NepaLinux 2.0 Installation Manual

Madan Puraskar Pustakalaya, Nepal

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NepaLinux 2.0 (GNOME) or (KDE) Installation Guide

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What is NepaLinux ?
NepaLinux is a Debian, Knoppix and Morphix based Live CD GNU/Linux Distribution focused for Desktop users in the Nepali language. The development and distribution of NepaLinux is done by Madan Puraskar Pustakalaya. The official site for NepaLinux is http://www.nepalinux.org

NepaLinux 2.0 consists of two CDs:

NepaLinux 2.0 (GNOME)
NepaLinux 2.0 (KDE)

These are two independent CDs. You can run only one at a time i.e. either GNOME or KDE.

What is a Live CD?

A Live-CD is an operating system (usually containing other software as well) stored on a bootable CD-ROM or DVD-ROM that can execute the operating system, without the installation of the operating system on a hard drive. The most popular Live-CD Linux Distributions are: Knoppix, Morphix, Gnoppix, Ubuntu etc.

A Live CD does not alter the current operating system or files unless the user specifically requests it. The system returns to its previous state when the Live CD is ejected and the computer is rebooted. It does this by placing the files that typically would be stored on a hard drive into temporary memory, such as a RAM Disk. In fact, a hard drive is not needed at all.

Although NepaLinux is a Live-CD, it comes with an installation utility runnable from the Desktop that can optionally install the system on a hard drive.

Hardware Requirements:

Minimum 128 MB RAM
Minimum Pentium 1 processor
At least 3 GB of Hard Drive to install

Warning : NepaLinux is a Live CD based Linux distribution. It is not an application software that runs on Microsoft Windows. So please don't try to run & install it in windows by searching a **setup file** like most application software on windows have.

However, it is possible to have Dual boot System in single Computer i.e NepaLinux in one partition and other Operating system(eg. Windows) in another.

Running the Live CD

1. BIOS setting
   As the computer starts,press the keys to enter the BIOS utility usually F1 or DEL key. Change the boot sequence setting such that the CD-ROM is first boot device. Save the BIOS setting, usually F10 key does this.
2. After you properly set the BIOS, insert the NepaLinux CD either NepaLinux 2.0 (GNOME) or NepaLinux 2.0 (KDE) depending upon you choice.
3. After few seconds GRUB boot loader is loaded. By default NepaLinux is booted in Nepali language. To boot NepaLinux in English interrupt the boot by presssing down arrow key within 5 seconds of GRUB loaded and then select NepaLinux GNU/LINUX 2.0 - en' in the GRUB menu.
4. Wait for some time until the NepaLinux is fully loaded and you are presented the Desktop. Now you are in NepaLinux Live CD working environment. You can operate it as the usual operating system , but it is comparatively slower since the whole operating system is loaded in the RAM. By LiveCD, you can browse the Internet, browse files and publish your documents in OpenOffice.org writer and editors,listens to Music etc. But it is to be noted that the saved files and folders are temporary. To save the copies permanently, you must save these files to external media such as floppy disk or pen Drive or you can save in your Hard Drive.

Installing NepaLinux in your Hard-Disk

Partition basics

Basically, three types of partitions exist: Primary, Extended, and Logical. However, when you for the very first time start dividing the drive, you will have just two types: Primary and Extended. The extended partitions can later further be sub divided into Logical partitions. Need to note that, each hard drive can have a maximum of four Primary partitions, or three Primary partitions and one Extended partition.

Ref. http://www.ahuka.com/other/partition.html

An Extended partition can contain multiple Logical partitions.

For NepaLinux 2.0 you must have two partitions
1). The main partition, denoted as **"/"** (at least 3 GB).
2). The swap partition, usually double the size of RAM.

In the main partition, all the packages in the NepaLinux are installed. The swap partition is used to help your system run faster. When your system runs out of physical RAM during operations, it uses the swap partition as RAM.

There are three types of interfaces for hard drives, CD-ROM drives, etc.

1. IDE (Integrated Drive Electronics) or Parallel ATA
2. SCSI (Small Computer System Interface)
3. SATA (Serial ATA)

ATA (Advanced Technology Attachment)

IDE is much more common and less expensive. SATA and SCSI are more expensive and also more flexible and are generally faster.
On your IDE drives, master, slave, primary and secondary are determined by how they are actually wired to the system.

IDE Device Linux Indication
primary master ----------> /dev/hda
Primary Slave ----------> /dev/hdb
Secondary Master -------->/dev/hdc
Secondary Slave ---------->/dev/hdd

SATA and SCSI drives are in order of appearance. If you have drives at SATA IDs 1, 2 and 3 they will be named sda,sdb and sdc respectively. Hard Drive Partitions are named as hda1,hda2 for IDE and sda1,sda2 for SATA or SCSI.

Before you begin NepaLinux 2.0 installation, please manage at least 3 GB of free partition in your Hard Drive. If you have not free partition you can manage it by using third party utility software such as Partition Magic for Windows. You can also allocate a whole partition (for eg. D or E Drive if you are in Windows) for NepaLinux, but be careful that all the data in that partition will be lost and overwritten by the NepaLinux so properly backup the data to other partitions or external media.

Installation Steps in Nepalinux2.0

There are two main steps in NepaLinux 2.0(GNOME or KDE) installation

1.First you make the partition

For making partition use either Gparted partitioning tool or CFDISk partitioning tool, after partitioning is finished restart your system.

2.Install into the HardDisk.

Choose NepaLinux2.0 (GNOME) 2.0 CD or Nepalinux2.0 (KDE) and run the live CD, by following the steps in the section **"Running Live CD"**.

After the NepaLinux 2.0 GNOME or KDE is fully loaded and you are presented to the Desktop, make the partitions for installation, using the partitioning utility. There are two partitioning utility available in NepaLinux.

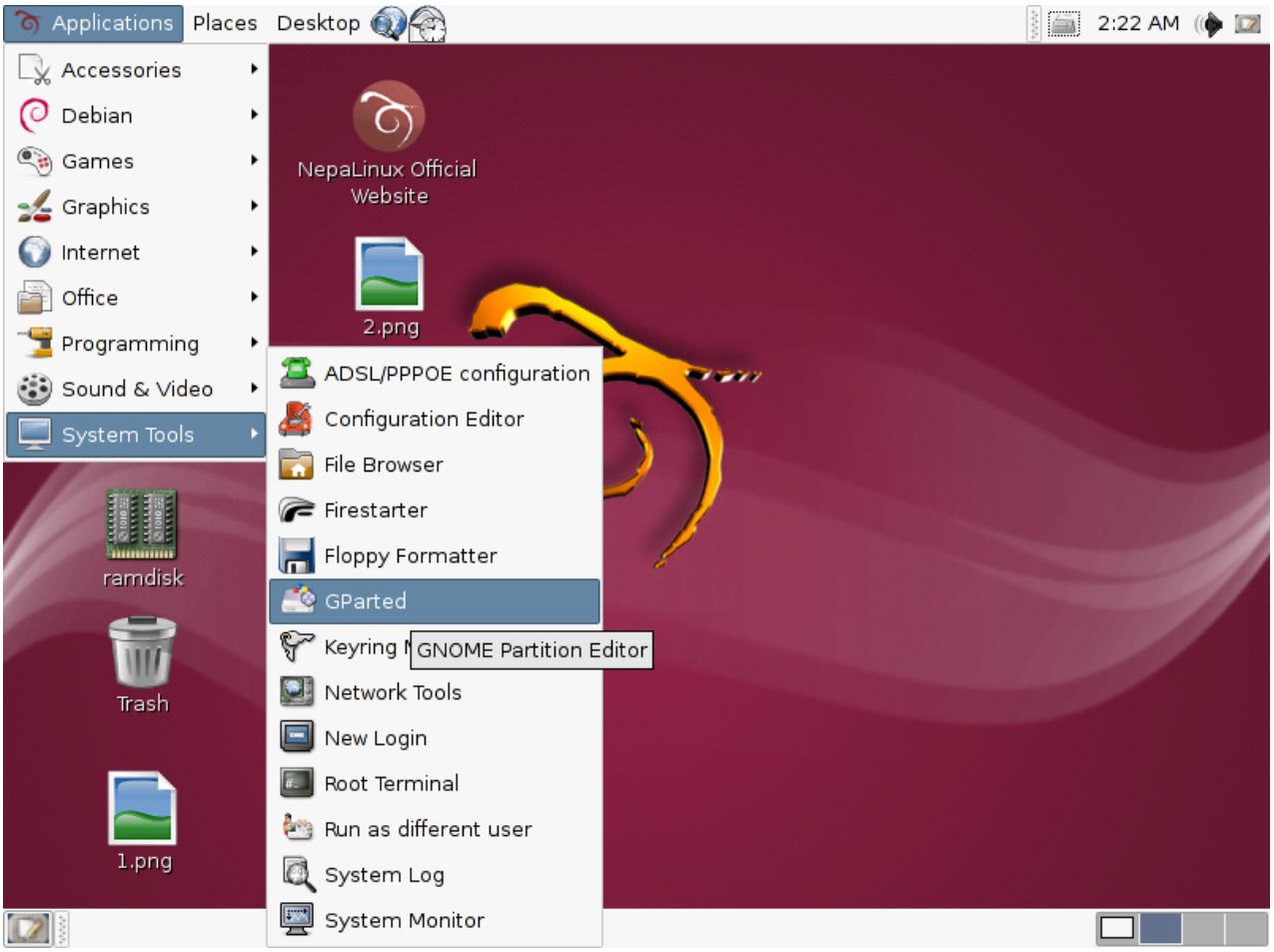
Gparteed ---> GUI

CFDISk -------> command Line based,
CFDisk is fast and efficient in comparision of Gparted while Gparted is easy and user friendly.

For Nepalinux2.0 GNOME or KDE you have to make two partitions one main partition (at least 3 GB) and another swap partition generally double the size of your RAM. You can use either of the method Gparted or CFDISK for making the partitions.

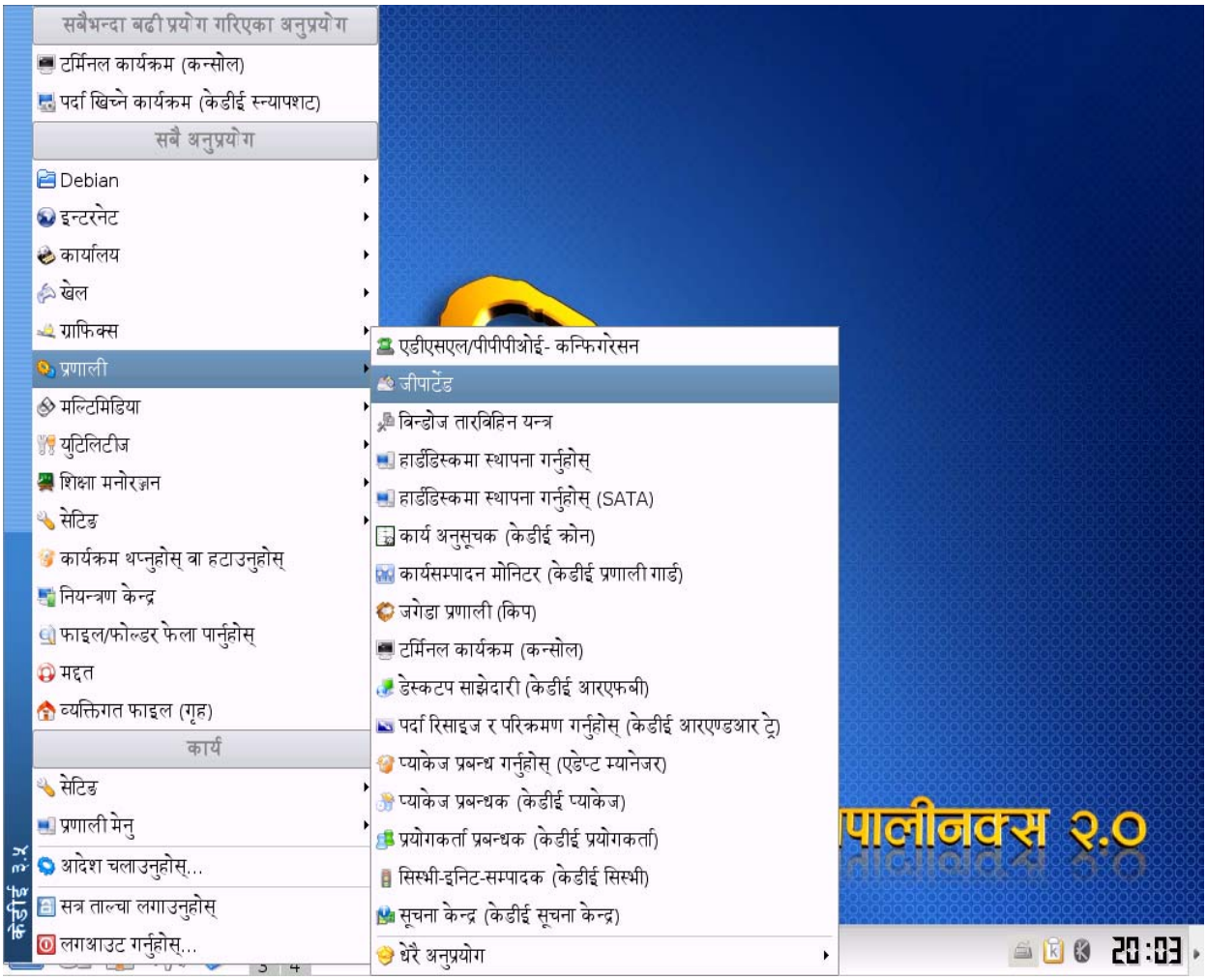
Making partitions using Gparted,

Under NepaLinux2.0 (GNOME)
a. Application -----> system tools -----> Gparted



Under Nepalinux2.0(KDE)

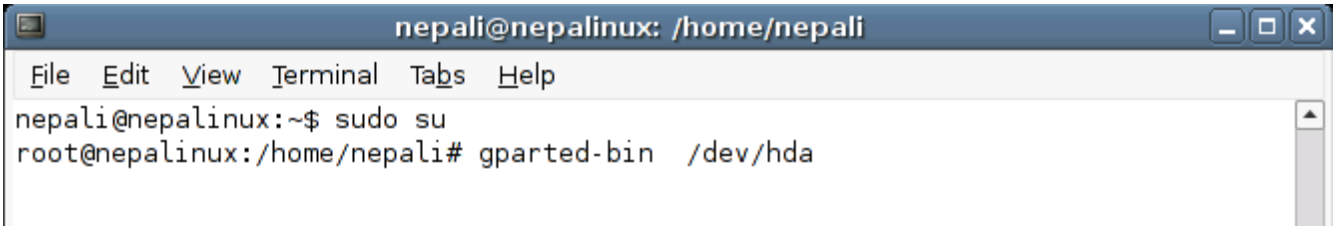
KDE Menu ----> System ----> Gparted



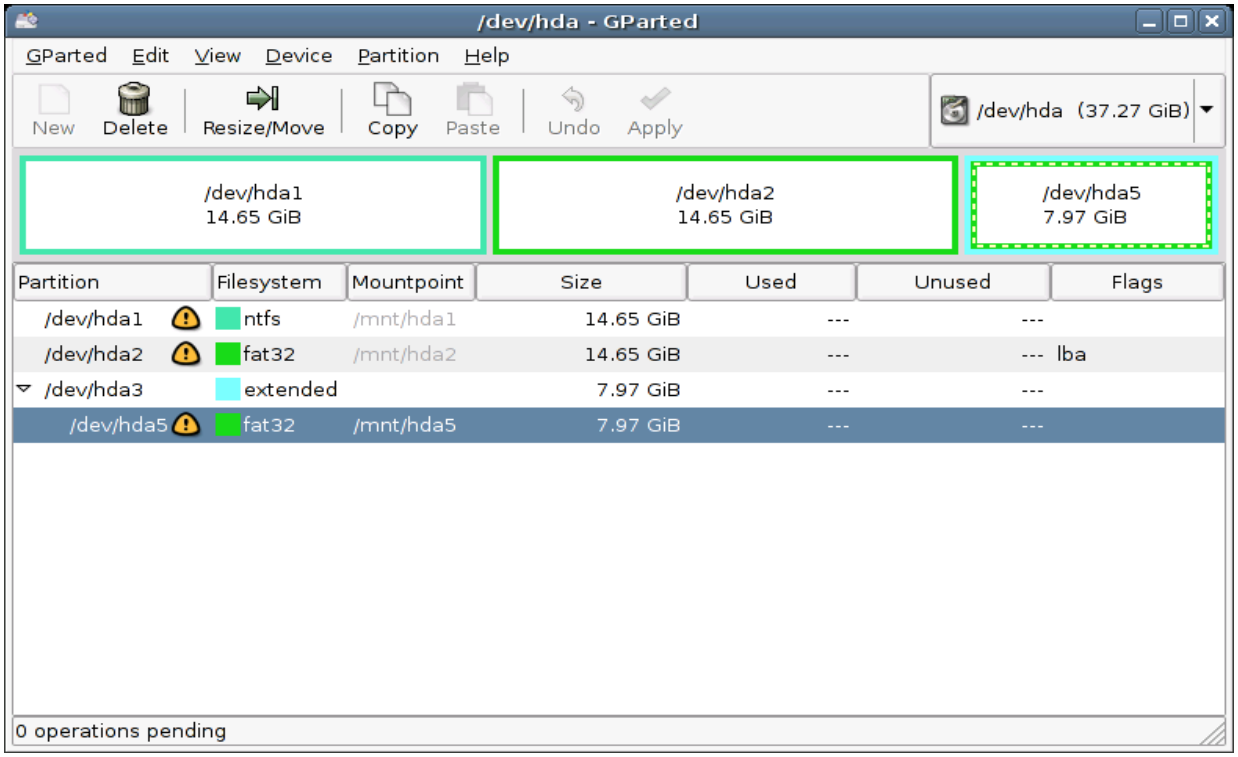
b. you are presented to the gparted screen.

c. Select your hard disk ,it is under /dev/hda or /dev/sda

Note:If gparted just get hanged or taking too much time for opening the partition table, then open the terminal and provide the following commands to get worked.



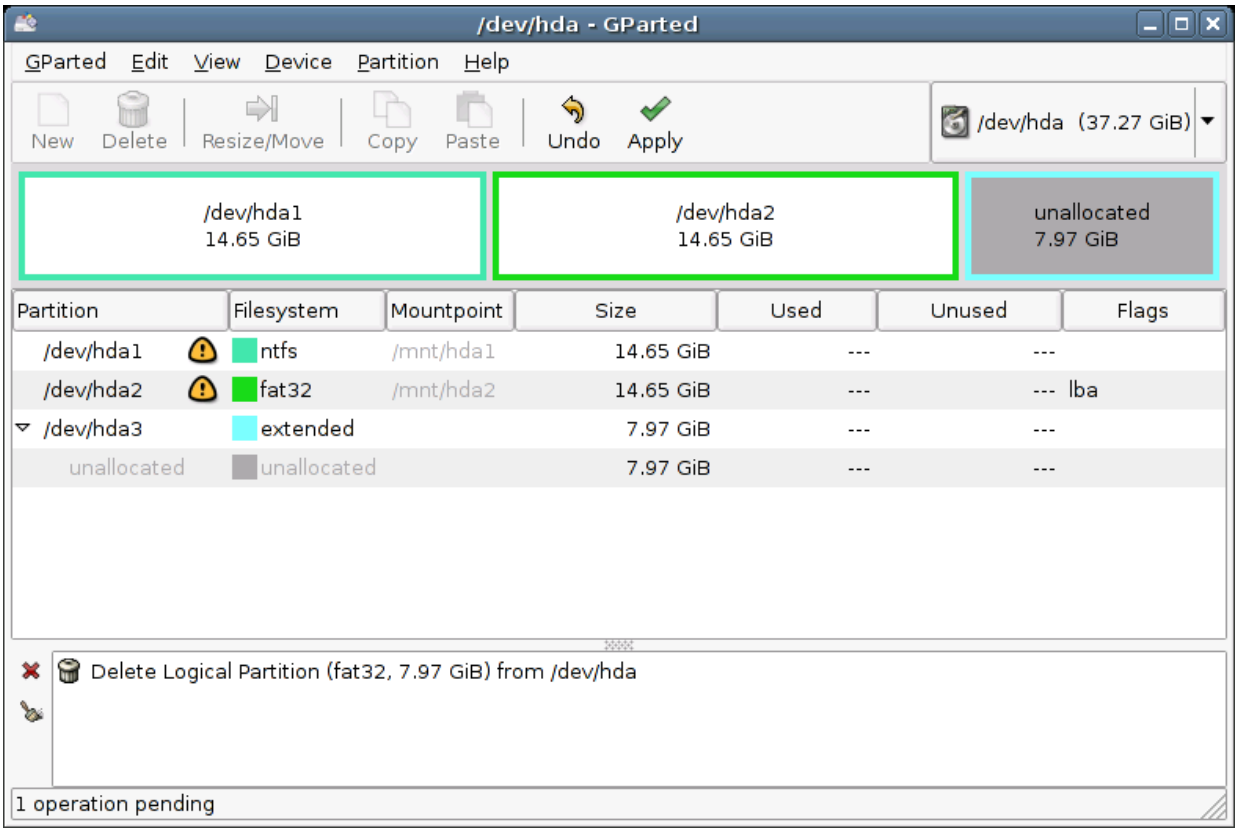
d. Now it will show the current harddirve partitions.



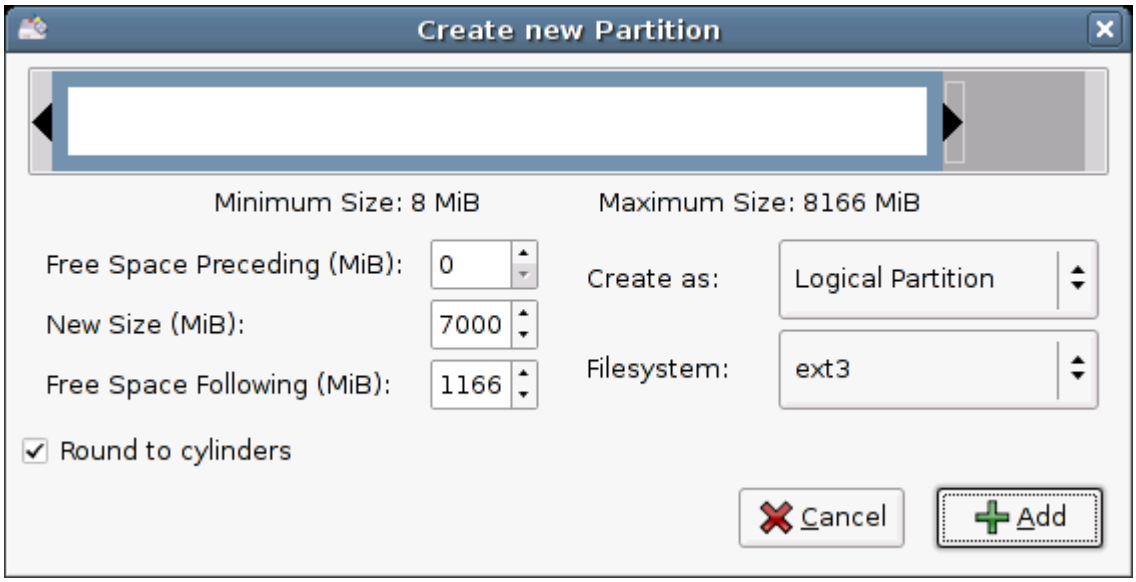
The partition table is displayed. In our example system three partitions are present. If you compare the partitions hda1, hda2 etc to windows counterpart, they are generally as,
hda1 ----> C: , hda2 ----> D: and hda3 ------>E repectively in windows. Here we have allocated third partition(hda3) for NepaLinux. So select the partition and delete this partition.

Note: If you have any data on third partition i.e. on the one you are going to install NepaLinux, it will be lost! So confirm that the data in this is properly backed up.

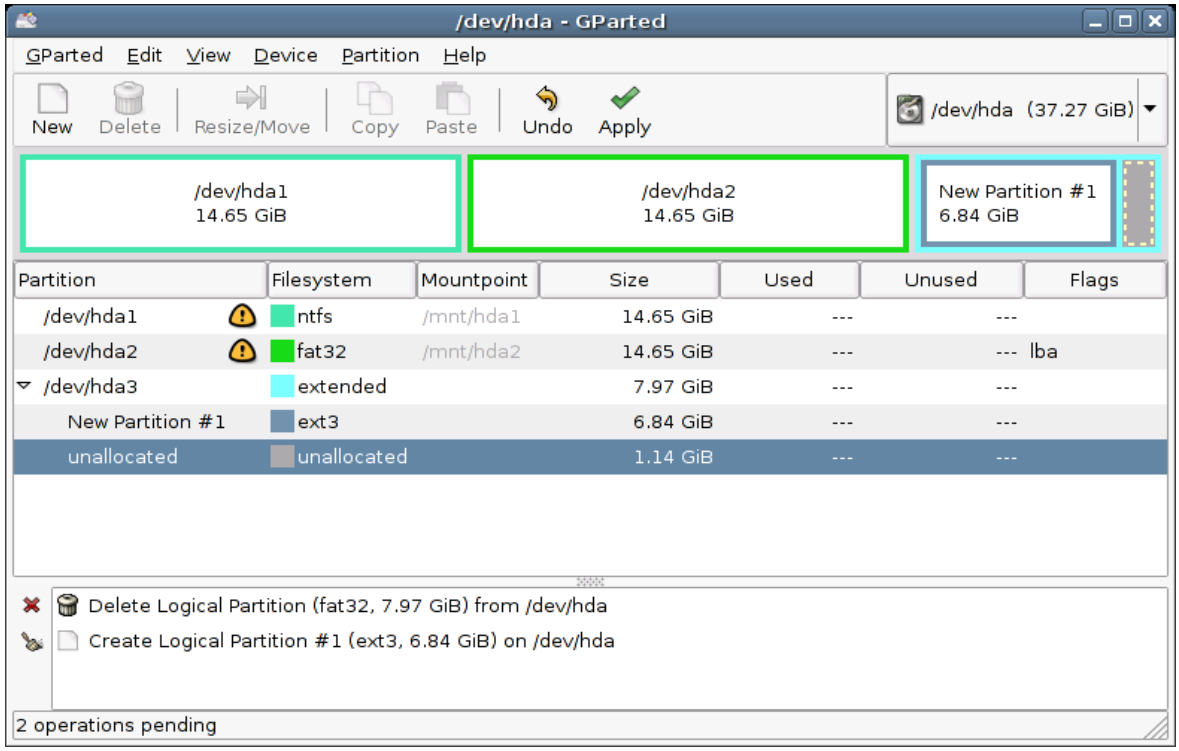
e. select the third partition and click delete.



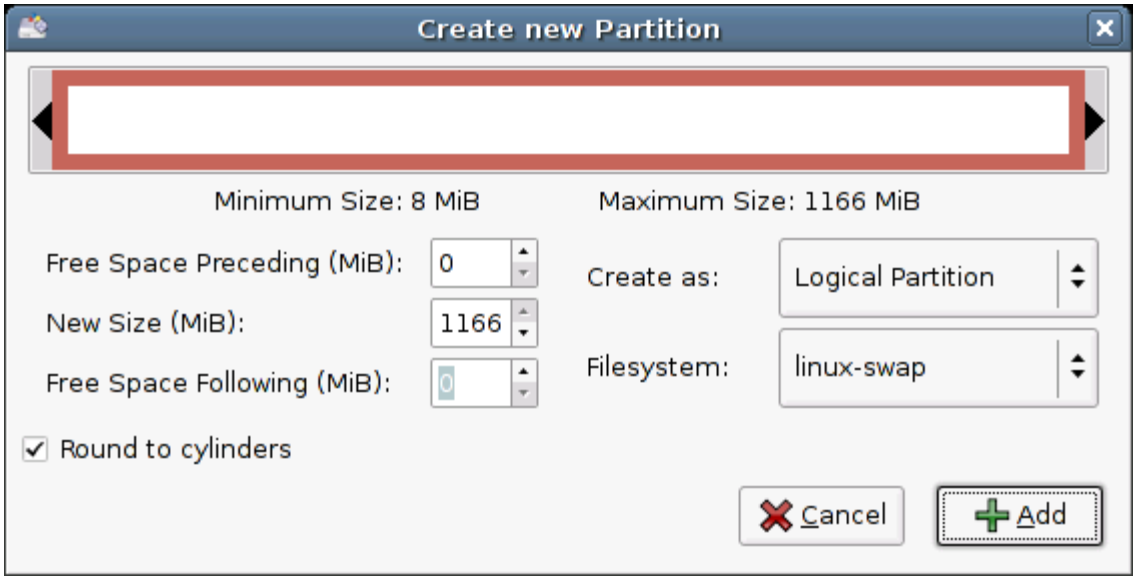
f. For making the main partition, select the free partition and click New. Then you are presented to a window, provide the size of main partition (minimum 3 GB). Here in our example system we have given it as 7GB(7000MB). Select the file system type ext3 and click add.



g. now again select the free partition and click new

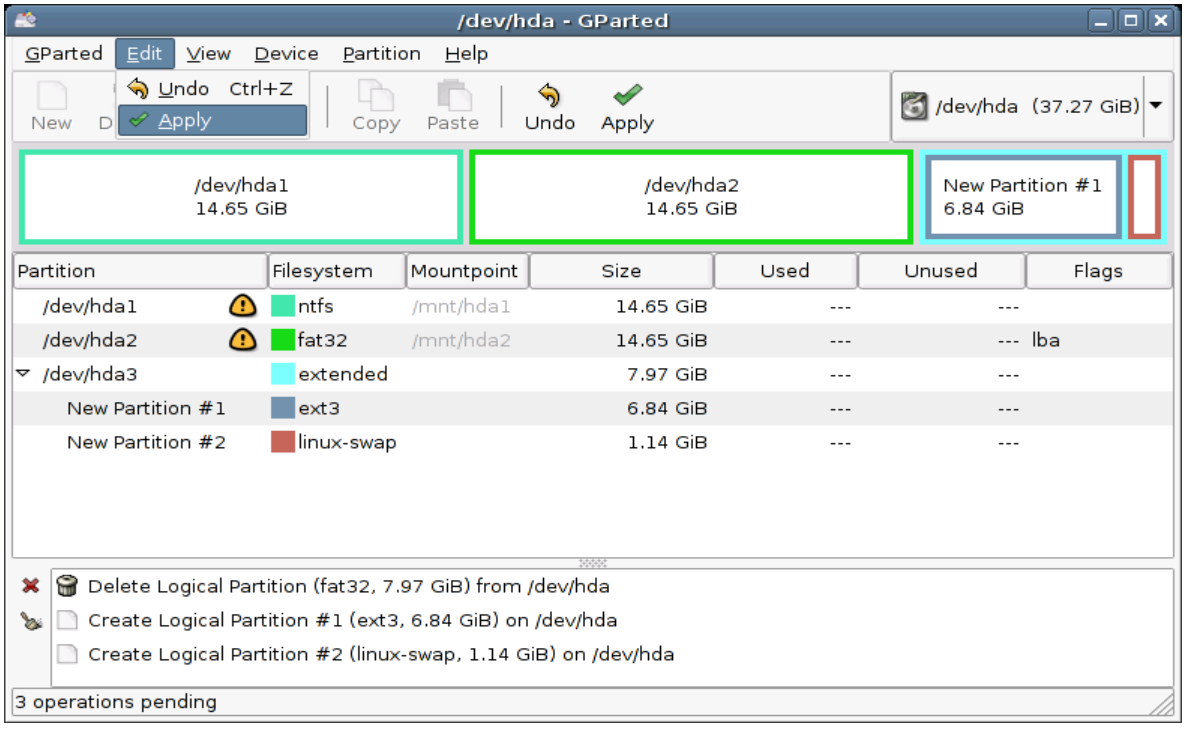


h. Now make the swap partition, generally its size is double the size of RAM. Here in this example we provide the size of 1.1 GB. Select the file system type as “linux-swap” and then click add.

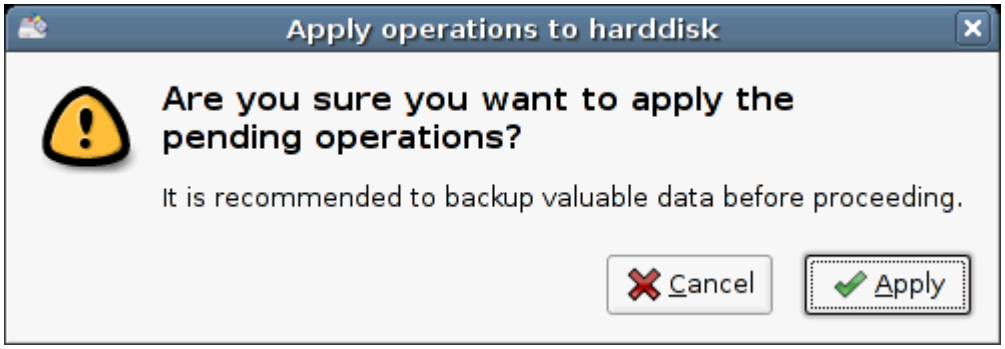


i. After you complete the partitioning ,Apply the changes,

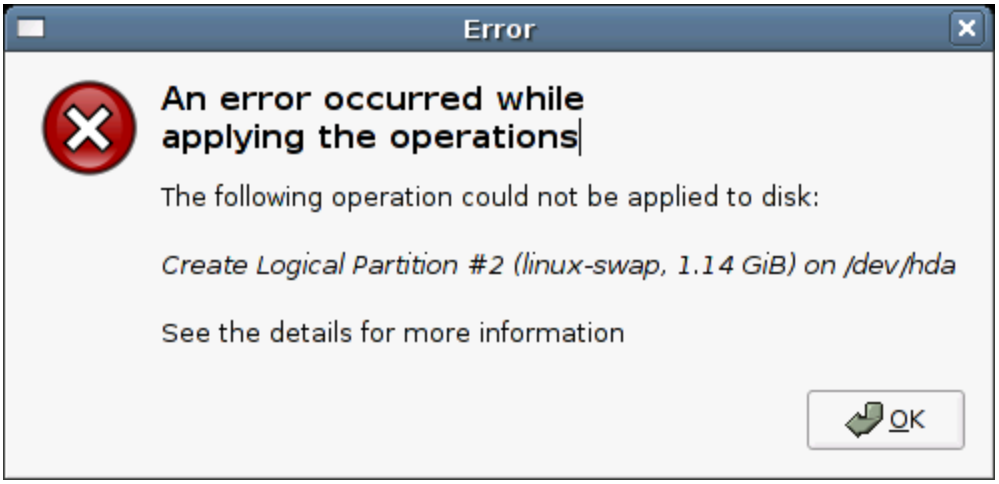
Edit ----->Apply or directly click the Apply button.



j. A warning message is displayed, Click Apply.



l. If an error is repeated during the partitioning repeat the process from the beginning or restart your computer and again follow the same steps.



m. After you finish the partitioning , restart your system, Desktop ----> logout for GNOME and KDE Menu ----> Logout for KDE.

Making partitions using CFDISK

For NepaLinux2.0(GNOME)

a. open the terminal window. Application ------> Accessories -------> Terminal.
Enter the command “sudo su” and then type “cfdisk”

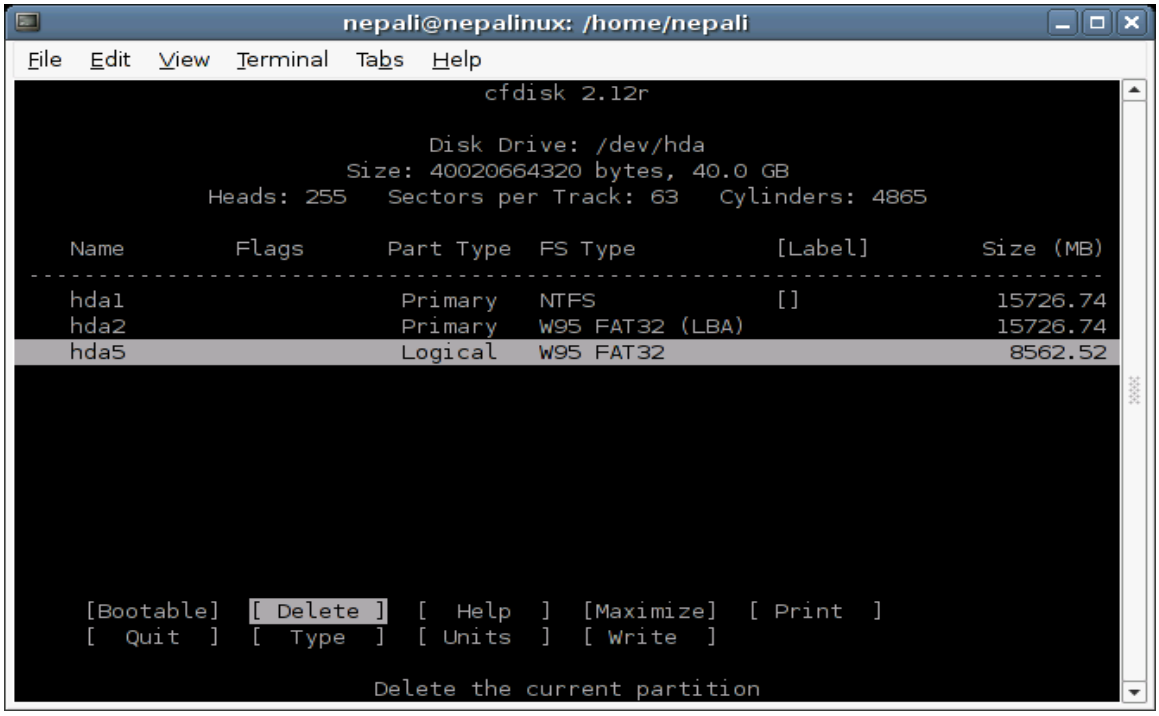
For Nepalinux2.0 (KDE)
open the Terminal window, KDE Menu ----> System -----> Terminal
Enter the command “sudo su” and then type “cfdisk”

by default cfdisk run in the first hard disk. If you have two harddisk then you have to specify the second harddisk as parameter,such as **“cfdisk /dev/hdb” or (/dev/sdb if your harddisk is sata)**

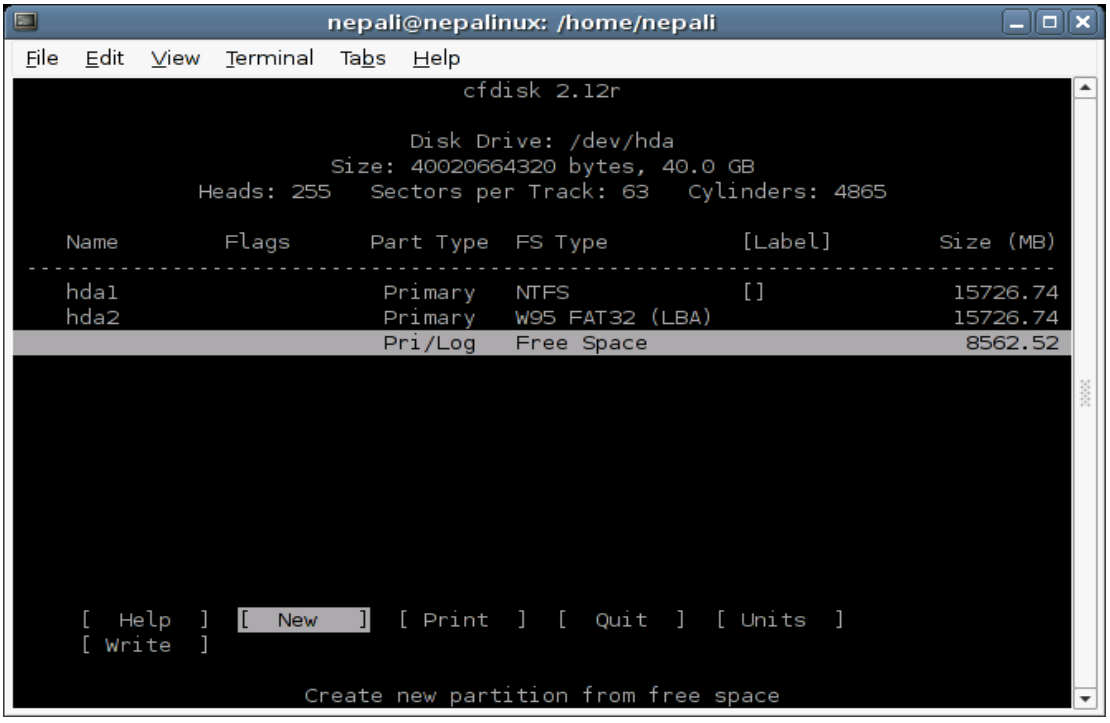
The partition table is displayed. In our example system three partitions are present. If you compare the partitions hda1, hda2 etc to windows counterpart, they are generally as, hda1 ----> C: , hda2 ----> D: and hda3 ------>E respectively in windows. Here we have allocated third partition(hda3) for NepaLinux. So select the partition and delete this partition.

Note1: If you have any data on third partition i.e. on the one you are going to install NepaLinux, it will be lost! So confirm that the data in this is properly backed up.

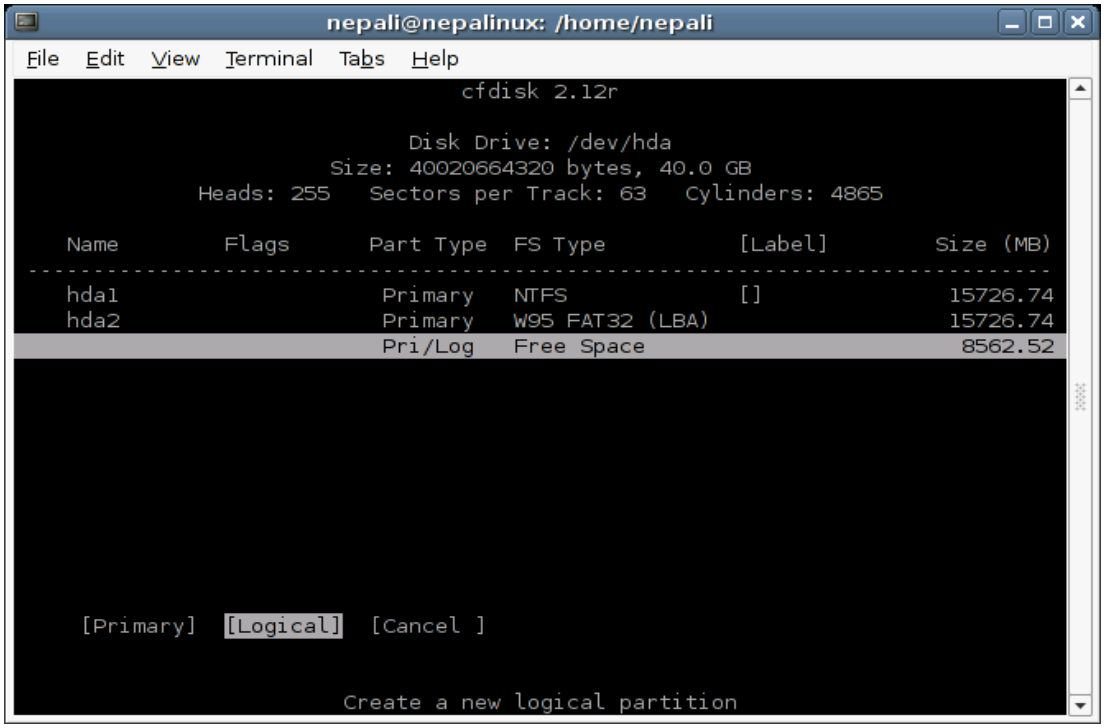
Note2:IDE Hard disk partitions are displayed as hda1,hda2 etc while SATAs hardidisk are replaced by sda1,sda2 etc.



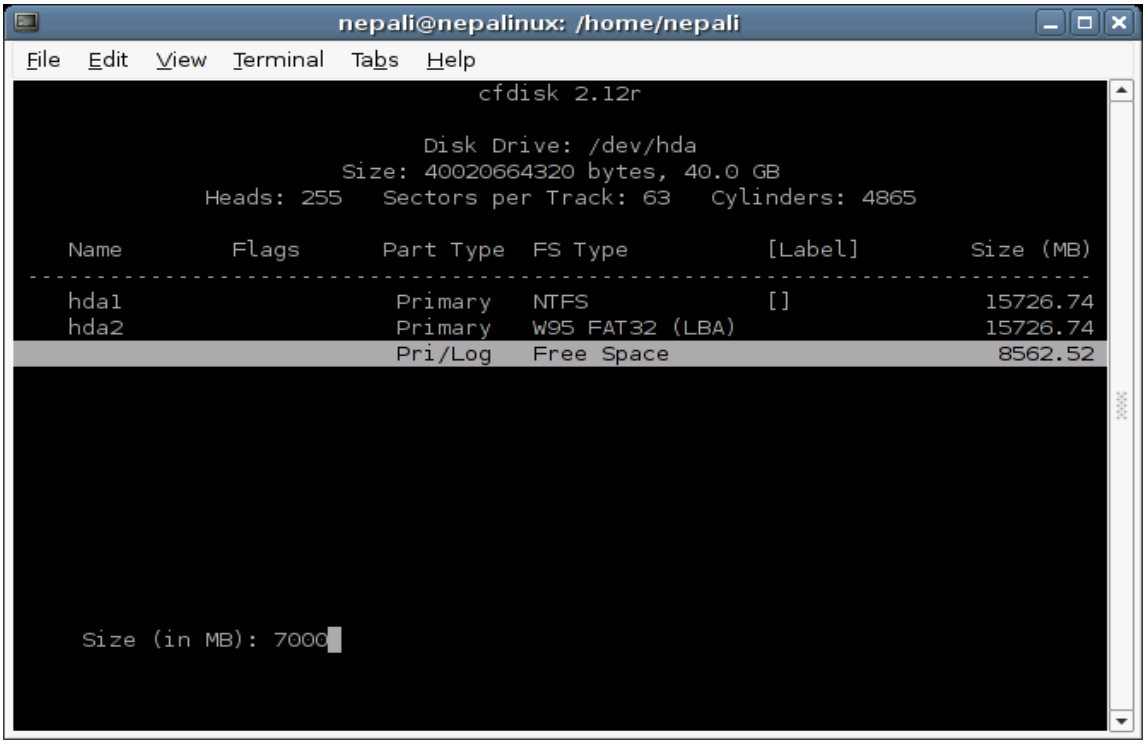
b. When you delete the third partition,this partition is indicated as Free in the CFDisk table. Create a new partition on this.



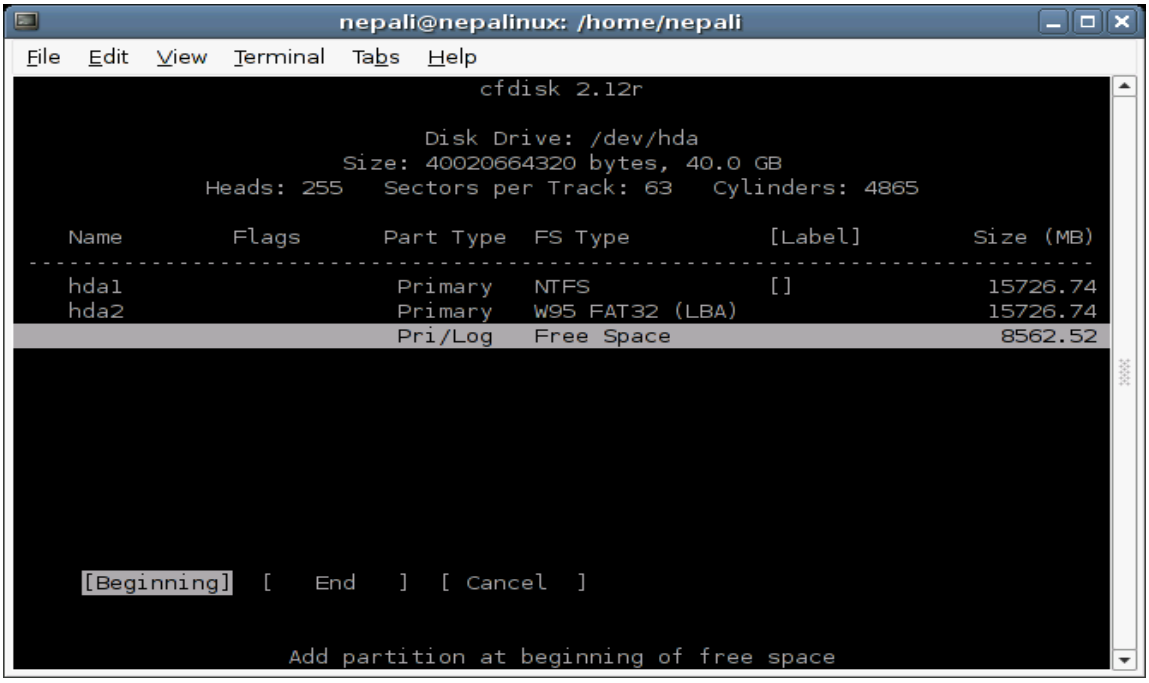
c. You may asked for primary or logical partition. Select logical and press enter.



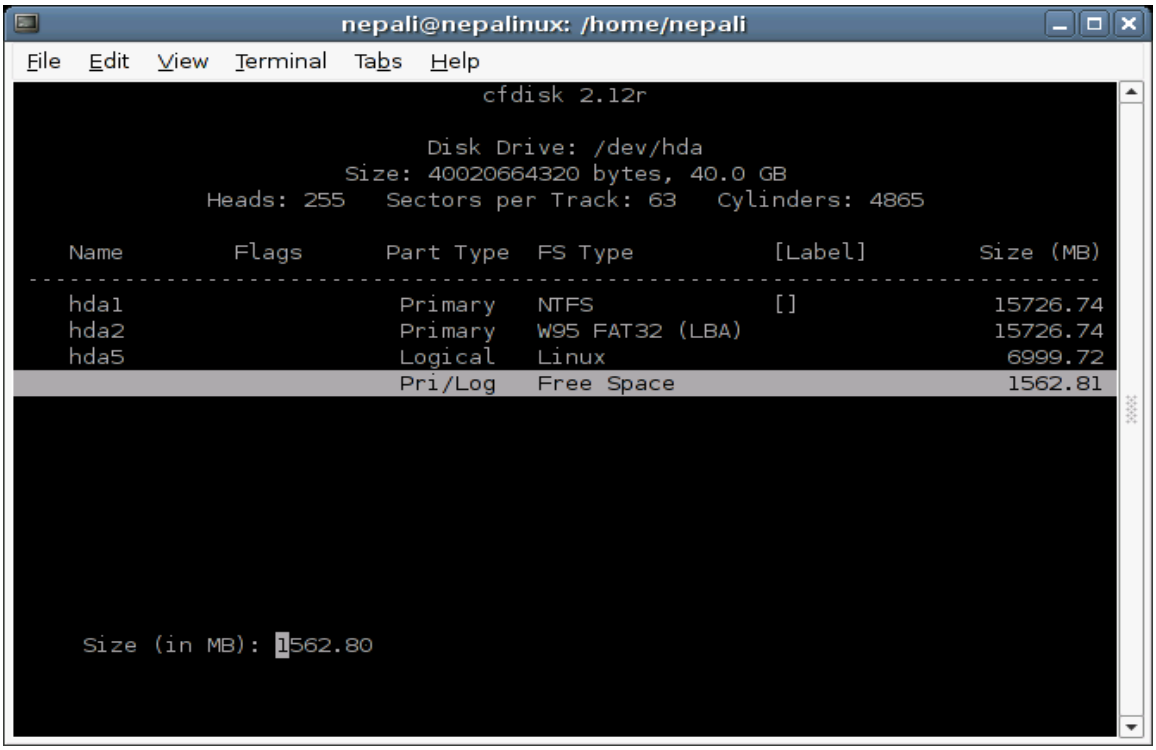
d. Enter the size for the main partition. Here in this example we allocate it 7000MB.



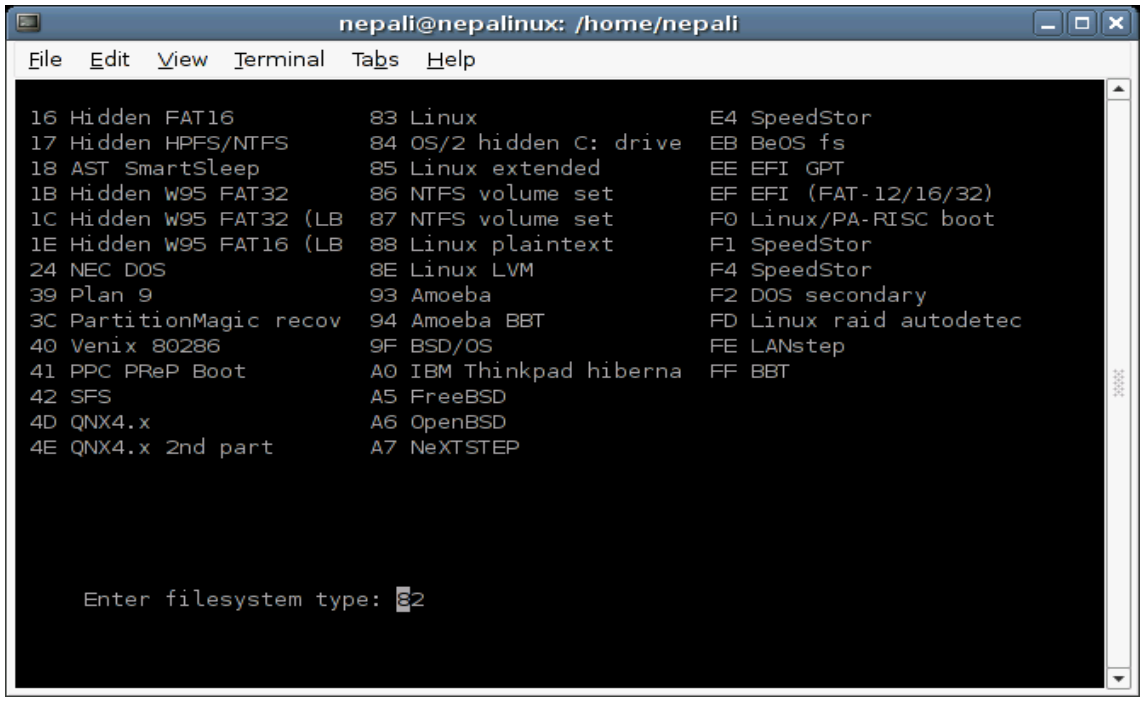
e. Enter the beginning.



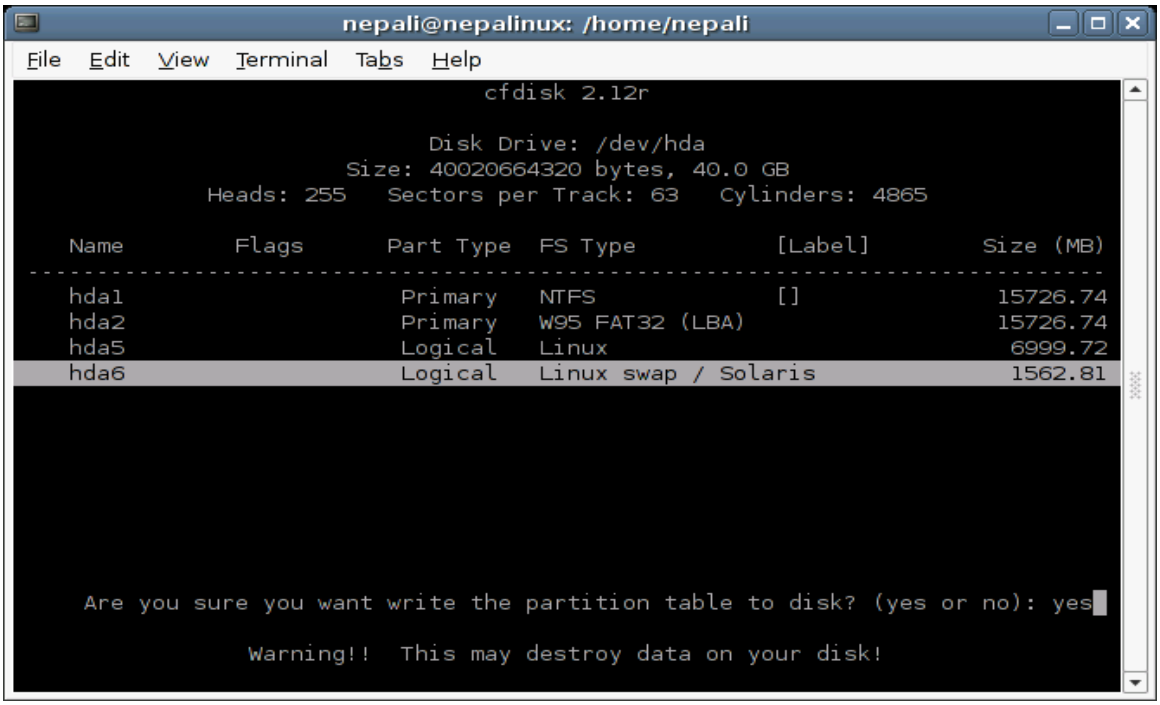
f. specify the swap partition size (usually double the size of RAM).



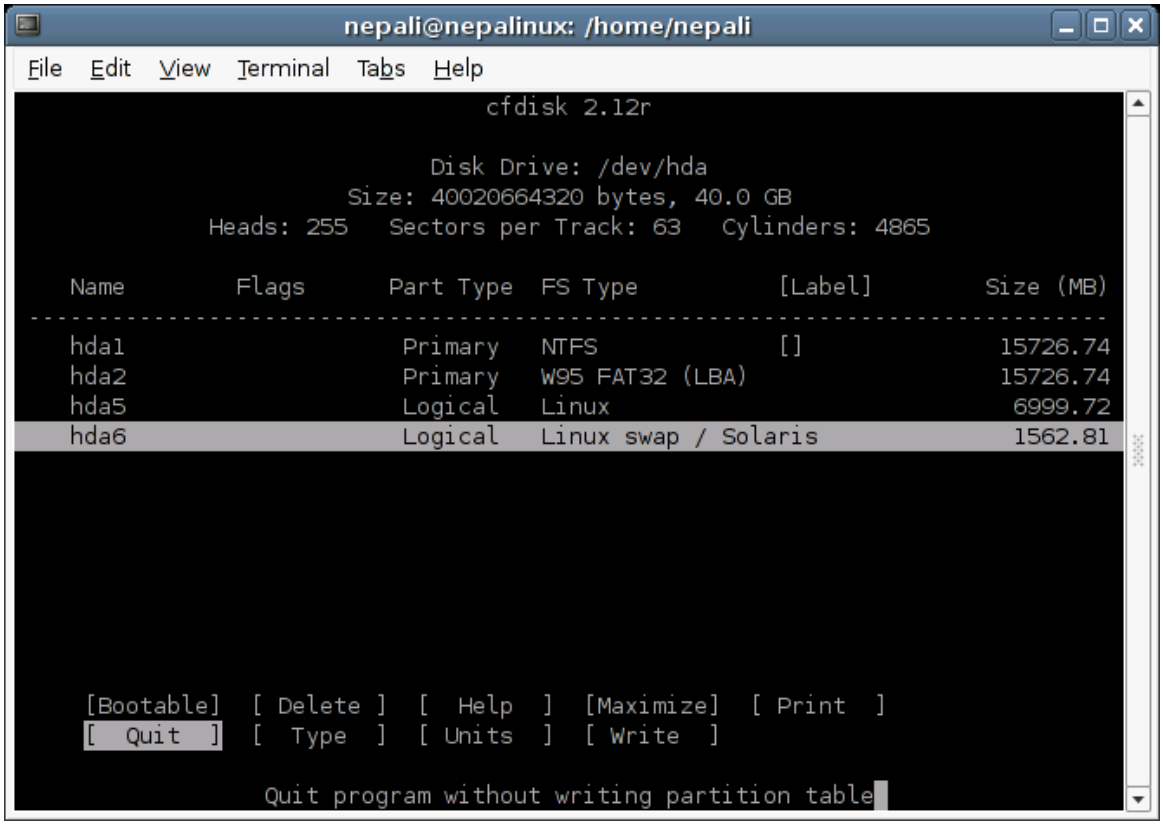
g Specify the partition as swap type by toggling the key to the Type tab, then press Enter Key and again Enter key where you see the type 82 as default.



h. Go to the “write” tab to write the partition table and type yes for permanently writing the partition table.



i. After you finish go to the “quit” tab to finish the partitioning.



After you finish the partitioning restart your system. Desktop ---> Logout, for GNOME and KDE menu ----> Logout for KDE, It will shutdown your system. Restart it again.

NepaLinux Installation

(If your Hard disk type is SATA refer to the section Installing Nepalinux2.0 in SATA Hard disk at the bottom of this manual.)

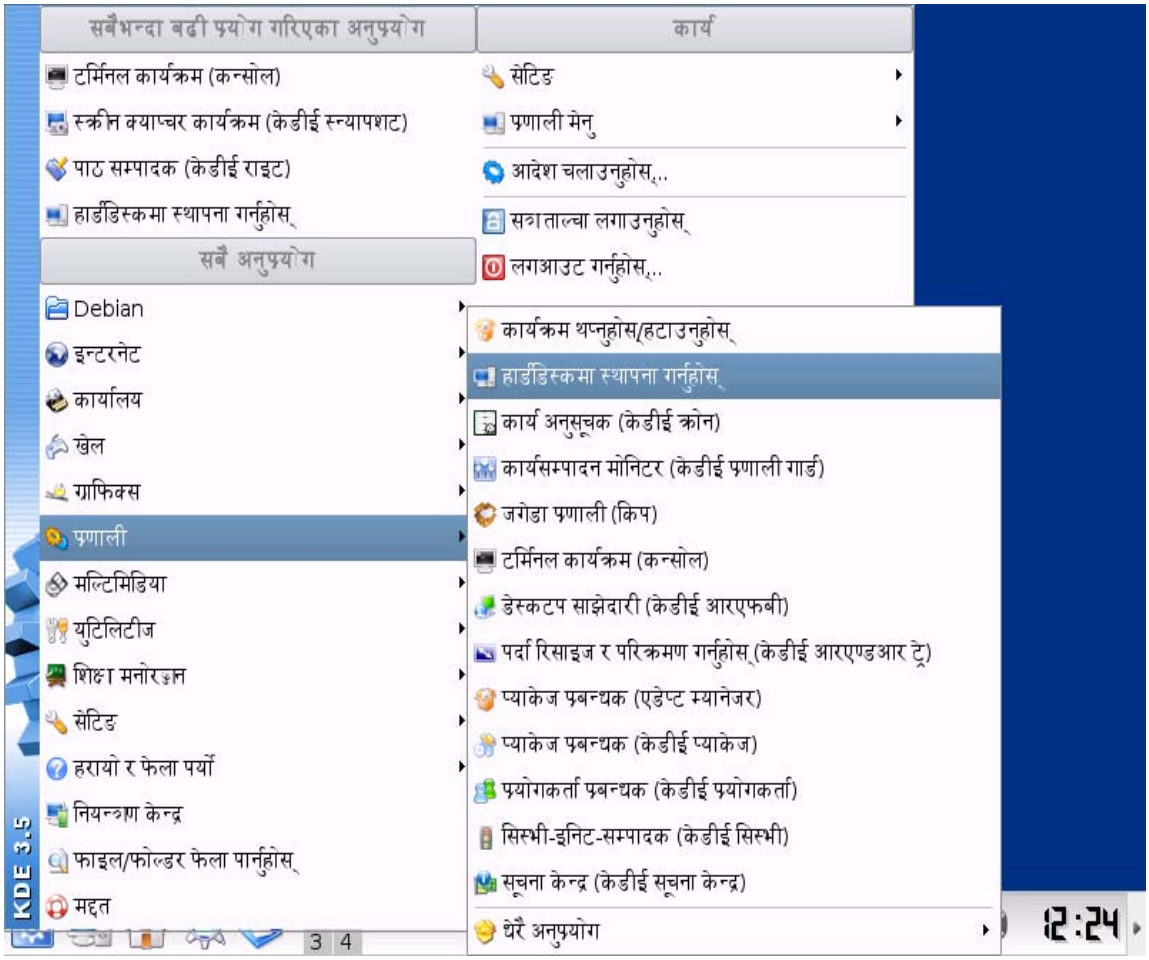
Install into the Hard Disk

For GNOME

1. **Desktop-----> Preferences ---> Install to Harddisk**

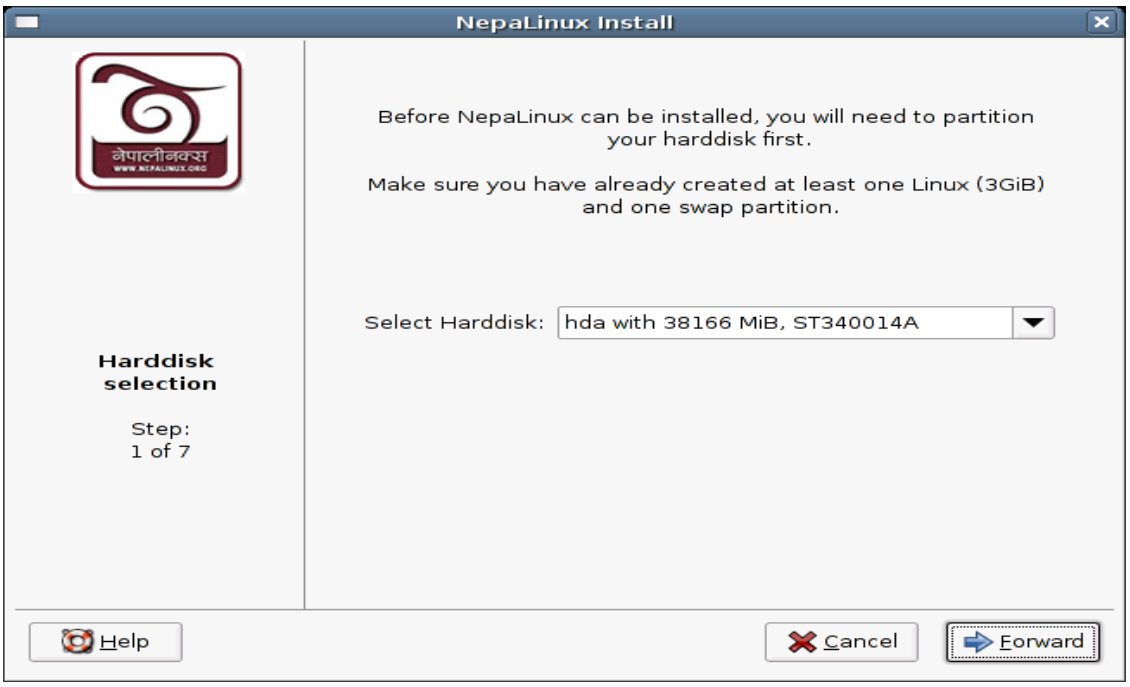
For KDE

KDE Menu(केडीई मेनु) -----> System(प्रणाली) ------> Install to Hard Disk(हार्डडिस्कमा स्थापना गर्नुहोस्)

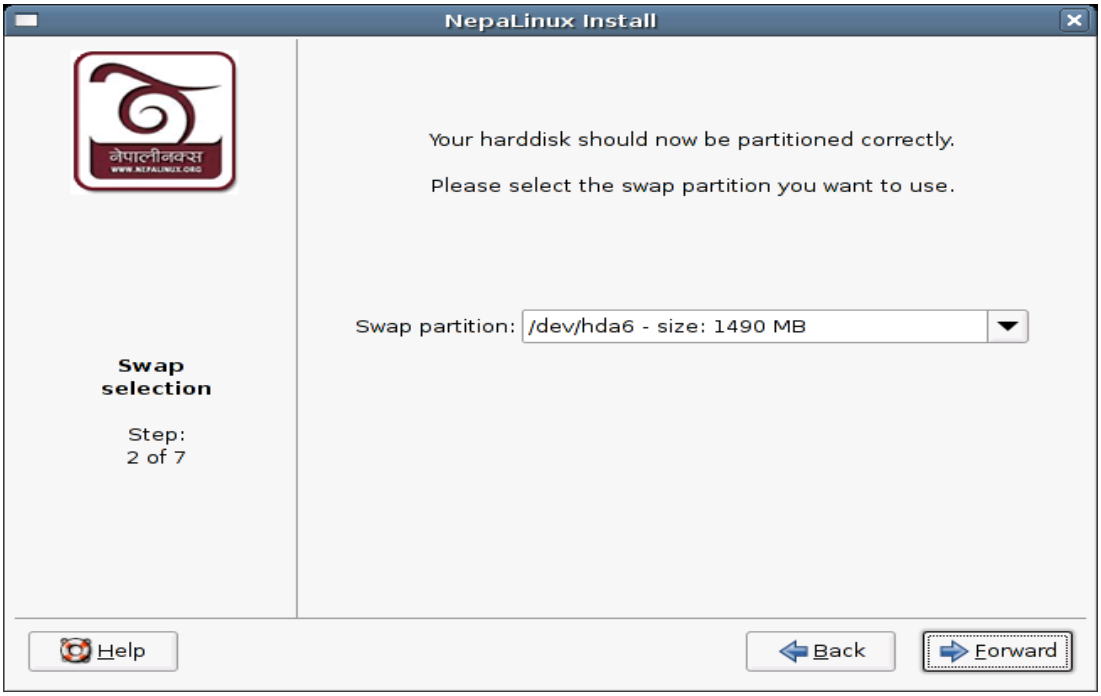


2. now you are presented to the welcome screen. Just click Forward.

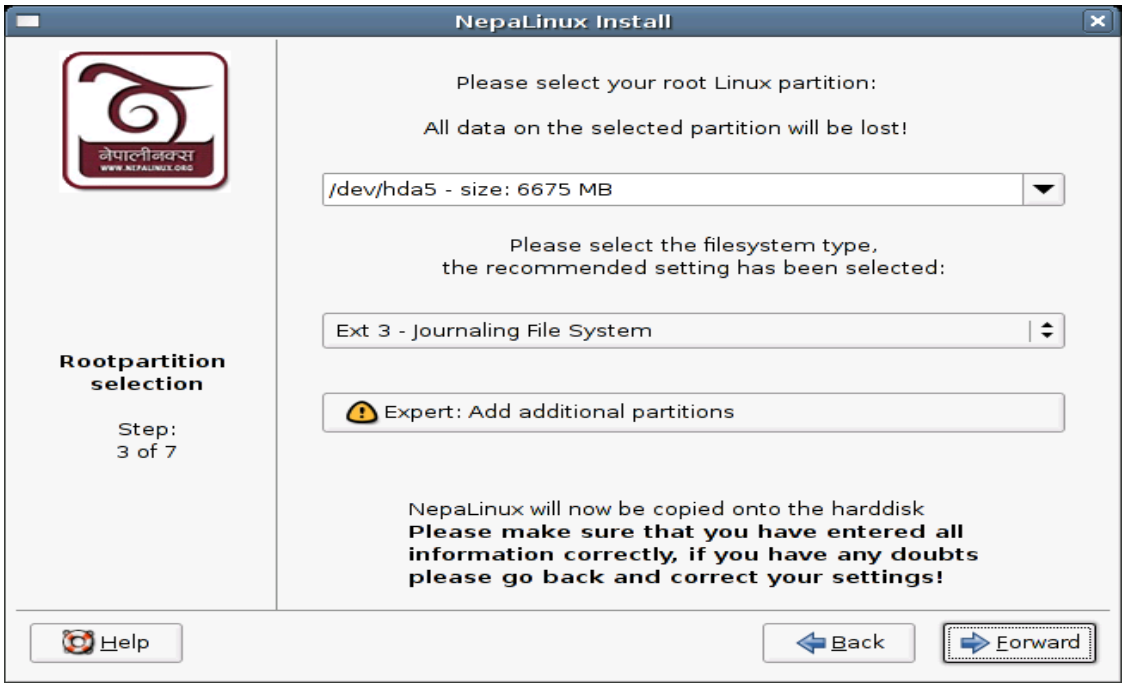
3. Select the Hard Disk to install the Nepalinux2.0 and click Forward button.



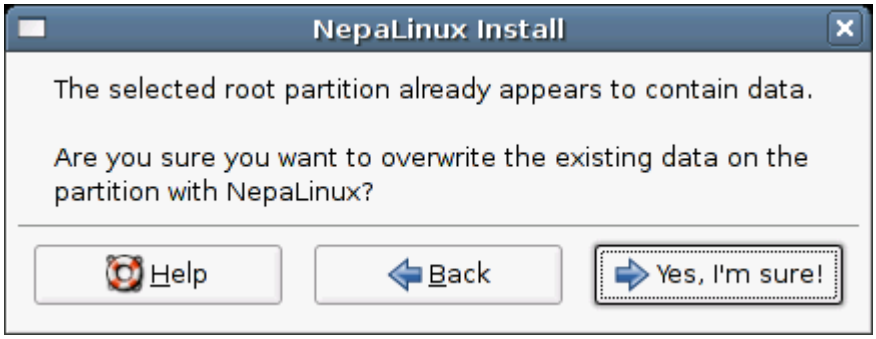
4. Just Detection of the Swap partition we made earlier, Click Forward.



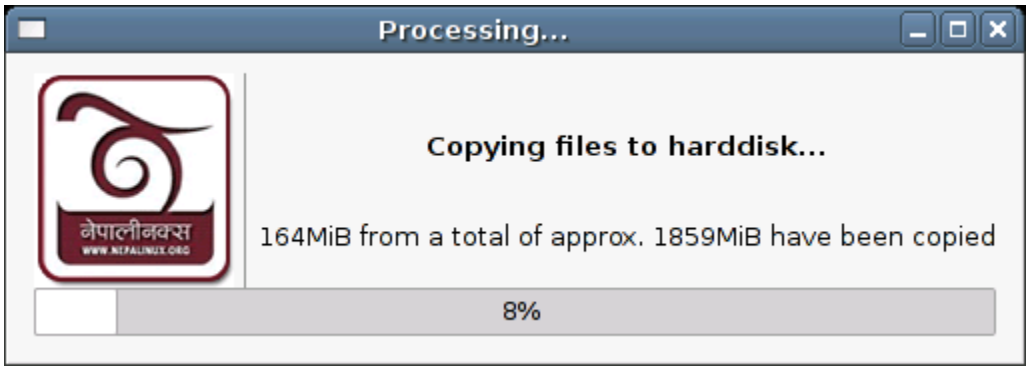
5. Your main partition is detected and you are now being queried for the filesystem type ext2 or ext3. Just choose default one, i.e Ext3 and Click Forward.



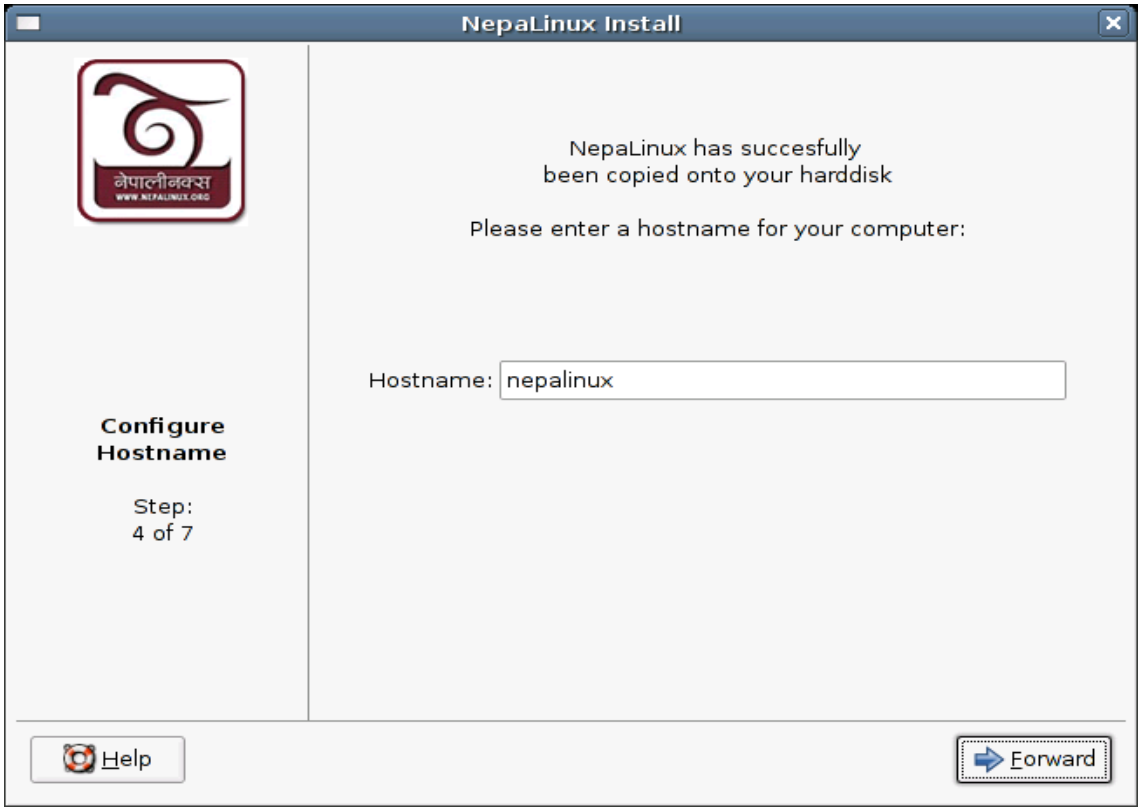
6. A warning message is displayed, Press “Yes I'm sure “ button,

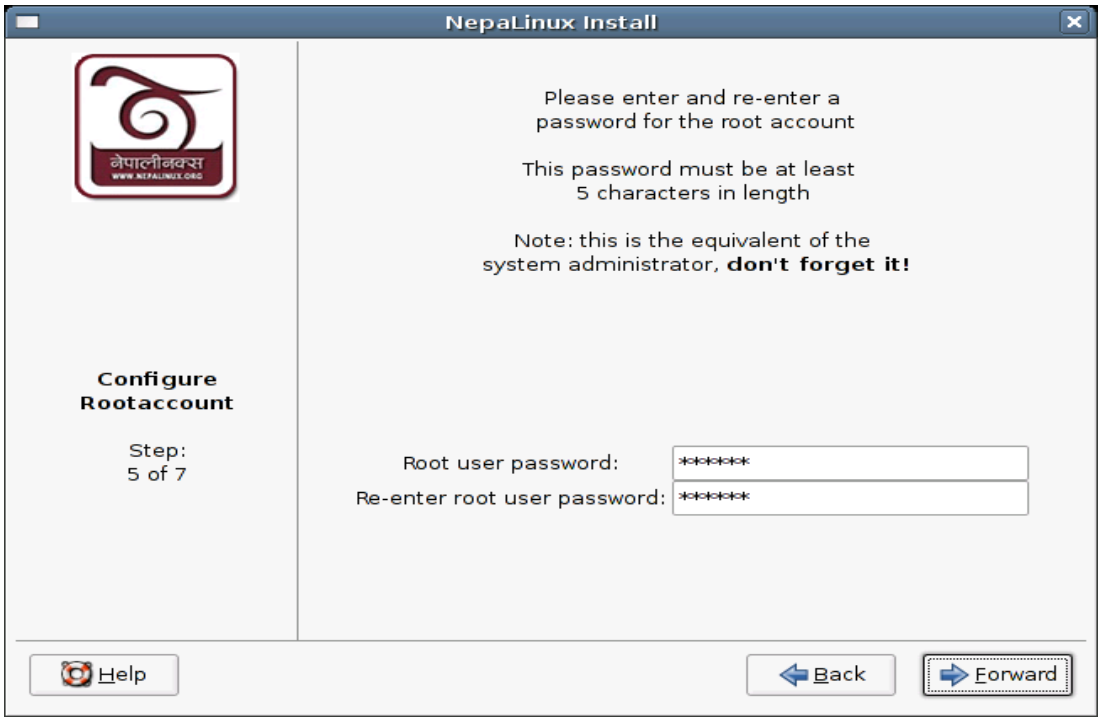


7. Copying files into the Hard Drive



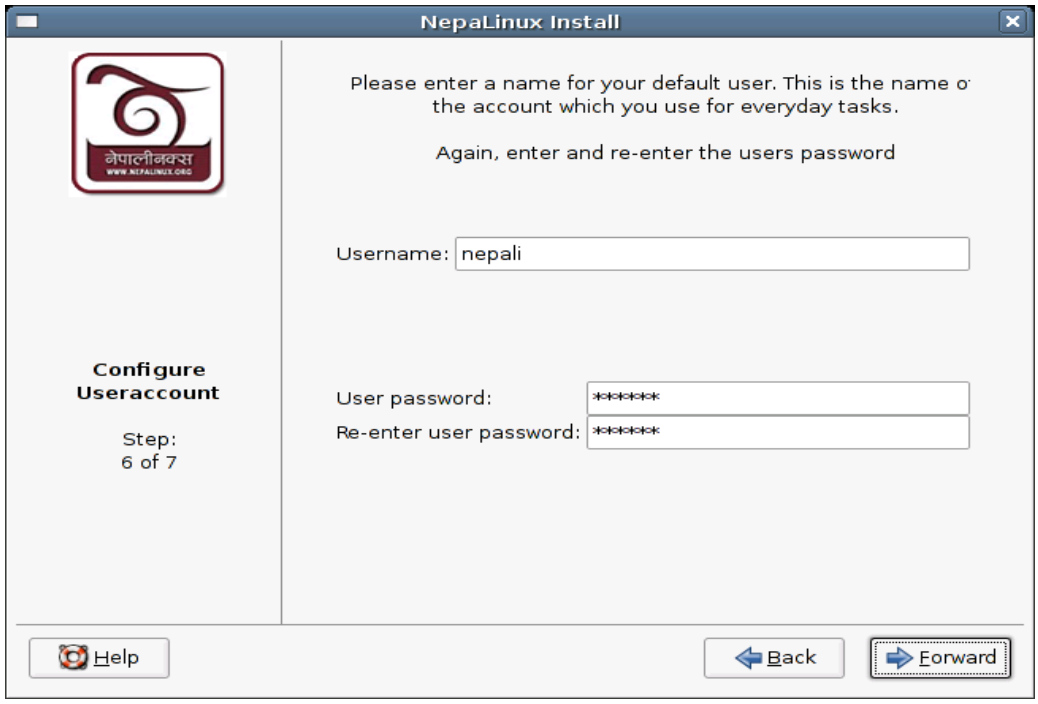
8. After copying of files in Hard Drive is completed you are asked to perform some post installation configuration. Give the hostname for your computer. By default, it is nepalinux if you are happy with it, just press Next otherwise supply whatever name you would want and Click Next.


NepaLinux Install
NepaLinux has succesfully
been copied onto your harddisk
Please enter a hostname for your computer:
Hostname:
nepalinux
Configure
Hostname
Step:
4 of 7
Help
Forward

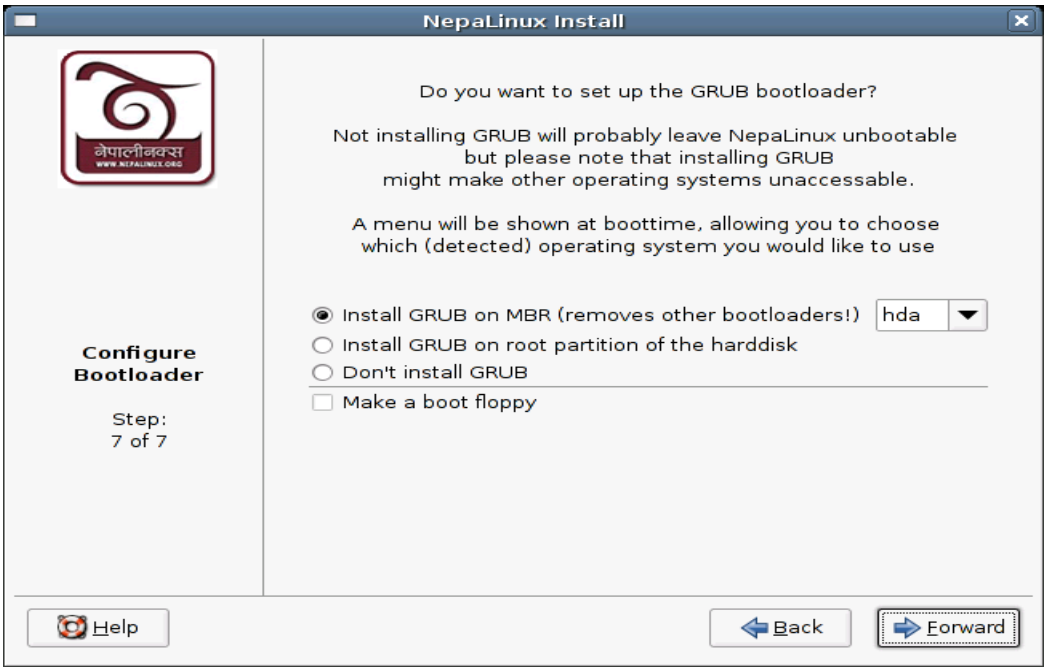


9. Supply the root(power user) password.

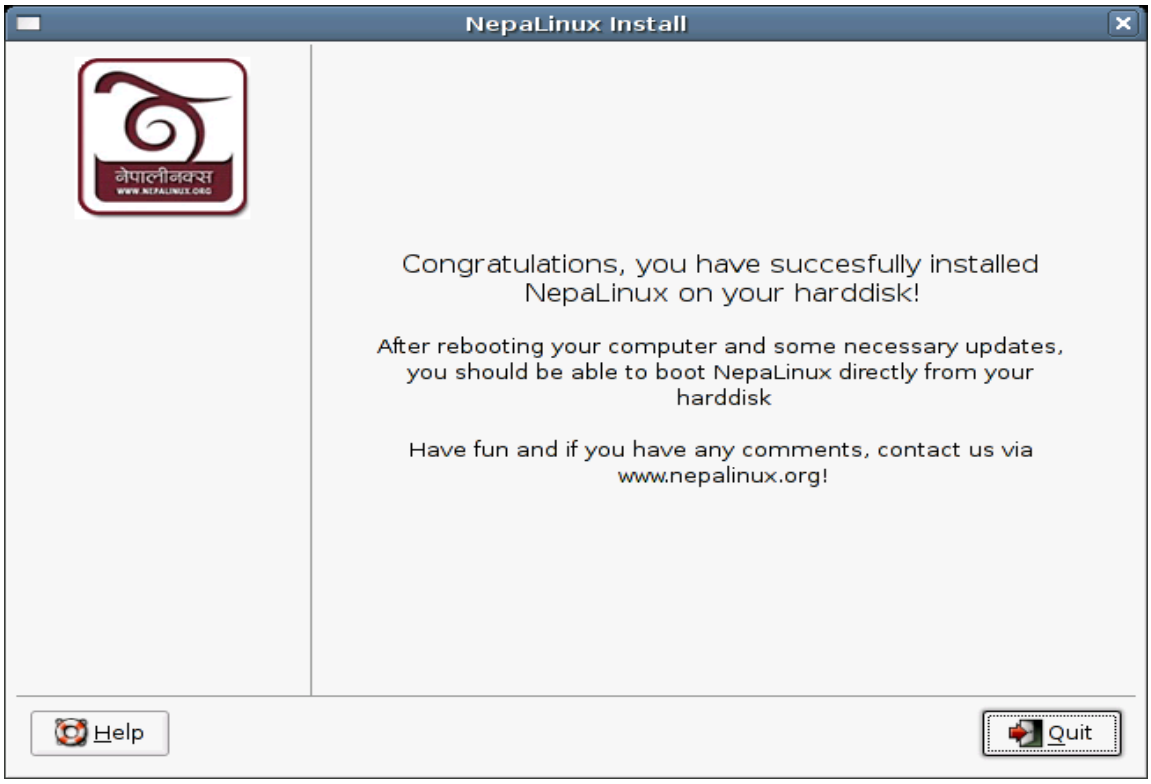
10. Enter one username and password that you used to login in NepaLinux system after installation is completed.



11. Here it is asking for GRUB boot loader to be loaded. By default GRUB Boot loader is loaded on MBR(Master boot record , first sector of the Hard Drive). It enables for dual boot system, so leave it as default, and Click Next.



12. Finally the installation is complete. Press End Now.



Now Logout of your system.
After you logout, your system will shutdown. Now again power on your CPU and remove the NepaLinux CD from the CD ROM. It will do its necessary settings and your computer will again restart, and take you to the login prompt. Login by supplying the username and the password what ever you created earlier. Please note that the root user is not able to login in the GUI by default due to security reason.

Installation troubleshooting:

1.Fails to enter into GUI mode and falls back to terminal saying "Operation failed".

To solve this problem reboot the computer, select "Sub menu" and enter - try vesa or fbdev in Grub while NepaLinux is booting from Lice CD.

2.Resolution problem:If very big or very small icons appear, it is due to the resolution problem try fixing it by pressing ctrl and + sign to increase the resolution and Ctrl and -(minus) sign to decrease the resolution.

3.Computer shuts down when running Live CD .
This may be due to the CD problem. It might be due to your CD-ROM or DVD not properly reading the NepaLinux CD. For this, if your CD ROM has problem, try replacing another CD ROM or try using another NepaLinux CD.

4.Installer Crashes:
Sometimes the NepaLinux Installer may crash while copying files in your Hard-Drive. This is due to the partitioning problems. T o solve this, please restart your computer with the NepaLinux CD in your CD or DVD ROM and again start from the beginning.

NepaLinux 2.0 (GNOME) or (KDE)Installation ,SATA HardDisk

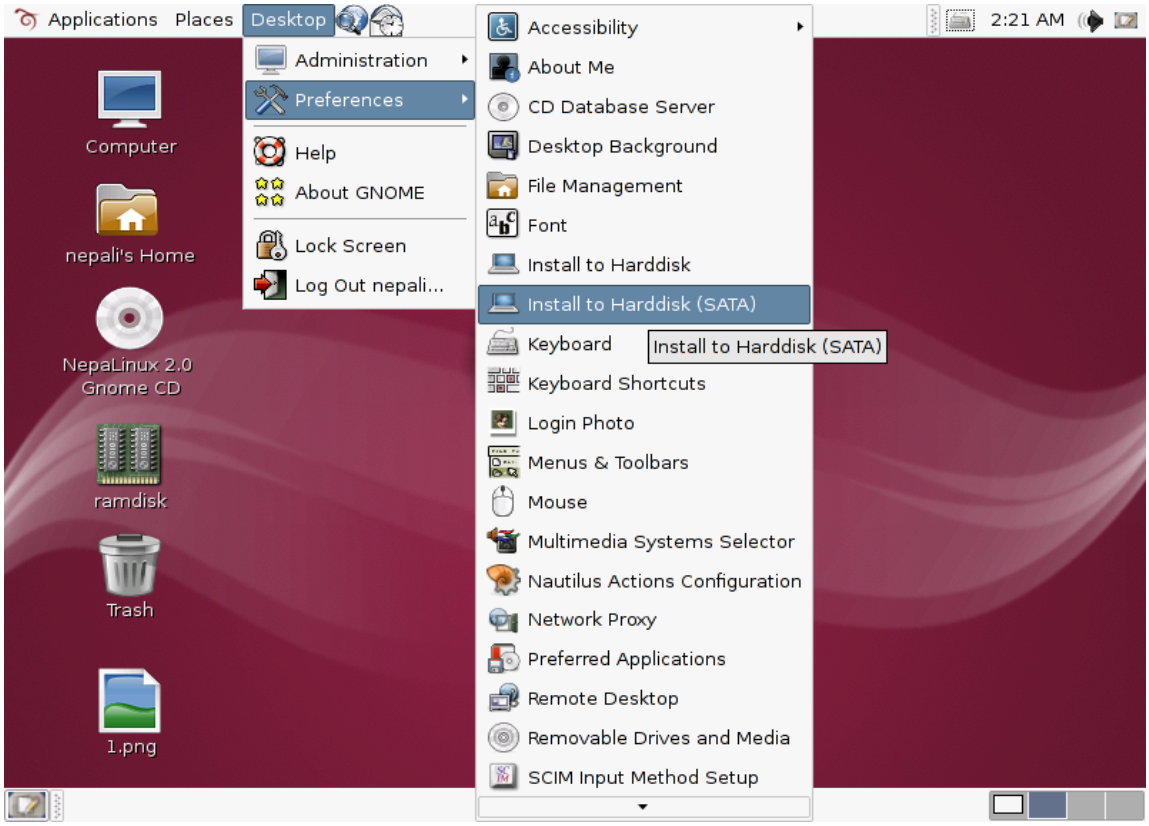
You can't install by the method explain above if your HardDisk is SATA, Generally old computers have IDE harddisk, only new computers may contains the SATA harddisk. If your computer has SATA hardisk please follow the steps below. It is text based installer so it will be little bit difficult than that of earlier GUI method.

Make two partitions one main partition and other swap either using Gparted or CFDISK as described above.
For sata hardisk the sample cfdisk partitioning table is,

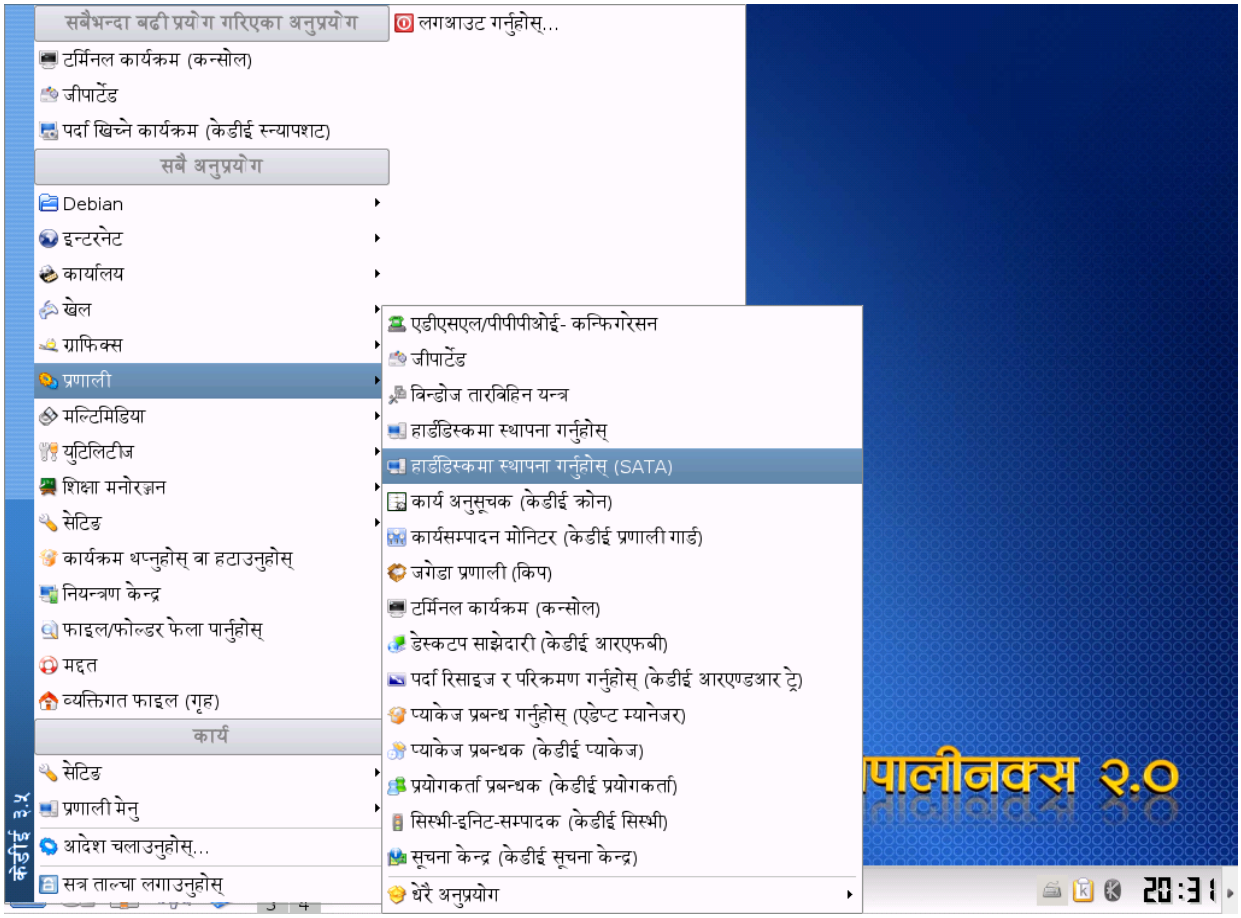
After you made partition restart your system, and follow these steps.

1. choose NepaLinux 2.0 (GNOME) or KDE CD and run the live CD, by following the steps in the section **“Running Live CD”**.

2. When NepaLinux is fully loaded and you are presented to the Desktop,
   Go to Desktop------>Preferences---------> Install to Harddisk (SATA)



For KDE, KDE Menu -----> System ----->Install to Harddisk (SATA)

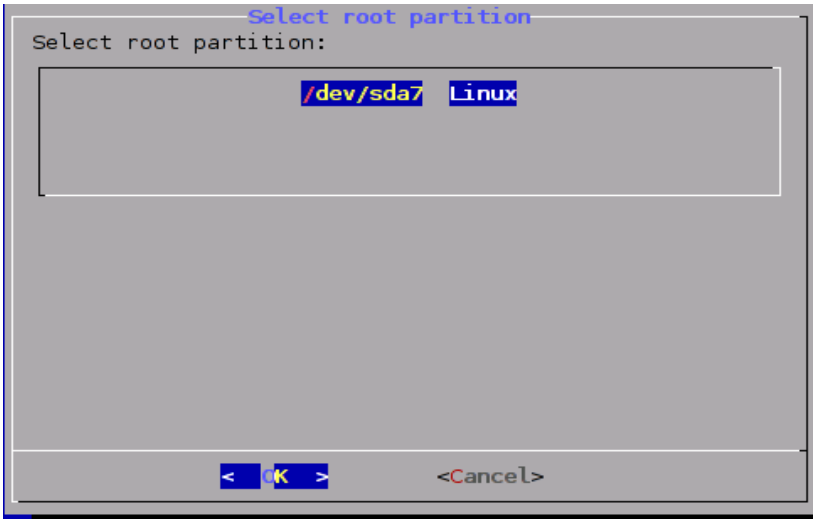


3. You are asked to select disk. Select the proper disk,press OK if you have only one hard disk.

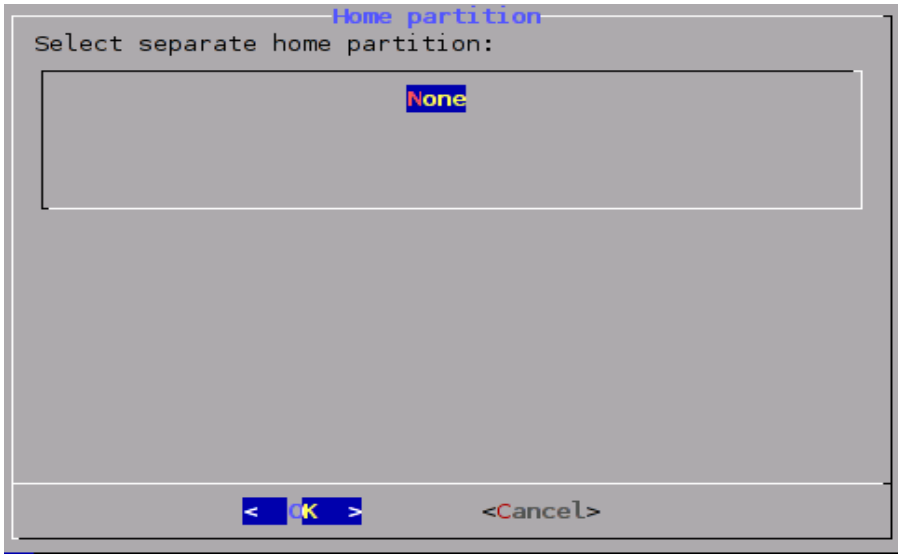
You can set the time zone and region in the Next screen by pressing **y** or just press if you don't want.

4. Make the two partition one SWAP(double the size of RAM) and one Main partition (about 3.5 GB) but can be greater
   (Note:here you see partitions as sda1, sda2 etc since Harddisk is SATA).

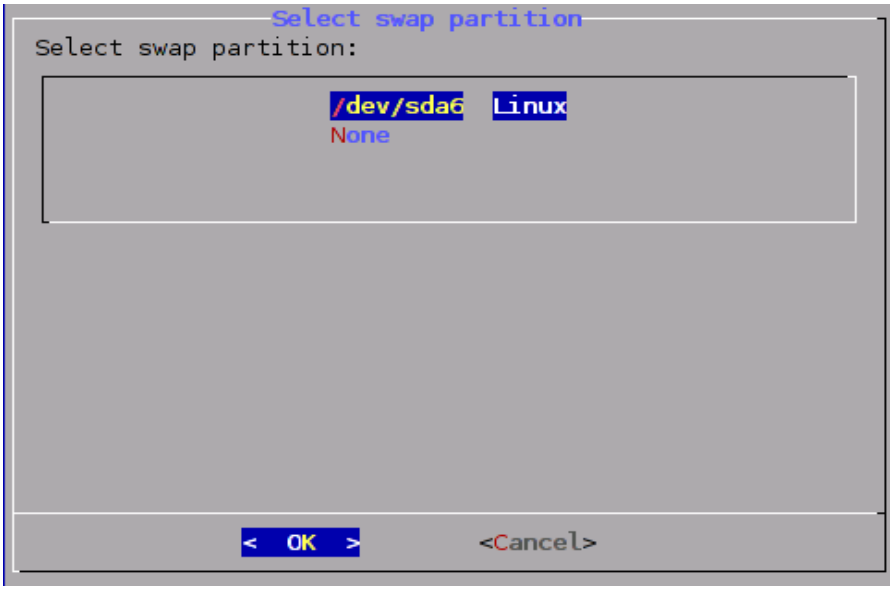
5. the root partition that we made earlier is detected and click OK



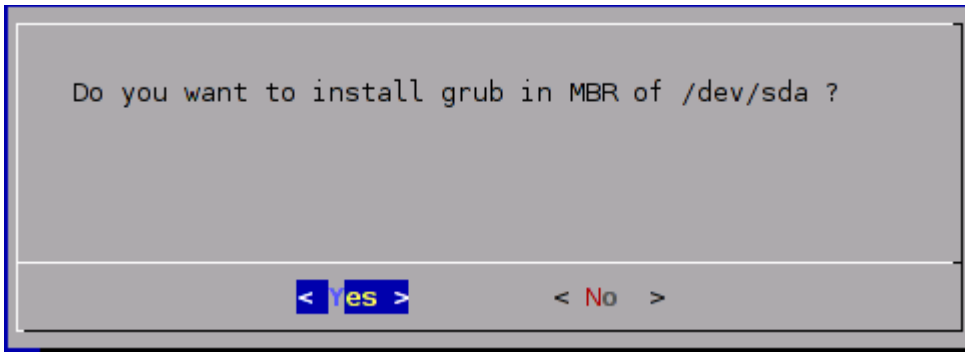
6. since we don't have made any partition for home just press OK



7. Detecting swap partition that we made earlier, press OK button.



8. Press Yes to install grub in MBR.



9. Provide username, hostname, password for root and general user.

10. Lastly your setup is presented as above, Select Yes and Press Enter key.

11. After insalllation is finished logout your system.

Acknowledgement

The PAN L10n Project works have been carried out with the aid of a grant from the International Development Research Centre, Ottawa, Canada, administered through the Center for Research in Urdu Language Processing (CRLUP), National University of Computing and Emerging Sciences, Lahore, Pakistan (NUCES).