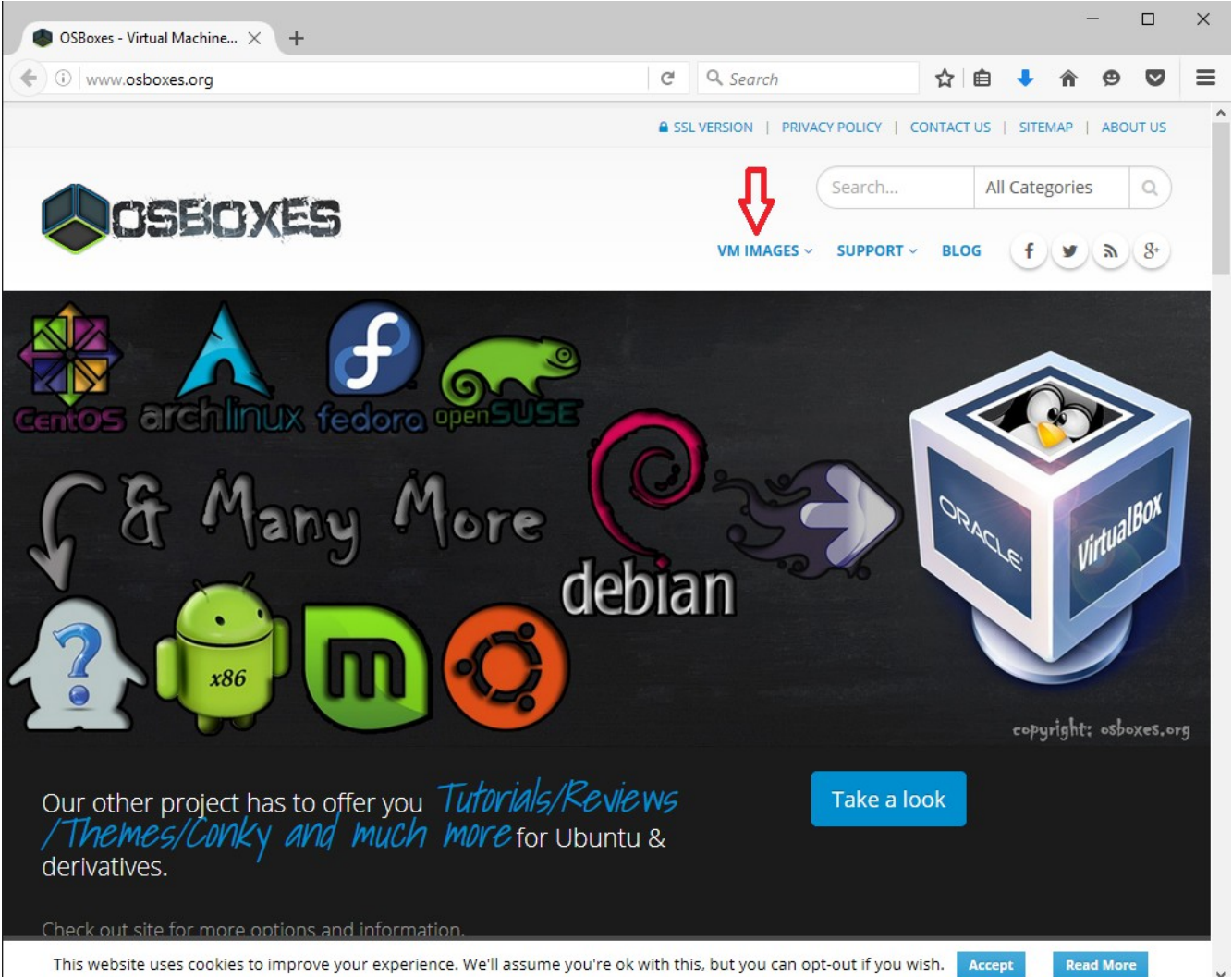


## How to install Ubuntu Linux in VirtualBox

Revised: 12-August-2016, David Walling

In our previous “How To”, we stepped through how to download and install Oracle VirtualBox on a Windows 10 host. This “How To” describes steps for downloading and installing an Ubuntu Linux virtual machine (VM) image as a guest OS to run in VirtualBox.

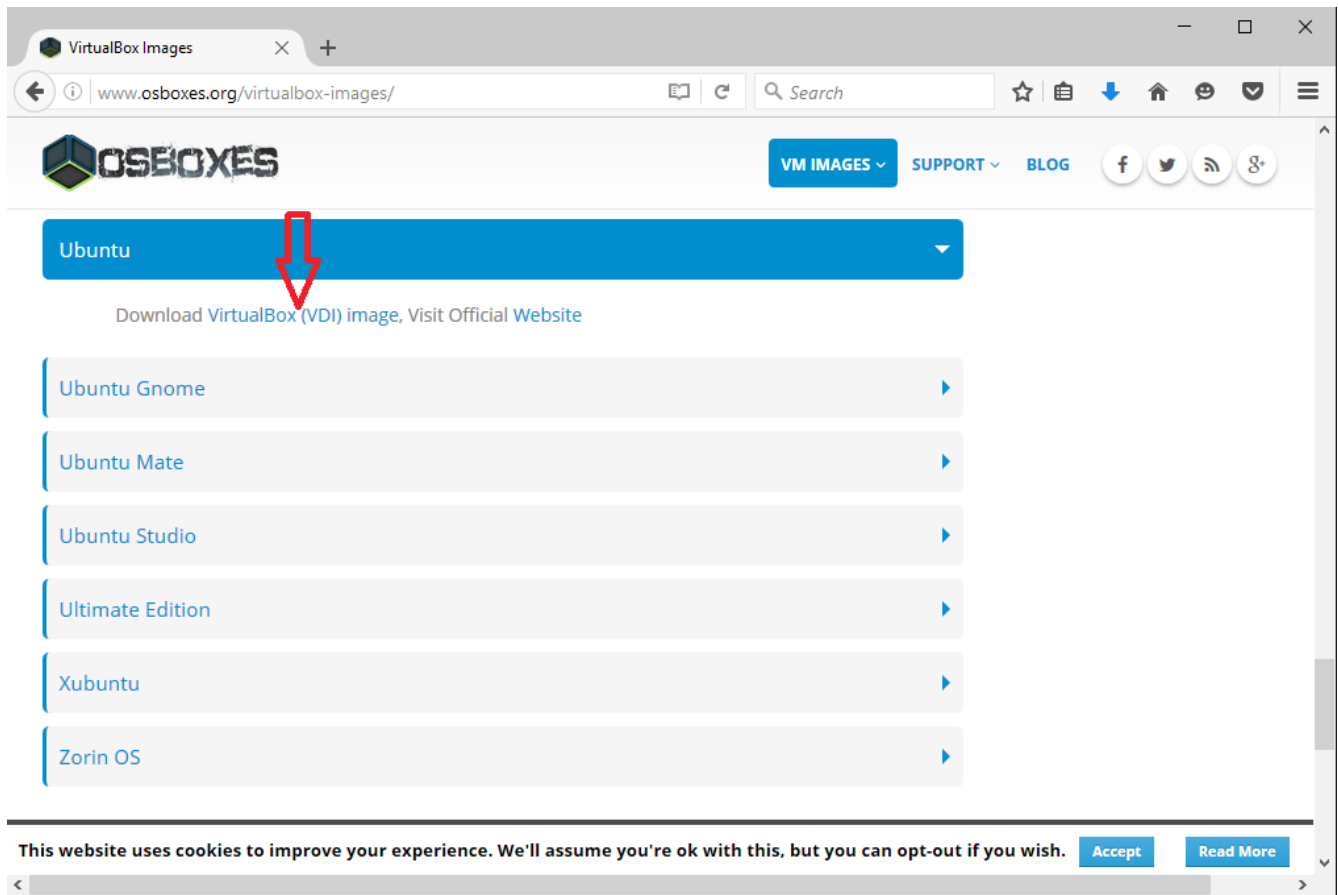
As of this writing, Ubuntu 16.04 Xenial is the current version. We will download a Virtual Disk Image (VDI) of Ubuntu 16.04 provided at the OSBoxes.org web-site, <http://www.osboxes.org>.



The screenshot shows a web browser window with the URL [www.osboxes.org](http://www.osboxes.org). The page features the OSBoxes logo, a search bar, and navigation links for VM IMAGES, SUPPORT, and BLOG. A large banner displays logos for CentOS, Arch Linux, Fedora, openSUSE, and Debian, along with an Android robot and a Linux logo. A 3D VirtualBox image is also present. A blue button labeled "Take a look" is visible. At the bottom, a cookie notice states: "This website uses cookies to improve your experience. We'll assume you're ok with this, but you can opt-out if you wish." with "Accept" and "Read More" buttons.

Click on the “VM IMAGES” drop-down menu and select “VirtualBox Images”

Scroll down to find the desired client operating system. In our case, we find and select “Ubuntu” and then click the link for “VirtualBox (VDI) Image.”



OSBoxes provides both VirtualBox and VMware images. VirtualBox images come in both 32 and 64-bit versions. Select the appropriate version for your hosting operating system. In our case, we select “VirtualBox (VDI) 64bit.” This download is approximately 1GB in size, so it may take a considerable time for the download to complete.



The screenshot shows the OSBoxes website interface for downloading Ubuntu 16.04 Xenial (Final Version) images. The page features a navigation bar with the OSBOXES logo and a search bar. Below the header, the main content area displays the title "Ubuntu 16.04 Xenial (Final Version)" and two tabs for "VirtualBox" and "VMware". Under the "VirtualBox" tab, there are two download options: "VirtualBox (VDI) 32bit" and "VirtualBox (VDI) 64bit". Both options include a "Download" button and a "Size: 1.0GB" label. The "VirtualBox (VDI) 64bit" option is highlighted with a red arrow. Below each option is a box containing the MD5 hash. To the right of the download options, there is a light blue box containing the following information: "Username: osboxes", "Password: osboxes.org", and "VB Guest Additions & VMware Tools: Not Installed".

VirtualBox VMware

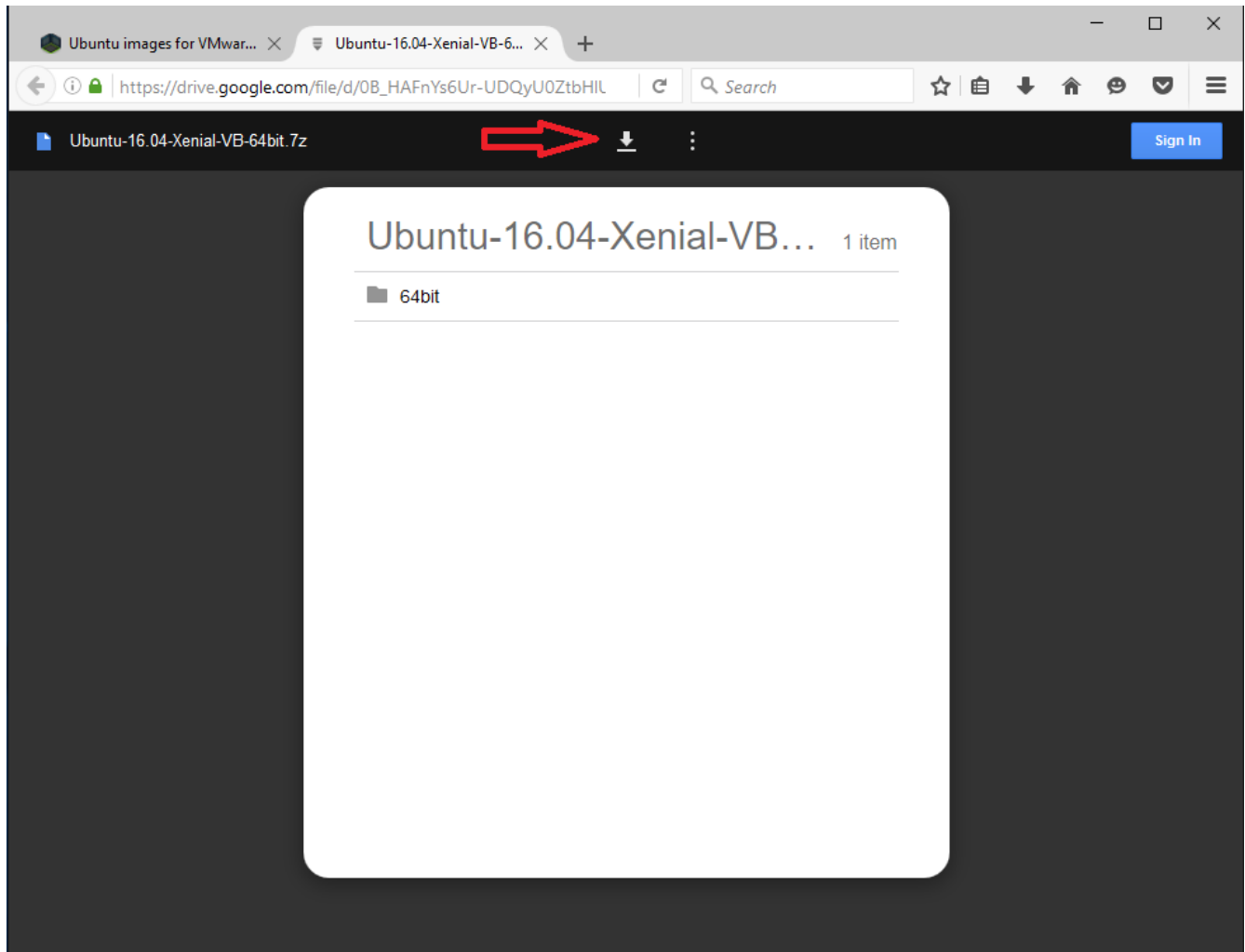
VirtualBox (VDI) 32bit [Download](#) Size: 1.0GB  
MD5: 53d4f234f9c976cf74c9d1b80fc649aa

VirtualBox (VDI) 64bit [Download](#) Size: 1.0GB  
MD5: 52e08e7a0ce228fa40ca4a47c69bbaf3

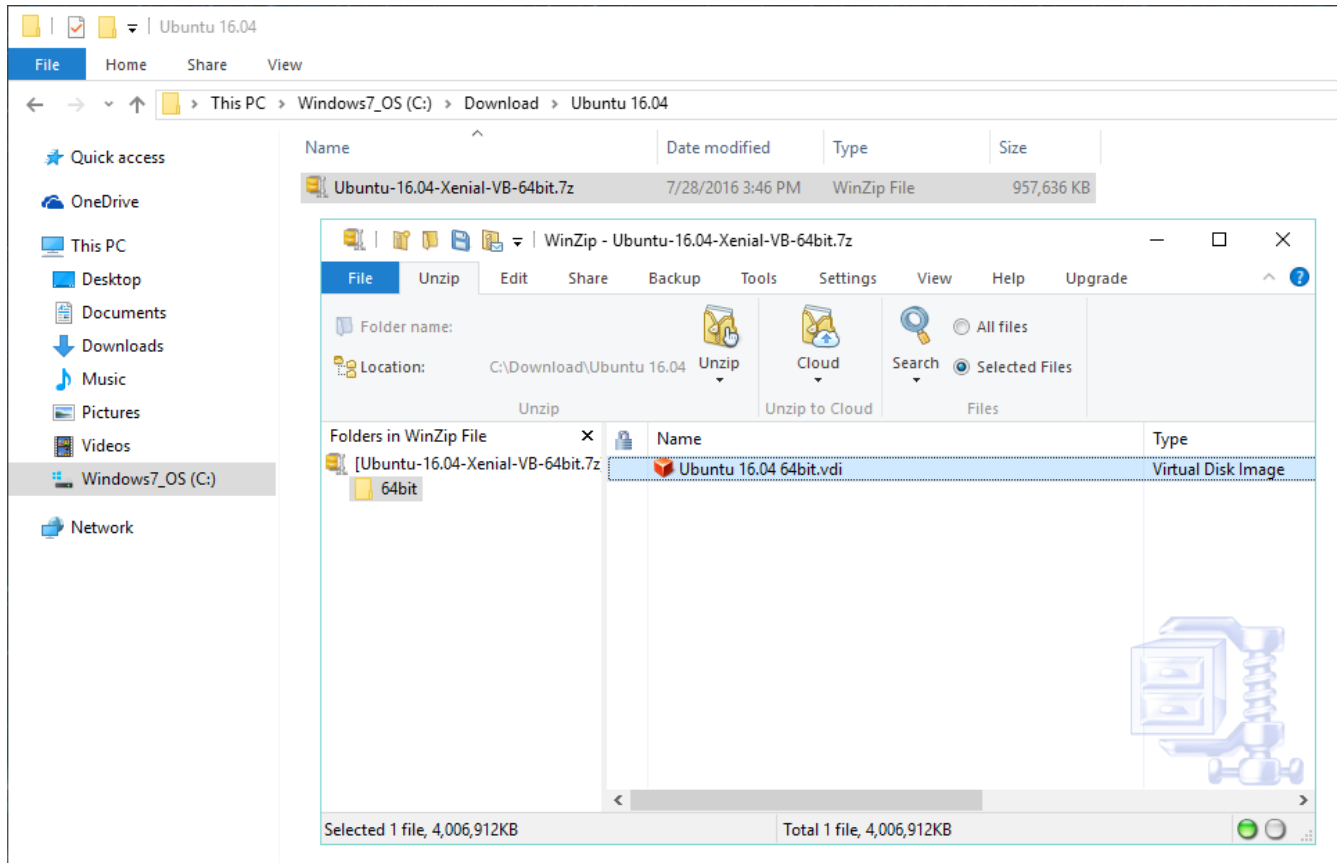
Username: osboxes  
Password: osboxes.org  
VB Guest Additions & VMware Tools: Not Installed

Note that the VM image is provided with a user “osboxes” and its password “osboxes.org” as shown. Also, this image does not include VB Guest Additions, but we will add those later in the next “How To.”

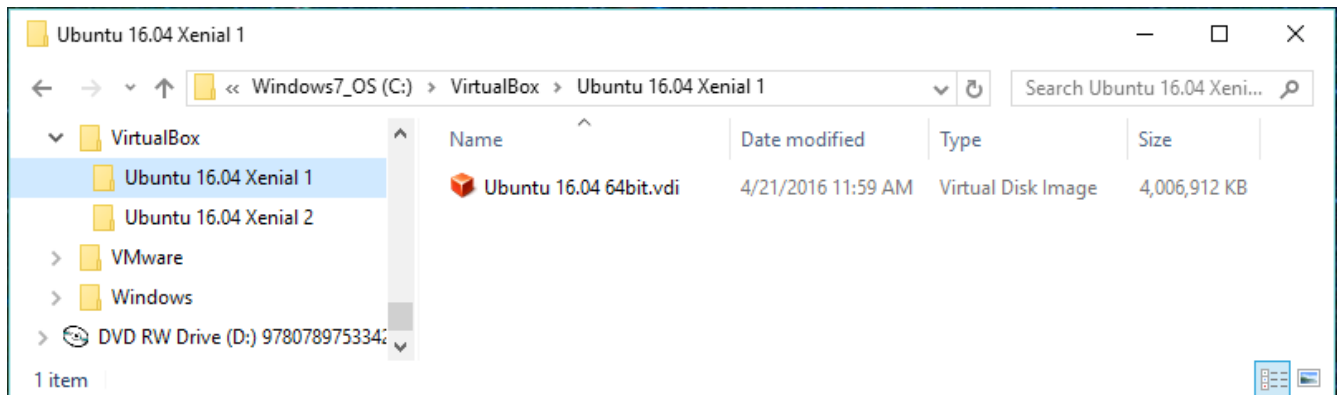
Clicking the Download link will take you to a Google Drive location where the compressed VDI image is available for download. Here, click the download icon (downward arrow) to start the download.



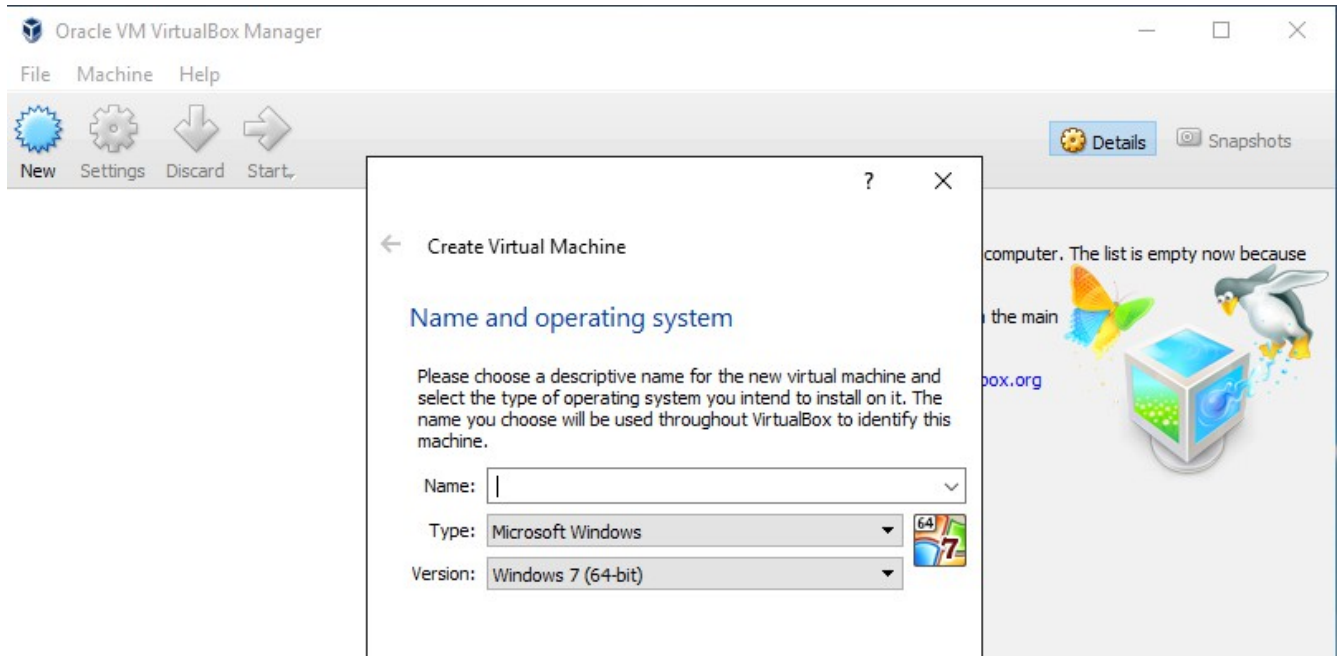
After downloading, the VDI will be stored in the 64bit folder inside the compressed (7-zip) file.



Drag the .vdi file to extract it into a location of your choosing. This will expand a default Virtual Disk Image file of about 3.82 GB in size.



Now we can add the Ubuntu 16.04 OSBoxes image into our VirtualBox environment. Launch VirtualBox (which you installed in the last “How To”) and click the “New” toolbar icon to open the Create Virtual Machine dialog.




Enter a name for the VM image and select the appropriate Type and Version. Note that VirtualBox may be able to accurately guess the Type and Version based on what you enter. Click “Next”.

← Create Virtual Machine

### Name and operating system

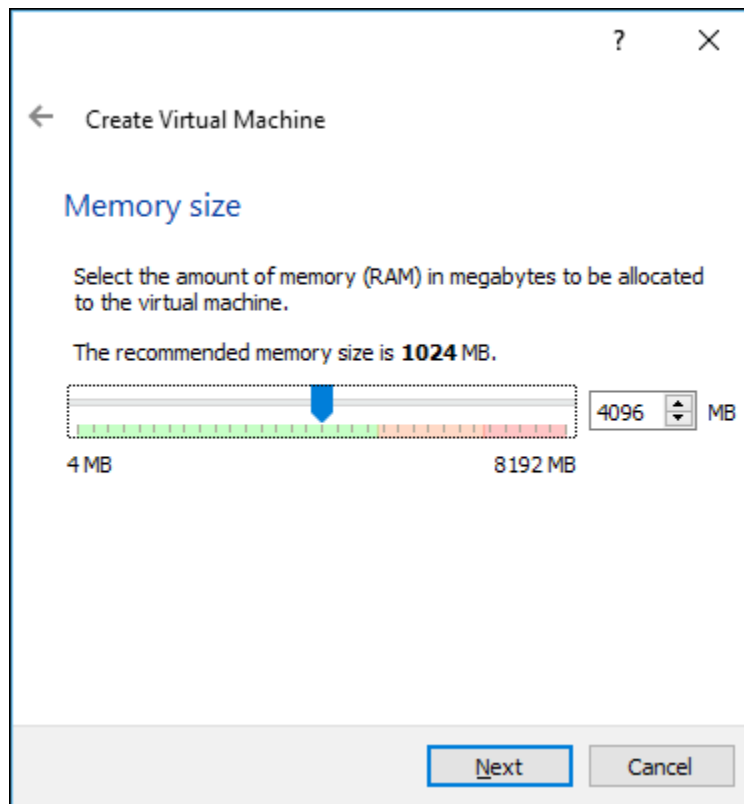
Please choose a descriptive name for the new virtual machine and select the type of operating system you intend to install on it. The name you choose will be used throughout VirtualBox to identify this machine.

Name:

Type:  

Version:

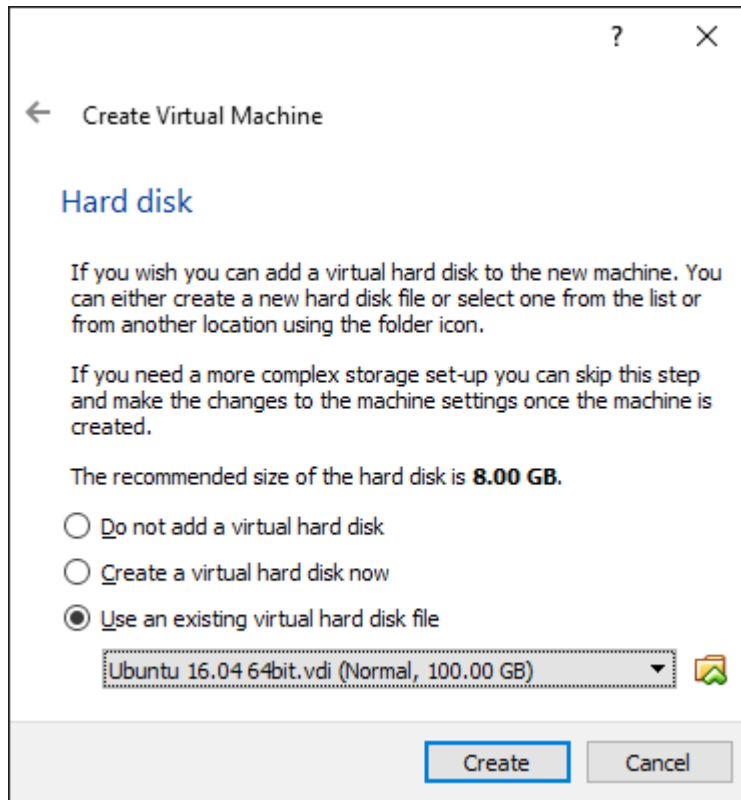
On the Memory configuration dialog, select an appropriate amount of RAM for the VM. In our case, we selected 4096MB.



Click Next to reach the Hard Disk dialog.

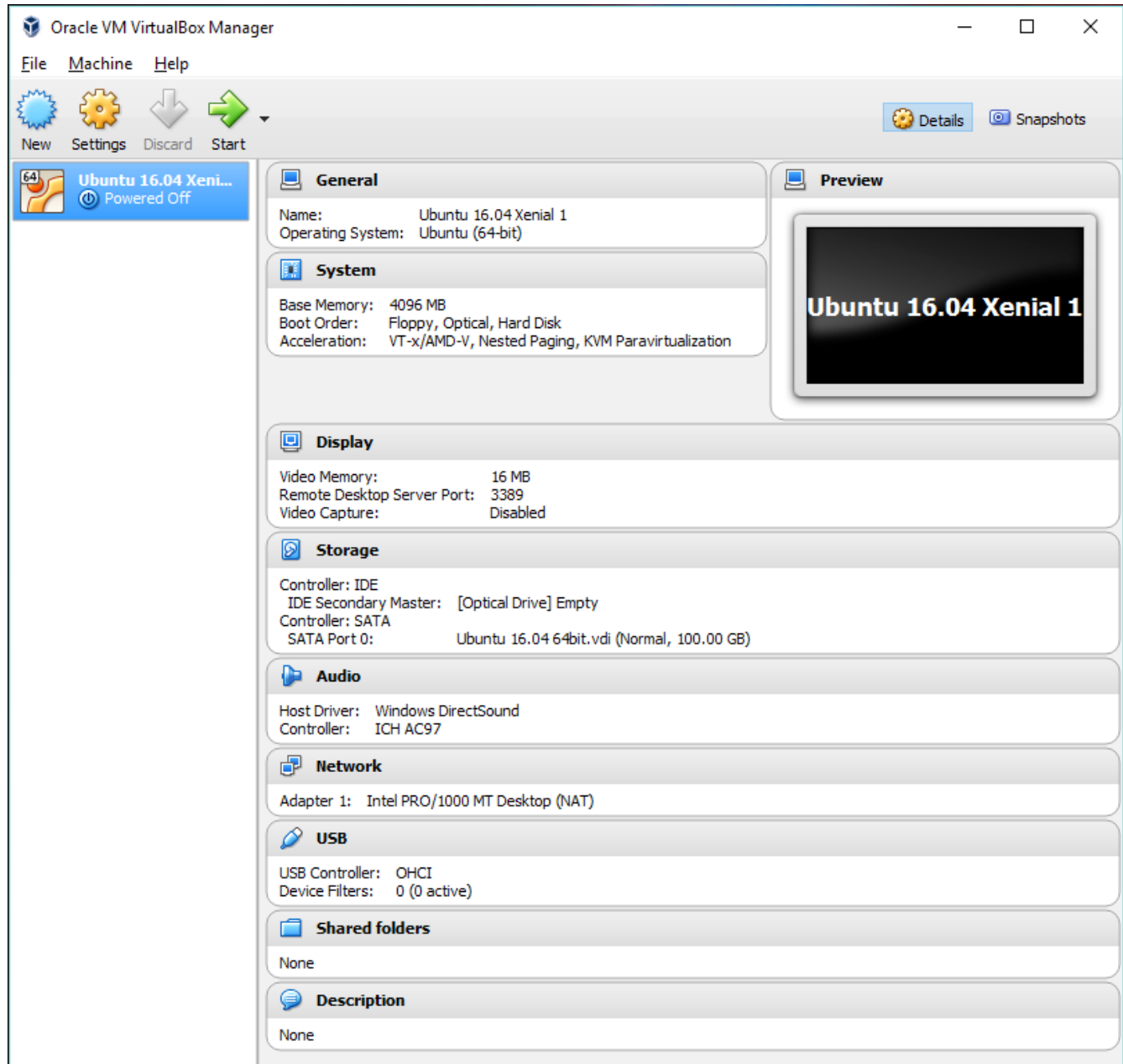


Here, we will use an existing virtual hard disk file that we downloaded in an earlier step. Use the folder icon to browse and locate the Ubuntu 16.04 VDI image we downloaded from OsBoxes.



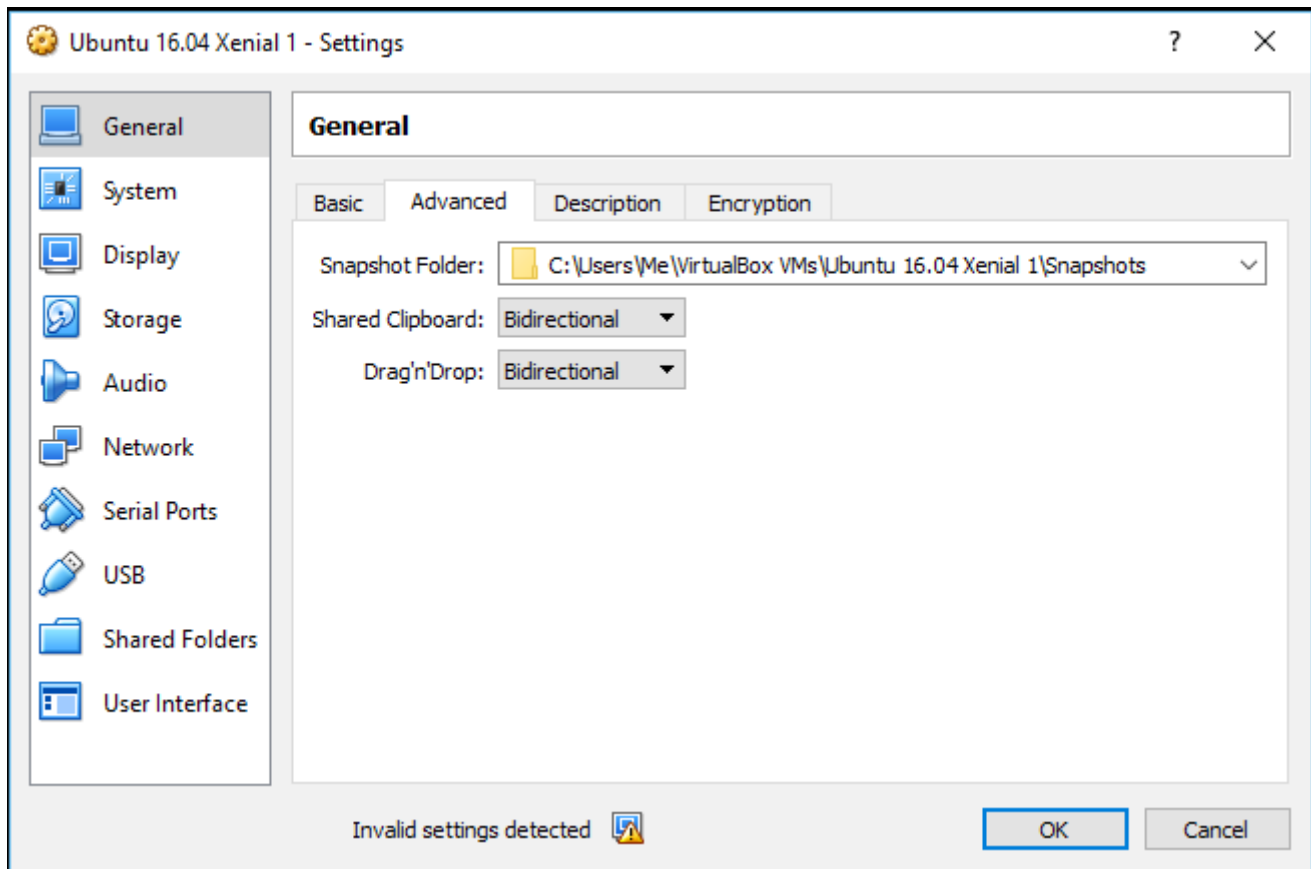
After clicking "Create", the VM definition is created using default values. We will change some of these settings from their default values.

After adding the VM, the Manager window is redisplayed with our new VM selected. Note that details of our configuration appear in the right panel.

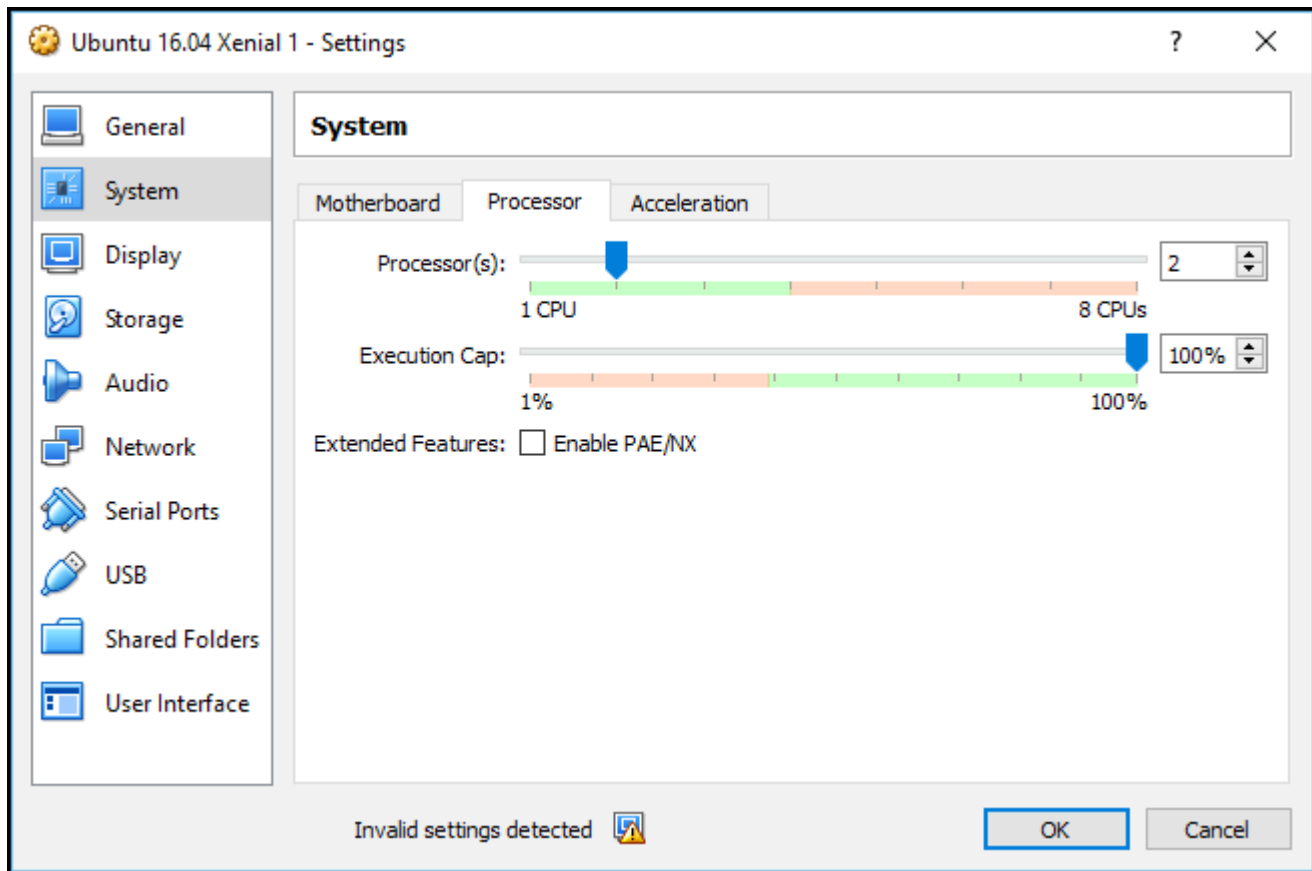


Click on the “Settings” toolbar item with the gear icon to open the settings dialog.

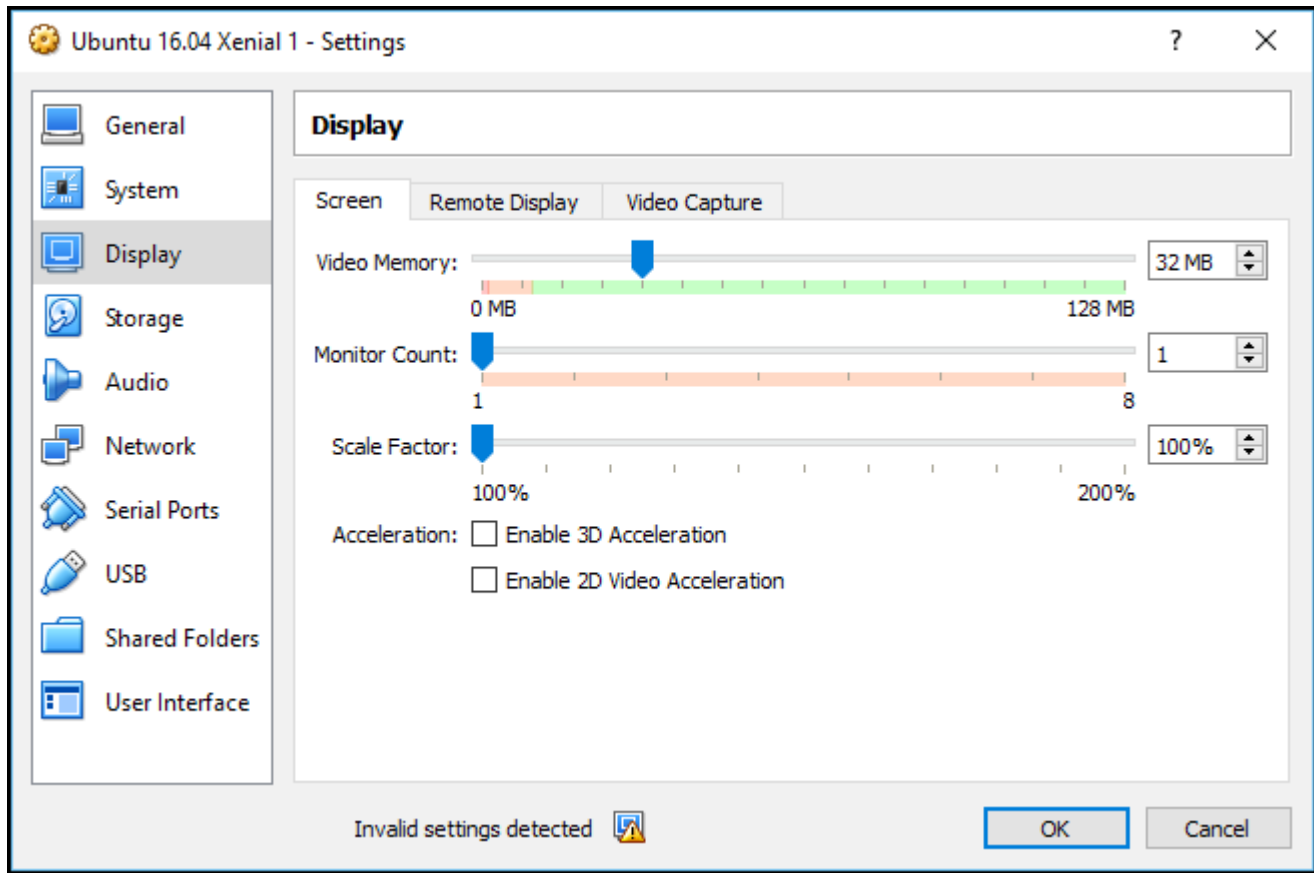
First, on the “General” settings dialog, on the “Advanced” tab, change the “Shared Clipboard” and “Drag'n'Drop” settings to “Bidirectional”. This will make it much simpler to cut and paste values between windows across Guest and Host operating systems and vice-versa.



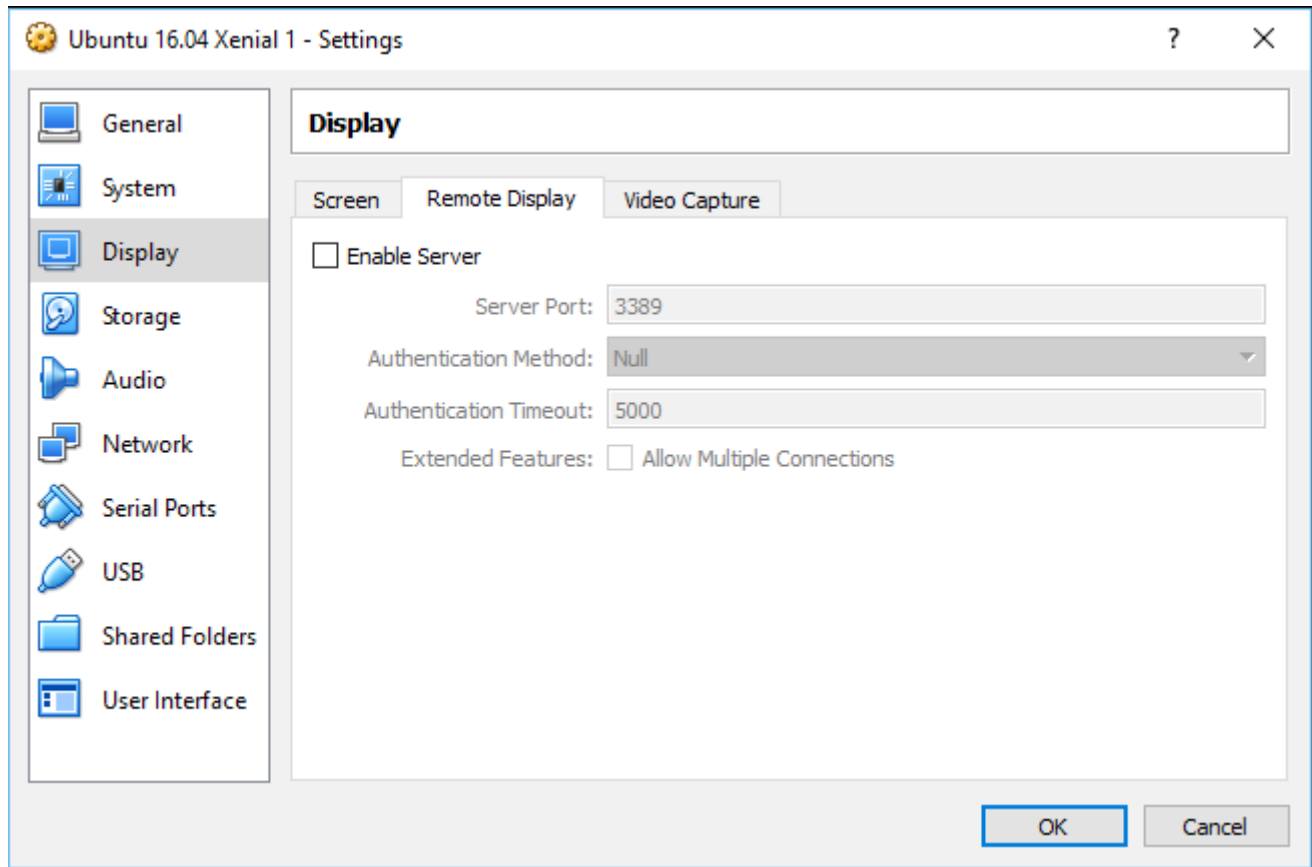
Secondly, if it is appropriate to your host operating environment, change the number of Processors from 1 to higher setting. In this example, I have set the number of processors that can support the VM to 2.



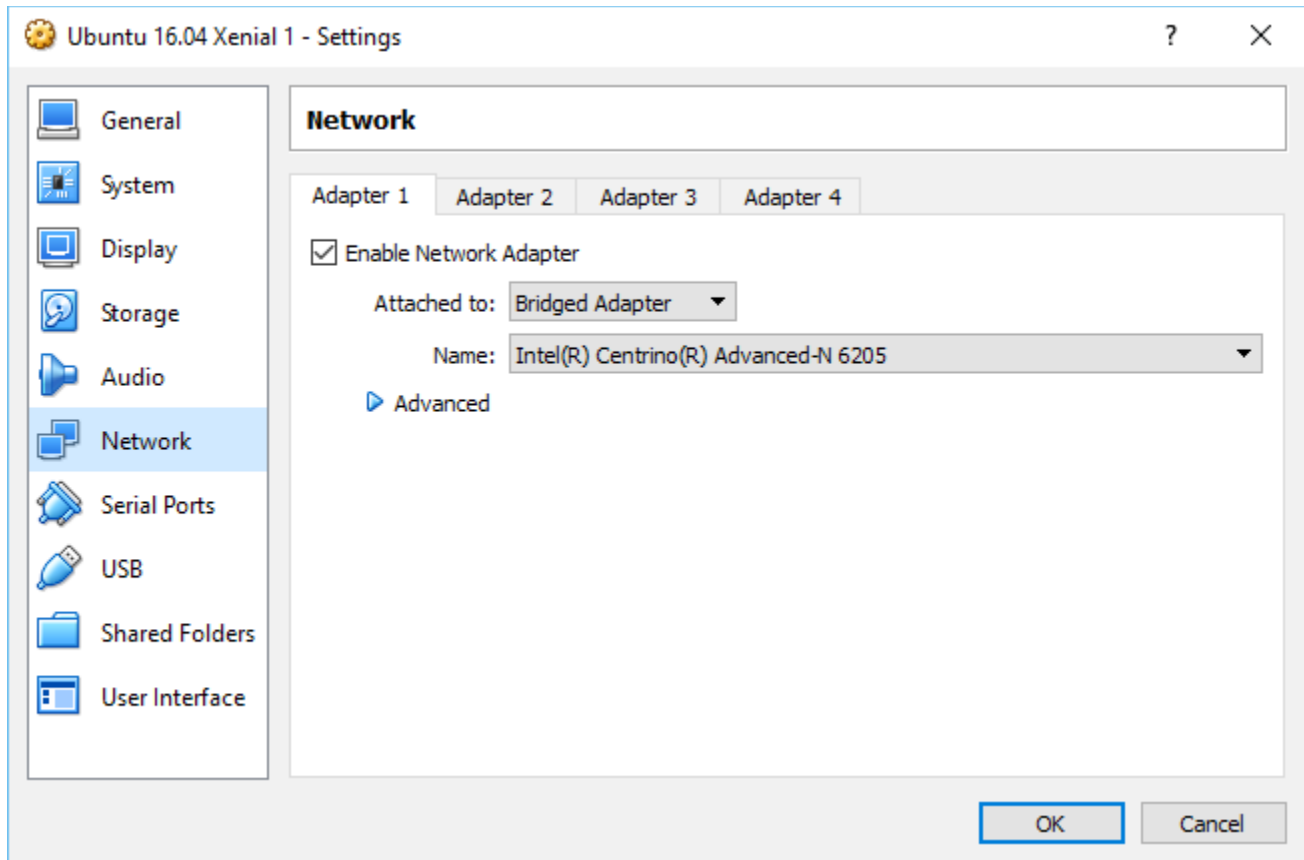
Next, on the “Display” dialong, on the “Screen” tab, I have updated the Video Memory setting from 16 MB to 32 MB. Choose a memory setting appropriate for your environment.



Next, still on the “Display” dialog, but on the “Remote Display” tab, uncheck the “Enable Server” checkbox. This will relieve the settings dialogs of the “Invalid settings detected” error that appeared at the bottom of the dialogs.



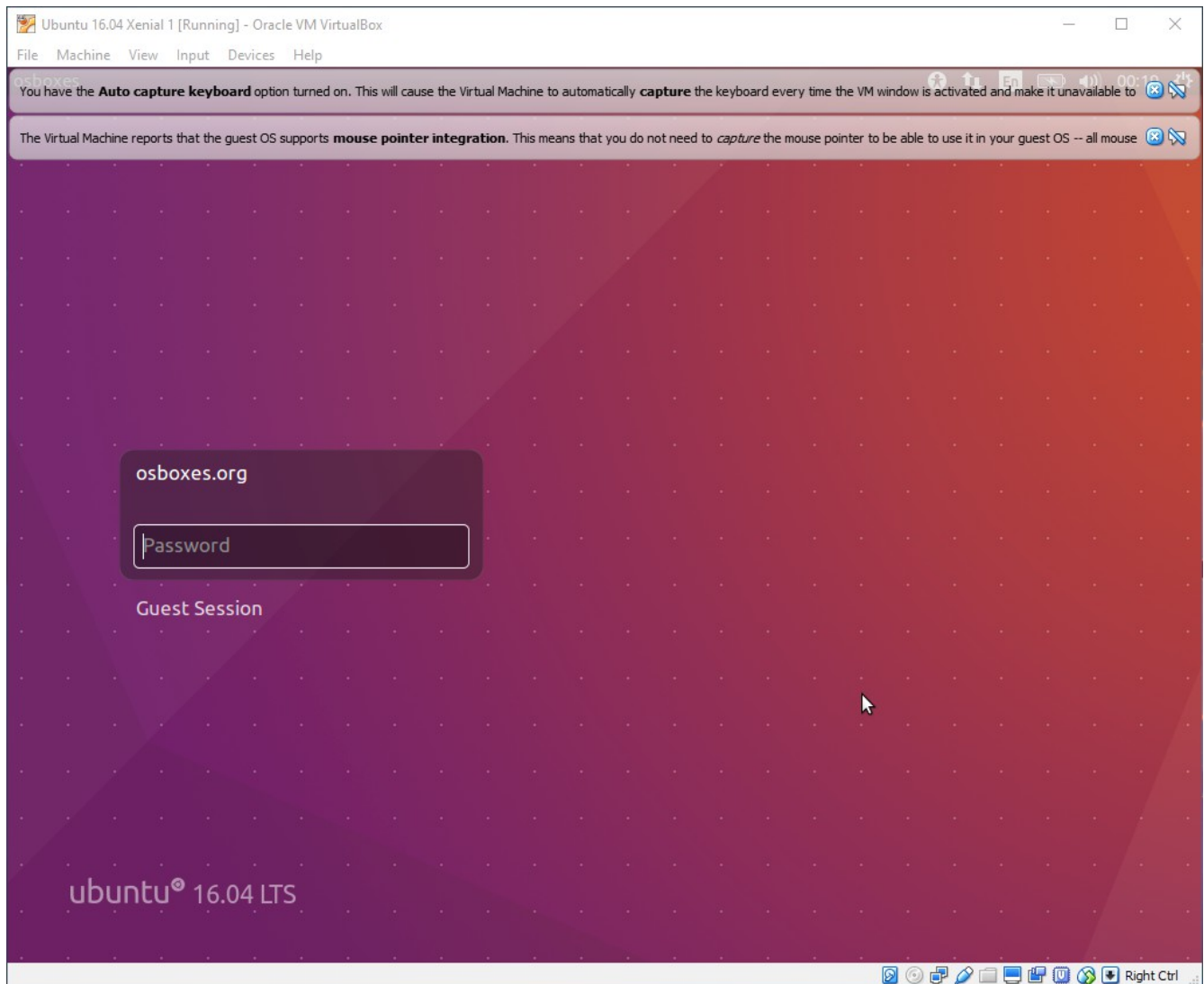
Now, on the “Network” setup dialog, on the “Adapter 1” tab, change the “Attached to:” drop-down menu selection from “NAT” to “Bridged Adapter”. Make sure that the “Name:” drop-down menu selection is the appropriate interface for connecting the VM to the network. In our example, our hosting operating system, Windows 10, is using a wireless Internet connection. Your settings may differ.



Click “Ok” to close the Settings dialog.

Now we can click “Start” in VirtualBox Manager window to start our Ubuntu VM. The VM window opens to display the Ubuntu logon screen.

When you start the Ubuntu VM, two semi-transparent messages might appear indicating that auto-capture keyboard and mouse pointer integration options are in effect. Click on the message text to read more about these options. If you do not want to see these messages again, click the right-most icon, the text bubble with a blue strikethrough, and OsBoxes will not display them again.

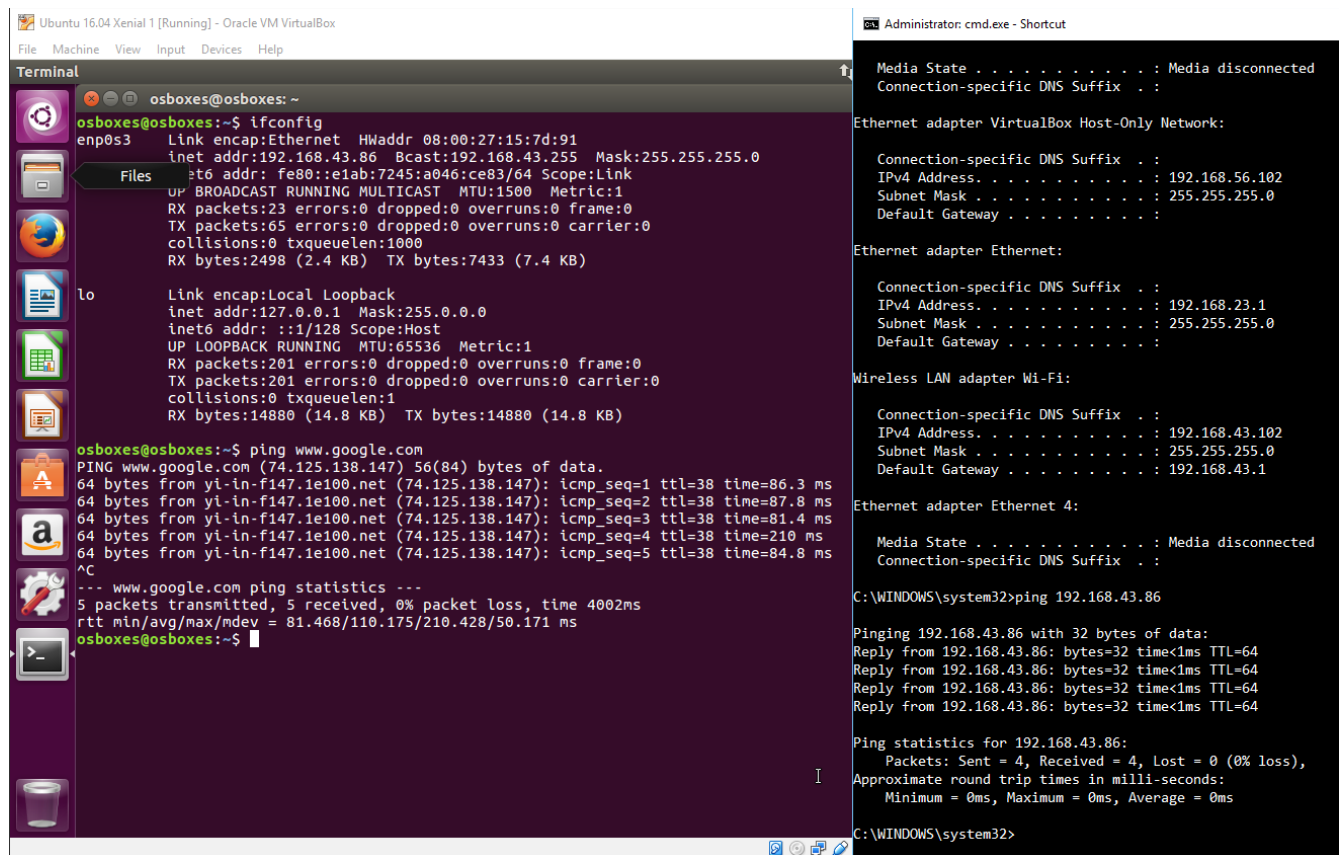


Do not be confused that the “osboxes” user is prompted to you as “osboxes.org”. The user name is “osboxes” and the password is “osboxes.org”.

Note: the Guest OS screen size has limited options right now. After we install VirtualBox Guest Additions later, we will be able to resize the display to the entire size of our display device.



Once logged on, right-click the mouse in the open work space and select “Open Terminal.” When a terminal window opens, enter the “ifconfig” command to display the network adapter settings. Note the IP address of the enp0s3 interface. It should be within the network of the interface you selected when you updated the adapter settings on the Host (Windows) OS. You can verify this by comparing to the output of “ipconfig” on Windows. From your Host OS, you should be able to ping your VM and get a response. From Ubuntu, you should be able to ping a domain name on the public Internet, have DNS resolve this to an IP address and get a response.



Your Ubuntu 16.04 Guest OS is installed in VirtualBox and networked to the Internet through your Host OS! You can now apply OS updates, configure and secure your environment.

In the next “How To” in this series, we will use the apt-get utility to update our Ubuntu VM with the latest packages.