



## **EZPBX-2000 IP-PBX Installation Guide**

**Release 1.0 Aug., 2011**



# About EzVoiceTek

---



*Ezvoicetek Co., Ltd. was founded by a team of specialist in the area of CTI, Contact Center, IVR, VOIP and Telecommunications. We concentrate to provide the IPV6+IPV4 SIP server farm solution including SIP proxy server, IP-PBX, SIP surveillance server and Qos Monitor to our partner, system integrator and value added reseller. All Ezvoicetek solutions are provided to support both IPV4 and IPV6 dual stack simultaneously. We provides a painless migration path from IPV4 to IPV6 network.  
EzVoiceTek Co., Ltd.*

*1F., No.16, Ln. 257, Yuantong Rd., Zhonghe Dist.,  
New Taipei City 235, Taiwan (R.O.C.)  
WEB: [www.ezvoicetek.com](http://www.ezvoicetek.com)  
EMAIL: [sales@ezvoicetek.com](mailto:sales@ezvoicetek.com)*

*Technical Support  
Email: [support@ezvoicetek.com](mailto:support@ezvoicetek.com)*

## **Copyright Notice and Disclaimer**

All rights reserved. No parts of this work may be reproduced in any form or by any means - graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems - without the written permission of Ezvoicetek.

Products that are referred to in this document may be either trademarks and/or registered trademarks of the respective owners. Ezvoicetek make no claim to these trademarks.

EzVoiceTek Co., Ltd. (EzVoiceTek) makes no representations or warranties with respect to the contents hereof. In addition, information contained herein are subject to change without notice. Every precaution has been taken in the preparation of this manual. Nevertheless, EzVoiceTek assumes no responsibility for errors or omissions or any damages resulting from the use of the information contained in this publication..

---

# Table of Contents

<b>Part I CentOS 5.x Linux Installation</b>	<b>6</b>
1 Installing CentOS 5.x .....	6
2 CentOS Post Setup .....	35
<b>Part II RHEL 6 (CentOS 6) Linux Installation</b>	<b>43</b>
<b>Part III EZPBX-2000 Installation</b>	<b>58</b>
1 Download and Install .....	58
2 Startup Settings .....	59

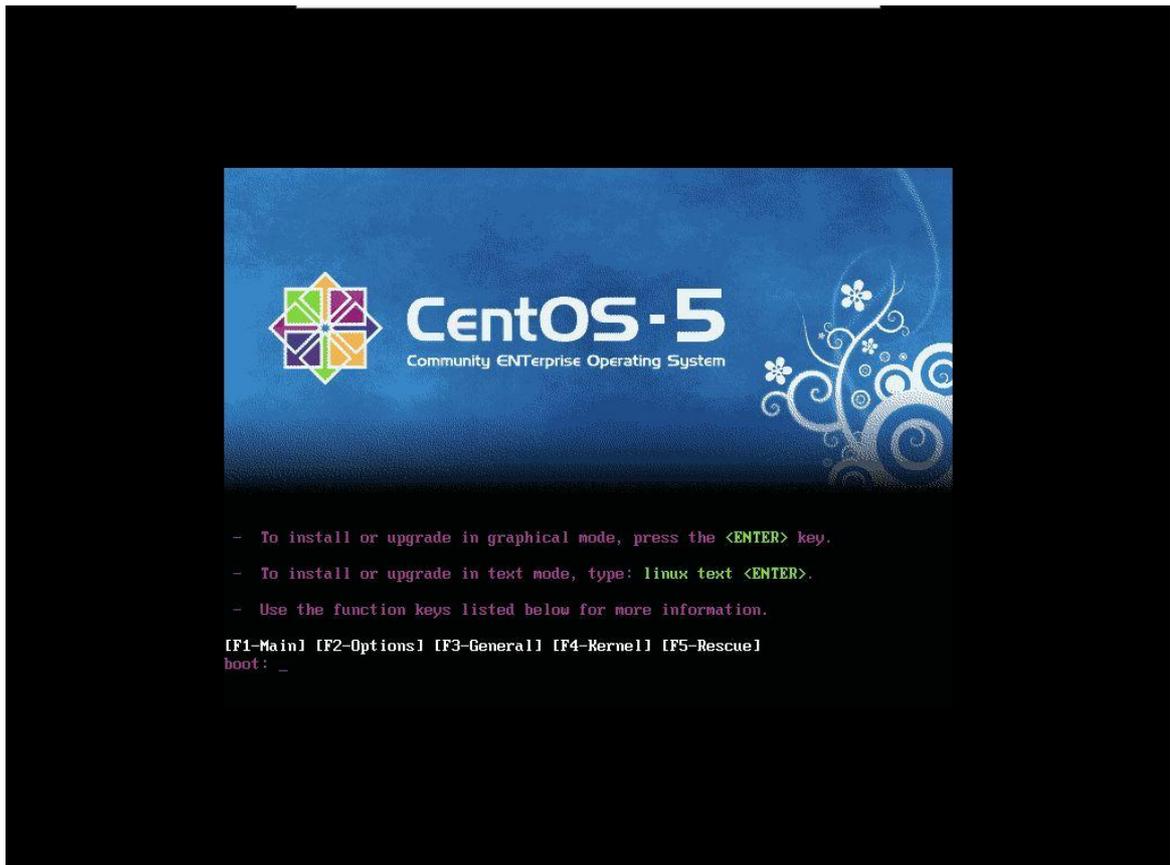
---

# 1 CentOS 5.x Linux Installation

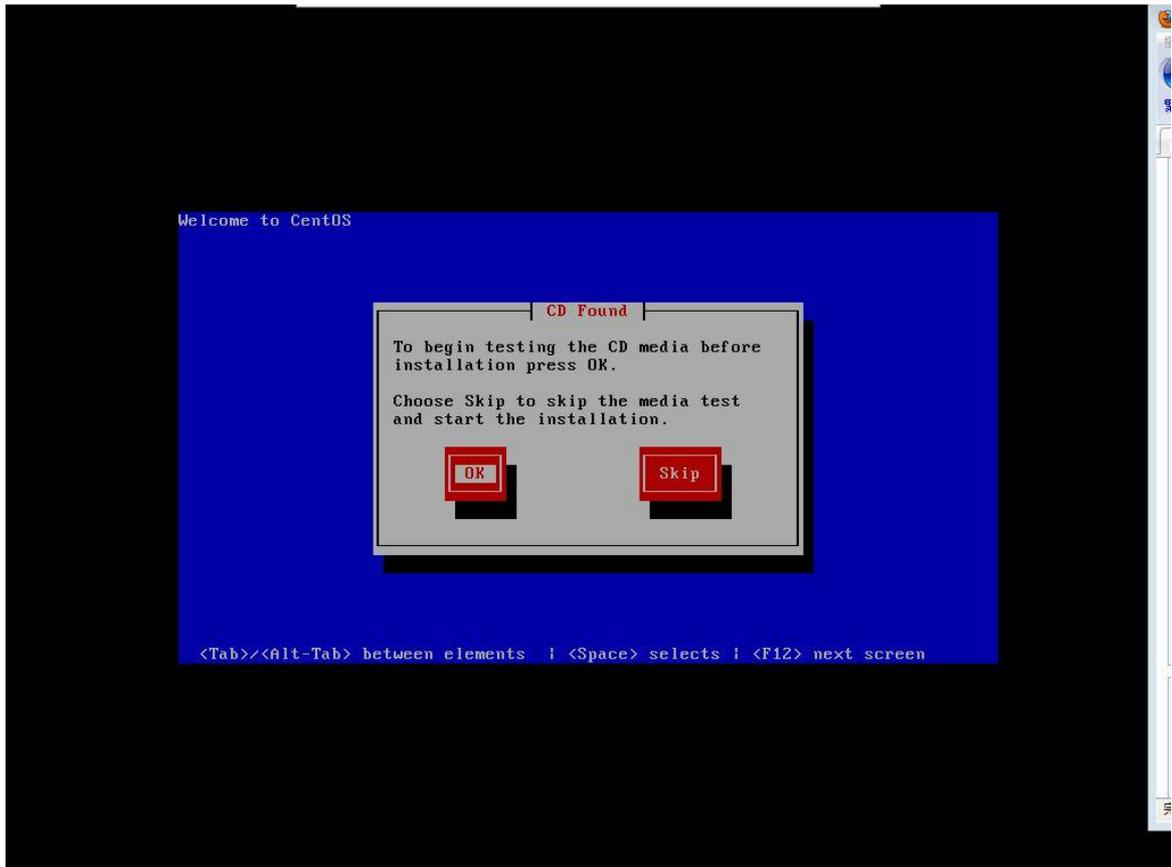
## 1.1 Installing CentOS 5.x

This is a tutorial for installing Centos on a server machine. For advance CentOS user, this chapter can be skipped. **Please note that MYSQL is a must to be installed before you can do the installation.**

Step 1: Insert CentOS DVD into server CDROM and power on the server. The following screen will appear.



Step 2: Press **Enter** key to start the installation. The following screen will appear,



Step 3: Normally, you can select **Skip** to continue the installation. The following screen will appear.



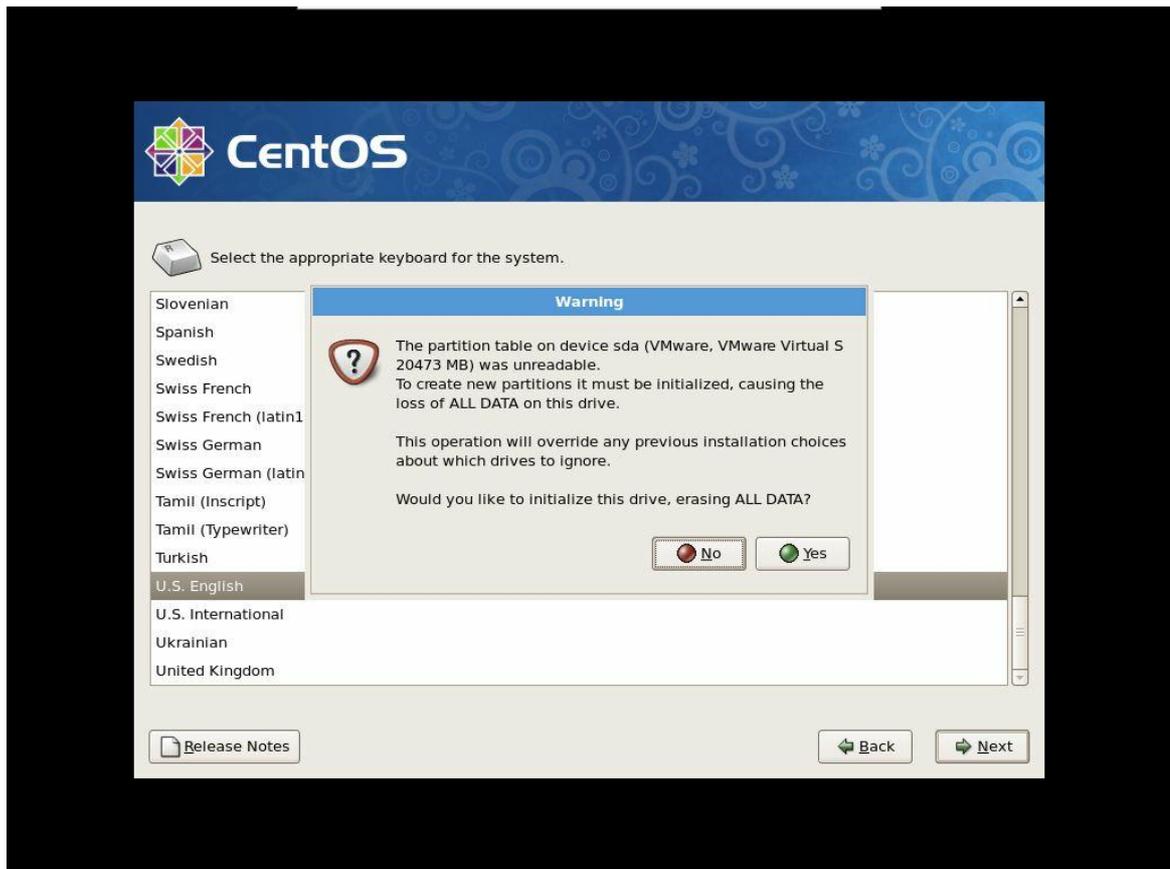
Step 4: Click **Next** button to continue. The following screen will appear.



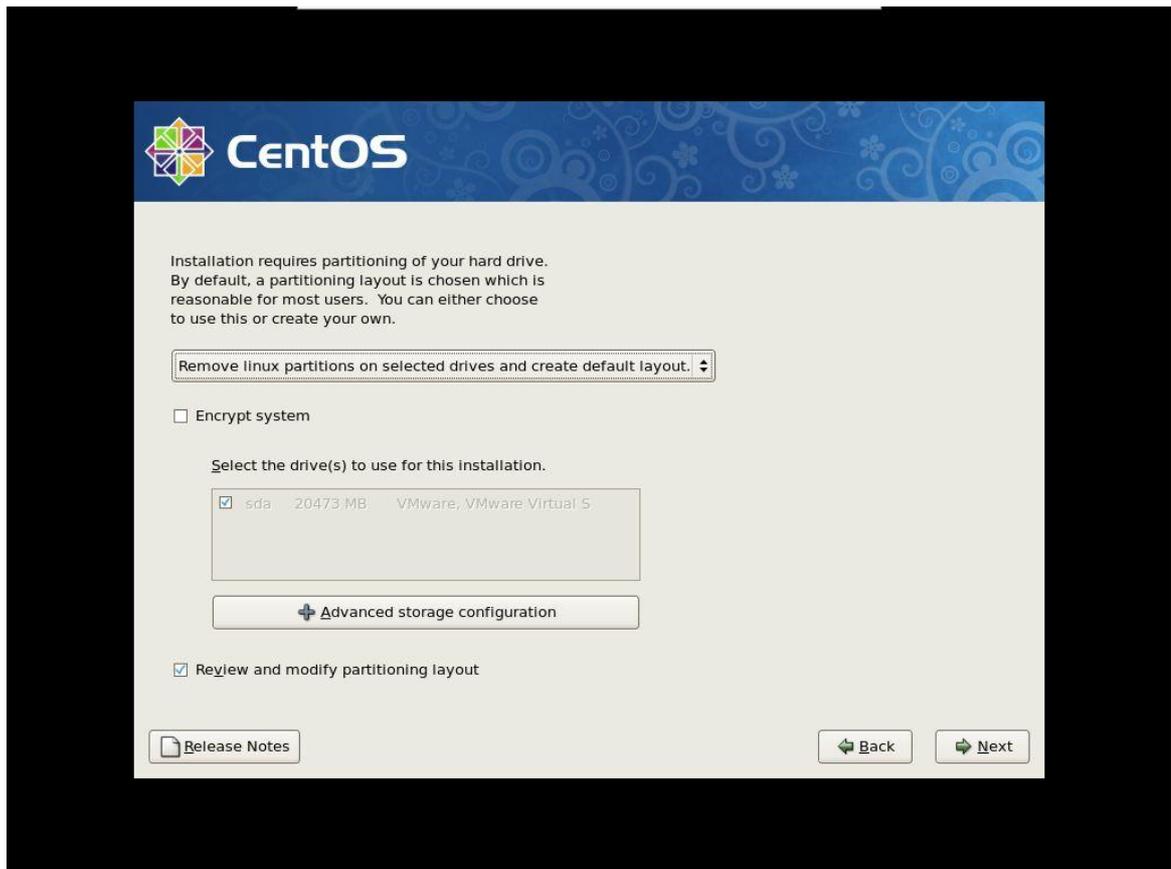
Step 5: Select the language you are preferred. In our case, we select **English** language and click **Next** to continue. The following screen will appear.



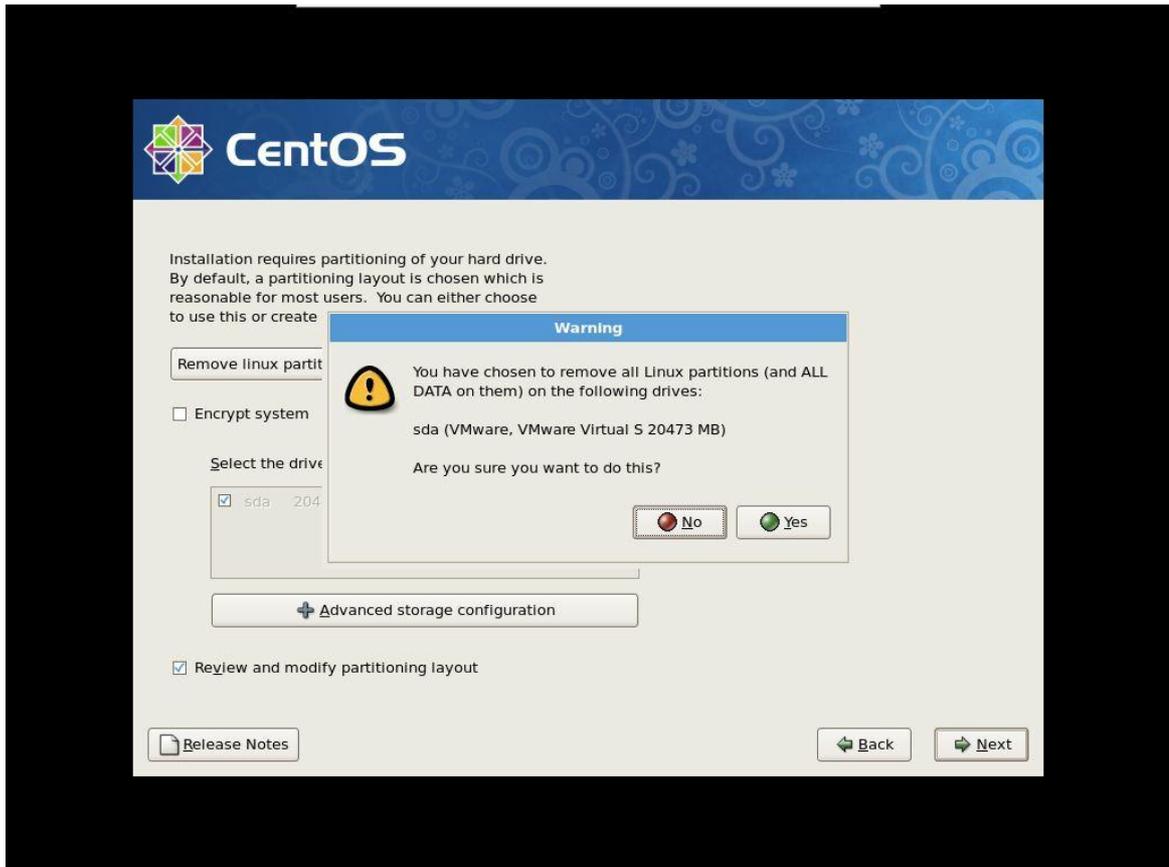
Step 6: Select the **Keyboard** type (in this case, we use U.S. English) and click **Next** to continue. The following screen will appear.



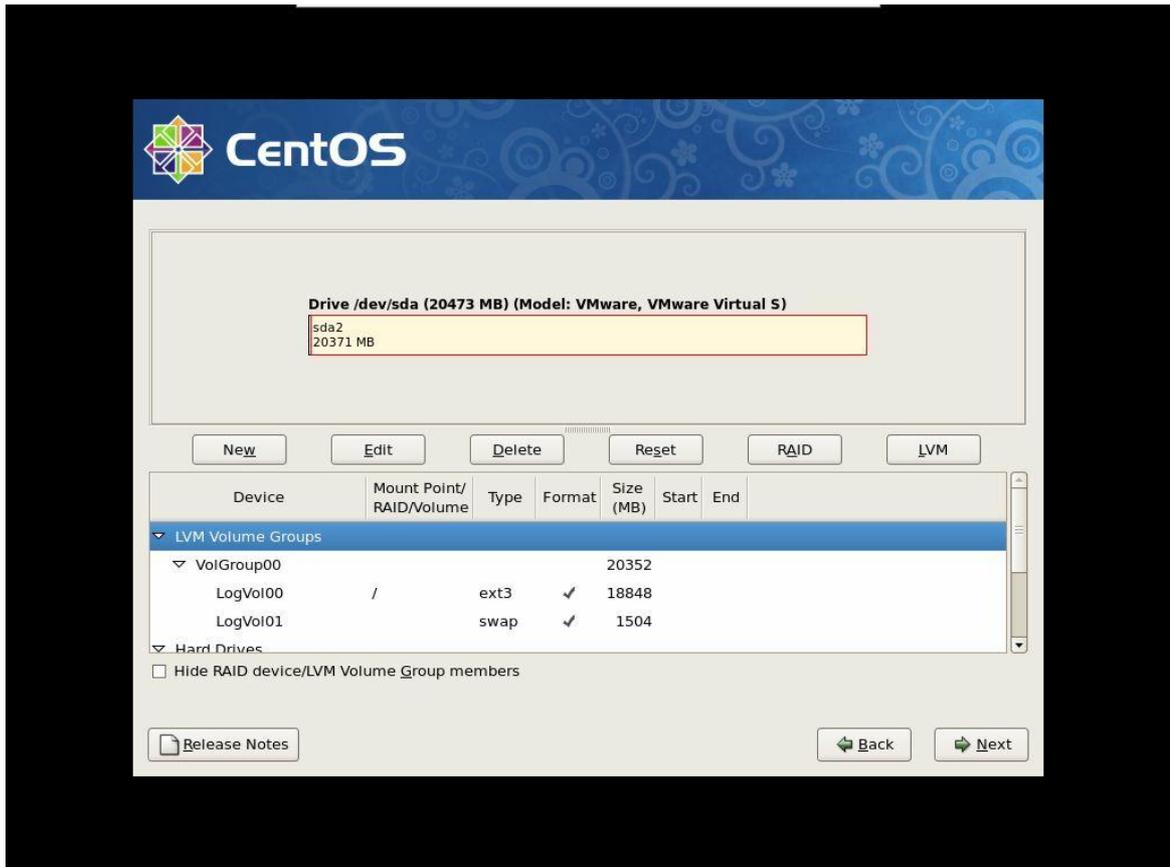
Step 7: Since it is a fresh installation, click **Yes** and continue the installation. The following screen will appear.



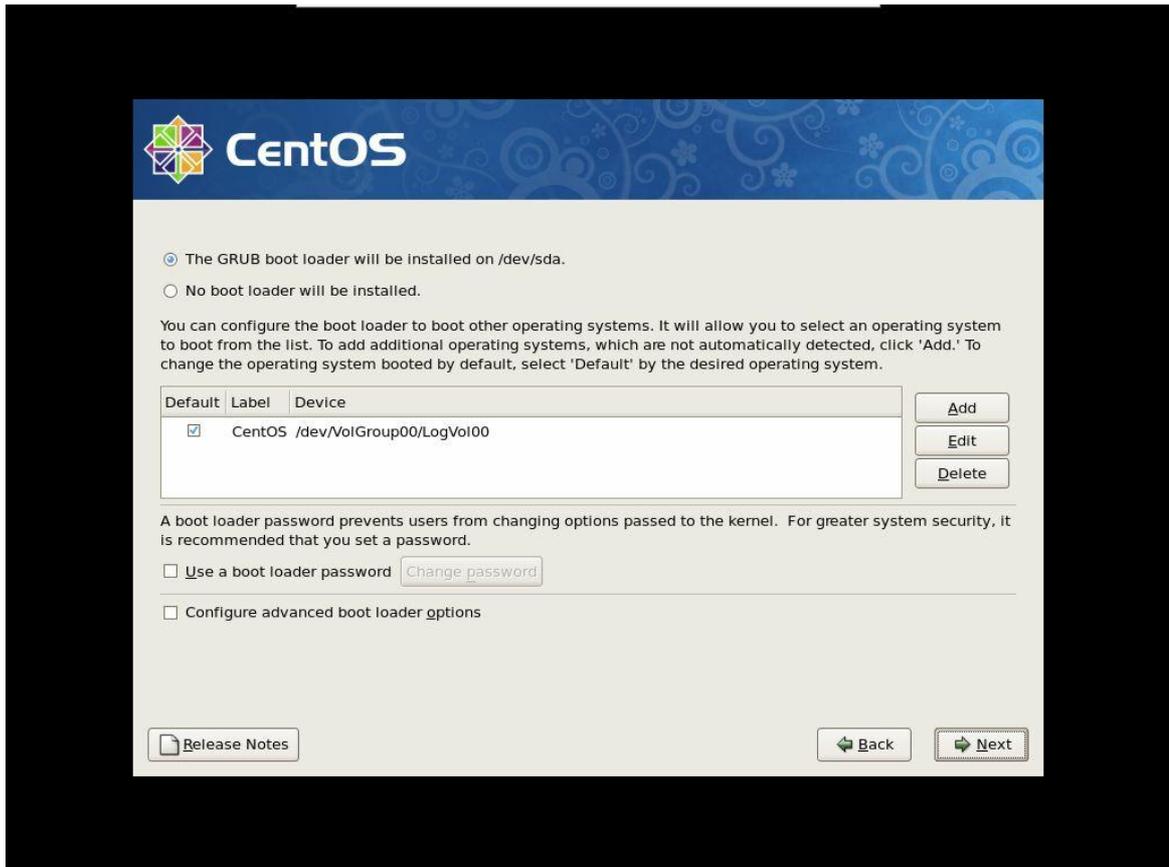
Step 8: Check "**Review and modify partitioning layout**" to view the partition layout and click **Next** to continue. The following screen will appear.



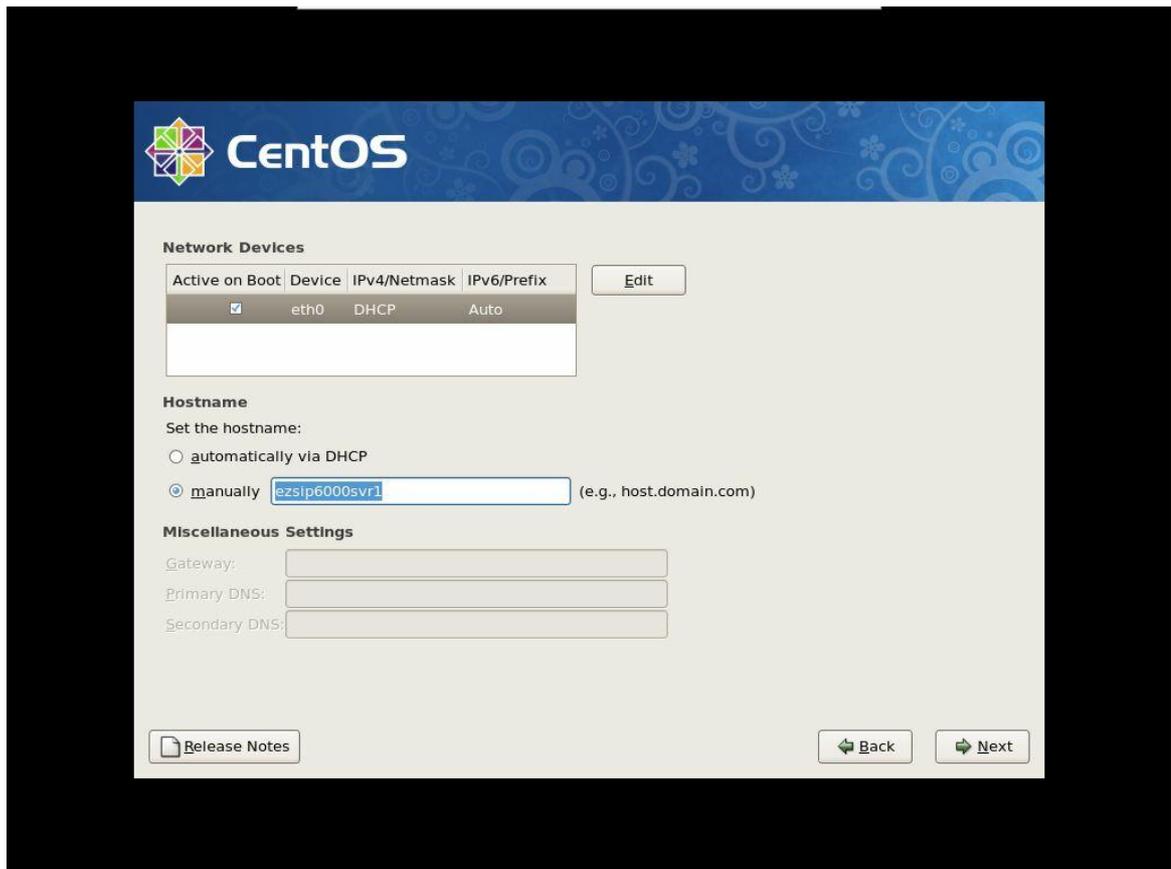
Step 9: Click **Yes** to remove the existing partition (if there is any) and the following screen will appear.



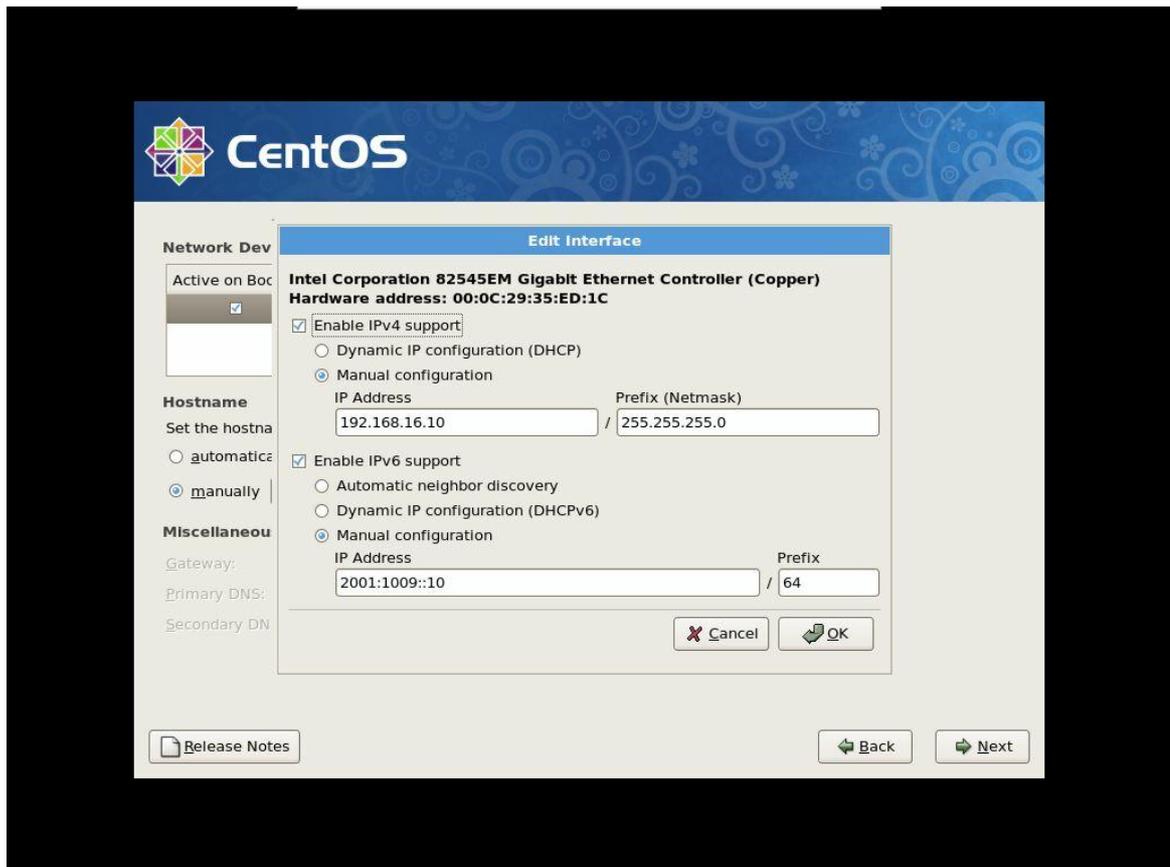
Step 10: Modify the partition layout based on your requirement or you can keep it as default. Click **Next** to continue and the following screen will appear.



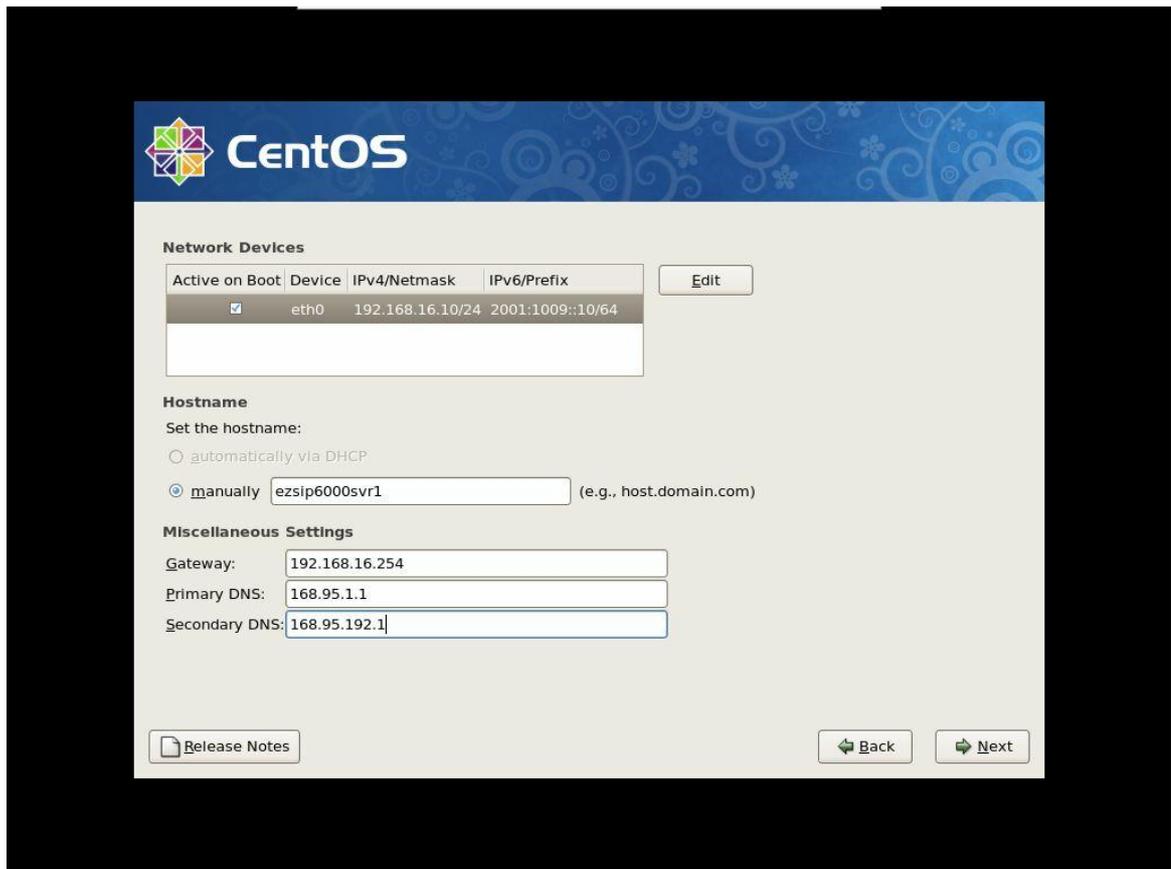
Step 11: Keep the default setting and click **Next** to continue. The following screen will appear.



Step 12: Select Hostname to manually and input the host name (e.g. ezsip6000svr1). Click **Edit** to setup the IP address for IPV4 and IPV6. The following screen will appear.



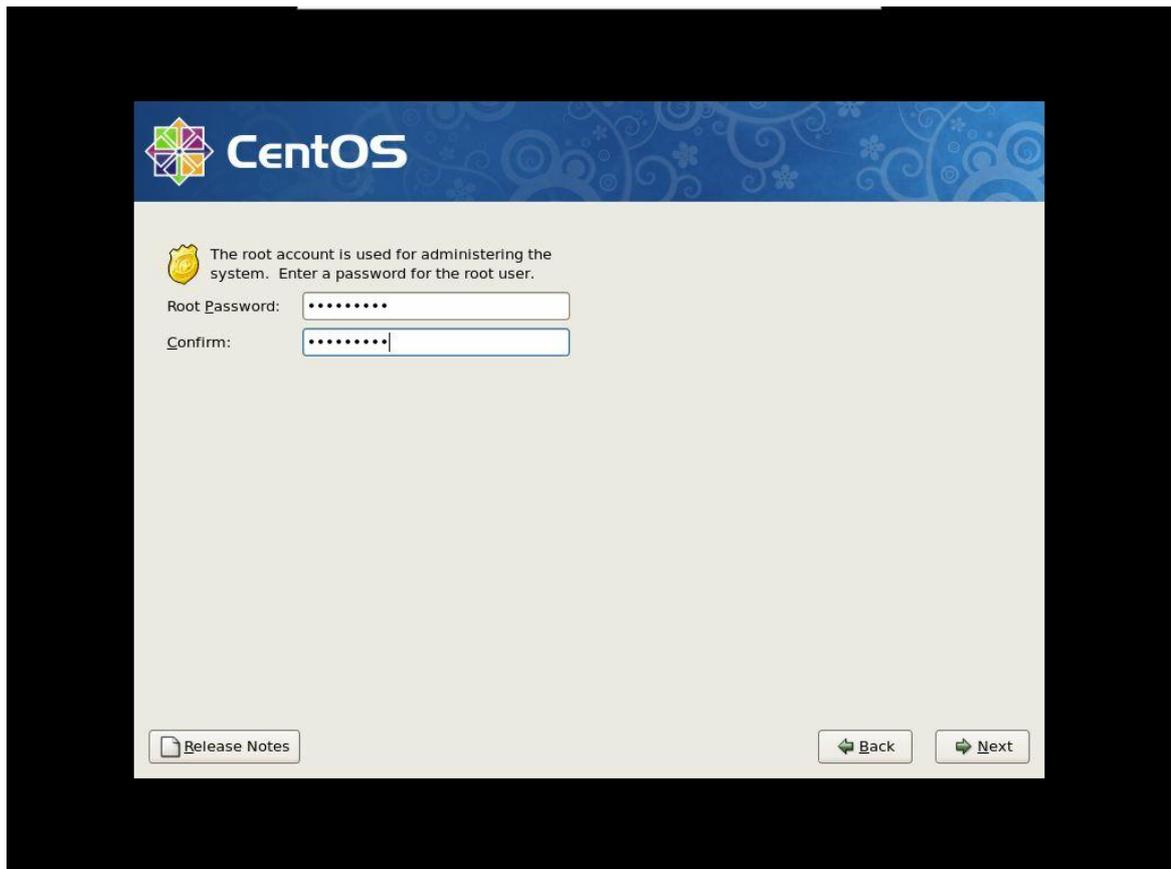
Step 13: Enable IPV4 and optional to enable IPV6 configuration. Input IP address for IPV4 and optional IPV6 as above picture. Click **OK** and the following screen will appear.



Step 14: Input IPV4 default gateway and DNS server settings as above picture. Click **Next** to continue and the following screen will appear.



Step 15: Select the time zone you are located. Click **Next** to continue and the following screen will appear.



Step 16: Enter the root password. Please don't use a strong password for security reason. Click **Next** and the following screen will appear.



Step 17: Uncheck all and select only **Server** and **Server GUI** to minimize the server installation. Click **Customize Now** to customize the setting. Click **Next** and the following screen will appear.



Step 18: Click **Server** and the following screen will appear.



Step 19: Uncheck all except the following server modules.

- FTP Server
- Legacy Network Server
- **MySQL Database (must be included)**
- Network Servers
- Server Configuration Tool

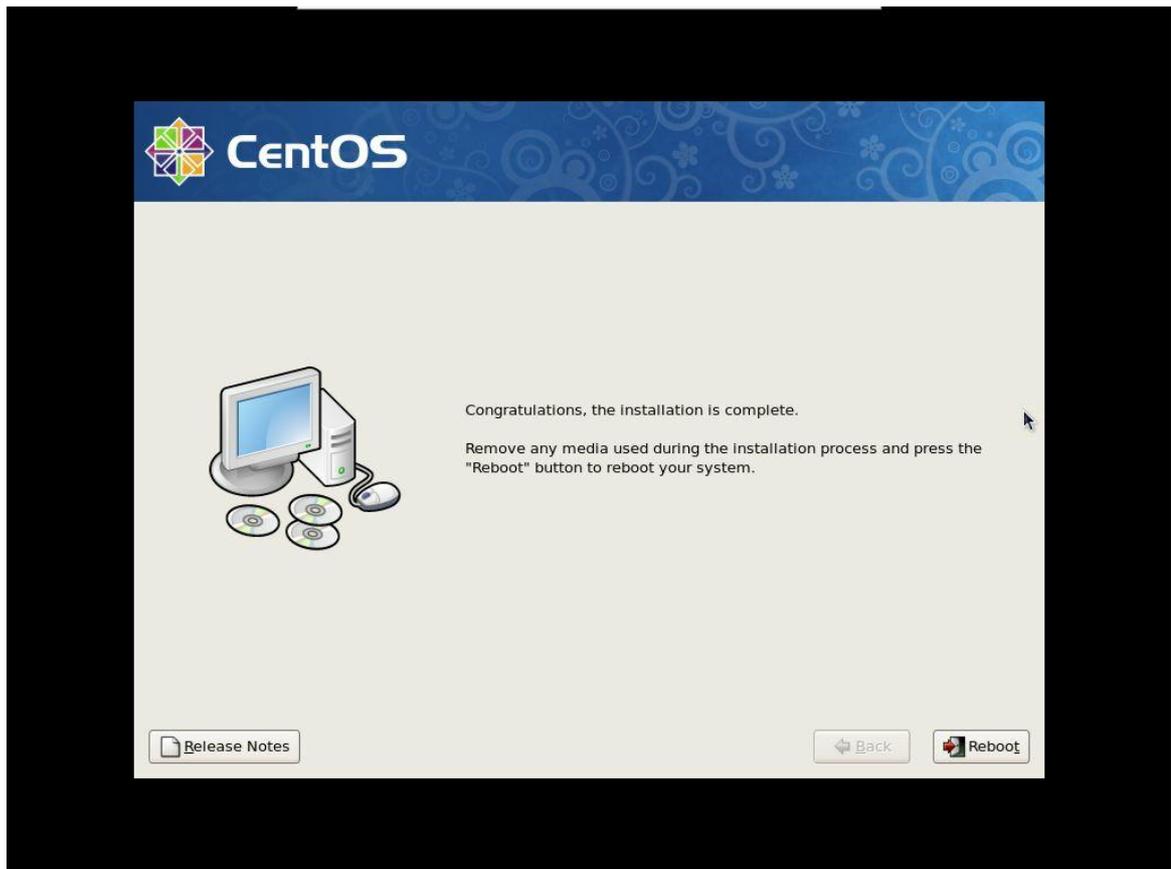
This is a recommendation only and you can select additional modules based on your requirements. Click **Next** and the following screen will appear.



Step 20: Click **Next** to start the installation and you will see the following installation in progress.



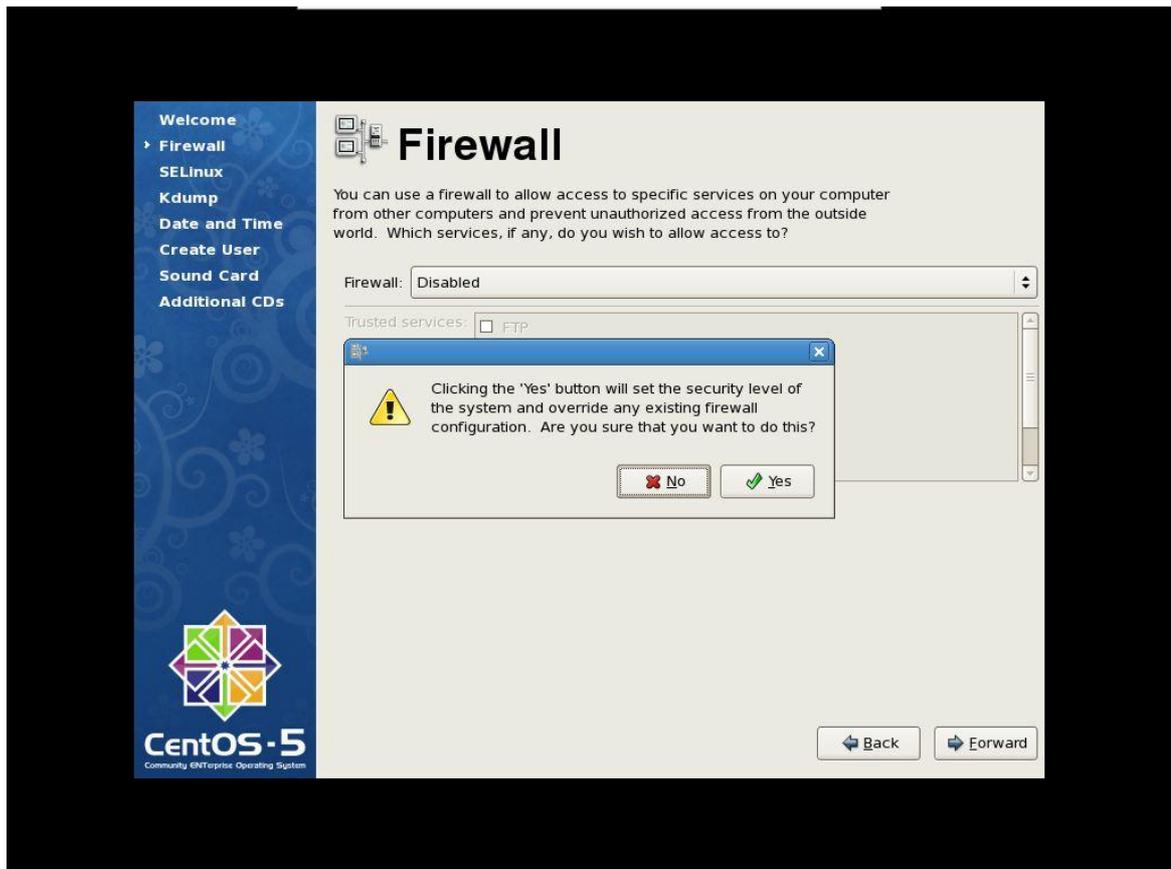
Step 21: After the installation, you will see the following screen.



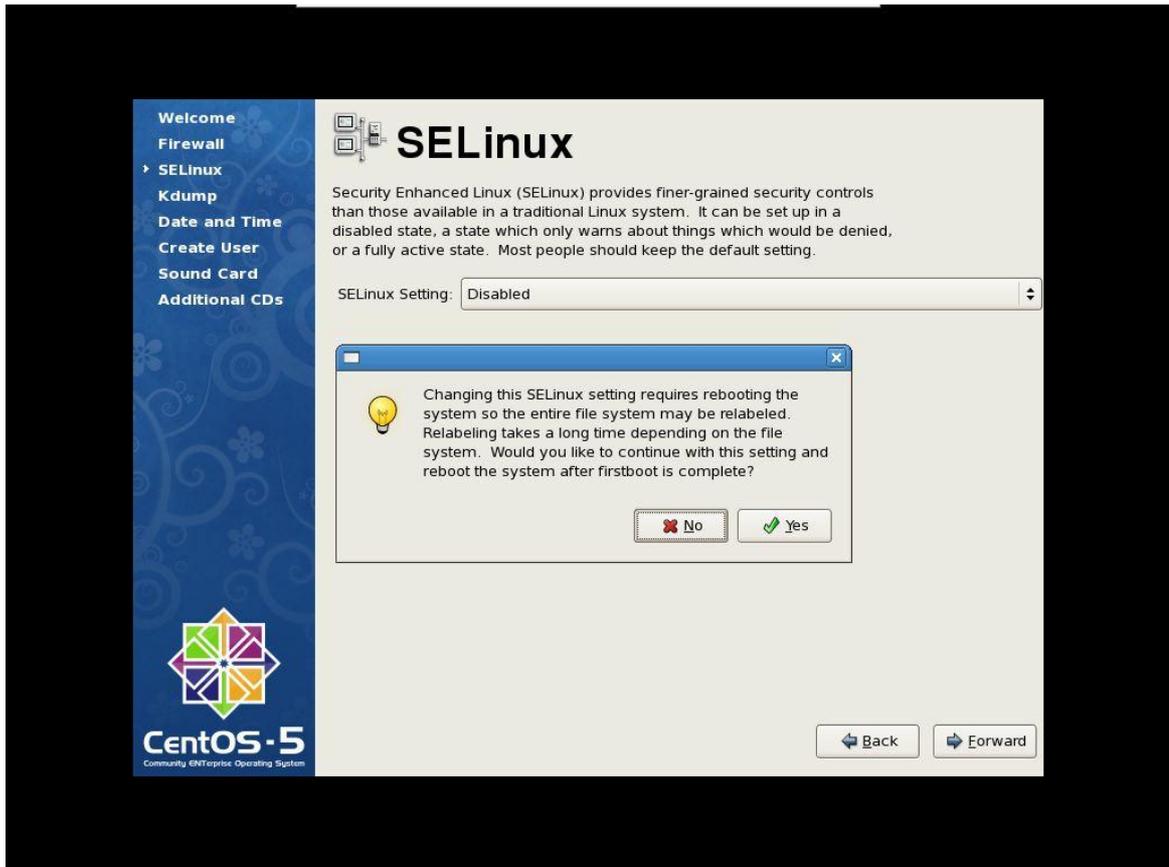
Step 22: Click to **Reboot** to reboot the server. After the server reboot successfully, the following welcome screen will appear.



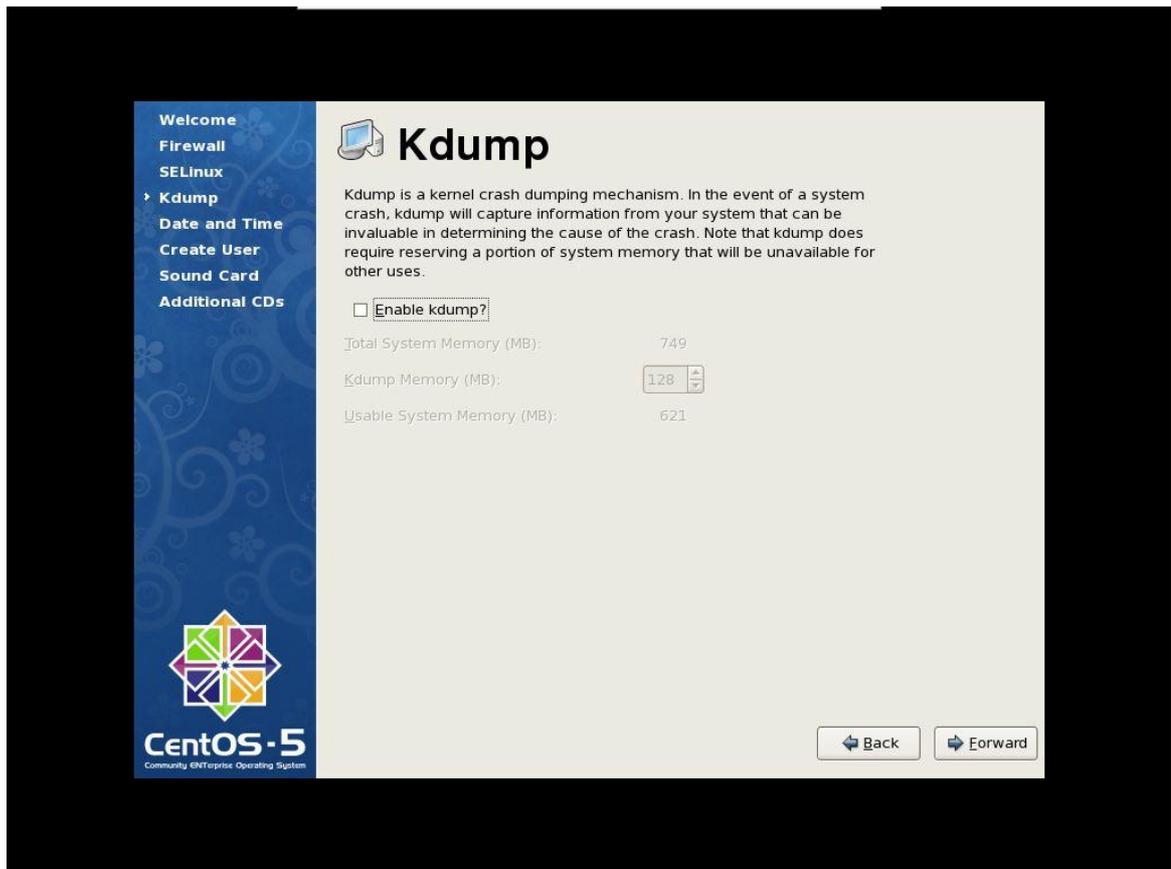
Step 23: Click **Forward** to continue the CentOS setup as follows.



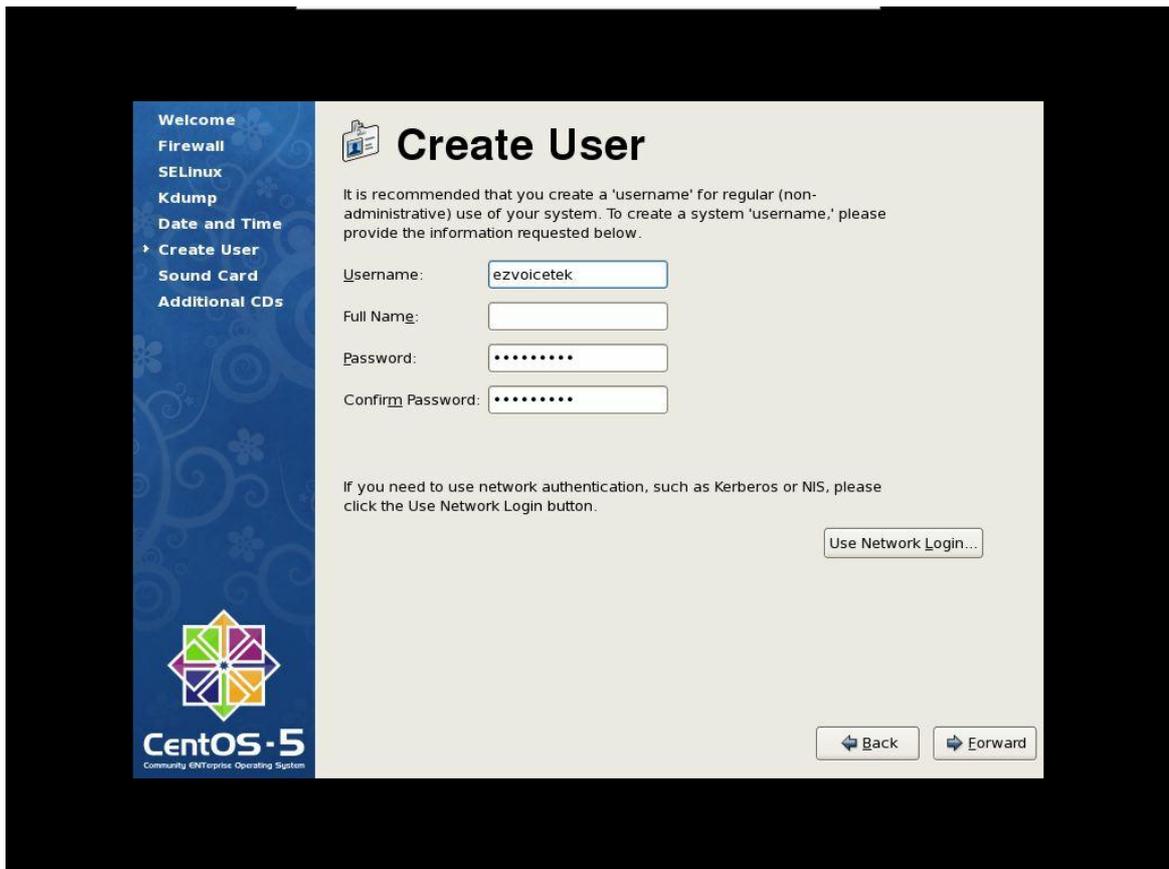
Step 24: Set Firewall to **disabled** to turn it off. If you decide to turn it on, please make sure all the necessary ports are opened. Click **Forward** to continue and the following screen will appear.



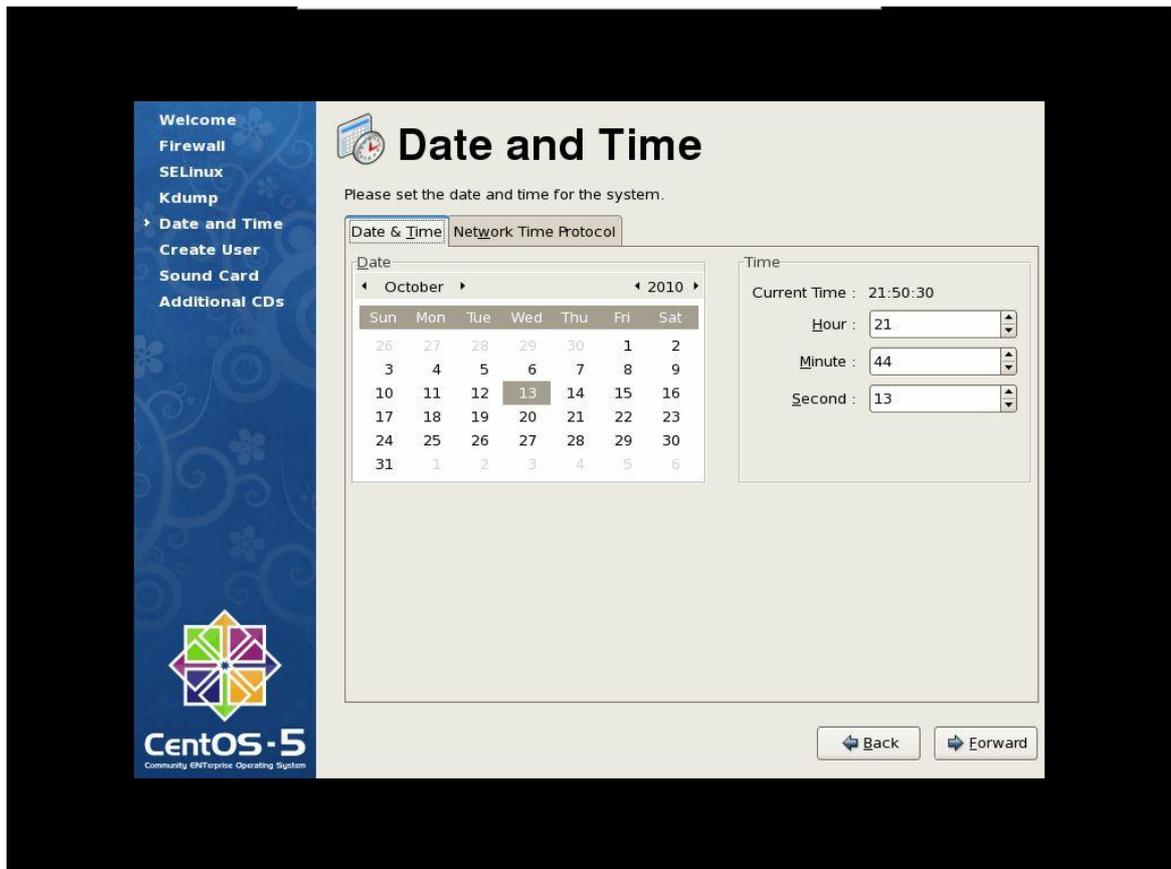
Step 25: Set SELinux setting to disabled to turn it off. Click **Forward** to continue and the following screen will appear.



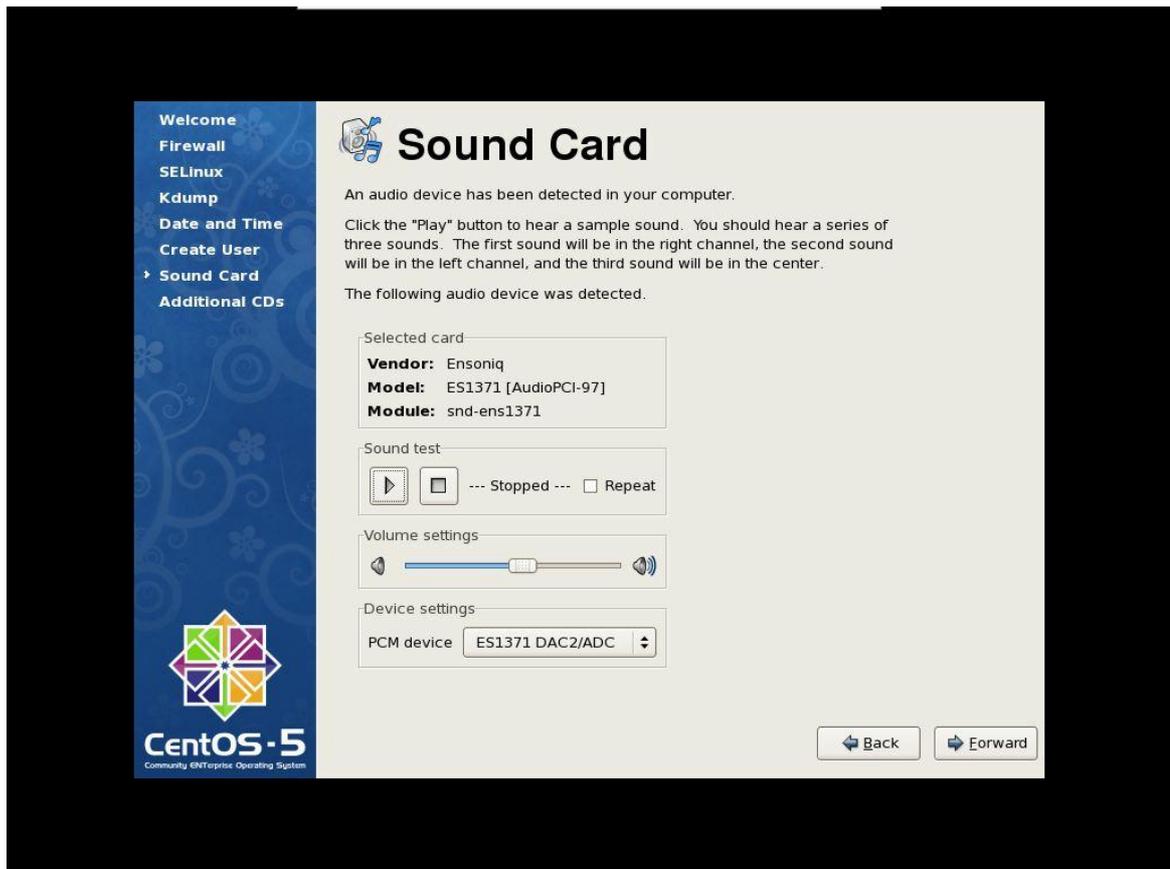
Step 26: Click **Forward** to continue and the following screen will appear.



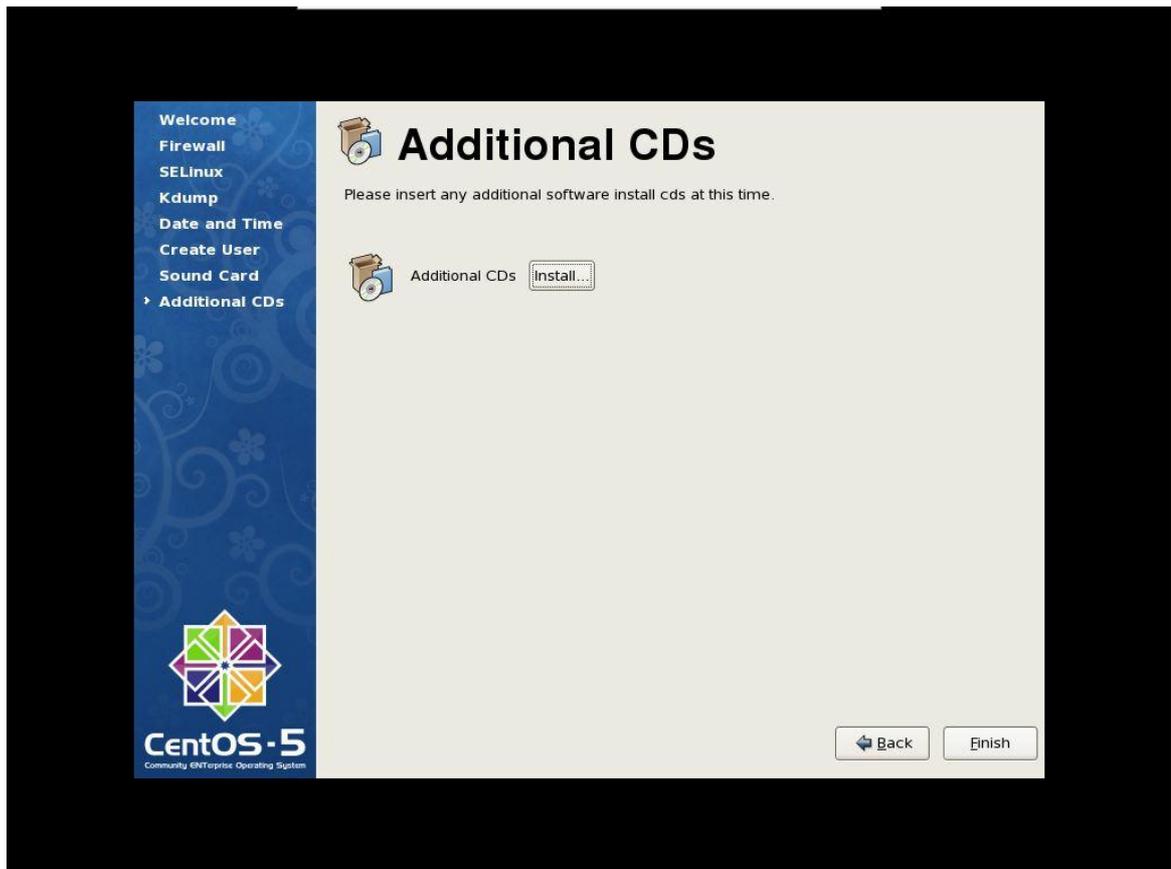
Step 27: Create another normal user by input username and password. Click **Forward** to continue and the following screen will appear.



Step 28: Set the current date/time and set NTP server based on your network environment. Click **Forward** to continue and the following screen will appear.



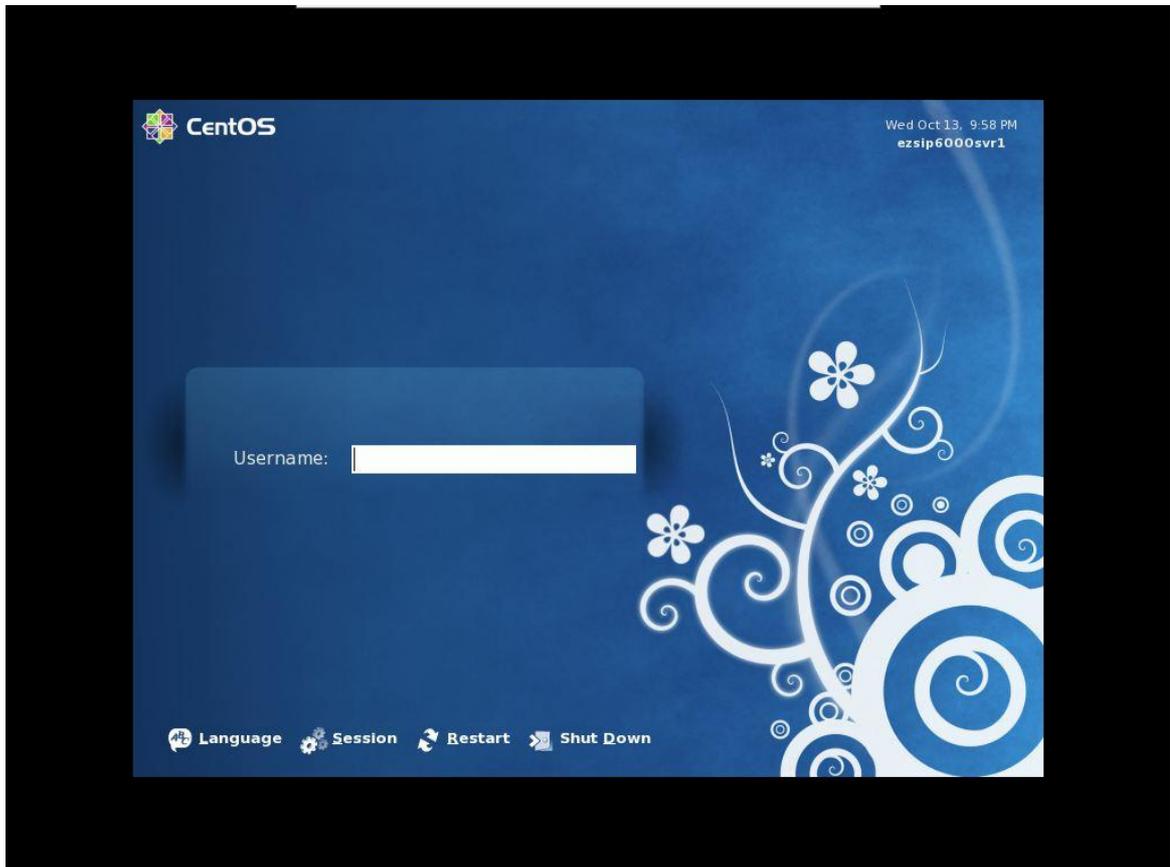
Step 29: Verify your audio device here if it is existed. Click **Forward** to continue and the following screen will appear.



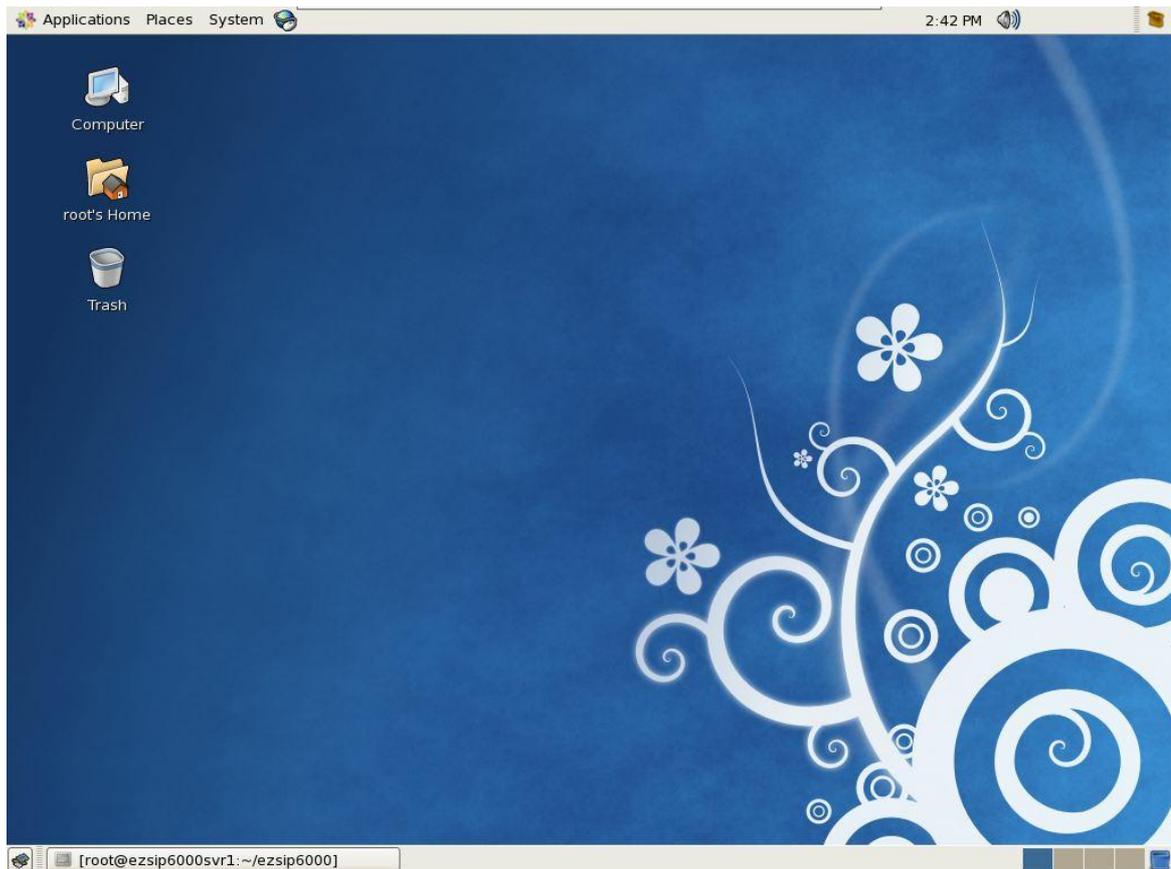
Step 30: Click **Finish** to complete the installation. The system will reboot automatically.

## 1.2 CentOS Post Setup

After the installation of CentOS, the following login screen will appear.



Step 1: Login the system by using Username "root" and the root password you created. After success login, the following screen will appear.



Step 2: Verify and add the host name to /etc/hosts. The following is an example of /etc/hosts which server's host name is "ezsip6000svr1" and IP address assigned is "192.168.17.10". You can use vi or editor to change it.

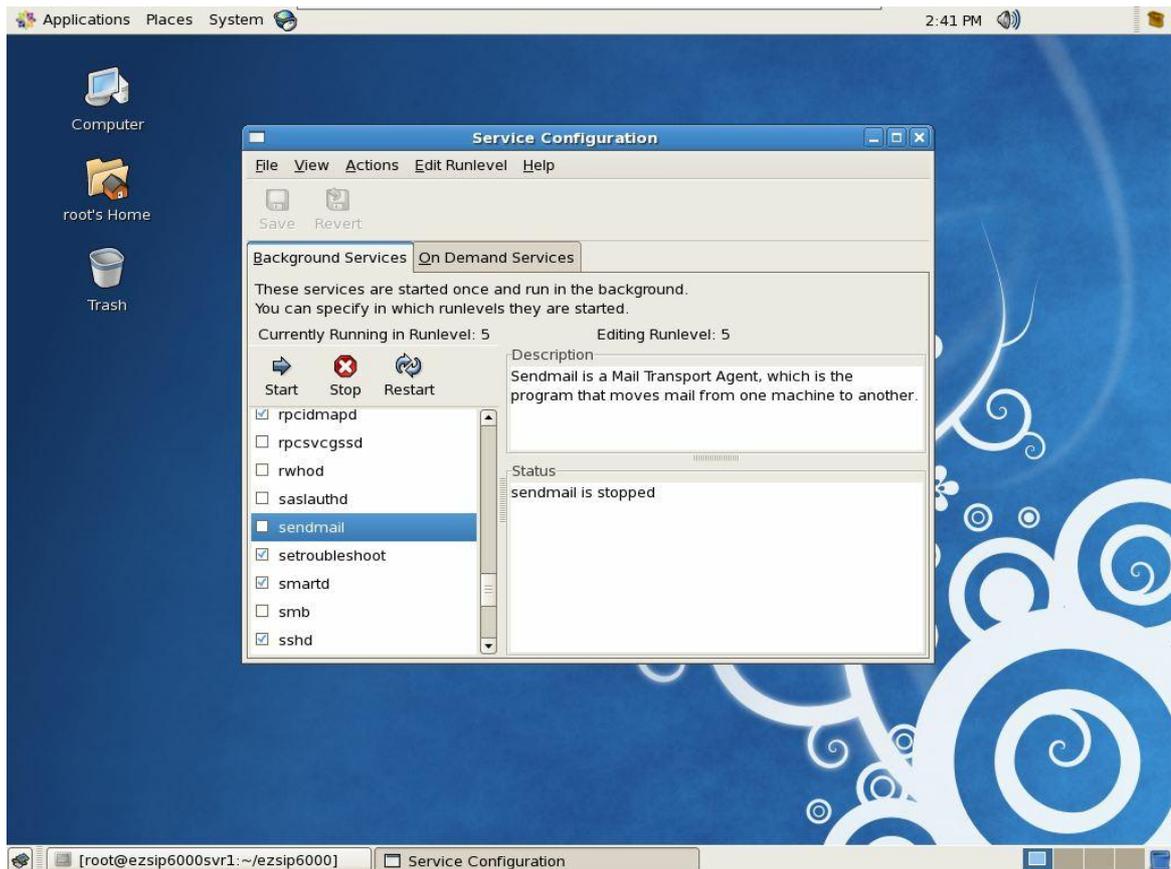
```
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1    localhost
::1         localhost6
192.168.17.10  ezsip6000svr1
```

***It must be done in order to make the mysql secure.***

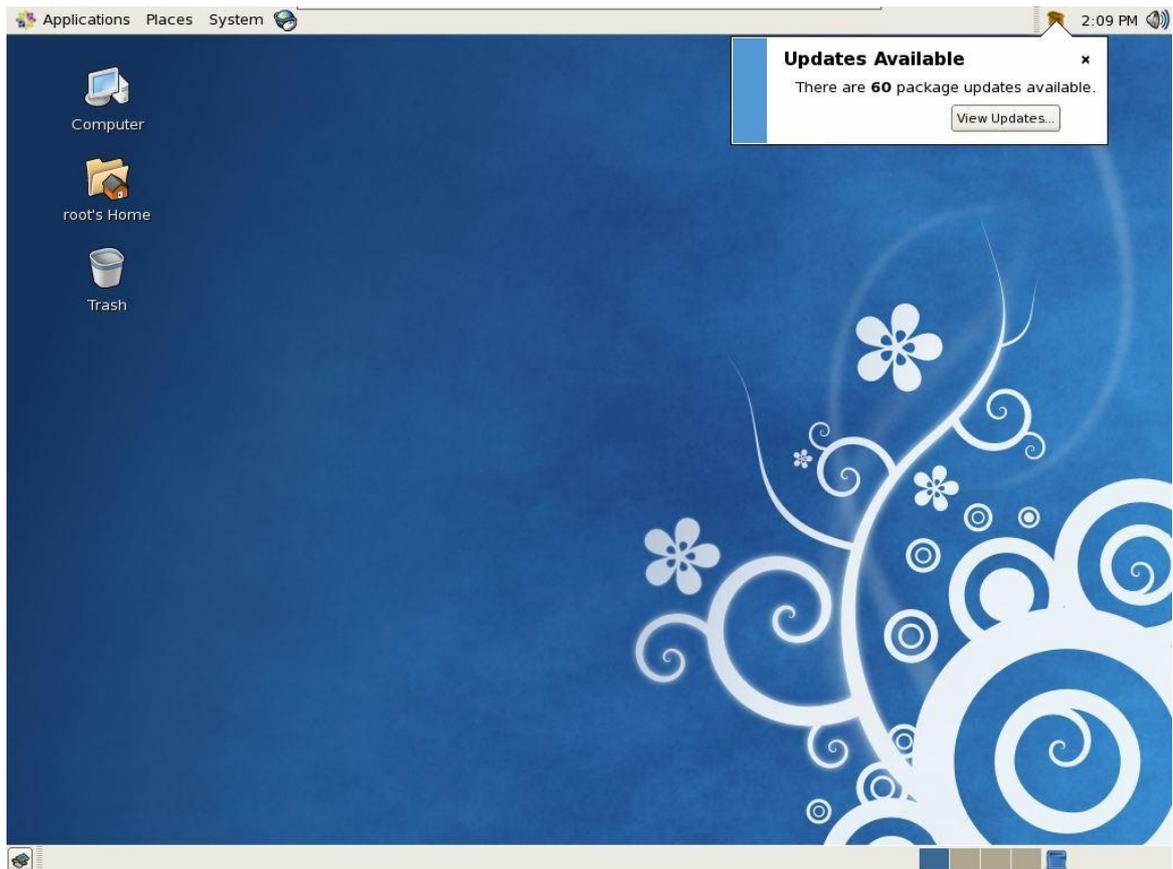
Step 3: Click **System -> Server Settings -> Services** as follows to change the default service setting.



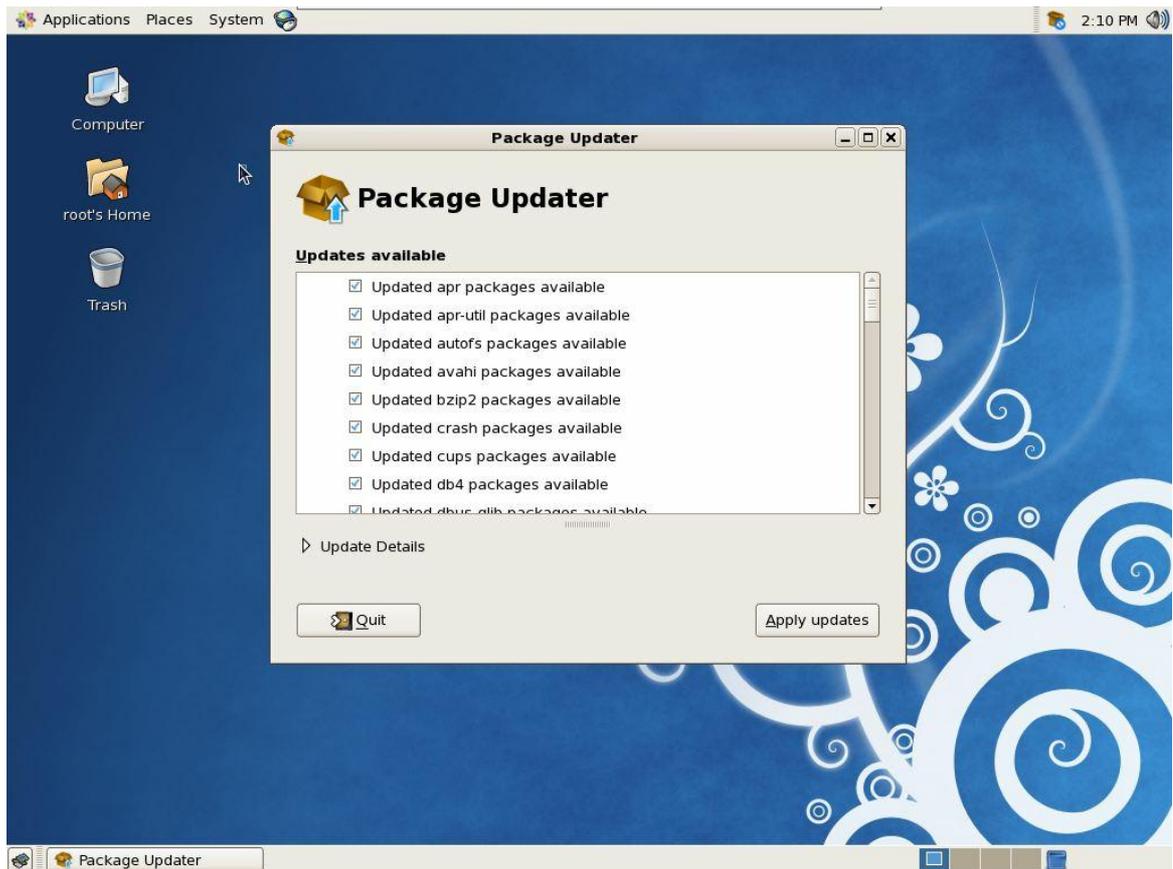
Step 4: It is recommended to turn off those services you don't need. The following is the example and recommended to turn off **sendmail** service by uncheck it. Otherwise the booting might take long time to get into Linux. Click **Save** to save it.



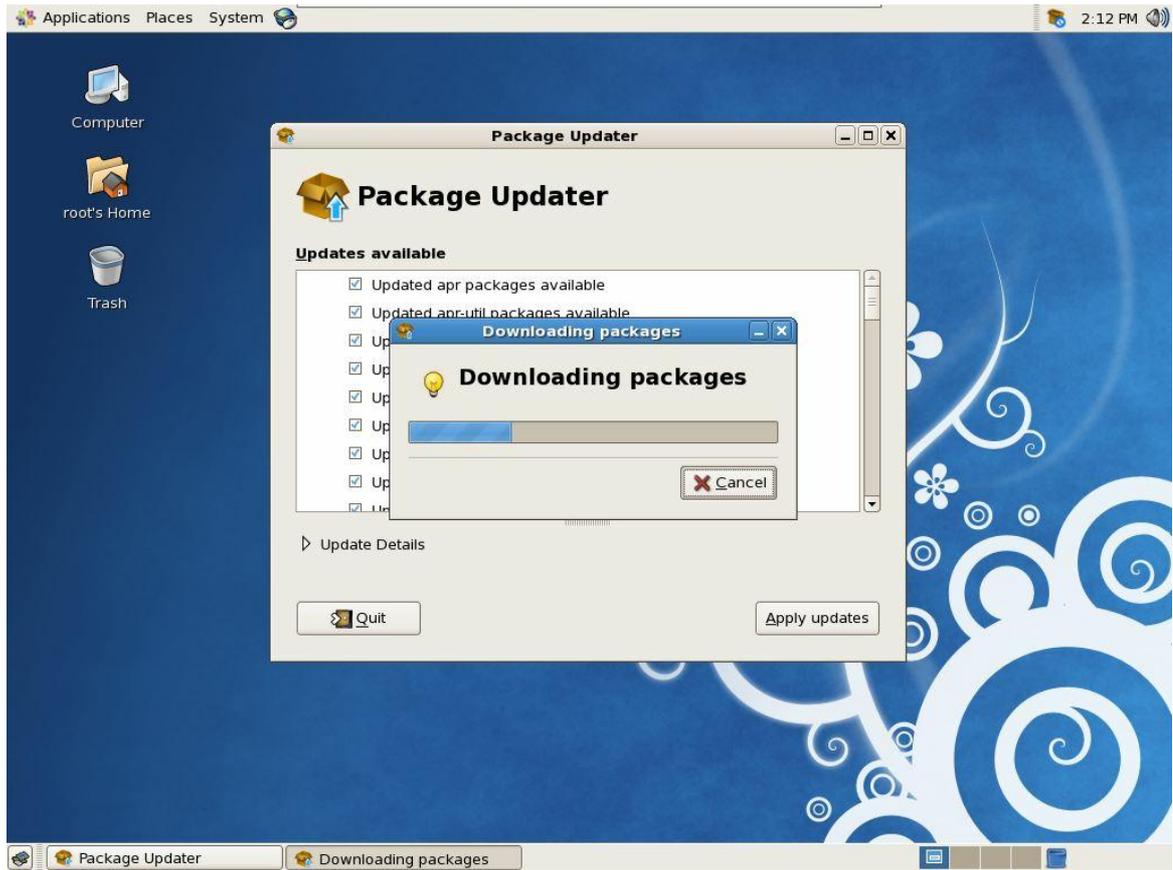
Step 5: If your network is connected to Internet, you should see the **Updates Available** popup in the right upper corner as follows. If you don't see it, please check your network connections. It is recommended to update to the newest Linux patch for security reason.



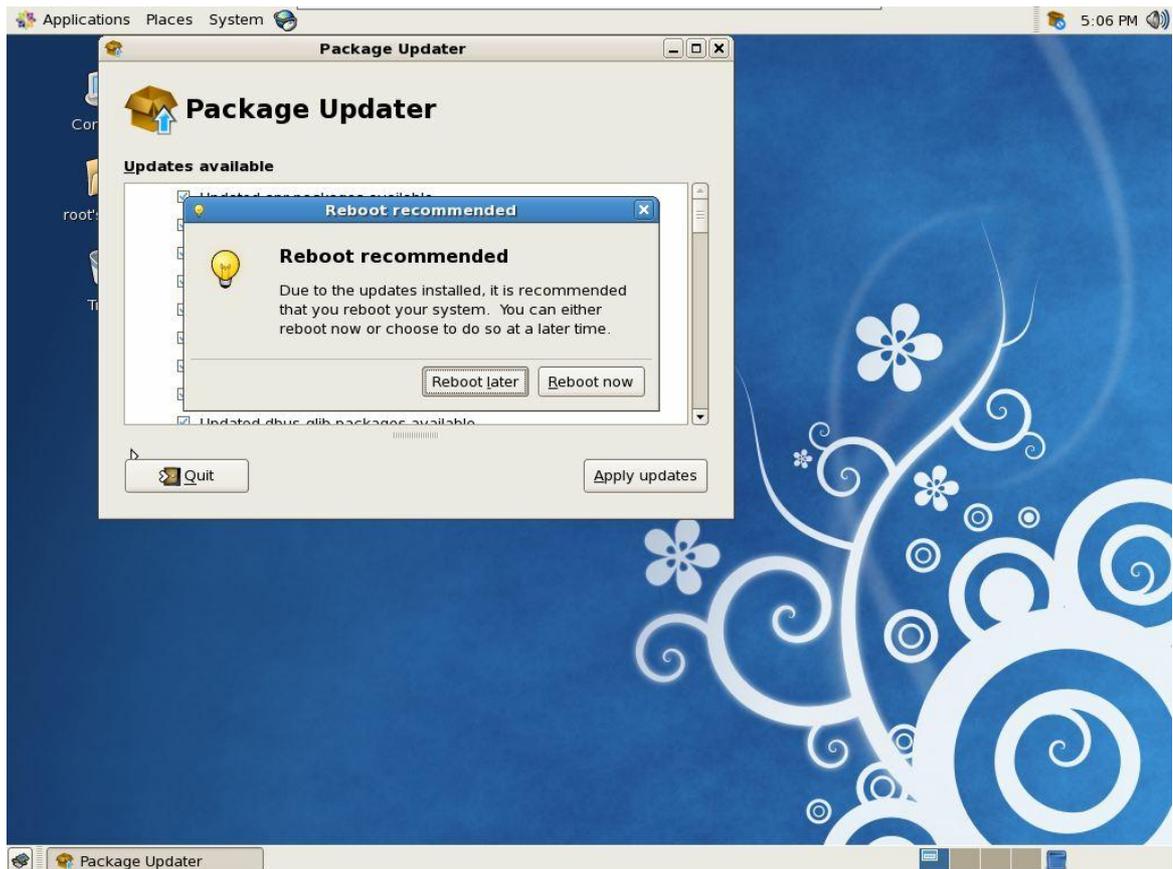
Step 6: In the above picture, you can see there are more than 60 patches required to be updated. Click **View Update** and the following screen will appear.



Step 7: Click ***Apply updates*** and the following screen will appear.



Step 8: You can go to have a coffee and wait the update complete. The following screen will appear.

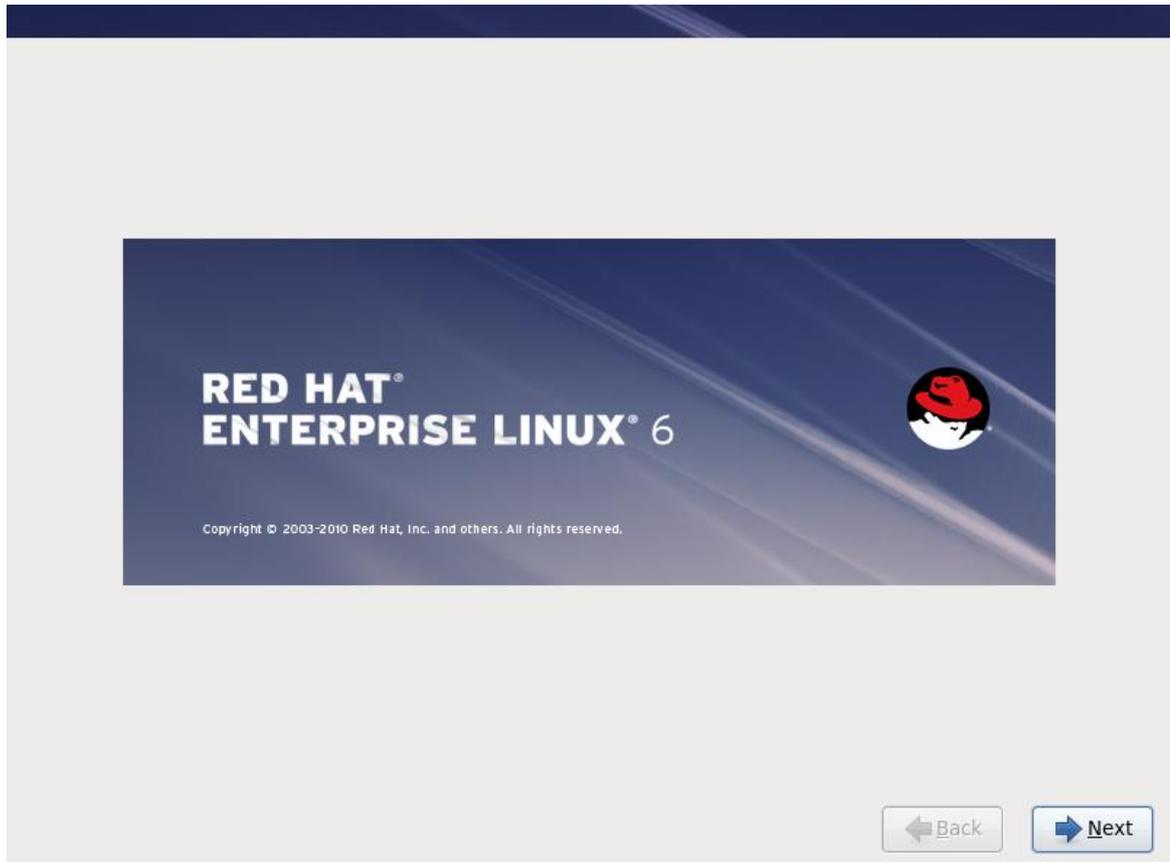


Step 9: Click **Reboot Now** to reboot the server. And then re-login to the system by using the root account.

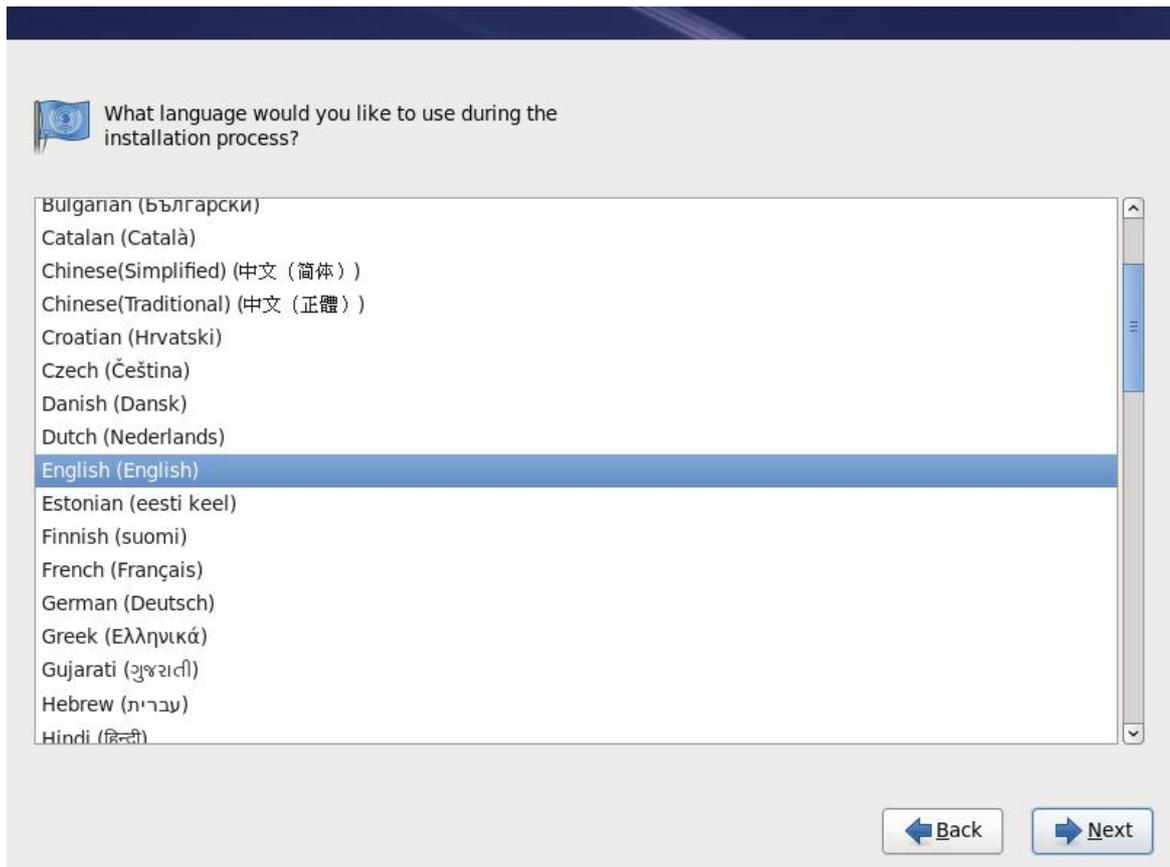
## 2 RHEL 6 (CentOS 6) Linux Installation

This is a tutorial for installing Centos on a server machine. For advance RHEL 6 user, this chapter can be skipped. **Please note that MYSQL is a must to be installed before you can do the installation.**

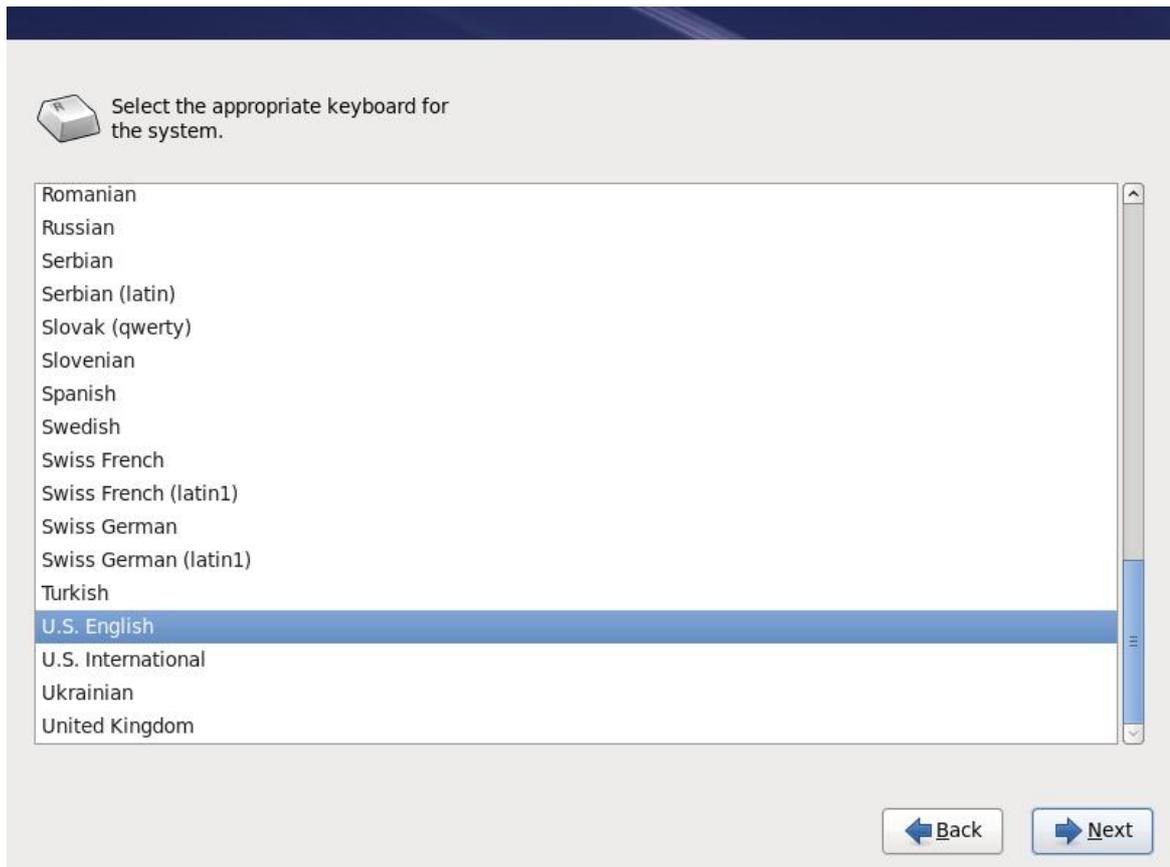
Step 1: Insert RHEL 6 or CentOS 6 DVD into server CDROM and power on the server. The following screen will appear.



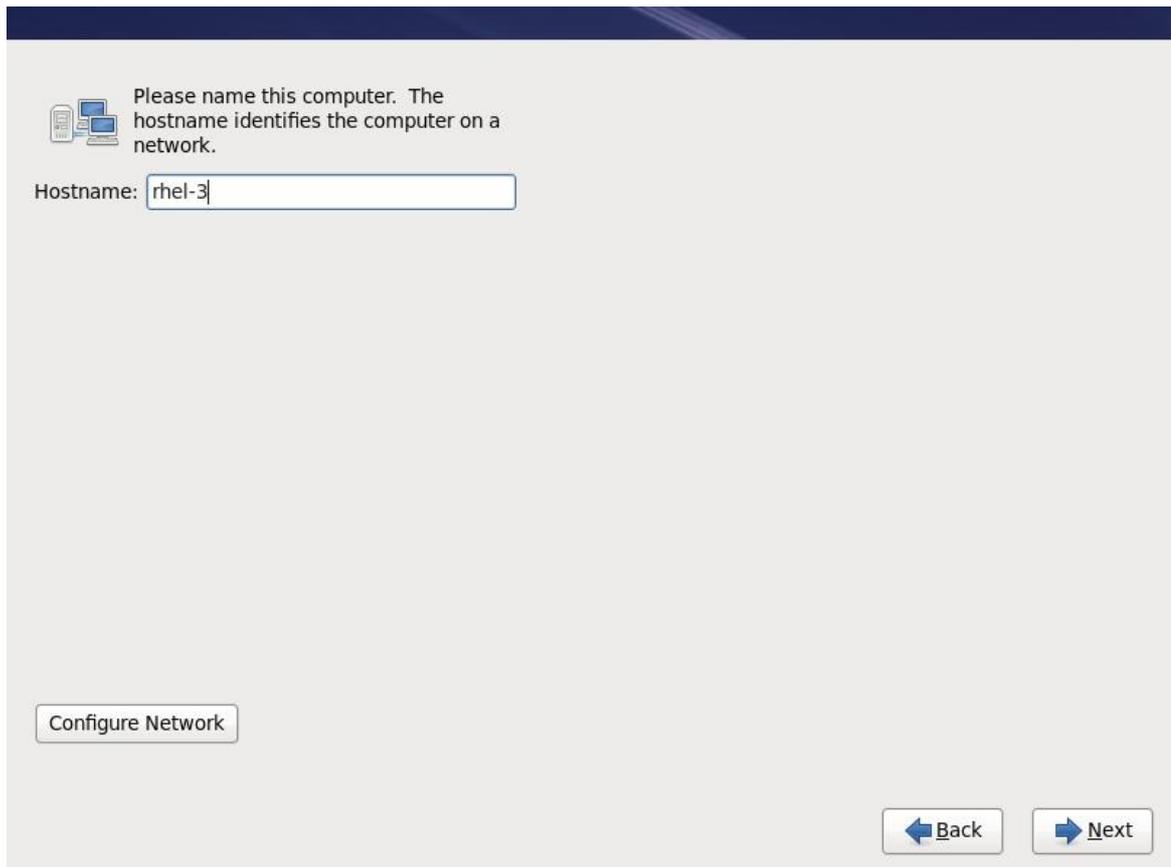
Step 2: Press **Next** key to start the installation. The following screen will appear,



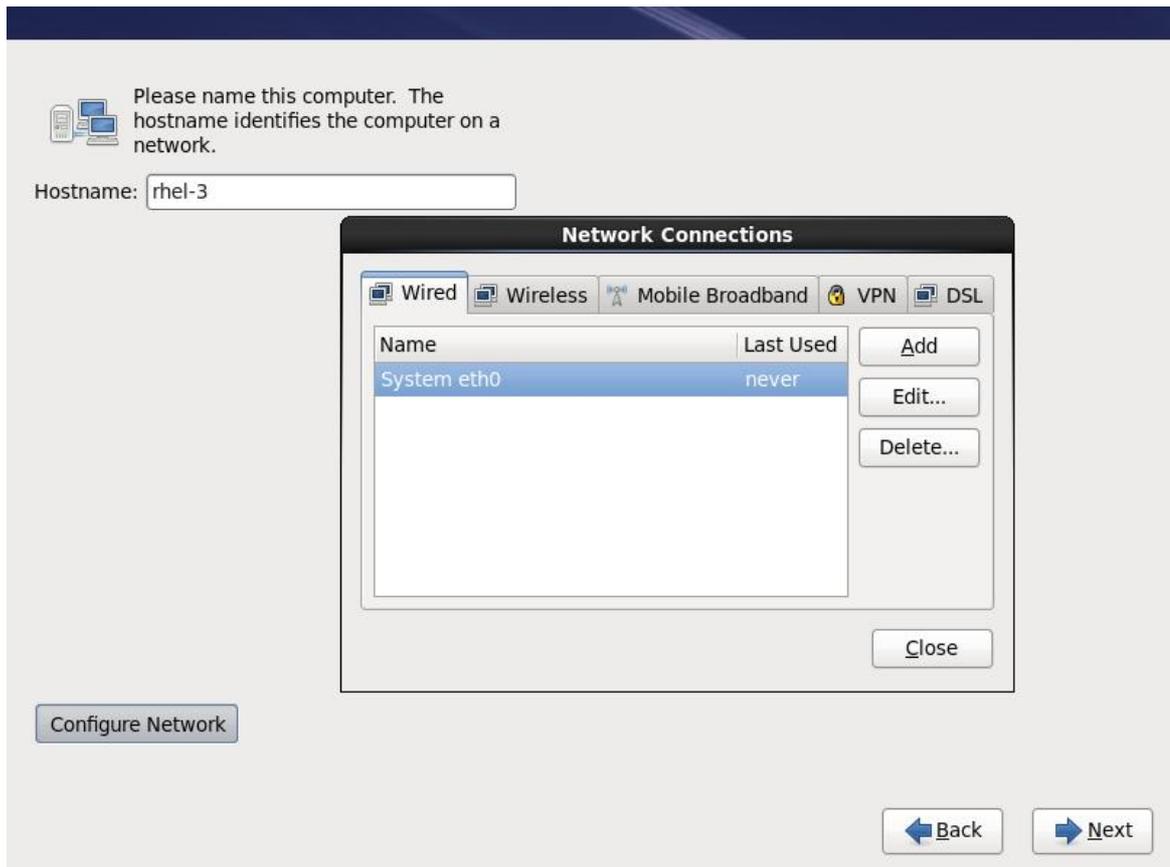
Step 3: Select the language you are preferred. In our case, we select **English** language and click **Next** to continue. The following screen will appear.



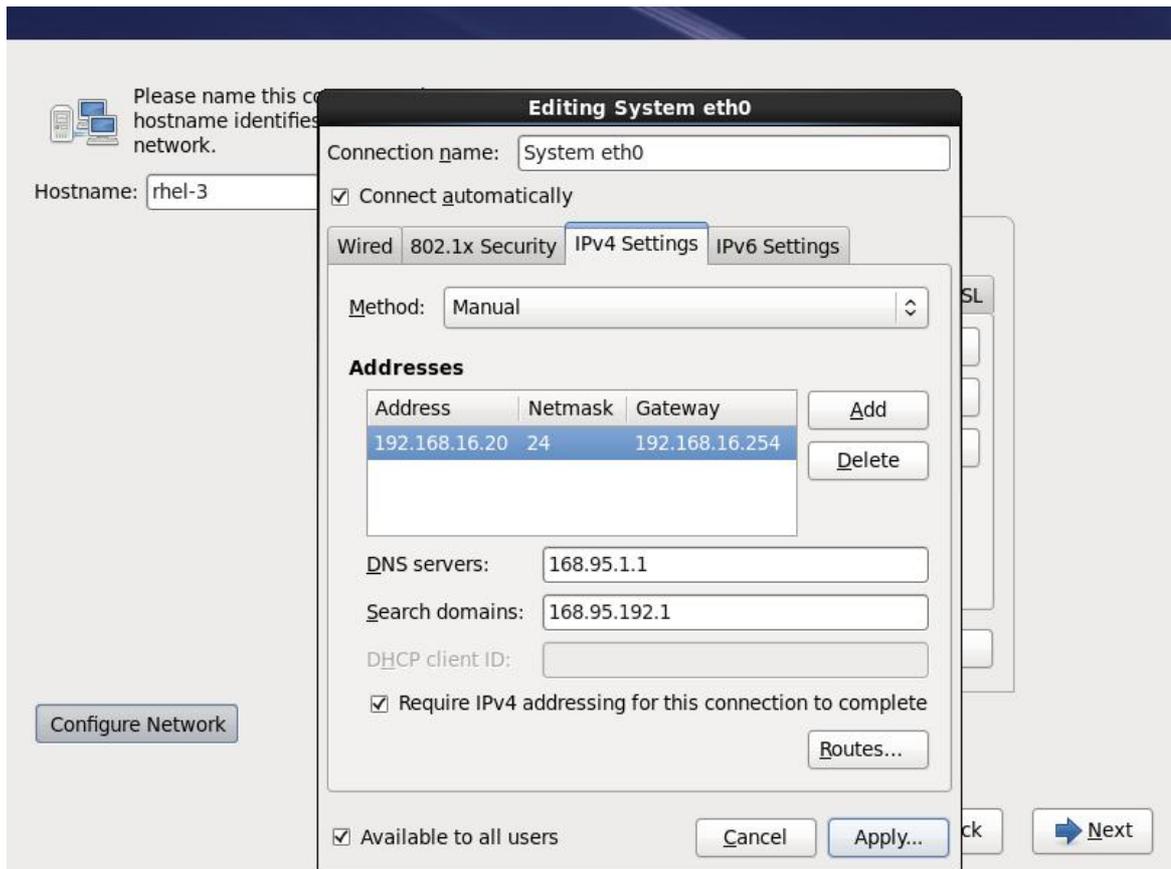
Step 4: Select the **Keyboard** type (in this case, we use U.S. English) and click **Next** to continue. The following screen will appear.



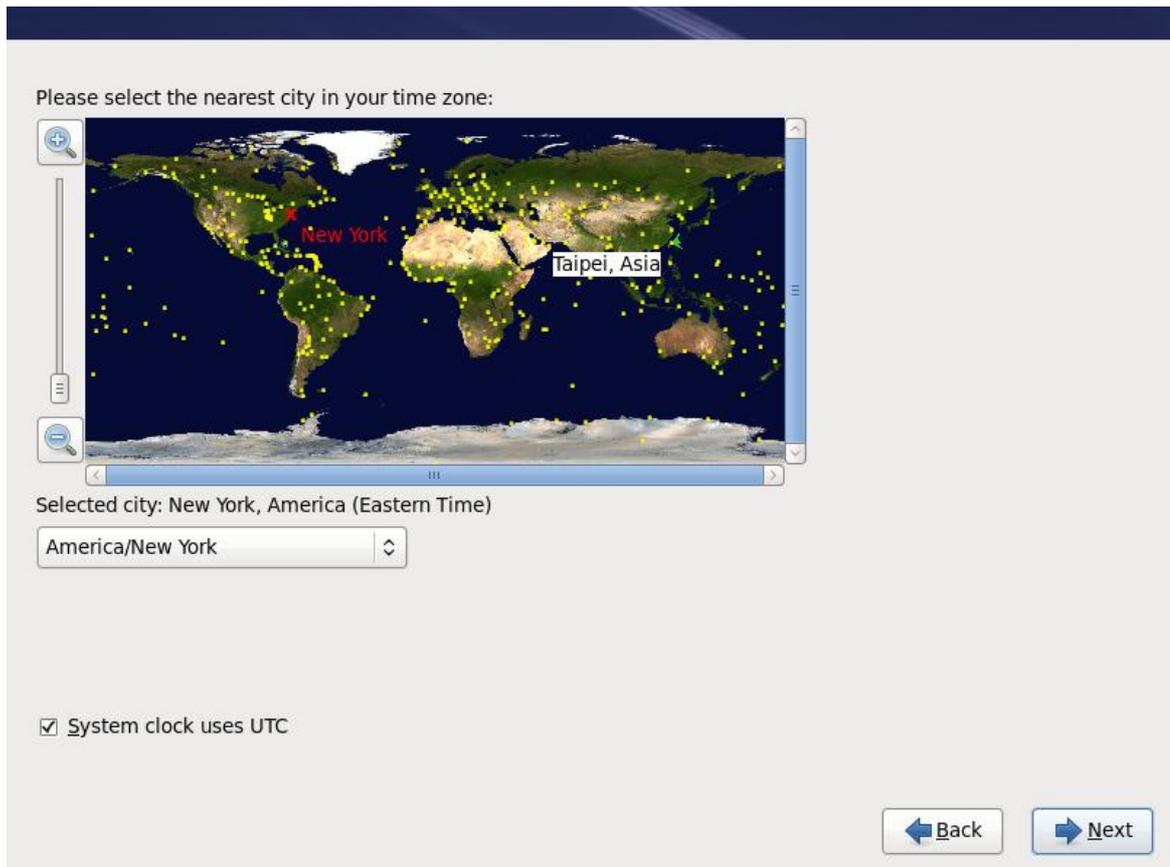
Step 5: Input the host name for the server and click "**Configure Network**" to continue. The following screen will appear.



Step 6: Select the **Ethernet Interface** and **Edit** to configure the IP address.

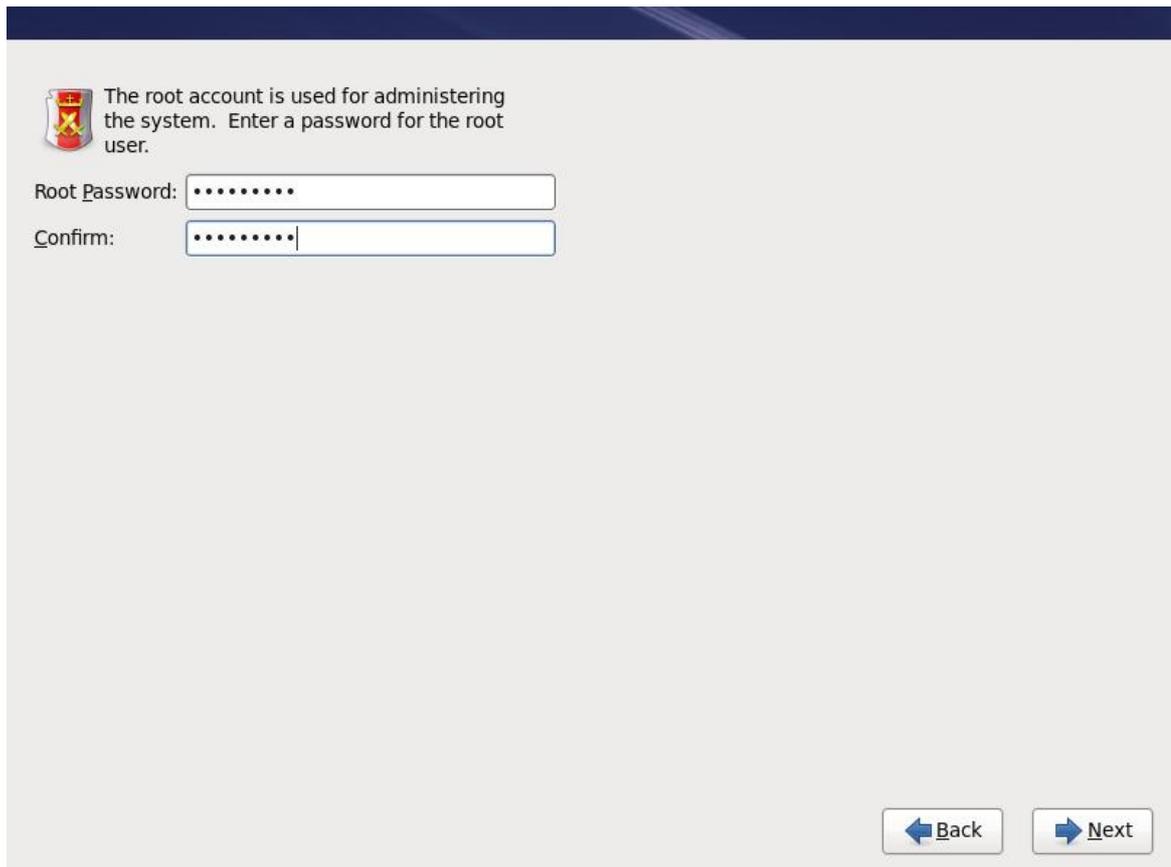


Step 7: Add the server **IP address** and **DNS servers** and click **Apply**. Click **Next** and the following screen will appear.



Step 8: Select the **time zone** your city is located. Click **Next** to continue the installation.

---



The screenshot shows a system configuration window with a dark blue header. Below the header, there is a red shield icon with a white cross and a smaller red cross. To the right of the icon, the text reads: "The root account is used for administering the system. Enter a password for the root user." Below this text, there are two input fields. The first is labeled "Root Password:" and contains seven dots. The second is labeled "Confirm:" and contains seven dots. At the bottom right of the window, there are two buttons: "Back" with a left-pointing arrow and "Next" with a right-pointing arrow.

Step 9: Enter the root password. Please don't use a strong password for security reason. Click **Next** and the following screen will appear.

The default installation of Red Hat Enterprise Linux is a basic server install. You can optionally select a different set of software now.

Basic Server  
 Database Server  
 Web Server  
 Virtual Host  
 Desktop  
 Software Development Workstation  
 Minimal

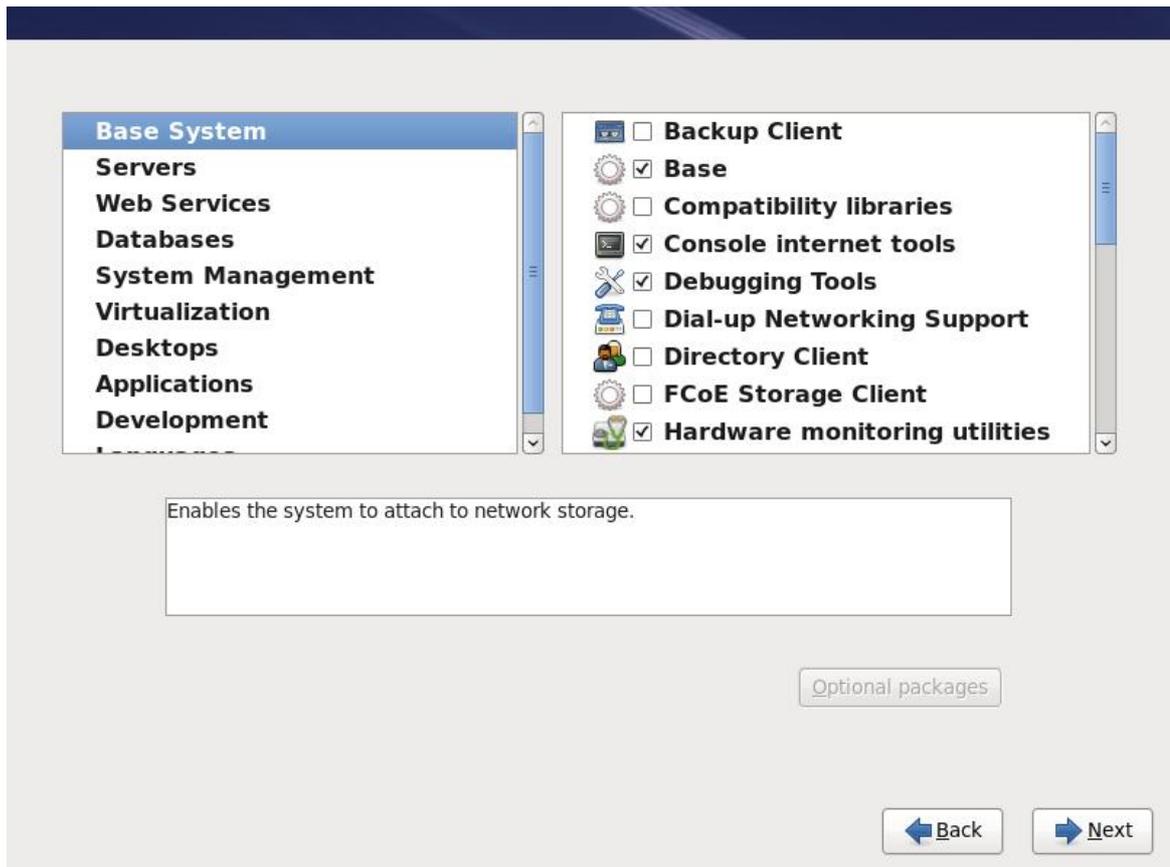
Please select any additional repositories that you want to use for software installation.

High Availability  
 Load Balancer  
 Red Hat Enterprise Linux  
 Resilient Storage

You can further customize the software selection now, or after install via the software management application.

Customize later     Customize now

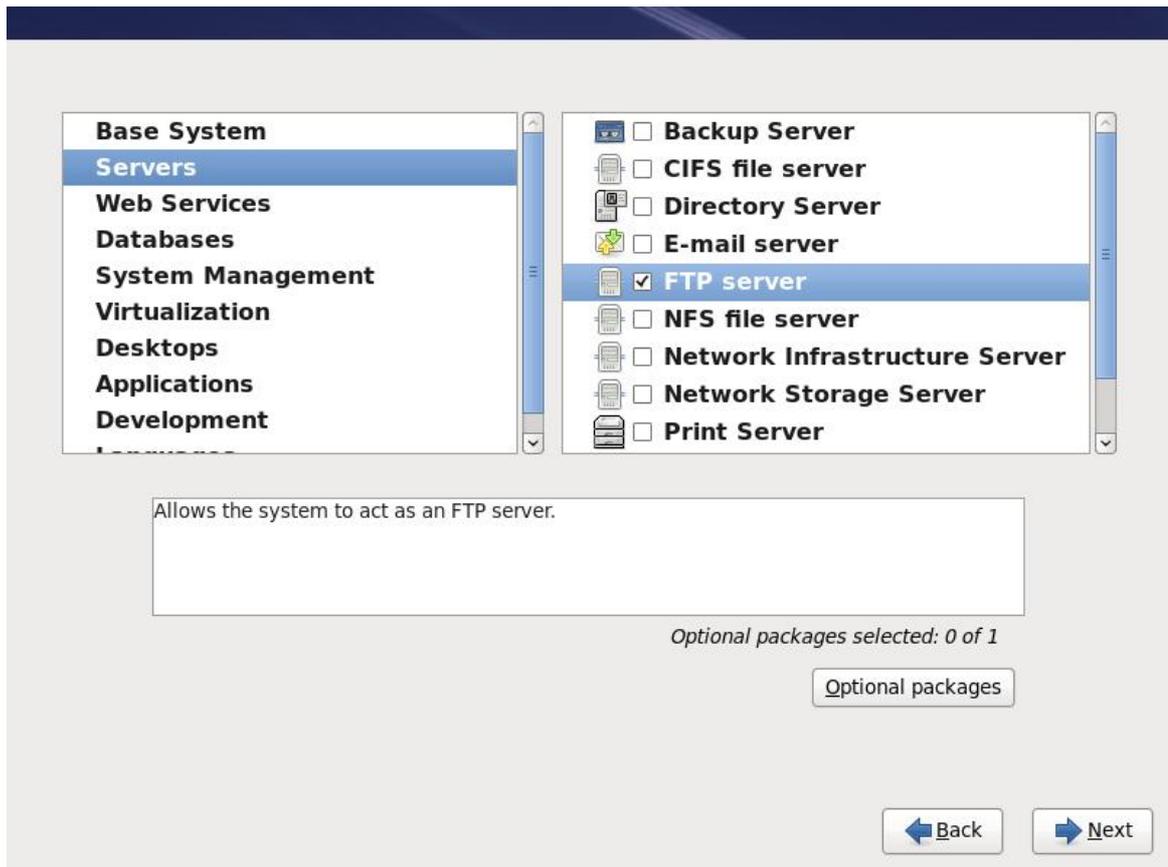
Step 10: Select **Basic Server** and **Customize Now** to customize the setting. Click **Next** and the following screen will appear.



Step 11: Uncheck the following components from **Base System**:

- Java System**
- Network File System Client**

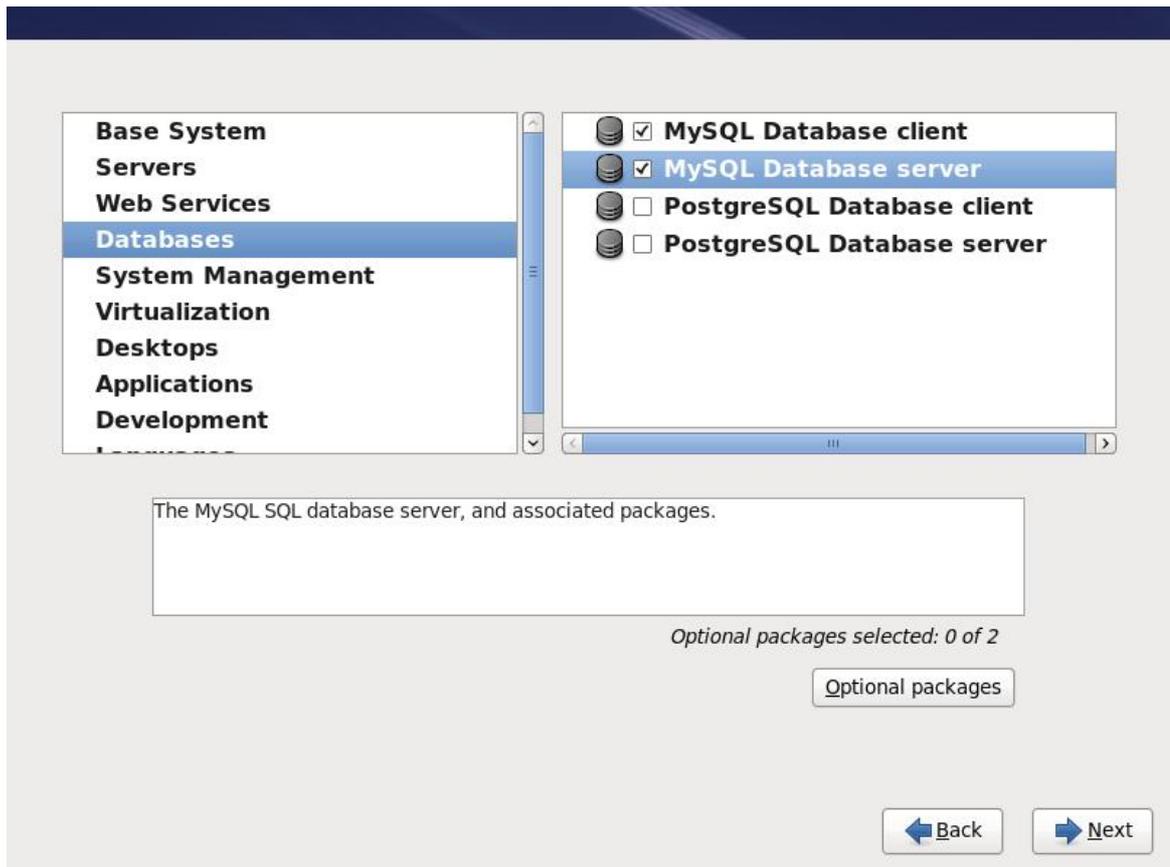
Click **Servers** and the following screen will appear.



Step 12: Add the following components into **Servers modules**.

- FTP Server

This is a recommendation only and you can select additional modules based on your requirements. Click **Database** and the following screen will appear.

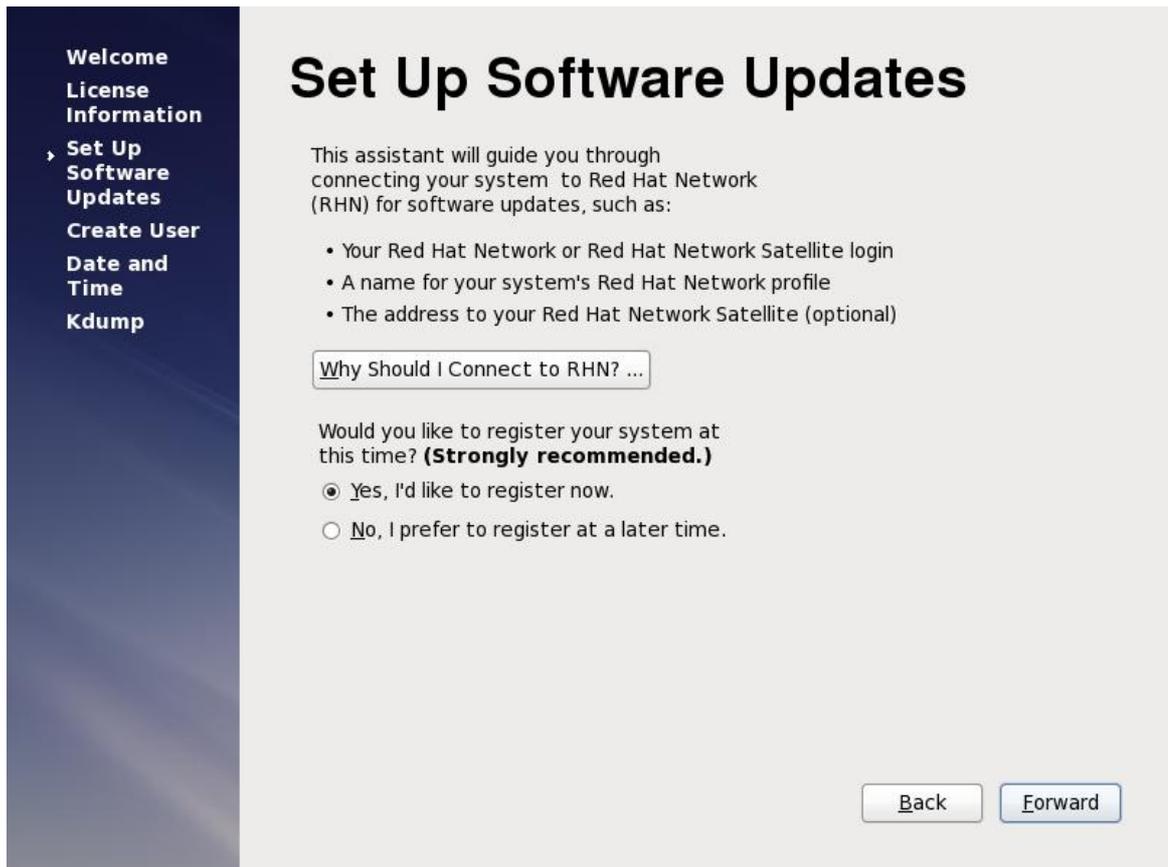


Step 13: **Select "MySQL Database client" and "MySQL Database server". It is a must to be selected.**

Step 14: Click **Desktops** and add the following components into **Desktops**:

- **Desktop**
- **Desktop Platform**
- **Fronts**
- **General Purpose Desktop**
- **General Administration Tools**
- **X windows System**

Click **Next** to continue and following screen will appear.



Step 15: Register to RedHat Network and click **Forward** to continue.

---

Welcome  
License  
Information  
Set Up  
Software  
Updates  
› Create User  
Date and  
Time  
Kdump

## Create User

You must create a 'username' for regular (non-administrative) use of your system. To create a system 'username', please provide the information requested below.

Username:

Full Name:

Password:

Confirm Password:

If you need to use network authentication, such as Kerberos or NIS, please click the Use Network Login button.

If you need more control when creating the user (specifying home directory, and/or UID), please click the Advanced button.

Step 16: Create a regular user to enhance the security. Click **Forward** to continue the settings.

Welcome  
License Information  
Set Up Software Updates  
Create User  
▶ **Date and Time**  
Kdump

## Date and Time

Please set the date and time for the system.

Date and Time

Current date and time: Mon 17 Jan 2011 11:10:16 PM CST

Synchronize date and time over the network

Synchronize date and time on your computer with a remote time server using the Network Time Protocol:

**NTP Servers**

0.rhel.pool.ntp.org  
1.rhel.pool.ntp.org  
2.rhel.pool.ntp.org

Add  
Edit  
Delete

▶ Advanced Options

Back Forward

Step 17: Enable NTP time sync and click **Forward** until complete the server settings and reboot it.

---

### 3 EZPBX-2000 Installation

This chapter includes EZPBX-2000 installation procedure.

#### 3.1 Download and Install

Before you can start the installation after server CentOS installation, first you need to get the firmware form Ezvoicetek. It is a zipped file and you need to copy to the CentOS either by using ftp or file sharing.

***STEP 1: Prepare the information need for installation.***

Before you can start the installation, for a regular version (non-HA release), please prepare the following information for installation:

**MYSQL root password:** \_\_\_\_\_

For installing a HA version, you need to have the following information prepared:

**HA Server 1 Host Name:** \_\_\_\_\_

**HA Server 1 WAN IPV4 Address:** \_\_\_\_\_

**HA Server 1 LAN IPV4 Address:** \_\_\_\_\_

**HA Server 2 Host Name:** \_\_\_\_\_

**HA Server 2 WAN IPV4 Address:** \_\_\_\_\_

**HA Server 2 LAN IPV4 Address:** \_\_\_\_\_

**HA Linux (hacluster) Password:** \_\_\_\_\_

**HA Virtual IPV4 Address:** \_\_\_\_\_

**MYSQL Root Password:** \_\_\_\_\_

**MYSQL Replication Password:** \_\_\_\_\_

***STEP 2:*** un-compress it  
For non-HA version,  
unzip ezpbx2000.xxx.install.zip

For HA version,  
unzip ezpbx2000ha.xxx.install.zip

**STEP 2:** In the directory of you un-compress it, you should see the following two files:

Regular (non-HA version)  
- ezpbx2000.xxx.bin  
- installezpbx2000.sh

HA Version:  
- ezpbx2000ha.xxx.bin  
- installezpbx2000.sh

**STEP 3:** execute the installezpbx2000.sh as follows  
./installezpbx2000.sh

**STEP 4:** follow the prompt and input the prepared information to complete the installation.

**STEP 5:** After success complete the installation, you should see the following:

```
***** Finished EZPBX-2000 IP-PBX installation *****  
(license.id) was crated in current directory...  
Please send the generated file (license.id) to sales@ezvoicetek.com for license.
```

*Please get the license.id and send to Ezvoicetek for generating the required license.*

**STEP 6:** reboot the server and login in the system by using ***http://xxx.xxx.xxx.xxx:9200***

## 3.2 Startup Settings

Please refer to Administrative Guide to start the configuration.