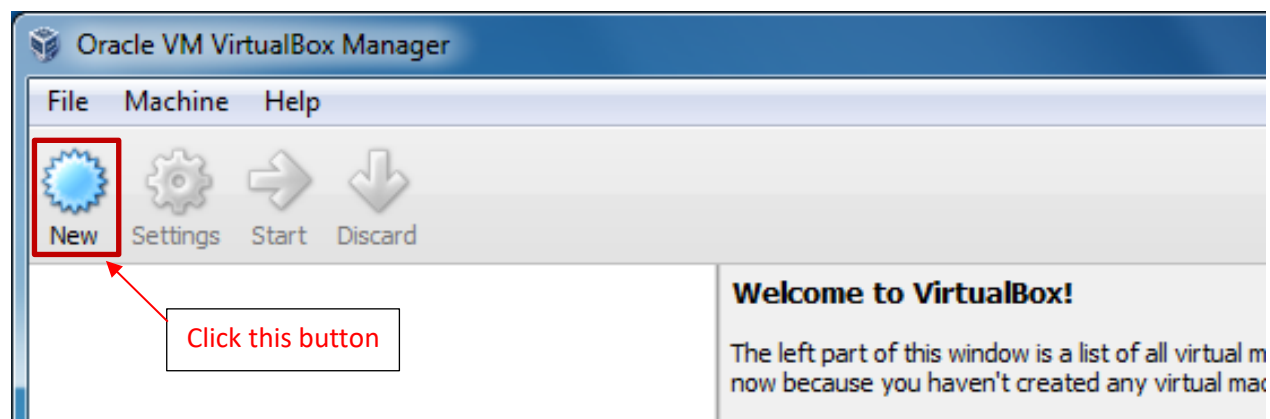


## How to use VirtualBox to Run Ubuntu VM?

### Step 0: Download the relevant files:

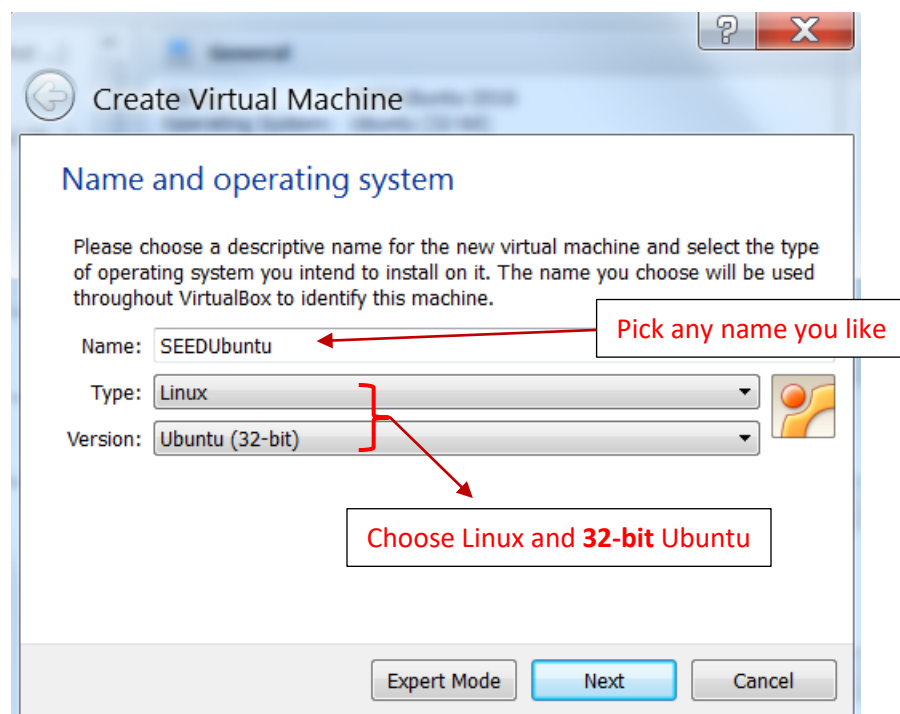
<https://drive.google.com/file/d/12l8OO3PXHjUsf9vfjkAf7-l6bsixvMUa/view>

### Step 1: Create a New VM in VirtualBox

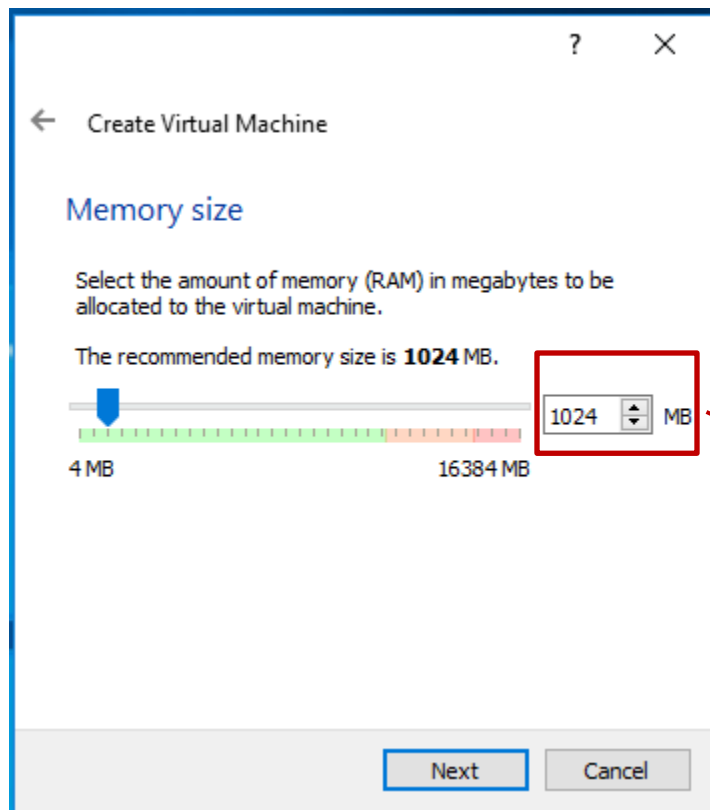


### Step 2: Provide a Name and Select the OS Type and Version

Do NOT pick Ubuntu (64-bit), even though your machine is 64 bit. Our prebuilt VM is 32-bit Ubuntu.

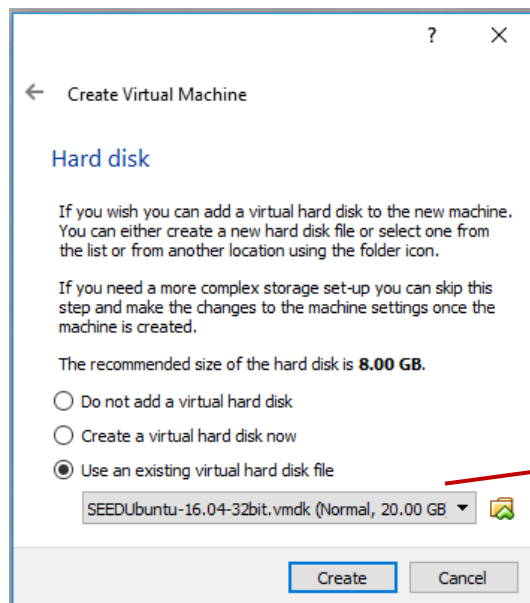


### Step 3: Set the Memory Size



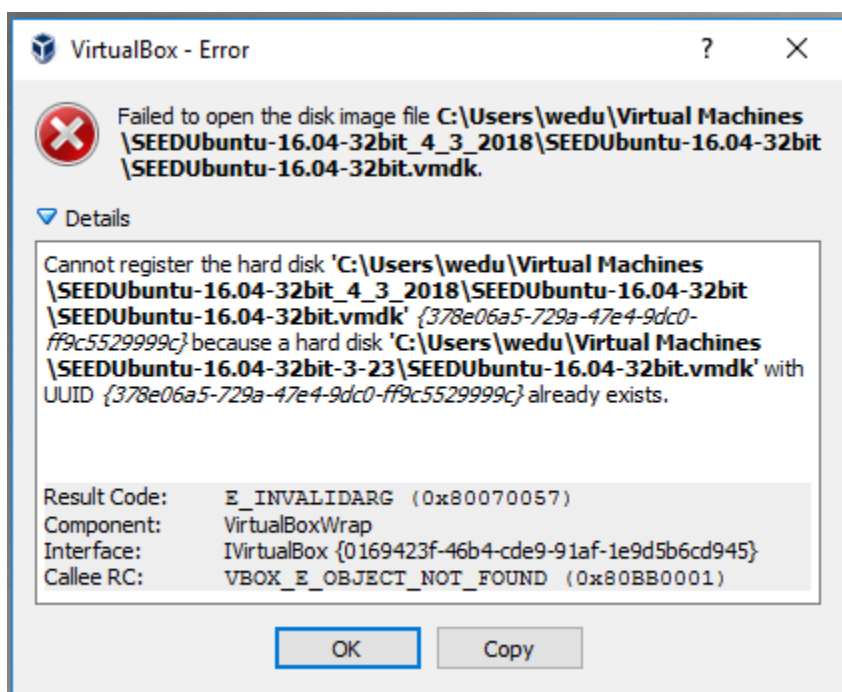
**1024 MB** should be sufficient, but we recommend **2GB**. If your computer has more RAM, you can increase accordingly. The more memory you give to the VM, the better the performance you will get.

### Step 4: Select the Pre-built VM File Provided by Us



Pick this file in the unzipped folder: **SEEDUbuntu-16.04-32bit.vmdk**. Other files in the folder have similar names (they have a postfix "-s0xx"); don't pick any of these files.

In the above step, you may encounter the following error; otherwise, directly go to Step 5.



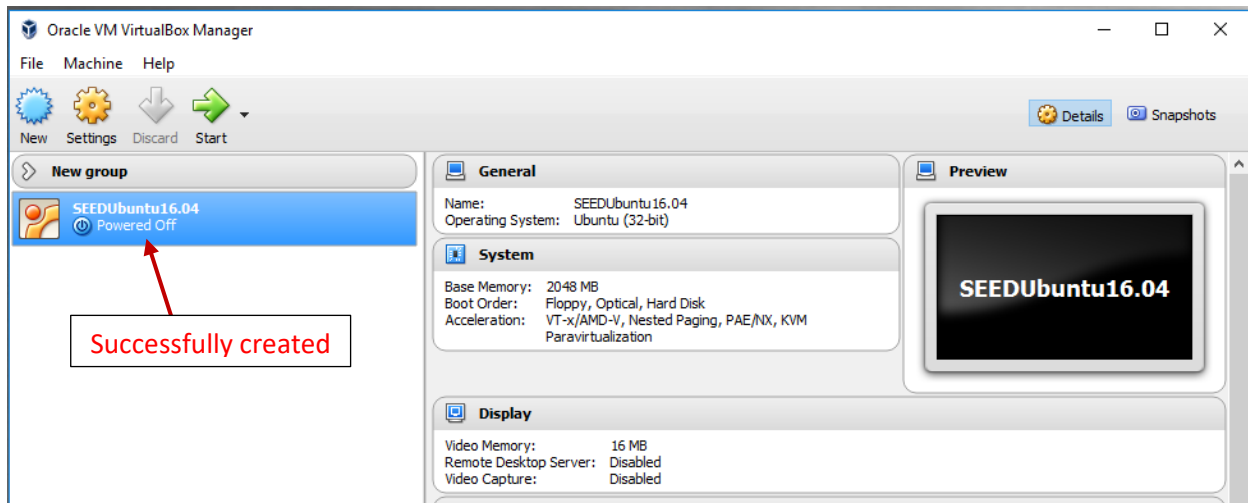
**Reason and Solution:** This is because you copied the VM files from another VM, which is already loaded into VirtualBox. These two VMs have the same UUID, which is not allowed by Virtualbox. Here are several solutions depending on your situations:

- If you plan to create multiple VMs using the same image, please use the clone mechanism (See Appendix A for details).
- If the older VM with the same UUID is no longer needed, remove it from VirtualBox will solve the problem.
- If you do want to keep the older VM, you can change the UUID of the new VM. The fastest way is to directly modify `SEEDUbuntu16.04.vmdk`, which is a text file. Search for the `ddb.uuid.image` entry, and change its value (e.g., change the last byte from 'c' to 'd')

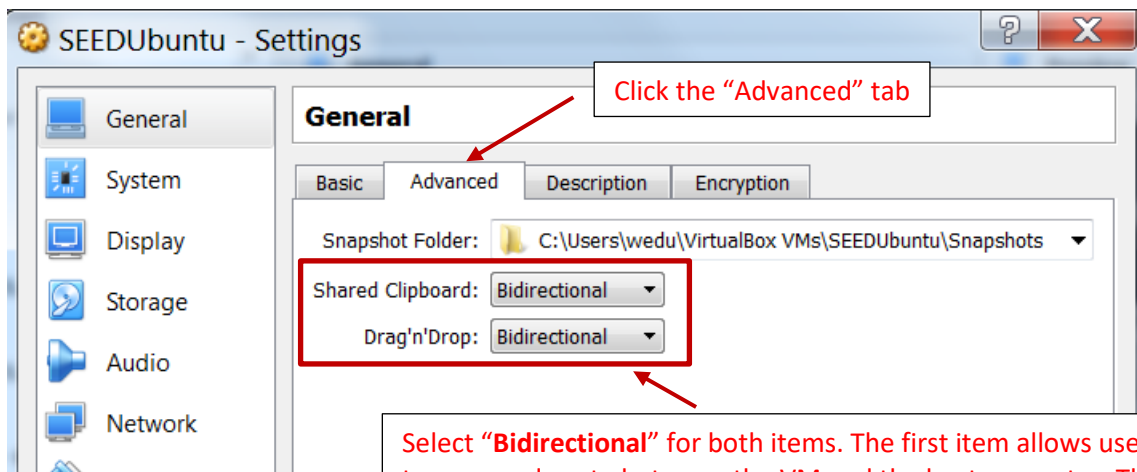
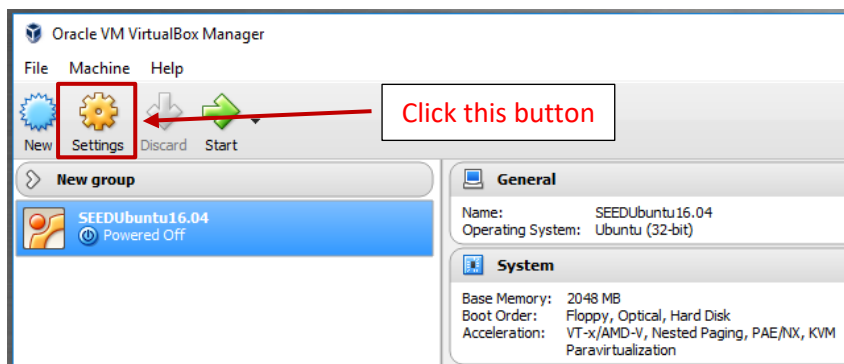
Change this entry

```
ddb.virtualHWVersion = "4"
ddb.adapterType="ide"
ddb.uuid.image="378e06a5-729a-47e4-9dc0-ff9c5529999c"
ddb.uuid.parent="00000000-0000-0000-0000-000000000000"
ddb.uuid.modification="6d1e05f4-851b-44b2-b294-db36918adc1c"
```

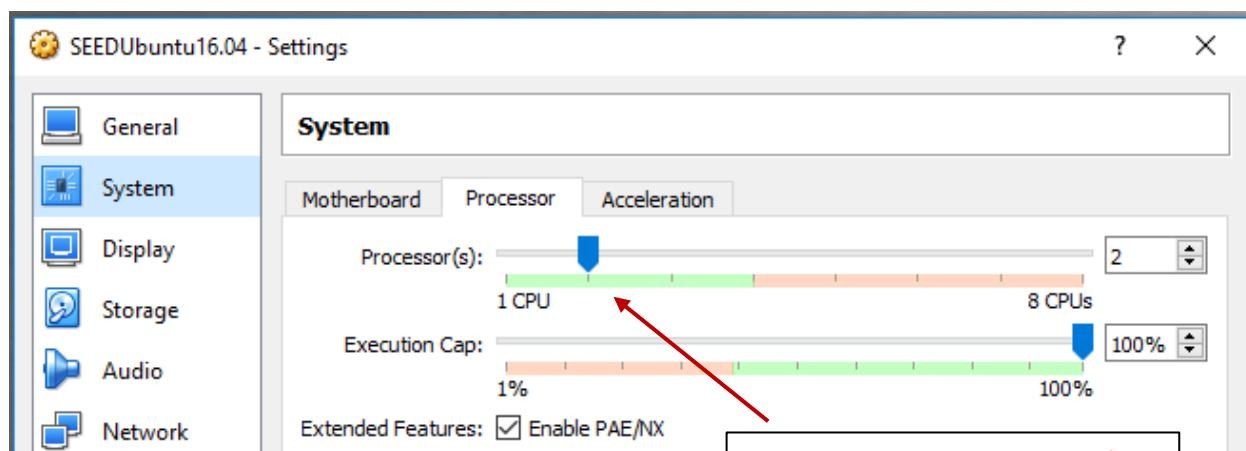
If there is no error (or after you fix the error), your VM will be created successfully.



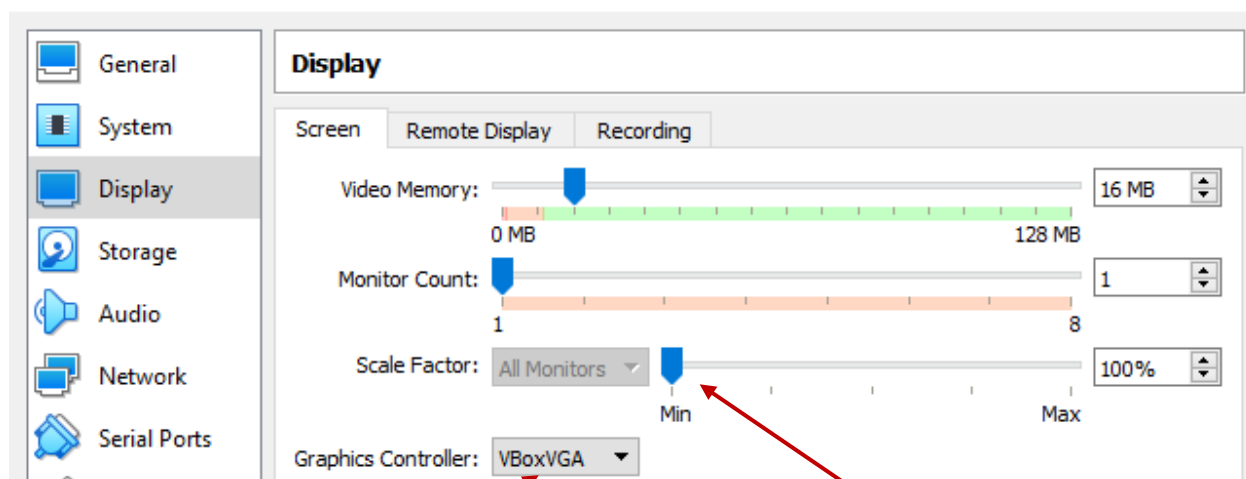
## Step 5: Configure the VM



Select "Bidirectional" for both items. The first item allows users to copy and paste between the VM and the host computer. The second item allows users to transfer files between the VM and the host computer using Drag'n Drop.



Assign more CPUs to this VM if you prefer. One is sufficient.



Make sure the **VBoxVGA** setting is selected.

If your computer screen has a very high resolution, your VM will look too small on the screen. You can adjust the scale factor to make it larger.

## Step 6: Start the VM

