

# VirtualBox

FRITA Noob Hour  
2016-08-03  
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# Outline

- What VirtualBox is
- Reasons to use it
- Quick safety notes
- How to obtain and install it
- How to build a virtual machine
- How to install an operating system on it
- Live demo

*I welcome questions during the presentation!*

*This is being recorded (FYI).*

What Is VirtualBox?

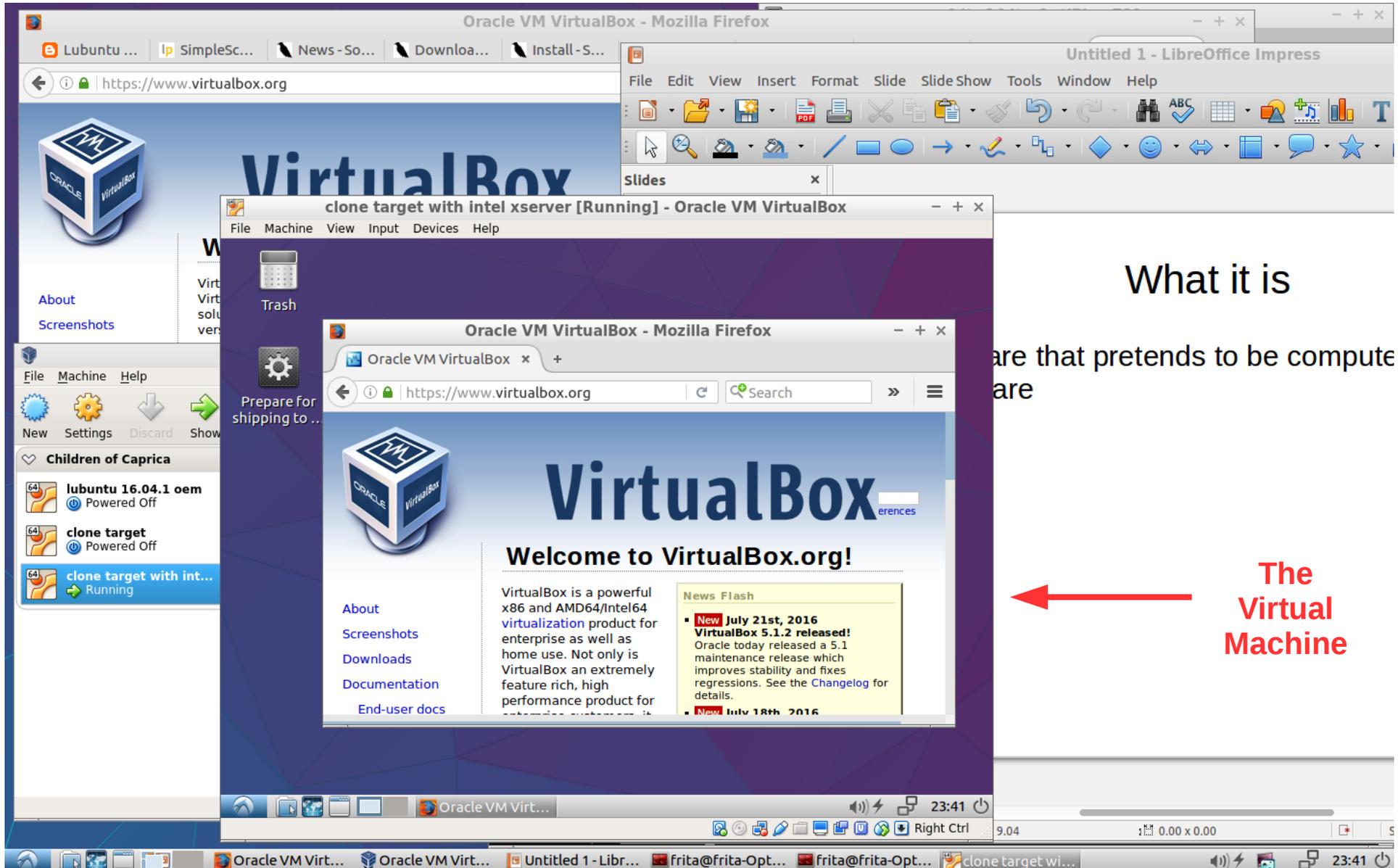
# A computer that you can't kick

- Software that pretends to be computer hardware
  - Keyboard, Mouse, Monitor, Hard Drive (etc.)
- You specify the hardware it should imitate
  - How large a drive
  - How much memory
- It builds for you a Virtual Machine (VM)
- You install software just like with any regular machine

Regular  
computer  
screen



# Here's a screenshot



What it is

are that pretends to be compute  
are

The  
Virtual  
Machine



Why you might use VirtualBox

# No need for more hardware

- VirtualBox can emulate other types of hardware
  - Need a 32-bit machine? No problem.
  - Need an old OS installed? No problem.
- Try out operating systems
  - Different versions of Linux
- Play with fire (see next about safety!)
  - Practice customizing the system
  - Learn why you shouldn't run as root
  - Try dangerous commands
  - Use software you don't trust (but be careful still!)

Quick note on safety

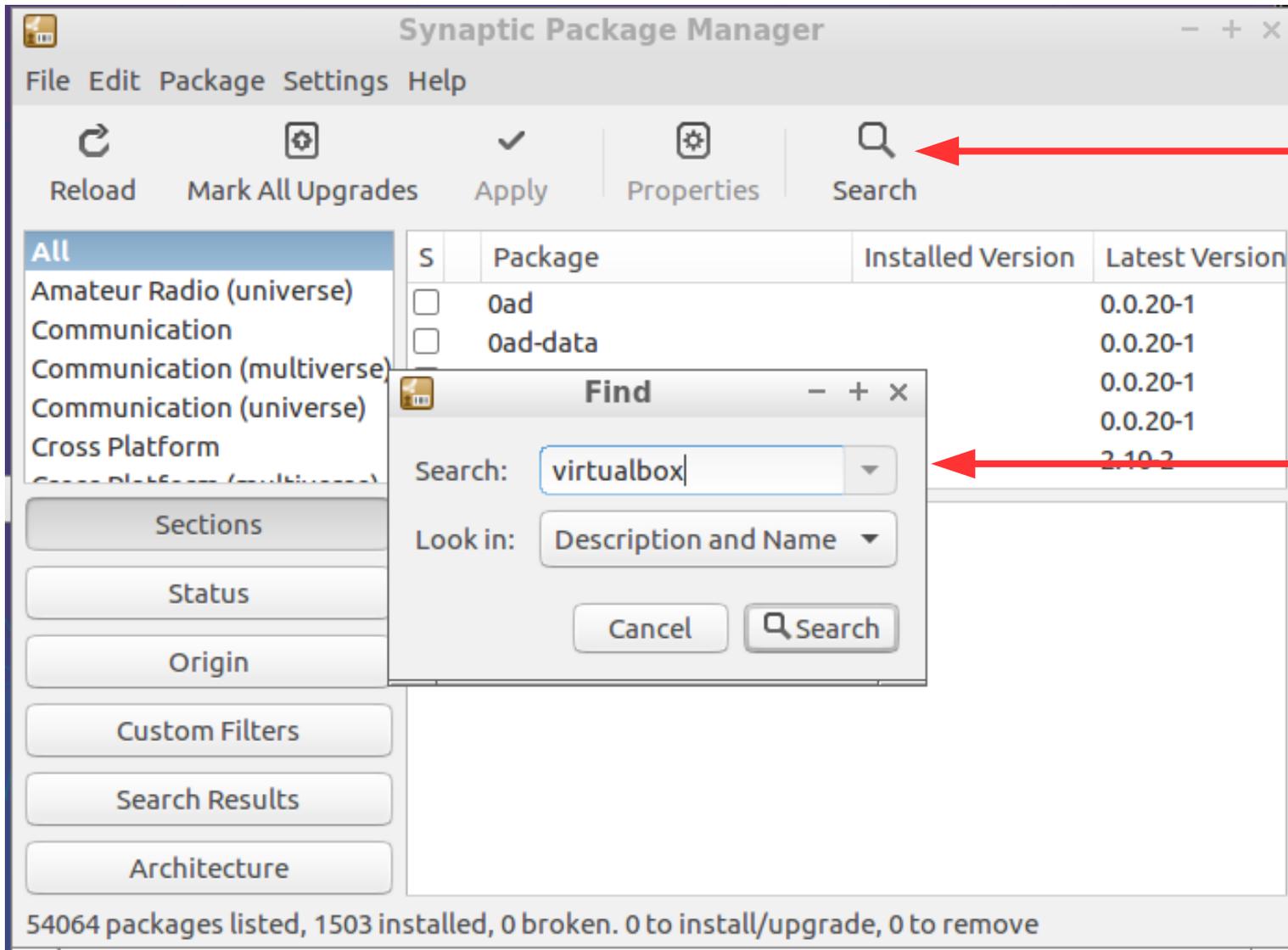
# Mostly a jail

- VirtualBox does a nice job of isolating the VM
- Only allow connections to/from the VM if you aren't doing something that might be dangerous.
  - Connections include:
    - Network ports (ethernet, etc.)
    - Directories mounted from the host
    - Drag/drop copy/paste between VM and host
- Just think carefully if you're using it to contain

# Obtaining and Installing VirtualBox



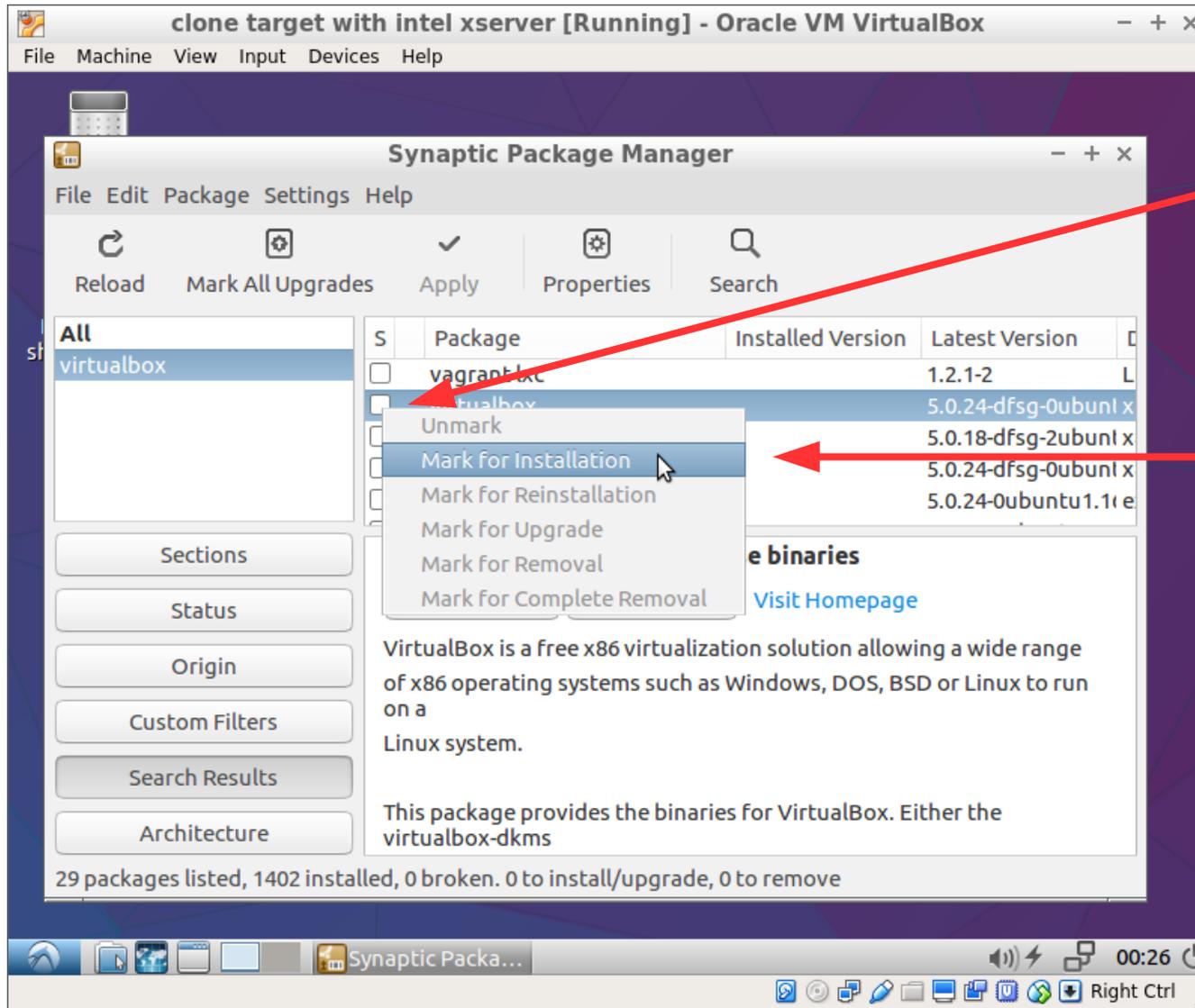
# ...obtaining: Ubuntu, cont.



Click Here

Enter virtualbox and click Search.

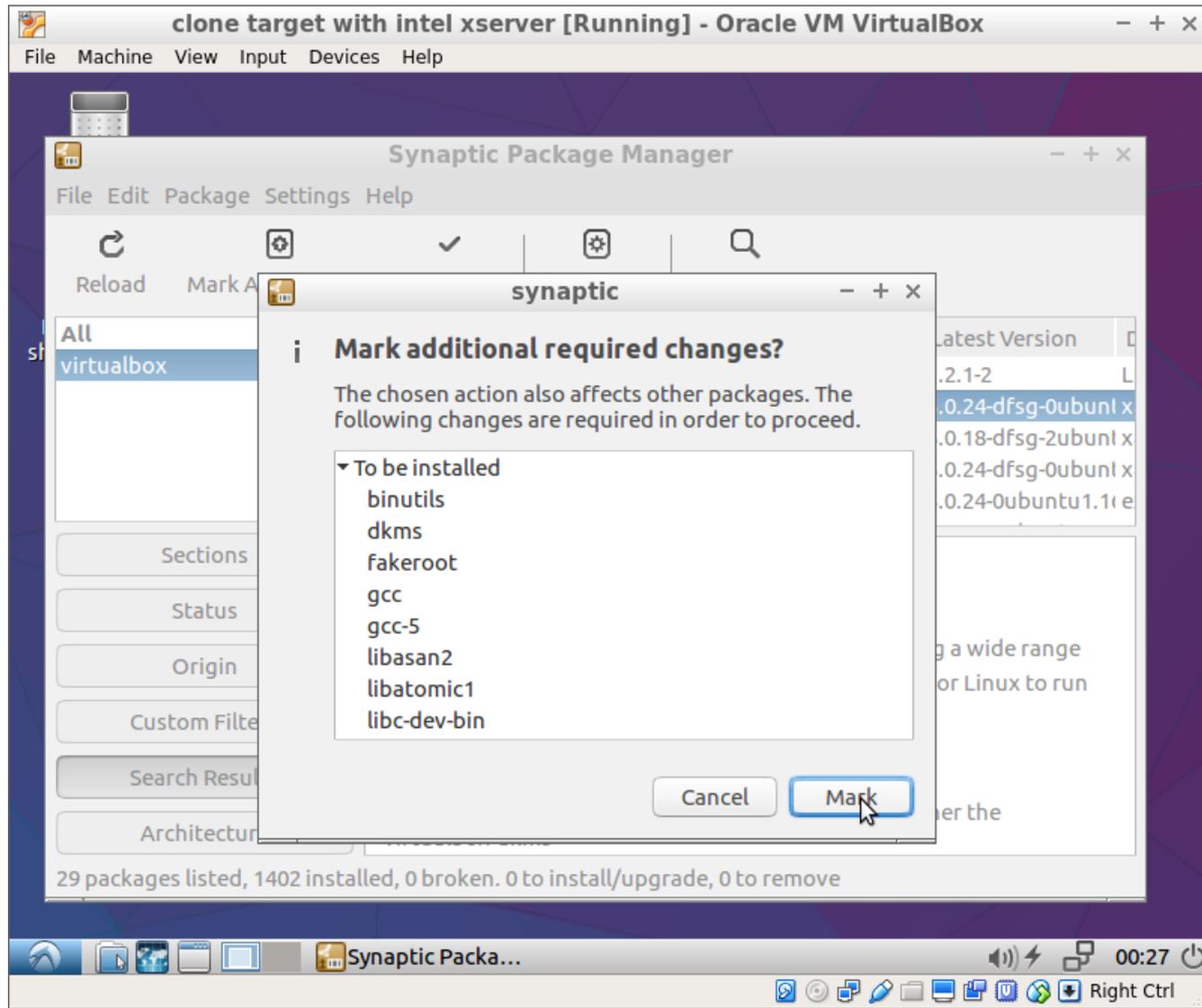
# ...obtaining: Lubuntu, cont.



Click the square next to *virtualbox*, then the window shown will pop up

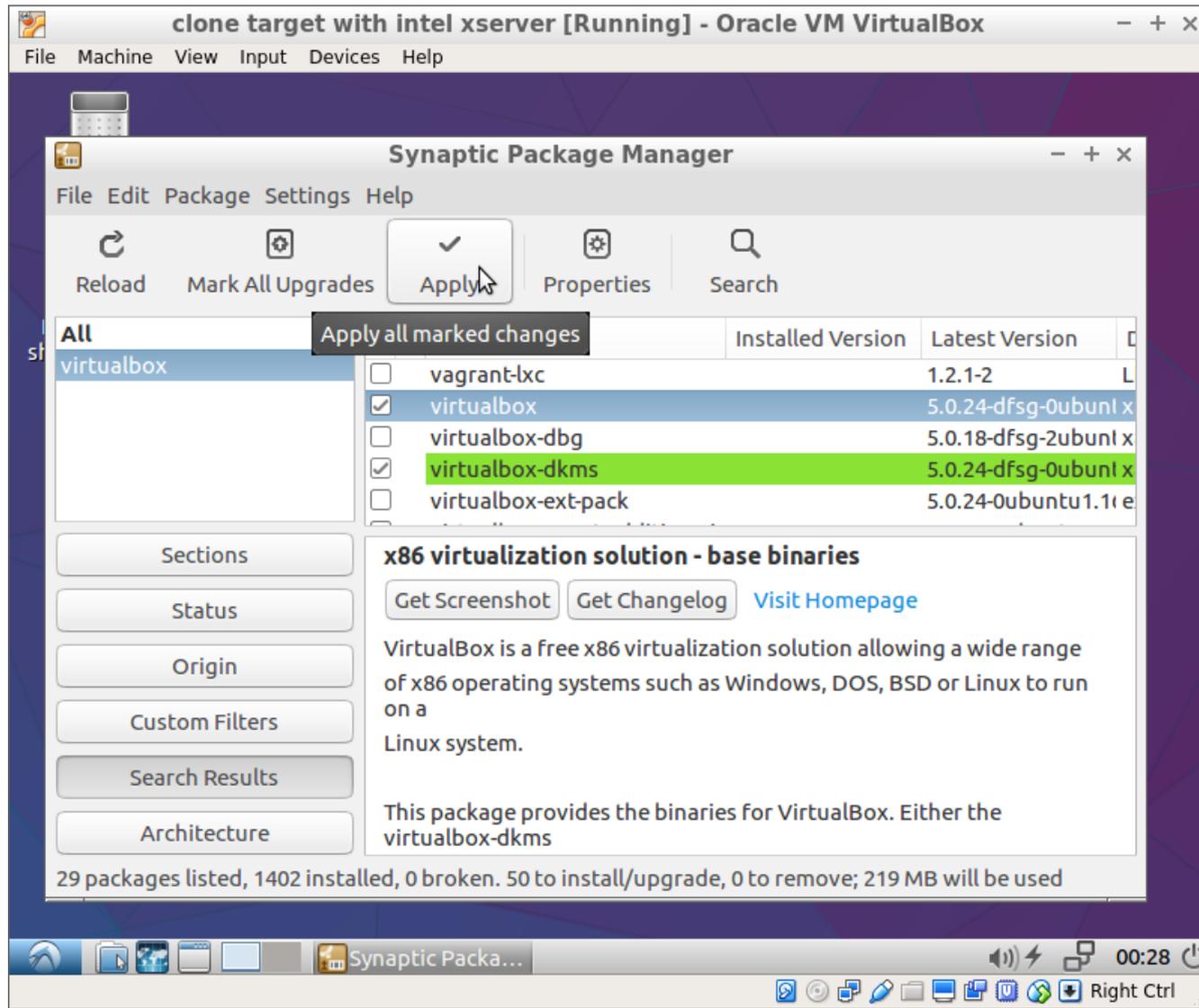
Click *Mark For Installation*

# ...obtaining: Lubuntu, cont.



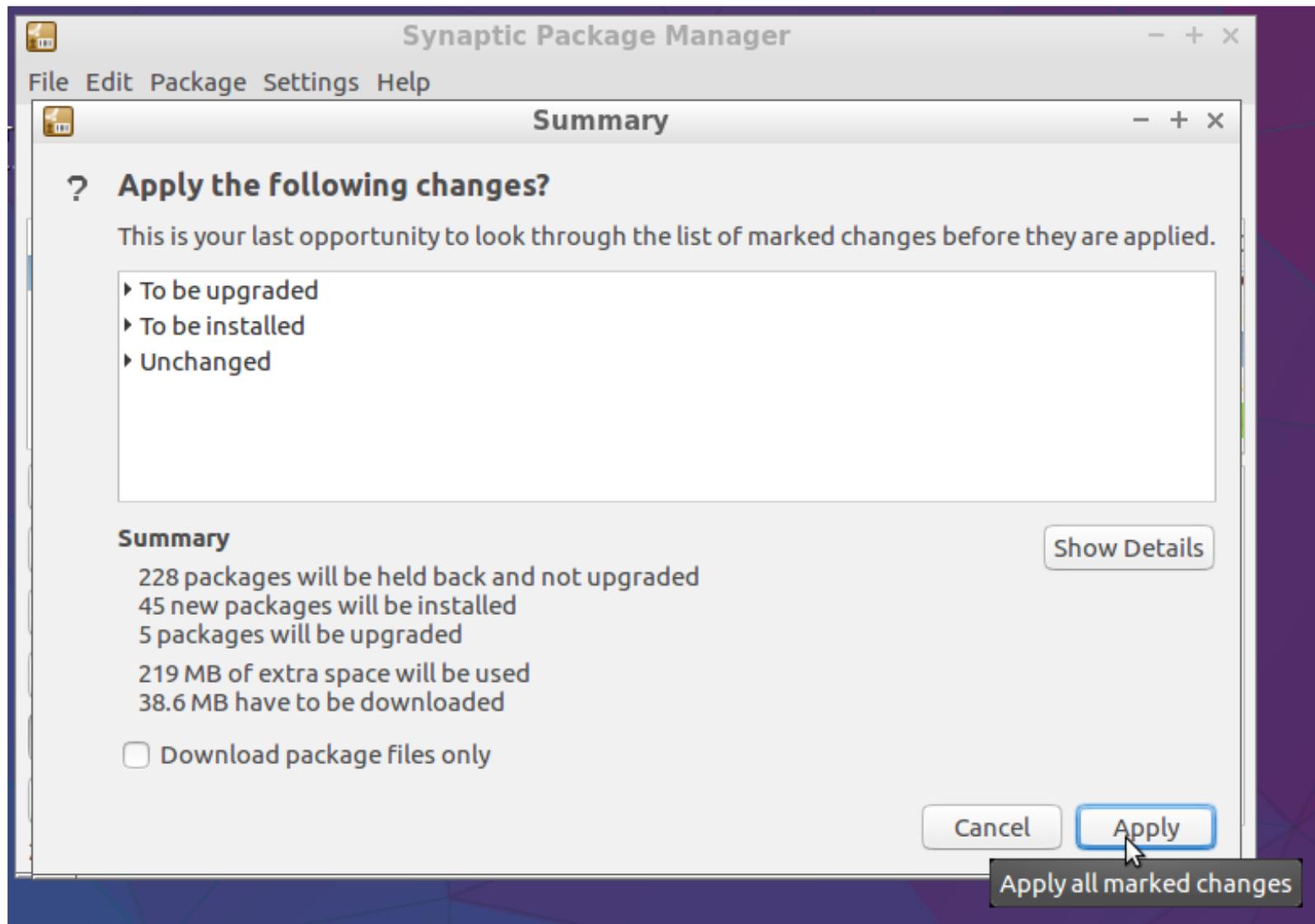
**This window will appear. Click Mark.**

# ...obtaining: Lubuntu, cont.



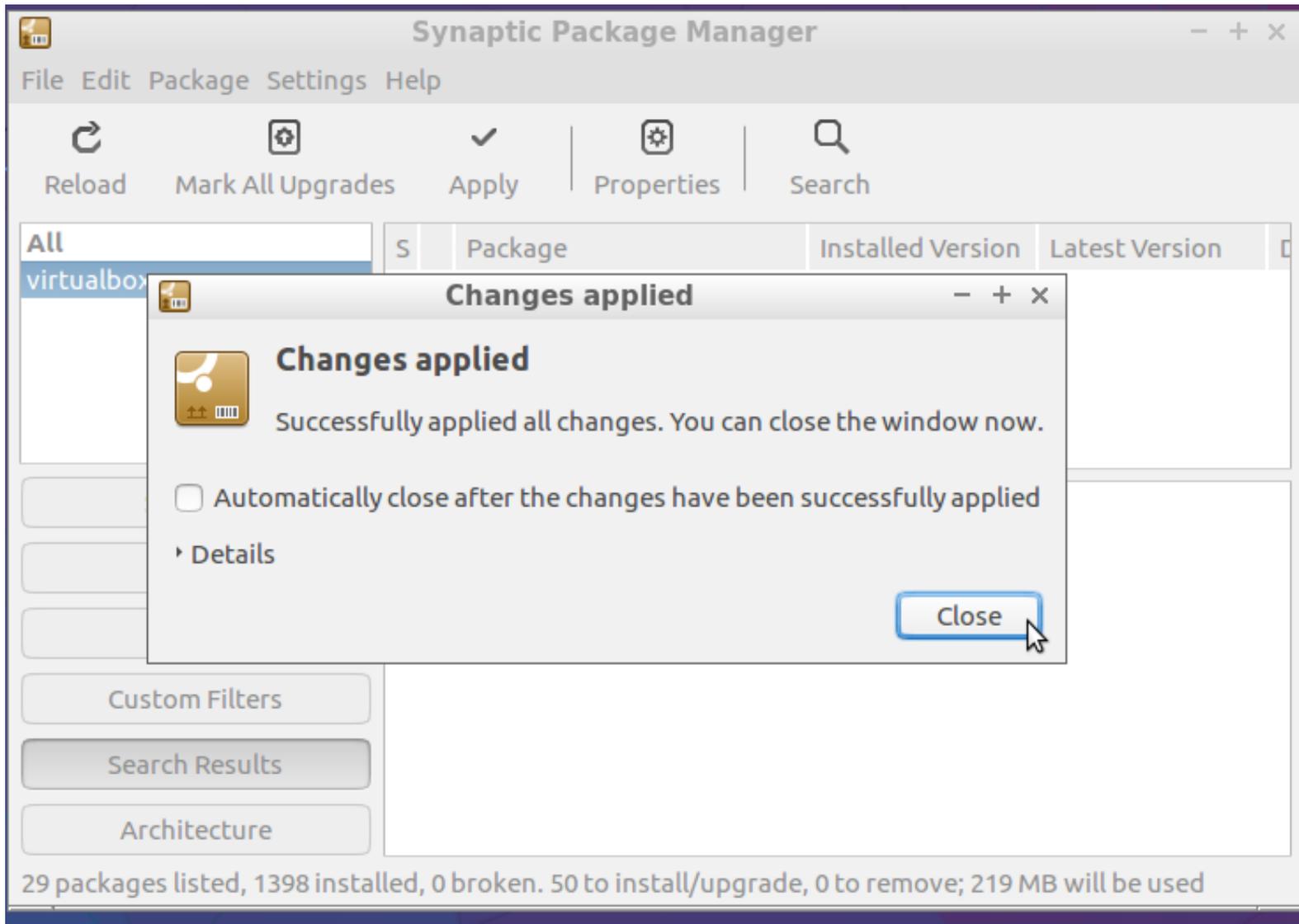
**This window will appear. Click *Apply*.**

# ...obtaining: Lubuntu, cont.



**This window will appear. Click *Apply* Again.**  
**The next bits might take a while. Synaptic will keep you up on what it is doing.**

# ...obtaining: Lubuntu, cont.



**When finished, this will appear. Click *Close* and then close Synaptic.**

# Obtaining VirtualBox – Other

Oracle VM VirtualBox - Mozilla Firefox

Lubuntu ... SimpleSc... News-So... Downloa... Install-S... Index of /file... xz compr... ask tar-How ... DW DistroWa... Oracle ... x +

https://www.virtualbox.org

# VirtualBox

search...  
Login Preferences

## Welcome to VirtualBox.org!

VirtualBox is a powerful x86 and AMD64/Intel64 [virtualization](#) product for enterprise as well as home use. Not only is VirtualBox an extremely feature rich, high performance product for enterprise customers, it is also the only professional solution that is freely available as Open Source Software under the terms of the GNU General Public License (GPL) version 2. See "[About VirtualBox](#)" for an introduction.

Presently, VirtualBox runs on Windows, Linux, Macintosh, and Solaris hosts and supports a large number of [guest operating systems](#) including but not limited to Windows (NT 4.0, 2000, XP, Server 2003, Vista, Windows 7, Windows 8, Windows 10), DOS/Windows 3.x, Linux (2.4, 2.6, 3.x and 4.x), Solaris and OpenSolaris, OS/2, and OpenBSD.

VirtualBox is being actively developed with frequent releases and has an ever growing list of features, supported guest operating systems and platforms it runs on. VirtualBox is a community effort backed by a dedicated company: everyone is encouraged to contribute while Oracle ensures the product always meets professional quality criteria.

**Download VirtualBox 5.1**

### Hot picks:

- Pre-built virtual machines for developers at [Oracle Tech Network](#)
- **Hyperbox** Open-source Virtual Infrastructure Manager [project site](#)
- **phpVirtualBox** AJAX web interface [project site](#)
- **IQEmu** automated Windows VM creation, application integration <http://mirage335-site.member.hacdc.org:6380/wiki/Category:IQEmu>

### News Flash

- **New July 21st, 2016 VirtualBox 5.1.2 released!**  
Oracle today released a 5.1 maintenance release which improves stability and fixes regressions. See the [Changelog](#) for details.
- **New July 18th, 2016 VirtualBox 5.0.26 released!**  
Oracle today released a 5.0 maintenance release which improves stability and fixes regressions. See the [Changelog](#) for details.
- **New July 12th, 2016 VirtualBox 5.1 released!**  
Many enhancements and improvements. Read more in the [announcement](#).
- **Important February, 2015 We're hiring!**  
Looking for a new challenge? We're looking for [generic product developers](#) (Russia).

[More information...](#)

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# Obtaining VirtualBox – Other Linux

## Download VirtualBox

Here, you will find links to VirtualBox binaries and its source code.

### VirtualBox binaries

By downloading, you agree to the terms and conditions of the respective license.

- **VirtualBox platform packages.** The binaries are released under the terms of the GPL version 2.
  - **VirtualBox 5.1.2 for Windows hosts** [↪x86/amd64](#)
  - **VirtualBox 5.1.2 for OS X hosts** [↪amd64](#)
  - **VirtualBox 5.1.2 for Linux hosts** [↪amd64](#)
  - **VirtualBox 5.1.2 for Solaris hosts** [↪amd64](#)
- **VirtualBox 5.1.2 Oracle VM VirtualBox Extension Pack** [↪All supported platforms](#)  
Support for USB 2.0 and USB 3.0 devices, VirtualBox RDP and PXE boot for Intel cards. See [this chapter](#) Extension Pack. The Extension Pack binaries are released under the [VirtualBox Personal Use and Evaluation License](#). Please install the extension pack with the same version as your installed version of VirtualBox:  
*If you are using **VirtualBox 5.0.26**, please download the extension pack [↪ here](#).*  
*If you are using **VirtualBox 4.3.38**, please download the extension pack [↪ here](#).*
- **VirtualBox 5.1.2 Software Developer Kit (SDK)** [↪All platforms](#)

See the [changelog](#) for what has changed.  
You might want to compare the

Click  
Here

Once comfortable,  
come back for the  
Extension Pack to  
get USB Support

# Obtaining VirtualBox – Other Linux

## Download VirtualBox for Linux Hosts

### VirtualBox 5.1.2 for Linux

**Note:** The package architecture has to match the Linux kernel architecture, that is, if you are running a 64-bit kernel does not matter if you have an Intel or an AMD CPU). Mixed installations (e.g. Debian/Lenny ships an AMD64 kernel) install VirtualBox anyway you need to setup a 64-bit chroot environment.

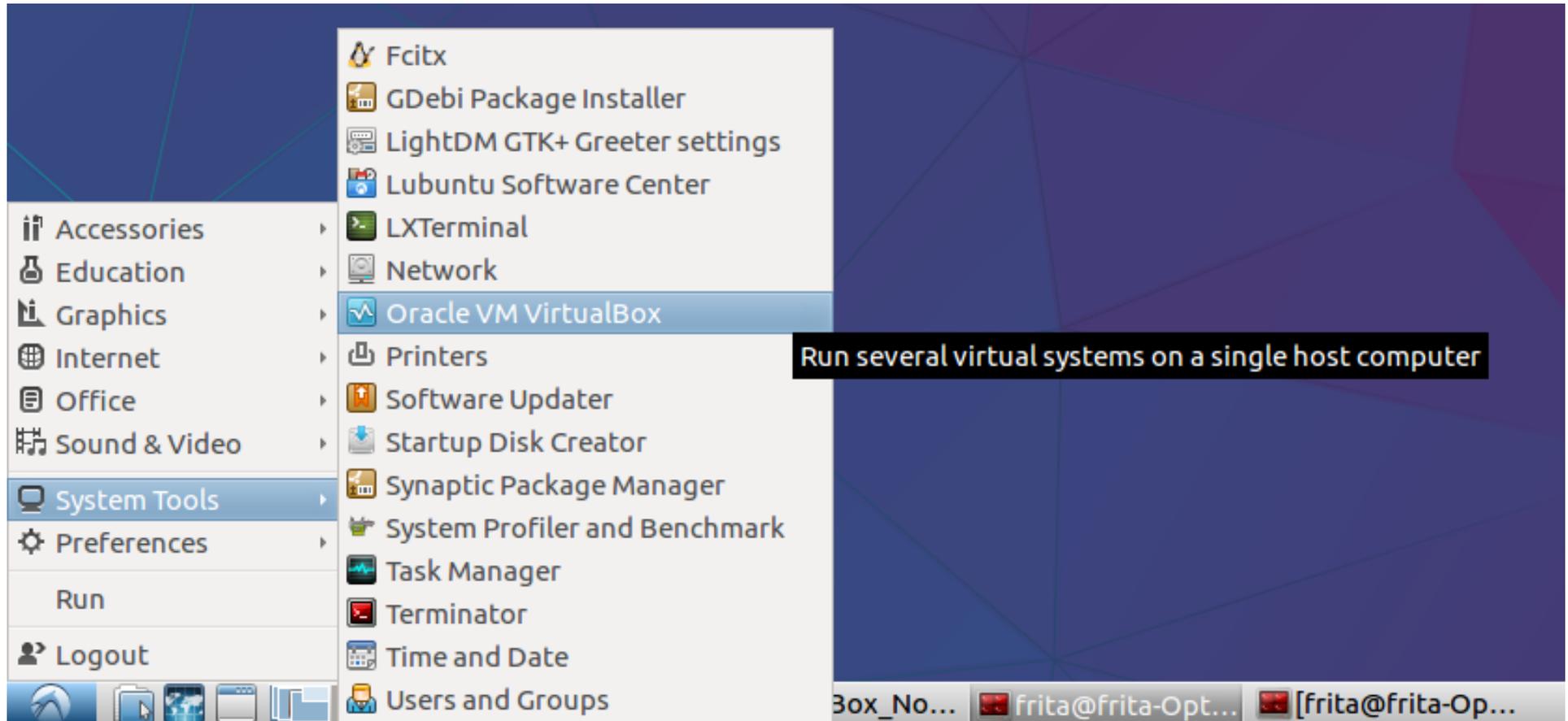
Please choose the appropriate package for your Linux distribution:

- Ubuntu 16.04 ("Xenial") ⇨ [i386](#) | ⇨ [AMD64](#)
- Ubuntu 15.10 ("Wily") ⇨ [i386](#) | ⇨ [AMD64](#)
- Ubuntu 14.04 ("Trusty") / 14.10 ("Utopic") / 15.04 ("Vivid") ⇨ [i386](#) | ⇨ [AMD64](#)
- Ubuntu 12.04 LTS ("Precise") ⇨ [i386](#) | ⇨ [AMD64](#)
- Debian 9 ("Stretch") ⇨ [i386](#) | ⇨ [AMD64](#)
- Debian 8 ("Jessie") ⇨ [i386](#) | ⇨ [AMD64](#)
- Debian 7 ("Wheezy") ⇨ [i386](#) | ⇨ [AMD64](#)
- openSUSE 13.2 ("Harlequin") / Leap 42.1 ("Malachite") ⇨ [i386](#) | ⇨ [AMD64](#)
- Fedora 24 ⇨ [i386](#) | ⇨ [AMD64](#)
- Fedora 22 / 23 ⇨ [i386](#) | ⇨ [AMD64](#)
- Oracle Linux 7 ("OL7") / Red Hat Enterprise Linux 7 ("RHEL7") / CentOS 7 ⇨ [AMD64](#)
- Oracle Linux 6 ("OL6") / Red Hat Enterprise Linux 6 ("RHEL6") / CentOS 6 ⇨ [i386](#) | ⇨ [AMD64](#)
- Oracle Linux 5 ("OL5") / Red Hat Enterprise Linux 5 ("RHEL5") / CentOS 5 ⇨ [i386](#) | ⇨ [AMD64](#)
- All distributions (built on EL5 and therefore do not require recent system libraries) ⇨ [i386](#) | ⇨ [AMD64](#)

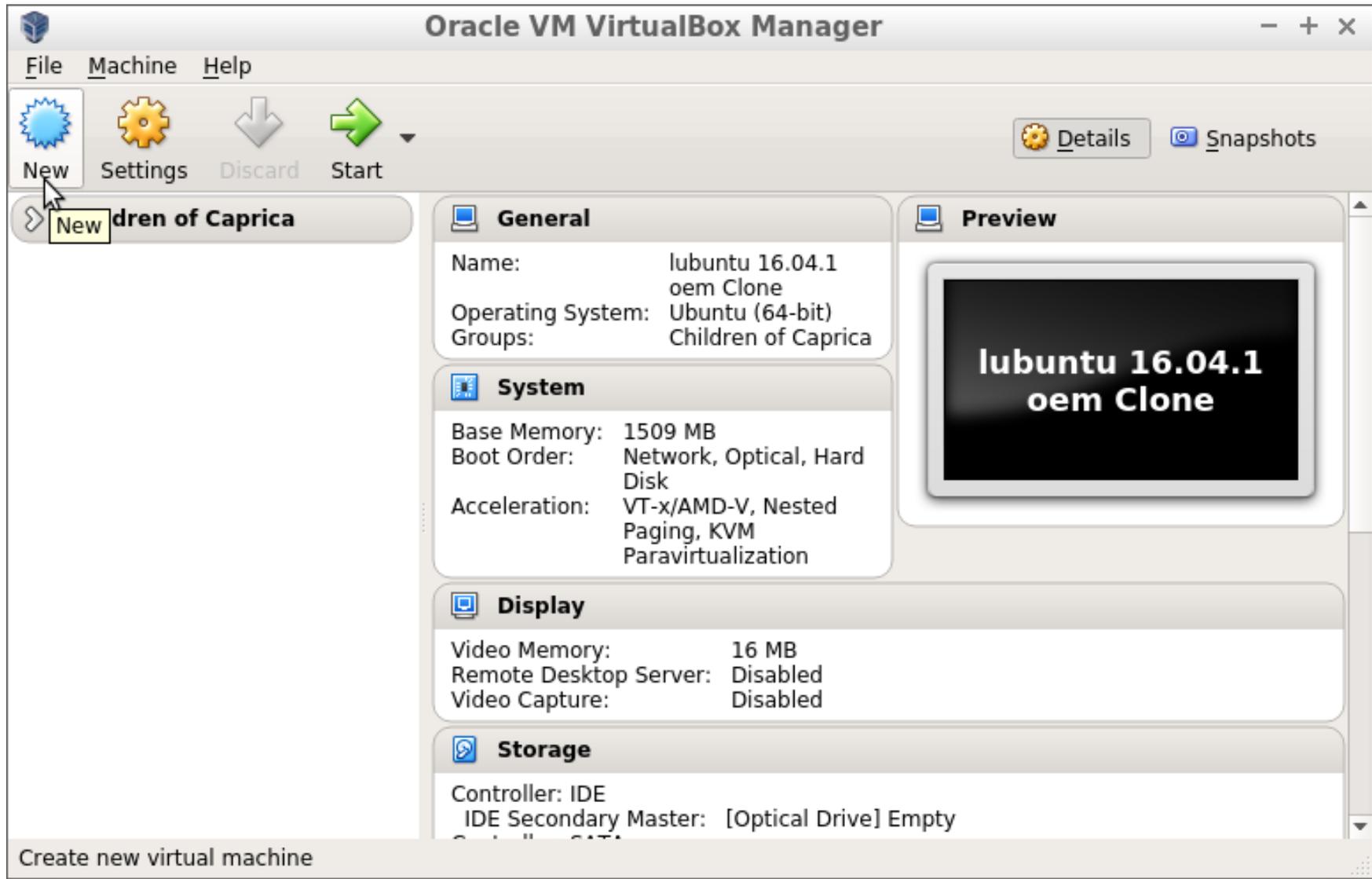
**Choose your Linux type and follow the instructions.  
In the interest of time, we will not cover this further today.**

# Using VirtualBox

# Under *Oracle* in the menu

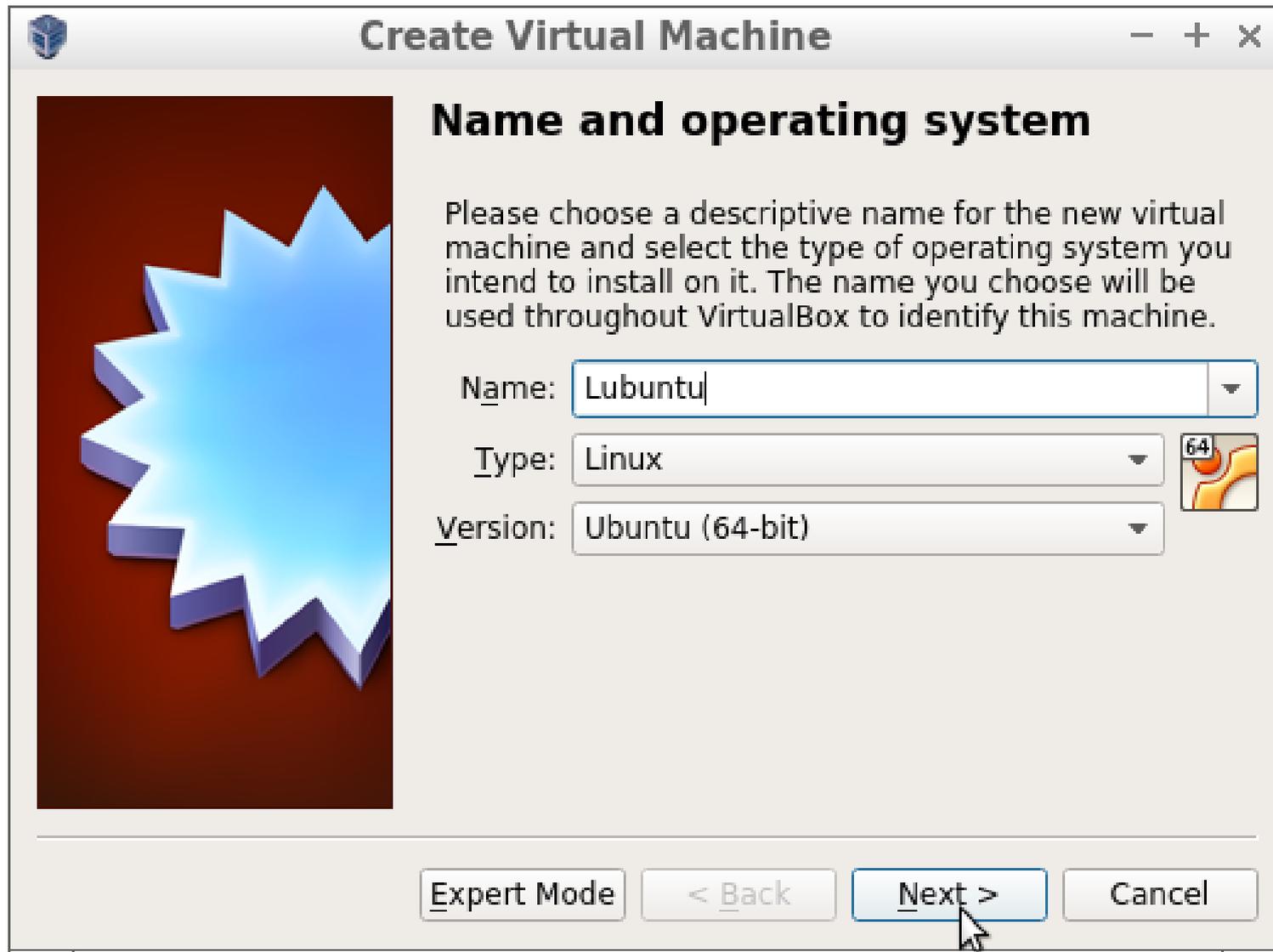


# When it has just opened



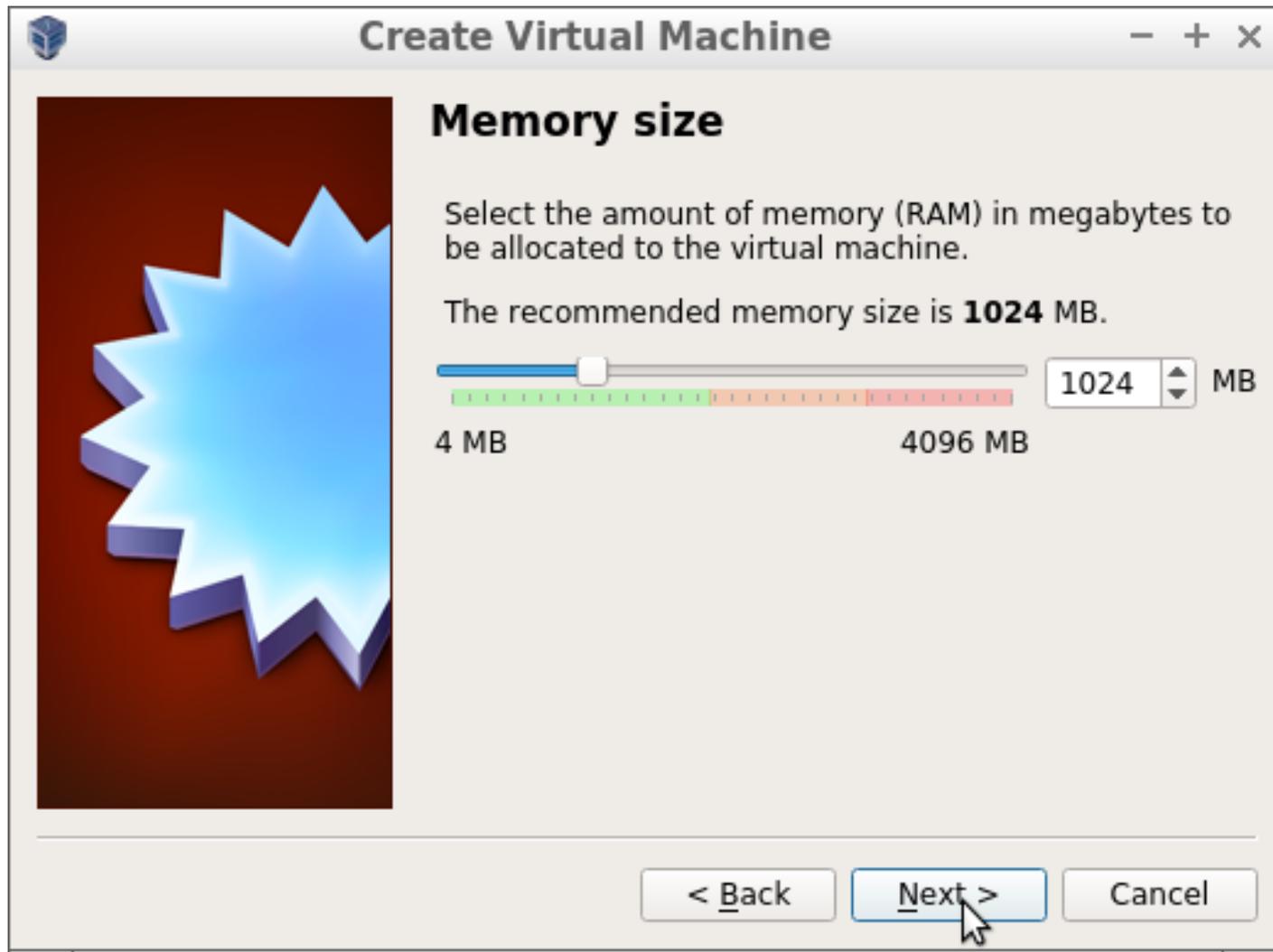
Click **New** to make a new machine.

# Name your machine



If it doesn't guess the *Type* and *Version* right, choose the right ones.

# Set the amount of memory



Remember, your computer will be having to do all the work of this machine as well as its normal tasks!

# Add a hard drive



You choose the size shortly.

# Choose the type of virtual hard drive



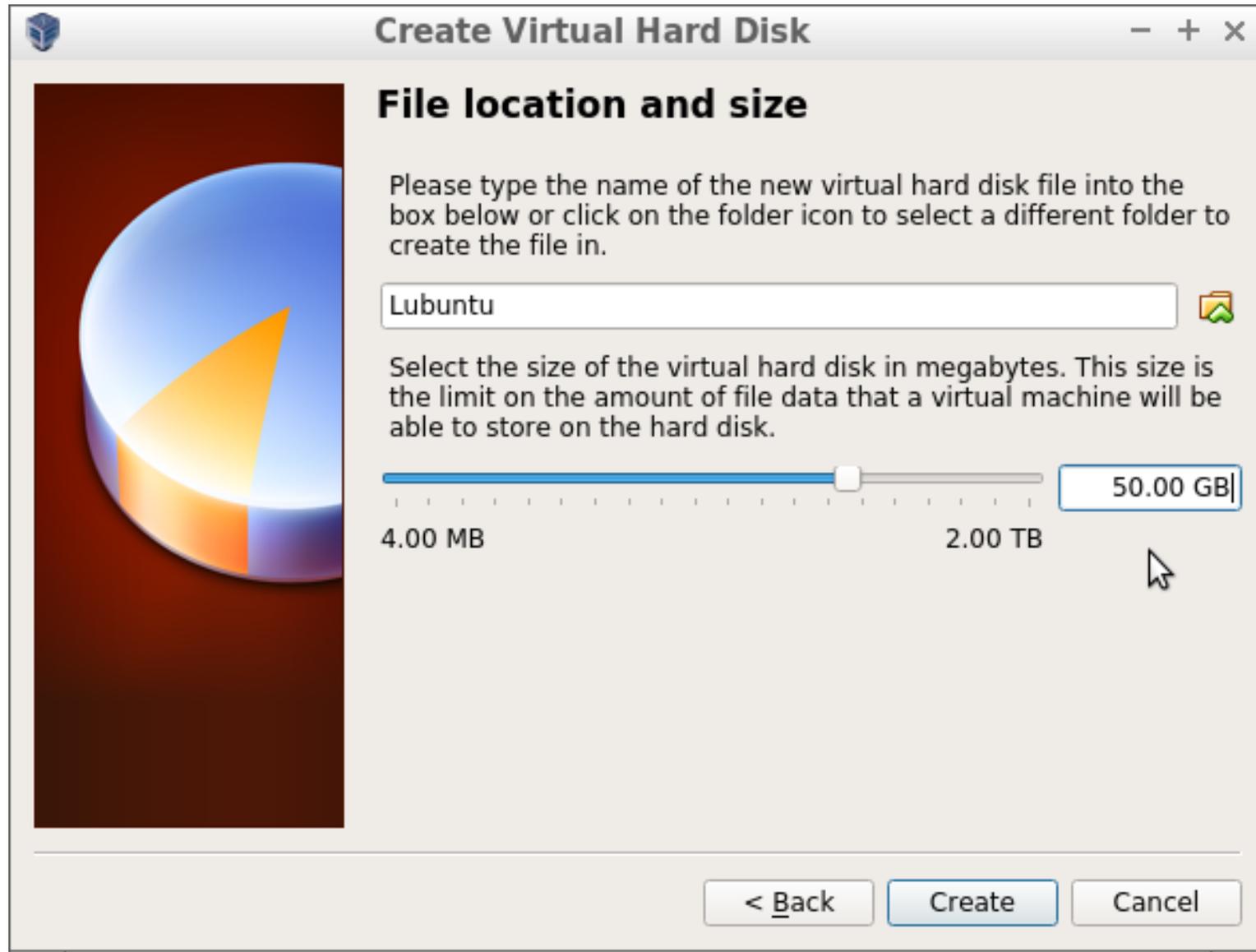
Keeping the default is usually fine..

# Choose how the HD uses space



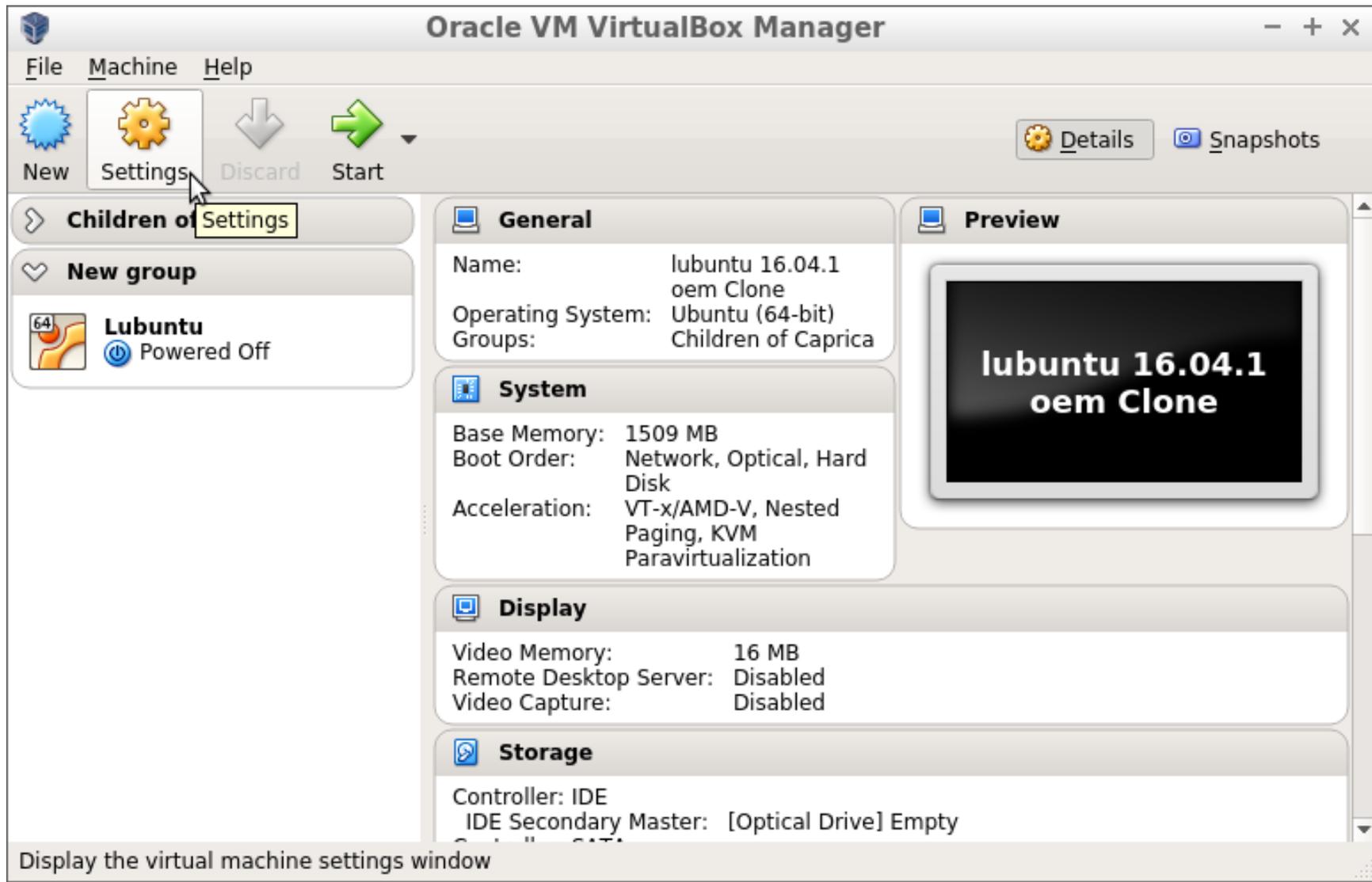
Keeping the default (Dynamic) is usually good.

# Choose the maximum size of the HD



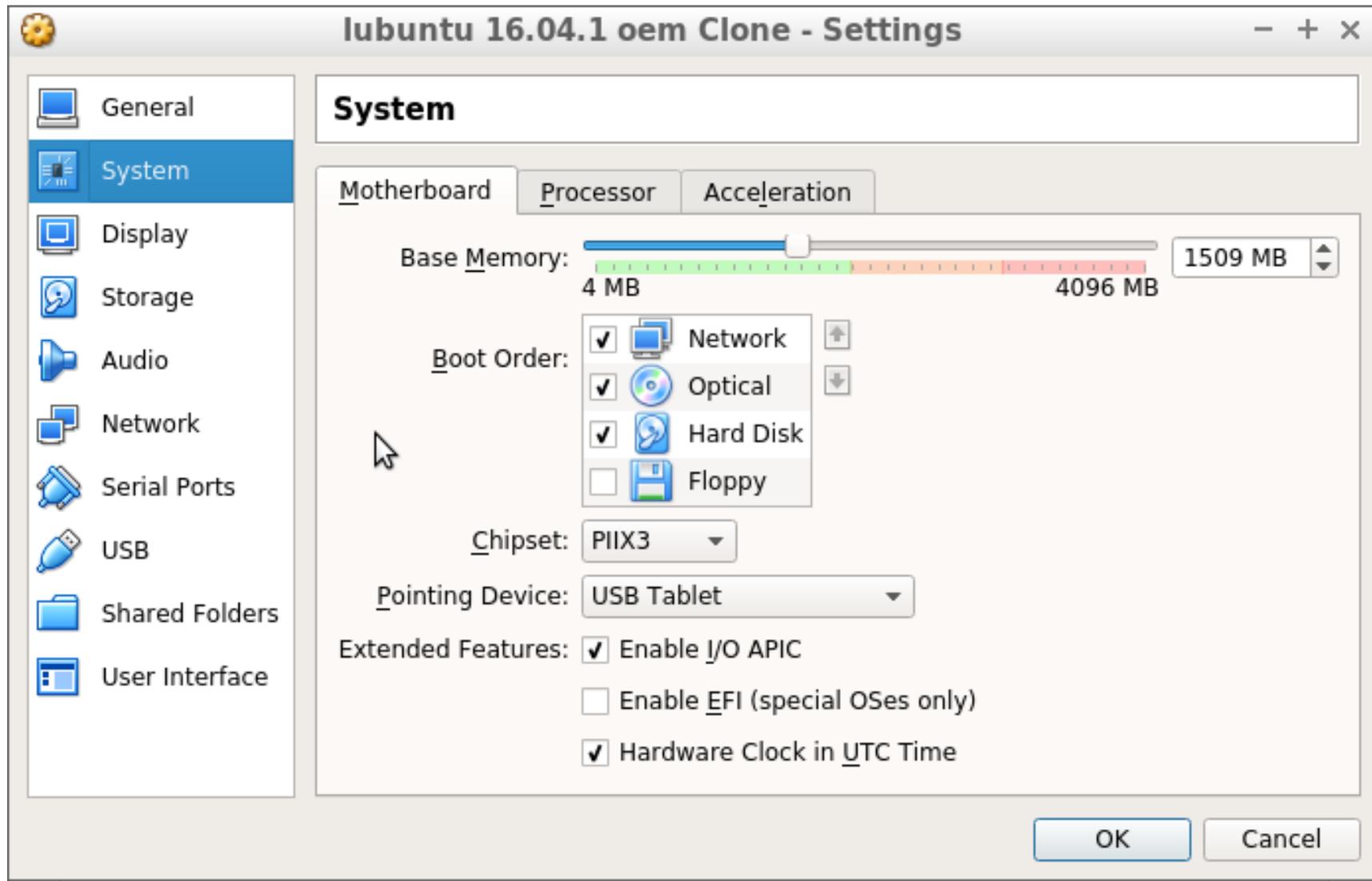
**A full install of many distros is 20+ GB, so don't get stingy.**

# Your new VM is made; click *Settings*



You won't see the groups initially – but you can make your own if you want.

# This is where you control the hardware

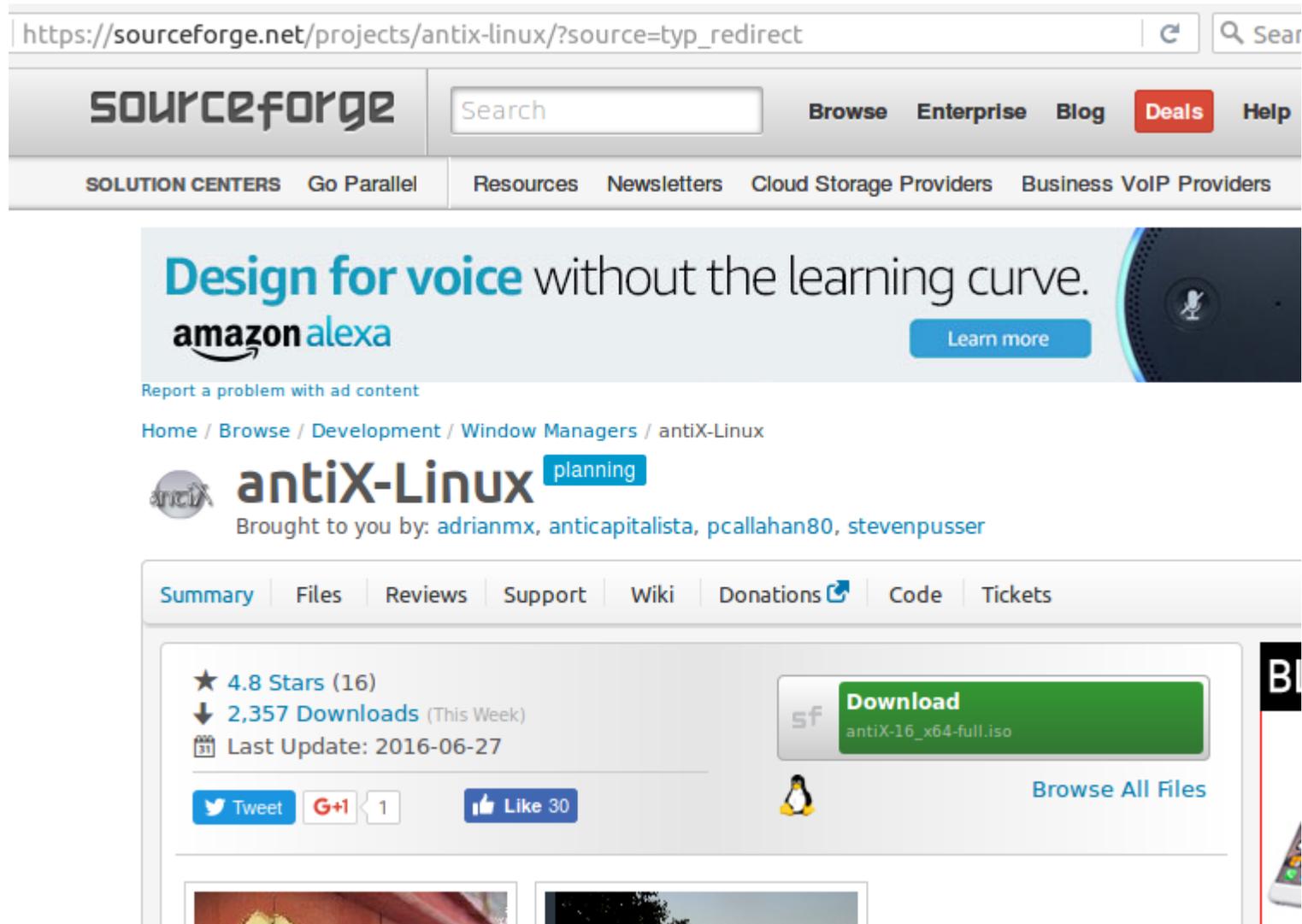


Now, we'll go see this in action.

# Installing an OS

# Download an ISO (CD) image

- This is the one we will use in the demo



The screenshot shows the SourceForge project page for antiX-Linux. The browser address bar displays the URL: [https://sourceforge.net/projects/antiX-linux/?source=typ\\_redirect](https://sourceforge.net/projects/antiX-linux/?source=typ_redirect). The SourceForge logo is visible in the top left, with a search bar and navigation links for Browse, Enterprise, Blog, Deals, and Help. Below the navigation bar, there are links for SOLUTION CENTERS, Go Parallel, Resources, Newsletters, Cloud Storage Providers, and Business VoIP Providers. A large banner for Amazon Alexa is present, with the text "Design for voice without the learning curve." and a "Learn more" button. Below the banner, there is a link to "Report a problem with ad content". The breadcrumb trail reads: Home / Browse / Development / Window Managers / antiX-Linux. The project name "antiX-Linux" is displayed with a "planning" tag. Below the project name, it says "Brought to you by: adrianmx, anticapitalista, pcallahan80, stevenpusser". A navigation bar contains links for Summary, Files, Reviews, Support, Wiki, Donations, Code, and Tickets. The main content area shows a star rating of 4.8 Stars (16), 2,357 Downloads (This Week), and a last update date of 2016-06-27. There are social media buttons for Tweet, G+1, and Like 30. A prominent green "Download" button is visible, with the file name "antiX-16\_x64-full.iso" below it. A "Browse All Files" link is also present. The bottom of the page shows two small image thumbnails.

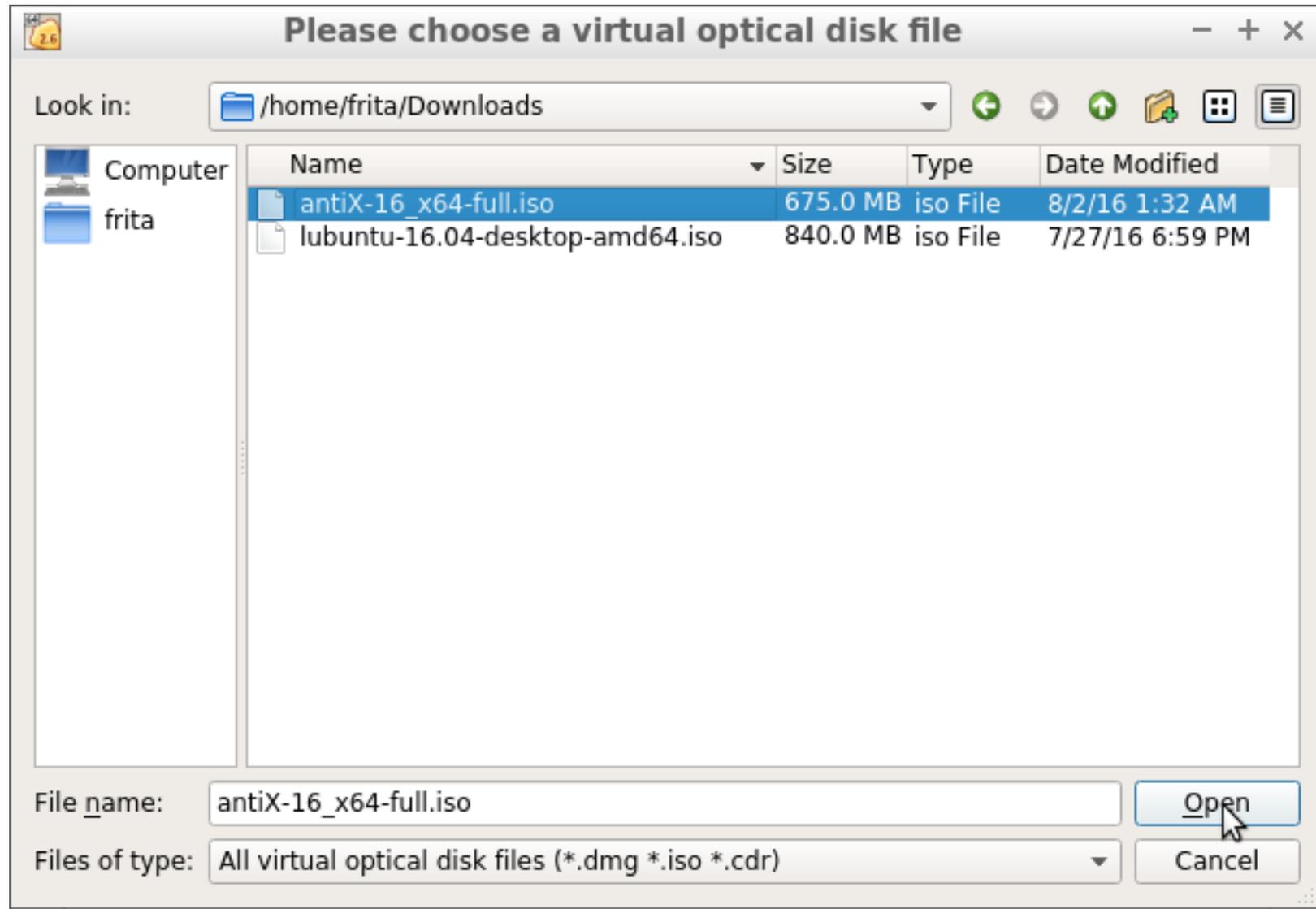
# Click on the VM, then click *Start*



# Click file icon to open browser



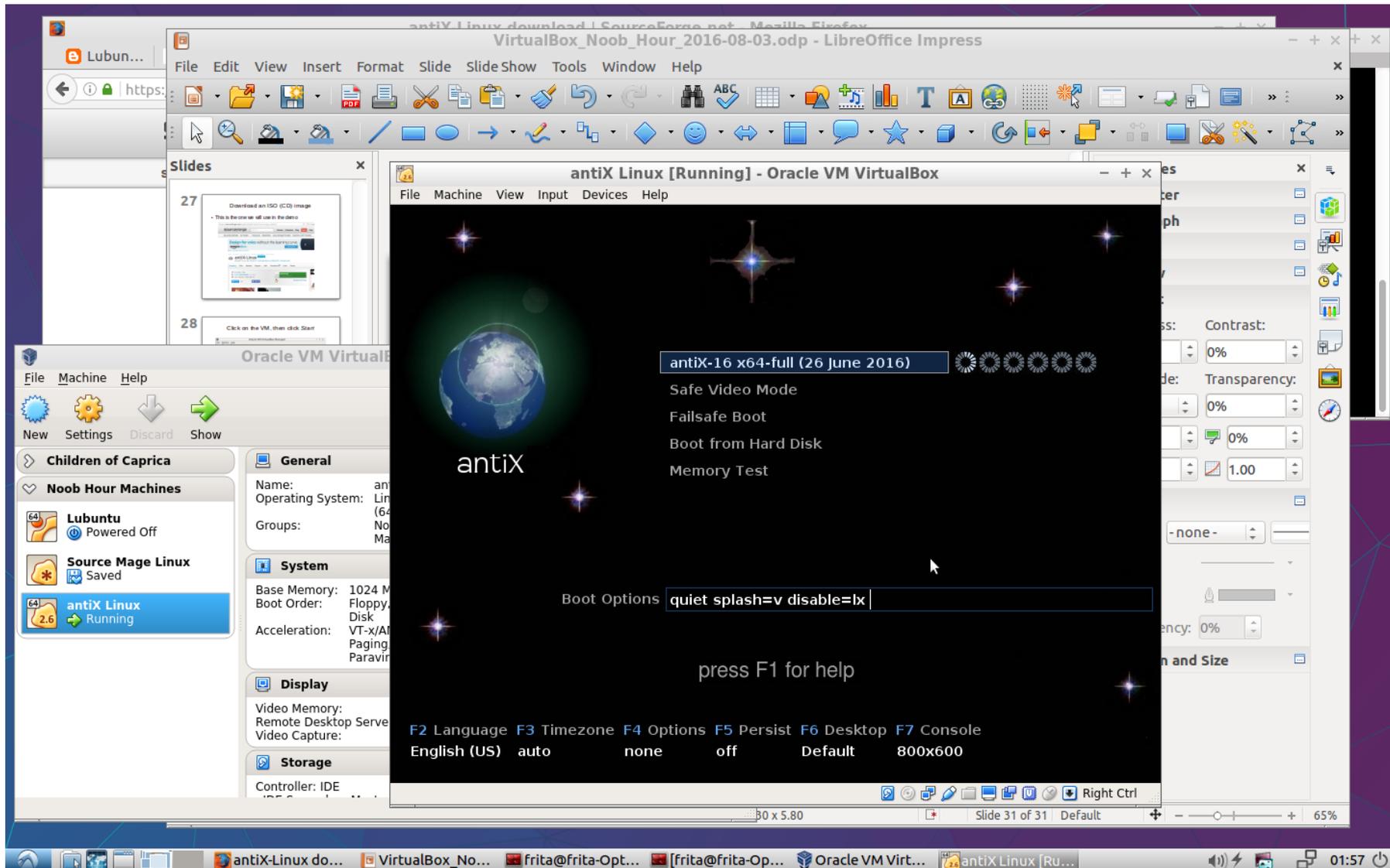
# Find and choose your iso to open



# Click *Start*

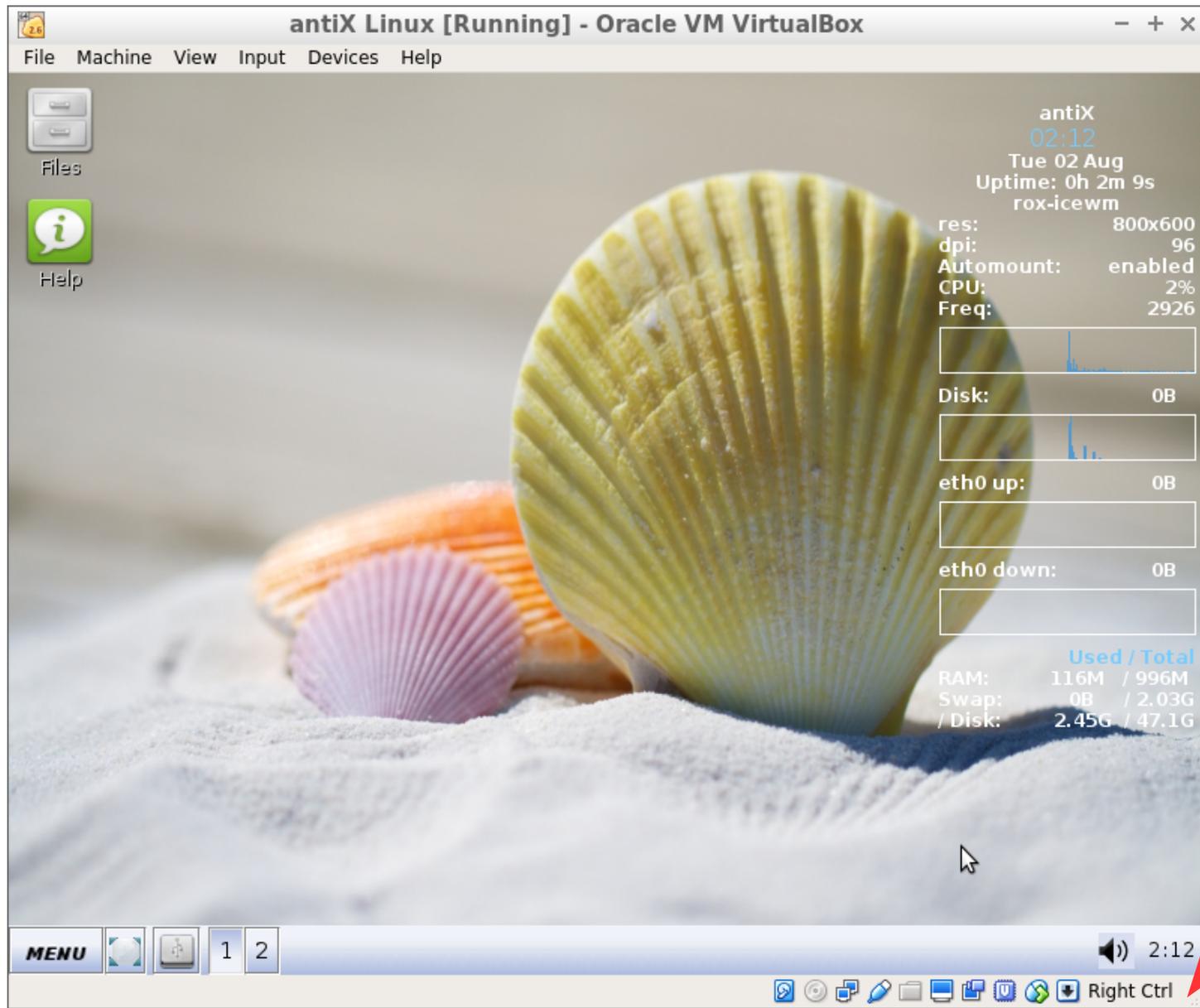


# It should look just like any other install



Except that it's inside a virtual computer inside your real computer.

# The Host Key (usually right Ctrl)



Now, let's explore VirtualBox a little more, but live.

Live Demo