Get VirtualBox

Go to www.virtualbox.org and select Downloads.

Download the current release of VirtualBox for the OS on which you will install VirtualBox. In these notes, that's Windows 7.

Download the VirtualBox Extension Pack.

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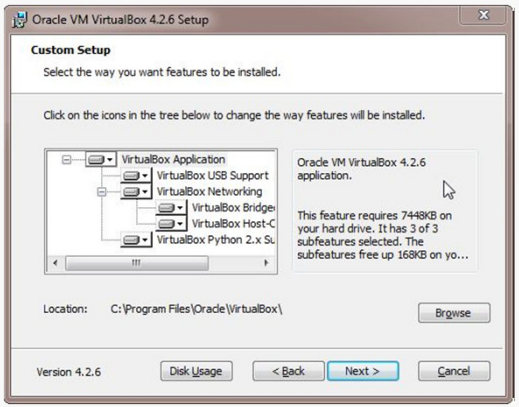
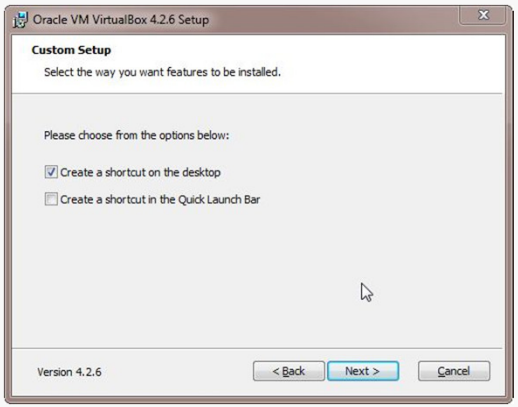
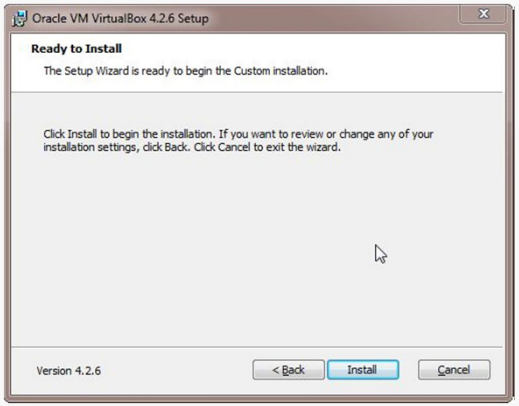
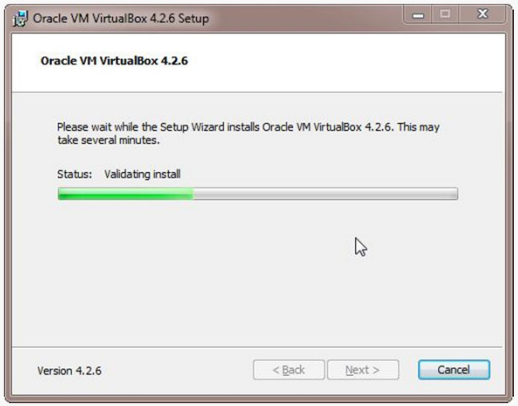
Begin the VirtualBox Installation

Run the VirtualBox installer. The first few screens are typical and probably do not require any changes:









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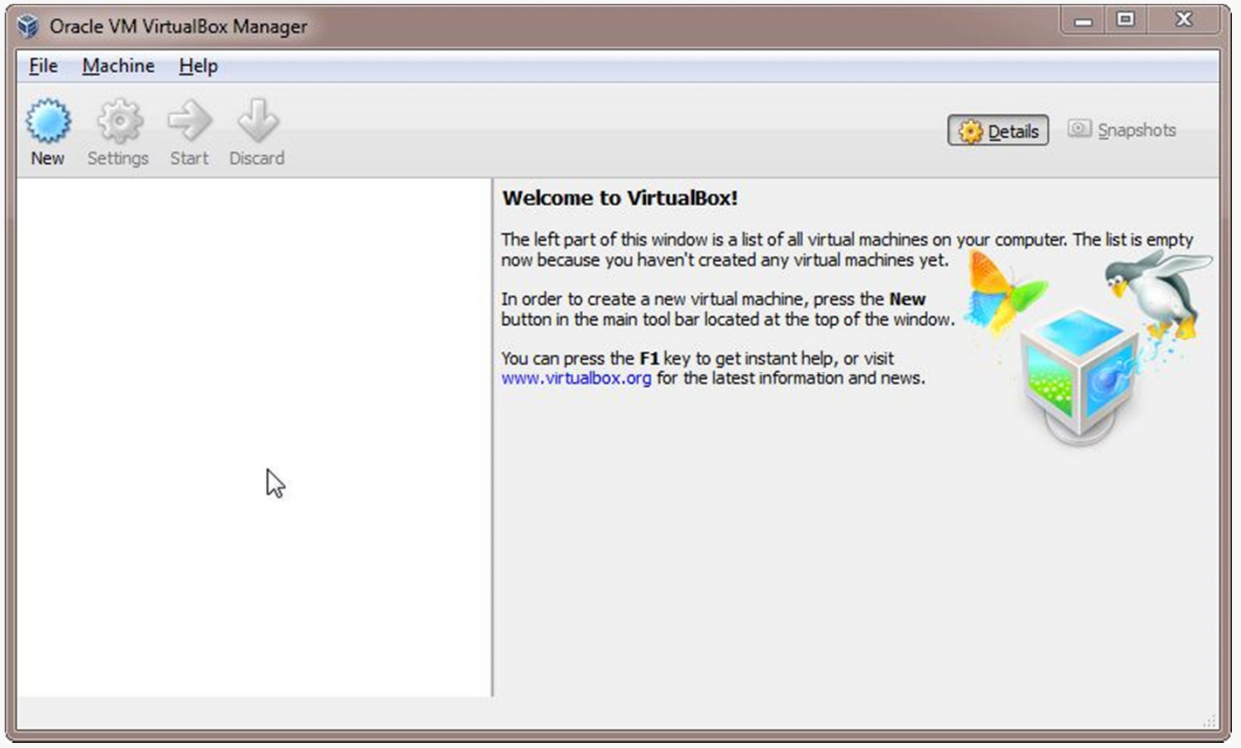
Starting VirtualBox

When the installation completes, you can run VirtualBox for the first time:



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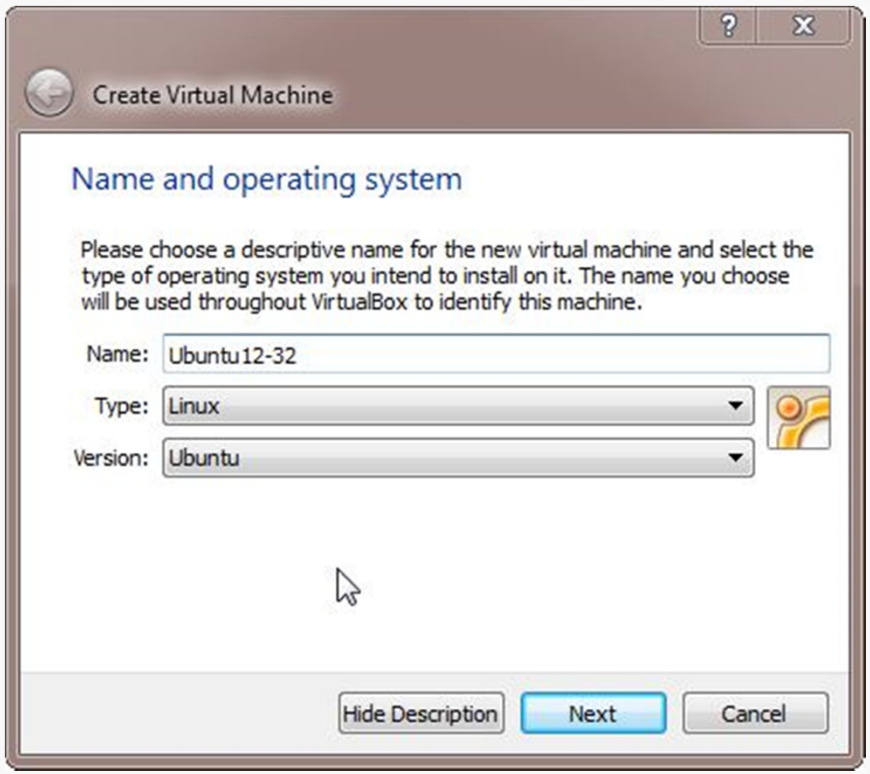
Creating a Virtual Machine

Give the new VM a descriptive name.

VirtualBox should auto-detect the proper OS type and version:



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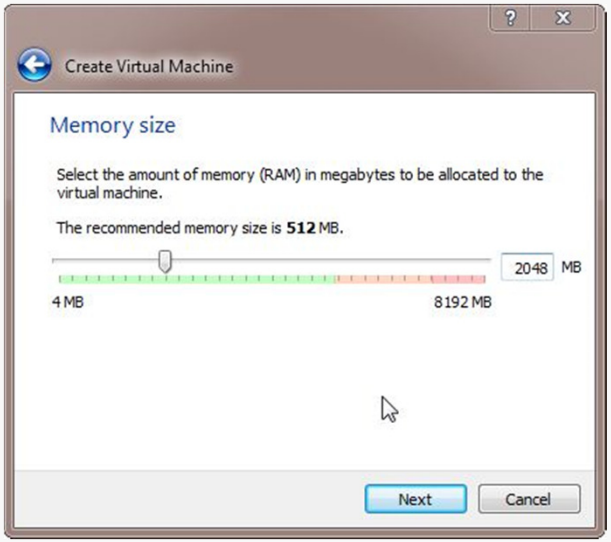
Configuring Memory for the VM

Specify the amount of memory you'll give the VM.

In this case, I'm installing on a host machine with 8GB of RAM; with less, I'd probably given the VM 1GB.



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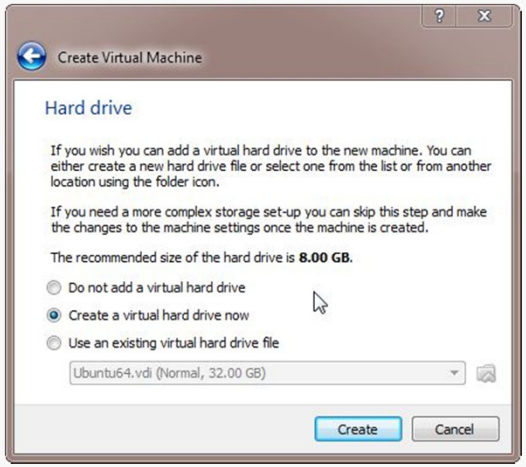
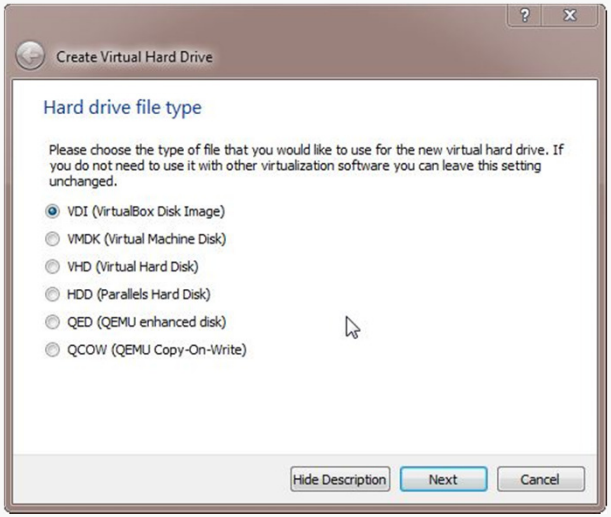
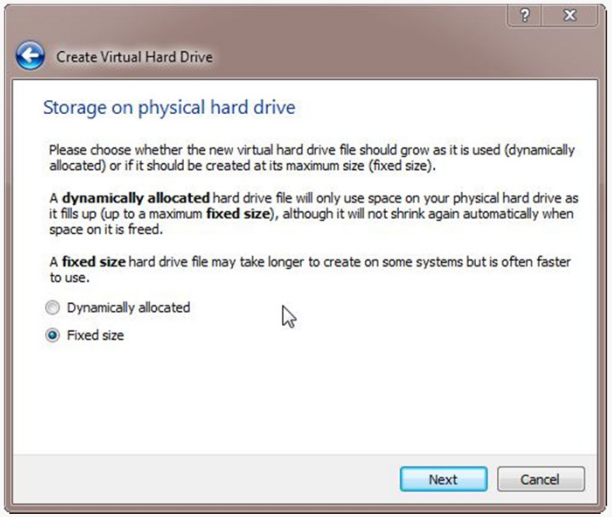
Configuring a Virtual Hard Disk

In the next dialog, select the option to create a new virtual hard drive now.

Take the default hard drive file type in the next dialog unless you're concerned about being compatible with some other virtualization tool like VMWare.







Next, I recommend choosing a fixed-size hard disk.

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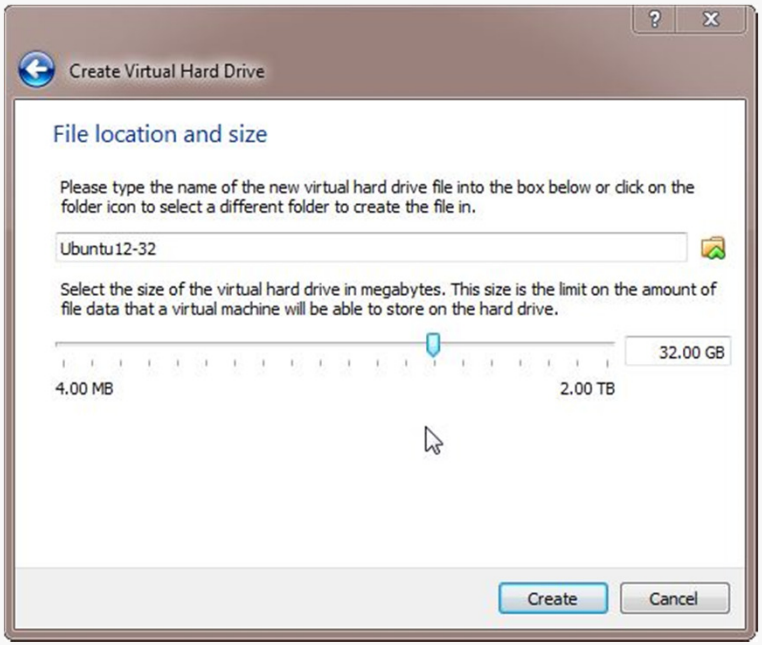
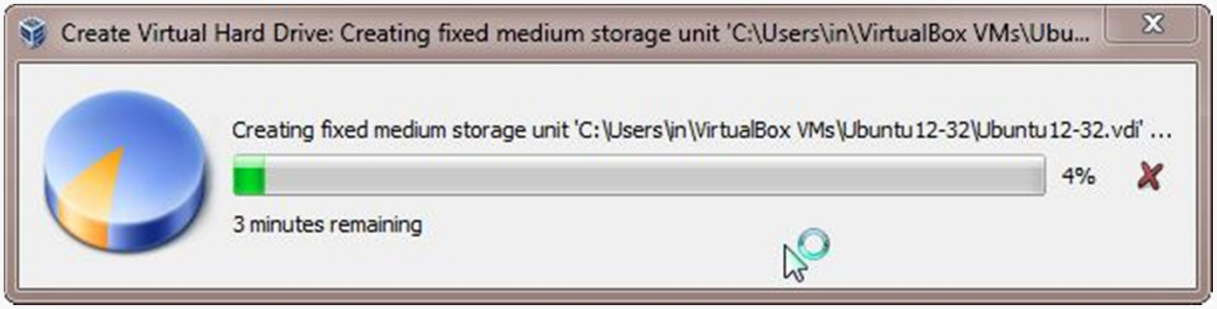
Configuring a Virtual Hard Disk

I generally make this 32GB, but make it smaller if you're short on space.





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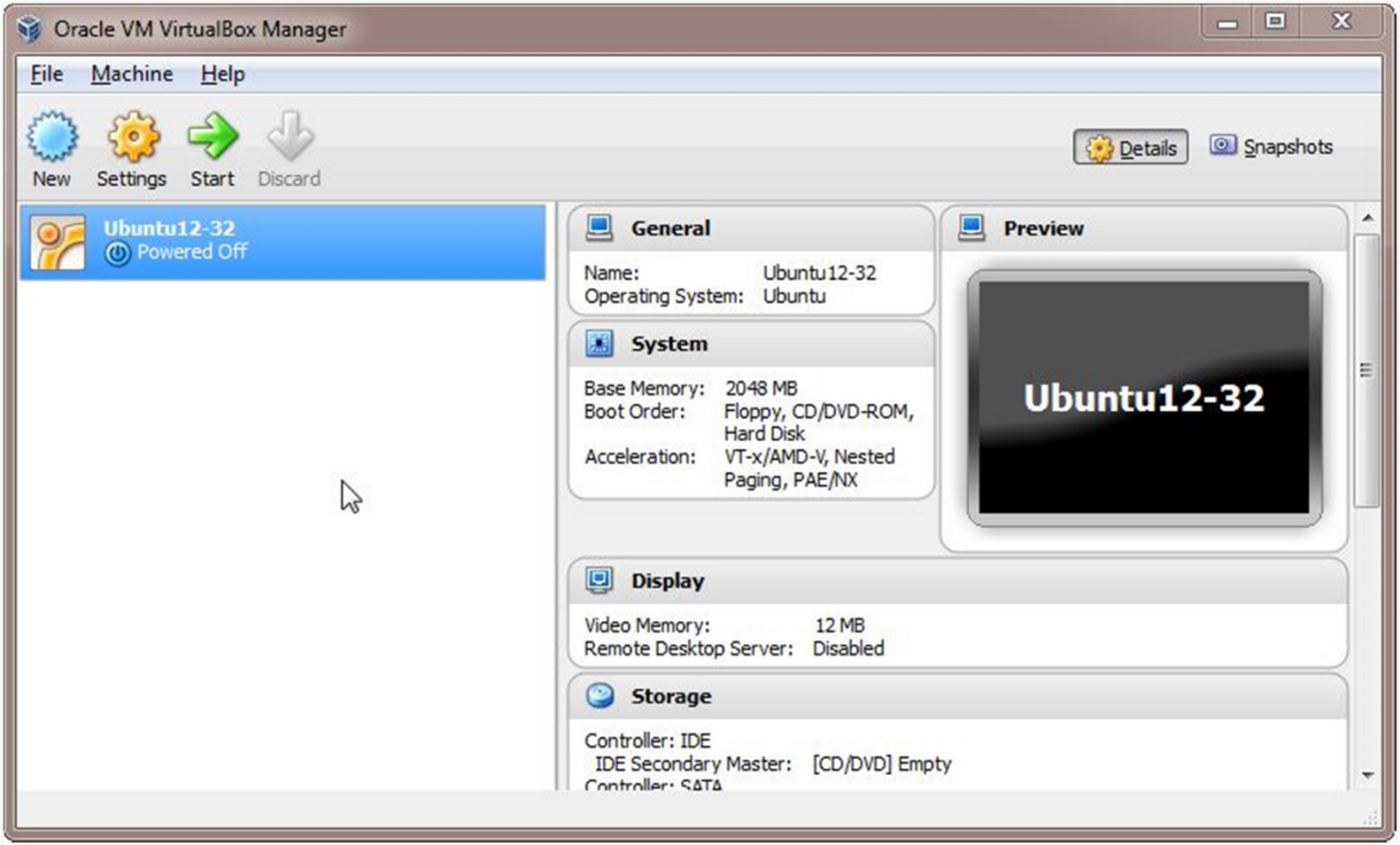
An Empty VM

Now, you have an empty virtual machine.

That is, a formatted (virtual) hard disk and no OS.



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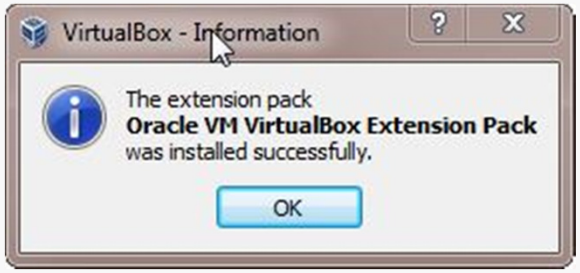
Install the VirtualBox Extensions

Find the file for the VirtualBox Extensions you downloaded earlier.

It should be associated with VirtualBox now.

Double-click on it and the Extensions should be installed.



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Install a Guest OS

Choose a Linux distribution to install. I recommend Ubuntu, but any distribution should do.

You'll have to select a 32-bit or a 64-bit version.

A 64-bit version gives you a few more options, but either will be sufficient for most of the assignments in CS 2505.

If you install a 32-bit version, you won't be able to run any 64-bit code on it.

If you install a 64-bit version, you won't be able to build any 32-bit executables on it unless you install some additional packages.

Whatever you choose, download an ISO file (CD or DVD). You don't need to burn a physical disk.

Disclaimer: the following notes illustrate one session installing a particular distribution of Linux on VirtualBox 4.2.6, running on Windows 7 Enterprise, on a particular underlying hardware system. YMMV. Mine certainly has…

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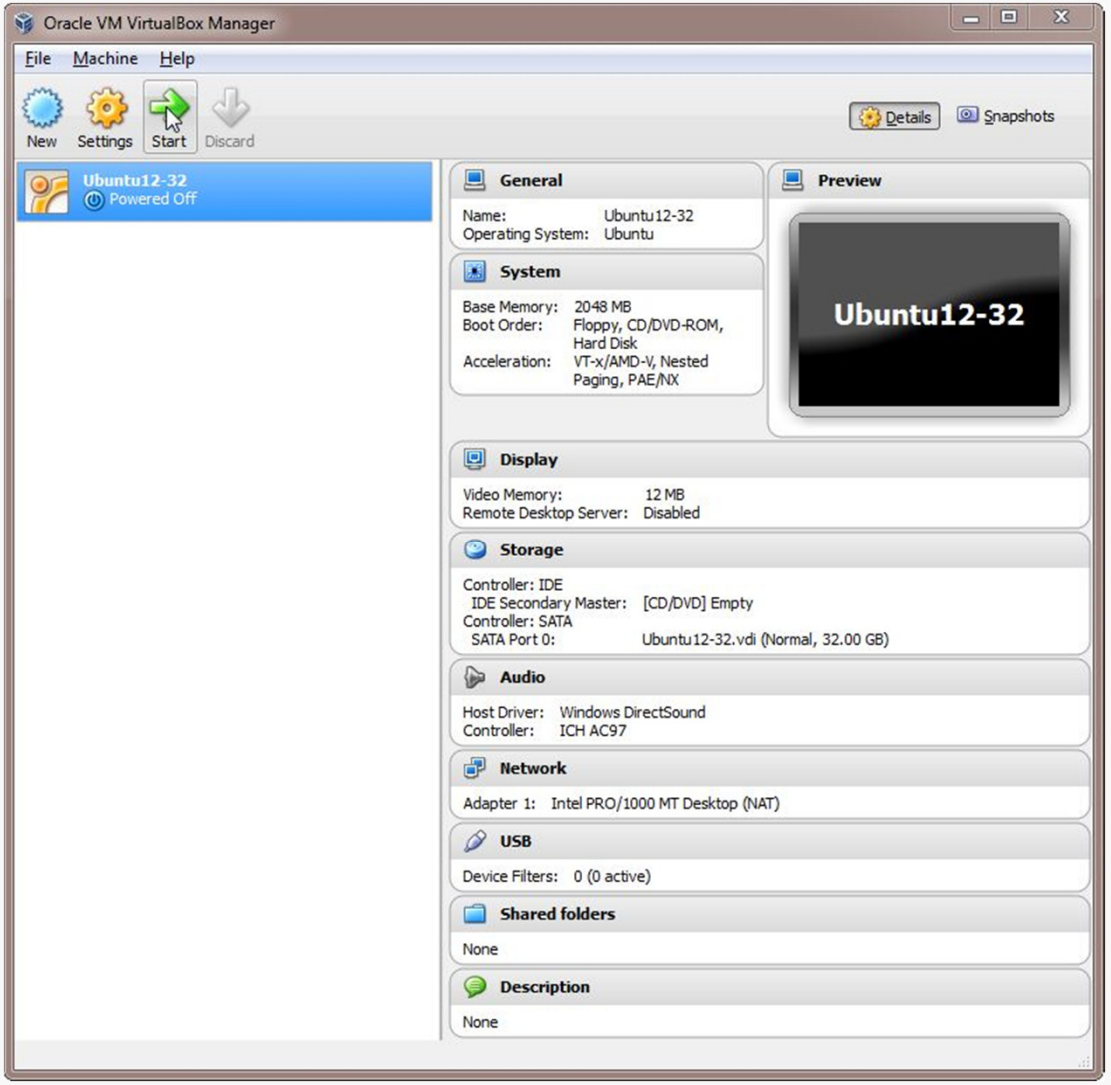
Beginning the Installation

Select the VM and click Start:



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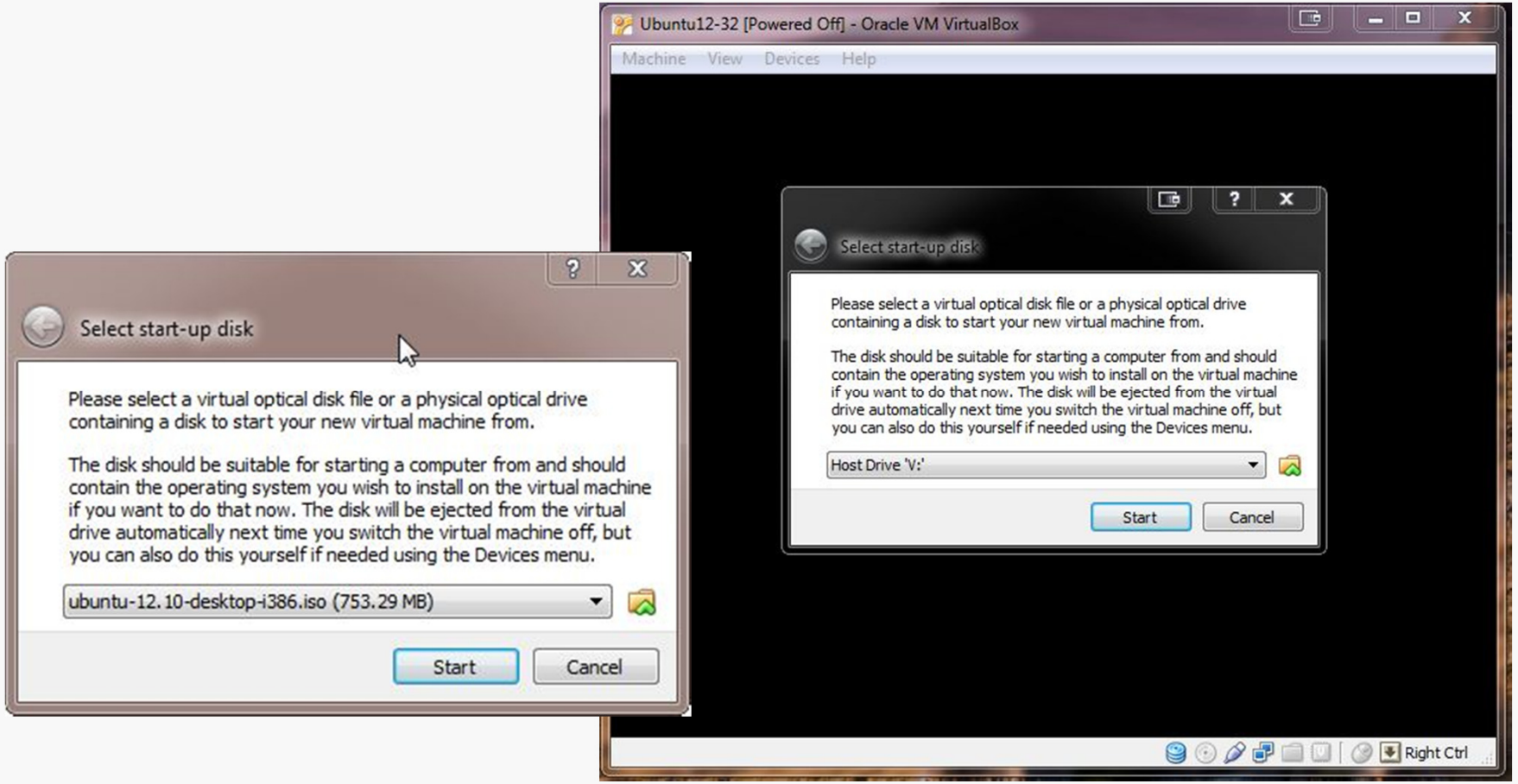
Selecting Installation Media

VirtualBox will recognize the empty system and prompt you to select an installation disk.

Click the folder icon and select your ISO file.



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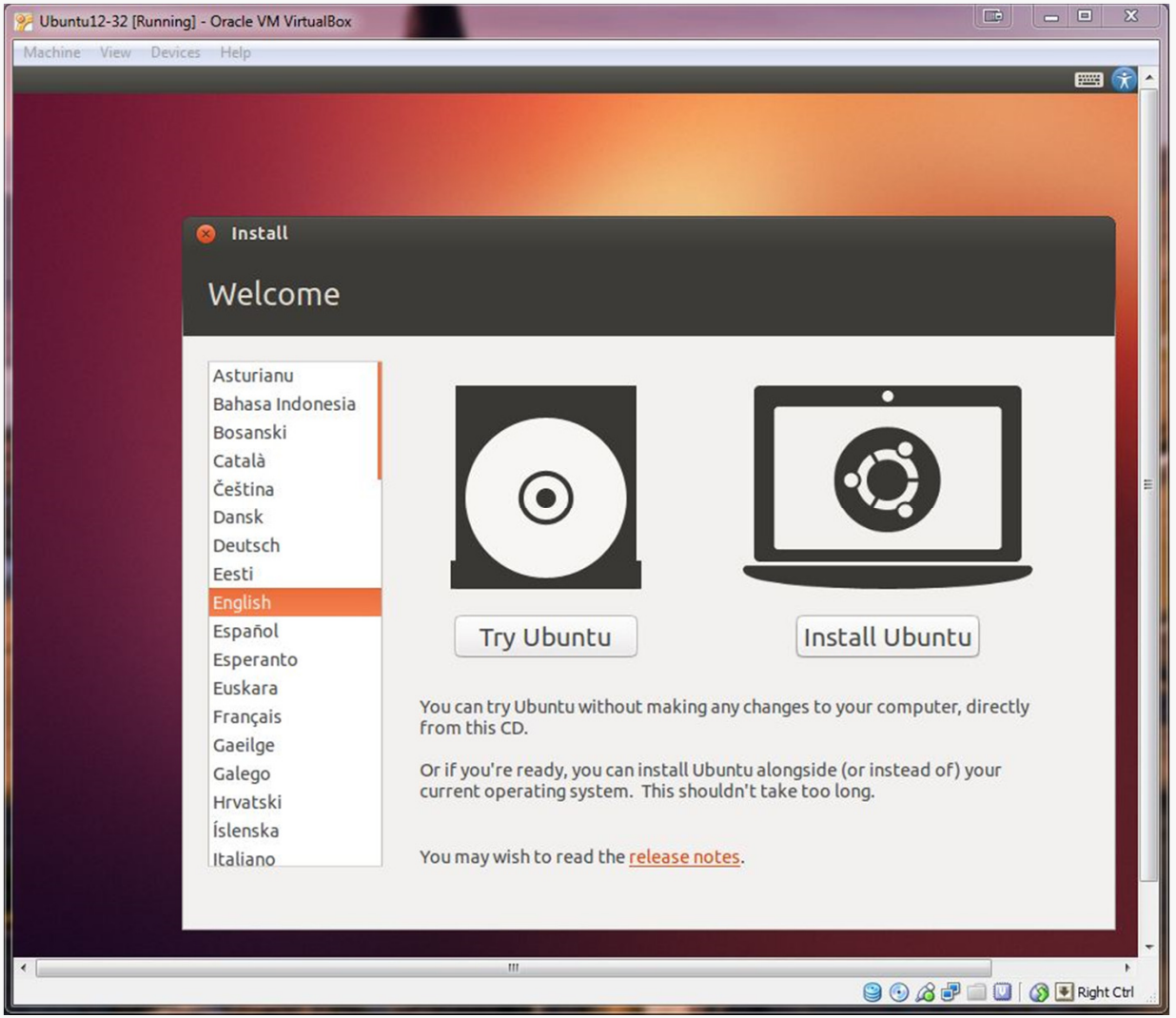
Running the Installation Code

The remaining screen shots will vary considerably depending on which distro you chose to install, but the general procedure will be similar.



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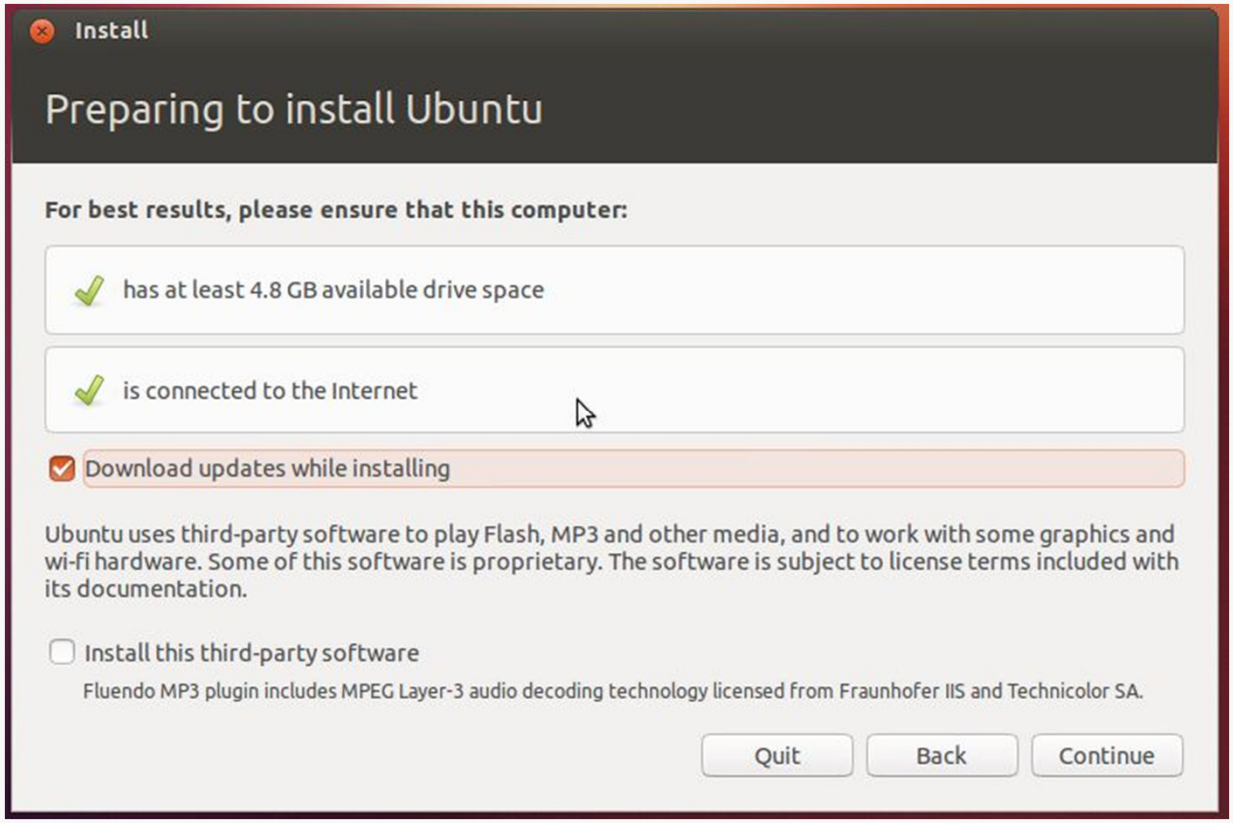
Initial Options

Ubuntu 12.10 gives a few options up front.

I chose to download updates during the installation; you can always run the system update tool later.



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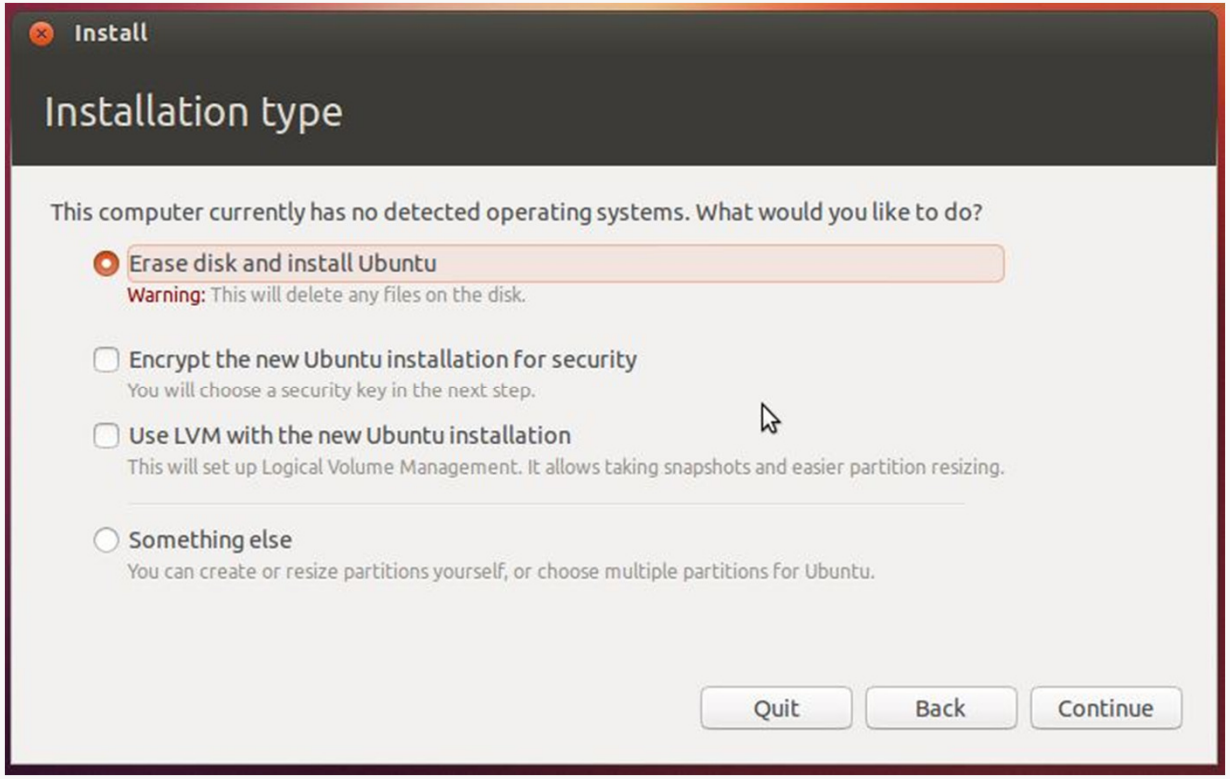
Initial Options

You're installing on the virtual drive, not your actual hard drive, so don't be alarmed by the first choice in this dialog.

Logical volume management is probably superfluous.

Encrypt the installation if you like (I haven't tested that).



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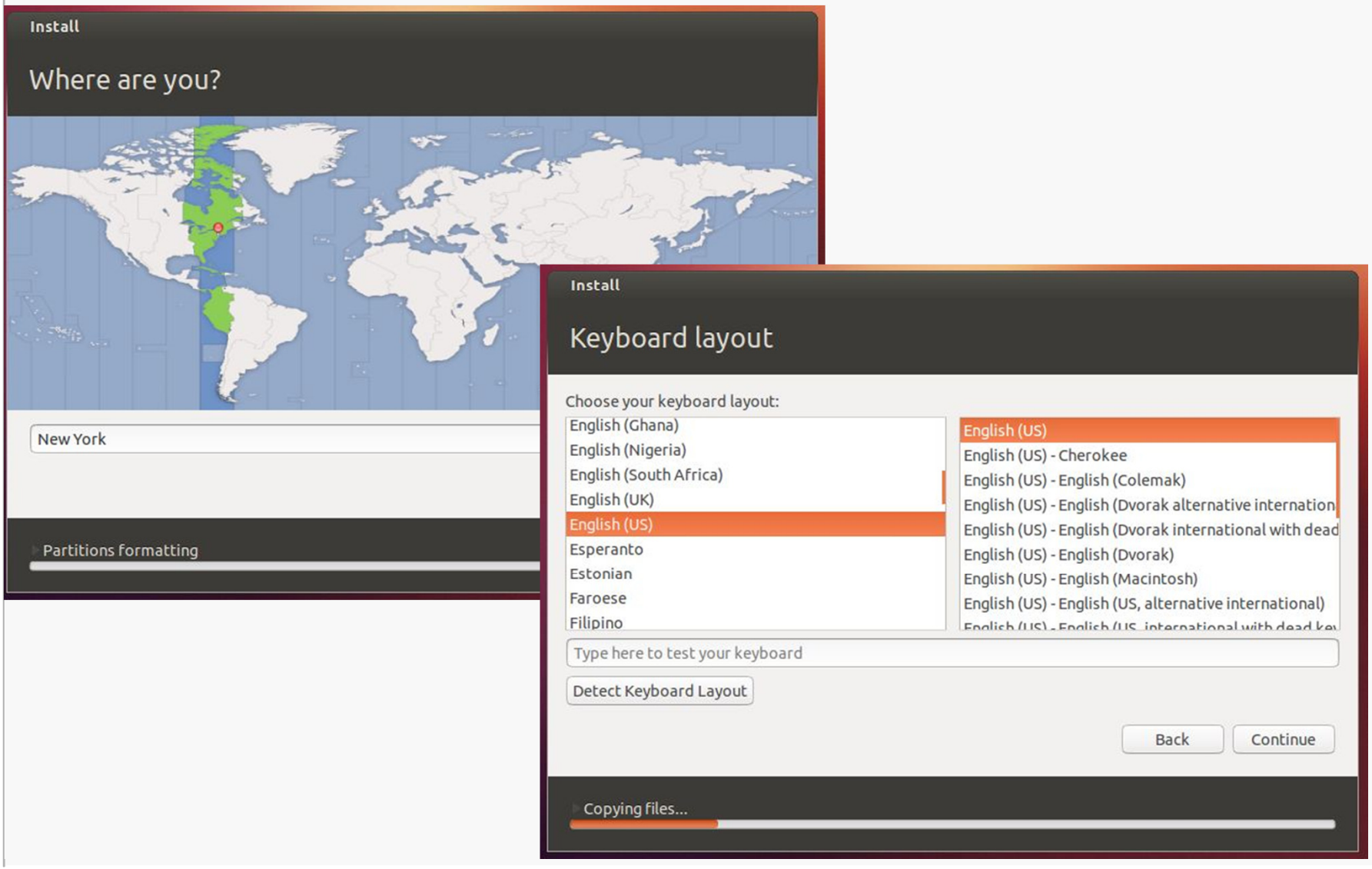
Basic Settings

Select your time zone and keyboard layout; the defaults are probably correct.



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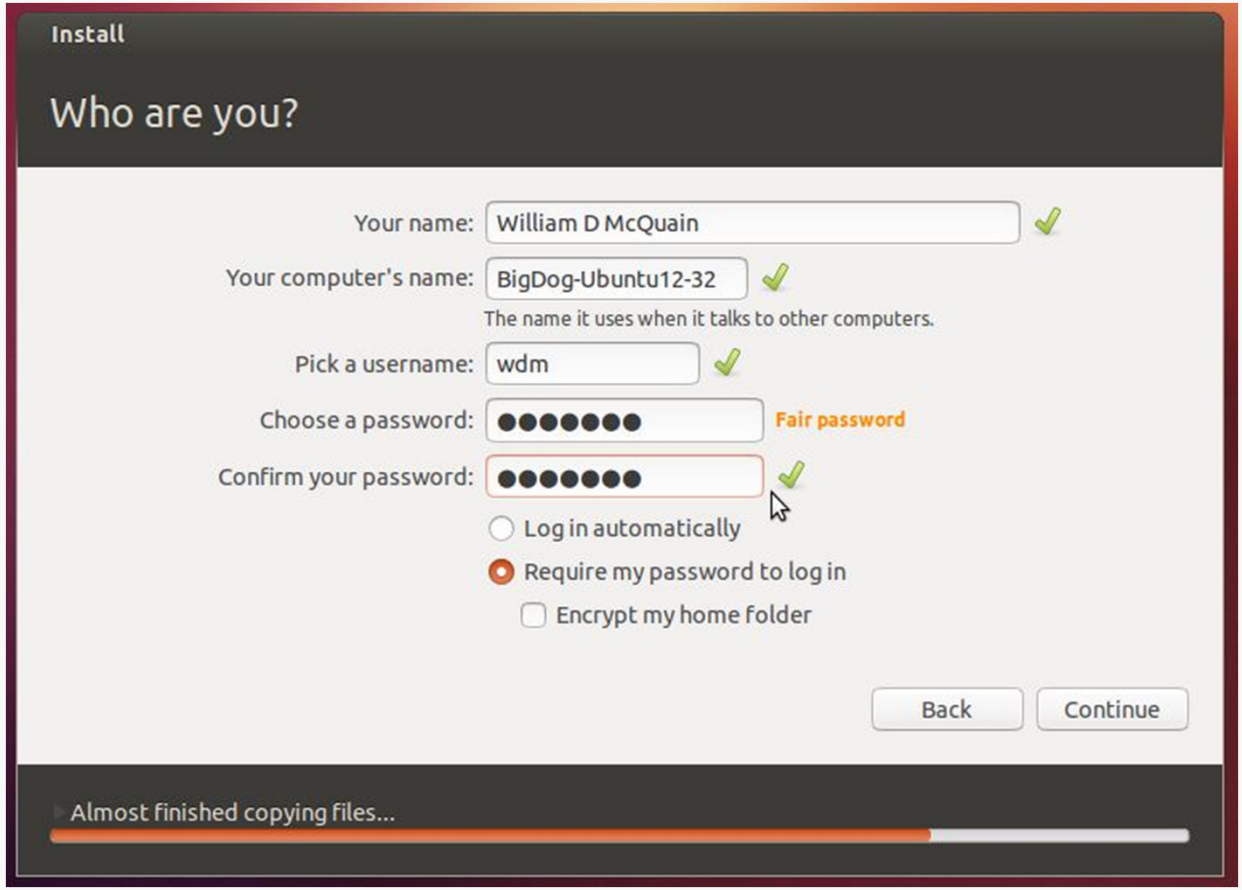
Account Settings

Choose settings for your user account.



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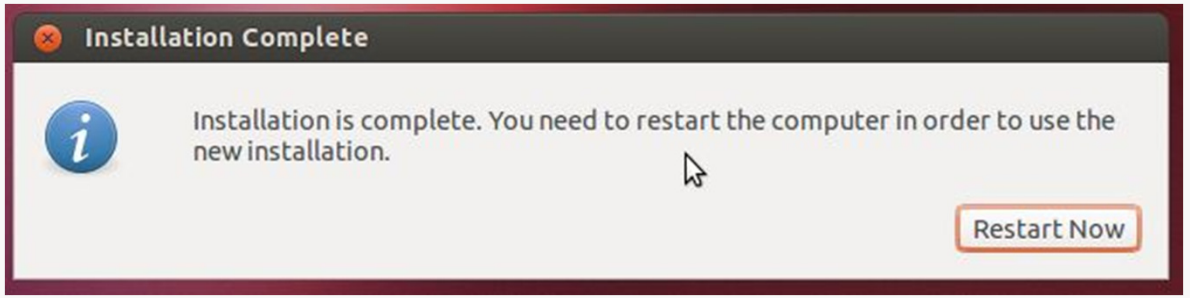
Continuing the Installation

Things should proceed automatically until a restart is needed:



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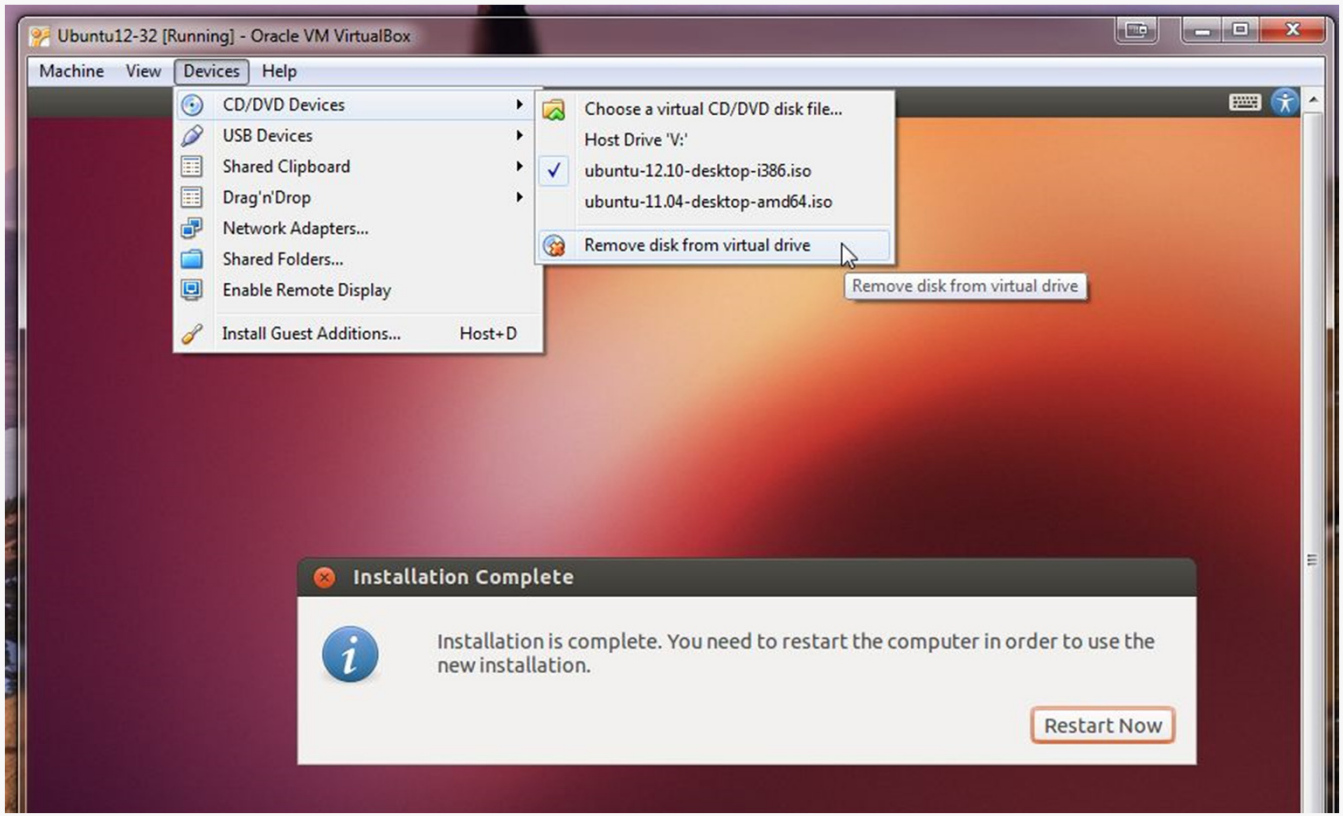
Restarting

Restarting seems to present some issues… if you're lucky, you won't see them.

You need to unmount the ISO:



In some cases, you may have to shut down the VM through the VirtualBox front end, and then restart it… several times perhaps… but it will sort out.

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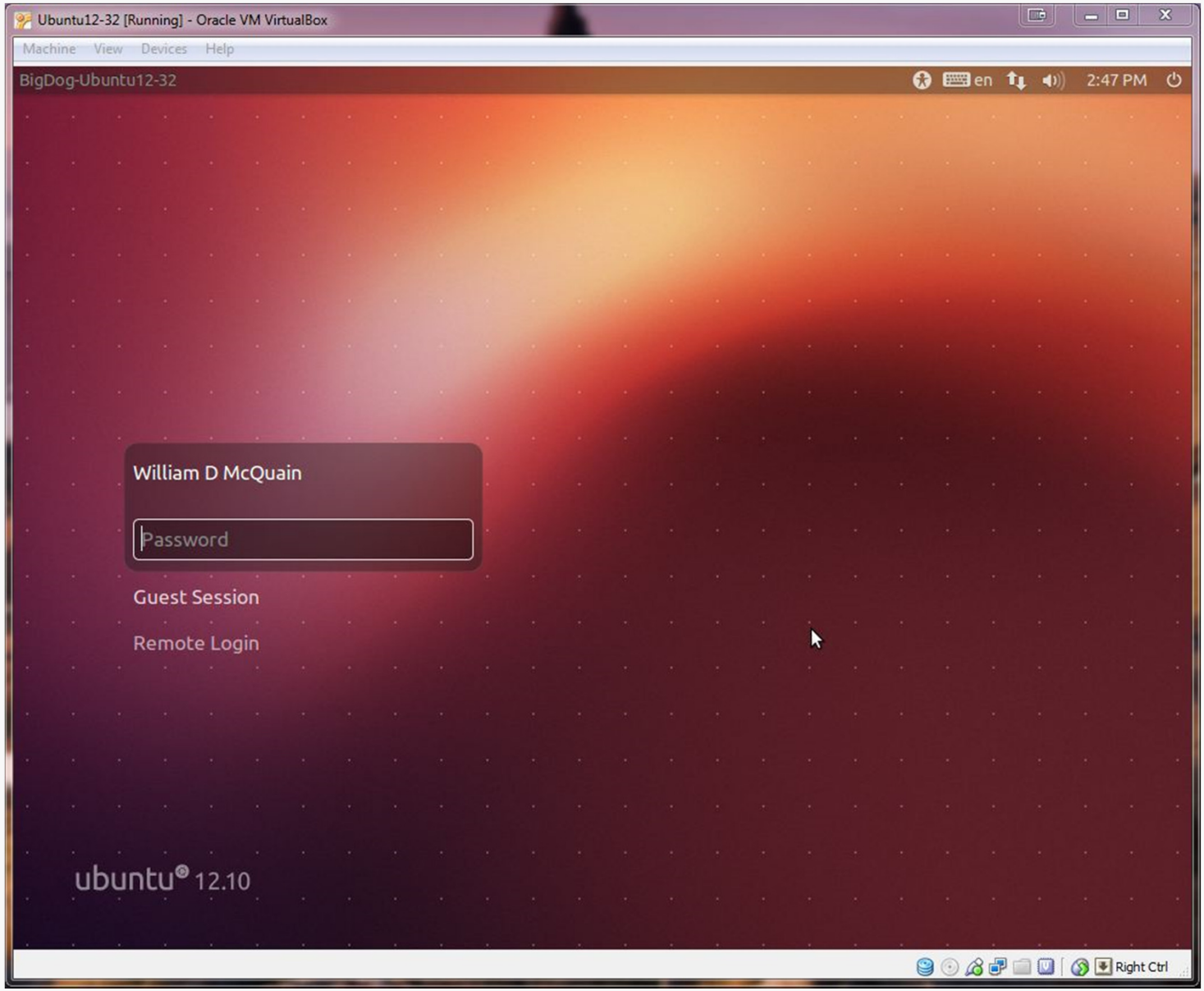
Booting up the VM



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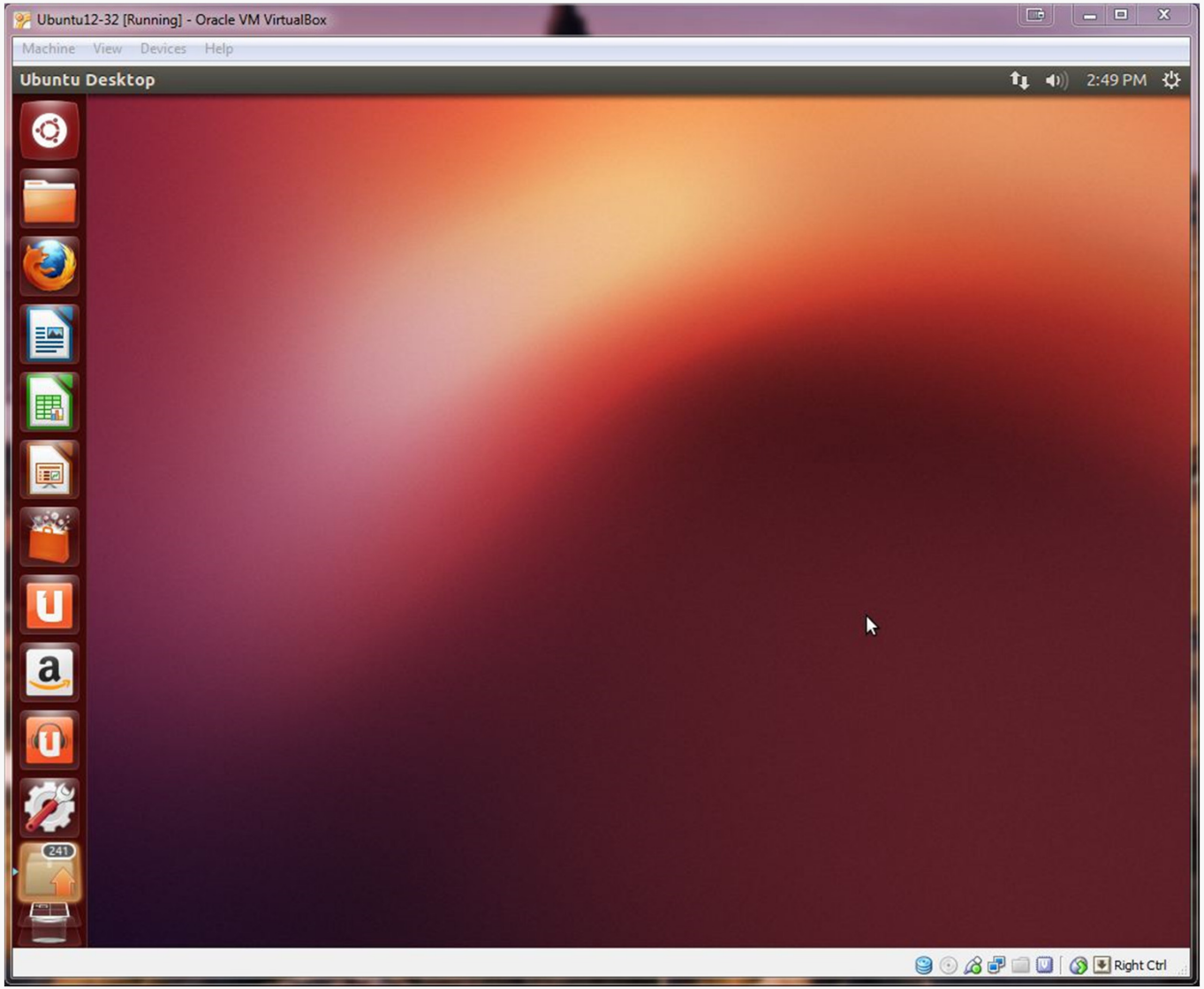
Ubuntu's Unity Desktop

Newer versions of Ubuntu default to the Unity desktop (love it or hate it):



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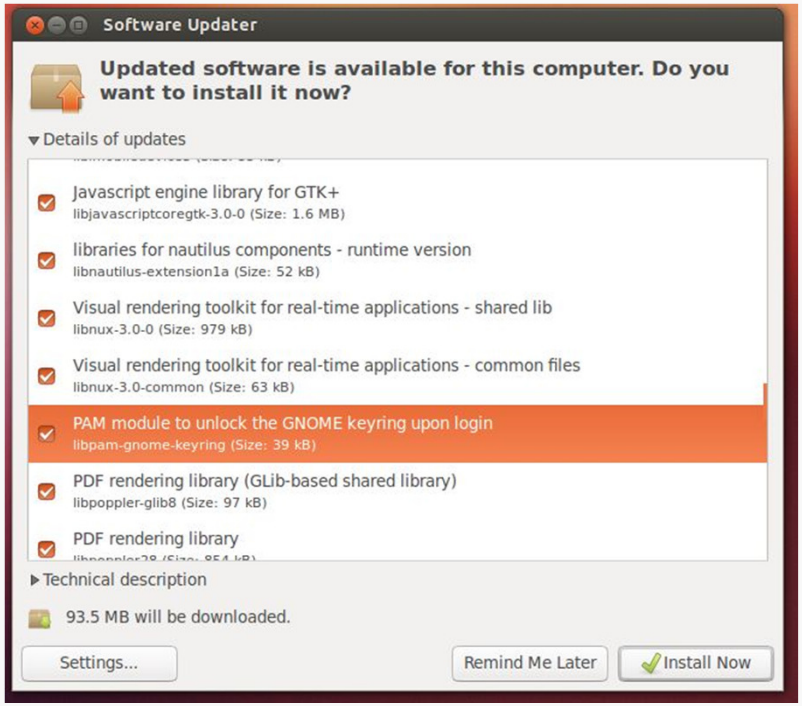
OS Updates

I recommend running any OS updates next.

You can select the update tool from the Unity toolbar:

It is likely that a lot of updates will be offered. It's probably OK to just accept all of them.



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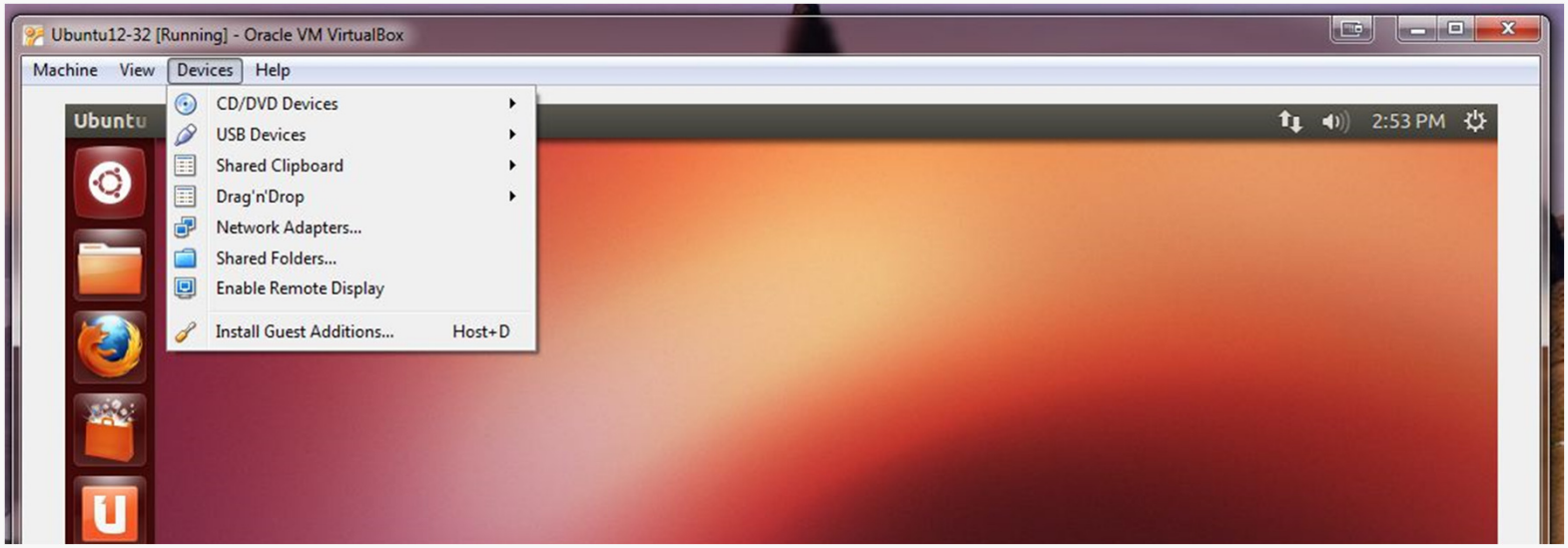
VirtualBox Guest Additions

The VirtualBox Guest Additions provide additional functionality for your VM.



One note: if you run the system updater or install other software on your VM, you may have to reinstall the Guest Additions.

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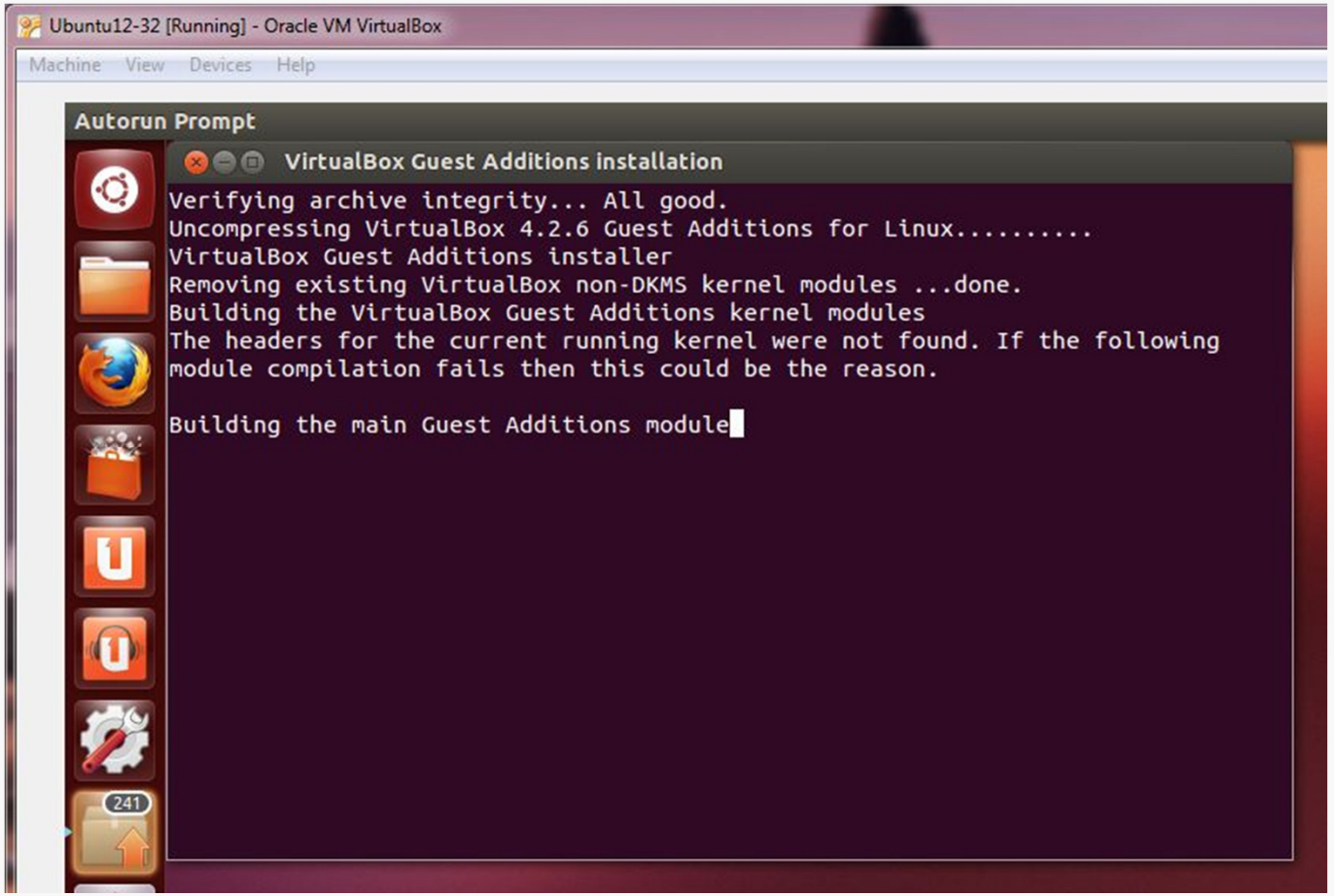
VirtualBox Guest Additions

Pay attention to the console window during the installation.

If there are error messages, the Guest Addition may not have been installed.



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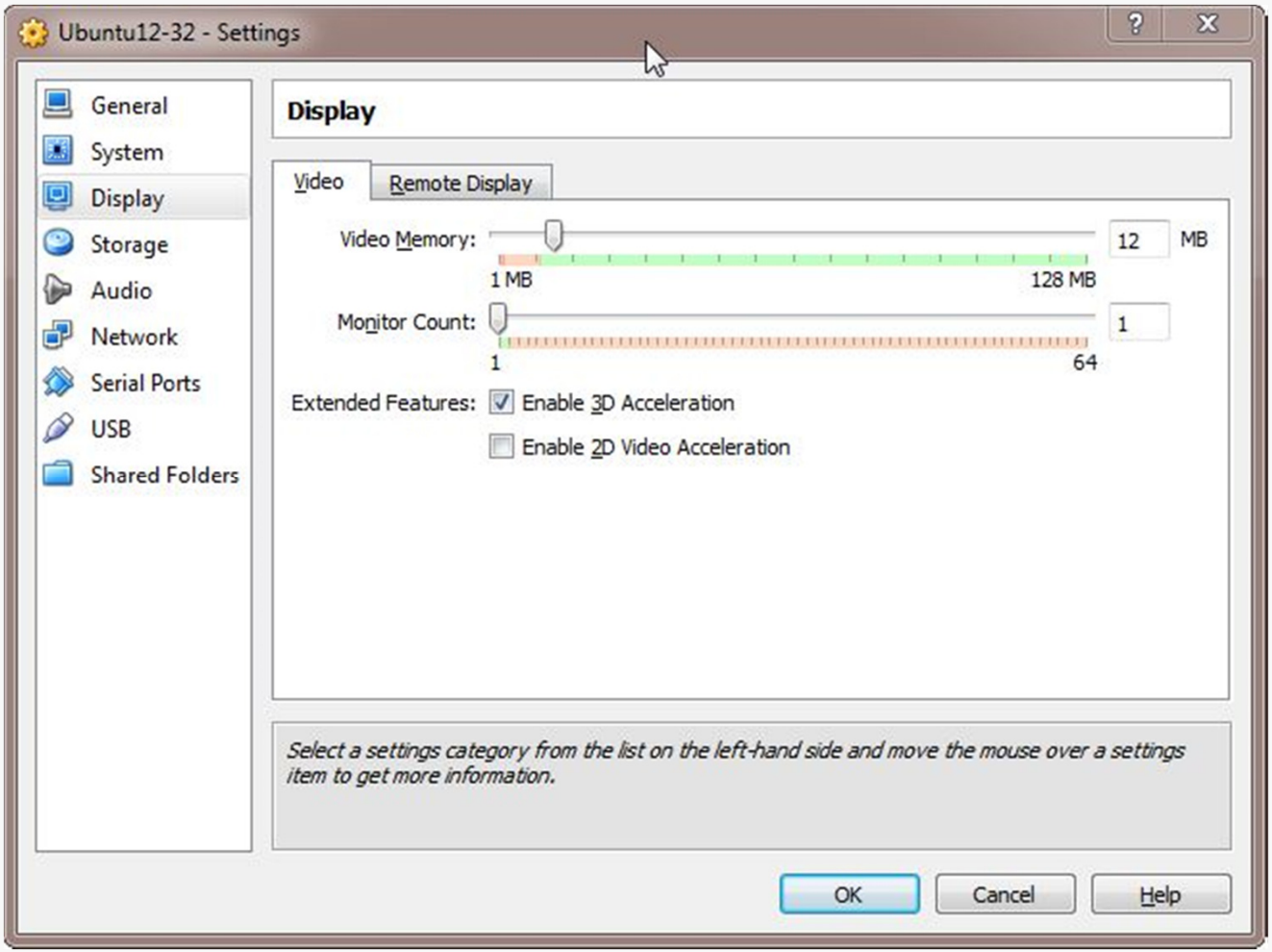
Applying Video Acceleration

Most Linux guests seem to benefit from enabling 3D acceleration.

Shut the VM down, right-click on it and go to Settings:



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