



# Easy Set-up of an eGroupWare Server with Zenserver

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If there is one thing I learned during my fifteen years working in the construction engineering field it is that a project's level of success is directly linked to its team's ability to communicate. Finding the proper tools and infrastructure that allow people on a project to collaborate with each other and share information, without getting in the way, is not an easy task.

I have worked for several engineering firms and on many kinds of projects over the years. And even with all of today's advanced technology, keeping a job on-time and on budget is a constant struggle.

However, a year or so ago, I happened to come across the open source web collaboration tool, called eGroupWare ([www.egroupware.org](http://www.egroupware.org)). I immediately saw the potential this suite of integrated applications had that could help make my job, as a project controls person, easier.

Since then, I have setup several instances of eGroupWare on a few different types of Linux servers. However, none of these experiences were as easy as my recent adventures with an up-and-coming Linux server distribution, called Zenserver ([zenserver.zenwalk.org](http://zenserver.zenwalk.org)).

Zenserver is a very *light* and fast Linux server distribution, built from the Zenwalk Linux desktop distribution ([www.zenwalk.org](http://www.zenwalk.org)).

In this tutorial, I will take you step-by-step through the process of installing Zenserver on to a low-resourced PC and then getting the eGroupWare web collaboration

suite up and running (note: at time of writing, Zenserver does not support PHP-IMAP, therefore e-mail support under eGroupWare will not be included).

The only prerequisites you will need to complete this tutorial is a PC that meets the minimum requirements of the Zenserver distribution (you can check out the Zenserver Wiki page for more information) and a CD that contains the Zenserver 0.2 ISO (again, you can find this by visiting the Zenserver Wiki).

## Part One – Installing Zenserver

*Booting the system:* The first thing you will do is boot your PC with the Zenserver 0.2 CD in the CD-ROM drive. During this tutorial, I'll be installing Zenserver on a PII – 350 Mhz PC, with 256MB of RAM and an unpartitioned 160GB hard drive. Once the PC has begun it's boot-up process and accesses the CD-ROM, you will be greeted with the very simple Zenserver boot-splash screen:

```
ZS-1 - Zenserver Boot-splash  
Press <ENTER> to proceed.
```



In a few moments, you will then be presented with the Zenserver Setup dialog box.

As you can see, Zenserver does not come equipped with a fancy GUI installer. But do not let this intimidate you. The install is still an easy process when compared to many other Linux installations – GUI based or otherwise. Just remember that your keyboard's up and down cursor keys change the menu selection, while the left and right cursor keys choose between the *OK* or *Cancel* options. Pressing the *<ENTER>* key makes your selection.

ZS-2 - Zenserver Setup

### Selecting a Keyboard Map

From the menu currently on your screen, we will select the first menu item, *KEYMAP* – *Select a keyboard map*, by pressing *<ENTER>*. From the list of keyboard/languages, choose the one you prefer to work with. If you wish to choose the default map, *Qwerty/us.map*, simply press *<ENTER>*.

### Partitioning the Hard Drive

Once you have chosen a keyboard map, you will be presented with the Partitions Editor menu. This will most likely be the most complicated and lengthy part of the Zenserver and eGroupWare installation.

You begin with a window listing all of the hard drives currently installed on this PC. In this example, you can see that I only have one hard drive to choose from, *hda*. Use the up and down arrow keys to select the drive you wish to work with – that is, install Zenserver on – and press the *<SPACE BAR>*. This puts an asterisk next to the drive label. Now press *<ENTER>* to edit the partition table on this particular drive:

ZS-3 - Zenserver Hard Drive  
Partitioning

If this is a new, never before formatted hard drive, you will see the message: *No partition table or unknown signature on partition table. Do you wish to start with a zero table [y/N] ?* Simply answer yes to this question by typing *y*, followed by *<ENTER>*.

Zenserver will now launch the *cdisk* partitioning tool; looking something like this:

ZS-4 - Zenserver - cfdisk  
partitioning program

*cdisk* can be a little intimidating for people who are more used to GUI applications of similar natures, like *Gparted*. But, let's see if I can take you through it without causing you too much distress.

In this example, the table on the screen has only one row, with the entire space on the hard drive assigned to it (that being 164694.79 Megabytes – or 164 Gigabytes). What we need to do is break this up into a few key partitions (or pieces) and then format the entire kit and caboodle.

One of these partitions must be designated as *bootable*, one partition must act as our systems *swap* (or temporary file) partition, and one partition must be designated as the *root* (aka */*) partition. The rest of the hard drive's layout is up to us.

I am not all that skilled as a system administrator, so I am sure other people in the field who know more than I do have a better idea as to how to configure a hard drive's partition table for a web server. But here is how I am going to set up this hard drive (as long as you meet the requirements I mentioned earlier, you can set up your hard drive any way you want):

- One partition as */boot* (flagged as *bootable*) – 100MB in size,
- One partition as */swap* – 1 GB in size,
- One partition as */* – 10 GB in size,
- One partition as */home* – 40 GB in size,
- One partition as */var* – 113 GB in size.

To create a partition table as I have described, begin by pressing your left cursor key to highlight *New* and press *<ENTER>*. As this is our first partition on our hard drive, press *<ENTER>* to choose the *Primary* option, which you will see as being highlighted.

Now enter the amount of storage space you wish to assign to this partition. As this will be the *boot* partition, I am only going to give it 100MB (which is much more than it really needs anyway) by typing 100 and pressing *<ENTER>*. Press *<ENTER>* again to select the default option of *Beginning* for the next question.

Now, we just need to make this partition *bootable*. Make sure our new partition, labeled as *hda1*, is highlighted in the table and that the option *Bootable* (found at the bottom of the screen) is also highlighted, then press *<ENTER>*. This will put the boot flag next to *hda1*.

The first criteria, which I mentioned previously, is now met. Let us take care of the second criteria. having a *swap* partition.

With the *hda1* row still highlighted, press your down cursor key to highlight the empty row below. Now, as we did to make the */boot* partition, cursor over to left to highlight *New* and then press *<ENTER>*. This time we want to make a *logical* partition, so cursor over to the left to highlight *Logical*, then press *<ENTER>*.

Type in the amount of hard drive space you wish to assign to the */swap* partition. In my example, I want to assign a Gigabyte to */swap*, so I type 1000 and press *<ENTER>*. Finish up by pressing *<ENTER>* to select the *Beginning* option for the next question.

Now we have to tell *cdisk* to make this our */swap* partition. With the row still highlighted (that's the row labeled *hda5*), cursor left until the *Type* option is highlighted, then press *<ENTER>*. You will then see a large table of different file formats you can choose from. Ignore them all and just press *<ENTER>* again. When you get to the next screen, simply type the number 82 and press *<ENTER>*.

That takes care of the swap partition. Now you can either make one more partition for *root* or you can breakdown your partitioning even further (like my example above).

Follow the steps that we did to make the swap partition, but leave out the last bit about selecting *Type*. You will not have to do that again.

When you are done, you will have a partition table that will look something like this:

ZS-5 - Zenserver - cfdisk completed  
partition table

When you are done, cursor over to the *Write* option and press *<ENTER>*. Type yes and press *<ENTER>* to confirm that you wish to format your hard drive. When this is done, cursor over to *Quit* and press *<ENTER>*.

You will then leave the *cdisk* program. Press *<ENTER>* again to exit this part of the Zenserver installer.

Next, Zenserver will attempt to determine if you have a */swap* partition (I told you we would need one of those). In the dialog box, you will see that *hda5* has been identified as a swap partition. Simply press *<ENTER>* to move on; and for the next dialog box, leave *No* selected and press *<ENTER>*.

Once your swap partition has been configured, press *<ENTER>* again to move on.



Now we must tell the Zenserver installer which partition will perform what function. We will refer to my example partition table, mentioned previously:

```
ZS-6 - Zenserver
      - Partition Install Table
```

The first partition Zenserver will want to deal with is the `root` (aka/) partition. If we refer to my list of partitions, `root` is actually `/dev/hda6`, not `/dev/hda1` (the first partition on the drive). So, use the down cursor key to select `/dev/hda6` and then press `<ENTER>`.

When asked how you wish to format this partition, select the first option, Format, and press `<ENTER>`. You will now be asked which file format you want the partition to have. This choice is up to you, but I have always had success with `ext3`. Use the up and down cursor keys to make your choice, then press `<ENTER>`. When asked for the inode density, the default should be just fine. So simply press `<ENTER>` again. Now Zenserver will format the `root` partition. We can now format and identify the rest of the partitions.

From the partition install table, now select `/dev/hda1` and press `<ENTER>`. Follow the formatting steps that we did for "root", but notice the screen that appears after selecting the inode density this time:

```
ZS-7 - Zenserver
      - Select Mount Point
```

In this box, type the *mount point* you wish to assign to this partition. In this case, we want `/dev/hda1` to be the `/boot` partition, so type `/boot` (remember to add the slash at the beginning) and press `<ENTER>`.

Now repeat this process for the remaining two partitions assign one as `/home` and one as `/var` (note `/var` will be the storage space for all of our eGroupWare and web server files).

When all of your partitions have been assigned, you will be back at the partition install table, press the left cursor key to select Continue, instead of Select, and press `<ENTER>`. You will be asked to confirm that this partition table will be written to `/etc/fstab`. Press `<ENTER>` again to accept.

You have successfully formatted your Zenserver hard drive! Congratulations!

## Installing the Zenserver System Files

Now comes the easy part, installing the Zenserver system files.

```
ZS-8 - Zenserver - Source Media
      Selection
```

At this screen, simply press `<ENTER>` to have Zenserver begin installing from your CD-ROM. Press `<ENTER>` again to have Zenserver auto detect the drive in which you have the Zenserver install CD loaded.

Once the CD is found, you can sit back and take a well deserved break. Depending on the speed of your processor and CD drive, the install should take between 15 and 25 minutes.

### Installing LILO

So, now that the system files are installed on to the hard drive, it is time to configure the boot-loader. Zenserver, just like Zenwalk, uses LILO for this task:

```
ZS-9 - Zenserver
      - LILO Install Menu
```

From the *Install LILO* menu that now appears on the screen, simply choose the default option, Simple, by pressing `<ENTER>`. You will then be asked to select a resolution for LILO's frame buffer. I typically choose the `800X600X64` option, which, to me, is the safest one to choose. To do so, press the up cursor key once and then `<ENTER>`.

For the last LILO question, where to install LILO, press `<ENTER>` to select the option MBR. LILO will now be installed on to the boot sector of the hard drive.

Hang in there, we are almost done with getting this distro. installed.

### Choose Your Super User Password

Now you have to choose the password for your system's Super User (aka Root) account. Press `<ENTER>` to select the Yes option and now type in a password for the Super User. Press `<ENTER>` and type it in once more (to confirm what you've just typed) and finish up with one more `<ENTER>`.

Make sure you remember your Super User password. If you forget it, good luck doing any further administration type stuff with your server.

Zenserver now informs you that the install process is done and you can now reboot your system. Press `<ENTER>` to continue.

When you get back to the Zenserver Setup menu (the one we first began with), cursor down to the Exit option and press `<ENTER>`. Zenserver will now tell you to remove the CD from the drive and then type *reboot* to reboot the system. So go ahead, type *reboot* and the press `<ENTER>`.

There you go, your system is installed and ready to go.... almost. There is just a couple of settings we need to configure before going on to the eGroupWare part of this tutorial. But, before you do that, give yourself a pat on the back. You have reached the end of Part One!

## Part Two - Configuring Zenserver Services

Once your new Zenserver is up and running after the reboot, log in as the Super User, by typing `root` at the log-in prompt. I hope you remembered the Super User password you just set-up a little while ago. What we are going to do now is run through the process of getting some the key services (or daemons) you need to have running in order for your new Zenserver box to perform the tasks of a web server. We are going to do this by making use of the Zenserver Administration tool (`zsadmin`).

### Launch Zsadmin

At the command prompt, type:

```
zsadmin <ENTER>
```

This will launch the *Zenserver Administration tool*. This is a handy little program that will make configuring your new server a breeze, and it looks like this:

```
ZS-10 - Zenserver - zsadmin
```

You interact with `zsadmin` in much the same way as you did with the install interface. Use the up and down cursor keys to select menu items, the left and right cursor keys to choose between *OK* and *Cancel*, and `<ENTER>` to make your selections.

### Activating and Deactivating System Services

Once you have the Zenserver Administration menu in front of you, cursor down to the Services option and press `<ENTER>`. We are going to activate a few services and turn one off, too.



In a few seconds, you will be presented with the *Startup Services* menu. This is a list of all the services running, or capable of running, on your server. The asterisk next to the entry indicates that this service is running. What we want to do is deactivate Sendmail and MySQL, and activate Sshd, and Lighttpd:

```
ZS-11 - Zenserver - Startup Services
```

To do this, cursor down to the first entry we are looking for (lighttpd) and press the space bar. You will see the asterisk appear next to Lighttpd. If we wanted to deactivate Lighttpd, we would just press the *space bar* again.

Now find MySQL and make sure there is no asterisk next to it, and do the same for Sendmail. As for Sshd, keeps cursoring down until you find it and make sure it does have an asterisk next to it.

When you are all done, press `<ENTER>` to accept your changes and exit the Startup Services menu.

### Activate Your Network Connection

Once you are back to the Zenserver Administration menu, cursor down to the Network selection and press `<ENTER>`. We are now going to configure your connection to the Internet.

I am going to have to make a few assumptions here. I assume you have your Zenserver box connected to a home (or office) router that has been set-up to assign dynamic IP addresses. If not, visit the Zenserver forum (which you can find by visiting Zenwalk's webpage – [www.zenwalk.org](http://www.zenwalk.org)) and ask for directions regarding your particular set-up.

When the Network configuration window appears, press `<ENTER>` with the eth0 selection highlighted. Then, on the next screen, select the *Up* option for *DHCP* and press `<ENTER>`. That is all you will really have to do. You can set your domain name and such, but it is really not necessary for the task we are attempting to perform. Once eth0 is up and running, you will see the IP address given to you by your DHCP router. You can now cursor over to the right and select `<BACK>` and press `<ENTER>` and now cursor over to `<EXIT>` and press `<ENTER>` to leave the Network configuration menu.

### Set-up and Activate MySQL

Once you are back to the Zenserver Administration menu, cursor down to Mysq

and press `<ENTER>`. This will configure MySQL on your system. Just follow the prompts as they come up. Start with selecting Setup and press `<ENTER>`.

You will have to set your MySQL root password. It does not have to be the same password as your Super User password. Just make sure you remember what you set it too. You will need it when configuring eGroupWare.

Once you have set-up MySQL, you can reboot your system. From the Zenserver Administration, cursor over to `<Cancel>` and press `<ENTER>`. When you get back to the command prompt, type `shutdown -r now` and press `<ENTER>`. Once the system reboots, we can proceed to install eGroupWare.

Note: you may want to visit the Zenserver Wiki site and read up on some of the *post installation* instructions listed there. Included in this list of tasks is how to upgrade the system files to the latest packages available on the Zenserver repositories.

Check out the Wiki here:

<http://zenserver.zenwalk.org/index.php/Documentation>

## Part Three – eGroupWare

Now comes the fun part of this tutorial, getting eGroupWare up and running on your new Zenserver.

### Downloading and Installing the eGroupWare Files

Log in to your server as Super User and get yourself to the command prompt. Once you are there download the latest eGroupWare installation file (at the time of this writing, it is version 1.2.106) by typing:

```
wget http://easynews.dl.sourceforge.net/sourceforge/egroupware/egroupware-1.2.106-2.tar.gz <ENTER>.
```

```
ZS-12 - Zenserver - Downloading eGroupWare
```

Once the download is complete, make a sub-directory in your web server folder called egroupware by typing:

```
mkdir /var/www/htdocs/egroupware and press <ENTER>.
```

Now, unzip the eGroupWare file you have just downloaded into this new directory by typing:

```
cd /var/www/htdocs/egroupware <ENTER> tar -xzf /root/eGroupWare-1.2.106-2.tar.gz <ENTER>.
```

You will now have to give ownership of these files to the Lighttpd webserver. Do this by typing:

```
chown -R web:web /var/www/htdocs/egroupware <ENTER>
```

You are now ready to configure your eGroupWare web application. The simplest way to do this is to connect to your Zenserver box via another PC on your network that has a GUI web browser application installed. I strongly suggest using either *Firefox* or *SeaMonkey*.

### Configuring eGroupWare

Finally, we are coming to the final few steps of this tutorial. All that remains is the final configuration of our eGroupWare system files. Initial System Check and Configuration:

To begin, launch your web browser application and navigate the the URL of your eGroupWare files. On the server that I have just set up, that would be: <http://192.160.0.100/egroupware>.

I am now greeted with the eGroupWare welcome screen:

```
ZS-13 - Zenserver - eGroupWare Welcome Screen
```

First thing to do in order to get eGroupWare running on our server is check to make sure all necessary services are installed and available for use. You do this by clicking on the Run installation tests link, at the bottom of the welcome screen.

eGroupWare will now take a few moments and evaluate the running web server, reporting back with a checklist of the services and settings it found and did not find:

```
ZS-14 - Zenserver - eGroupWare Checklist Screen
```

There are three status symbols that you will see in the checklist report:

- *Green Check mark* – Everything checks out and is configured properly,
- *Yellow Lightning Bolt* – A service is missing or mis-configured which will



prevent a minor subsystem of eGroupWare from running,

- *Red Cross Box* – A major services is missing or mis-configured preventing the eGroupWare system from running.

Of course, we would like to see everything report back with a green checkmark. However, we will see a few yellow lightning bolts for some services that we will not have running on our Zenserver set-up. But, most importantly, we should not see any red cross boxes (at least not with a default install of Zenserver), which will prevent us from getting eGroupWare running – for the most part.

Later on, you can work on your Zenserver if it is important to you, and get the services running that reported back as unavailable. For now, we will just click on the link at the bottom of the screen to *Continue to Header Admin file*.

```
ZS-15 - Zenserver - eGroupWare
Configure Header Admin.
```

On this screen, you are issuing a few passwords for your eGroupWare administration and configuration files. Make sure you keep notes, as you will need these later on.

Scroll down to the *Admin Password To Header Manager* box and enter a password for the Header Administrator. This is necessary if you ever wish to re-configure the Header file sometime in the future.

Next, scroll down to the *DB User box* (this is the ID of the user that has access to



### About the author

David has been working with computers since he first sat down in front of a 2001 Commodore PET micro-computer, back in 1980.

He later chose a career in Project Management and Construction Engineering in a supportive role as a project scheduler / project services technician, utilizing his computing skills to their fullest.

In 2001, David stumbled upon the world of GNU/Linux and F/OSS software, which rekindled his enthusiasm for computers and the software that makes them go.

David has since enjoyed learning from and contributing to the Linux community and has been bringing Linux to the local home and corporate computer user through his home consulting business, Virtual Sky Solutions.

the MySQL database) and type in *root* then put root's password in the box below – refer to section 4 of Part Two of this tutorial. I told you you would need that information later!

Now scroll further down to the *Configuration User Password* box and enter a password for the eGroupWare administrator (this is the log-in you will use in eGroupWare to do things like add new users, change passwords, configure the eGroupWare internal applications, etc.).

At the bottom of the screen, click on the *Download* button to save your changes to the *header.inc.php* file and save the file to the PC you're currently working on.

Your next task is to copy this file, *header.inc.php*, from where you saved it on to your Zenserver machine under the folder */var/www/html/egroupware*. You can do this in many ways. For me, the easiest way was to use Konqueror and `fish://` my way into my Zenserver box and move the file over. You do what ever is easiest for you.

Once the file is in the */egroupware* folder, click the *Continue* button, found next to the *Download* button to move on to the home stretch of our journey together.

### Final System Configuration and Applications Install:

A screen with two login dialog boxes will appear on your screen. Log in to the first one, using the Configuration User you just recently set up and click the *Login* button.

You will now see the last configuration checklist for the eGroupWare system. We must go through each of these to finish our install:

```
ZS-16 - Zenserver - eGroupWare
Configure System 1
```

Step 1: In the *DB Root Username* box, type *root*. In the *DB Root Password* box, type the password for the root MySQL user you chose earlier. Now, click the *Create Database* button.

Once that is done, click the *Re-check my database* button and you should see the icon of the cross replaced with a check mark:

```
ZS-17 - Zenserver - eGroupWare
Configure System 2
```

Now click the *Install eGroupWare Applications* button. The system will now install and configure the default set of applications that

come with the install files. When it's done, click the *Re-check my database* button.

```
ZS-17 - Zenserver - eGroupWare
Configure System 3
```

Step 2: Click the *Edit Current Configuration* button to configure the eGroupWare backup setting. You also go here to configure the e-mail support settings, but I am not going to be covering this option in the tutorial.

```
ZS-17 - Zenserver - eGroupWare
Configure System 4
```

For now, we will just configure the system backup folders, which you will see specified in the corresponding fields on your screen. By default, these folders do not exist on your system yet. So, you will have to log in to your Zenserver box as root and type the following commands:

```
mkdir /var/lib/egroupware
<ENTER>
mkdir /var/lib/egroupware/default
<ENTER>
mkdir /var/lib/egroupware/default/
backup
<ENTER>
mkdir /var/lib/egroupware/default/files
<ENTER>
chown -R web:web /var/lib/egroupware
<ENTER>
```

Once that is done, come back to your web browser and click the *Save* button, then click *Cancel*. You will see an error message stating that the mail settings have not been configured, but we can ignore that for now.

Step 3: Click the *Create Admin Account* button and enter the information that is requested. This account information can be the same as the information you set up for the Configuration User account.

```
ZS-17 - Zenserver - eGroupWare
Configure System 5
```

Click the *Save* button when you are done.

Hey, guess what? That is about it! You can now log in to your new eGroupWare server by clicking the *Back to User Login* link (in the menu to the left of the screen) then log in to eGroupWare using your Administration account ID.

```
ZS-17 - Zenserver - eGroupWare
Configure System 6
```