

# SETUP

These notes are based on the Ubuntu distribution of the GNU/Linux operating system. The material was tested on the Ubuntu 13.04 “Raring Ringtail” release, 32 bit version. Although most of the practical information in the material can be applied to any Ubuntu-based system, you might encounter problems when working on a different version.

On a standard Ubuntu installation, you will need the following extra packages:

- manpages-dev
- nasm
- g++
- gdb
- patch
- strace
- ltrace
- linux-headers-\$(uname -r)
- linux-source
- kernel-package
- fakeroot
- libncurses5-dev
- libfuse-dev

You can install these packages using the following command:

```
sudo apt-get install nasm g++ manpages-dev ...
```

The recommended way of setting up the system is to use a virtual machine for [VirtualBox](#) or [VMware Player](#). A virtual disk image that contains all the necessary packages can be downloaded from:

<http://ortanca.cs.itu.edu.tr/downloads/>

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**Note:** On the virtual disk image, the username and password of the administrative account are both set as “itucs”.

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## 4.1 Installation

If you are not going to use a virtual machine, or if you would like to reproduce the installation for some reason, follow these steps:

**Warning:** This installation method downloads packages from the Internet. It will generate a lot of traffic on your connection.

- Boot your computer using the Ubuntu Mini CD. You can download the CD image `mini.iso` by going to the address <http://cdimage.ubuntu.com/netboot/> and choosing the release and architecture.
- Follow the installation instructions. On any form, if in doubt, choose the default option.
- Configure the settings on the “Partition disks” form very carefully. On a virtual machine install, prefer the “Guided - use entire disk” option.
- On the “Configuring discover” form, choose “No automatic updates”.
- On the “Software selection” form, check “Lubuntu minimal installation” and uncheck everything else.
- After rebooting the system, when the login form comes up, select “Lubuntu” from the drop-down menu underneath the password box.
- Start up a terminal and update the package list using the command:

```
sudo apt-get update
```

- Install a better terminal and a text editor:

```
sudo apt-get install lxterminal geany
```

- Install the extra packages listed at the beginning of this document.

To make the different kernel versions available at boot time, change the contents of the file `/etc/default/grub` so that the following line is commented out as shown:

```
#GRUB_HIDDEN_TIMEOUT=0
```

And run the command:

```
sudo update-grub
```