Click on this link to be directed to the Microsoft page to download Windows 10 64-Bit. The system will download the ISO to your "Downloads" directory.

https://www.microsoft.com/en-us/software-download/windows10ISO

 Hold down the "command" key and press the "space" bar to launch Spotlight Search. Enter "VirtualBox.app" to launch VirtualBox.



3. After VirutalBox launches, select VirtualBox and go up to the taskbar under File to select Host Network Manager.



4. Once you have done so, you should see this on the menu on your screen.

•••	)		Host Net	work Manager			
Create	Remove	Properties					
Name				IPv4 Address/Mask	IPv6 Addre	ss/Mask	DHCP Server
							Close

5. Next, you will click the "Create" button on the top left of the screen. Once you do so, you should see vboxnet0 is created down below with 192.168.56.1/24 and DHCP Server Enabled. Check the small box to enable it if it is not Enabled already. You can now close this screen by pressing close on the bottom right of the screen.

	Host Network Manager		
eate Remove Properties			
ame	▲ IPv4 Address/Mask	IPv6 Address/Mask	DHCP Server
boxnet0	192.168.56.1/24		🗸 Enable
			Close

6. Now let us go back to the VirtualBox Manager. Once there, click the "New" icon on the top.



7. You should be presented with a screen like this. If the button "Expert Mode" is there, press it and continue. If you see "Guided Mode", then there is nothing to do in this step.

virtual machine a to install on it. Tl	ating system descriptive name and destination folder for the new and select the type of operating system you intend he name you choose will be used throughout entify this machine.
Name:	
Machine Folder:	/Users/****/VirtualBox VMs
Туре:	Microsoft Windows
Version:	Windows 7 (64-bit)
Exp	Go Back Continue Cancel

8. Once at this screen, under "Name:" call this "Windows 10". You will see under "Machine Folder:" where on your computer, all of the contents you will have on your VirtualBox will be stored. Be sure under "Type:" it is "Microsoft Windows," and under "Version:" it is "Windows 10 (64-bit)". Under "Memory size", enter "8192" in the MB box. Click on the "Create" button.

Name: Windows 10	
Machine Folder: 📄 /Users/ /VirtualBox VMs	
Type: Microsoft Windows	64
Version: Windows 10 (64-bit)	
Memory size	8192 🗘 MB
4 MB 3	32768 MB
Hard disk	
 <ul> <li>Do not add a virtual hard disk</li> <li>Create a virtual hard disk now</li> <li>Use an existing virtual hard disk file</li> </ul>	
test.vdi (Normal, 50.00 GB)	

9. Next you will need to change the default disk size of your VM from 50GB to 100GB, then click on the "Create" button.

/Users/ /VirtualBox VMs/Window	vs 10/Windows 10.vdi				
File size					
	100.00 GB				
4.00 MB	2.00 TB				
Hard disk file type	Storage on physical hard disk				
• VDI (VirtualBox Disk Image) • VHD (Virtual Hard Disk) • VMDK (Virtual Machine Disk)	<ul> <li>Dynamically allocated</li> <li>Fixed size</li> <li>Solit into files of less than 2GB</li> </ul>				
HDD (Parallels Hard Disk) QCOW (QEMU Copy-On-Write) QED (QEMU enhanced disk)					

10. You will now be back at the VirtualBox Manager main window. Now, left-click on "Windows 10" on the left pane, then click on the "Settings" icon at the top.



## 11. You should now be at a screen that looks like this.

• •				Wir	dows 10	- Gener	ral		
General	Syster	n Display	Storage	Audio	Network	Ports	Shared Folders	User Interface	
			A	dvanced	Desc	ription	Disk Encrypti	on	
Na	me:	Windows 10							
Type: Microsoft Windows								64	
Vers	Version: Windows 10 (64-bit)								
								Cancel	ОК

12. Now, along the top row, click "Systems" then click on "Processor". Your screen should now look like this.

	Windows 10 - System									
General	System	Display	Storage	Audio	Network	Ports	Shared Folders	User Interfac	ce	
			Moth	erboard			Acceleration			
	Process	sor(s):	<b></b>						1	
			1 CPU					12 CPUs		
	Execution	n Cap:							100% 🗘	
			1%					100%		
Ext	tended Fea	tures:	Enable	PAE/NX						
			Enable	Nested V	VT-x/AMD	)-V				
								Cancel	ОК	

#### Windows 10 - System 2 General System Display Storage Audio Network Ports Shared Folders User Interface Motherboard Acceleration \$ 4 Processor(s): 1 CPU 12 CPUs \$ Execution Cap: 100% 100% 1% Limits the amount of time that each virtual CPU is allowed to run for. Each Enable PAE/NX Extended Features: virtual CPU will be allowed to use up Enable Nested VT-x/AMD- to this percentage of the processing time available on one physical CPU. The execution cap can be disabled by setting it to 100%. Setting the cap too low can make the machine feel slow to respond. Cancel OK

#### 13. Under "Processor(s)", change the CPU count to 4.

14. Now on the top row, click on "Storage" to be taken to this screen.

• • •	)			Win	dows 10	- Storage	9		
			$\bigcirc$		P			•	
General	System	Display	Storage	Audio	Network	Ports	Shared Folders	User Interface	
Storage	Devices				Attrib	outes			
e Co	ontroller: S	SATA		<b>@2</b>		Name	: SATA		
	Windows	s 10.vdi				Туре	: AHCI		0
i 💿	Empty				P	ort Count	: 2		\$
							Use Hos	t I/O Cache	
			🔶 🍐						
								Cancel	ОК

15. In the "Storage Devices" window, left-click once on "Empty" cdrom icon to select it.

• • •				Win	dows 10	- Storag	je			
			$\bigcirc$						•	
General	System	Display	Storage	Audio	Network	Ports	Share	d Folders	User Interface	
Storage	Devices				Attrib	outes				
	ontroller: S				o	ptical Dr	ive:	SATA Po	ort 1	0
	Window: Empty	s 10.vdi						Live Cl Hot-pl	D/DVD uggable	
					Inform	nation				
						Ту	/pe:			
						S	ize:			
						Locat	ion:			
						Attached	to:			
			🖕 💩	2						
									Cancel	ОК

16. Now to the right, you will see a small cdrom disk.

				Win	dows 10	- Storag	le		
			$\bigcirc$						
General	System	Display	Storage	Audio	Network	Ports	Shared Folders	User Interace	
Storage	Devices				Attrib	outes			
🔶 Co	ontroller: S	SATA			0	ptical Dri	ive: SATA Po	rt 1	0
2	Windows	s 10.vdi							
•	Empty						Live CI	uggable	
					Inforr	nation -			
						Ту	/pe:		
						Si	ize:		
						Locati	ion:		
						Attached	to:		
				7					
								Cancel	ОК

17. Left click on the blue cdrom disk, and you will see this pulldown menu below. Select "Choose a disk file...."



 Next, your finder will be displayed, and you should be under your "Downloads" folder. There you should see the Windows 10 iso you downloaded earlier. Select this and press "Open".

Favorites	< > ≔ →  →	Downloads 📀	Q Search
Recents		<u> </u>	
🙏 Applicati	Today	Date Modified v S	ize Kind
🔲 Desktop	TMP	Today at 8:30 AM	Folder
🕒 Documents	Win10_21H2_English_x64.iso	Today at 7:18 AM	5.88 GB ISO Disk Image
Jownloads	Previous 7 Days		
	VirtualBox-6.1.36-152435-OSX.dmg	Aug 24, 2022 at 8:04 PM	127.4 MB Disk Image
Creative	Jubuntu-20.04.4-Iserver-amd64.iso	Aug 23, 2022 at 8:04 PM	1.33 GB ISO Disk Image
🖪 Pictures			
iCloud			
🛆 iCloud Dri			
🖰 Shared			
Locations	All virt	ual optical disk files (*.dmg 📀	
A Macintos	New Folder Options		Cancel Open

 Now you should be looking at the "Storage" page and see the "Empty" file selected before now, have the Windows 10 ISO mounted

• • •	)			Win	dows 10	- Storag	je			
			$\textcircled{\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	()			[			
General	System	Display	Storage	Audio	Network	Ports	Shar	ed Folders	User Interface	
_					Aun	Jules				
	ontroller:				0	ptical Dr	ive:	SATA Po	rt 1	0
•••••••••••••••••••••••••••••••••••••••	Window Win10_2		lish_x64.	iso				Live CI	D/DVD uggable	
					Infor	mation		0 p.		
						Ту	/pe:	Image		
						S	ize:	5.48 GB		
						Locat	ion:	/Users/et	hanvillalovoz	/Downloads/
						Attached	to:			
			🔶 💩	2						
									Cancel	ОК

20. Next, along the top row, select "Network." Once under that page, select Adapter 2.

• •			Win	dows 10	- Netwo	ork		
General System	Display	Storage	Audio	Network	Ports	Shared Folders	User Interface	
		Adapter 1			Adapter	3 Adapter 4	•	
Enable 1	Network Ad	apter						
Att	tached to:	Not att	ached			٥		
	Name:							٢
D A	dvanced							
							Cancel	ОК

21. You want to click the check box to "Enable Network Adapter." Then, select the dropdown menu for "Attached to:" and select "Host-only Adapter. Once done, click "OK" on the bottom right.

• • •	)			Win	dows 10	- Netwo	ork		
			$\bigcirc$		-			•	
General	System	Display	Storage	Audio	Network	Ports	Shared Folders	User Interface	
		1	Adapter 1			Adapter	3 Adapter	4	
<b>V</b> E	Enable Net	work Ada	pter						
	Attac	hed to:	Host-o	nly Adap	oter		0		
		Name:	vboxne	t0					0
	Adv.	anced							
								Cancel	ОК

22. You should now be at the main window of VirtualBox Manager. You can now select "Start" at the very top to start the "Windows 10" VM!



23. A console window will pop up that will walk you through the "Windows 10" installation. This will not be the window you do your daily tasks in as it's relatively slow to work in. We will be setting up an RDP connection later in this document for you to use to connect to your Windows 10 VM.



# 24. Click "Next."

000	Windows 10 [Running]	
You have the Auto capture keyboa	rd option turned on. This will cause the Virtual Machine to automatically capture the keyboard every time the VM window is activated and make 🧕	3 🔽
The Virtual Machine reports that th	e guest OS supports mouse pointer integration. This means that you do not need to <i>capture</i> the mouse pointer to be able to use it in your guest (	3 🔽
	🖆 Windows Setup	
λ.	Languag <u>e</u> to install: <mark>English (United States)</mark> <u>T</u> ime and currency format: English (United States)	
	Keyboard or input method: US	
	Enter your language and other preferences and click "Next" to continue.	
	© Microsoft Corporation. All rights reserved.	
	D 💿 💯 🗗 🖉 🗐 🖉 🔕	Left ೫

### 25. Now click "Install Now."



26. Once done installing, you will see this screen. Choose "I don't have a product key."

000		Windows 10 [Running]				
You have the Auto capture keyboard option turned on. This will cause the Virtual Machine to automatically capture the keyboard every time the VM window is activated and make 🙁 🔀						
The Virtual Machine reports that the guest OS supports mouse pointer integration. This means that you do not need to capture the mouse pointer to be able to use it in your guest 🙁 🚫						
	🕞 💰 Windows Setup					
	Activate Windows					
	If this is the first time you're installing Windows on this PC (or you're installing a different edition), you need to enter a valid Windows product key. Your product key should be in the confirmation email you received after buying a digital copy of Windows or on a label inside the box that Windows came in.					
	The product key looks like this: XXXX	X-XXXXX-XXXXX-XXXXX				
	If you're reinstalling Windows, select a automatically activated later.	I don't have a product key. Your copy of Windows v	vill be			
	[					
	Privacy statement	I don't have a product key	Next			
*						
$1^{\text{Collecting information}}$	2 Installing Windows					
			🖸 💿 🐚 🗗 🌽 🗐 🖻 🖉 🚺 🔇 💽 L	.eft ೫		

27. Scroll down and select "Windows 10 Pro". Click "Next" once selected.



28. Click the check box "I accept the license terms" and click "Next".



#### 29. Select "Custom".



30. At this screen, you can simply press "Next."

000		Windows 10 [Running]			
You have the Auto capture keyboard opti	on turned on. This will cause the Vir	ual Machine to automatically <b>cap</b>	oture the keyboard every	time the VM window is activated and make	8 🕅
The Virtual Machine reports that the guest	t OS supports <b>mouse pointer integ</b>	<b>ation</b> . This means that you do no	t need to <i>capture</i> the mo	use pointer to be able to use it in your guest	8 🕅
<b>G</b>	Windows Setup Where do you want to ins	all Windows?			
	Name	Total size	Free space Type		
	Drive 0 Unallocated Spac	e 100.0 GB	100.0 GB		
	Refresh     Deli       Image: Dead driver     Image: Extended to the second driver		<mark>∦</mark> N <u>e</u> w		
*				Next	
1 Collecting information 2	installing Windows				
				2 💿 🛄 🗗 🌽 🗐 🖳 🖓 🚫	💌 Left 🕷

# 31. Windows will now begin installing.



32. Windows will automatically reboot after the installation is complete.

0 0 0	Windows 10 [Running]			
You have the Auto capture keyboard option turned on. This will cause the Virtual Machine to automatically capture the keyboard every time the VM window is activated and make 🙁 💭				
The Virtual Machine reports that t	he guest OS supports mouse pointer integration. This means that you do not need to <i>capture</i> the mouse pointer to be able to use it in your guest 🙁 Ņ			
	🔏 Windows Setup			
	Windows needs to restart to continue			
	Restarting in 1 second			
N	<u>R</u> estart now			
*				
$1^{\text{Collecting information}}$	2 Installing Windows			
	🖸 💿 🛄 🖶 🖉 🔝 🕒 Left 🕊			

33. Soon Windows will be ready, and you will go through the standard Windows 10 setup. Click "Yes"



### 34. Click "Yes"

0 0 0	Windows 10 [Running]	
You have the Auto capture keyboard	option turned on. This will cause the Virtual Machine to automatically capture the ke	yboard every time the VM window is activated and make 🛛 🙁 🏷
The Virtual Machine reports that the g	uest OS supports mouse pointer integration. This means that you do not need to ca	apture the mouse pointer to be able to use it in your guest 🙁 💭
I	s this the right keyboard	
k	Canadian Multilingual Standard	
	English (India)	
	Irish	
	Scottish Gaelic	
	United Kingdom	
	United States-Dvorak	· · · · · · · · · · · · · · · · · · ·
		Yes
Ф		ሳን
		🔯 💿 🛄 🗬 🄗 🥅 🖳 🖶 🚫 🕥 🕨 Left 🕊

# 35. Click "Skip"



36. When you see this screen below, select "Set up for personal use." Then click "Next".

How	would you like to set u	p?
டி	<b>Set up for personal use</b> We'll help you set it up with a personal Microsoft account. You'll have full control over this device.	
	Set up for an organization You'll gain access to your organization's resources like email, network, apps, and services. Your organization will have full control over this device.	
		Next

37. Select "Offline account" and then press "Next".

Let's add your account One account connects your device across Microsoft apps and services, like Office, OneDrive, Microsoft Edge, a	and the Microsoft Store.
8	
Email, phone, or Skype	
Create account Sign in with a security key	
Offline account Privacy & Cookies Terms of Use	Next

38. Select "Limited experience".



39. Enter a username like "WSU", then click on "Next".



40. Create a password for your "WSU" user account, then click on "Next".

Create a super memorable password Make sure to pick something you'll absolutely remember.	
••••••••• •••••••••	
Or, even better, use an online account	Next

41. One more time for good measure, then click on "Next".



42. Select 3 security questions and provide an answer for each. Click on "Next" after each response provided.

	Security questions for this acc et your password, choose 3 security questions, and make sure your answers are u	
	R	
	Security question (1 of 3)	
Or, even better, use an online acco	unt	Next
## Create security questions for this account

Just in case you forget your password, choose 3 security questions, and make sure your answers are unforgettable.

	R	
	Security question (2 of 3)	
	Your answer	
Or, even better, use an online accou	int	Next

## Create security questions for this account

Just in case you forget your password, choose 3 security questions, and make sure your answers are unforgettable.

	R	
[	Security question (3 of 3)	
[	Your answer	
)r, even better, use an online accou	nt	Next

# 43. Under privacy settings, select "No" for everything and then click on the "Accept" button.

Microsoft puts you in control of your privacy. Choose your settings,	tings for your device then select 'Accept' to save them. You can change these settings at any time.
Location You won't be able to get location-based experiences like directions and weather or enjoy other services that require your location to work. No	Find my device Windows won't be able to help you keep track of your device if you lose it. No
<b>Diagnostic data</b> Send only info about your device, its settings and capabilities, and whether it is performing properly. Diagnostic data is used to help keep Windows secure and up to date, troubleshoot problems, and make product improvements.	Inking & typing Don't use my diagnostic data to help improve the language recognition and suggestion capabilities of apps and services running on Windows.
<ul> <li>Send Required diagnostic data</li> <li>Tailored experiences</li> <li>The tips, ads, and recommendations you see will be more generic and may be less relevant to you.</li> <li>No</li> <li>Select 'I earn more' for info on the above settings how Microsoft</li> </ul>	Advertising ID The number of ads you see won't change, but they may be less relevant to you. No
	learn more Accent

44. Let's NOT customize our experience, click on the "Skip" button.

Sei	ect all the ways you plan to use your device to get personalize welcome ex		
₽ I I I I I I I I I I I I I	Entertainment Watch videos, browse the web, connect on social media	8	<b>Creativity</b> Bring your ideas to life with photos and videos
<u>ĝ</u> ≎	Gaming Play and discover games, keep up with new releases	E C	Business Track expenses, manage your business, chat with customers
Ø	School Take notes, write essays, collaborate on projects	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Family Connect with family members, edit safety settings, give everyone their own profile on this device

45. We don't want Cortana's help, click on the "Not now" button.



46. After that, you will now have Windows 10 installed on a VirtualBox! Hang in there, we are almost done.



47. In the "Type here to search" box, type in "Remote Desktop Settings", then click on "Open".



### 48. Click on "Enable Remote Desktop" to turn it on.

Recycle	Settings	– 🗆 X
	ம் Home	Remote Desktop
Micros Edge	Find a setting	Remote Desktop lets you connect to and control this PC from a remote device by using a Remote Desktop client (available for
	System	Windows, Android, iOS and macOS). You'll be able to work from another device as if you were working directly on this PC.
	🖵 Display	Enable Remote Desktop
	切》 Sound	• Off
	Notifications & actions	User accounts
	J Focus assist	Select users that can remotely access this PC
	( <sup>1</sup> ) Power & sleep	Help from the web
	□ Battery	Setting up remote desktop
	📼 Storage	See Get help
	다 Tablet	Give feedback
	<b>目</b> i Multitasking	
	ho  Type here to search	O 턹 💽 菺 🛱 🗙 🌣 🥚 72°F ^ 🖮 딙 🗤 👫

#### 49. Click on the "Confirm" button.

Recycle	Settings	×
	යි Home	Remote Desktop
Micros Edge	Find a setting	Remote Desktop lets you connect to and control this PC from a remote device by using a Remote Desktop client (available for Windows, Android, iOS and macOS). You'll be able to work from another device as if you were working directly on this PC.
	Di Remote Desktop Settings	
	🐗 😽 Enable Remote Deskto	p?
	You and users selected under User a	accounts will be able to connect to this PC remotely.
	ی Fo	Confirm Cancel
	U Power & sleep	пер пот те мер
	Battery	Setting up remote desktop
	📼 Storage	A Get help
	- Tablet	Give feedback
	甘 Multitasking	
-	${\cal P}$ Type here to search	O 벍 💽 📮 🛱 < 🌞 🔶 72°F 스 🖮 🖓 😗 😽 🛃

50. Now Remote Desktop is enabled on your VM. You can click on the "X" in the upper right of the windows to close it.

	i	
Recycle	Settings	– – ×
Micros Edgi	☆ Home       Find a setting     >        System	Remote Desktop lets you connect to and control this PC from a remote device by using a Remote Desktop client (available for Windows, Android, iOS and macOS). You'll be able to work from another device as if you were working directly on this PC.
	다 Display 4 》 Sound	Enable Remote Desktop On
	Notifications & actions	Keep my PC awake for connections when it is plugged in Show settings
	<ul> <li>Focus assist</li> <li>Power &amp; sleep</li> </ul>	Make my PC discoverable on private networks to Show settings enable automatic connection from a remote device Advanced settings
	Battery	Auvanceu settings
	□ Storage	How to connect to this PC
	다 Tablet	Use this PC name to connect from your remote device: DESKTOP-J22HA4H
	曰: Multitasking	Don't have a Remote Desktop client on your remote device?
	$\mathcal P$ Type here to search	O 闫: 💽 📻 🏥 숙 🌣 🥚 72°F ヘ 🔤 🗜 🕬 <sub>8/26/2022</sub>

51. In the "Type here to search" box, type in "powershell", then click on "Open" in the right pane.



52. In the powershell window, type in "ipconfig". We are looking for the IP address that starts with "192.168.56.???". This will be the IP address we connect to via the RDP client that we will download later in this document. In this example, our IP for our RDP client will be "192.168.56.3".



53. Now goto the "App Store" and search for "Microsoft Remote Desktop". Click on "GET".



54. Hold down the "command" key and press the "space" bar to bring up "Spotlight Search". Enter in the box "Microsoft Remote Desktop.app". Press "return".



55. When the RDP client starts for the first time, it will ask for help making your experience better, click on "Not now".



56. Click on the "Add PC" button.



57. Enter the IP address from above and put it in the "PC name:" box. For "Friendly name:" put in "Windows 10". If for some reason after you start your VM in the future and you cannot connect into your VM from the RDP client, it is possible that the DHCP server from VirtualBox assigned a different IP to your VM. If this happens, login to your VM from the VirtualBox console and then run the powershell application again with the command "ipconfig" to see if your IP changed. If it did, then be sure to change it in the RDP client. It is possible to make the IP a static IP so this can never happen, but it's outside the scope of this document.

Add PC	
PC name:	192.168.56.3
User account:	Ask when required
General	Display Devices & Audio Folders
Friendly name:	Windows 10
Group:	Saved PCs
Gateway:	No gateway 📀
	<ul> <li>Reconnect if the connection is dropped</li> <li>Connect to an admin session</li> <li>Swap mouse buttons</li> </ul>
	Cancel Add

58. Pull down the list for "User account:".

Add PC	
PC name:	192.168.56.3
User account:	Ask when required
General	Display Devices & Audio
Friendly name:	Windows 10
Group:	Saved PCs
Gateway:	No gateway 📀
	<ul> <li>Reconnect if the connection is dropped</li> <li>Connect to an admin session</li> <li>Swap mouse buttons</li> </ul>
	Cancel Add

59. Select "Add User Account..."

Add PC	
PC name:	192.168.56.3
User account:	✓ Ask when required
General	Add User Account
Friendly name:	Windows 10
Group:	Saved PCs
Gateway:	No gateway 📀
	<ul> <li>Reconnect if the connection is dropped</li> <li>Connect to an admin session</li> <li>Swap mouse buttons</li> </ul>
	Cancel Add

60. Add the username "WSU" in the "Username:" box and put in your password you created for your Windows 10 VM in the "Password:" box. Click "Add".

Add a User Account					
Username:	WSU				
Password:	••••••				
	Show password				
Friendly name:	Optional				
	Cancel Add				

61.	You should	now see a	screen like	this,	click	"Add".
-----	------------	-----------	-------------	-------	-------	--------

Add PC	
PC name:	192.168.56.3
User account:	WSU
General	Display Devices & Audio Folders
Friendly name:	Windows 10
Group:	Saved PCs
Gateway:	No gateway 🗘
	<ul> <li>Reconnect if the connection is dropped</li> <li>Connect to an admin session</li> <li>Swap mouse buttons</li> </ul>
	Cancel Add

62. Now click on the "Windows 10" icon and connect via the RDP client into your Windows 10 VM.



63. You will be prompted about the certificate coming from your Windows 10 VM not being able to be verified, but your connection is secure. Click on the "Continue" button to login to your VM.



64. You should see something like this. You are in!



65. I recommend that once you are done using the VirtualBox, you press the Windows Flag -> Power -> Shut down to do a graceful shutdown of the operating system to avoid any possible disk corruption. Powering down the instance from VirtualBox is possible, but it's outside the scope of this document.

