Lab - Creating a Virtual Install of Server 2016 Using VirtualBox

Overview

In this lab, students will create a virtual install of Server 2016 with GUI using VirtualBox. This lab is designed to run on a MAC, Windows 7 64 bit, Windows 8/8.1 64 bit or Windows 10. The latest version of VirtualBox Player was used in confirming this lab as working.

The student should read the lab in its entirety before beginning the install.

System requirements for creating a virtual install of Server 2016 using VirtualBox.

Windows Server 2016 as a 64-bit operating system. This lab is built using a 64-bit hardware system.

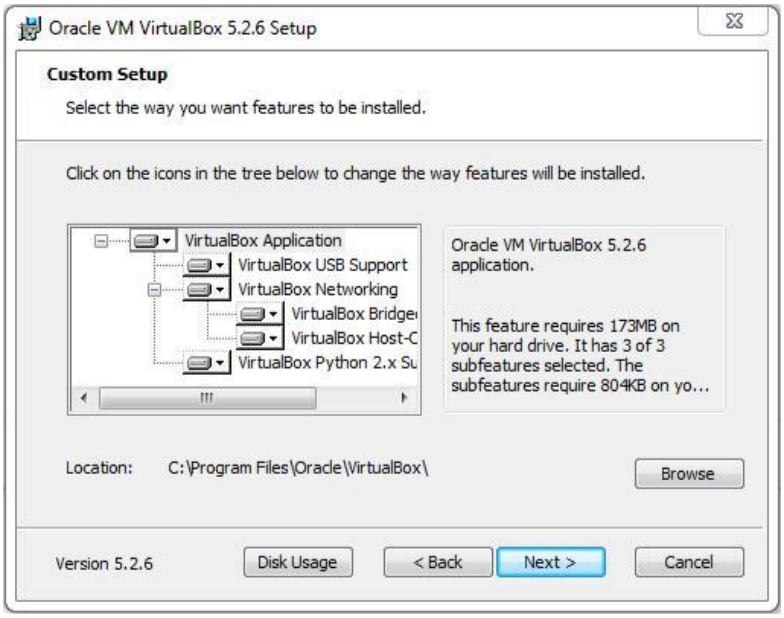
You can get a free copy of VirtualBox by using this link Download VirtualBox.

Begin the Lab!

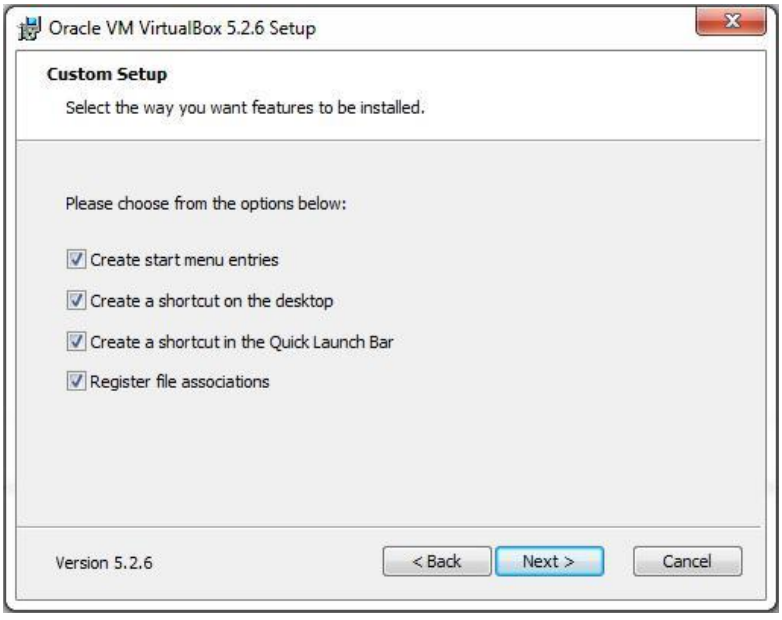
Once you've downloaded VirtualBox, you can browse to the saved download location and run the installer. In this lab, I demonstrate installing VirtualBox, Version 5.2.8 but regardless of the version, the installation wizard remains intuitive.

On the opening screen, click next.

On the next screen, accept the defaults and click next.

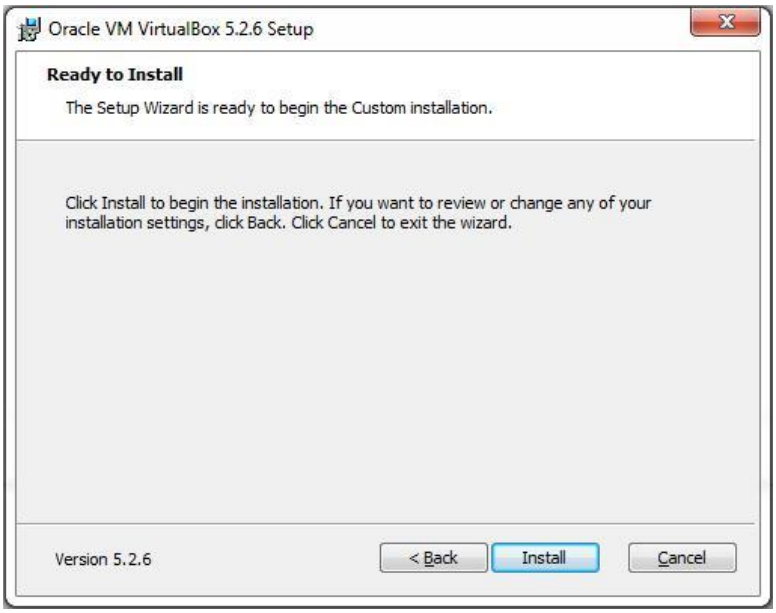


On the next screen, accept the defaults and click next.

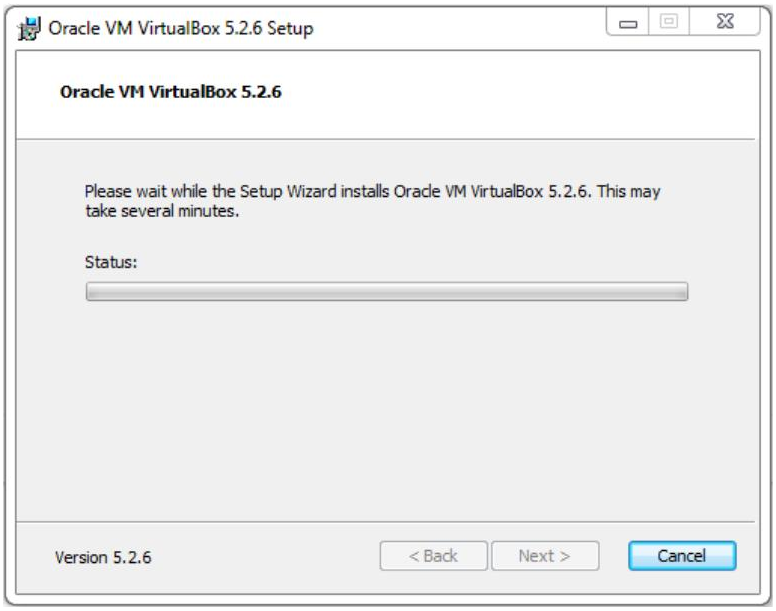


On the next screen, accept the warning and click Yes.

On the Ready to Install screen, click the install button.



The installation begins.



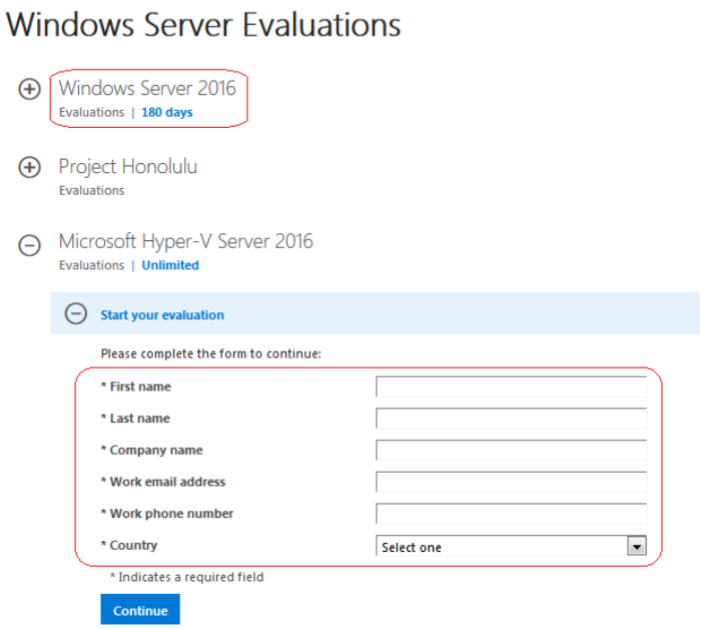
On the finish screen, click the finish button and if prompted, restart you host machine.

Installing Server 2016 with Desktop Experience (GUI)

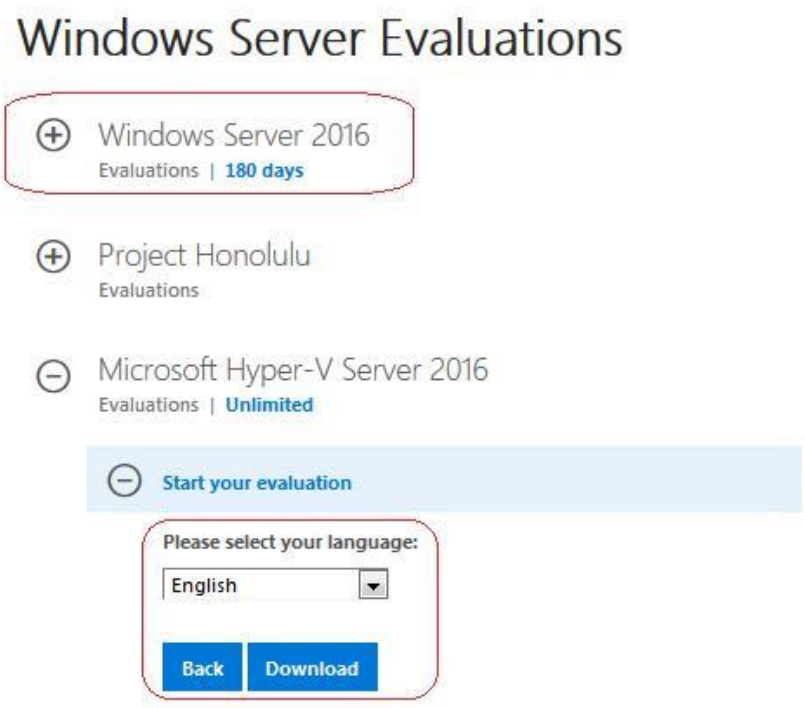
In this next part of the lab, we begin the process of creating a virtual machine of Server 2016.

We will first need to download an ISO image of Server 2016 Standard Edition and save it to a location on our machine.

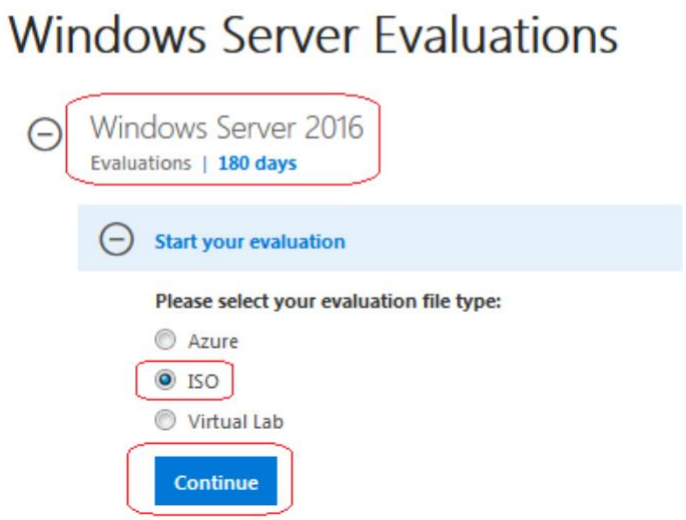
Download direct from Microsoft: Server 2016 ISO image



Next page…. select your language.



Select Windows Server 2016 180-day evaluation and that your download type is ISO.

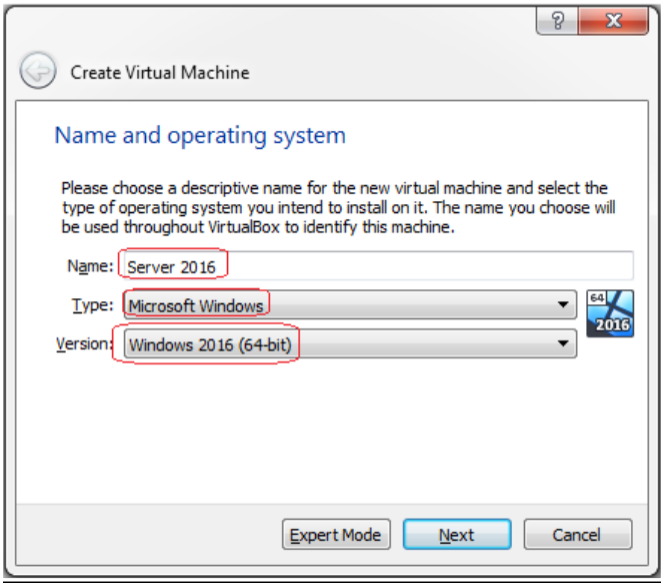


Once you have completed the download of the ISO image for Server 2016 standard, open VirtualBox and begin creating a virtual install of Server 2016.

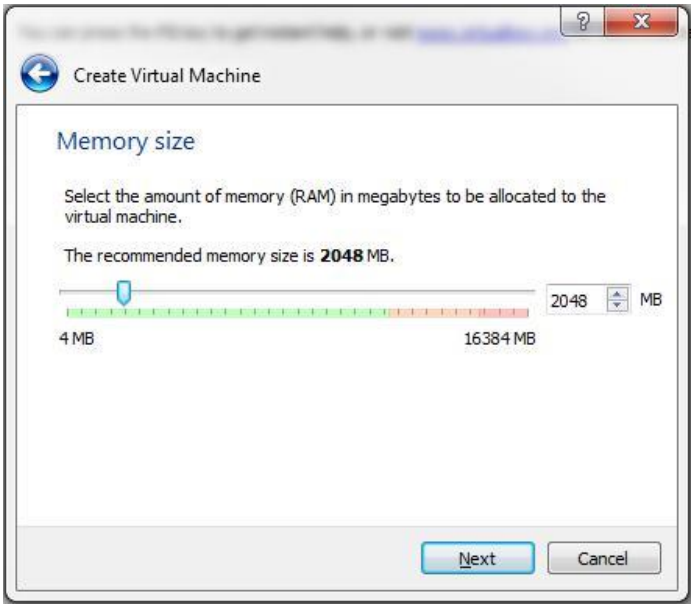
Begin the lab!

To begin the 2016 creation process, open VirtualBox and from the upper left corner, click on the New button.

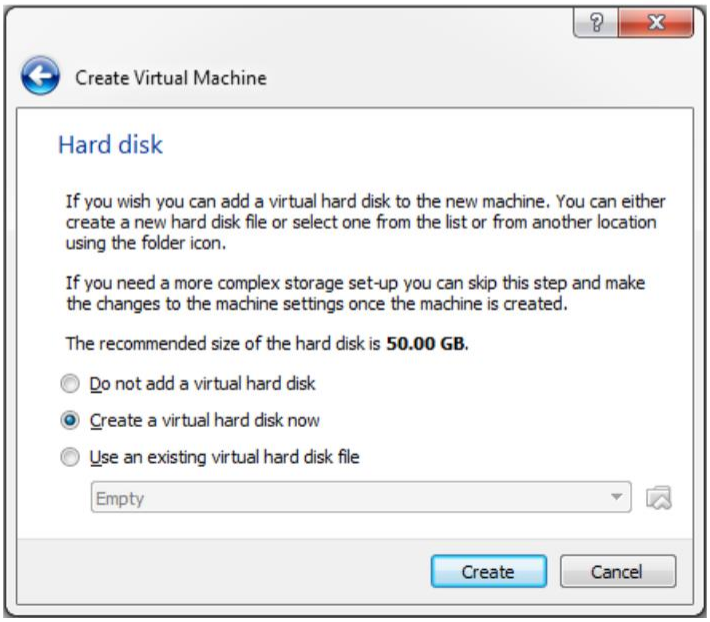
This launched the Create Virtual Machine Wizard.



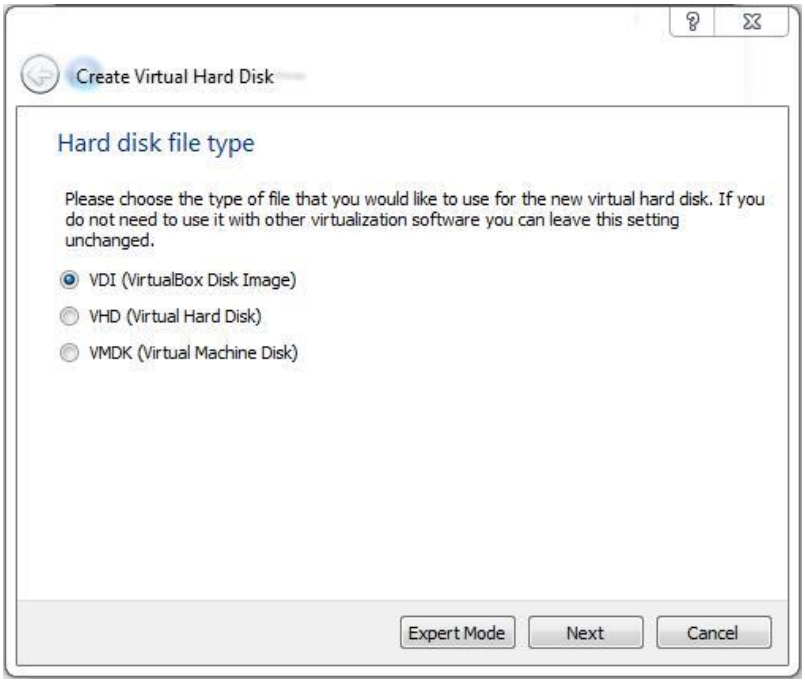
On the next window, accept the default of 2014 MB of RAM. Click next.



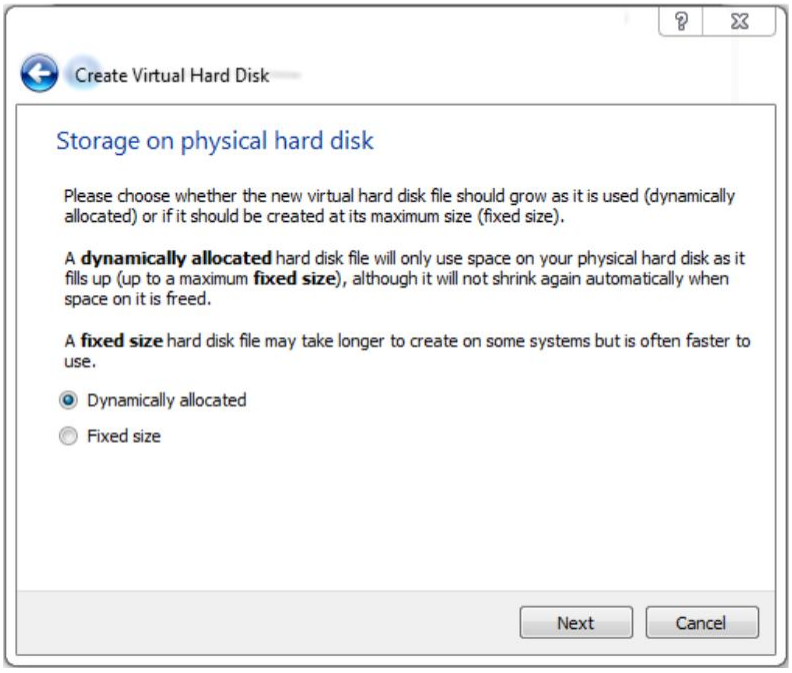
On the next screen, accept the default to **create a virtual hard disk now**. Click create.



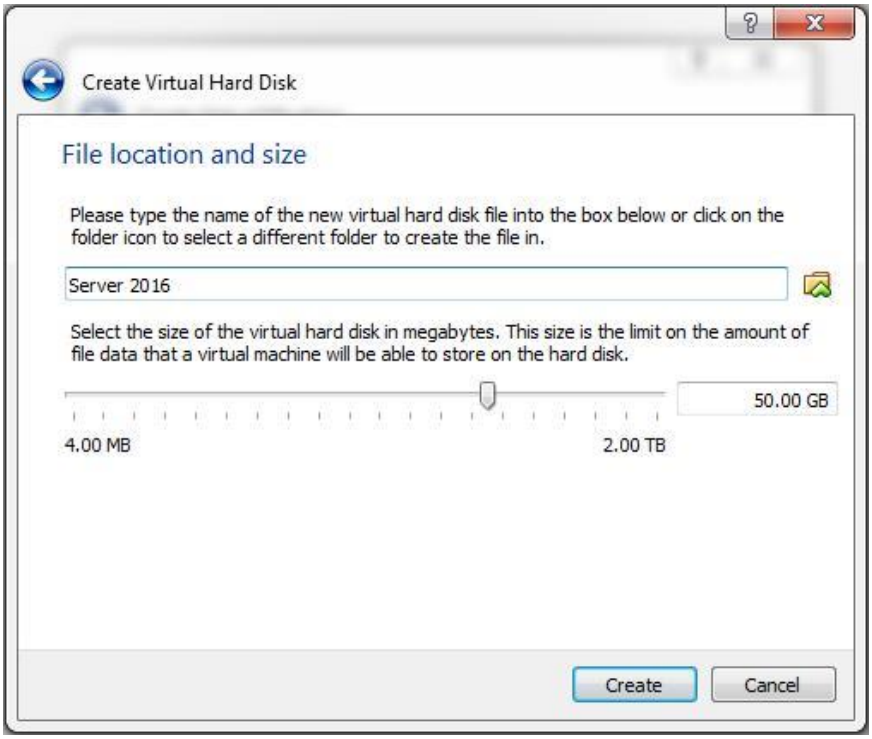
Accept the default for the hard disk type as VDI. Click next.



On the next screen, accept the default for the storage on the physical hard disk to be dynamically allocated.

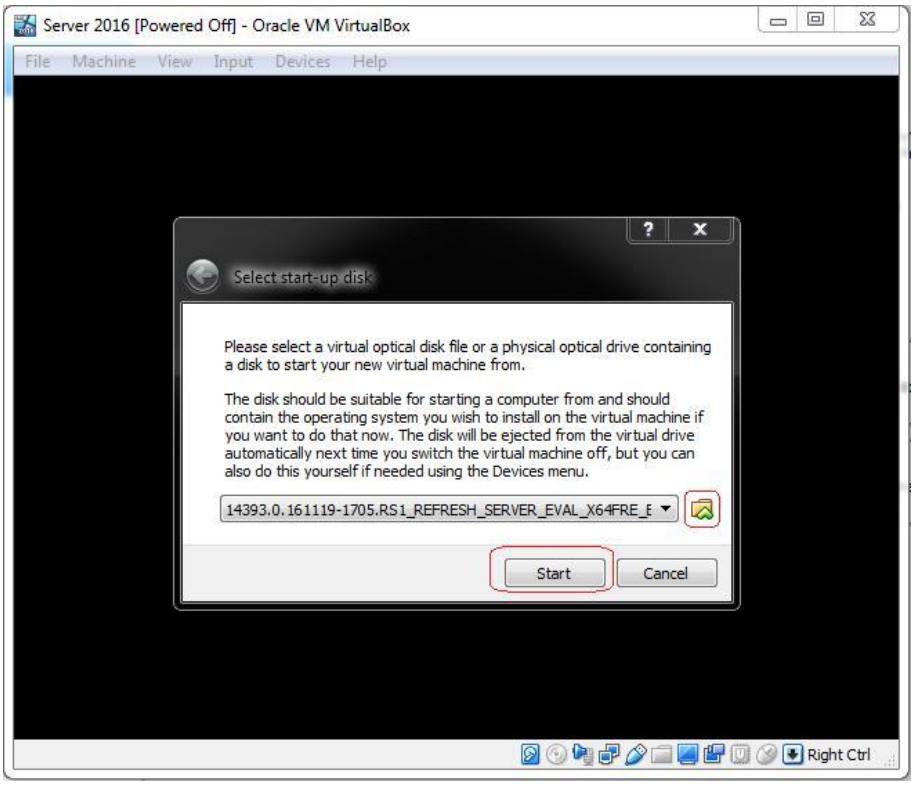


On the next screen, accept the default for the file location and size of 50 GB. Click create.

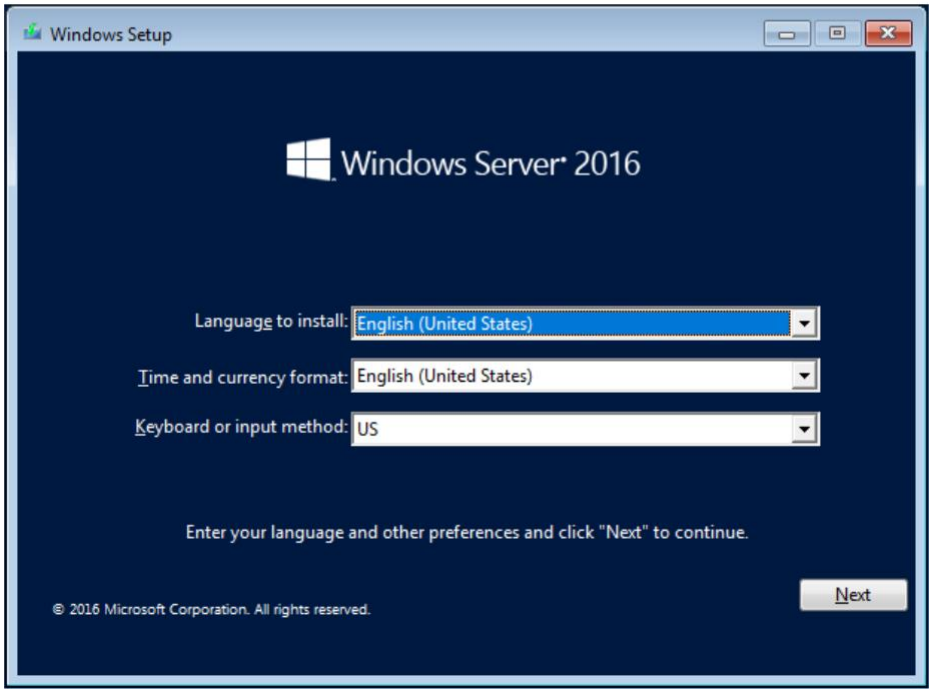


From the left window pane, ensure your disk for Server 2012 Full Install is highlighted and from the grey taskbar, click on the start arrow.

From the select Start-up Disk screen, click on the folder browse button and browse to the download location for your ISO image of Server 2016. Double-click the ISO image and click the Start button.

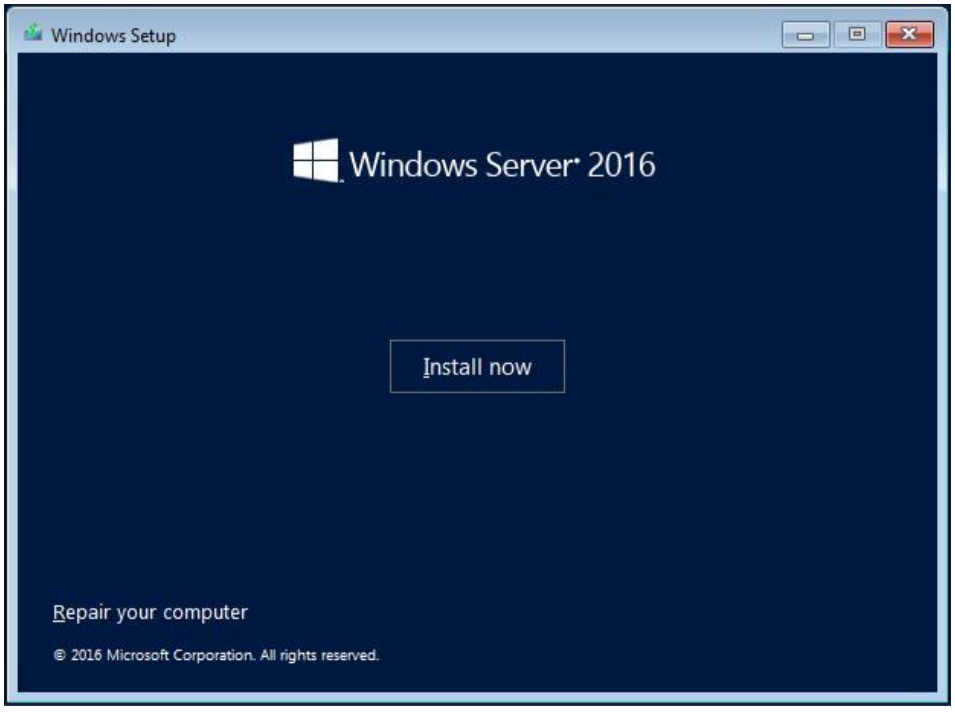


Step 9: VirtualBox begins the install.



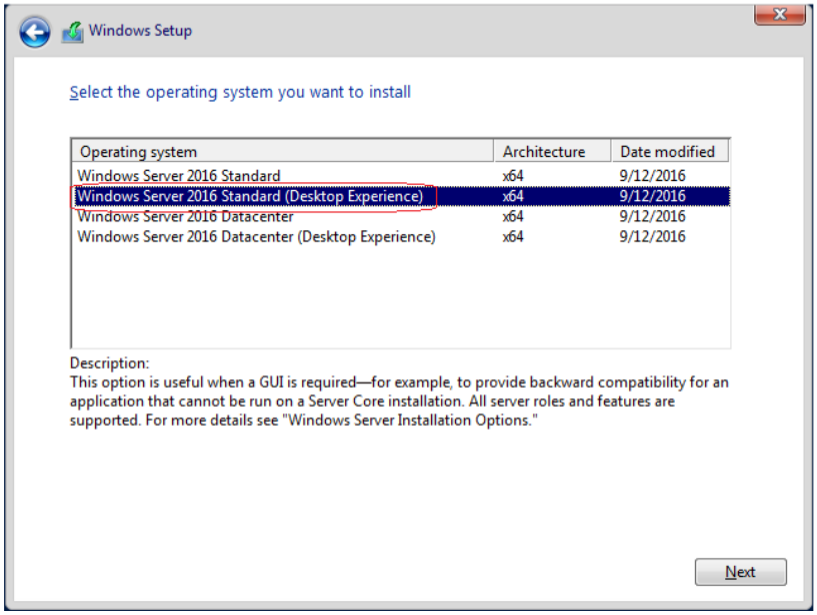
15. Click on Next to start the Windows Server 2016 installation.

Click on Install now

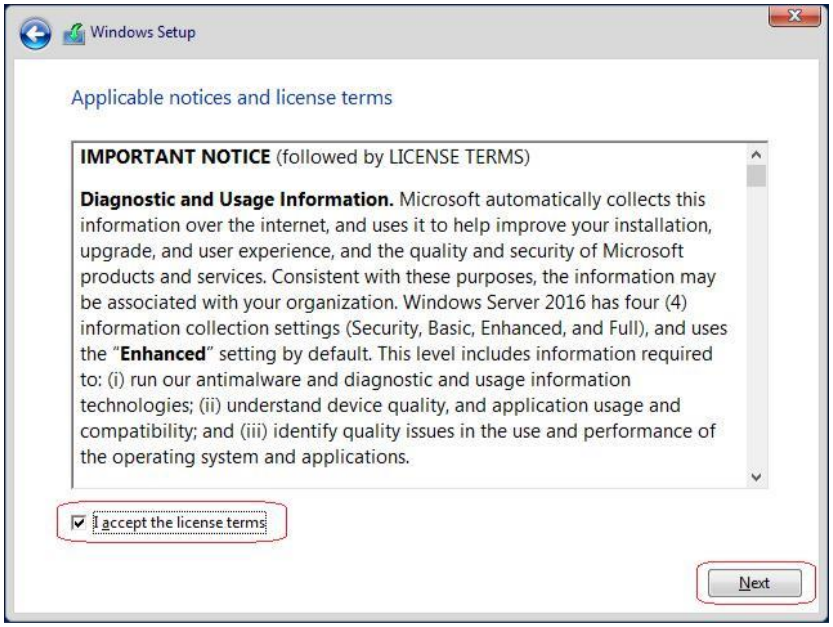


On the next screen, click, ‘I don’t have a product key’ to start your 180-day evaluation of Server 2016.

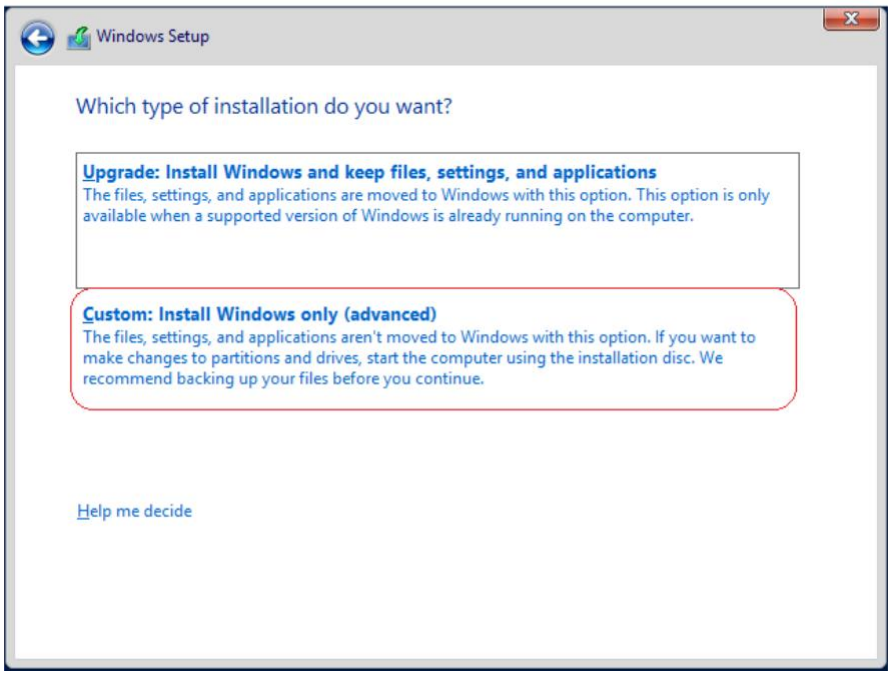
16. Select the operating system that you wish to install. Regardless if you install the Server 2016 Datacenter or the 2012 R2 Standard version, you want the installing package that includes the Desktop Experience. Otherwise, you end up with just the Server 2012 Core and no GUI.
Datacenter can handle more RAM and CPU options, but they are identical operating systems. Students may use either for their labs.



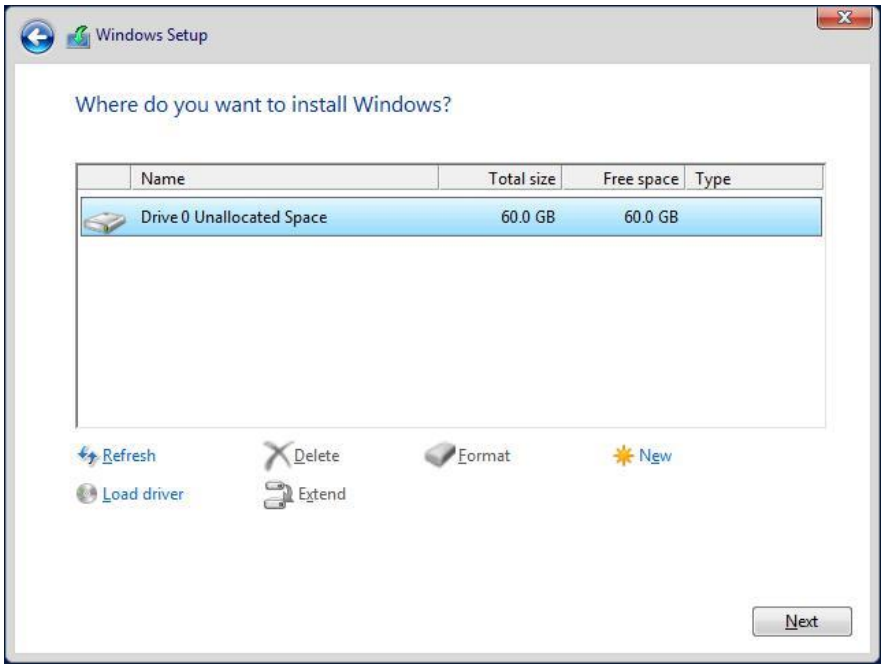
17. Accept the license agreement.



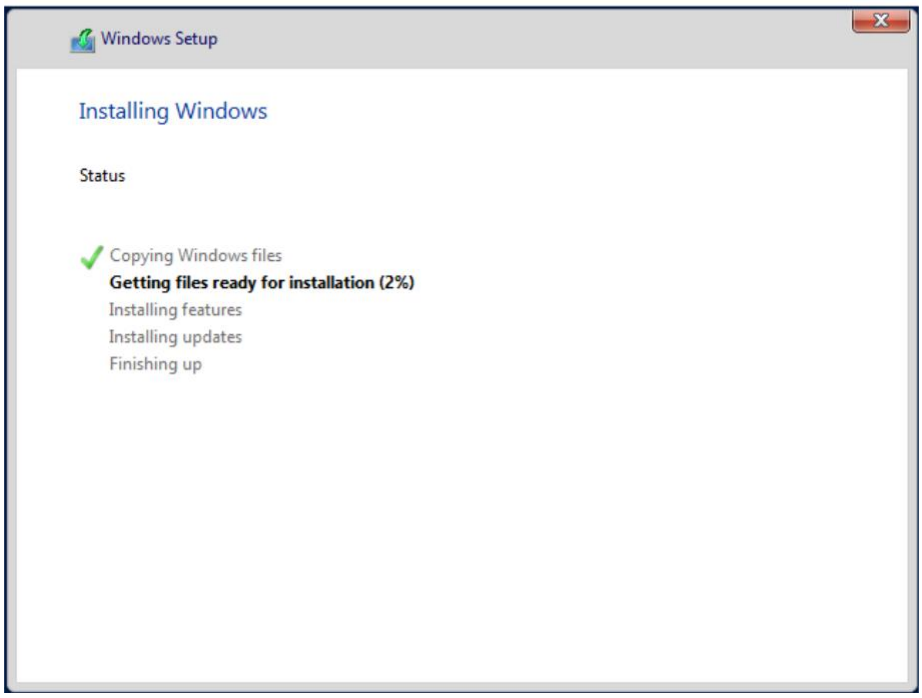
18. Select Custom Install Windows only (advanced).



19. Nothing to do here but click Next.

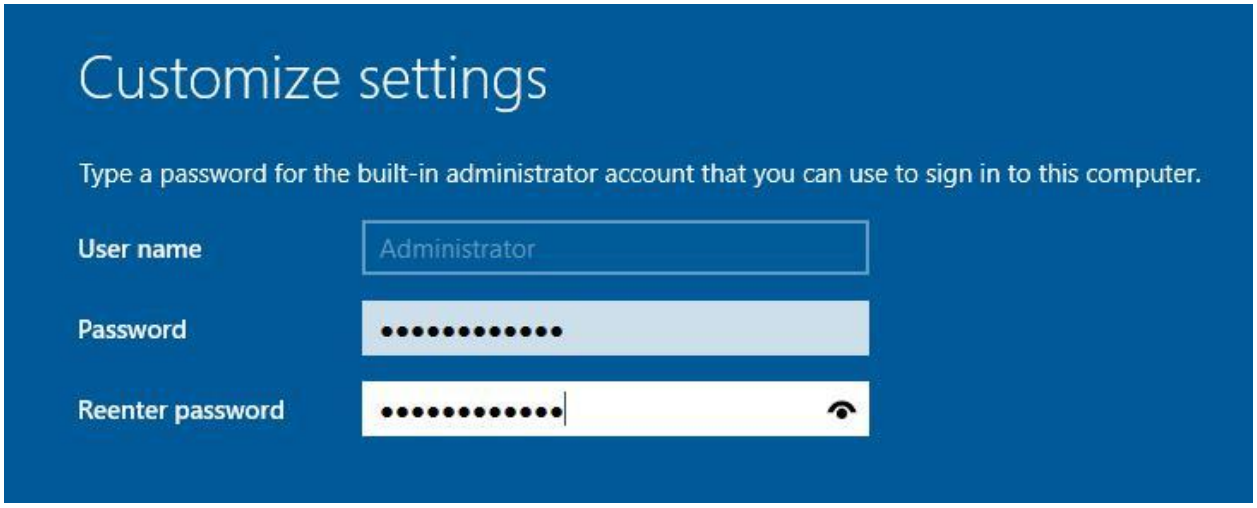


Server 2016 beings the file copy process. Take a break while the installation finishes.



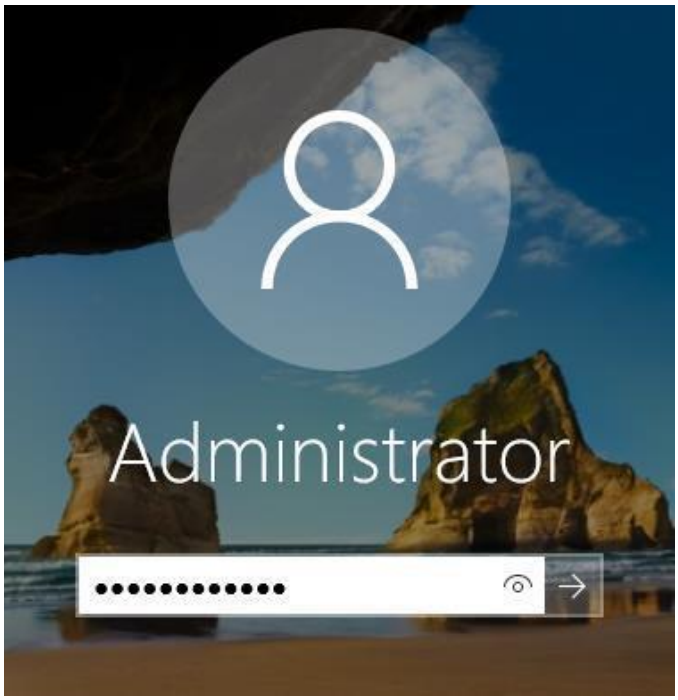
Windows will reboot. Be patient!

Before Server 2016 will allow you to log in, you must configure the password for the administrator account. Do try and remember your password. If you forget it, you will need to remove the machine and files from the VMWare Player Management Console and begin anew.

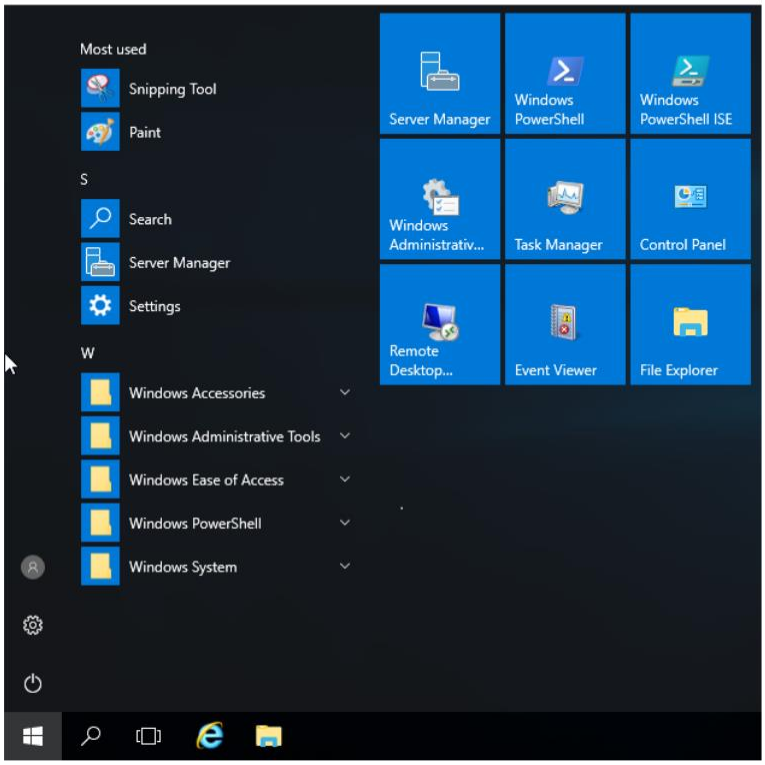


From the VMWare task bar, click on VM> Send Ctrl+Alt+Delete.

Logon with your administrator password.



21. Welcome to Windows Server 2016!



Caveats

Word of warning! Do not enable automatic updates for this server! Doing so will take days, use up plenty of bandwidth and will fill up your 50 GB partition in little to no time at all.

If the partition fills up, you will need to expand it or blow out the virtual machine and start over.

Make sure you provide enough RAM for Server 2016 to remain responsive. If your install pauses or hangs or boots to slow, this is a RAM issue. Right-click on the name of your virtual machine and go into system to increase the amount of RAM.

The Last Word

This is a virtual machine; this is not a simulator or an emulator. This is a real working install of Server 2016, and you could use this server as-is on any production network in any organization. No one would know the difference. With every Server 2016 Standard license we get two free virtual machine licenses. With Server 2016 Datacenter we unlimited virtual machines.

We could purchase a medium size server, install a commercial grade emulation package such as Citrix, VMWare or Hyper-V. We next create one physical install of Server 2016 Standard Edition and create two additional virtual servers of Server 2016 Standard edition. We've saved a bundle on hardware, licensing, recovered server space in our already crowded server room, reduced cooling cost and reduced the organization's carbon footprint. Win, win!

Virtualization can be a great benefit to even the smallest organization, and there is probably not an easier way to learn how to install, configure and manage a real install of any Windows or Linux operating system.

End of the lab!