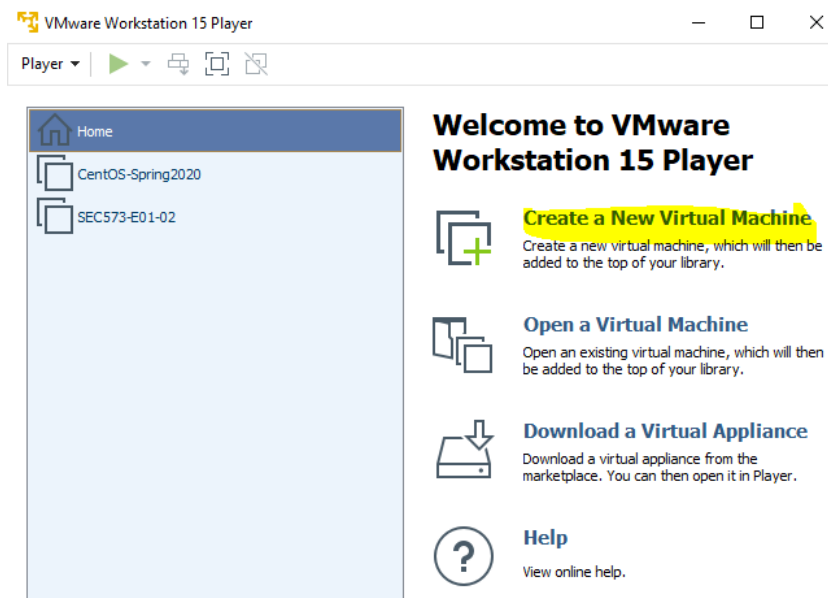
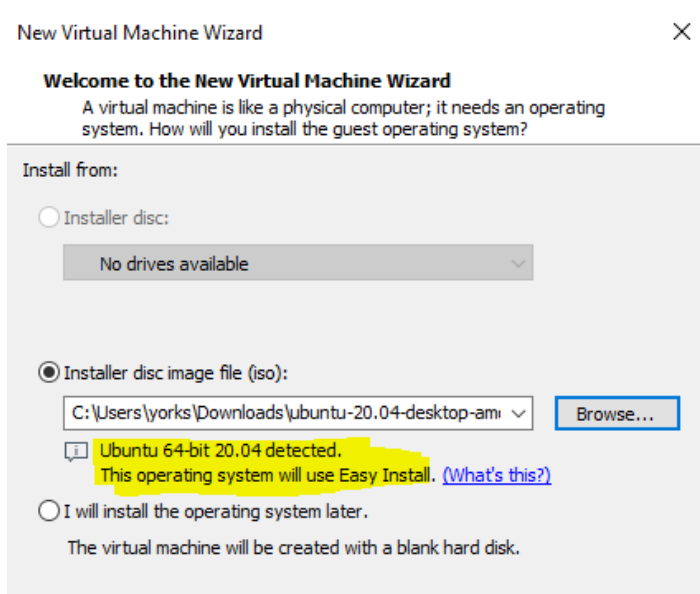


Screenshots for installing Ubuntu 20.04 Desktop as a VMware Virtual Machine (VM)



Use the Browse... button to tell Workstation Player where the ISO file lives.

Note: When Workstation Player recognizes the Operating System (OS) it is about to install, it will offer you the choice to use “Easy Install.” This allows you to pre-enter the data the installation will need, such as computer name, user name, keyboard type, etc. It will then enter those items for you when the OS installs, which speeds the installation process. If you want to see the questions the OS asks during installation and answer them yourself, select “I will install the operating system later.” You will have to connect the VM to the installation ISO manually, and then the installation will proceed just as it does on fresh hardware.

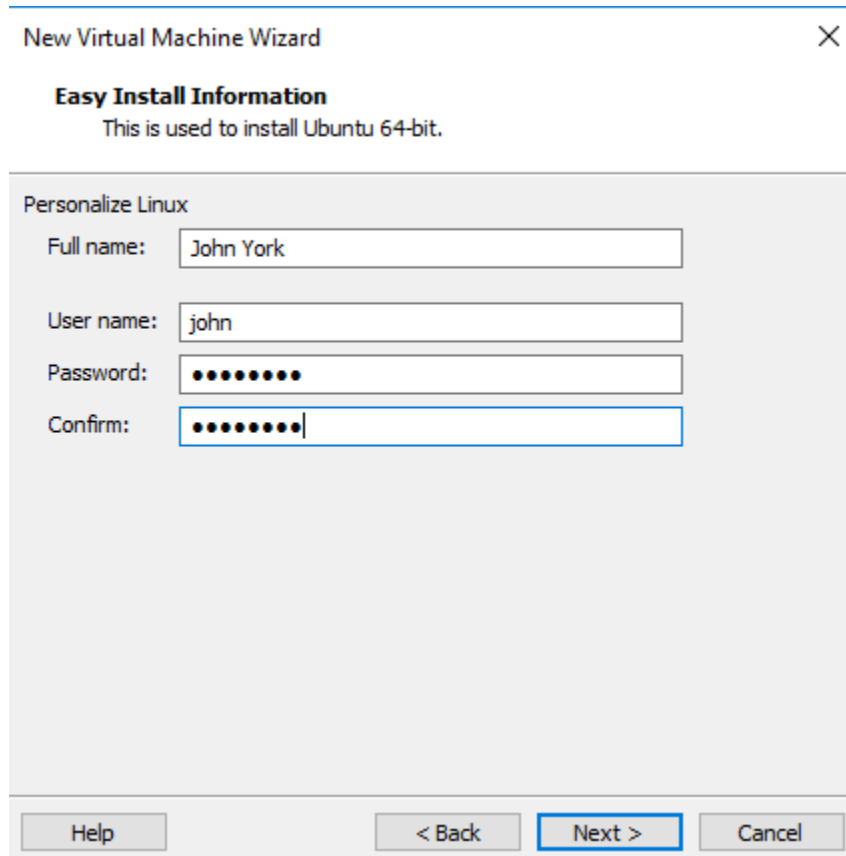


If you choose not to do the 'Easy Install', scroll down in this document to the section, "Note: If you elected not to use Easy Install, or, Installing Ubuntu the hard way."

Continuing with the Easy Install.

Linux usernames must be lower case letters. Do not forget your password!!

You can use a simple password here unless you plan to store secrets on the VM.



The screenshot shows a window titled "New Virtual Machine Wizard" with a close button (X) in the top right corner. Below the title bar, the text "Easy Install Information" is displayed, followed by "This is used to install Ubuntu 64-bit." The main area is titled "Personalize Linux" and contains four input fields: "Full name:" with the text "John York", "User name:" with the text "john", "Password:" with ten dots, and "Confirm:" with ten dots. At the bottom of the window, there are four buttons: "Help", "< Back", "Next >" (which is highlighted with a blue border), and "Cancel".

The standard location is C:\Users\[your user name]\Documents\Virtual Machines, which is fine. Give the VM any name you like, within reason. I have a lot of VMs, so I often include the month and year, or other descriptive information in the title.

New Virtual Machine Wizard ✕

Name the Virtual Machine
What name would you like to use for this virtual machine?

Virtual machine name:

Location:

The defaults here, 20 GB disk size and split the virtual disk into multiple files, should be fine.

Important Note

By default, VMware Player will create the VM in

`C:\users\your_username\Documents\Virtual Machines\name_of_your_VM.`

If your Documents folder is redirected to Google Drive or OneDrive, this will eat all your bandwidth and cloud storage, and run very, very slowly. In that case, create a new folder on your C:\ drive and tell VMware Player to install the VM there.

New Virtual Machine Wizard ✕

Name the Virtual Machine
What name would you like to use for this virtual machine?

Virtual machine name:

Location:

Click Next

New Virtual Machine Wizard

×

Specify Disk Capacity
How large do you want this disk to be?

The virtual machine's hard disk is stored as one or more files on the host computer's physical disk. These file(s) start small and become larger as you add applications, files, and data to your virtual machine.

Maximum disk size (GB):

Recommended size for Ubuntu 64-bit: 20 GB

☐ Store virtual disk as a single file

☒ Split virtual disk into multiple files

Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.

Help

< Back

Next >

Cancel

Your VM will run better if you give it 2 CPUs and 4 GB of RAM (assuming your physical machine has 8 GB of RAM or more.) Select customize Hardware.

New Virtual Machine Wizard

×

Ready to Create Virtual Machine
Click Finish to create the virtual machine and start installing Ubuntu 64-bit and then VMware Tools.

The virtual machine will be created with the following settings:

Name:	SVGS-Ubuntu18
Location:	D:\Virtual Machines\SVGS-Ubuntu18
Version:	Workstation 14.x
Operating System:	Ubuntu 64-bit
Hard Disk:	20 GB, Split
Memory:	1024 MB
Network Adapter:	NAT
Other Devices:	CD/DVD, USB Controller, Printer, Sound Card

Customize Hardware...

☒ Power on this virtual machine after creation

< Back

Finish

Cancel

Hardware



Device	Summary
Memory	4 GB
Processors	2
New CD/DVD (SATA)	Using file C:\Users\yorks\Do...
New CD/DVD (SATA)	Using file autoinst.iso
Floppy	Using file autoinst.flp
Network Adapter	NAT
USB Controller	Present
Sound Card	Auto detect
Printer	Present
Display	Auto detect

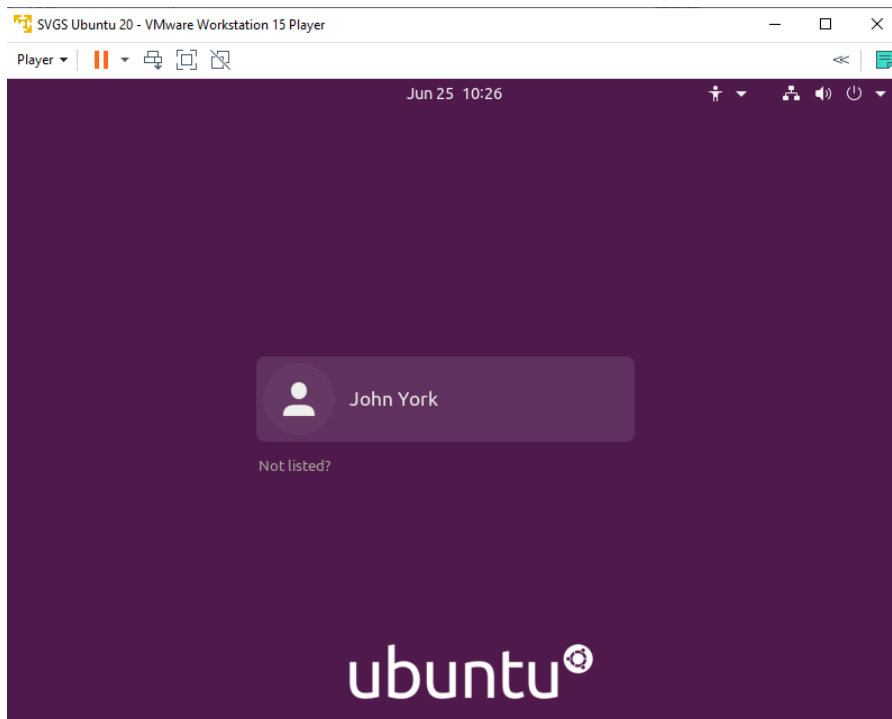
Memory

Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.

Memory for this virtual machine: MB

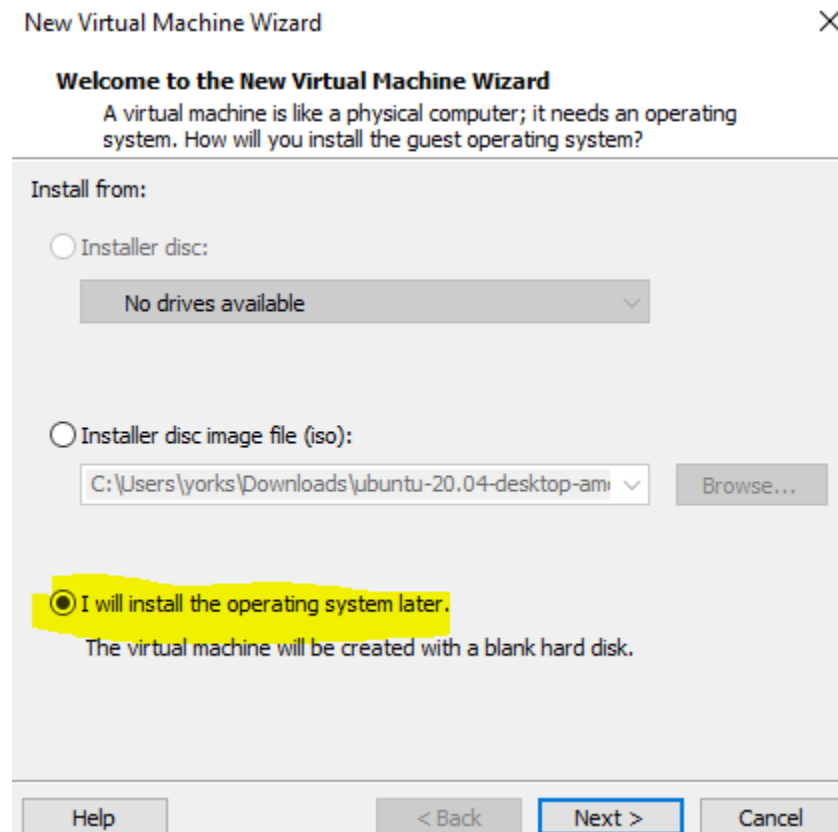
- Maximum recommended memory (Memory swapping may occur beyond this size.) 13.4 GB
- Recommended memory 4 GB
- Guest OS recommended minimum 2 GB

Close the hardware window, click Finish, and the installation will proceed on its own. You should eventually see an Ubuntu login screen.



Note: If you elected not to use Easy Install, or, Installing Ubuntu the “hard” way

After selecting Create a New Virtual Machine, this shows what happens when I will install the operating system later is selected.



New Virtual Machine Wizard [X]

Welcome to the New Virtual Machine Wizard
A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?

Install from:

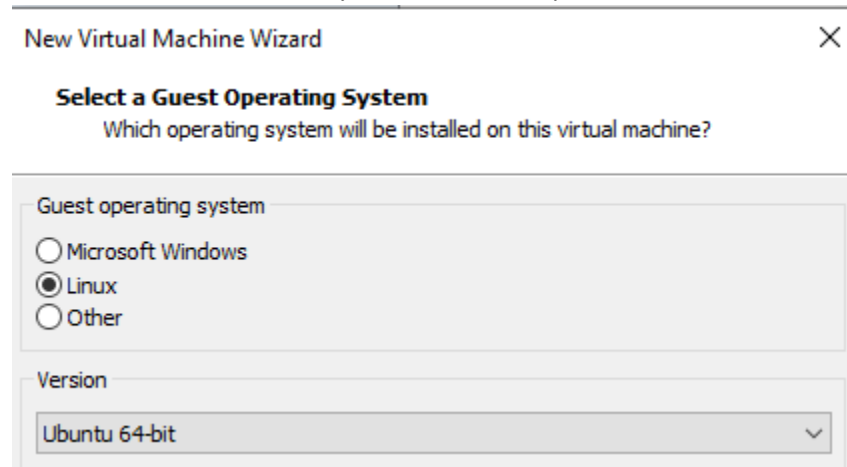
☐ Installer disc:
No drives available

☐ Installer disc image file (iso):
C:\Users\yorks\Downloads\ubuntu-20.04-desktop-amd64.iso [Browse...]

☒ I will install the operating system later.
The virtual machine will be created with a blank hard disk.

[Help] [< Back] [Next >] [Cancel]

We can still let VMware Player know that we plan to install Linux, Ubuntu 64-bit.



New Virtual Machine Wizard [X]

Select a Guest Operating System
Which operating system will be installed on this virtual machine?

Guest operating system

☐ Microsoft Windows
☒ Linux
☐ Other

Version
Ubuntu 64-bit

Name the virtual machine and give it a place to live.

New Virtual Machine Wizard ✕

Name the Virtual Machine
What name would you like to use for this virtual machine?

Virtual machine name:

Location:

The disk capacity can be left at the defaults.

New Virtual Machine Wizard ✕

Specify Disk Capacity
How large do you want this disk to be?

The virtual machine's hard disk is stored as one or more files on the host computer's physical disk. These file(s) start small and become larger as you add applications, files, and data to your virtual machine.

Maximum disk size (GB):

Recommended size for Ubuntu 64-bit: 20 GB

☐ Store virtual disk as a single file

☒ Split virtual disk into multiple files

Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.

If the VM has not been allocated 2 CPU cores and 4 GB of RAM, you can select Customize Hardware to change that.

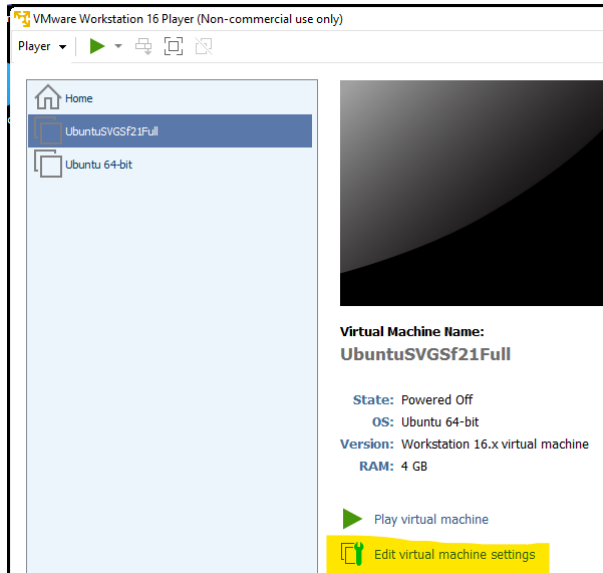
New Virtual Machine Wizard ✕

Ready to Create Virtual Machine
Click Finish to create the virtual machine. Then you can install Ubuntu 64-bit.

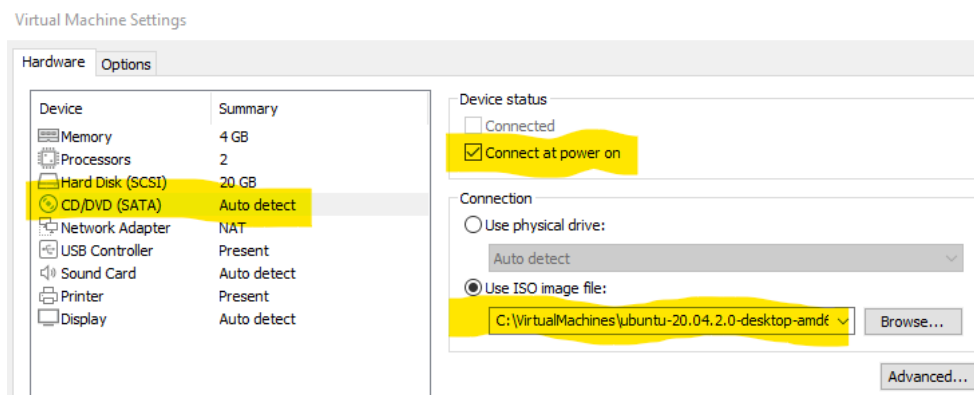
The virtual machine will be created with the following settings:

Name:	SVGS Ubuntu 20
Location:	D:\Virtual Machines\svgsf20-1
Version:	Workstation 15.x
Operating System:	Ubuntu 64-bit
Hard Disk:	20 GB, Split
Memory:	4096 MB
Network Adapter:	NAT
Other Devices:	2 CPU cores, CD/DVD, USB Controller, Printer, Sound...

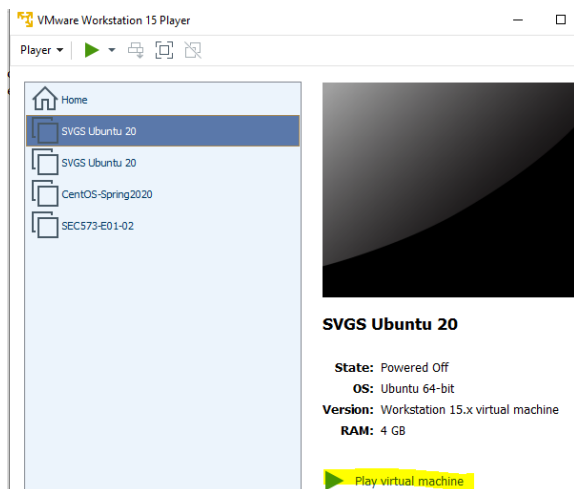
We need to tell VMware Player where to find the installation ISO. Click “Edit virtual machine settings” to go back and do that.



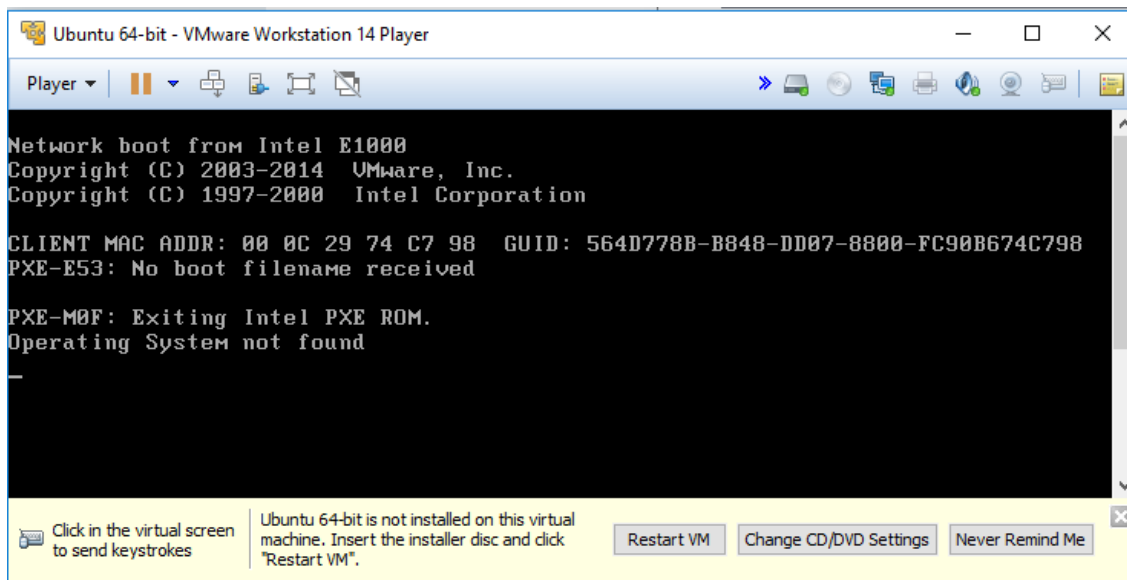
Under the CD/DVD setting, select “Use ISO image file” and browse to where you stored the ISO.



When you play your virtual machine, it should find the ISO file.



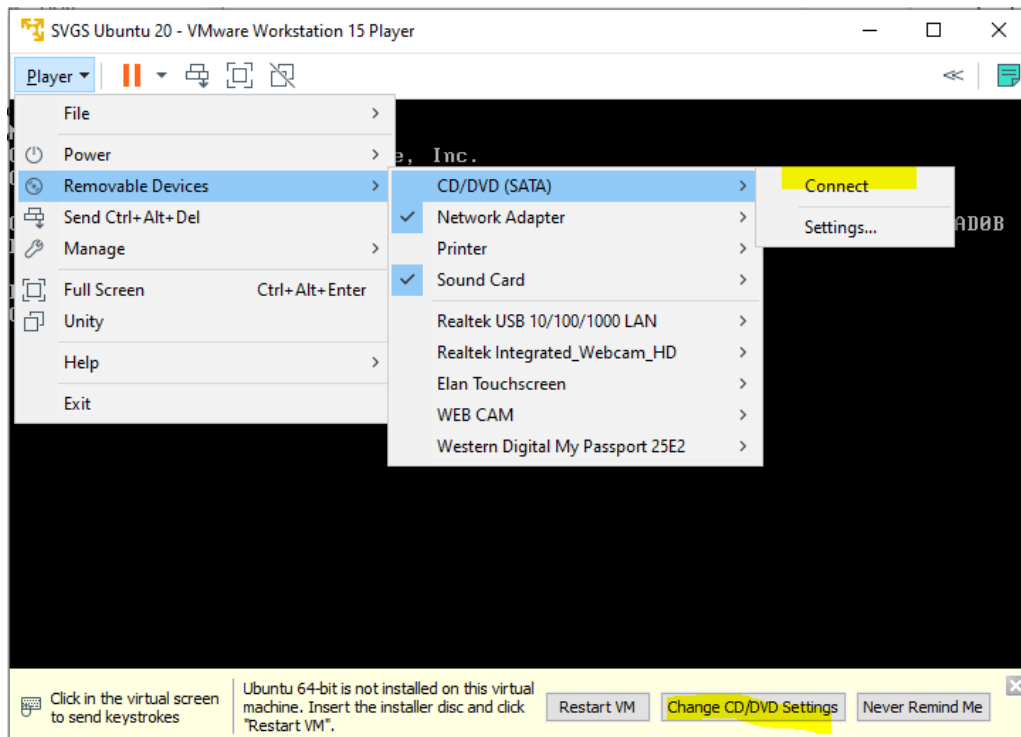
If the installation doesn't start because the VM cannot find the ISO file, you will see this.



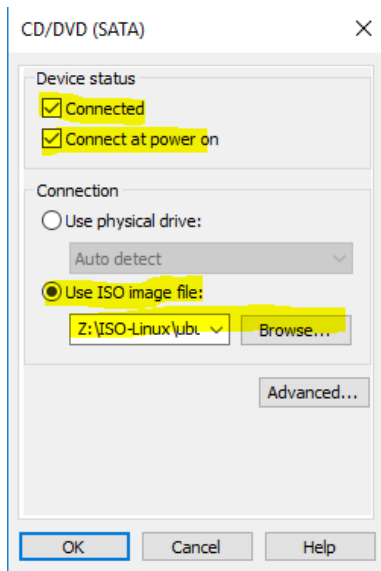
Fix the error by using the VM settings to tell the VM to boot from the installation ISO. You can click on "Change CD/DVD Settings."

Be sure the Device status is Connected and Connect at power on. Use the browse button to find the ISO file you wish to install. Note: If the selections you want are grayed out, shut down the VM, open Player again, and select Edit virtual machine settings.

Select Player > Removable Devices > CD/DVD > Connect

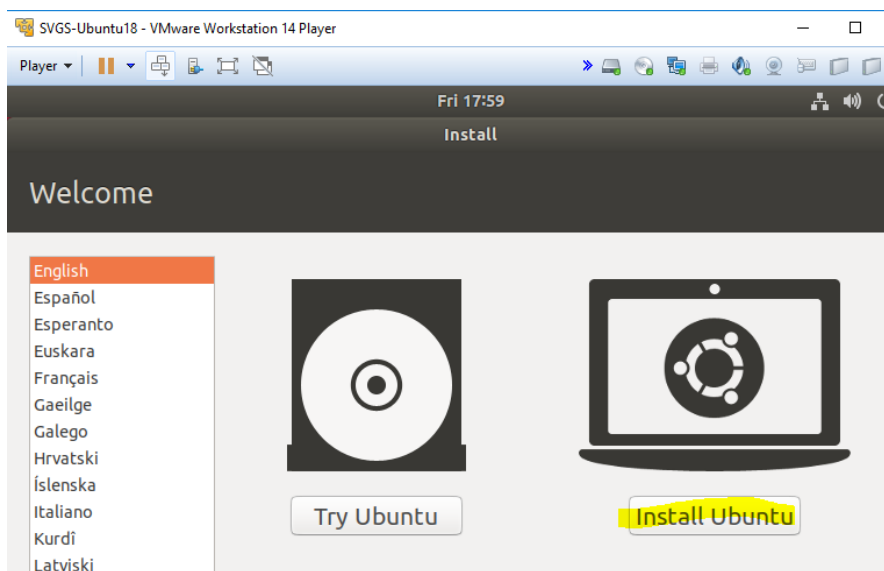


Then make the same settings as before.

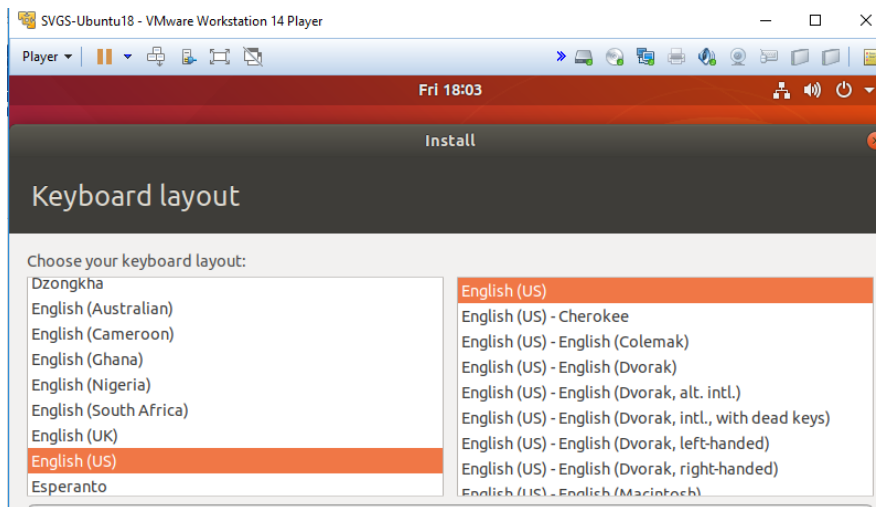


When the VM boots, it should start the installation process from the ISO file. If you select “Try Ubuntu”, the VM will boot entirely from the CD (or ISO), will always require the CD/ISO to boot, and changes you make will be lost any time the VM restarts. This is called a “Live CD” installation” and has the advantage of taking very little disc space.

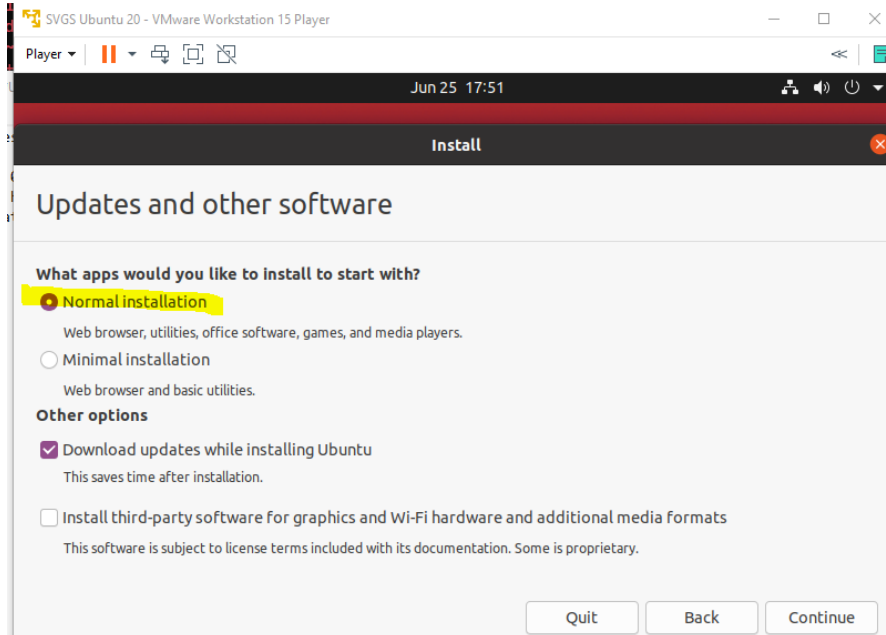
We will install our VM on the files in the VM folder so that we do not need the ISO to boot (after the installation) and any changes we make will be retained between reboots. Select Install Ubuntu.



I selected the standard US English keyboard.

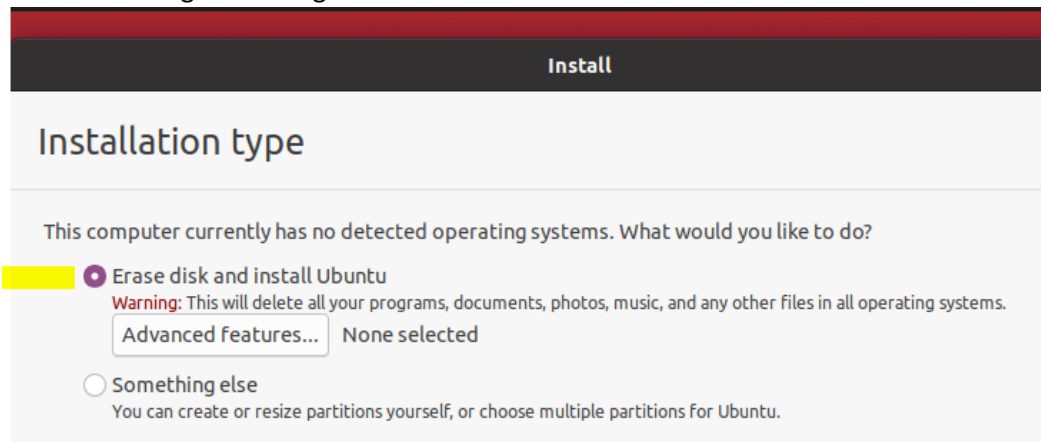


The Normal installation has a lot of software we will not use, but it does include most of what we need. Later on, you can make a VM with the Minimal installation if you like.



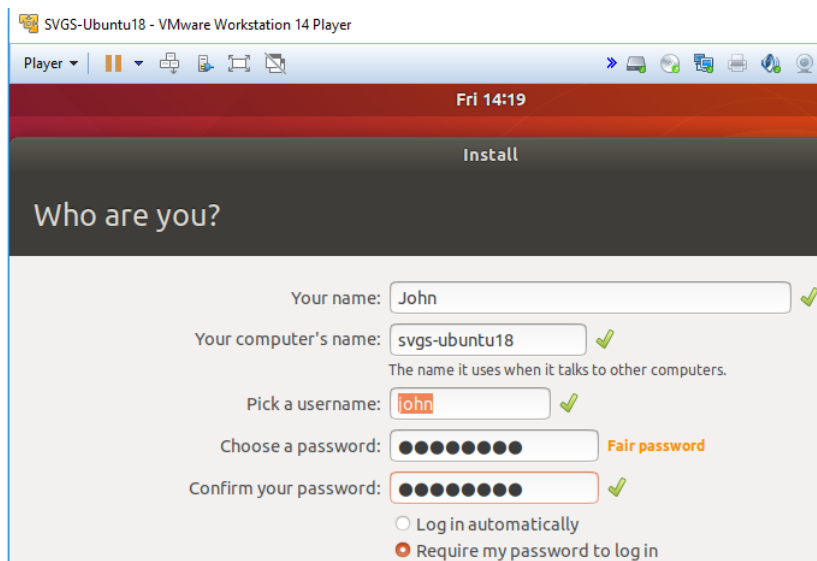
If we were installing on hardware, we would want to ensure that there is nothing important on the hard disk, as it will be overwritten. On a VM, the “hard disc” is just a file that has not been created yet so

there is no danger of losing data.

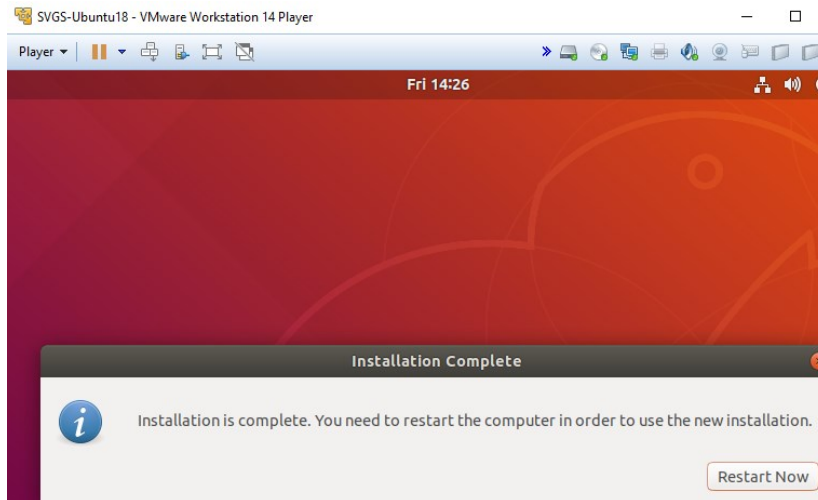


You will need to click Continue on the next screen, and then set the time zone.

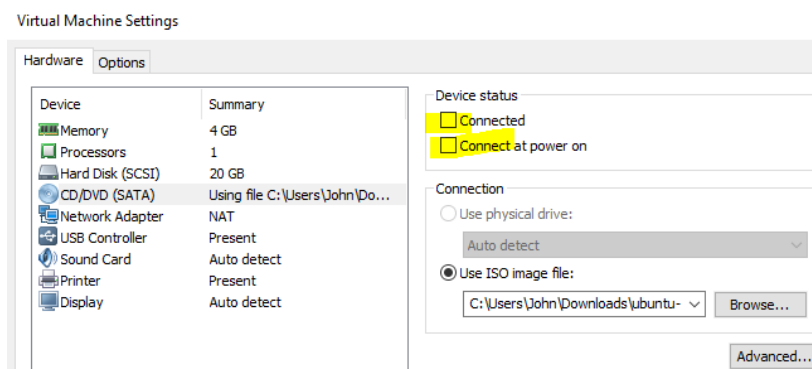
Note that Linux requires the username to be in lower case. We will not store sensitive data on this VM, but we will be entering the password a lot; you can use a short password if you like. Be sure to remember your password!



Done! (Almost)



We don't want to boot from the CD/ISO anymore, so disconnect it.



VMware Tools

VMware tools provide better drivers and software to make the OS easier to use in a VM environment. VMware Workstation Player automatically installs the open source tools. You can check to see if they are installed with the command

```
sudo apt list --installed | grep open-vm
```

The screenshot below shows what it looks like when they **are** installed. If they are not installed you will get no results.

```
john@SVGSUBunF21:~/Desktop$ sudo apt list --installed | grep open-vm
WARNING: apt does not have a stable CLI interface. Use with caution in scripts.

open-vm-tools-desktop/focal-updates,now 2:11.2.5-2ubuntu1~ubuntu20.04.1 amd64 [installed]
open-vm-tools/focal-updates,now 2:11.2.5-2ubuntu1~ubuntu20.04.1 amd64 [installed,automatic]
```

If VMware tools are not installed, the command to install them is:

```
sudo apt-get install open-vm-tools
```

```
john@svgs-ubuntu18: ~  
File Edit View Search Terminal Help  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
john@svgs-ubuntu18:~$ sudo apt-get install open-vm-tools  
[sudo] password for john:
```

Once you put in your password and tell it to install, it will be done in moments.