

README COS Software

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Installation of the base OS

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Hardware preparation

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HP ProLiant DL380

1. Power on the system, and you will see a BIOS message about the **HP Smart Array 6i Controller**. Press the *F8* key, to go into the **Option Rom Configuration for Arrays** screen.
2. Under the **Main Menu**, select **Delete Logical Drive**, and then on the next screen, press *F8* to delete the pre-configured RAID 1+0 Drive.
3. At the **Warning** screen, press the *F3* key. When you receive the prompt to press *Enter* to continue, press the *Enter* key.
4. Under the **Main Menu**, select **Create Logical Drive**,
5. At the next screen, all drives should be selected, and under **Raid Configurations** the **RAID 1+0** level should be selected. Press *Enter* to continue.
6. You will receive a confirmation prompt, summarizing the information about your logical drive. Press *F8*.
7. At the **Configuration saved prompt**, press *Enter*.
8. When you see the **Main Menu** screen again, you may press *Esc*.

[edit]

Method 1 - Standard hardware w/Kickstart

This is the recommended, and easiest installation method to try first.

[edit]

Get the installation media that you need

Simply obtain the correct boot ISO images from either <http://bfs.iplink.net/cos/> or <http://bfs.int.iplink.net/cos/> (this one is if you are inside the Interlink office). You will want to grab the ones for the most recent supported version of CentOS (at the time of writing, this was 4.4). Here's an example of some of the different boot ISO's available:

CentOS-4.4-i386-boot-custom-ide-raid-two-master.iso

The system must be configured with two master IDE drives (a primary master [hda] and a secondary master [hdc]) that are identical.

CentOS-4.4-i386-boot-custom-ide-single-master.iso

The system must be configured with at least one IDE drive configured to be the primary master (hda), and no RAID is configured.

CentOS-4.4-i386-boot-custom-scsi-raid-two-hd.iso

The system must be configured with two SCSI drives that show up before any other SCSI storage devices on the system (sda and sdb). Keep in mind that properly configured **SATA** drives will look like SCSI drives to the system, so you will want to use this if you have SATA enabled in the BIOS. The drives should be identical.

CentOS-4.4-i386-boot-custom-scsi-single-hd.iso

The system must be configured with at least one SCSI drive configured to be the first SCSI storage device that shows up on the system. Keep in mind that properly configured **SATA** drives will look like SCSI drives to the system, so you will want to use this if you have SATA enabled in the BIOS.

CentOS-4.4-i386-boot-custom-hp-dl380-cnt44.iso

This is custom for the HP ProLiant DL380 server configured with two RAID 1+0 SCSI disks.

All of these kickstarts expect that you are installing with CD images of the OS, because so many times it is not possible to get a good connection for a network installation. We do have a network install kickstart available on request. Thus, you will also need to download the four OS CD's that are on the site. (You may also want to grab the latest ISO from <http://bfs.iplink.net/cos/iso> or <http://bfs.iplink.net/cos/iso> for the add on software now too.)

Sometimes from outside, the <http://bfs.iplink.net/cos> site will try to redirect itself to  <http://bfs.int.iplink.net/cos/> in your browser, so that after you log in you get an error message about not being able to find the site. Just re enter the <http://bfs.iplink.net/cos> site in your browser, and it should be okay.

[edit]

Start the installation

Boot off of the boot CD that you downloaded (not the CentOS CD1, but the one customized for your system's hardware config.) If all goes well, it will load up, and then give you an error about not being able to find the installation disc. At this point, insert the CentOS CD1 and hit Enter, and the kickstart should do the rest. You will be prompted to insert various CD's by the installer as the installation finishes.

[edit]

If there are problems

If you get errors, you can try a couple things:

- Check that your drives have their jumpers set correctly and showing up in the right order in the BIOS
- Try a different boot CD (maybe one without RAID).
- Try a more manual partitioning approach, such as in Method 2 or Method 3

[edit]

Method 2 - Kickstart for package and network configuration, but manual partitioning

Most problems tend to be because the partitioning doesn't work for one reason or another. We have now made available a boot CD that does all of the work for you, but makes you partition the system yourself, to help you work around issues with problematic hardware.

Simply obtain the cc-simple ISO image from either <http://bfs.iplink.net/cos/> or <http://bfs.int.iplink.net/cos/> (this one is if you are inside the Interlink office). You will want to grab the ones for the most recent supported version of CentOS (at the time of writing, this was 4.2). The current image is:

CentOS-4.4-i386-boot-custom-cc-simple.iso

You must manually partition the system, but everything else is done for you!

This kickstart expects that you are installing with CD images of the OS, because so many times it is not possible to get a good connection for a network installation. We do have a network install kickstart available on request. Thus, you will also need to download the four OS CD's that are on the site. (You may also want to grab the latest ISO from <http://bfs.iplink.net/cos/iso> or <http://bfs.iplink.net/cos/iso> for the add on software now too.)

Sometimes from outside, the <http://bfs.iplink.net/cos> site will try to redirect itself to  <http://bfs.int.iplink.net/cos/> in your browser, so that after you log in you get an error message about not being able to find the site. Just re enter the <http://bfs.iplink.net/cos> site in your browser, and it should be okay.

[[edit](#)]

Start the installation

Boot off of the boot CD that you downloaded (not the CentOS CD1, but the one customized for your system's hardware config.) If all goes well, it will load up, and then give you an error about not being able to find the installation disc. At this point, insert the CentOS CD1 and hit Enter, and the kickstart should do the rest. You will be prompted regarding partitioning next. Follow the manual partitioning instructions using the guidelines under [README_COS_Software#Method_3 - Complete Manual Installation](#). After completing partitioning, the software will continue installing, prompting you for OS CDs at needed.

[[edit](#)]

Method 3 - Complete Manual Installation

This is the recommended, and easiest installation method to try first.

[[edit](#)]

Get the installation media that you need

Simply obtain the OS ISO images from either <http://bfs.iplink.net/cos/> or <http://bfs.int.iplink.net/cos/> (this one is if you are inside the Interlink office). You will want to grab the ones for the most recent supported version of CentOS (at the time of writing, this was 4.2). Thus, you will also need to download the four OS CD's that are on the site. (You may also want to grab the latest ISO from <http://bfs.iplink.net/cos/iso> or <http://bfs.iplink.net/cos/iso> for the add on software now too.)

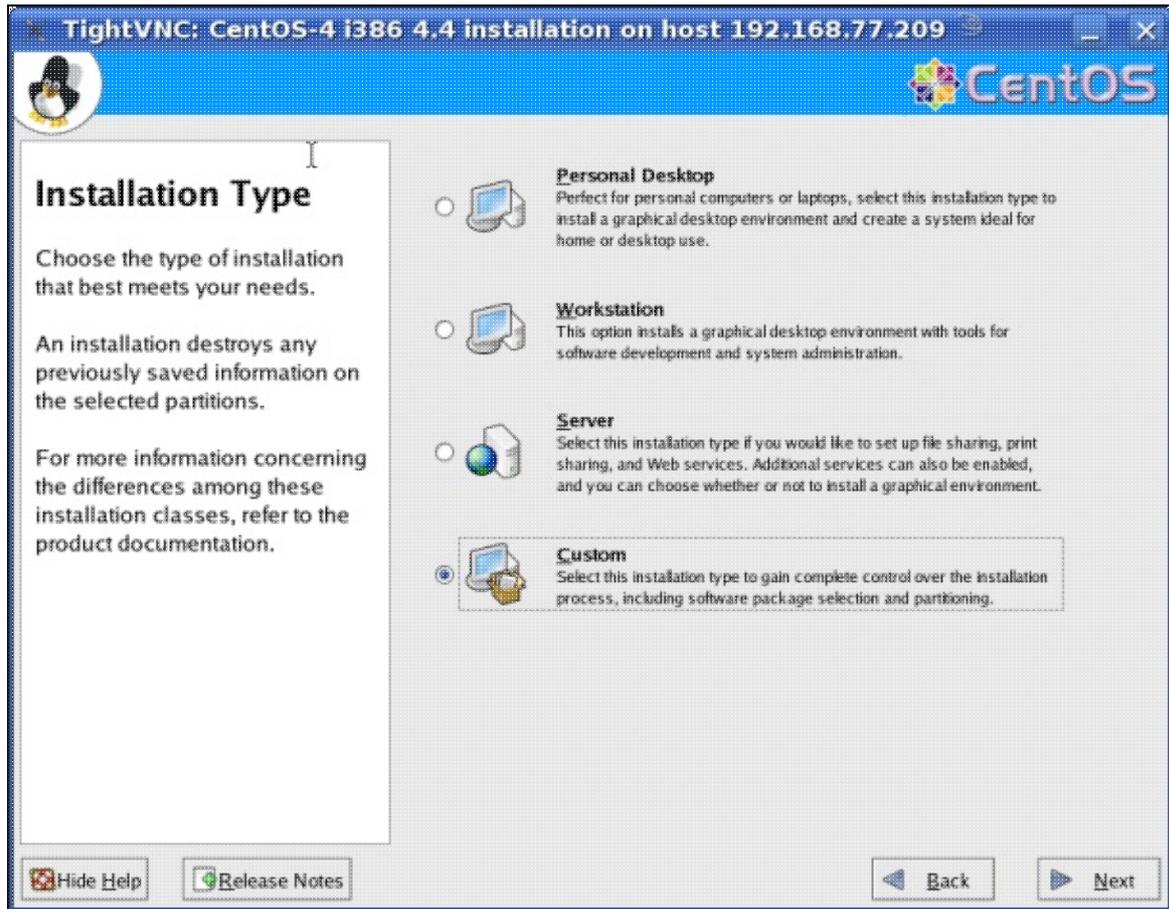
Sometimes from outside, the <http://bfs.iplink.net/cos> site will try to redirect itself to <http://bfs.int.iplink.net/cos/> in your browser, so that after you log in you get an error message about not being able to find the site. Just re enter the <http://bfs.iplink.net/cos> site in your browser, and it should be okay.



[edit]

Start the installation

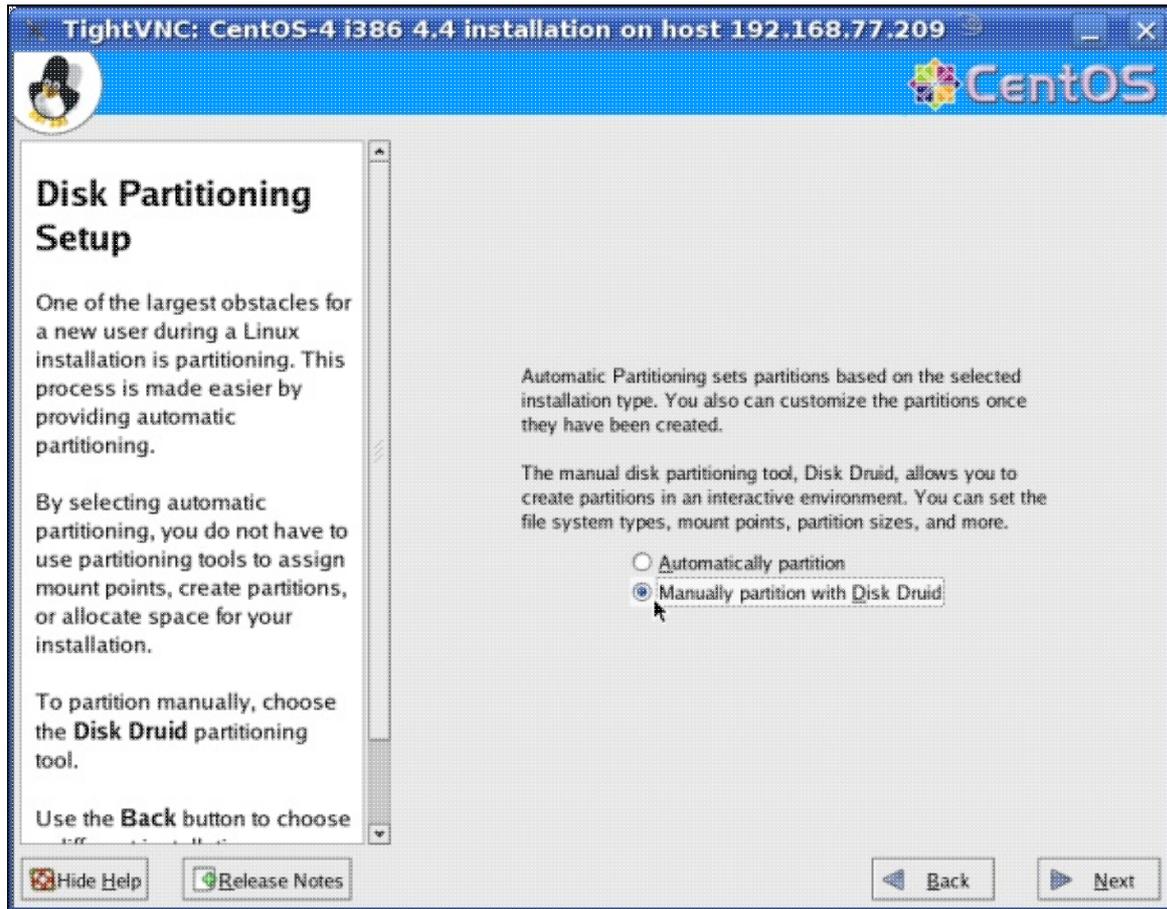
- Boot off of CentOS CD1 that you downloaded.
- At the **CD Found** screen, select **OK**.
- At the **Media Check** screen, select **Test**.
- After the test has completed, select **OK**.
- Repeat this process for each of the discs, to ensure that you have good installation media. When finished, select **Continue** at the **Media Check** screen.
- At the **Welcome to CentOS4** screen, select **Next**.
- At the **Language Selection** screen, select **English (English)**.
- At the **Keyboard Configuration** screen, select **U.S. English**.



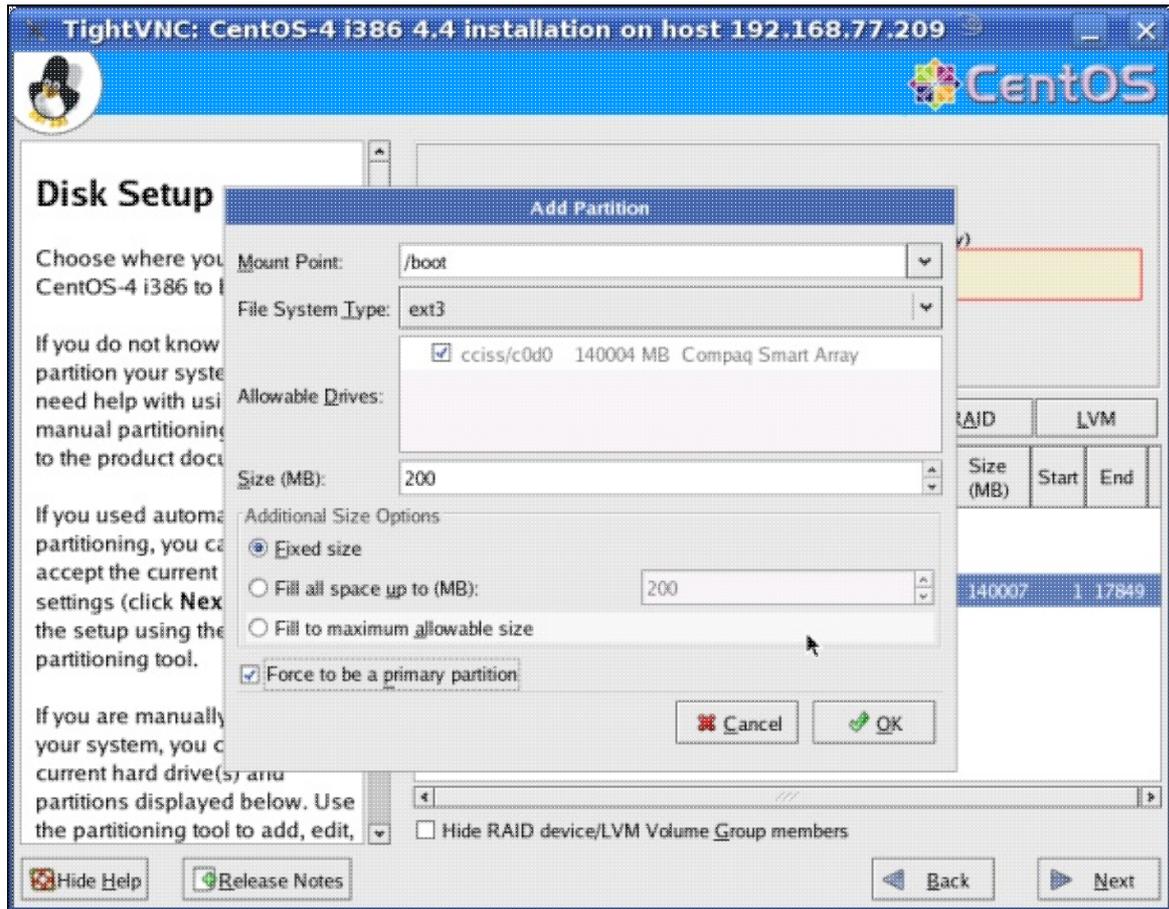
- At the **Installation Type** screen, select **Custom** and then select **Next**.

[edit]

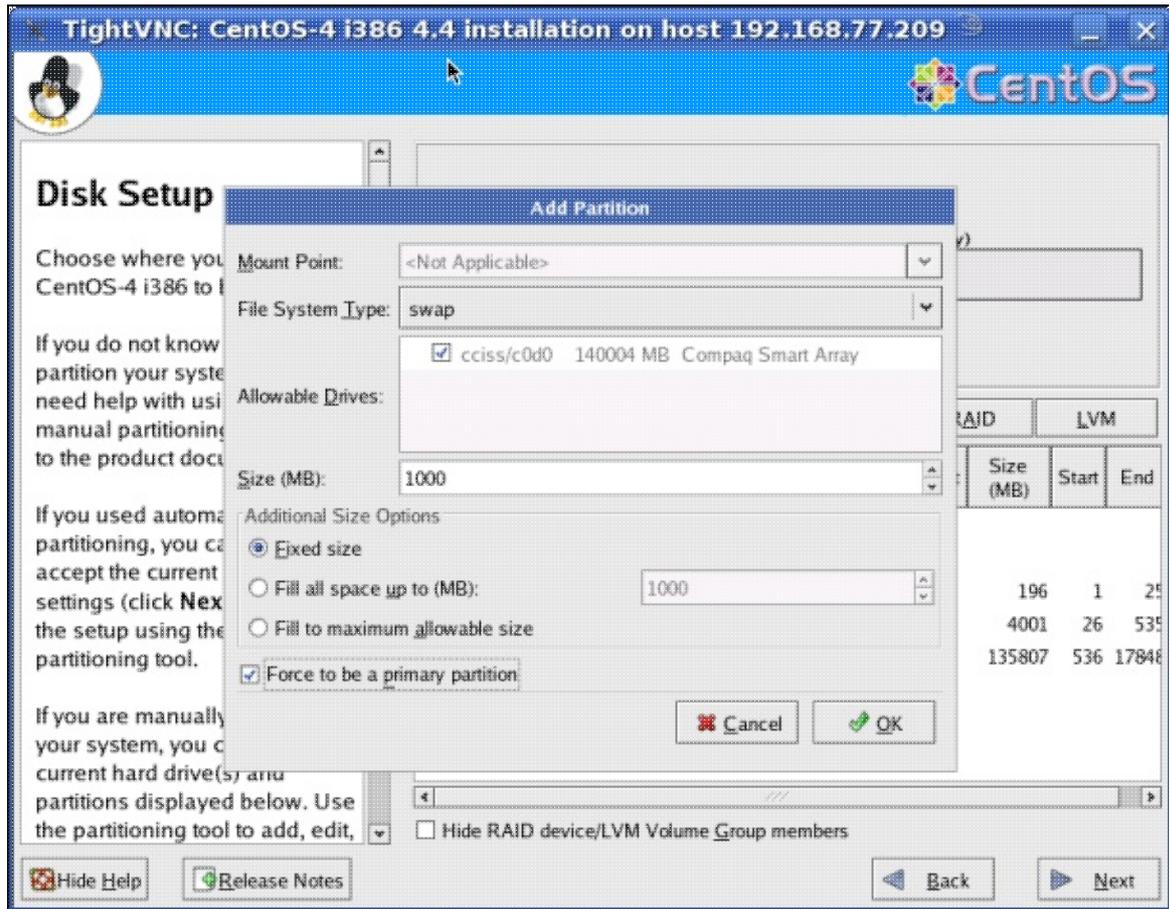
Partitioning for single drive systems, and hardware RAID based systems (like the HP ProLiant DL380)



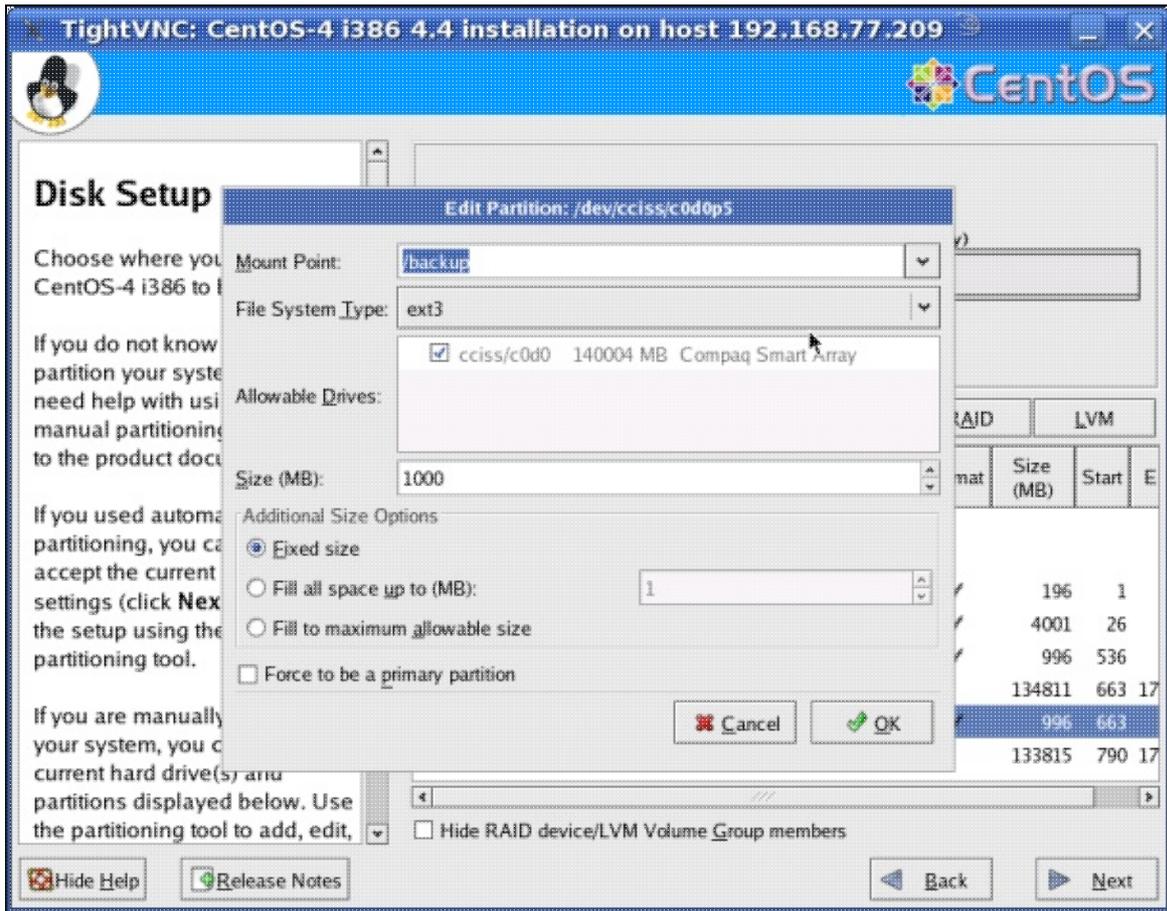
- At the **Disk Partitioning Setup** screen, select, **Manually partition with Disk Druid** and then select **Next**.
- If you receive a **Warning** prompt, select **Yes** to initialize the drive.



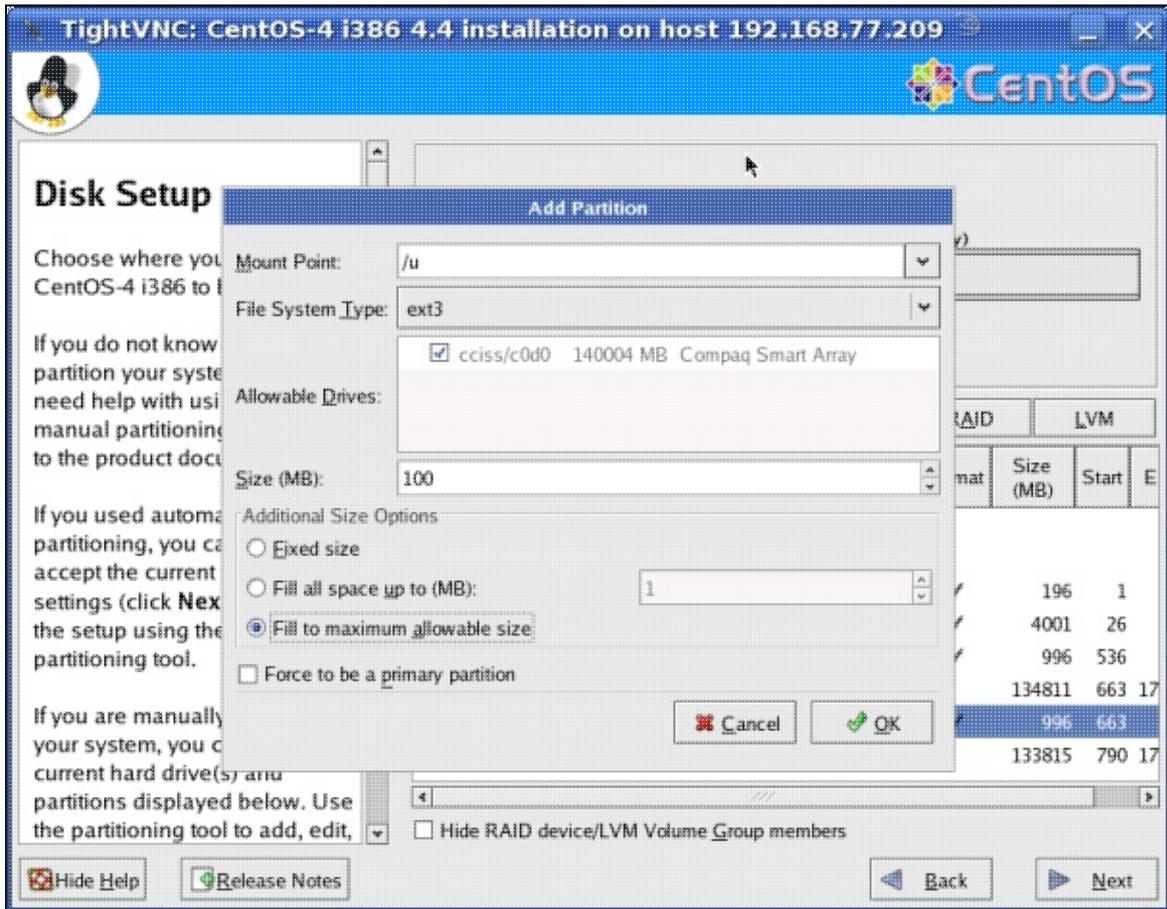
- Select **New**. Under **Mount Point** select **/boot** and type **200** in the **Size (MB)** field. Select **Force to be a primary partition** and then select **OK**.



- Select **New**. Under **File System Type** select **swap** and type **1000** in the **Size (MB)** field. Select **Force to be a primary partition** and then select **OK**.



- Select **New**. Under **Mount Point** type */backup* and type *1000* in the **Size (MB)** field. Then select **OK**.

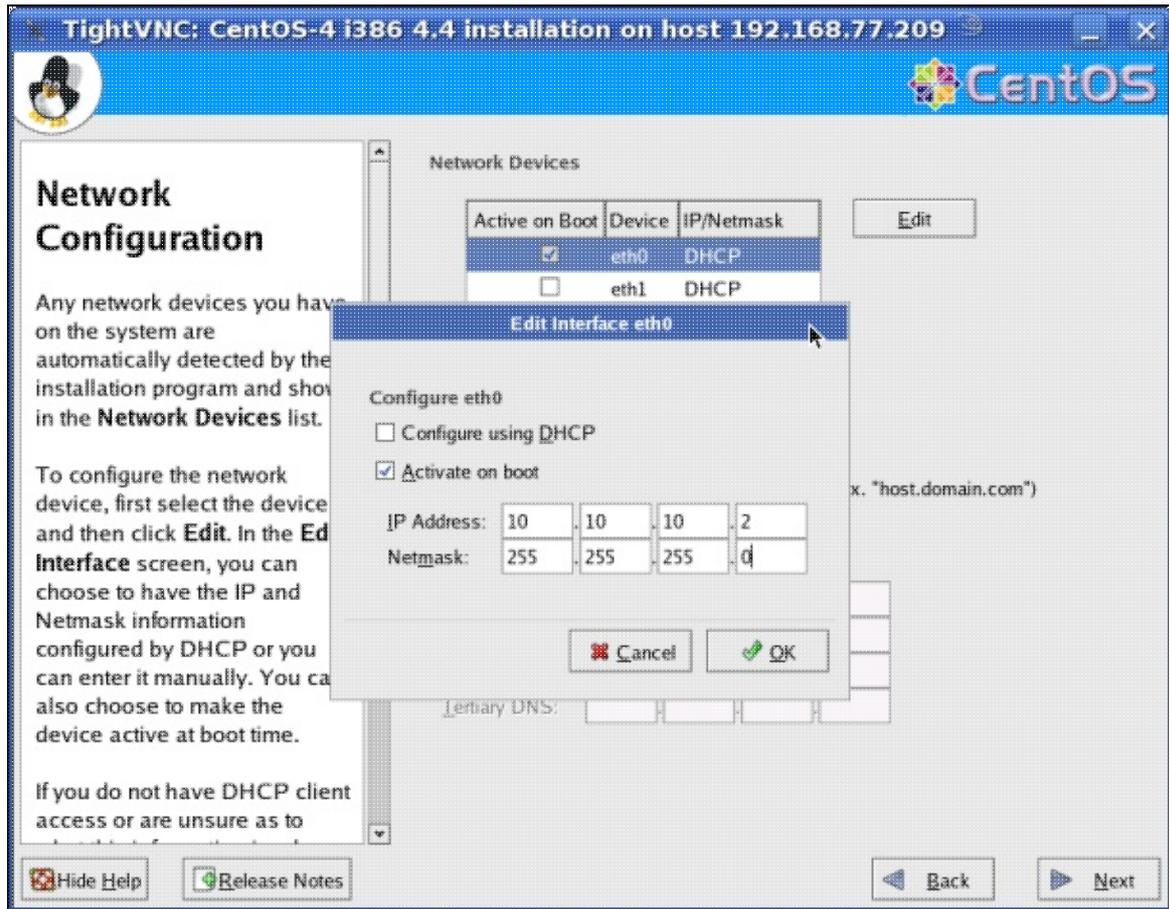


- Select **New**. Under **Mount Point** type `/u`. Select **Fill to maximum allowable size** and then select **OK**. * Back at the **Disk Setup** screen, select **Next**.

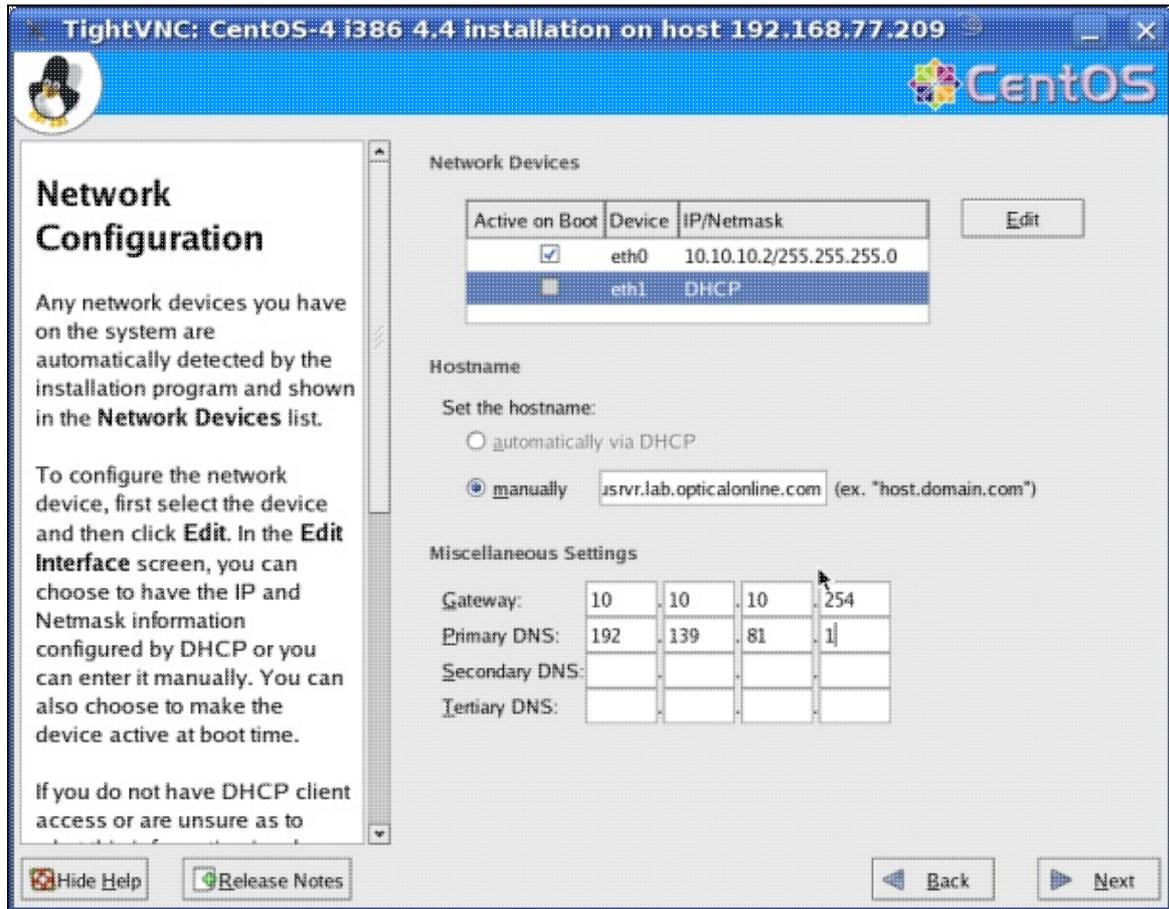
[edit]

Final OS installation steps

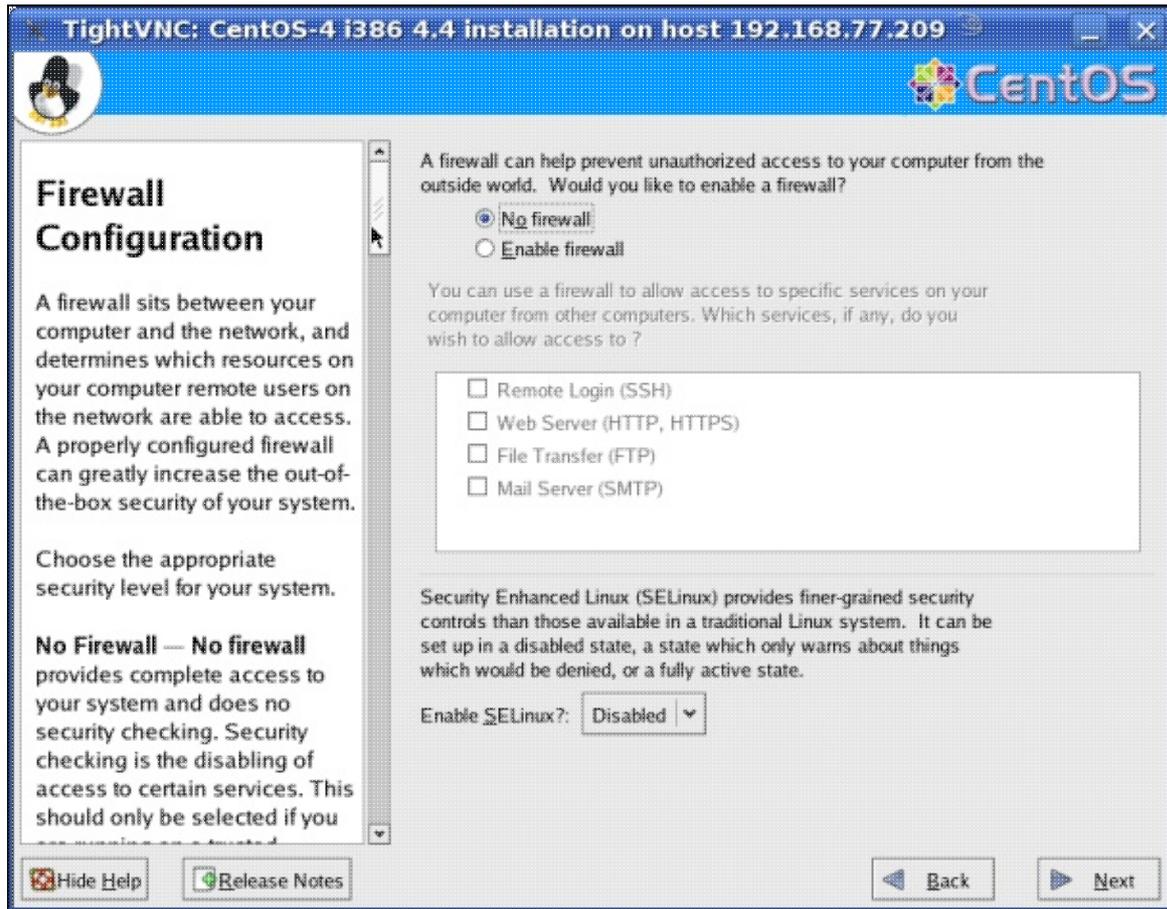
- At the **Boot Loader Configuration** screen, select **Next**.
- At the **Network Configuration** screen, ensure that `eth0` is highlighted, and select **Edit**.
- Uncheck, **Configure using DHCP** and enter `10.10.10.2` for the **IP Address** field, and `255.255.255.0` for the **Netmask** field, then select **OK**.



- Under **Hostname**, *manually* should be selected. Type *usrvr.lab.opticalonline.com* in the field next to **manually**.
- Type *10.10.10.254* in the **Gateway** field.
- Type *192.139.81.1* in the **Primary DNS** field.



- Select **Next**.
- At the **Firewall Configuration** screen, select **No Firewall** and select **Disabled** for the **Enable SELinux?** field, then select **Next**.



- At the **Warning - No Firewall** prompt, select **Proceed**.
- At the **Additional Language Support** screen, select **Next**.
- At the **Time Zone Selection** screen, select the correct time zone and then select **Next**.
- At the **Set Root Password** screen, enter the default root password (Same as for ccs account.) and select **Next**.
- At the **Package Group Selection** screen, un-check everything. Then select:
 - ◆ **X Window System**
 - ◆ **GNOME Desktop Environment**
 - ◆ **Editors**
 - ◆ **Text-based Internet**
 - ◆ **Sound and Video**
 - ◆ **Server Configuration Tools**
 - ◆ **Windows File Server**
 - ◆ **Network Servers**
 - ◆ **Legacy Network Server**
 - ◆ **Legacy Software Development**
 - ◆ **Administration Tools**

- ◆ **System Tools**
- ◆ **Printing Support**

- Find the **Sound and Video** selection, and select **Details**.
- Un-check **HelixPlayer**, **cdparanoia**, **rhythmbox**, and **sound-juicer**; and then select **OK**.
- Back at **Package Group Selection**, select **Next**.
- At the **About to Install** screen, select **Next**.
- At the **Required Install Media** screen, select **Continue**.



You will be prompted to insert various discs as the installation proceeds.

- At the screen that says, "Congratulations, the installation is complete", select **Reboot**.



The system will automatically reboot if you leave this screen long enough.

- You will be presented with a **Welcome** screen after the system reboots. Select **Next**.
- At the **License Agreement** screen, select **Next**.
- At the **Date and Time** screen, verify that the date and time is set correctly, and resolve those settings if needed, then select **Next**.
- At the **Display** screen, select **Next**.
- At the **System User** screen, select **Next**. You will receive a **Warning** prompt and should select **Continue**.
- At the **Additional CDs** screen, select **Next**.
- At the **Finish Setup** screen, select **Next**.

[edit]

OS Post installation steps

You will be presented with a system login screen that asks for your Username. At this screen, press **Ctrl + Alt + F2** with the keyboard, until you reach a console based **usrvr login:** prompt.

- Enter *root* and press *Enter*.
- At the **Password** prompt, enter the root user password, and press *Enter*.
- Insert CD2 into the disc drive and type:

```
mount /media/cdrecorder  
cd /media/cdrecorder/CentOS/RPMS  
rpm -Uvh k3b* kdelibs* tcl* tk* expect* perl-Crypt-SSLeay*  
cd  
eject
```

- Insert CD3 into the disc drive and type:

```
mount /media/cdrecorder
cd /media/cdrecorder/CentOS/RPMS
rpm -Uvh uucp* vnc-*
cd
eject
```

- Insert CD4 into the disc drive and type:

```
mount /media/cdrecorder
cd /media/cdrecorder/CentOS/RPMS
rpm -Uvh ncompress* tftp*
cd
eject
```

The type the following commands:

```
/usr/sbin/useradd cadmin
chfn -f 'emergency account' cadmin
/usr/sbin/usermod -p '$1$!iç%iç%82cQ$uodV1QgjtcouC74iRCkp2/' cadmin
rpm --import /usr/share/doc/centos-release-4/RPM-GPG-KEY-centos4
mv /etc/inittab /etc/inittab.backup
cat /etc/inittab.backup | /bin/sed 's/5:initdefault/3:initdefault/g' > /etc/inittab
reboot
```

The server will reboot after this, and should come up to a text based login.

[\[edit\]](#)

Installation of Add-On software

After installing the operating system, you must now install the add-on **cc-systems-centos4-software** CDs. To do so:

Insert the CD1 into the CDROM drive of the server and type the following commands as the root user:

```
mount /media/cdrecorder
# if for some reason that fails, try /media/cdrom
cd /media/cdrecorder
sh install.sh
```

Insert the CD2 into the CDROM drive of the server and type the following commands as the root user:

```
mount /media/cdrecorder
# if for some reason that fails, try /media/cdrom
cd /media/cdrecorder
sh install.sh
```

[\[edit\]](#)

FAQ for CentOS 4.x Software Versions

[\[edit\]](#)

Q: Can we disable kernel warnings on the screen?

A: You might get warnings that interrupt work even when there doesn't seem to be a problem. For example:

```
hdd:irq timeout: status=0Xd0 (Busy)
ide: failed opcode was: unknown
hdd: ATAPI reset complete
```

You can disable those messages popping up on the console, so that they don't continue to interfere with server use by editing the file `/etc/sysconfig/syslog` and modifying the `KLOGD_OPTIONS` line to look like this:

```
# KLOGD_OPTIONS="-x"
KLOGD_OPTIONS="-2 -c 1"
```

Then type:

```
service syslog restart
```

[\[edit\]](#)

Q: How do I enable the diskless workstation software on the server?

A: On a newly installed server, the following commands should be run as root:

```
chkconfig tftp on
chkconfig xinetd on
chkconfig dhcpd on
service dhcpd restart
service xinetd restart
```

[\[edit\]](#)

Q: I am missing NCFTP, how can I install it?

A: Newer versions of the 4.1 software should have ncftp installed, however some of the earlier versions may not. If the server that needs it is connected to the network, running the command:

```
yum install ncftp
```

Should install it for you.

The RPM can also be downloaded from one of the following sites:

- (Externally available) <http://bfs.iplink.net/yum/centos-cc/4/cc/ncftp-3.1.8-3.el4.i386.rpm>
- (Internal to Interlink) <http://bfs.int.iplink.net/yum/centos-cc/4/cc/ncftp-3.1.8-3.el4.i386.rpm>
- <http://heinous.org/files/rpms/ncftp-3.1.8-3.el4.i386.rpm>

Once the RPM is on the server, install it with:

```
rpm -Uvh ncftp-3.1.8-3.el4.i386.rpm
```

Note

It is recommended to start using wget or lftp instead of ncftp, as it is out of date software. See http://heinous.org/wiki/FTP_Clients for a comparison of the old ncftpget command to the newer lftp syntax. See http://heinous.org/wiki/Wget_examples for examples of ways to use wget with ftp servers.

[\[edit\]](#)

Q: When connecting to the Labzilla program (opti) with Teraterm from Windows, the backspace key does not work properly. How can I fix that?

- Start the connection by clicking on the icon that you normally would, but do not log in yet.
- In the top left corner of the Teraterm application screen, click on the icon of a computer and select **Show menu bar**
- Select **Setup**, and then select **Keyboard**.
- Make sure both of the transmit del by boxes are checked like so:



- Select **OK**
- Select **Setup**, and then select **Save setup**
- The filename should be teraterm.ini and the directory should be where teraterm is installed on your system.
- Select **Save**

The backspace key should now work correctly in the Labzilla application.

[edit]

References

Questions & Comments welcome! Edit the Discussion tab, or, for more traditional information: see [Leah](#)

leah-@heinous.org <http://heinous.org> <http://www.frauerpower.com> <http://www.lc>

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