

Installing Ubuntu Linux Gutsy Gibbon - Server Version 7.10

The Installer

If you do a default installation you will end up with a server that uses DHCP to obtain it's network address, a file system of the form:

```
/(root)      [All of disk minus 3xRAM]
<swap>      3xRAM
```

and a minimal installation of software.

Our Goal

We want you to install Ubuntu and set up the network manually entering in your *fixed* IP address, your correct host name and domain.

After the Initial Install

We will install the Ubuntu Desktop meta-package (Gnome 2.x and Xorg) as well as properly configure this to work with your particular hardware.

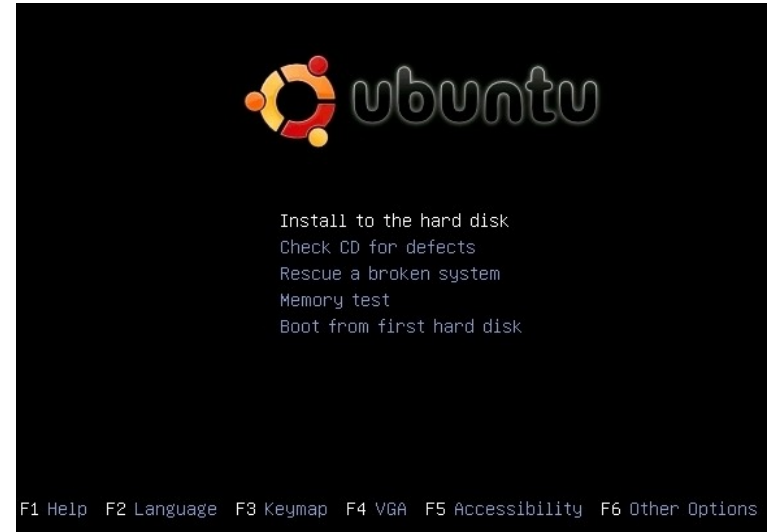
Information you Need

IP Address: _____
Netmask: _____
Gateway: _____
DNS Server: _____
Hostname: _____
Keyboard Layout: _____

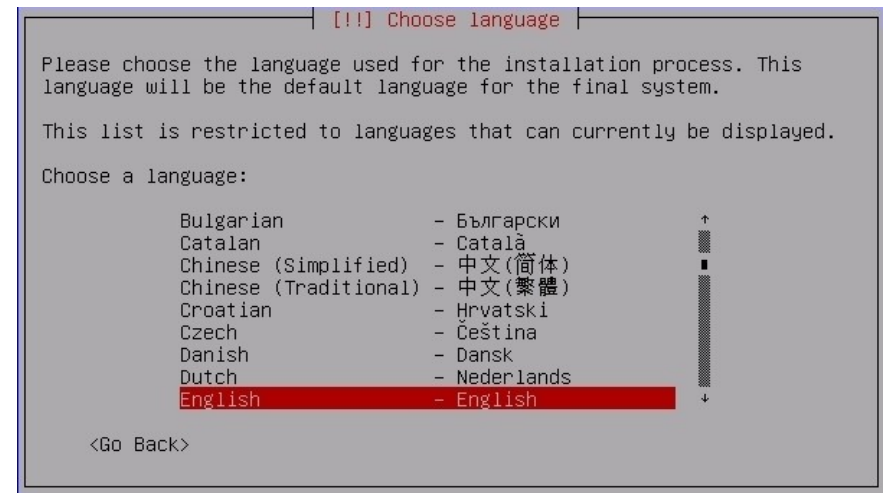
You will specify a user name and password of your choosing. One of the post-install exercises will include creating a user named *admin* and a password that we will specify in class.

If you have questions during installation ask your instructor or an assistant for help.

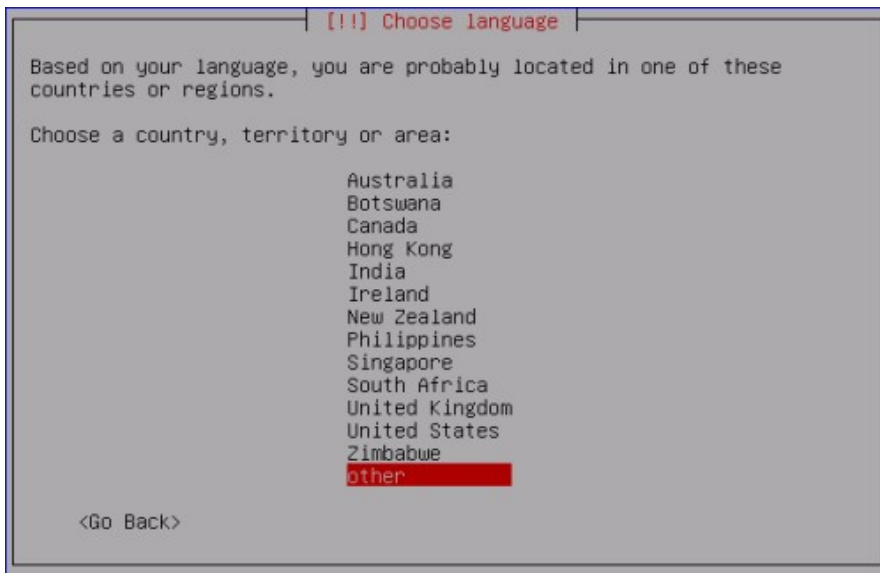
Installing Ubuntu



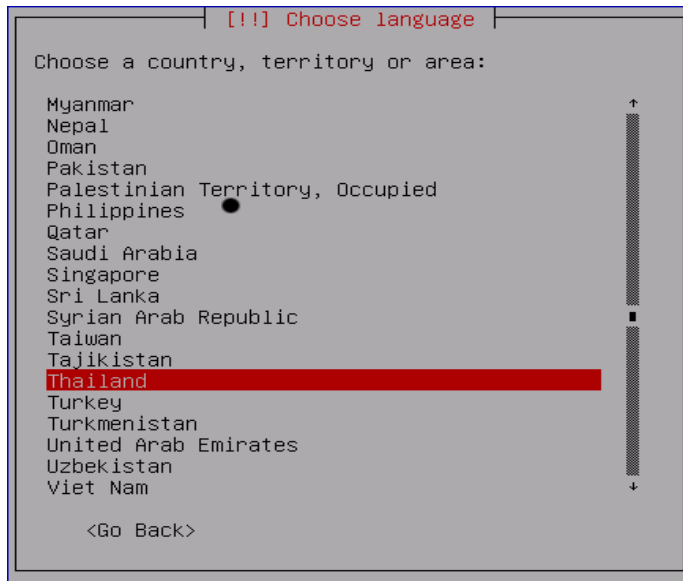
Step 1



Step 2



Step 3



Step 4



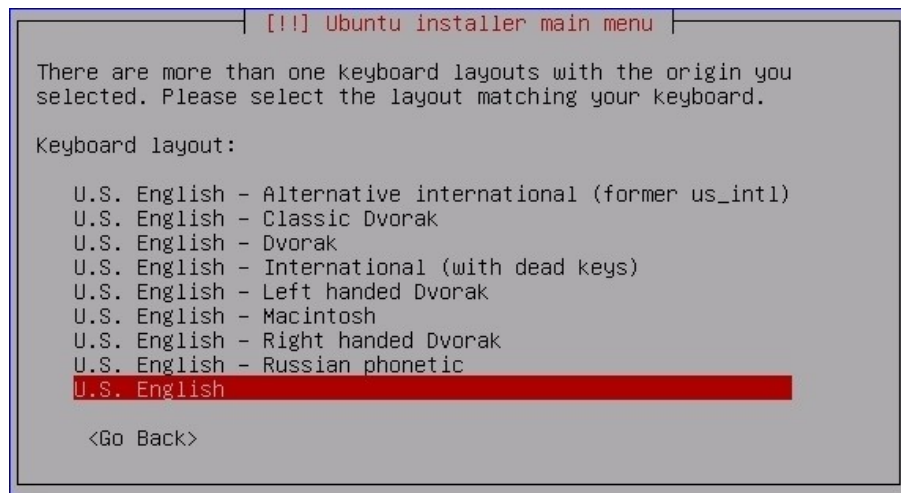
Step 5

This may be different depending on location.



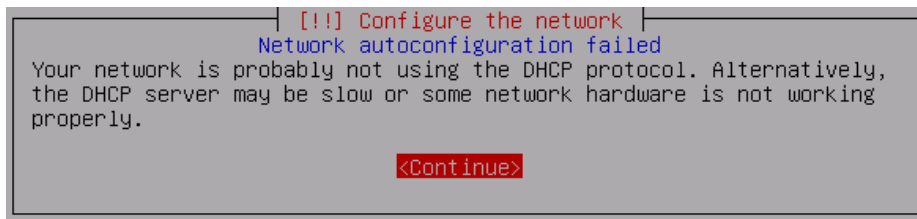
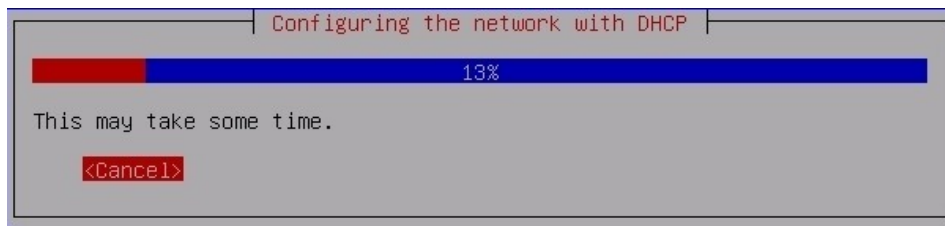
Step 6

Again, this may be different depending on location.



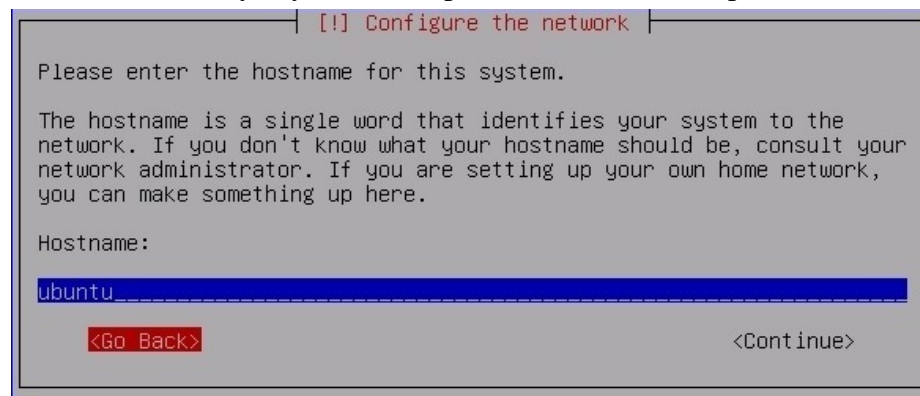
Step 7

You will see several screens appear as the installer loads various modules and detects hardware. Eventually you will see the screen below. If you can press **Cancel** in time please do so, otherwise see the screen in Step 8 and choose to **Go Back** to manually configure your network.

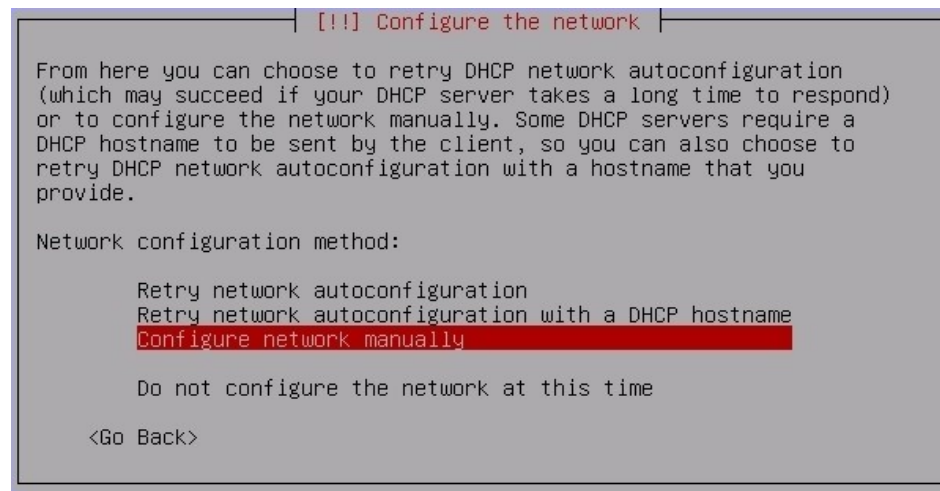


Step 8

Only if you did not press **Cancel** in step 7.



Step 9



Note

On the next page for steps 10-14 you should use the values you filled in

for your network information at the start of this exercise.

Step 10

[!!] Configure the network

The IP address is unique to your computer and consists of four numbers separated by periods. If you don't know what to use here, consult your network administrator.

IP address:

Step 11

[!!] Configure the network

The netmask is used to determine which machines are local to your network. Consult your network administrator if you do not know the value. The netmask should be entered as four numbers separated by periods.

Netmask:

Step 12

[!!] Configure the network

The gateway is an IP address (four numbers separated by periods) that indicates the gateway router, also known as the default router. All traffic that goes outside your LAN (for instance, to the Internet) is sent through this router. In rare circumstances, you may have no router; in that case, you can leave this blank. If you don't know the proper answer to this question, consult your network administrator.

Gateway:

Step 13

[!!] Configure the network

The name servers are used to look up host names on the network. Please enter the IP addresses (not host names) of up to 3 name servers, separated by spaces. Do not use commas. The first name server in the list will be the first to be queried. If you don't want to use any name server, just leave this field blank.

Name server addresses:

Step 14

Remember to use lowercase characters in your hostname.

[!] Configure the network

Please enter the hostname for this system.

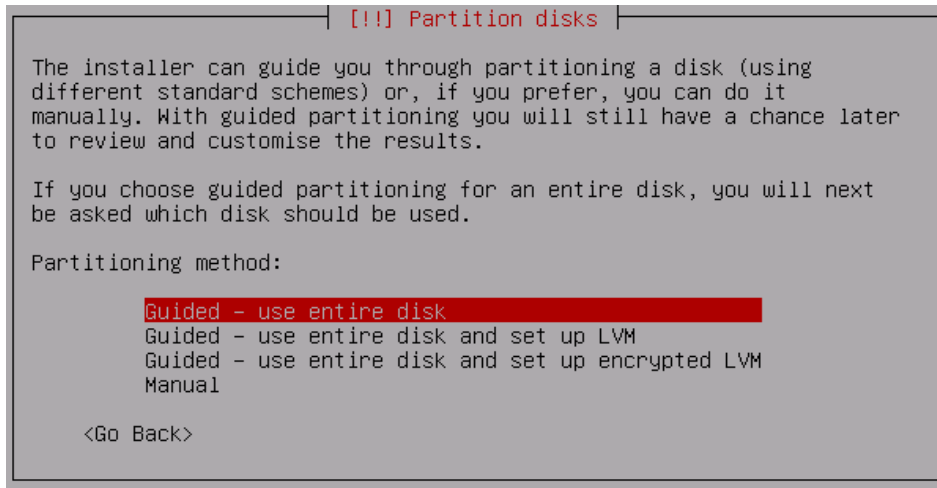
The hostname is a single word that identifies your system to the network. If you don't know what your hostname should be, consult your network administrator. If you are setting up your own home network, you can make something up here.

Hostname:

Partitioning

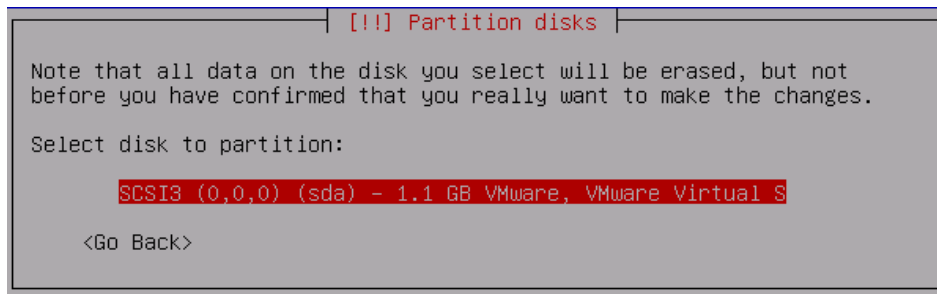
On the next page you will do a Guided partition of your drive.

Step 15



Step 16

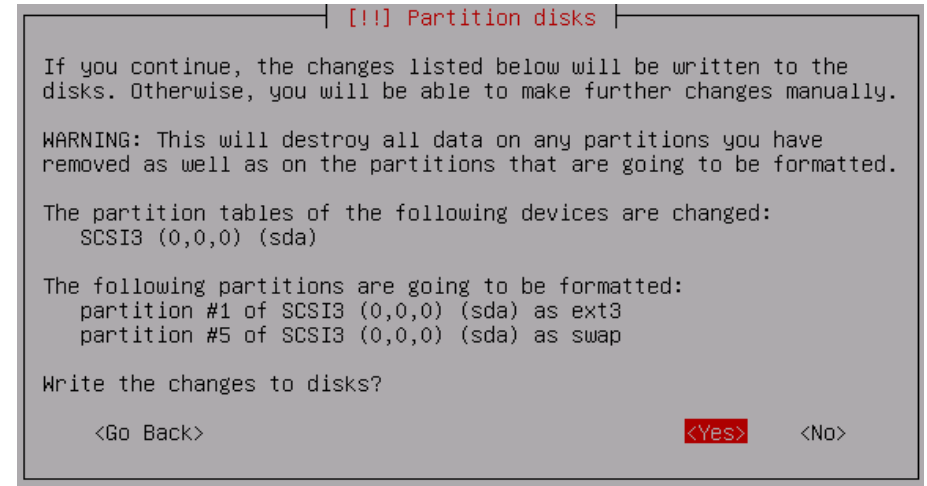
The drive and size will be different for your machine.



After this you should see some screens appear as the installer prepares to partition your drive. If you are asked to delete what is already on your machine you should do this.

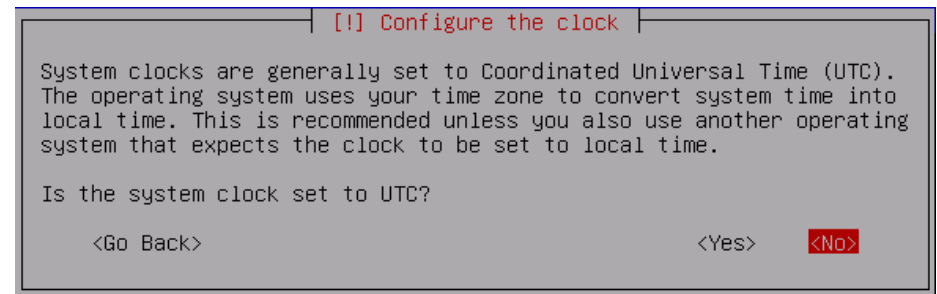
Step 17

Be sure you choose **Yes** below.



Again, you will see some screens appear as the installer completes partitioning your drive. Then you should see:

Step 18



In reality you would probably want your server's clock to be set to Universal Time (UTC), but for purposes of our lab it is simplest if we choose **No** at this point.

Step 19

(Enter in a user name you wish to use in place of Jane User)

[!!] Set up users and passwords

A user account will be created for you to use instead of the root account for non-administrative activities.

Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or uses the user's real name. Your full name is a reasonable choice.

Full name for the new user:

Jane User

<Go Back> <Continue>

Step 20

(If you wish a different username you can specify this here.)

[!!] Set up users and passwords

Select a username for the new account. Your first name is a reasonable choice. The username should start with a lower-case letter, which can be followed by any combination of numbers and more lower-case letters.

Username for your account:

jane

<Go Back> <Continue>

Step 21

[!!] Set up users and passwords

A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.

Choose a password for the new user:

<Go Back> <Continue>

Step 22

[!!] Set up users and passwords

Please enter the same user password again to verify you have typed it correctly.

Re-enter password to verify:

<Go Back> <Continue>

Step 23

Now you should see this on your screen for a fairly long time...

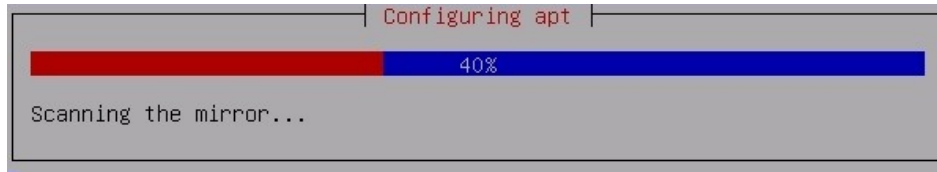
Installing the base system

48%

Unpacking the base system...

Step 24

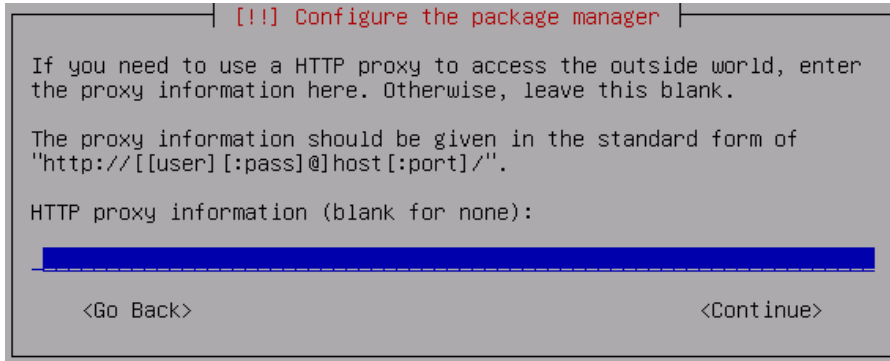
And then this...



Step 24a

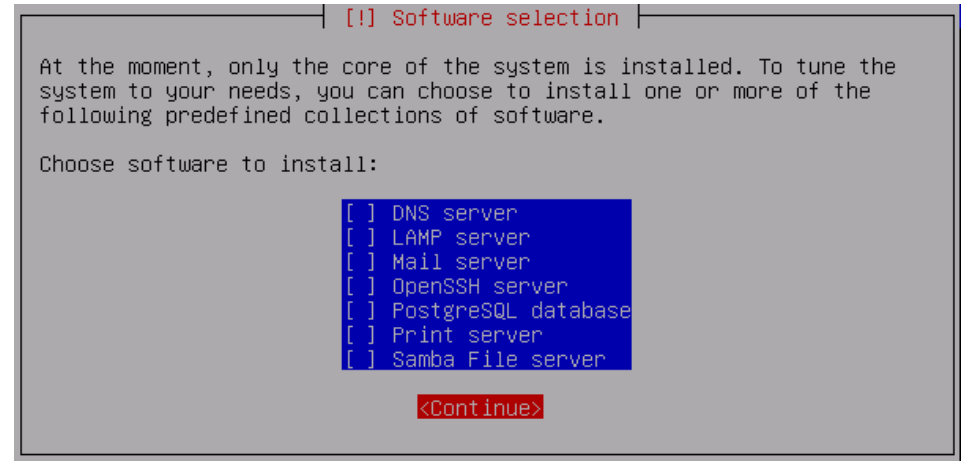
You should not see this screen.

If you see this, then your network settings are likely broken. At this point installation will take a very long time. Let your instructor or assistant know that you are seeing this screen as restarting the installation is probably faster than waiting for completion.



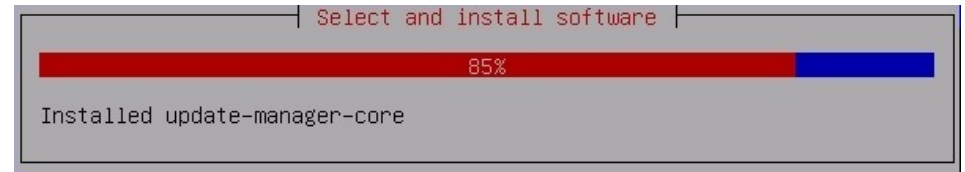
Step 25

For now please don't choose to install any packages.

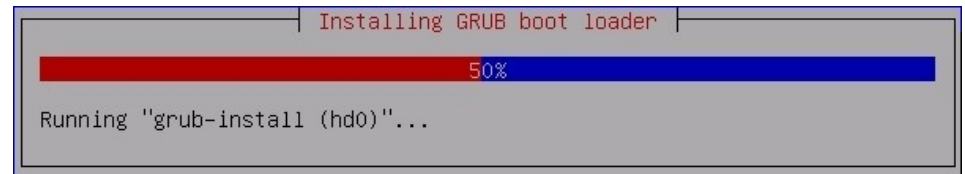


Step 26

You should see this. At 85% things will take a bit to finish..



Step 27



Step 28

Congratulations! You have installed Ubuntu.



The Final Step

Your machine reboots and starts Ubuntu server. You will be presented with an initial log in prompt. If your screen stops at Running local boot scripts (/etc/rc.local) just press ENTER to get the initial log in prompt.

```
* Activating swap... [ OK ]
* Checking root file system...
fsck 1.40-WIP (14-Nov-2006)
/dev/sda1: clean, 21916/1465920 files, 167248/2929846 blocks
[ OK ]
* Checking file systems...
fsck 1.40-WIP (14-Nov-2006)
[ OK ]
* Mounting local filesystems... [ OK ]
* Activating swapfile swap... [ OK ]
* Configuring network interfaces... [ OK ]
* Setting up console font and keymap... [ OK ]
* Starting system log daemon... [ OK ]
* Starting kernel log... [ OK ]
* Starting deferred execution scheduler atd [ OK ]
* Starting periodic command scheduler crond [ OK ]
* Running local boot scripts (/etc/rc.local) [ OK ]
Ubuntu 7.04 pc37.conference.pacnog.org tty1
pc37.conference.pacnog.org login: _
```

Next we'll be doing some exercises to practice some concepts in Ubuntu as well as setting up your Ubuntu environment to run with a graphical user interface (GUI) using the Xorg XWindow system with the Gnome desktop.

Manual Partitioning of Drives

During this installation we did a Guided Partition of your entire drive. Manually partitioning your drive using the Ubuntu installer involves numerous steps. You may wish to do this if you install Ubuntu back at your own location this workshop includes an appendix to this installation guide that gives you step-by-step instructions for doing a sample manual partition of a drive during installation of Ubuntu.

The appendix on the following pages has step-by-step instructions for doing this.

If you are looking at a printout without an appendix, the appendix is available in the on-line version of this document on your workshop's web site. The document is linked in the Detailed Agenda for this workshop.

Appendix

Manual Partitioning of Drives

In Step 15 of the installation we chose `Guided use entire disk`. If you wish to manually partition a drive for installation of Ubuntu you should follow these steps instead.

Step 1

```

[!!!] Partition disks

The installer can guide you through partitioning a disk (using
different standard schemes) or, if you prefer, you can do it
manually. With guided partitioning you will still have a chance later
to review and customise the results.

If you choose guided partitioning for an entire disk, you will next
be asked which disk should be used.

Partitioning method:

    Guided - use entire disk
    Guided - use entire disk and set up LVM
    Manual

<Go Back>
```

Step 2

Your machine may already have partitions on it. If this is the case you need to delete each individual partition first, then you can create partitions. Here is a sample of deleting one partition. Repeat this until all partitions are deleted:

```

[!!!] Partition disks

This is an overview of your currently configured partitions and mount
points. Select a partition to modify its settings (file system, mount
point, etc.), a free space to create partitions, or a device to
initialise its partition table.

    Guided partitioning
    Help on partitioning

SCSI1 (0,0,0) (sda) - 12.9 GB VMware, VMware Virtual S
    #1 primary 12.0 GB K ext3 /media/sda1
    #2 primary 880.1 MB F swap swap

    Undo changes to partitions
    Finish partitioning and write changes to disk

<Go Back>
```

Step 3

```

[!!!] Partition disks

You are editing partition #2 of SCSI1 (0,0,0) (sda). This partition
is formatted with the swap area. All data in it WILL BE DESTROYED!

Partition settings:

    Use as:                swap area
    Bootable flag:         off
    Resize the partition (currently 880.1 MB)

    Done setting up the partition
    Copy data from another partition
    Delete the partition

<Go Back>
```

Step 4

Now repeat 1 through 3 until you have no partitions left. Then go on to step 5.

Step 5

These screens show a sample drive. Your drive will be different.

```

[!!!] Partition disks

This is an overview of your currently configured partitions and mount
points. Select a partition to modify its settings (file system, mount
point, etc.), a free space to create partitions, or a device to
initialise its partition table.

Guided partitioning
Help on partitioning

SCSI1 (0,0,0) (sda) - 12.9 GB VMware, VMware Virtual S
#1 primary 12.0 GB K ext3 /media/sda1
pri/log 880.1 MB FREE SPACE

Undo changes to partitions
Finish partitioning and write changes to disk

<Go Back>
```

Step 6

```

[!!!] Partition disks

This is an overview of your currently configured partitions and mount
points. Select a partition to modify its settings (file system, mount
point, etc.), a free space to create partitions, or a device to
initialise its partition table.

Guided partitioning
Help on partitioning

SCSI1 (0,0,0) (sda) - 12.9 GB VMware, VMware Virtual S

Undo changes to partitions
Finish partitioning and write changes to disk

<Go Back>
```

Step 7

```

[!!!] Partition disks

You have selected an entire device to partition. If you proceed with
creating a new partition table on the device, then all current
partitions will be removed.

Note that you will be able to undo this operation later if you wish.

Create new empty partition table on this device?

<Go Back> <Yes> <No>
```

Step 8

Your partition size will be different.

```

[!!!] Partition disks

This is an overview of your currently configured partitions and mount
points. Select a partition to modify its settings (file system, mount
point, etc.), a free space to create partitions, or a device to
initialise its partition table.

Guided partitioning
Help on partitioning

SCSI1 (0,0,0) (sda) - 12.9 GB VMware, VMware Virtual S
pri/log 12.9 GB FREE SPACE

Undo changes to partitions
Finish partitioning and write changes to disk

<Go Back>
```

Step 9

```
[!!] Partition disks

How to use this free space:

Create a new partition
Automatically partition the free space
Show Cylinder/Head/Sector information

<Go Back>
```

Step 10

Again, your disk size is different than what's in the dialog on this screen. If, for example, you had 1GB of RAM you might want 1 or 2GB for swap. If you are using 40GB of disk space, then to have 1GB of swap space you would do the following:

```
[!!] Partition disks

The maximum size you can use is 12.9 GB.

Hint: Use "20%" (or "30%", etc.) for 20% (resp. 30%, etc.) of the
available free space for this partition. Use "max" as a shortcut for
the maximum allowed size.

New partition size:
39.0 GB
-----
<Go Back> <Continue>
```

Step 11

```
[!!] Partition disks

You are editing partition #1 of SCSI1 (0,0,0) (sda). No existing file
system was detected in this partition.

Partition settings:

Use as: Ext3 journaling file system
Mount point: /
Mount options: defaults
Label: none
Reserved blocks: 5%
Typical usage: standard
Bootable flag: off

Done setting up the partition
Copy data from another partition
Delete the partition

<Go Back>
```

Step 12

```
[!!] Partition disks

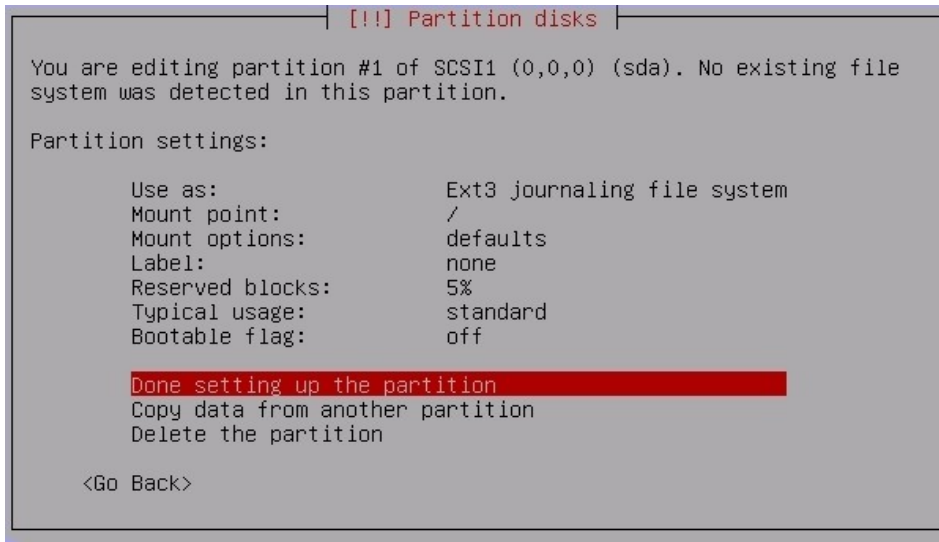
Please choose whether you want the new partition to be created at the
beginning or at the end of the available space.

Location for the new partition:

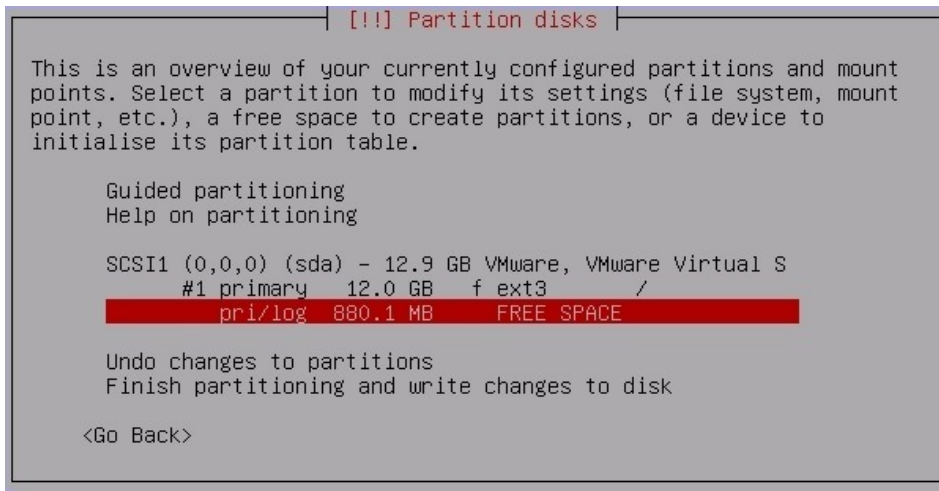
Beginning
End

<Go Back>
```

Step 13



Step 14

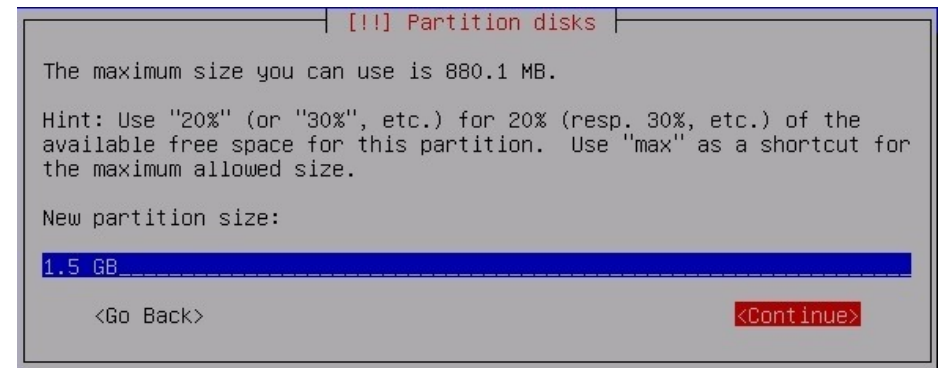


Step 15

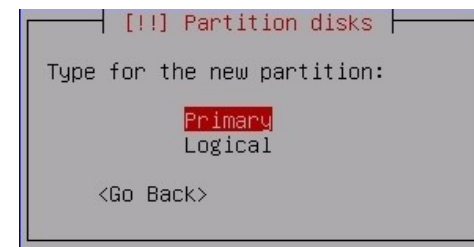


Step 16

If this dialog is incorrect simply enter in the maximum size listed at the top of the dialog for your machine. This will be the SWAP space (virtual memory) in use on your machine.



Step 17



Step 18

```

[!!!] Partition disks

You are editing partition #2 of SCSI1 (0,0,0) (sda). No existing file
system was detected in this partition.

Partition settings:

Use as: Ext3 journaling file system
Mount point: /home
Mount options: defaults
Label: none
Reserved blocks: 5%
Typical usage: standard
Bootable flag: off

Done setting up the partition
Copy data from another partition
Delete the partition

<Go Back>
```

Step 20

```

[!!!] Partition disks

You are editing partition #2 of SCSI1 (0,0,0) (sda). No existing file
system was detected in this partition.

Partition settings:

Use as: swap area
Bootable flag: off

Done setting up the partition
Copy data from another partition
Delete the partition

<Go Back>
```

Step 19

Note the difference. You chose Use as: in step 18. This gives you the dialog below. This is how you set this partition to be swap.

```

[!!!] Partition disks

How to use this partition:

Ext3 journaling file system
Ext2 file system
ReiserFS journaling file system
JFS journaling file system
XFS journaling file system
FAT16 file system
FAT32 file system
swap area
EFI boot partition
physical volume for LVM
physical volume for RAID
do not use the partition

<Go Back>
```

Step 21

```

[!!!] Partition disks

This is an overview of your currently configured partitions and mount
points. Select a partition to modify its settings (file system, mount
point, etc.), a free space to create partitions, or a device to
initialise its partition table.

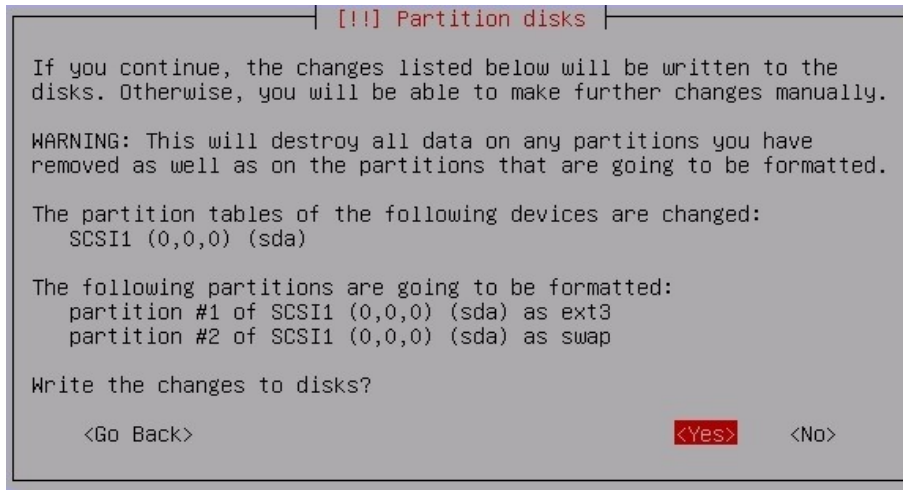
Guided partitioning
Help on partitioning

SCSI1 (0,0,0) (sda) - 12.9 GB VMware, VMware Virtual S
#1 primary 12.0 GB f ext3 /
#2 primary 880.1 MB f swap swap

Undo changes to partitions
Finish partitioning and write changes to disk

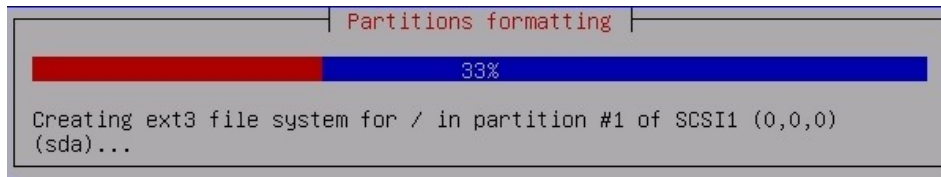
<Go Back>
```

Step 22



Step 23

You'll see this on the screen...



Once this dialog finishes you are done partitioning your drive. Note that the partition we created was the same as you get if you choose `Guided us entire disk` in Step 1. Naturally you could choose to partition your drive any way you wish.