

# 0 – Install Linux within VirtualBox

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Course: Scientific Programming / Wissenschaftliches Programmieren (Python)



- Installation instructions for Lubuntu within VirtualBox

# Install Linux (Lubuntu) within VirtualBox

Download Lubuntu ISO-image: [Lubuntu 16.04 LTS](#)

Add new machine in VirtualBox:

The image shows the 'Create Virtual Machine' wizard in Oracle VM VirtualBox. The first step, 'Name and operating system', is shown with the following details:

- Name: Lubuntu 16.04 LTS
- Type: Linux
- Version: Ubuntu (64-bit)

The second step, 'Memory size', is shown with a slider set to 1024 MB. The recommended memory size is 1024 MB. The slider ranges from 4 MB to 12288 MB. The value '1024 MB' is circled in red.

Navigation buttons include 'Expert Mode', '< Back', 'Next >', and 'Cancel'.

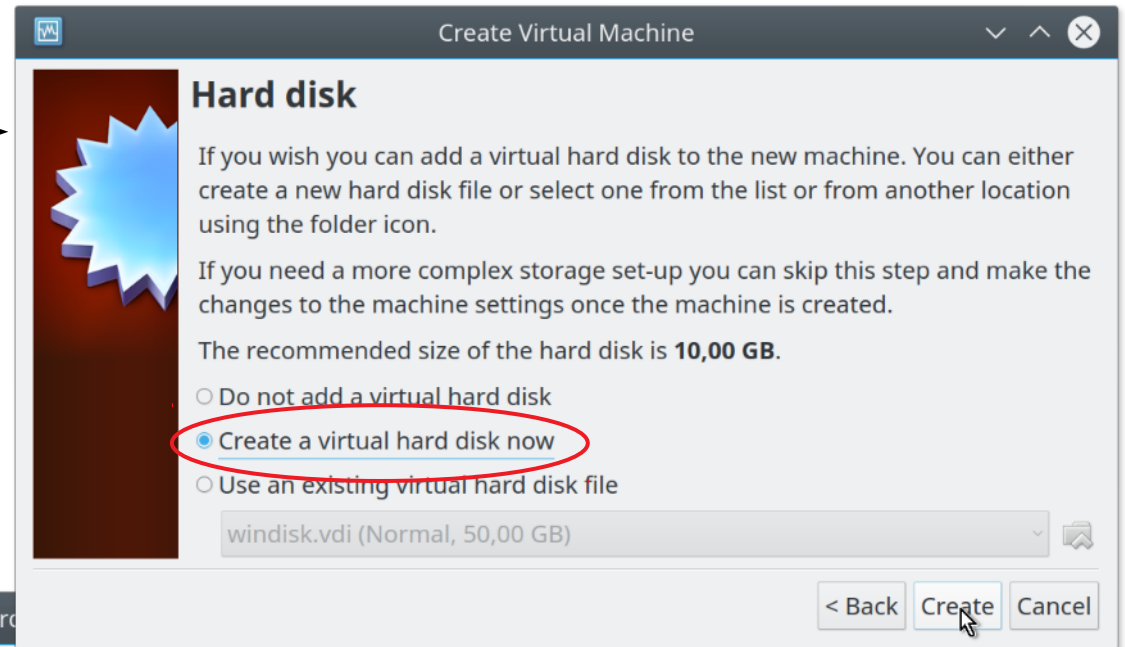
Select **1024** MB memory if your laptop has at least 2 GB of RAM, or **512** MB otherwise

# Install Linux (Lubuntu) within VirtualBox

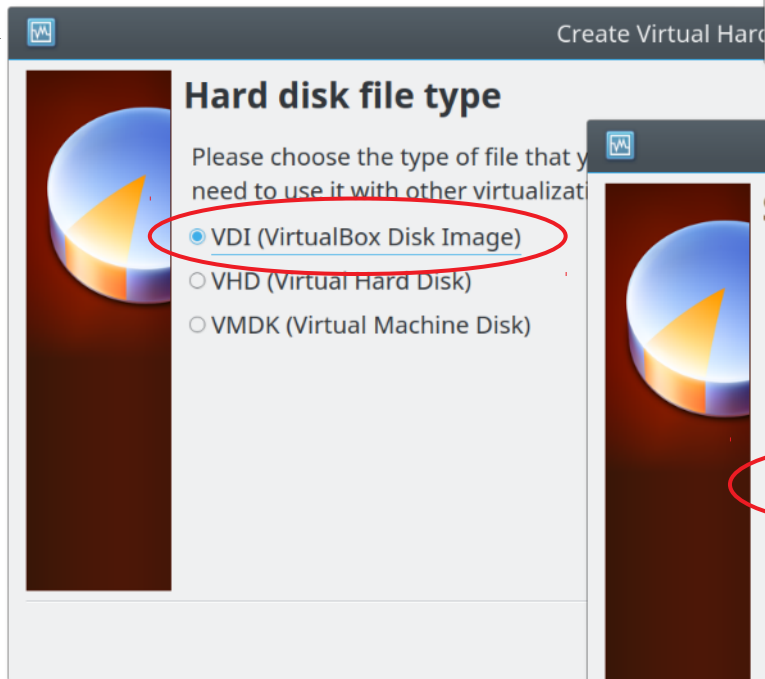
Create virtual hard disk:

Make it of VDI-type and dynamically allocated

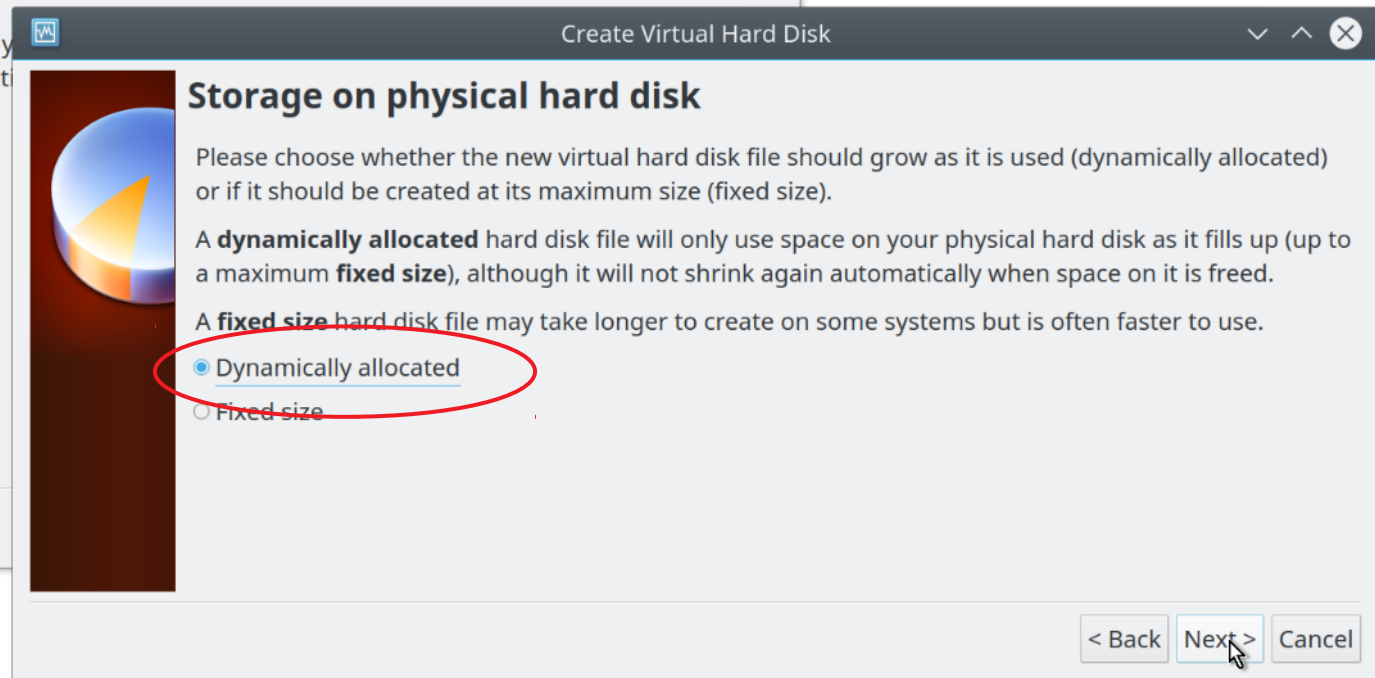
1 →



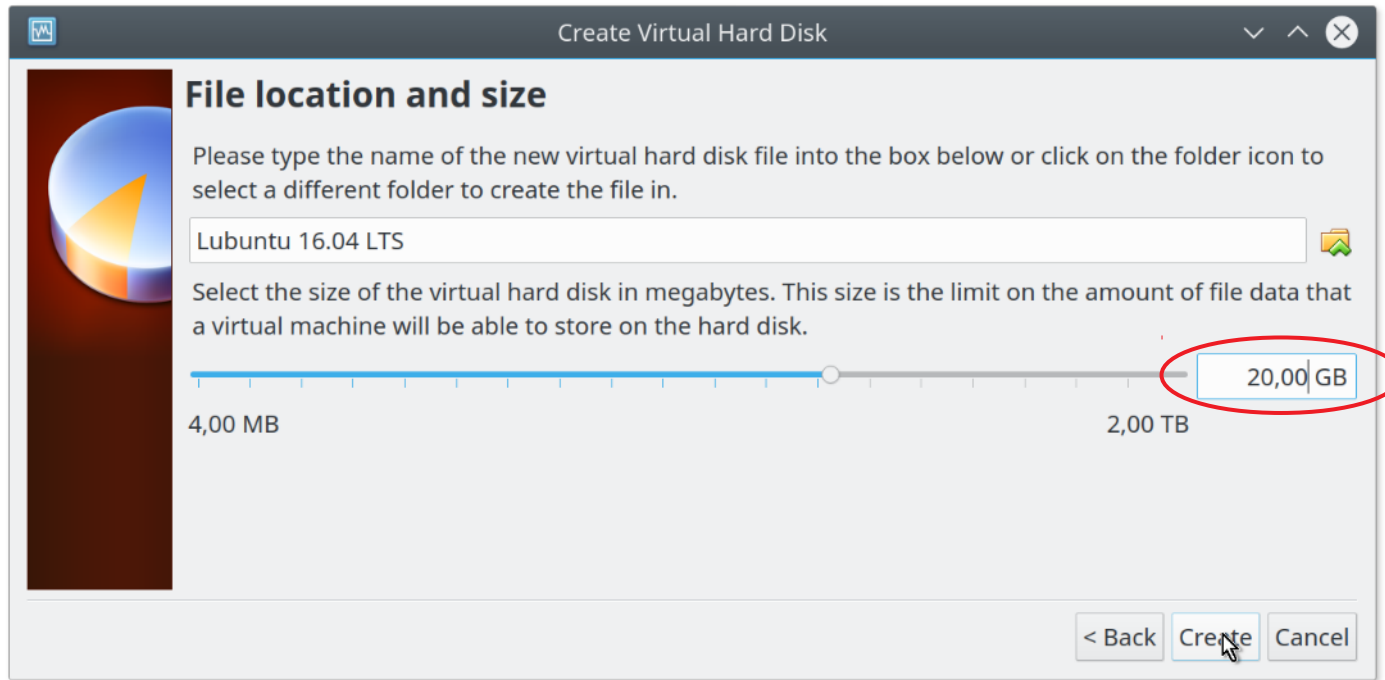
2 →



3 →

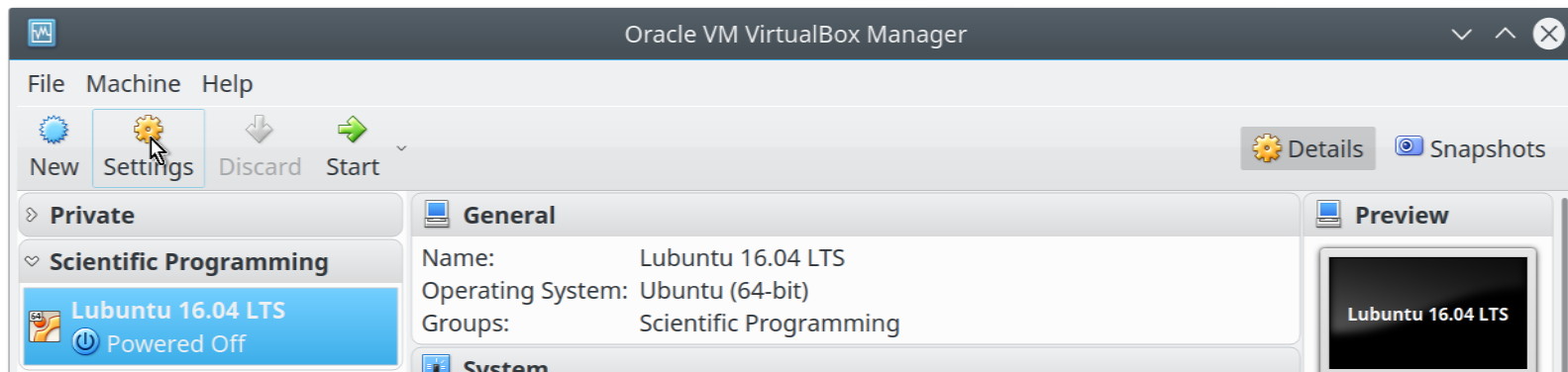


# Install Linux (Lubuntu) within VirtualBox



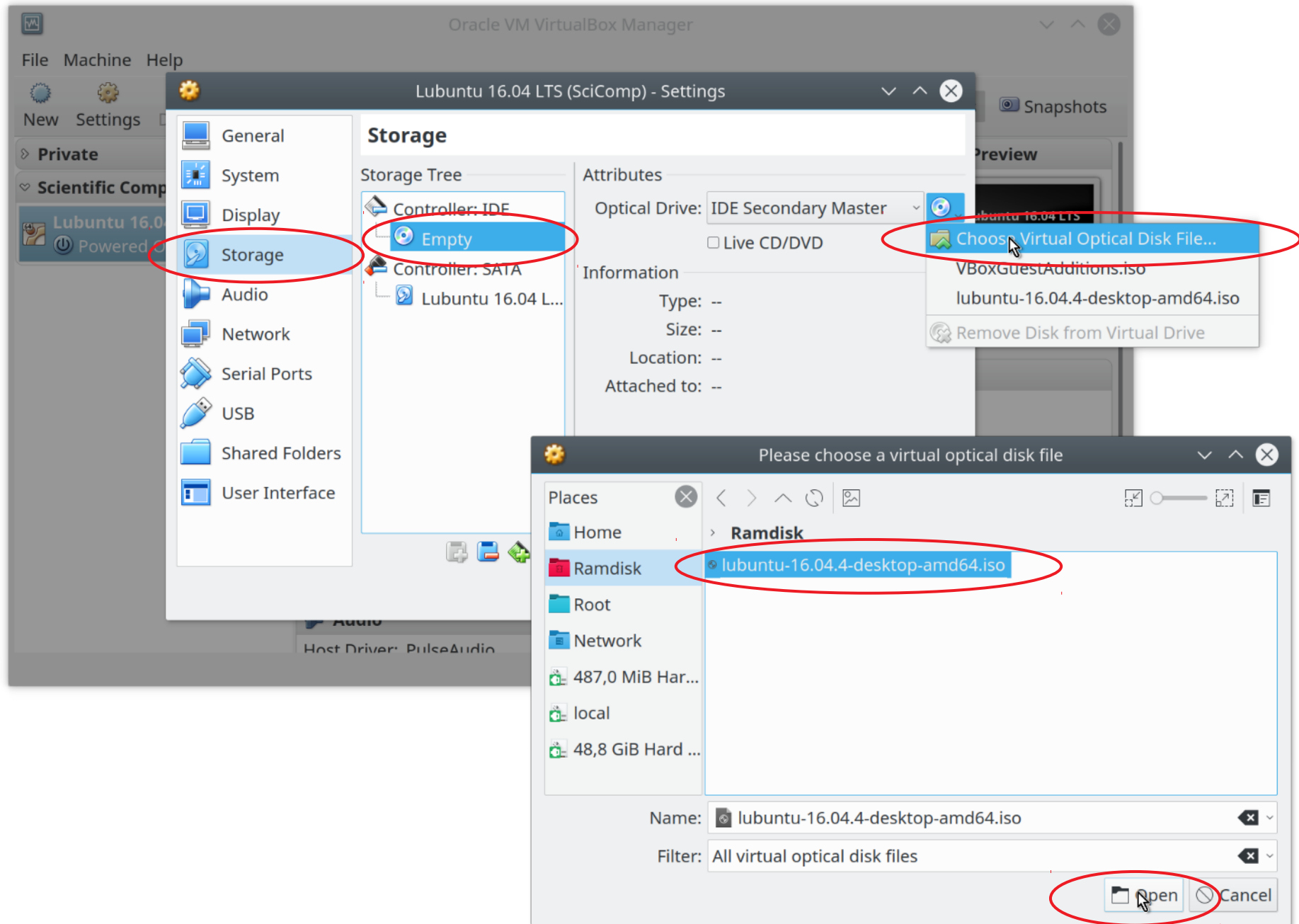
Set hard disk size to 20 GB (provided you have enough space on your hard drive)

Edit virtual machine settings:



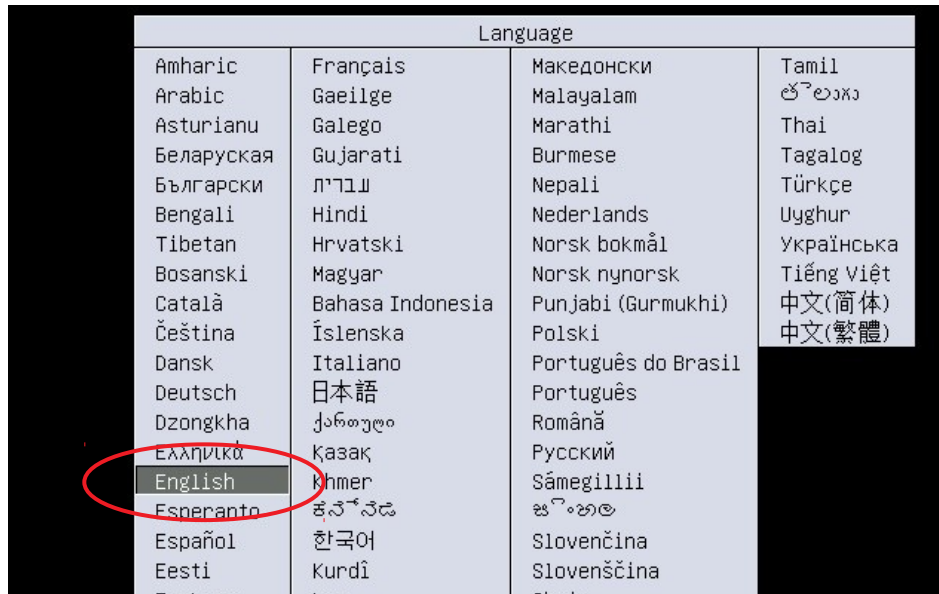
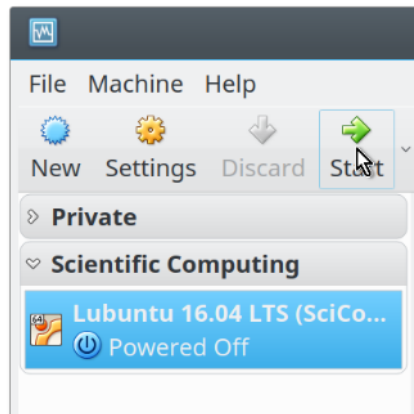
# Install Linux (Lubuntu) within VirtualBox

Insert the Lubuntu ISO-image as virtual optical disk:



# Install Linux (Lubuntu) within VirtualBox

Start the virtual machine, set up installation language and keyboard map:



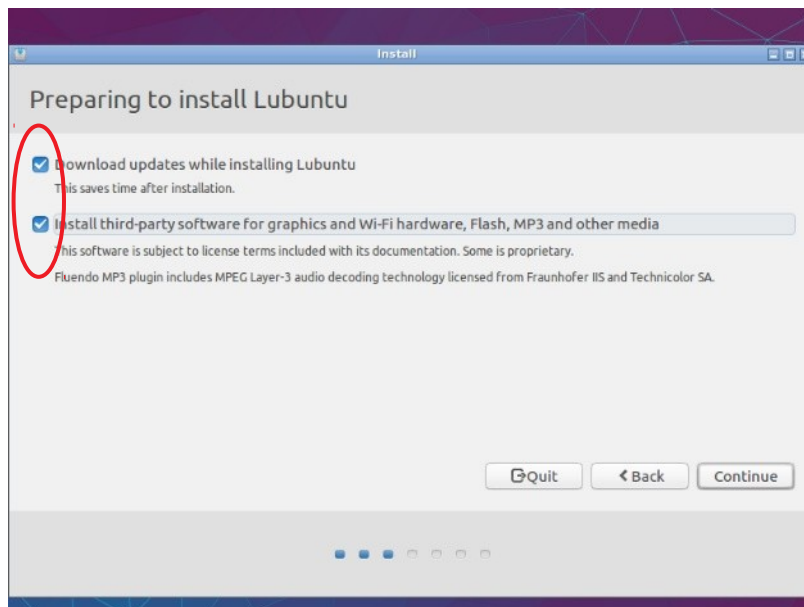
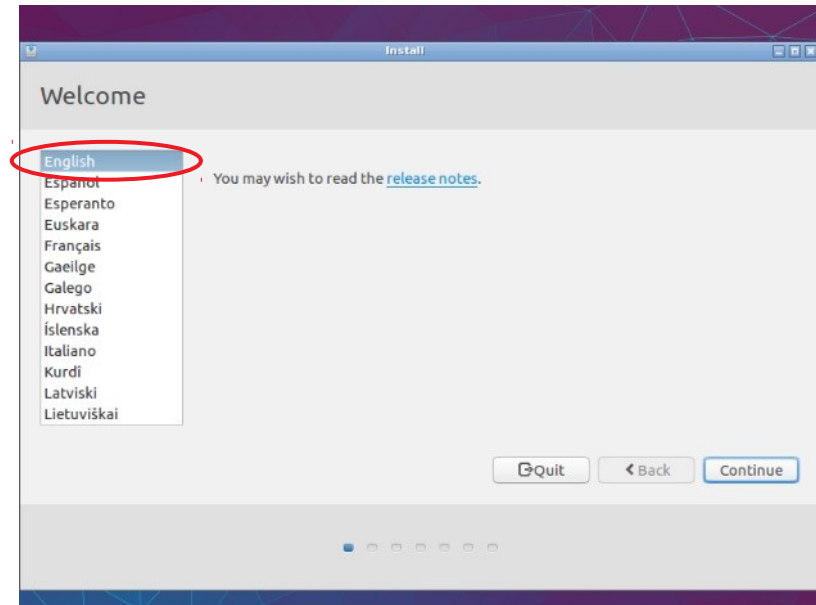
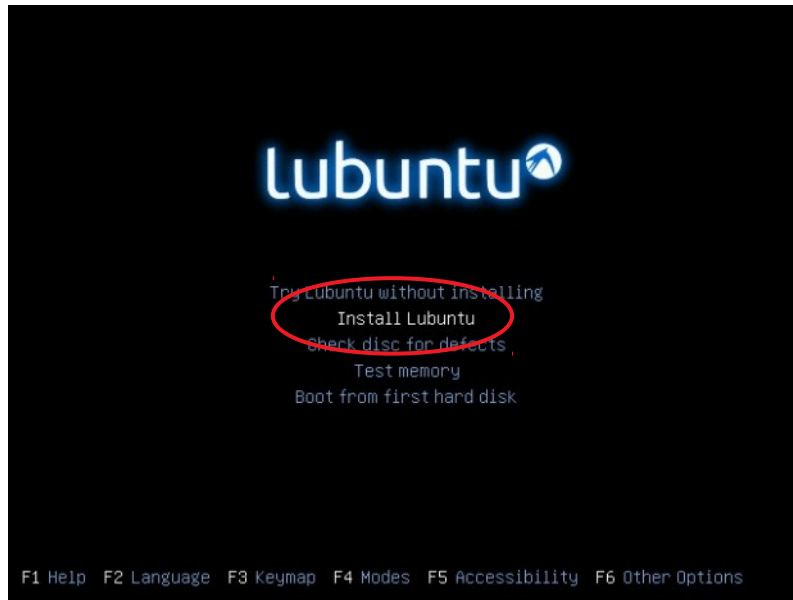
Make sure you select **English** for the language!

Press F3 and select the layout of your keyboard (or the one you are used to)

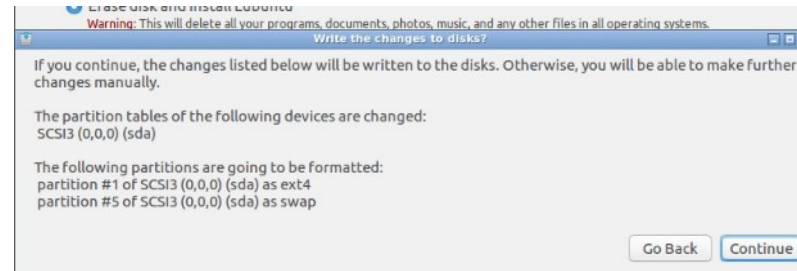
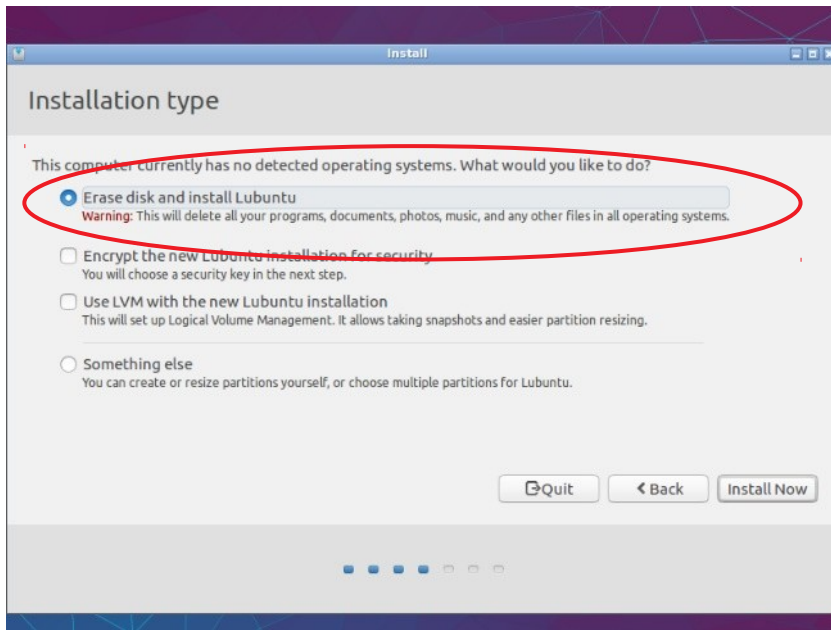


# Install Linux (Lubuntu) within VirtualBox

Install the operating system:



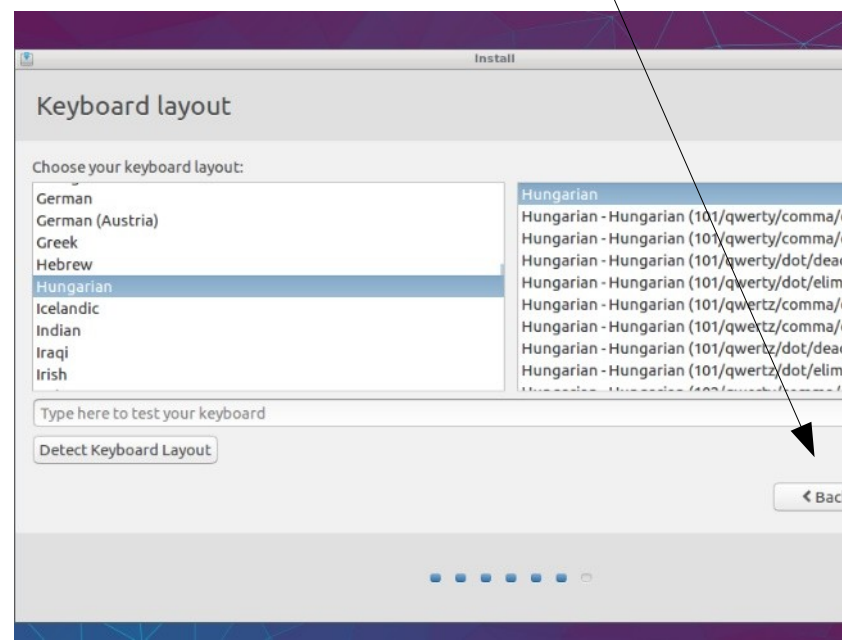
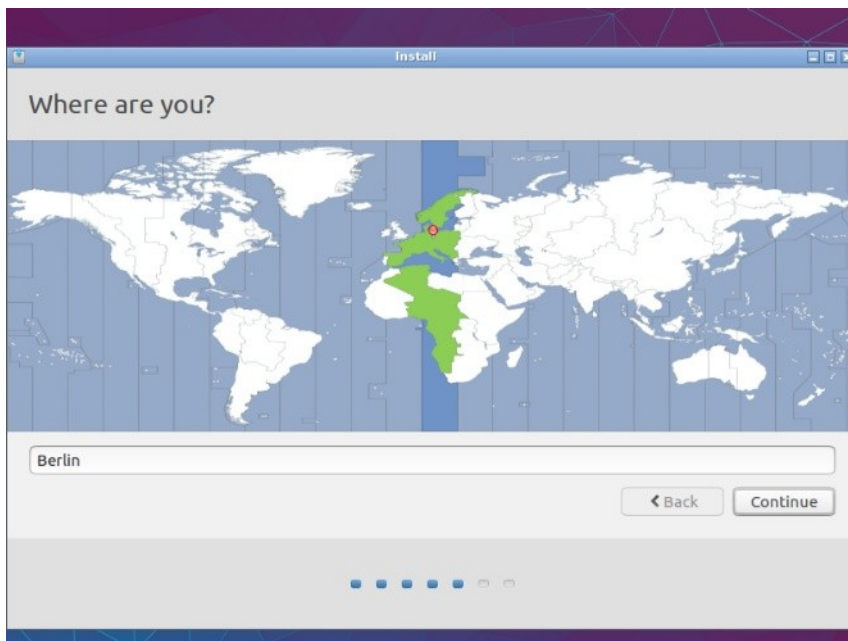
# Install Linux (Lubuntu) within VirtualBox



Note: Sometimes the **Continue** button is not shown (screen clipped)

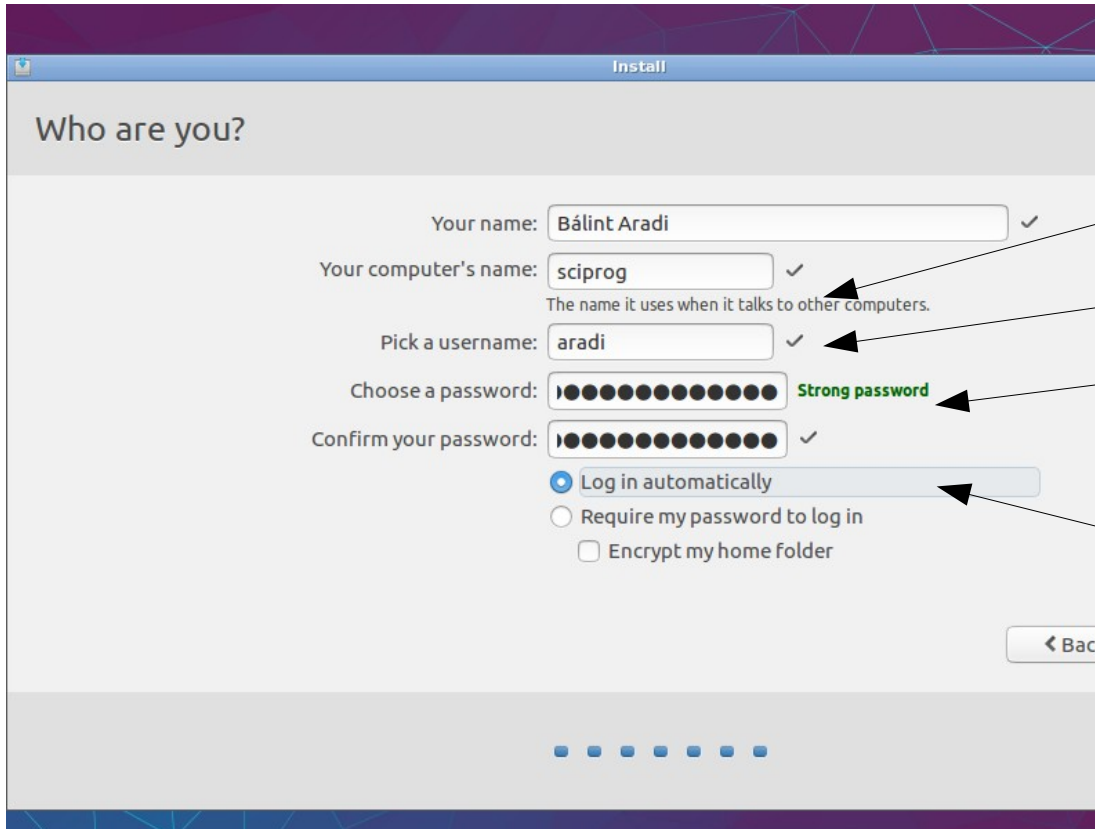
Workaround: Hit **TAB**, until **Back** button is highlighted, hit **TAB** once more and then hit **Enter**

Set up time-zone and keyboard layout for the operating system



# Install Linux (Lubuntu) within VirtualBox

Create user account:



The screenshot shows the 'Who are you?' screen during the Lubuntu installation. The window title is 'Install'. The form includes the following fields and options:

- Your name:  ✓
- Your computer's name:  ✓  
The name it uses when it talks to other computers.
- Pick a username:  ✓
- Choose a password:  Strong password
- Confirm your password:  ✓
- Log in automatically
- Require my password to log in
- Encrypt my home folder

A '< Back' button is located at the bottom right of the form area.

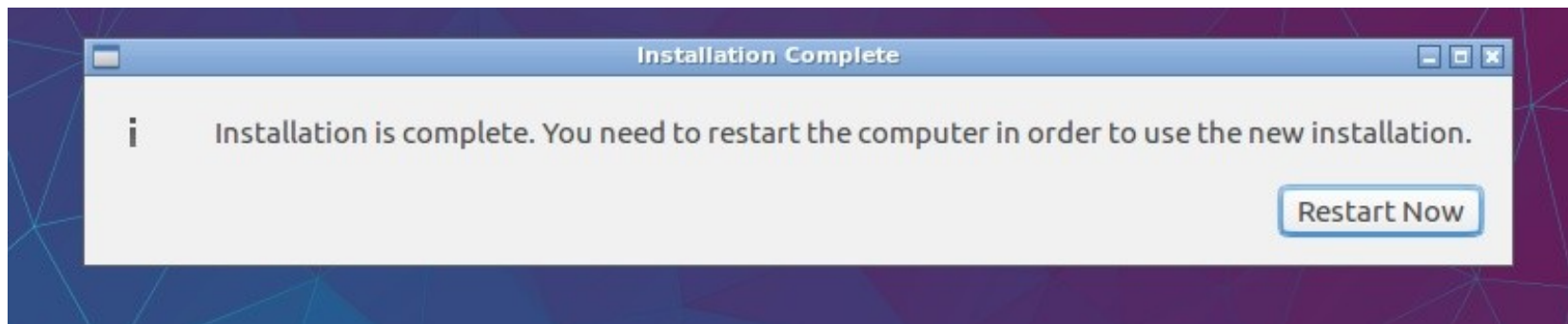
Pick a simple computer name

Pick a simple user name

Choose a strong password which you can remember

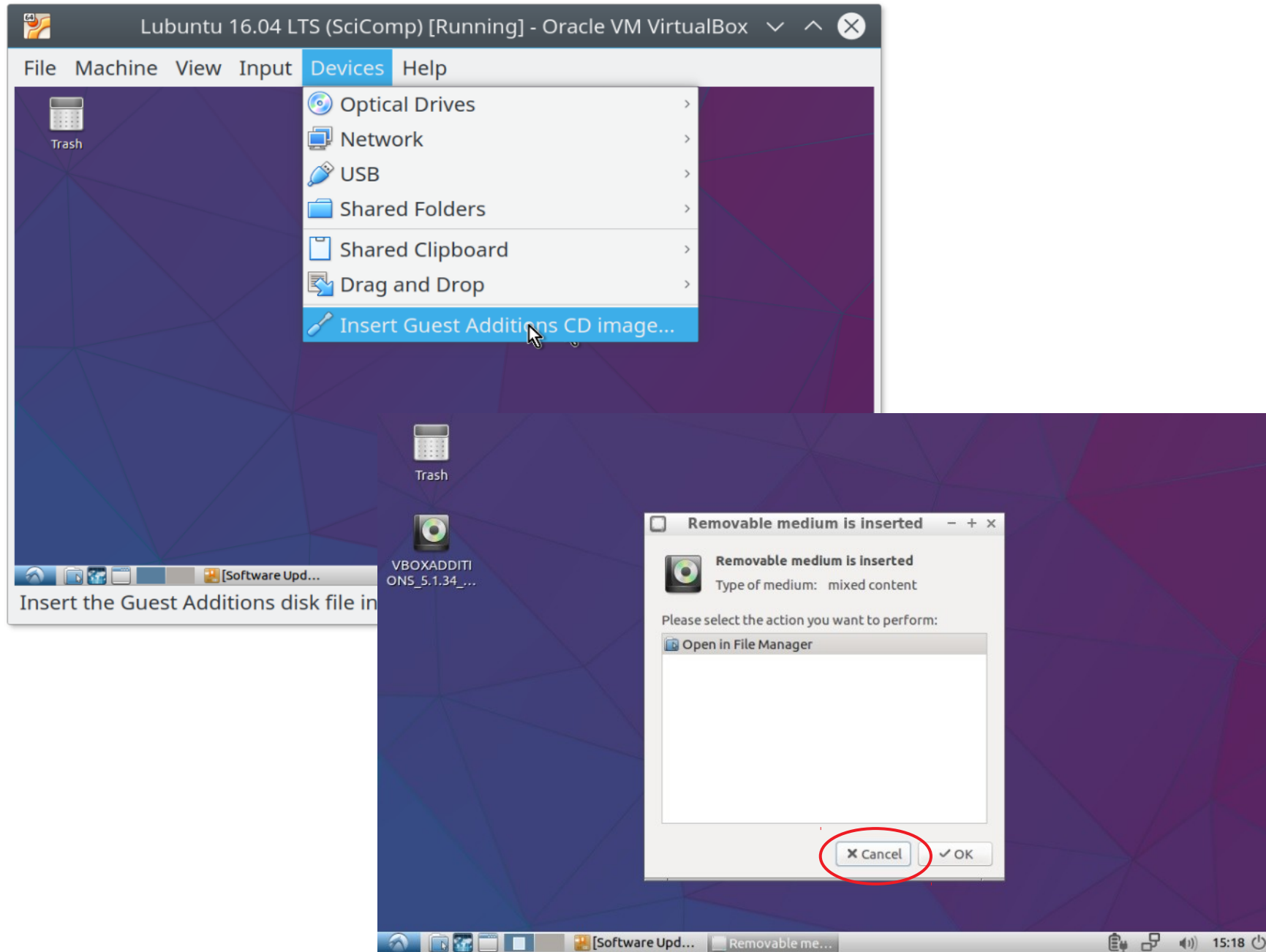
Select automatic log in

When installation is complete, reboot virtual machine:



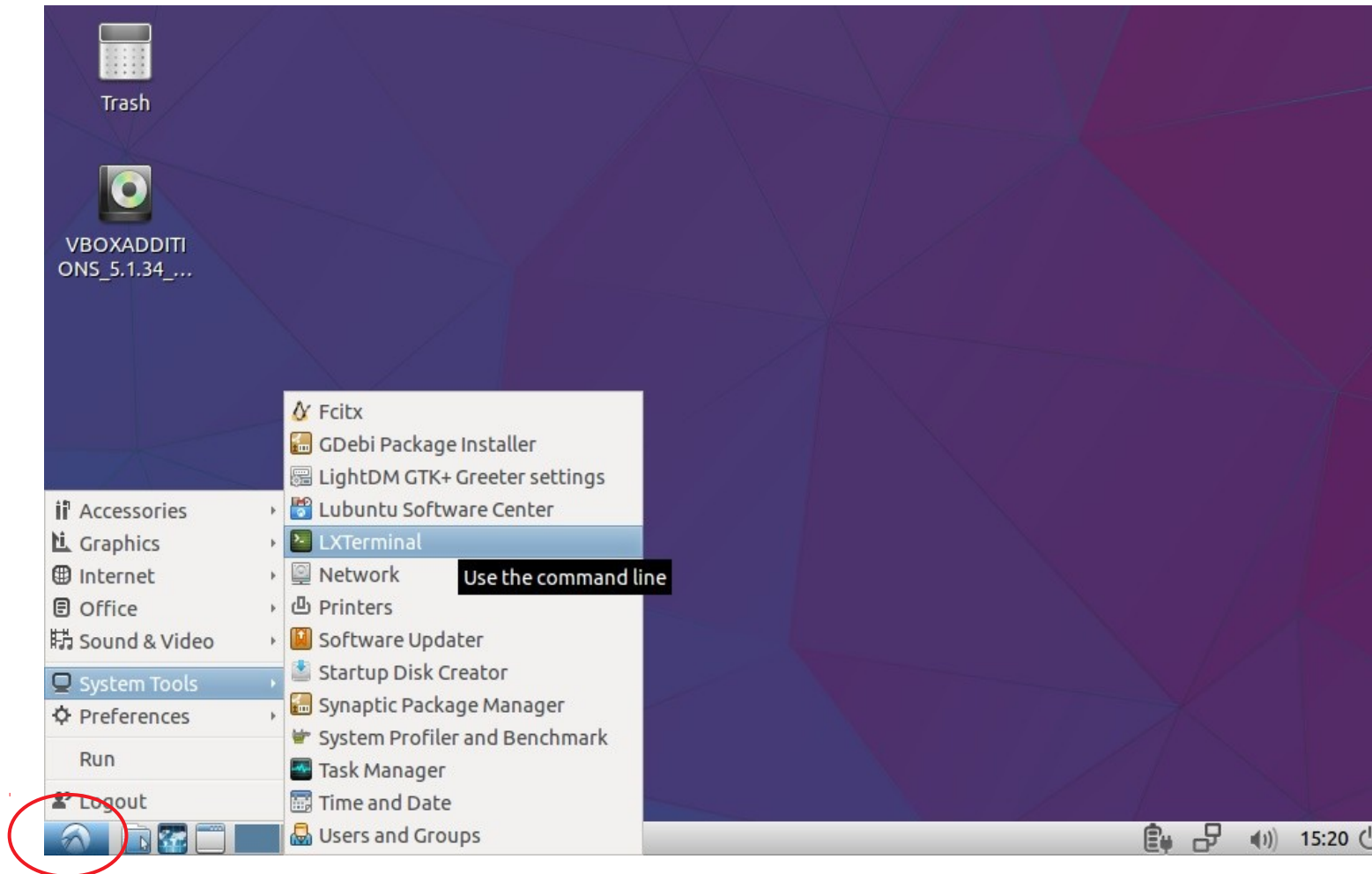
# Install Linux (Lubuntu) within VirtualBox

Insert guest edition CD image:



# Install Linux (Lubuntu) within VirtualBox

Open a command window (terminal):



# Install Linux (Lubuntu) within VirtualBox

Go to the user specific media folder:

```
cd /media
```

```
cd aradi ← Use your user name here!
```

List the content of the folder:

```
ls
```

Go to the folder with CD content:

```
cd VBOX
```

Before hitting Enter, hit the **TAB**-key in order to expand the directory name to the full name!

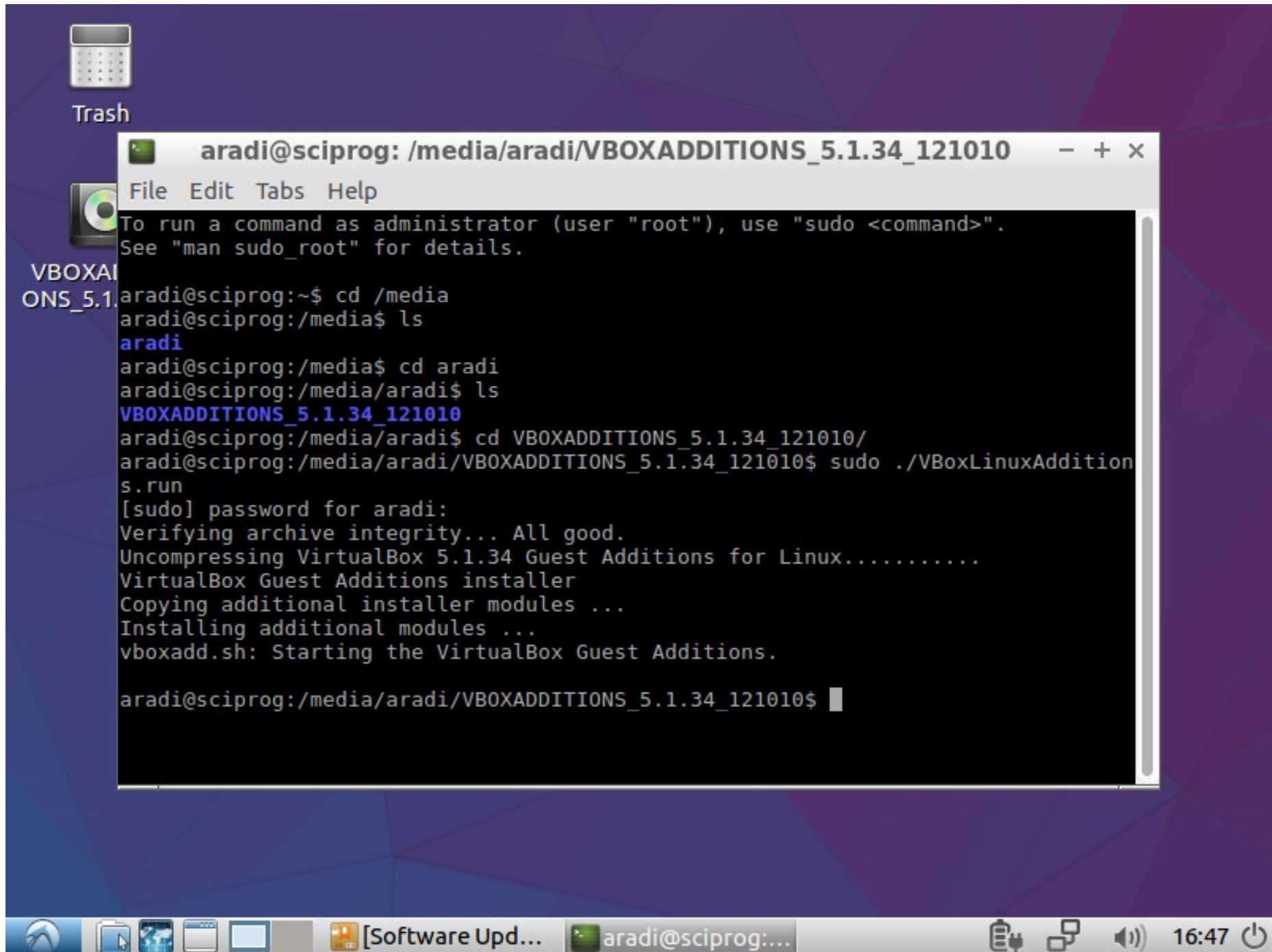
Install the guest additions as root (super user):

```
sudo ./VBoxLinux
```

Before hitting Enter, hit the **TAB**-key so that the file name is expanded to the full name!

When asked, enter your password (to obtain root privileges)

# Install Linux (Lubuntu) within VirtualBox

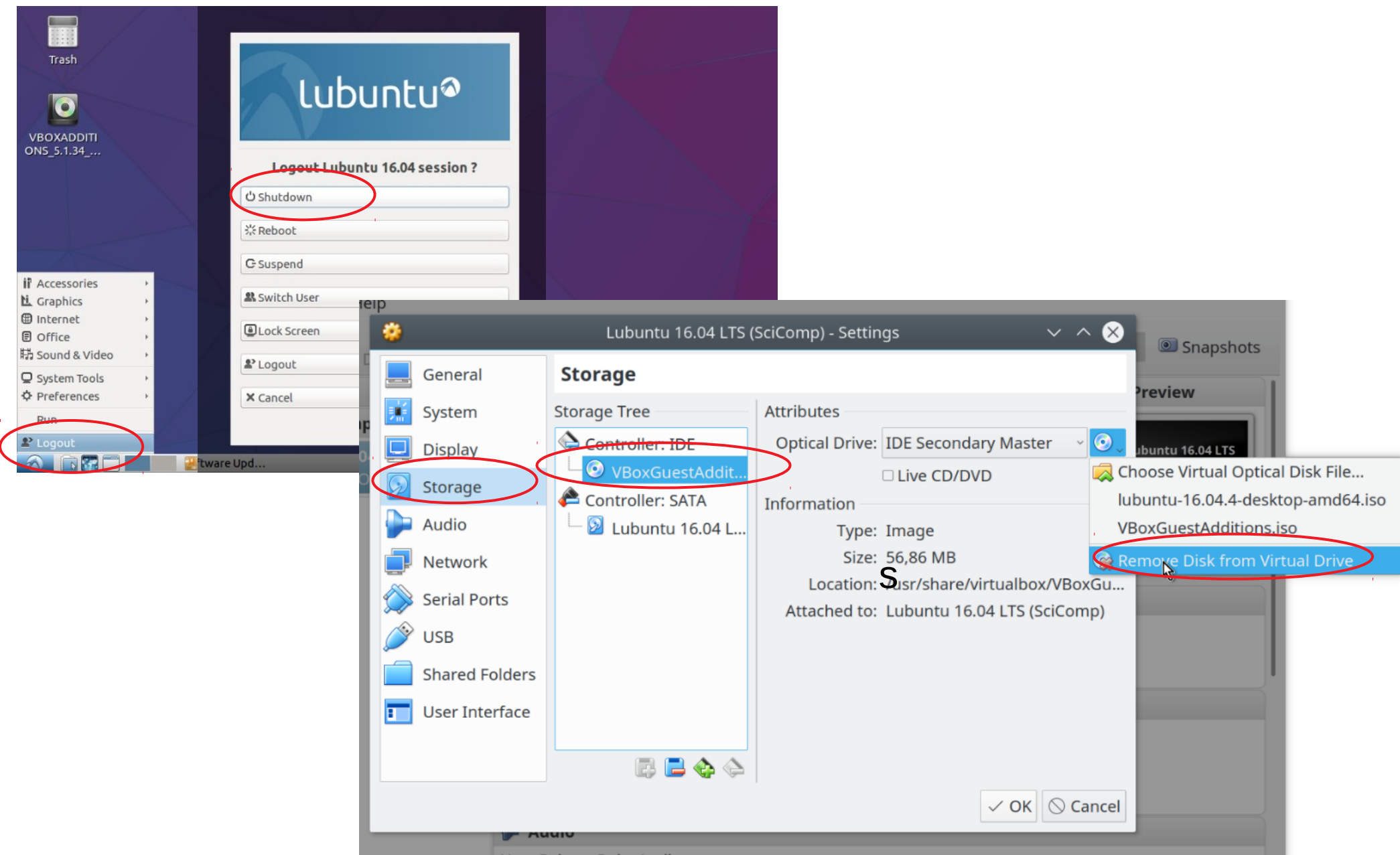


```
aradi@sciprolog: /media/aradi/VBOXADDITIONS_5.1.34_121010 - + x
File Edit Tabs Help
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
aradi@sciprolog:~$ cd /media
aradi@sciprolog:/media$ ls
aradi
aradi@sciprolog:/media$ cd aradi
aradi@sciprolog:/media/aradi$ ls
VBOXADDITIONS_5.1.34_121010
aradi@sciprolog:/media/aradi$ cd VBOXADDITIONS_5.1.34_121010/
aradi@sciprolog:/media/aradi/VBOXADDITIONS_5.1.34_121010$ sudo ./VBoxLinuxAdditions.run
[sudo] password for aradi:
Verifying archive integrity... All good.
Uncompressing VirtualBox 5.1.34 Guest Additions for Linux.....
VirtualBox Guest Additions installer
Copying additional installer modules ...
Installing additional modules ...
vboxadd.sh: Starting the VirtualBox Guest Additions.

aradi@sciprolog:/media/aradi/VBOXADDITIONS_5.1.34_121010$
```

# Install Linux (Lubuntu) within VirtualBox

Shut down the host and remove the Live CD



# Install Linux (Lubuntu) within VirtualBox

When you start Lubuntu again, switch it to full screen by pressing the **right Ctrl** and the **F** keys (full screen) at the same time.

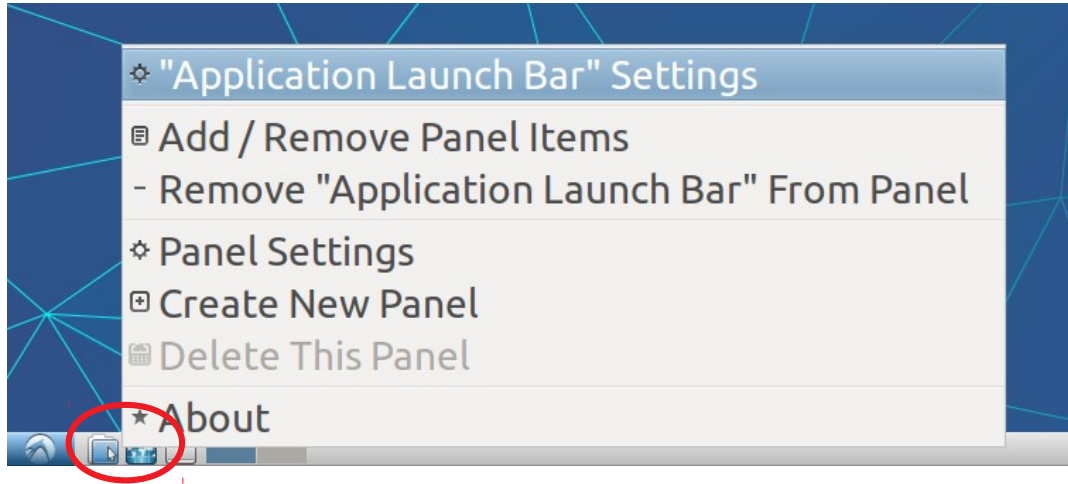
(On Germany keyboards the **Ctrl**-key is called **Strg**).

You can leave full screen mode by pressing **right Ctrl-F** again.

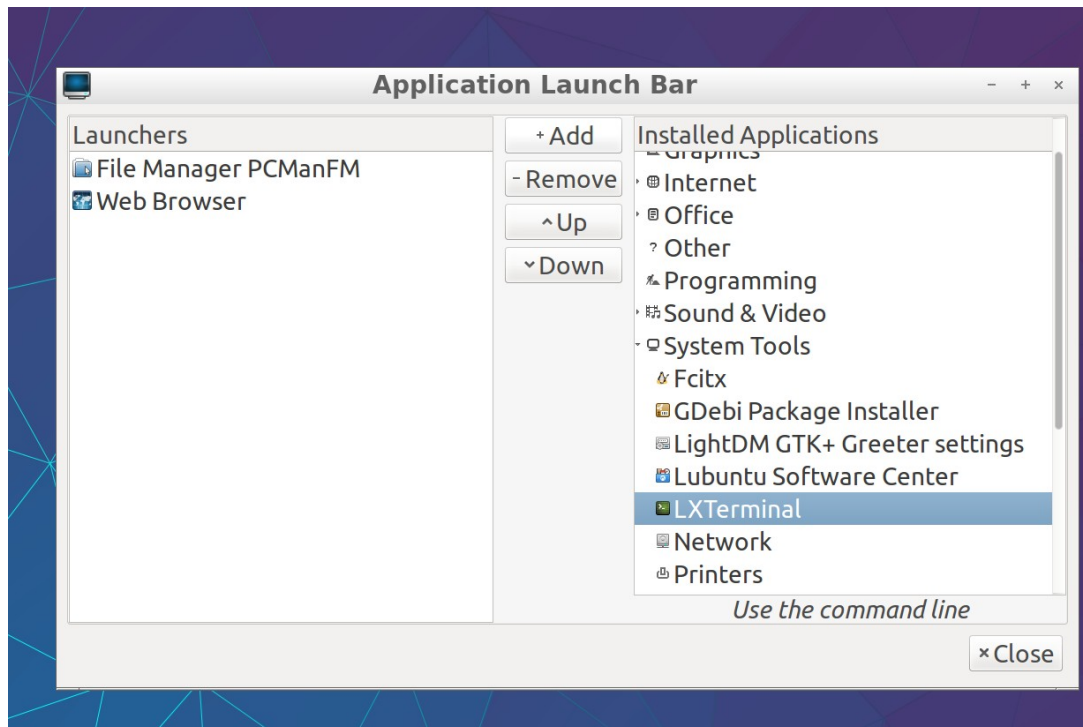
You can switch between host and guest operating system with the **right Ctrl** key.

# Install Linux (Lubuntu) within VirtualBox

Add often used applications (e.g. LXTerminal) to the launch bar:



Right click into the Application Launch Bar area and select Settings



Add application to the launch bar