Guide to Setting Up the Computer Club Virtual Machine with VirtualBox

Version 3

Prerequisites:

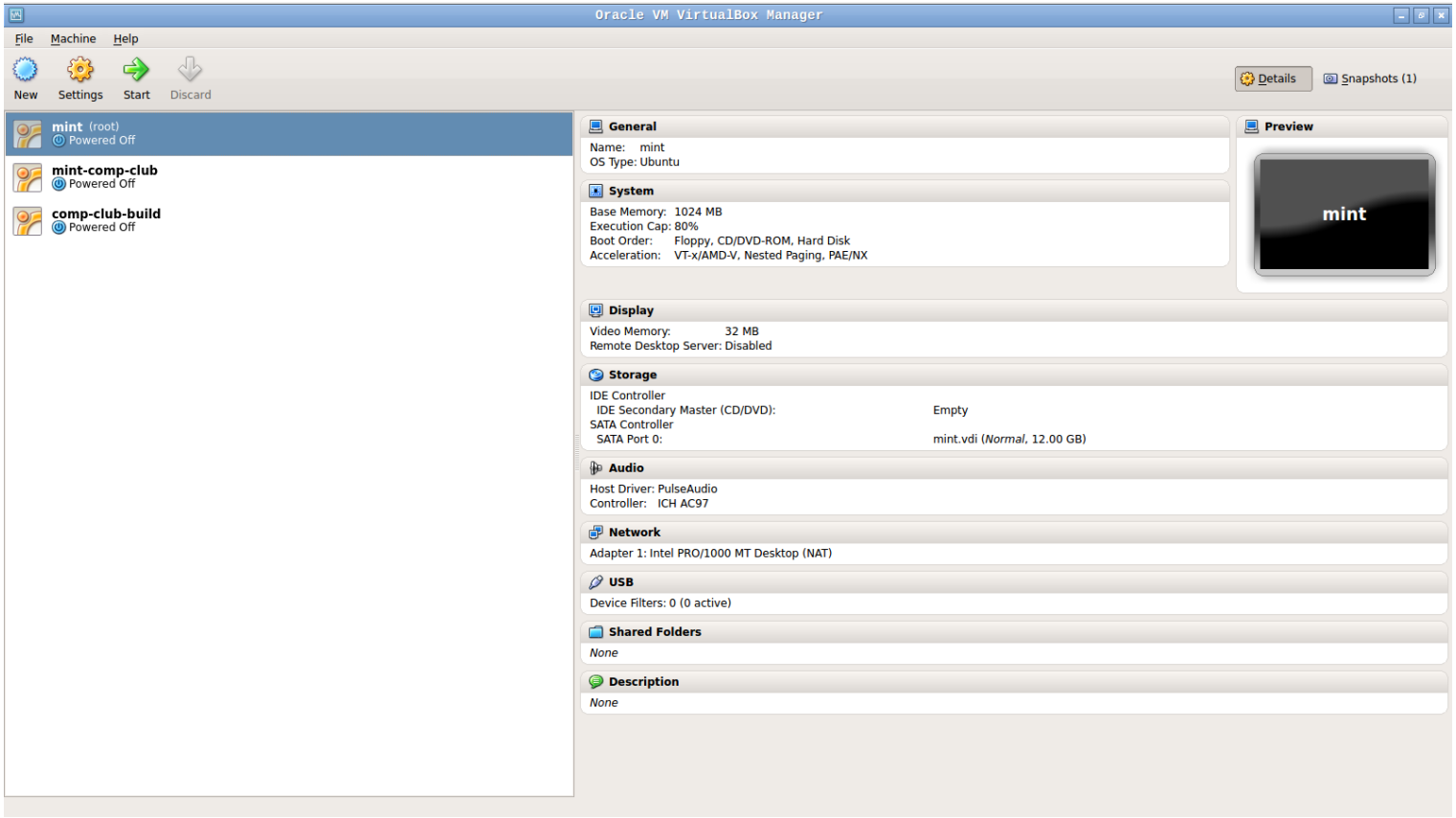
- VirtualBox is installed on your computer
- Possession of the virtual disk image (VDI) file containing the pre-installed, customised Ubuntu Linux system (on the shared drive). Access to the drive has now been set up and you should be able to copy the image over. If you don't have access to the folder, tell Patrick.

Contents

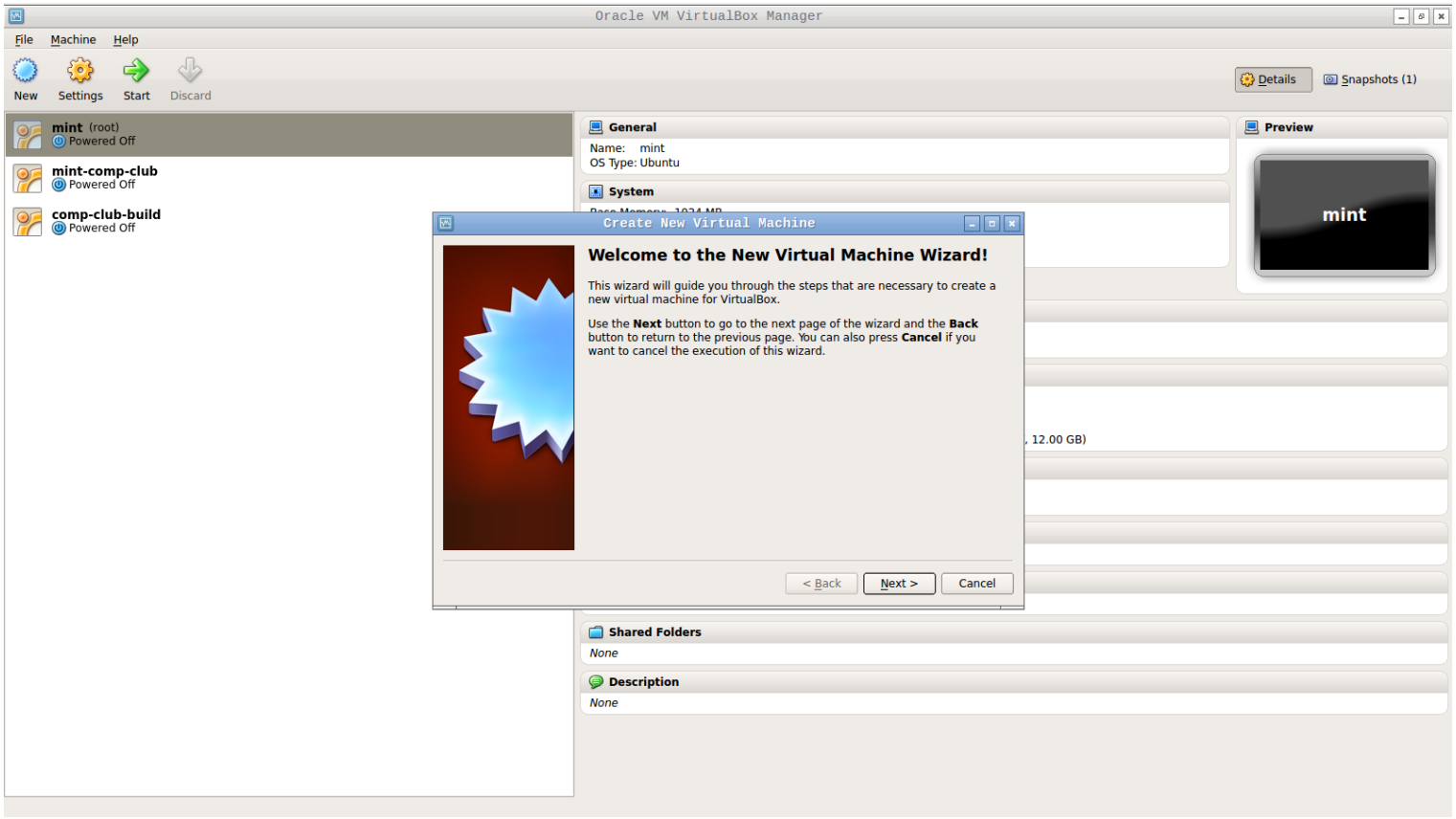
- This version of the VirtualBox Setup Guide contains:
  - How to setup the VM in VirtualBox, and attach your Linux image to it
  - How to configure the VM once you've created it
  - Enabling the VM to access a USB plugged into your computer
- Still to come:
  - Options for further customisation of your VM (i.e. settings)
  - Operating the VM, the host key, etc.

Instructions

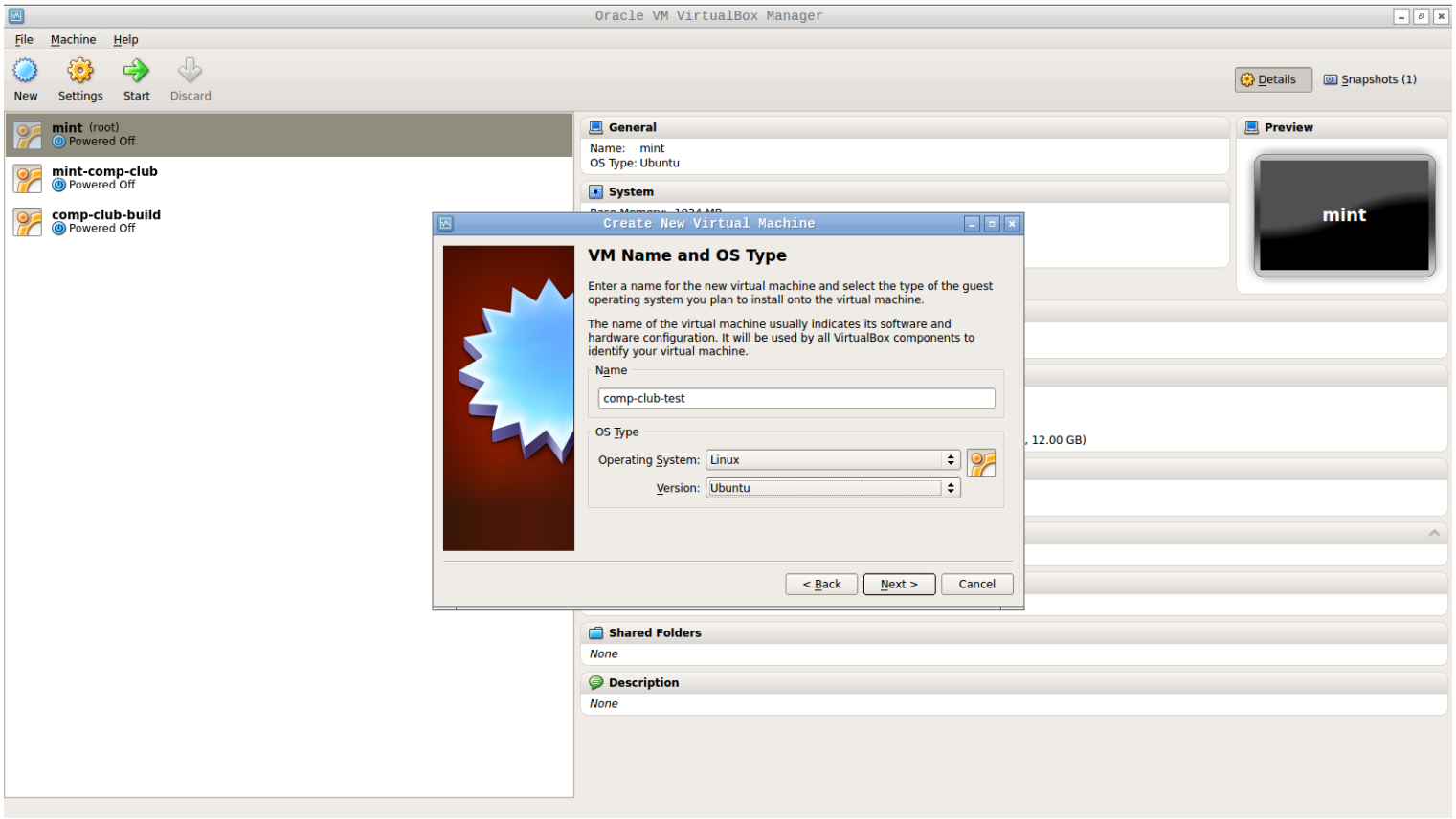
- Fire up VirtualBox as you would any other program. The interface should be the same across all Operating Systems.
- If you haven't played with VirtualBox yet, the left hand panel will be blank, as you haven't created any VMs yet. As I've already made some, you can see them (mint, mint-comp-club, and comp-club-build) in the screenshot.



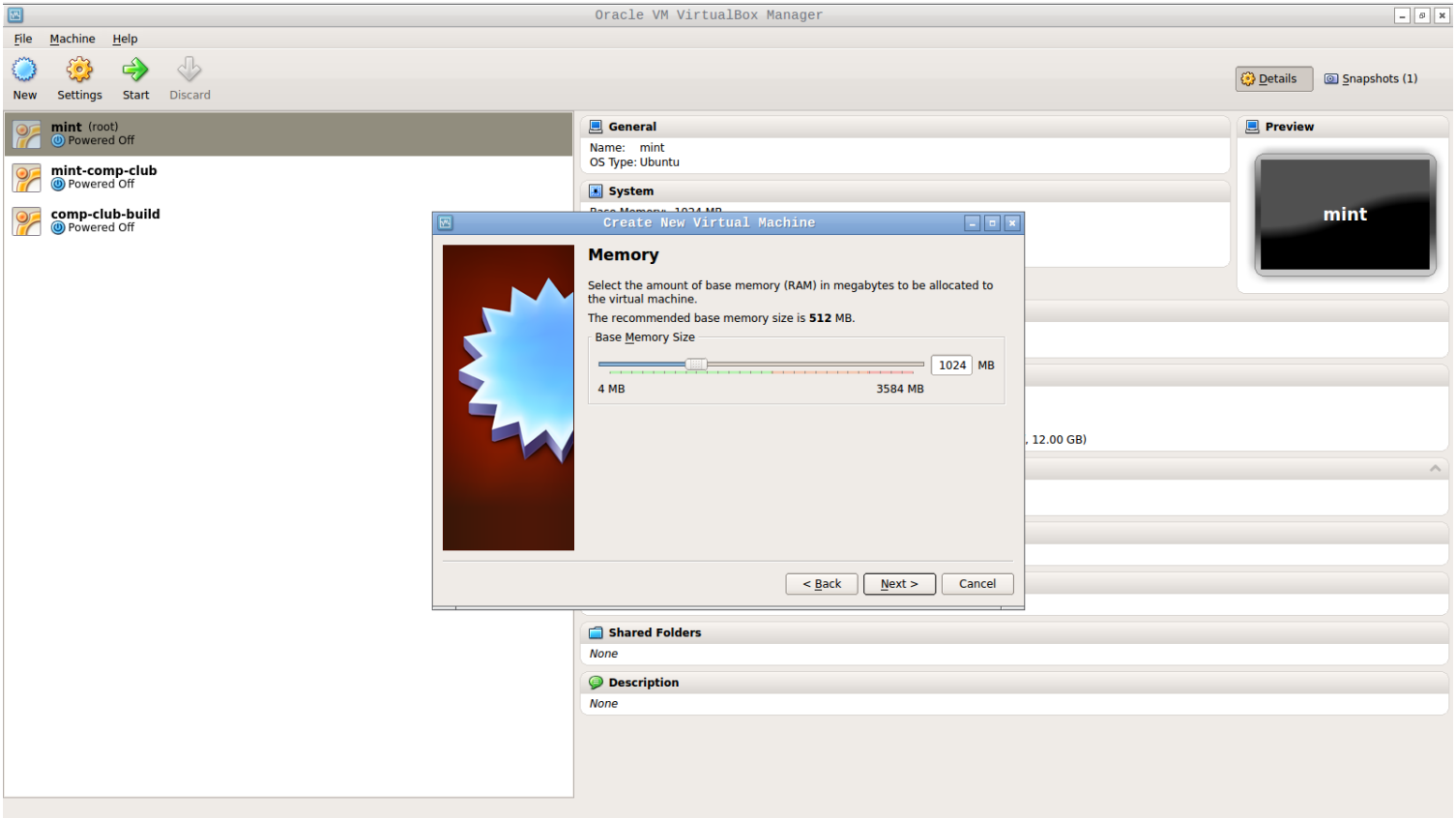
- As you can see, once you've made a VM, you can see information about its configuration on the right hand side, which basically tells you what sort of "fake" system VirtualBox is presenting to the OS you've installed in the VM
- Click "New" to make a new VM:



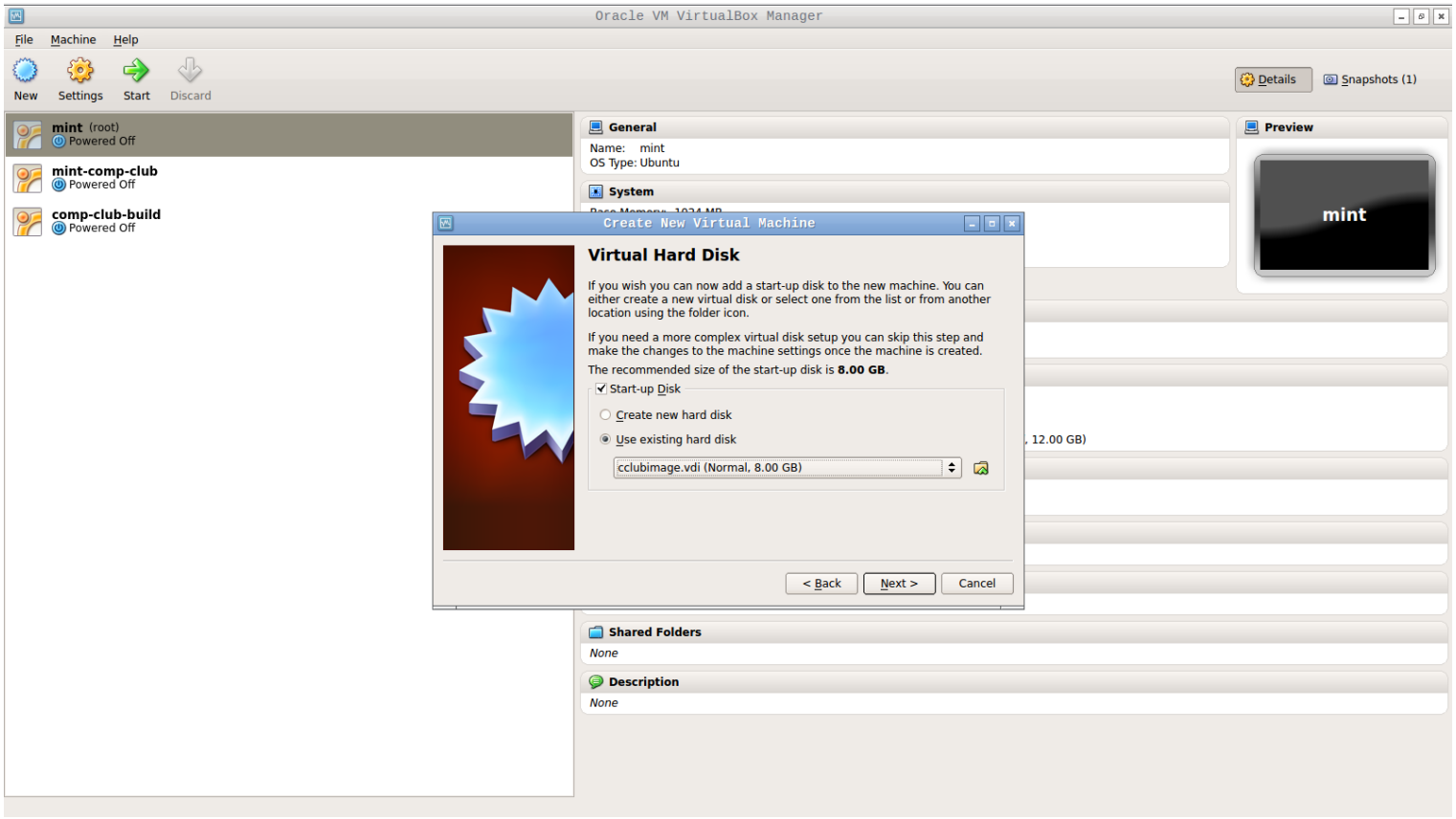
- Click "Next"
- Enter what you want to call your VM. It doesn't really matter what you choose.
- Choose your OS type. We want "Linux" and "Ubuntu". NB: DON'T select "Ubuntu (64-bit)"



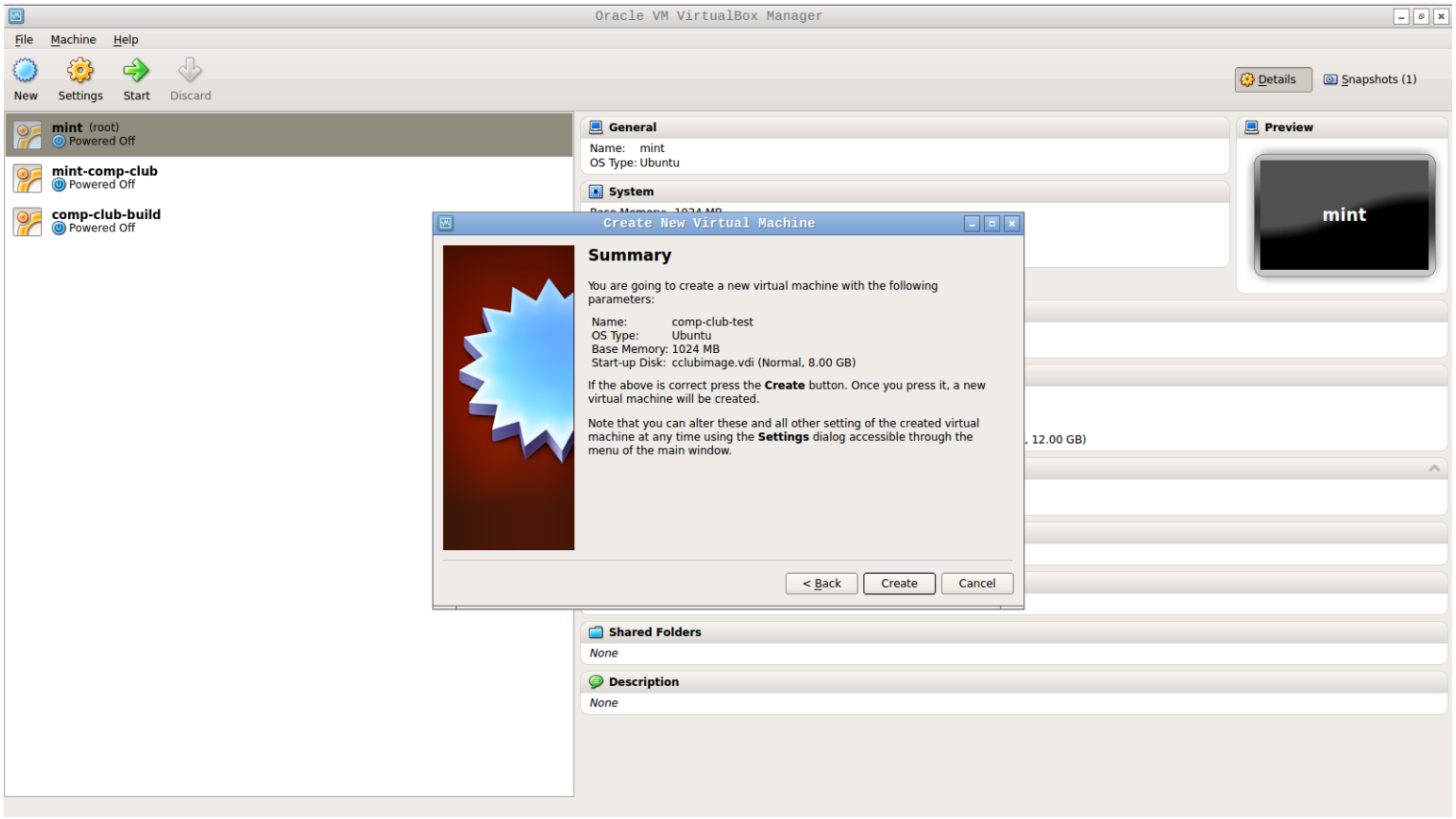
- Click "Next"
- Now select how much memory you want for your system. You probably shouldn't select more than half of how much memory you have on your system. 1GB RAM for the VM is more than enough. It will run fine on 512MB, but that might get a bit constricted if you run too many programs.

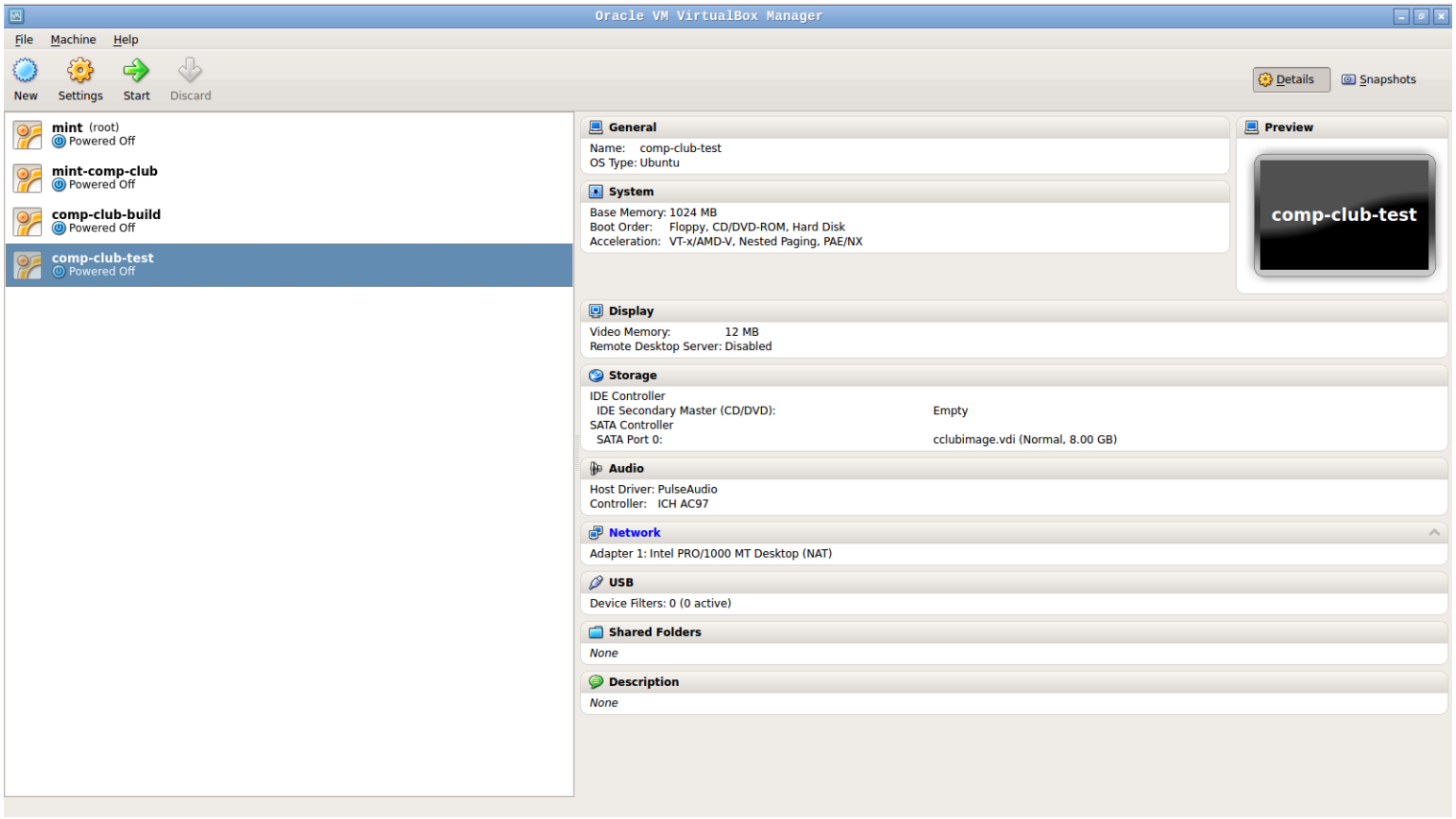


- Click "Next"
- You'll want to use an existing hard disk, so select "Use existing hard disk" and select it using the browse function
- This should be the image that you've copied to your (NTFS-formatted!) USB. DON'T use the image direct from the shared drive. Not only will it be slow, because it has to go over the network, but that's the clean image that's provided as a backup for anyone who's mucked up their VM and wants a working installation.



- Click "Next"
- Click "Create" to create your VM. It should appear in the left-hand panel.

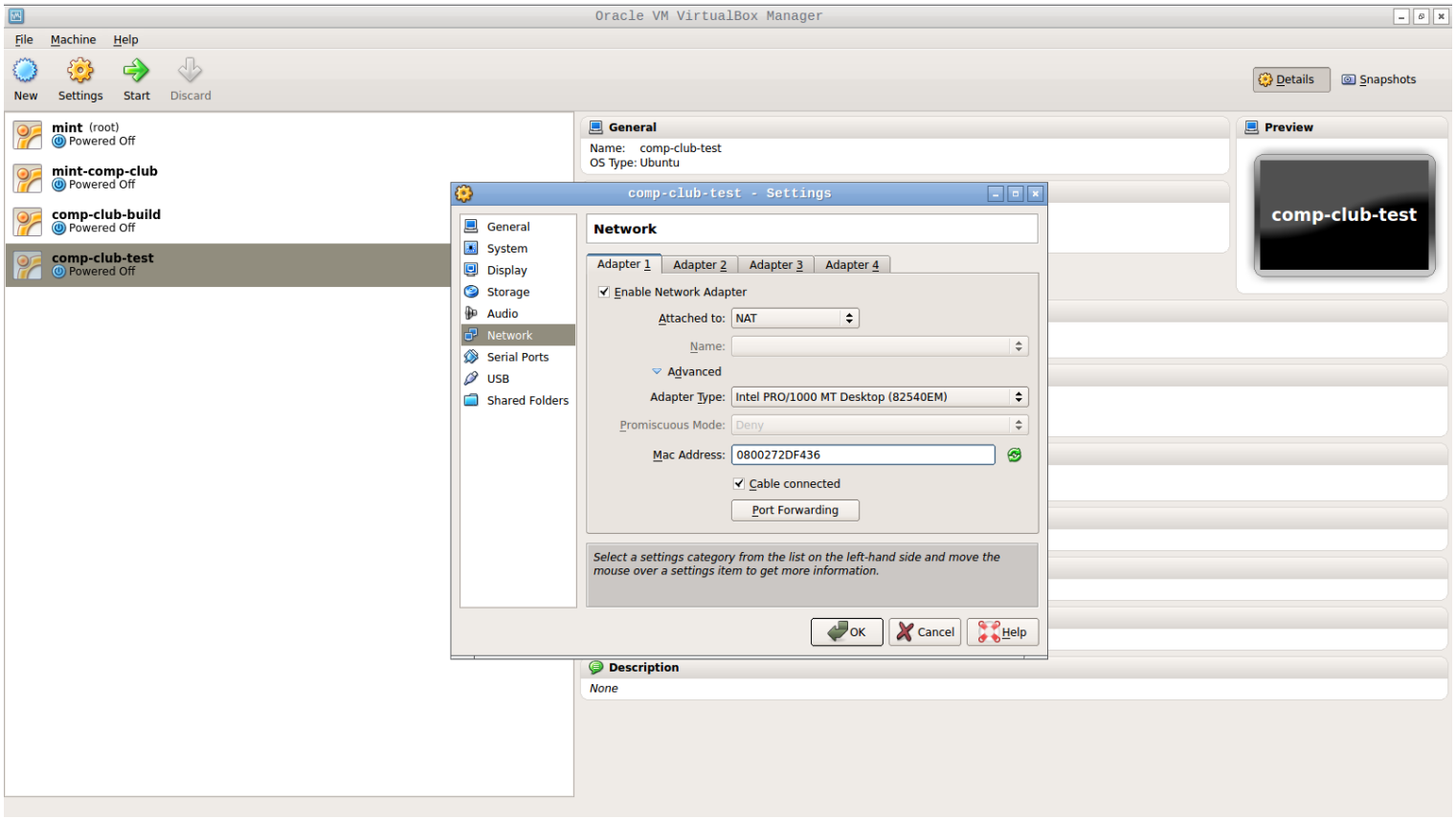




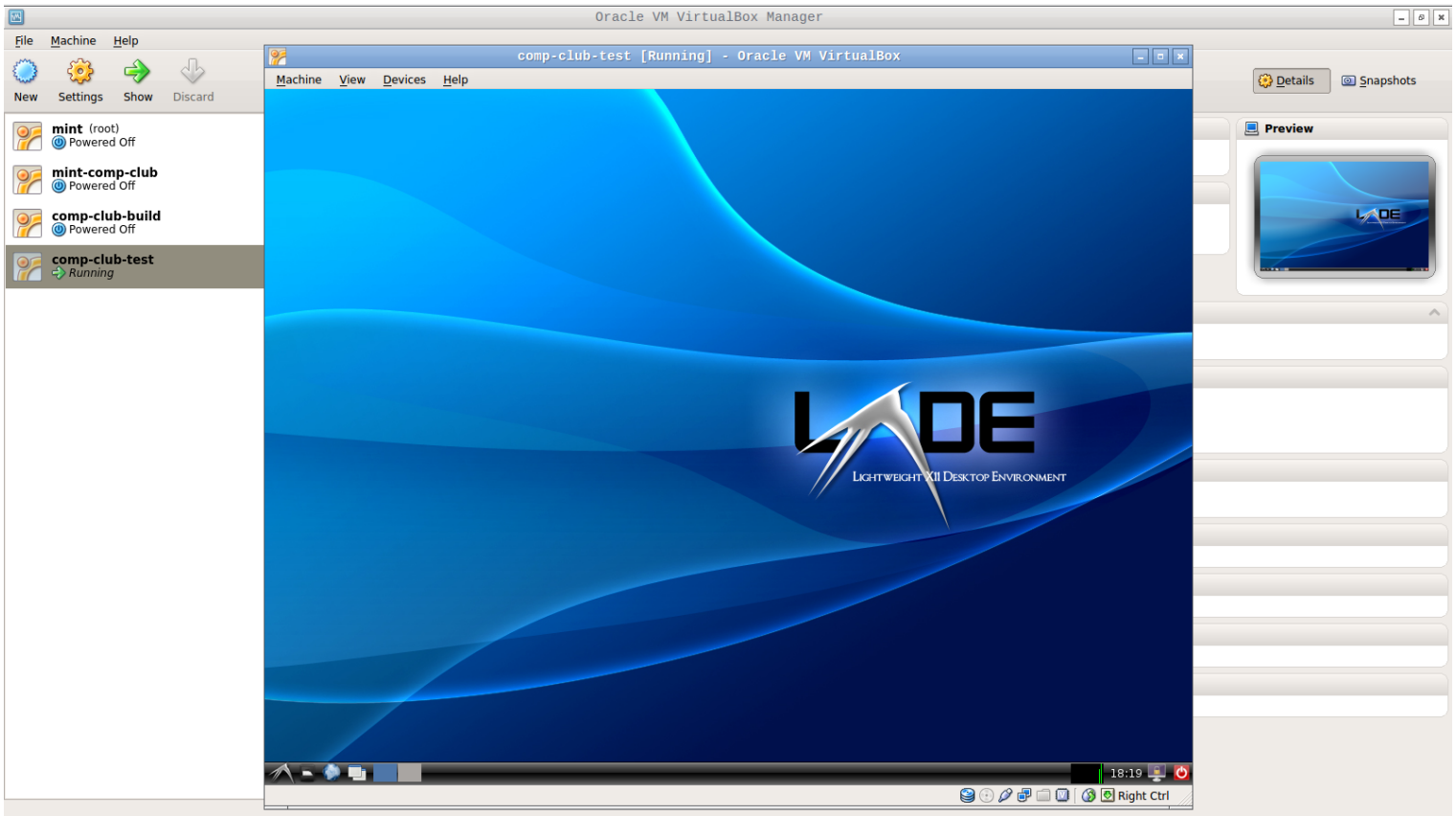
- Configure the MAC address. The MAC address is a hardware setting that is specific to your network card. Having randomly different MAC addresses in your VMs will cause networking issues.
- Click "Settings", then "Network", and finally the little triangle to bring up the Advanced settings.
- Change the entry in the "Mac Address" box to the one that the image was set up with:

0800272DF436

- This MAC address is also on the shared drive Computer Club folder in "README".
- If the MAC address is not configured, you may have a very laggy boot, as well as no network access in your VM.
- Click "OK".



- Now you can click "Start" to start the VM. The window serving as the virtual monitor screen should appear. You might get a few messages about "mouse integration" and what-not. These are purely informational – you should read them and try out their instructions to get a feel for operating the VM. As long as there are no error messages, you should be fine.

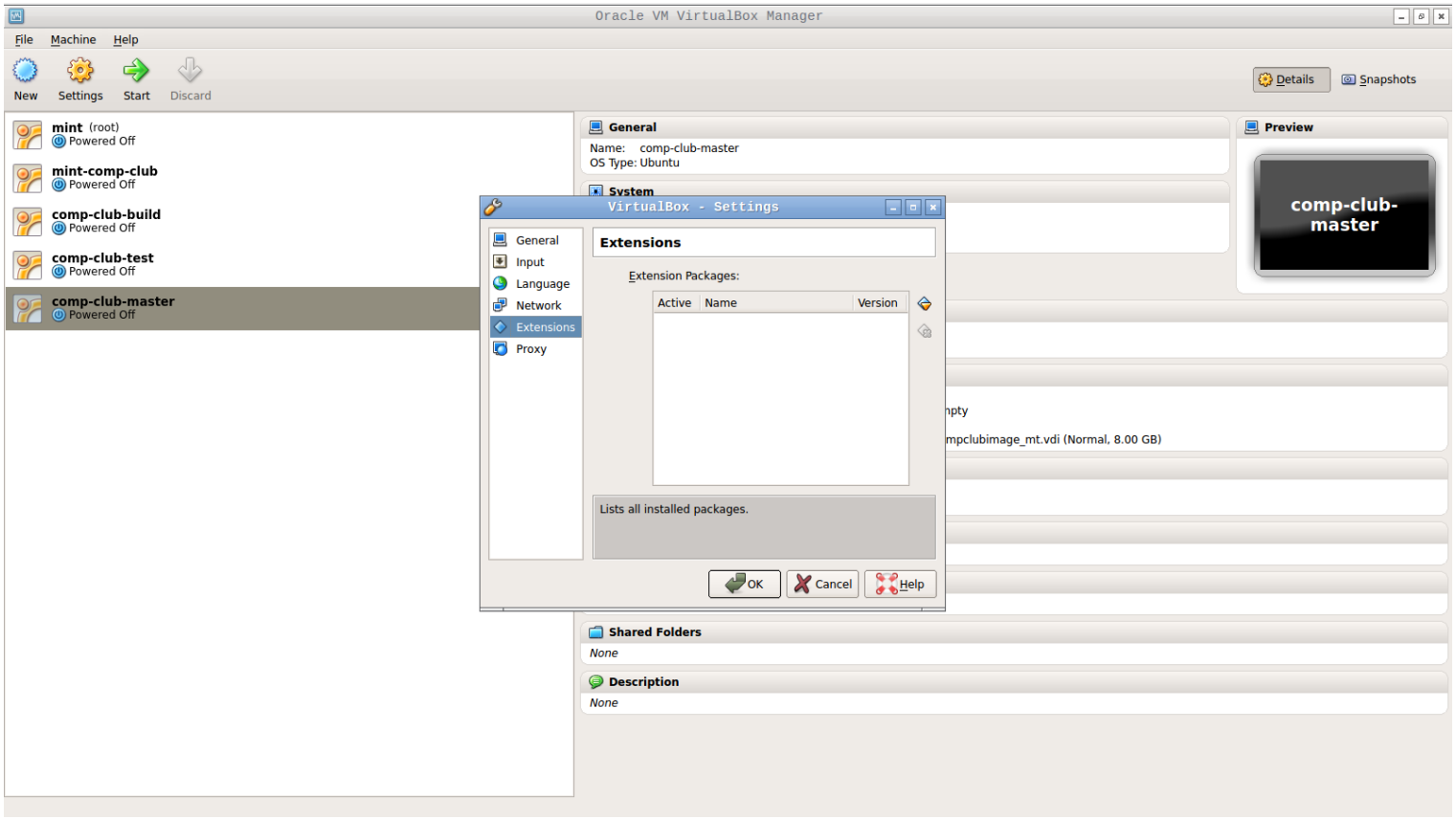


- The LXDE desktop of Ubuntu should appear after a short while. Congratulations! You're running Linux (inside a VM).

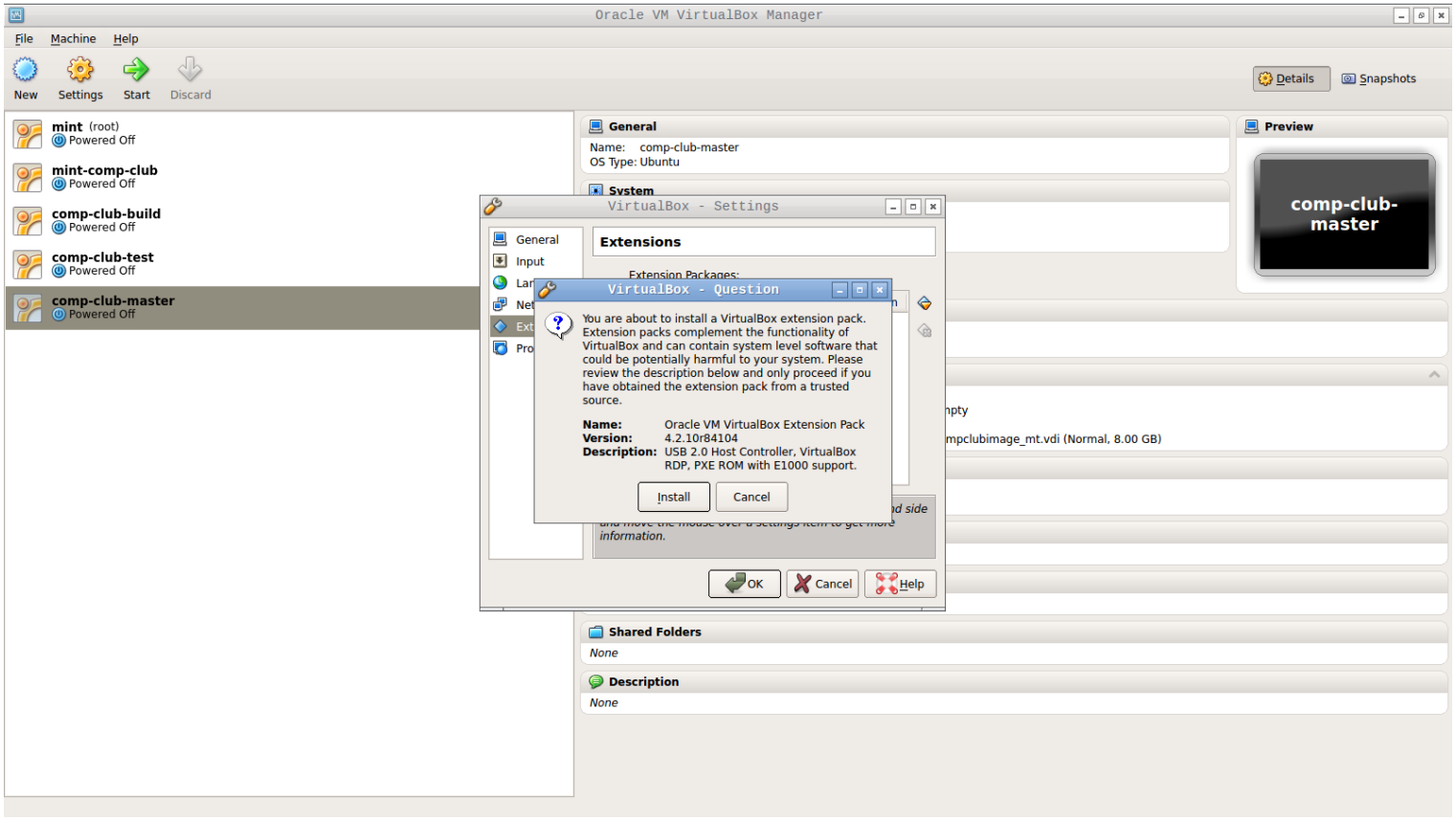
USB Access inside the VM

- VirtualBox can allow the VM to access a USB plugged into your physical machine. This is done by basically having VirtualBox act as an intermediary, and presenting a simulated USB that simply corresponds to the actual USB you've plugged in.
- Please Note: enabling access to the USB in the VM will cause the host OS (the one that VirtualBox is running on) to lose access to the USB.
- The following advice assumes you have a USB 2.0 device, which is probably the great majority of USB sticks today.

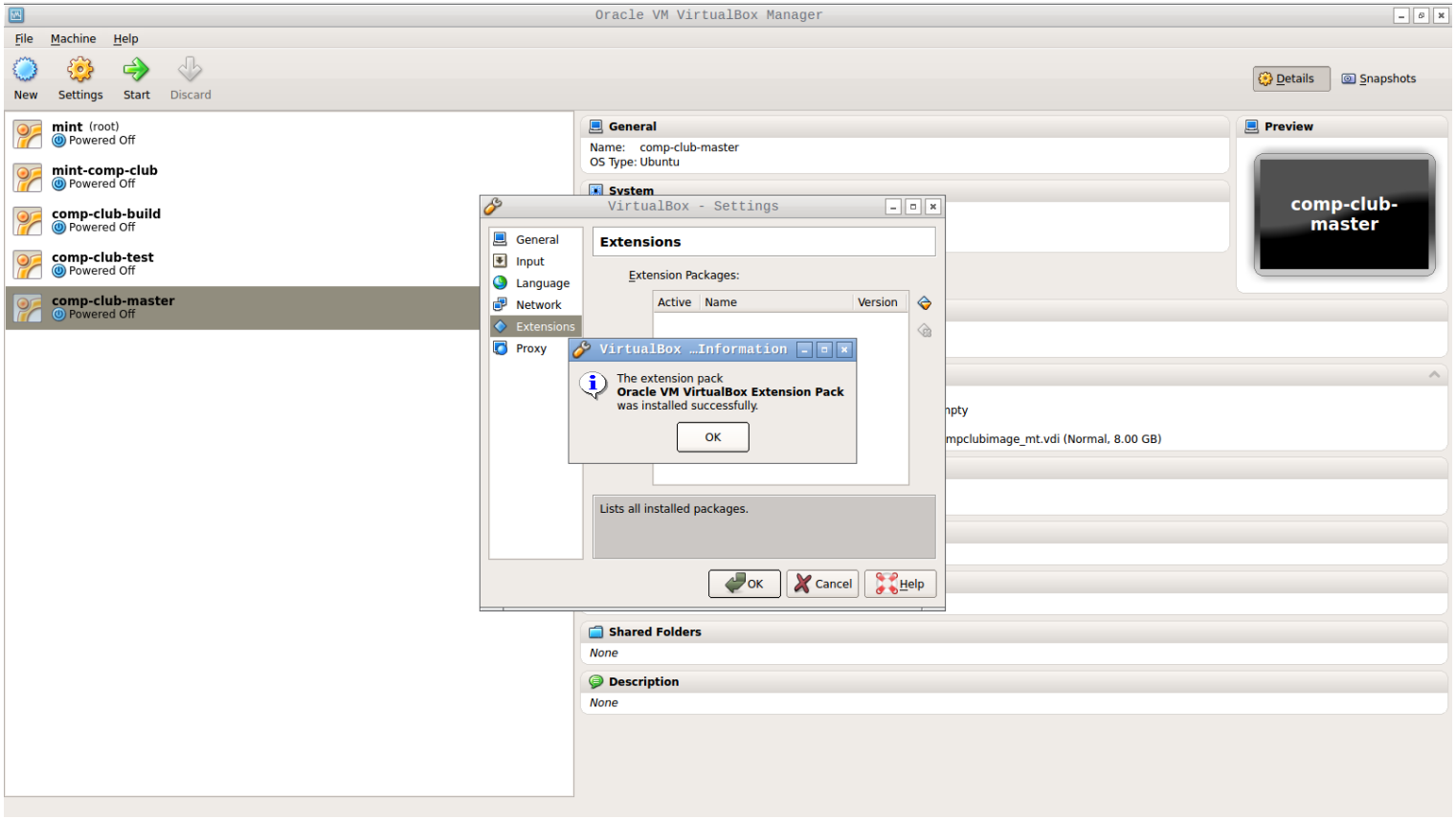
- Download the "Oracle VM VirtualBox Extension Pack" from https://www.virtualbox.org/wiki/Downloads
- Please ensure that you select the correct version, but it's very likely the latest one
- The Extension Pack provides extra functionality, such as USB support.
- Now, you'll need to install it into VirtualBox. Open VirtualBox Settings; for me, it was inside File > Preferences. Click the "Extensions" Tab:



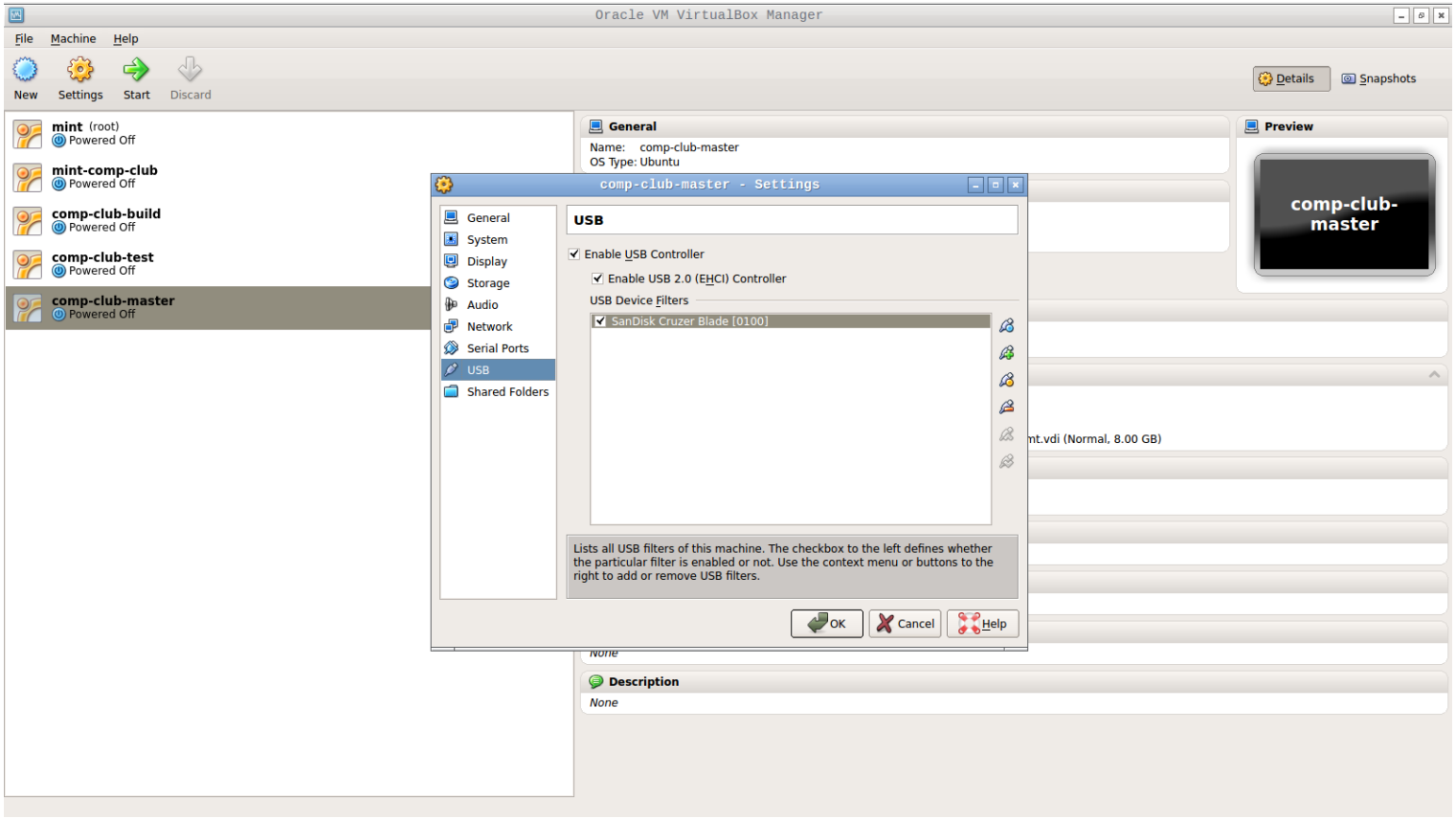
- Click the diamond icon to browse your system for the Extension Pack file you downloaded. It'll display a prompt:



- Click "Install". You'll have to accept a license agreement. The install should complete shortly:

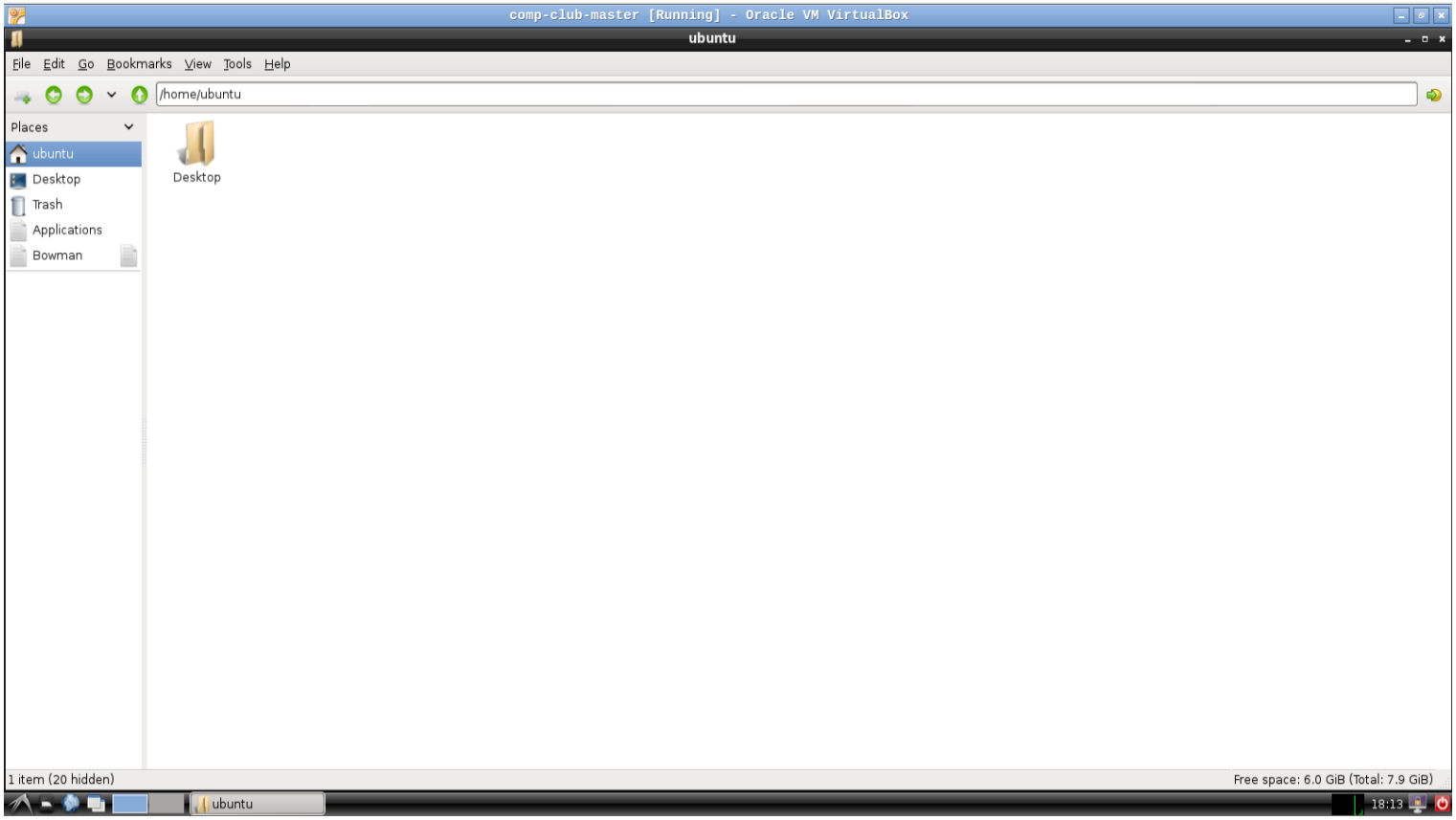


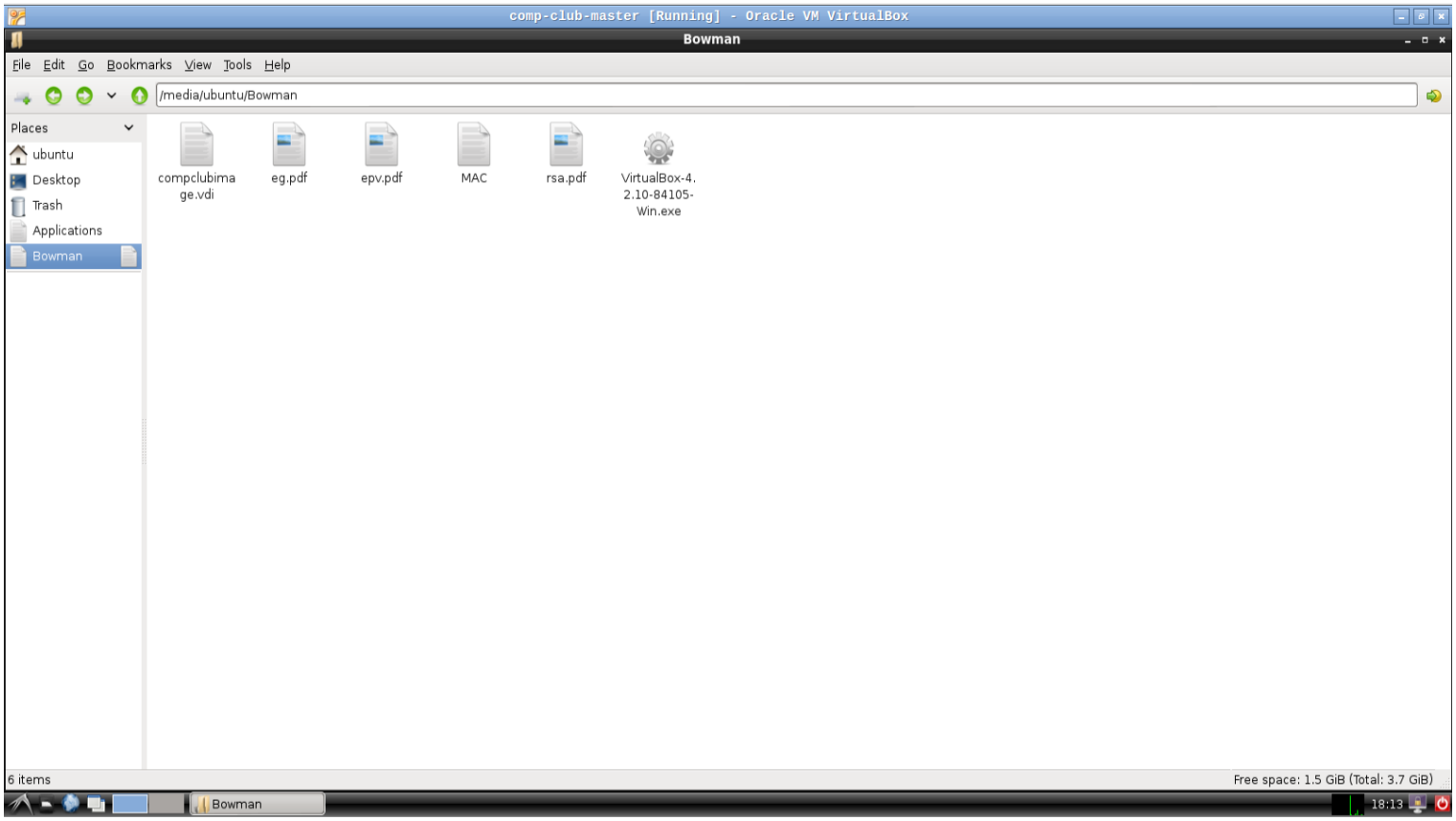
- Now, select the VM you're using, and click "Settings". Navigate to the "USB" tab.
- You can now enable the "USB 2.0 (EHCI) Controller" (if you tried to do this without installing the extension pack, it'll just complain and tell you to install the extension pack)
- Click the icon with the "+". If your USB is plugged in, it should be displayed here. Select the device you want, and it'll come up in the list:



- Now you can start up the VM as normal; the USB should be registering inside. In the official image, you can open up the file manager (lower left hand corner quick launch), or Accessories > File Manager PCManFM and be able to see the USB attached:


comp-club-master [Running] - Oracle VM VirtualBox
LXDE
Lightweight X11 Desktop Environment
18:13


comp-club-master [Running] - Oracle VM VirtualBox
ubuntu
File Edit Go Bookmarks View Tools Help
/home/ubuntu
Places
ubuntu
Desktop
Trash
Applications
Bowman
Desktop
1 item (20 hidden)
Free space: 6.0 GiB (Total: 7.9 GiB)
ubuntu
18:13



- If for any reason the USB isn't attached, you can manually attach it. If you're working in a normal window, you should have a menu bar in the top left hand corner of the VirtualBox window. If you've tried out fullscreen or scale mode (I'm working in scale mode), then you can press HostKey-Home to bring up the menu (Default HostKey is right Ctrl). Then, go to "Devices", "USB Devices", and you should be able to select your device: