# Installing Fedora 18 in VirtualBox

This short guide will demonstrate how to install Fedora 18 in VirtualBox for the projects for this course. For the most part, it is a straightforward process, however, sometimes a few changes must be made to the defaults. It is for those instances that this guide was put together.

Setting up the VM

This portion assumes that VirtualBox is already installed on the host machine. As this is different from OS to OS and from distribution to distribution, installing VirtualBox itself is not covered here. Please consult the VirtualBox website for more information. Also, if you are using Linux, consult the package repository of your distribution to see if a package is available (there should be one there).

All screenshots shown in this guide were taken on VirtualBox 4.3.6 on Windows 7. The exact screens may differ slightly on other OSes or versions of VirtualBox. This semester, we will be using VirtualBox 5.1.x. **DO NOT USE THE 5.2 BETA VERSION!** You do not want to experimenting with bleeding-edge VMs while also trying to hack the kernel. If you want to try using VMWare, you do so at your own risk: we cannot provide any additional support for this.

When starting VirtualBox up for the first time, you will need to create a new VM using the appropriate button in the program. This will bring up the New Virtual Machine Wizard. When asked for the name of your VM, we will call it "421VM" for the course (the name is not particularly important -- feel free to give it a different name). Select that you will be using an Operating System of **Linux**, and a Version of **Fedora 32-bit (i.e., NOT 64 bit)**. This is shown in the screenshot below (note newer VirtualBox version explicitly show "Fedora (32-bit)"):
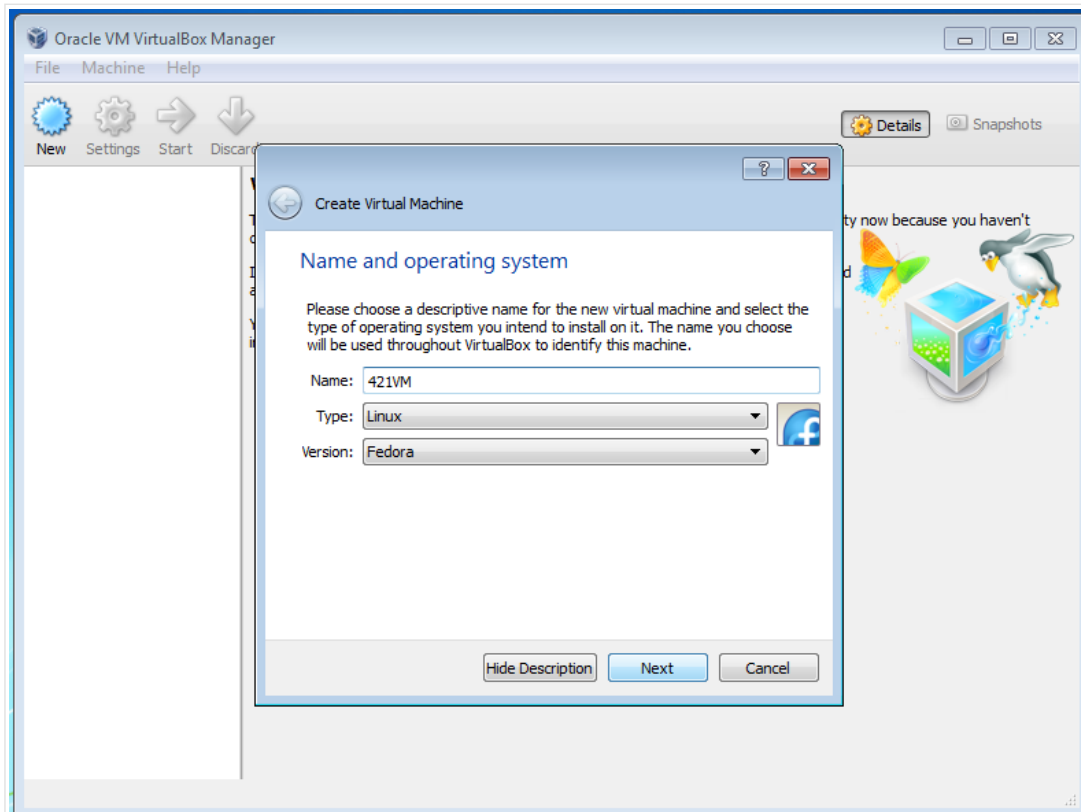
The memory size should be set to **1024 MB**; this will probably be already the default. If your physical computer only has 2GB of RAM, choosing 768 MB should be acceptable. Conversely, if you find your VM runs slowly, you may want to try increasing

the VM memory allocation.

After setting the amount of memory, you will need to set up the hard disk image. Select **"Create a virtual hard drive now"** to make a new hard disk image, which will bring up the "Create New Virtual Disk" wizard.

You can accept the defaults for the disk image type and the storage details: **VDI (VirtualBox Disk Image)** and **Dynamically allocated**, respectively. The name is not particularly important, but make sure if you wish to put the disk image on a USB drive to select that location in on the next screen.

You should increase the size of the disk to **at least 24.00GB**. Upon completing this wizard, you will get a summary of the settings you have made. Verify them, and press the Create button.

The newly created Virtual Machine should show up in the main VirtualBox window now. Select it, and start it by clicking button in VirtualBox. Upon doing this, you may see an auto-capture warning (just dismiss it) and then see the "Select Start-up Disk" dialog. You need to load the Fedora Live 18 iso (Which you can get here if you have not yet downloaded it). Click the folder with the green arrow, navigate to where you downloaded the iso, select it and hit start.
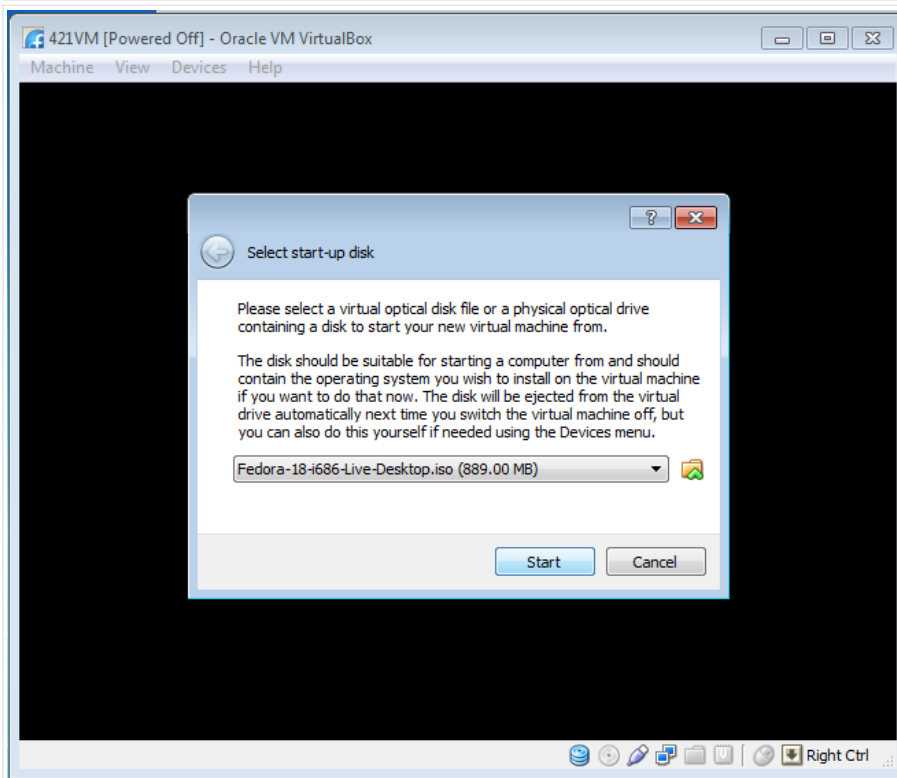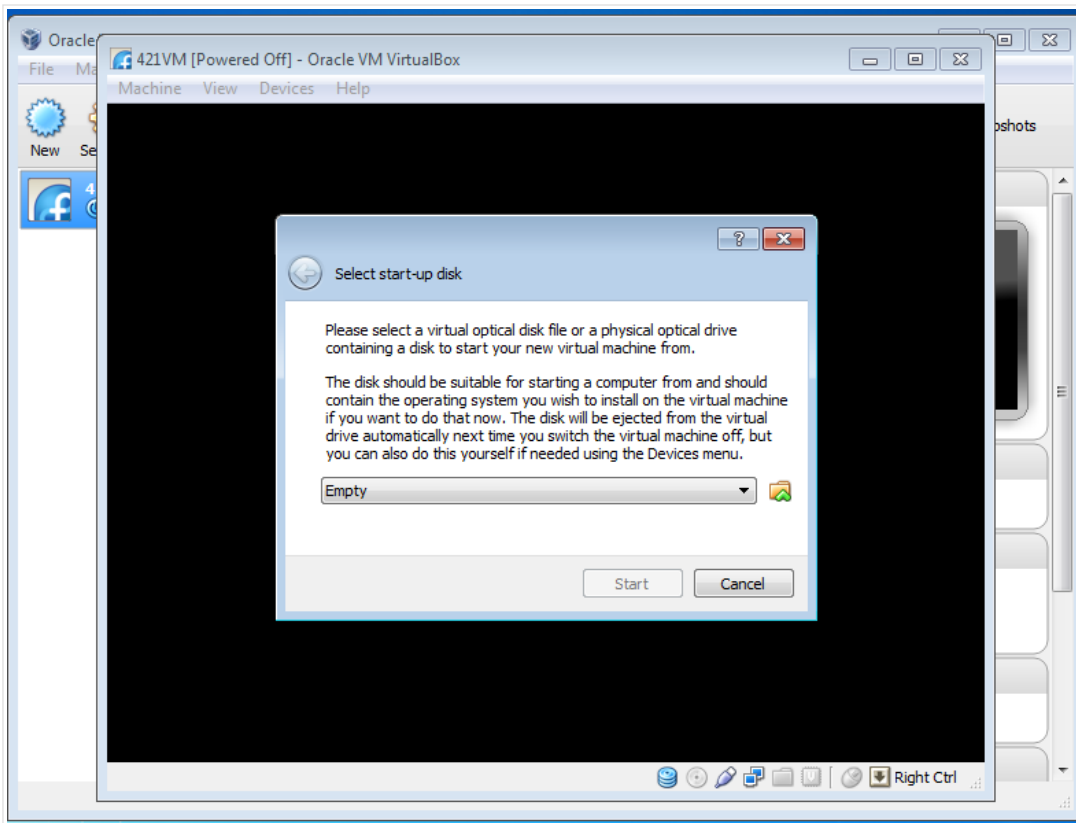
Quickly dismiss any messages VirtualBox gives you so you can see the boot menu.
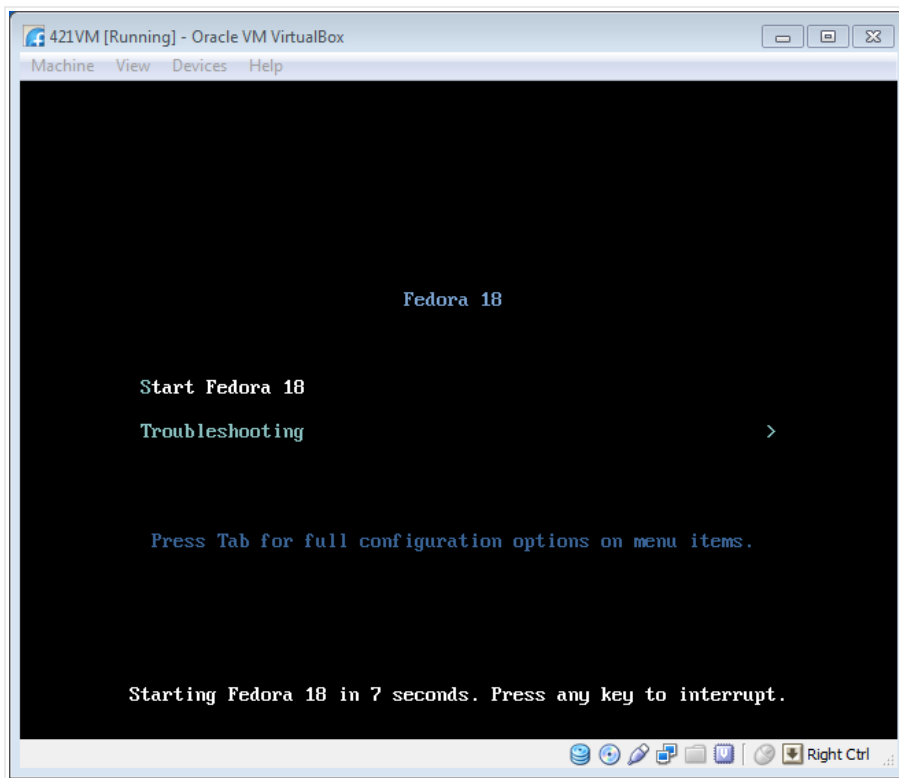
Take note of the second option: the Troubleshooting menu. As a precaution, or if you get the infamous "Oh No" error message with a frowning computer, you may want to go into the Troubleshooting menu and choose to boot Fedora in Basic Graphics mode. If you still encounter the "Oh No" error, make sure you have Virtualization enabled in your host machine's BIOS.
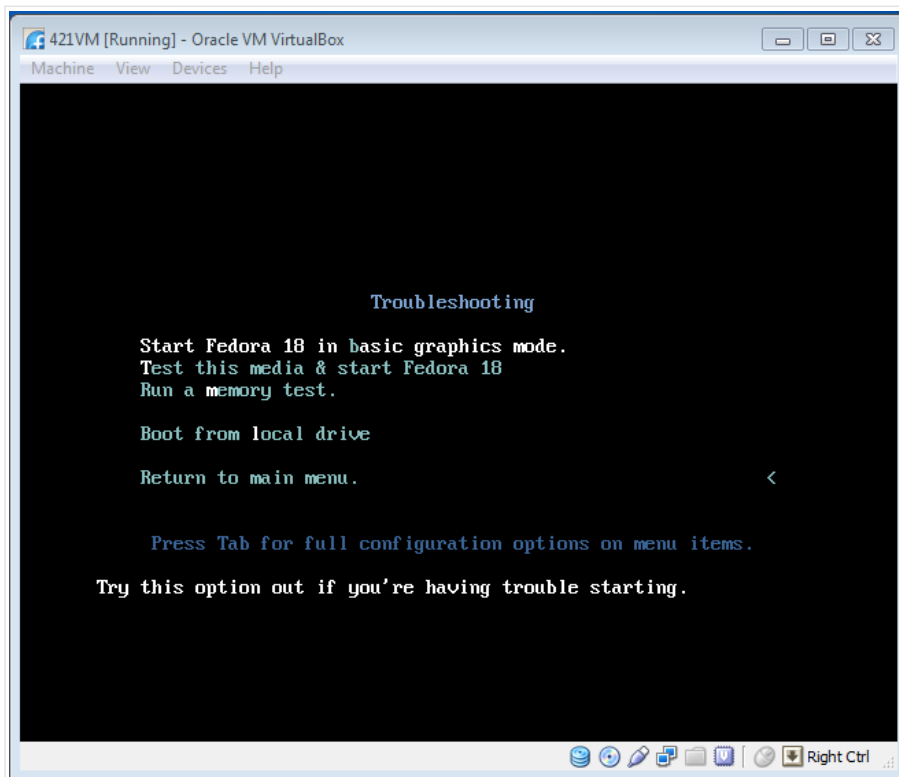
Either wait or choose to start Fedora and it should load to a user selection screen. Select the user "Live System User." This initiates the installation program. Note that you can switch VirtualBox to "Scale" or "Fullscreen" view modes by choosing them from the top menu under View.
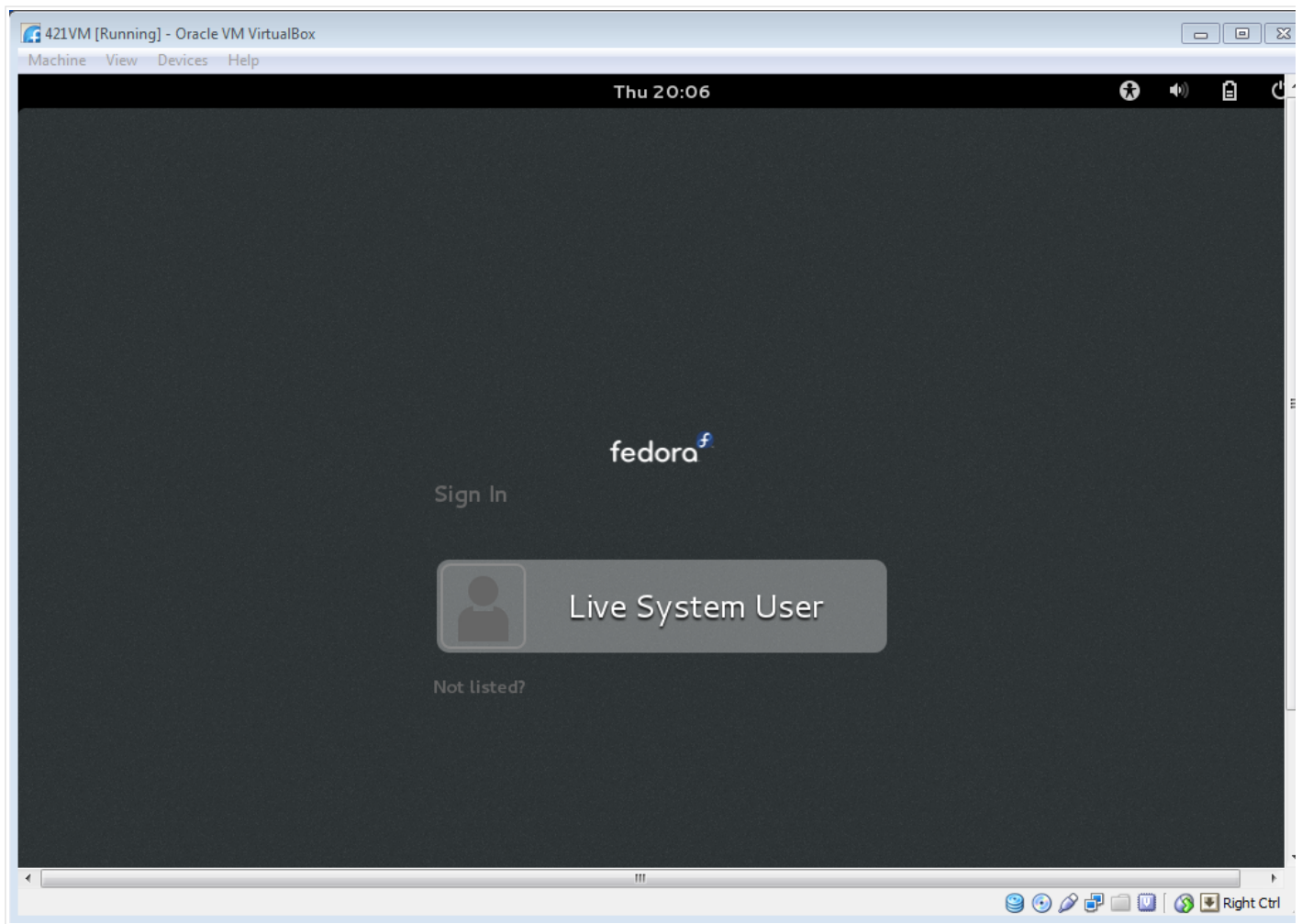
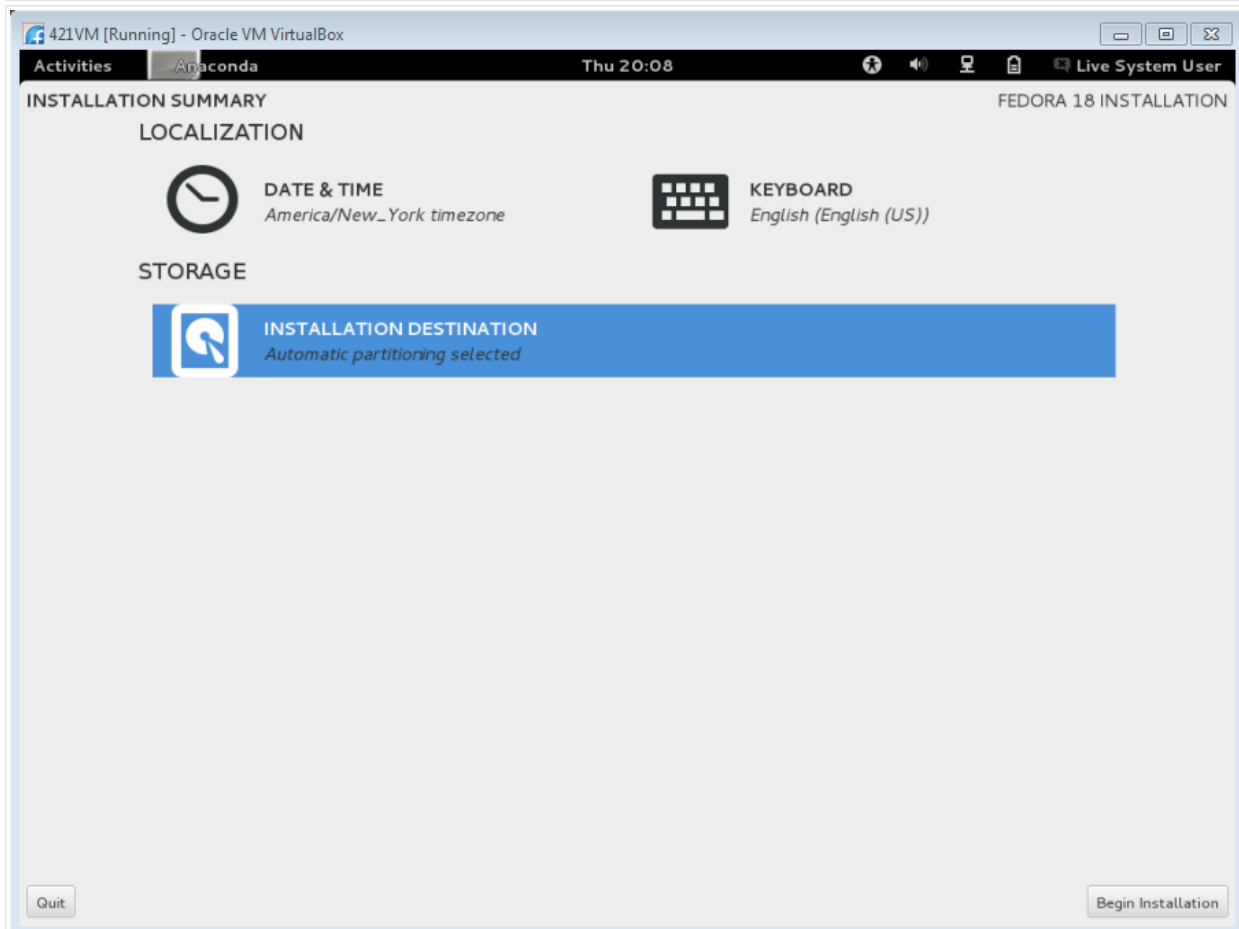You should get to a Welcome screen. Choose "Install to Hard Drive" on the right.
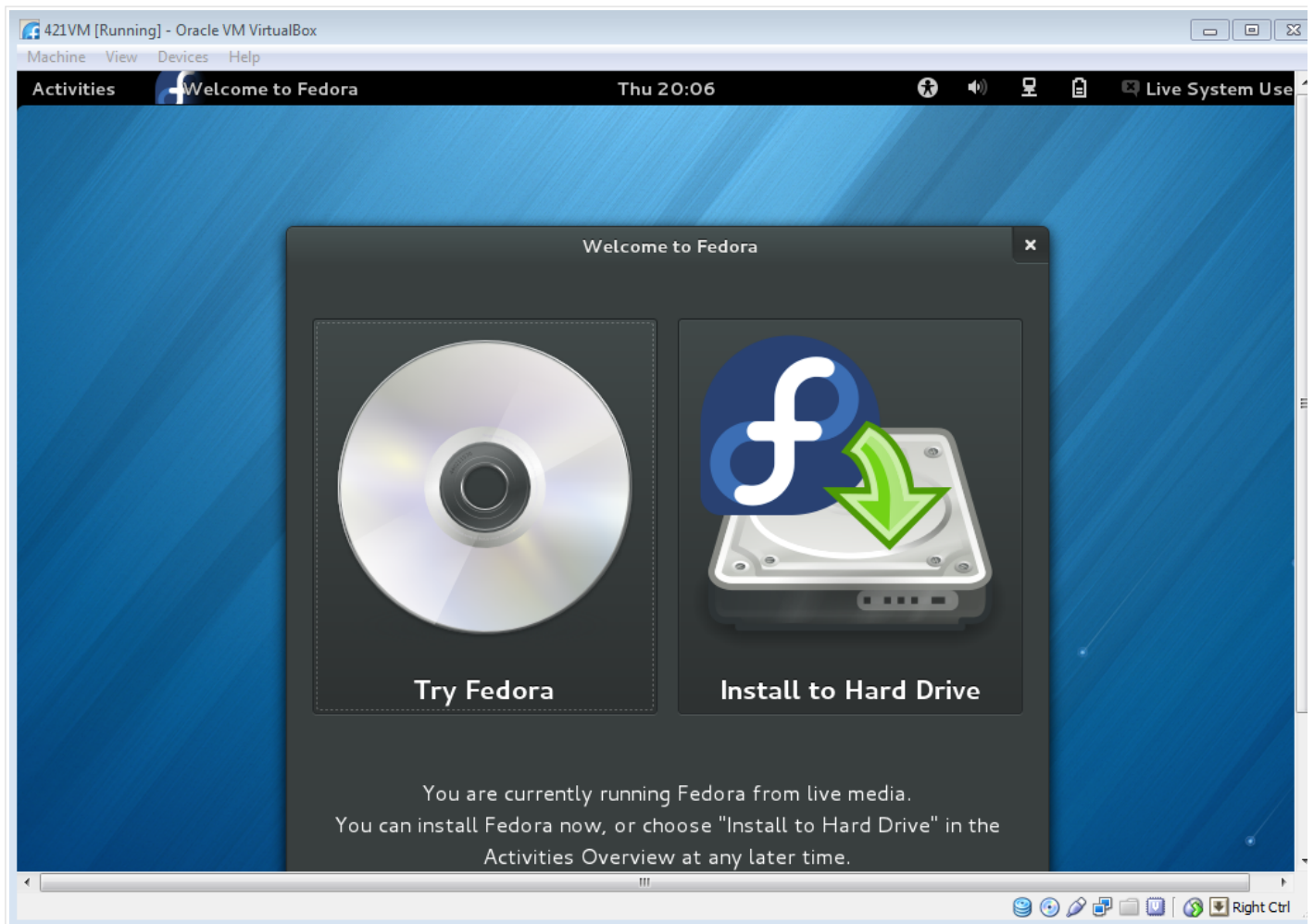
Choose English (United States) as your language. Click the continue button in the lower right. You should then get an installation summary page. You need to make sure that the "Automatic partitioning" is selected under "Installation Destination." Click on the icon under "Storage", verify that the disk image is highlighted blue and click the done button in the upper left to return. After a moment, the "Begin Installation" button should no longer be greyed out, so press it.

Activities   Anaconda   Thu 20:08   🌐 🔊 🖥 🔒 💬 Live System User

INSTALLATION DESTINATION   FEDORA 18 INSTALLATION

Done

Local Standard Disks

8.19 GB

ATA VBOX HARDDISK

☐ Encrypt my data. I'll set a passphrase later.

1 disk selected; 8.19 GB capacity; 8.19 GB free

Full disk summary and options...   Continue

421VM [Running] - Oracle VM VirtualBox

Activities   Anaconda   Thu 20:08   🌐 🔊 🖥 🔒 💬 Live System User

INSTALLATION SUMMARY   FEDORA 18 INSTALLATION

LOCALIZATION

🕐 **DATE & TIME**   ⌨ **KEYBOARD**
     America/New_York timezone   English (English (US))

STORAGE

INSTALLATION DESTINATION
Automatic partitioning selected

Quit   Begin Installation

You now need to select a root password. You can/should do this while the install is progressing. Click the icon to enter the password menu, type in a password, then click the done button in the upper left. Wait for the progress bar to reach the end.

When it is finished installing, click "Quit" in the lower right. It should take you to a blank desktop screen. You can now shut down the machine. To shut it down properly, **make sure you follow these instructions exactly**:

Do not simply close the VirtualBox window by clicking on the "Close" button of the VM window! This is equivalent to yanking the power plug out of the wall, and will result in a messy power-down with buffered information being lost, resulting in a possibly corrupt virtual disk.

The proper way to shut down the system every time is to click on the "Live System User" item in the upper right of the VM's screen, select "Power Off" there, then hit the "Power Off" button in the confirmation box. **Make sure you always shut down the system in an orderly fashion this way.** The one exception is when you are doing active kernel modification and you have somehow created a bug that causes the system to completely hang. In that case, you have to choice but to pull the plug by clicking the "Close" "X" for the window.
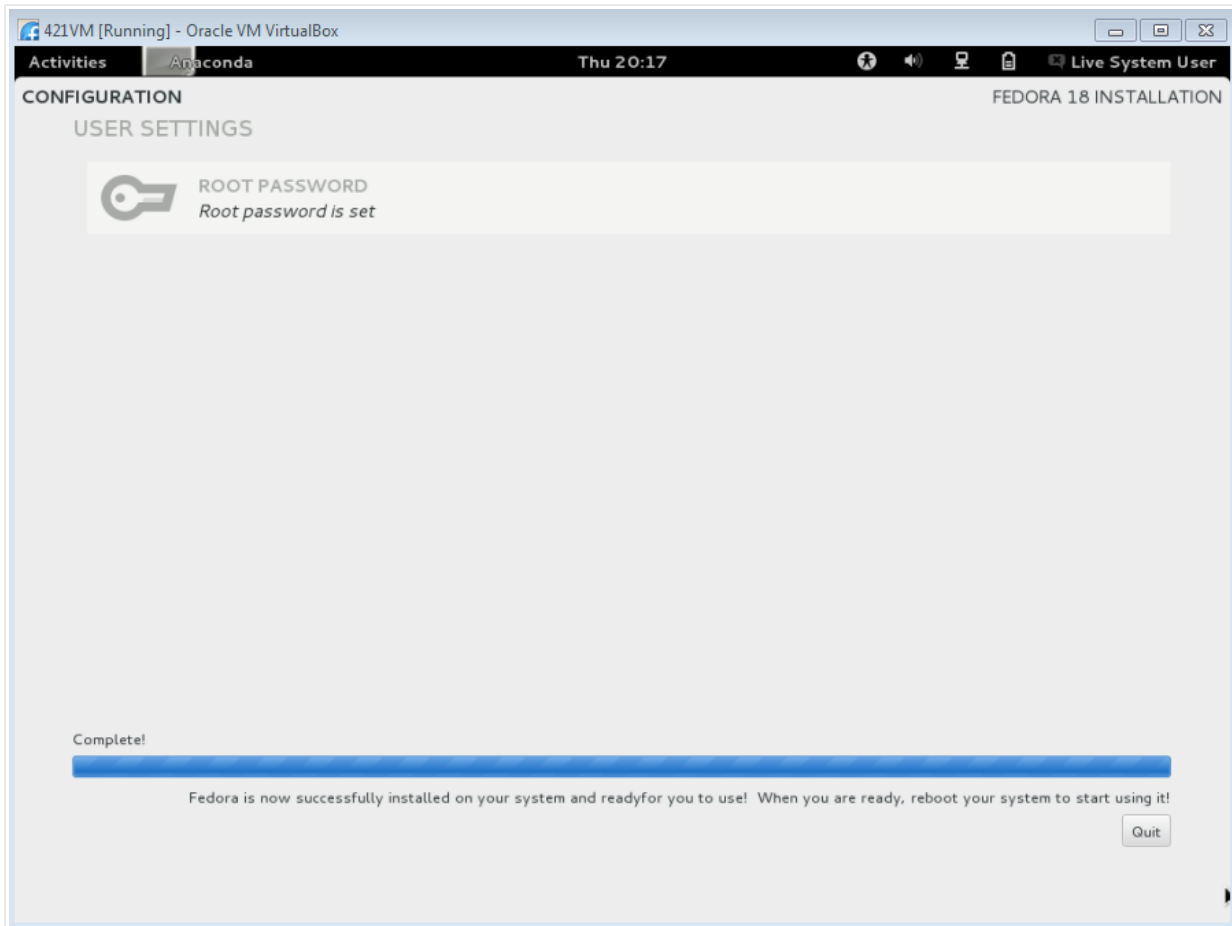
Back in the main VirtualBox window, select your VM, and hit the settings button. Go to the storage tab in the dialog shown, and look for the LiveCD image. and Select it. Then, on the right side, click on the small CD icon just to the right of the "IDE Secondary Master" item, and select "Remove disk from virtual drive".

Click OK on the dialog box, and your VM should be ready for use.

When you reboot the VM, and it asks you to set up a user account, **please make sure to set up the user as an Administrator account.** Otherwise, you will have an error message when you try to use `sudo`.