installation process may take several minutes without showing any change. Note that there is a long pause near the end of the installation as Zenoss is initializing itself. This wait may take several minutes.

7. When installation is complete you will see the following dialog.

**Figure 2.6. 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), just use the URL scheme discussed in step 3 above.

---

# Chapter 3. Installing the Zenoss Virtual Appliance

## 1. System Requirements

The system requirements for running the Zenoss Virtual Appliance are largely based on the requirements for running the VM Player itself. These are basically the minimum system requirements for a fulfilling Zenoss experience with a Zenoss appliance. A typical host system used for a VMware installation should have the following specifications:

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

The other primary limitation for this Zenoss appliance is that you do not have command line access to Zenoss and its feature. You are limited to the functionality of the Zenoss UI.

## 2. Installing the Zenoss Appliance

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

The is called called:

zenoss-VERSION-x86.vmware.zip

2. Once you have downloaded this file, unzip it into the directory where you want to work.
3. Install and Start the VMware player. Use the instructions provided by the player to run the VMware player.
4. When prompted, use the VMware player to navigate to the directory where you unzipped the Zenoss Virtual Appliance package and open the Zenoss Virtual Appliance.

After loading the appliance, the URL you will use to connect to the Zenoss management console will be listed in the virtual machine window. It will appear 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, in fact you do not need to log into the console at all to be able to access the Zenoss UI. You can go directly to opening your browser in the next step.

6. Open a new web browser (Zenoss runs most consistently using Mozilla Firefox) and enter the URL that appears in the login screen. When the login prompt appears, log in as: User: admin Password: zenoss
7. Click OK. The main Zenoss Dashboard page appears.

NOTE: We recommended that you changed your password to both the Zope server and the root user account. This is done by entering the following commands. Enter \$ passwd and enter a new password to for the zenoss user password. Then enter: \$ zenpass and enter a new password for Zope login.

---

# Chapter 4. Installing the Zenoss RPM on RHEL/CentOS 4

## 1. Installing Zenoss for RHEL/CentOS 4

These instructions are for installing the Zenoss RPM for Enterprise Linux 4. This RPM is compatible with Red Hat Enterprise Linux 4 as well as CentOS 4. Follow these steps on the machine where you want to run Zenoss.

All commands should be run as root.

1. YUM or Up2Date is used to install several packages Zenoss depends on to properly function.

If you are using YUM, issue the following command:

```
# yum -y install net-snmp-utils gmp
```

2. Download all Zenoss software for EL4.

3. Install the EL4 dependencies using the following commands:

```
# tar jxf zenoss-deps-el4.i386.tar.bz2
# rpm -Uvh zenoss-deps/*.rpm
```

4. Setup your MySQL access permissions.

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

5. Install the latest Zenoss RPM using the following command:

```
# rpm -ivh zenoss-VERSION-0.el4.i386.rpm
```

6. Start Zenoss using the command:

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

7. Install the Zenoss Core and Enterprise ZenPacks then restart Zenoss.

```
# rpm -ivh zenoss-core-zenpacks-VERSION-0.el4.i386.rpm
# /etc/init.d/zenoss restart
```

8. Several ports need to be open for Zenoss to operate. One option for doing this is to disable the firewall:

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

Or, and probably most-likely, you will open the following ports in your firewall:

**Table 4.1. Zenoss Ports**

<b>Port</b>	<b>Reason</b>
8080	Access to the Zenoss Console
514	syslog
162	SNMP Traps

---

# Chapter 5. Installing the Zenoss RPM on RHEL/CentOS 5

## 1. Installing Zenoss for RHEL/CentOS 5

These instructions are for installing the Zenoss RPM for Enterprise Linux 5. This RPM is compatible with Red Hat Enterprise Linux 5 as well as CentOS 5. Follow these steps on the machine where you want to run Zenoss.

All commands should be run as root.

1. YUM or Up2Date is used to install several packages Zenoss depends on to properly function.

If you are using YUM, issue the following command:

```
# yum -y install mysql mysql-server net-snmp-utils gmp
```

2. Download all Zenoss software for EL5.

3. Setup your MySQL access permissions.

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

4. Install the latest Zenoss RPM using the following command:

```
# rpm -ivh zenoss-VERSION-0.el5.i386.rpm
```

5. Start Zenoss using the command:

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

6. Install the Zenoss Core ZenPacks then restart Zenoss.

```
# rpm -ivh zenoss-core-zenpacks-VERSION-0.el5.i386.rpm
# /etc/init.d/zenoss restart
```

7. Several ports need to be open for Zenoss to operate. One option for doing this is to disable the firewall:

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

Or, and probably most-likely, you will open the following ports in your firewall:

**Table 5.1. Zenoss Ports**

Port	Reason
8080	Access to the Zenoss Console
514	syslog
162	SNMP Traps

---

# Chapter 6. Installing From the Zenoss Debian Stack Installer

## 1. Installation via the zenoss-stack DEB

### 1. Installation via the zenoss-stack DEB

```
$ dpkg -i zenoss-stack-VERSION-0.deb
```

Alternatively, you can add the Zenoss repository to `/etc/apt/sources.list`:

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

Then:

```
$ apt-get update
$ apt-get install zenoss-stack
```

### 2. Zenoss will be installed in `/usr/local/zenoss`. Start it using:

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

### 3. The package will create a zenoss user with a home directory at `/home/zenoss`.

In order to run commands that are specified in the Zenoss admin guide, you must become the zenoss user. If you know your root password, use the `su` command to become root, then to become zenoss:

```
$ su - root
# su - zenoss
```

If you don't know your root password, use the `sudo` command:

```
$ sudo su - zenoss
```

If you would prefer not to become the zenoss user, you can also run:

```
$ /usr/local/zenoss/zenconsole
```

To enter a shell with the Zenoss environment. You can then start/stop daemons, enter `zendmd`, and perform other command line tasks.

---

# Chapter 7. Zenoss Source Install

## 1. Installing Zenoss from Source

This section describes the installation process for Zenoss from source. For the really impatient, run `install.sh` in the `inst` directory. If you experience problems, continue reading.

## 2. Major Dependencies

- A build environment including `binutils`, `gcc/g++`.

- MySQL 5.0.x

Where `x >= 22`. \* Make sure you assign a password to root

\* Make sure `mysql_config` is in the path

- GNU build environment (GNU Make)

- SWIG `>= 1.3`

- Autoconf `>= 2.53`

## 3. System Setup

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 to the appropriate rc or profile for your shell (e.g., `.bashrc`, `.profile`, etc.):

```
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 we use.

We recommend installing in a directory *other than* the zenoss user's home directory (e.g., don't use `/home/zenoss`). The reason for this recommendation is that once you learn more about Zenoss (or if you encounter problems during installation), you may need to reinstall at some point, and this will be much easier if you have a dedicated directory for the installation.

When you run the install script below, you will need to login as the zenoss user first.

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

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

4. Start MySQL (if it's not already started...)

## 4. Build and Install Zenoss

1. Login in to the "zenoss" user account that you created above.
2. If you are using the tar ball install skip to the next step. You can also use the svn trunk, but this is only for people who want to live on the bleeding edge!

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

Notes:

- this will put the installer files in the directory zenossinst
- the following commands are run from this directory

3. Run the Zenoss installation script

```
bash$ ./install.sh
```

Notes:

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

```
bash$ make clean
```

- all files needed for execution will be built and installed under \$ZENHOME, including Zenoss and other components such as Zope, RDD, Twisted, etc.
- This script will create 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 will listen on port 8080. This can be changed by modifying \$ZENHOME/zope.conf and other references to the port number in daemon configs.
- zensocket needs to be setuid in order to open raw sockets. As root, run:

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

- Access the Zenoss portal

Web Browser: - go to url <http://hostname:8080/zport/dmd>

Username is "admin"

Password is the one entered for Zenoss "admin" user

4. Start Daemons

The entire system can be stopped and started using the "zenoss" script. Start it up:

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

Now all daemons should be running. Check by running:

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

expected output:

```
Daemon: zeectl program running; pid=4295
Daemon: zoectl 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
```

## 5. Platform Specific Notes

### 5.1. Fedora Core 5

If you are doing a clean install of Fedora Core 5, during the installation, you must configure your software installations. Under servers, make sure to select MySQL. Under MySQL Optional Packages, check the box for MySQL-devel (developers MySQL). Go back to the main software selection screen and select Development. Select Development Libraries and Development Tools. Once all of these are selected you are good to install by following the install directions.

### 5.2. Mac OSX

To create the zenoss user use System Preferences -> Accounts instead of useradd.

If the installer cannot find mysql:

modify the line in .bashrc:

```
export PATH=$ZENHOME/bin:$PATH
```

to read:

```
export PATH=$ZENHOME/bin:$PATH:/usr/local/mysql/bin
```

Then cd back up to the install directory and proceed with the installation process.

### 5.3. 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
```

## 5.4. Setting up Zenoss to run with a remote MySQL Instance

Please see the section "Using Zenoss with a Remote MySQL Instance" in the Zenoss Admin Guide.

---

# Chapter 8. Other Zenoss Installs

## 1. Ubuntu Install Instructions

The following sections outline the Ubuntu Installation Instructions for Zenoss.

### 1.1. Ubuntu 6.10

Installing Zenoss on Ubuntu Server

#### 1. Install Ubuntu 6.10.

(This install tested on a vmplayer image.)

#### 2. Login as default user.

Commands that need to run as root will be prefixed with sudo. You can sudo from the default user.

#### 3. Need to add universe for apt-get use (svn, mysql dev) (using nano for editor):

```
sudo nano /etc/apt/sources.list
```

Uncomment the two lines that contain "dapper universe" by removing #:

```
deb http://ca.archive.ubuntu.com/ubuntu/ dapper universe deb-src
http://ca.archive.ubuntu.com/ubuntu/ dapper universe
```

Save file, then refresh at command prompt:

```
sudo apt-get update
```

#### 4. Install development tools needed to build Zenoss.

```
sudo apt-get install -y build-essential libmysqlclient15-dev \ python-dev
svn-buildpackage snmpd snmp \ autoconf swig automake mysql-server-5.0 mysql-client-5.0
```

#### 5. Add zenoss user:

```
sudo adduser zenoss
```

#### 6. Add zenoss install directory:

```
sudo mkdir /usr/local/zenoss sudo chown zenoss /usr/local/zenoss
```

#### 7. Login as zenoss user and set up some variables in login script:

```
su - zenoss cd (goto home directory) nano .bashrc . .bashrc
```

Add these lines:

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

#### 8. Get latest Zenoss tarball. To use subversion to download it, need to download svn first from universe. Login as root:

```
apt-get install svn-buildpackage su - zenoss cd
```

Download latest tar to zenossinst subdir:

```
svn co http://dev.zenoss.org/svn/trunk/inst zenossinst
```

9. Install zenoss from its install directory. For mysql, use the default root user, with the password you used in step 15. For zenoss password, create a new one:

```
cd zenossinst ./install.sh
```

10. Do as the install instructions say and change the permissions on zensocket (as root):

```
sudo chown root:zenoss $ZENHOME/bin/zensocket sudo chmod 04750 $ZENHOME/bin/zensocket
```

11. Start zenoss:

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

12. If install fails, cleanup with:

```
make clean
```

13. If install says successful, browse the Zenoss portal

Determine your IP address:

```
/sbin/ifconfig -a | grep addr
```

Use that address to browse to Zenoss:

Go to <http://<your address here>:8080/zport/dmd>, for example, you might browse to <http://192.168.1.100:8080/zport/dmd>.

Username is "admin" Password is the one entered for Zenoss "admin" user in step 9

14. To monitor your Zenoss server, configure your SNMP agent. After installing, you need to configure it to allow 'public' to read all OIDs (default is to read very few OIDs):

```
sudo cp /etc/snmp/snmpd.conf /etc/snmp//snmpd.conf.bak sudo cp /home/zenoss/zenossinst/conf/snmpd.conf /etc/snmpd.conf sudo cp snmpd.conf /etc/snmp/ sudo /etc/init.d/snmpd restart
```

15. Default ubuntu mail agent (MTA) is exim4, which may need to be setup if you want email alerts to work with a remote mail server (mail.mydomain.inc):

```
sudo dpkg-reconfigure exim4-config
```

```
# select default options, except for below) mail sent by smarthost; received via SMTP or fetchmail mail.mydomain.inc
```

16. To test mail agent, need to install a frontend (MUA - mail) to exim4:

```
apt-get install mailutils echo 'this is a test' | mail -s 'test subject' youremail@yourdomain.inc
```

```
# to see if mail is sent or still in queue: sudo mailq
```

17. To add zenoss daemons to run at boot up, login as root. Apached runtime is 90, so we use 95 to have it run after it and mysql. Also need to modify zenoss script for ZENHOME path:

```
sudo cp $ZENHOME/bin/zenoss /etc/init.d sudo nano /etc/init.d/zenoss
```

Add the following line to ensure all scripts can find ZENHOME)

```
export ZENHOME=/usr/local/zenoss
```

Run the following to get zenoss to start in the proper order

```
sudo update-rc.d zenoss defaults 95
```

## 1.2. Ubuntu 7.04

Installing Zenoss on Feisty Ubuntu

1. Install Ubuntu 7.04 Server from an installation CD.

2. Log in as the default user.

3. Install ssh so you can putty (remote terminal) from your desktop:

```
sudo apt-get install ssh ifconfig | grep cast
```

(to see what your IP is)

4. Either via SSH or on the box itself, become the root user:

```
sudo su [Enter password]
```

5. Several dependencies are in the 'universe' repository, so we'll need to modify your sources list (here we'll use vim as an editor):

```
vim /etc/apt/sources.list
```

Find these two lines:

```
deb http://us.archive.ubuntu.com/ubuntu feisty main restricted deb-src
http://us.archive.ubuntu.com/ubuntu feisty main restricted
```

And add the 'universe' repository:

```
deb http://us.archive.ubuntu.com/ubuntu feisty main restricted universe deb-src
http://us.archive.ubuntu.com/ubuntu feisty main restricted universe
```

Save the file and close the editor. Then, back at the command line:

```
apt-get update && apt-get upgrade
```

6. Now we can install the dependencies. From the command line:

```
apt-get install mysql-server mysql-client python-dev python2.4-dev \
build-essential subversion libmysqlclient15-dev snmpd autoconf \ snmp swig
python-setuptools sysv-rc-conf bzip2
```

7. Add the 'zenoss' user that will run the application:

```
adduser zenoss
```

If security isn't an issue, use the password 'zenoss'. Use defaults for everything else.

8. Zenoss requires some environment variables to be set, so we need to add them to the 'zenoss' user's bash startup script. Enter the command:

```
vim /home/zenoss/.bashrc
```

And add these lines to the end:

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

Save the file and close the editor.

9. Now we'll make the directory into which Zenoss will install. Run:

```
mkdir /usr/local/zenoss chown zenoss /usr/local/zenoss
```

10. Feisty Fawn ships with Python 2.5, but certain dependencies of Zenoss are unable to build properly with this version. Once Zenoss has been installed, it will run just fine under 2.5, but we'll need to change the symlink for the installation. Run:

```
unlink /usr/bin/python && ln -s /usr/bin/python2.4 /usr/bin/python
```

11. Now it's time to install. First, become the zenoss user:

```
su zenoss cd
```

You're in the zenoss user's home directory. Download the latest version of Zenoss [here](http://dev.zenoss.org/svn/trunk/inst). If you want to use svn to download it, run:

```
svn co http://dev.zenoss.org/svn/trunk/inst zenoss-install
```

If you want to use a tarball, download it to this directory and run:

```
tar xzf zenoss-[X.XX].tar.gz
```

Replacing the [X.XX] with the version you've downloaded. Now that you've got Zenoss, cd to the directory that was just created. All that's left to do is:

```
./install.sh
```

The installation script will ask you a few questions, then install Zenoss. If you run into any problems and need to run the installation again, clean up what's already been done with:

```
make clean
```

12. Once Zenoss has been installed successfully, become root again by typing:

```
exit
```

Or hitting Ctrl-D. Set zenosocket to setuid:

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

Switch back the Python symlinks:

```
unlink /usr/bin/python && ln -s /usr/bin/python2.5 /usr/bin/python
```

And have Zenoss run on system startup:

```
ln -s /usr/local/zenoss/bin/zenoss /etc/init.d sysv-rc-conf
```

Add Zenoss to runlevels 2, 3, 4 and 5. Reboot, and check that Zenoss started properly with:

```
/usr/local/zenoss/bin/zenoss status
```

13. To monitor your Zenoss server, install SNMP agent:

```
apt-get install snmpd
```

You need to configure it to allow 'public' to read all OIDs (default is to read very few OIDs):

```
cp /etc/snmp/snmpd.conf{,.bak} snmpconf (configure snmpd agent to allow  
public read) cp snmpd.conf /etc/snmp/ /etc/init.d/snmpd restart
```

14. Default ubuntu mail agent (MTA) is exim4, which may need to be setup if you want email alerts to work with a remote mail server (mail.mydomain.inc):

```
dpkg-reconfigure exim4-config
```

Select default options, except:

```
mail sent by smarthost; received via SMTP or fetchmail mail.mydomain.inc
```

15. To test mail agent, need to install a frontend (MUA - mail) to exim4:

```
apt-get install mailutils mail youremail@yourdomain.inc (press enter for Cc:,  
type in subject, press enter) (type in body of message, then enter) . (type in  
single period, then enter, to end composing and email is queued) mailq (to see  
if mail is sent or still in queue)
```

## 2. SLES Installation Instructions

The following sections outline the SUSE Linux Enterprise Server (SLES) Instructions for Zenoss.

### 2.1. SLES 10 Installation Instructions

Install Zenoss on SUSE Enterprise Linux 10 SLES 10 is an RPM based system that uses YaST as it's front end. Using YaST system administrators can automatically install software along with dependencies. The manual installation technique installs the required RPMs via YaST.

Installation Technique: Manual Install

These instructions are for installing the Zenoss RPM. This version works with SLES 10 or higher. Follow these steps on the machine where you want to run Zenoss. Note: All commands should be run as root.

1. Make sure you have the SLES Yast repository loaded:

```
Run yast Go to: Software -> Installation Source Choose Add: - Protocol: HTTP - Host: suse.mirrors.tds.net -  
Directory: /pub/opensuse/distribution/SL-10.0-OSS/inst-source
```

2. Install Zenoss dependencies with yast

```
# yast -i net-snmp perl-Digest-HMAC perl-DBI perl-Socket6 perl-Net-SNMP  
perl-Crypt-DES pyxml
```

3. Zenoss also depends on some RPMs that are not included in yast distributions. These dependencies are bundled together in the "zenoss-deps" distribution for your convenience. Download the zenoss-deps from the Zenoss downloads page and install them using the following command:

```
# wget http://dev.zenoss.org/downloads/zenoss-deps.tar.bz2 # tar xjf
zenoss-deps.tar.bz2 # cd zenoss-deps; rpm -Uvh *.rpm
```

#### 4. Install Zenoss

```
# rpm --replacefiles -i zenoss-VERSION-0.sles10.i386.rpm
```

#### 5. Start Zenoss using the command:

```
# /etc/rc.d/init.d/zenoss start
```

## 2.2. SLES 10.2 Instructions

Install Zenoss on SUSE Enterprise Linux 10.2 SLES 10.2 is an RPM based system that uses YaST as its front end. Using YaST system administrators can automatically install software along with dependencies. The manual installation technique installs the required RPMs via YaST.

Installation Technique: Manual Install

These instructions are for installing the Zenoss RPM. This version works with OpenSUSE 10.2 or higher. Follow these steps on the machine where you want to run Zenoss. Note: All commands should be run as root.

#### 1. Make sure you have the SLES Yast repository loaded:

Run yast Go to: Software -> Installation Source Choose Add: - Protocol: HTTP - Host: suse.mirrors.tds.net - Directory: /pub/opensuse/distribution/SL-10.0-OSS/inst-source

#### 2. Install Zenoss dependencies with yast

```
# yast -i net-snmp perl-Digest-HMAC \ perl-DBI perl-Socket6 perl-Net-SNMP
perl-Crypt-DES \ pyxml mysql-client mysql mysql-devel
```

#### 3. Zenoss also depends on some RPMs that are not included in yast distributions. These dependencies are bundled together in the "zenoss-deps" distribution for your convenience. Download the zenoss-deps from the Zenoss downloads page and install them using the following command:

```
# wget http://dev.zenoss.org/downloads/zenoss-deps.tar.bz2 # tar xjf
zenoss-deps.tar.bz2 # cd zenoss-deps; rpm -Uvh *.rpm
```

#### 4. Install Zenoss

```
# rpm --replacefiles -i zenoss-VERSION-0.sles10.i386.rpm
```

#### 5. Start Zenoss using the command:

```
# /etc/rc.d/init.d/zenoss start
```

## 3. Fedora Core 6 Installation

Fedora Core uses an RPM based packaging system that contains both stable and cutting-edge software. It differs from other distributions in that the RPMs (packages) that are bundled with Fedora Core are very modern (usually no older than a year), as well as very stable and thoroughly tested.

These instructions are for installing the Zenoss RPM. This version works with FC6, but it should work with FC5 and previous Fedora Core installations with minor modifications (mostly to dependent RPM versions). Follow these steps on the machine where you want to run Zenoss. Note: All commands should be run as root.

1. Use YUM to install several packages Zenoss depends on in order to properly function. To run YUM, issue the following command:

```
# yum -y install mysql mysql-server net-snmp net-snmp-utils gmp
```

2. Download the latest Zenoss RPM for EL 5 (there is no independent FC6 RPM) from the SourceForge downloads page, and install it using the following command:

```
# rpm -ivh zenoss-VERSION-0.el5.i386.rpm
```

3. In order to allow the SNMP Daemon to read CPU information SELinux must be disabled. This can be achieved using the following command (Note: if you have a better alternative please share it with us by emailing support@zenoss.com)

```
# setenforce 0
```

4. Start the snmp daemon using the command:

```
# chkconfig snmpd on # /etc/init.d/snmpd start
```

5. Start MySQL using the command:

```
# chkconfig mysqld on # /etc/init.d/mysqld start
```

6. Start Zenoss using the command:

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

7. Several ports need to be open for Zenoss to operate. One option for doing this is to disable the firewall:

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

Alternatively you can open the following ports in your firewall:

- 8080 - HTTP access to the zenoss console
- 514 - syslog
- 162 - SNMP traps

## 4. Zenoss BSD Installation

Many BSD system administrators use ports or packages to install software. Unfortunately Zenoss is not yet available in either of those formats. Instead, system administrators will need to prepare their BSD based systems for a Zenoss source based installation. This involves installing MySQL, Python, and SNMP. There are no current plans to add a ports or BSD package style install, but if you would like to see one please email the zenoss-users mailing list.

### 4.1. Overview: Manual Installation

The manual installation of Zenoss is achieved by first issuing pkg\_add commands to install the software Zenoss requires in order to build. Once that process is complete system administrators can download a Zenoss source based installation and install it via the install.sh shell script.

### 4.2. Overview: Automated Installation

There are no current plans to support an automated installation of Zenoss on BSD based systems. This may change if Zenoss is packaged using BSD packages or is included in the ports system.

## 5. FreeBSD Installation Instructions

### 5.1. FreeBSD 6.1 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 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
```

4. Edit /usr/local/etc/sudoers as per typical Zenoss instructions. I normally just uncomment the wheel line with NOPASSWD.

```
# adduser zenoss
```

5. Add to 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", "COMMUNITY" to be "public".

6. Add in these lines to rc.conf:

```
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/stop all servers. Login as the zenoss user, install zenoss either from the tarball or SVN. If you install from svn, you need to add subversion:

```
# pkg_add -r subversion
```

Again, you can use portinstall -R to resolve dependencies (and sub- version has a few)

### 5.2. FreeBSD 6.2 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. Edit /usr/local/etc/sudoers as per typical Zenoss instructions. I normally just uncomment the wheel line with NOPASSWD.

```
# adduser zenoss
```

5. Add to 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 rc.conf:

```
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/stop all servers. Login as the zenoss user, install zenoss either from the tarball or SVN. If you install from svn, you need to add subversion:

```
# pkg_add -r subversion
```

Again, you can use portinstall -R to resolve dependencies (and subversion has a few)

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's a problem loading libnetsnmp.so in Zope. The workaround is to add this line to the top of the \$ZEN-OSS/bin/zenfunctions script:

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

## 5.3. 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 `/usr/local/etc/sudoers` as per typical Zenoss instructions. I normally just uncomment the wheel line with `NOPASSWD`.

```
# adduser zenoss
```

6. Add to 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 `rc.conf`:

```
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/stop all servers. Login as the zenoss user, install zenoss either from the tarball or SVN. If you install from svn, you need to add subversion:

```
# pkg_add -r subversion
```

Again, you can use `portinstall -R` to resolve dependencies (and sub- version has a few)

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's a problem loading `libnetsnmp.so` in Zope. The workaround is to add this line to the top of the `$ZEN-OSS/bin/zenfunctions` script:

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

---

# Chapter 9. Upgrading Zenoss

## 1. Overview

This chapter describes the steps necessary to upgrade a Zenoss installation to a newer version. There are three sections below will cover the three types of upgrades follow the section applicable to your installation.

### 1.1. Back Up First

You should always backup your Zenoss data prior to upgrading. The easiest way to do this is to use zenbackup and save the backup file somewhere other than within \$ZENHOME:

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

### 1.2. After the Upgrade

After the completion of the upgrade, the web UI and URL to access your Zenoss instance will be the same. PLEASE do not forget to delete your browser cache to make sure all previous files have been cleared. If you are using Firefox, you can do this by pressing Control/Shift/R.

## 2. Upgrading the Zenoss Stack Installers

These instructions describe how to install an upgraded version of the Zenoss Stack Installer.

If you have a Zenoss stack installation and you want to upgrade that installation:

1. Back everything up as detailed in the section above. Additionally, you should back up all of the Zenoss configuration files. To do this (assuming the install directory is /usr/local and the place we want to keep the config files is /tmp):

```
mkdir -p /tmp/zenoss-tmp/mysql
mkdir -p /tmp/zenoss-tmp/zenoss
cp /usr/local/zenoss/mysql/my.conf /tmp/zenoss-tmp/mysql
cp /usr/local/zenoss/zenoss/etc/* /tmp/zenoss-tmp/zenoss
```

2. Get the latest version of the Zenoss stack installer you want to upgrade.
3. Follow the normal installation instructions for your Zenoss stack installer of choice.
4. After the upgrade, move all of your back ups back:

```
cp /tmp/zenoss-tmp/mysql/my.conf /usr/local/zenoss/mysql
cp /tmp/zenoss-tmp/zenoss/* /usr/local/zenoss/zenoss/etc
```

## 3. Upgrading the Zenoss Virtual Appliance Image

This section provides instructions for upgrading the Zenoss Virtual Appliance. Navigate to the console of your virtual appliance, and then use the following upgrade steps.

## Note

Before beginning upgrade, you must save any other software packages you have installed on the virtual appliance. For each software package, use this command:

```
root# conary pin packagename
```

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

To upgrade the Zenoss Virtual Appliance:

1. Back up your Zenoss data files, as discussed in Section 1.1.

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. Clean up cache files with the following commands:

```
root# rm /home/zenoss/var/*.zec
root# find /home/zenoss/perf -name *.pickle -delete
```

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

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

6. Use the following command to upgrade your Zenoss instance:

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

7. Reboot your system.

8. 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
```

## 4. Upgrading EL4 or EL5 RPMs

These instructions describe how to install an upgraded version of the Zenoss RPM for RHEL/ CentOS 4 and 5.

1. Download all new Zenoss software for ELX.

Where 'X' is either 4 or 5 depending on which version of Enterprise Linux you are running

2. Shutdown your existing Zenoss install:

```
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. Cleanup cache files with the following commands:

```
root# rm /opt/zenoss/var/*.zec
root# find /opt/zenoss/perf -name *.pickle -exec rm -f {} \;
```

5. Install the RPM. (Note - if you have the zenoss-core-zenpacks rpm already installed you may need to use the --nodeps option with this rpm command.)

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

6. Start Zenoss:

```
root# service zenoss start
```

7. Upgrade the Core ZenPacks and restart Zenoss:

```
# rpm -Uvh zenoss-core-zenpacks-VERSION.elX.i386.rpm --nodeps
# /etc/init.d/zenoss restart
```

Make VERSION in the above command equal to the current version of Zenoss (ie:2.0.0, 2.2.3, etc.).

## 5. Upgrading a Source Tarball Install

To upgrade a Zenoss source tarball, download and extract the new tar ball, run install.sh:

```
zenoss$ tar zxf zenoss-VERSION.tar.gz
zenoss$ cd zenoss-VERSION
zenoss$ ./install.sh
```

Make VERSION in the above command equal to the current version of Zenoss (ie:2.0.0, 2.2.3, etc.).

## 6. Upgrading a Subversion Source Checkout

If you have a subversion checkout of the Zenoss installer code you can update it using the following commands:

```
root# cd <your inst directory>
root# svn update
otherwise retrieve a copy of the install code:
root# http://dev.zenoss.org/svn/trunk/inst zenossinst
root# cd zenossinst
```

Then run the install script:

```
root# ./install.sh
```

After install is complete migrate your data as the zenoss user:

```
root# su - zenoss
zenoss$ zenmigrate
```

---

# Chapter 10. Upgrading from a Source Install to a Stack Install

## 1. Upgrading From a Source Install to a Stack Install

Here are the steps for upgrading from a source-based install to a zenoss-stack .deb or rpm.

Note, that for all the commands below, the prompt "#" is used to mean "run as root" and "\$" for the zenoss user.

1. Get the zenoss .deb (for debian and ubuntu systems) or .rpm for Redhat, SuSE.
2. The zenoss stack includes it's own copy of mysql, which, by default, will run on port 3307. Change your current configuration to point to port 3307.

In the Zenoss GUI, from the Event Manager choose Edit, 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 GUI go to Settings -> ZenPacks

5. Shutdown 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 the stack on debian/ubuntu using either the .deb

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

or 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 install:

```
$ 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 all of zenoss:

```
$ zenoss start
```

---

# Chapter 11. Uninstalling Zenoss

## 1. Uninstall Overview

The uninstall instructions in this chapter will remove Zenoss and all of its components from your system. If you want to maintain any of the data files for this Zenoss instance then follow the backup and archiving instructions in the Zenoss Administrator's Guide.

## 2. Uninstalling Zenoss from RPM Installs

If you have installed Zenoss from one of the Zenoss RPMs (not a stack installer), as 'root' run the following commands:

```
rpm -e zenoss
```

```
rm -rf /opt/zenoss
```

```
userdel zenoss
```

```
mysql -u root
```

The following commands will be run at the mysql prompt you are already at as a result of the previous command.

```
> drop database events;
```

```
> delete from user where username="zenoss";
```

The username field may change depending on the username where you installed the Zenoss instance. 'zenoss' is just the recommended user location.

## 3. Uninstalling Zenoss from Stack Installers

To uninstall Zenoss and all of its files from an installation of Zenoss installed using the bin installers:

In the `usr/local/zenoss` folder, find executable named 'uninstall'.

Run this 'uninstall' executable and follow the prompts and Zenoss is removed from your system.

To uninstall the for the Zenoss deb files, the uninstall uses the `dpkg` uninstall command:

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

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

## 4. Uninstalling from the Mac OSX Stack Installer

To uninstall an instance of Zenoss installed using the OSX Stack installer. From the Finder, from the Go menu, select Go to Folder and then in the resulting dialog, enter: `/usr/local/zenoss`

A new finder window installs showing the contents of that folder. The folder contains an app called 'uninstall.app'

Follow the uninstaller screen prompts and Zenoss is removed from the system.