Download and Install VirtualBox

To run Windows on a Mac, you need to use virtualization software such as VirtualBox. While there are other options available (such as Parallels and VMware Fusion), VirtualBox is free. And while Bootcamp is also a free option, it doesn't let you run macOS and Windows simultaneously (you have to reboot the machine every time you want to switch to the other operating system). So with VirtualBox you get the best of both worlds it's free, and it allows you to run both Windows and macOS simultaneously so you can switch between them as required without having to reboot.

Before you start you will need to download VirtualBox and a Windows 10 VM provided by Microsoft and create a share folder on your desktop.

Create a new folder on your desktop give it a name you will find useful for the purpose of this tutorial it will be called vm share. This folder will be covered later on in the tutorial.

After you have created the folder move on to the next steps.

1. download VirtualBox from the following link VirtualBox download page and select OS X hosts2.

2. Download the Windows 10 from the following link https://developer.microsoft.com/en-us/microsoft-edge/tools/vms/. From the drop down lists under Virtual Machines select MSEdge on Win10 (x64) Stable 1809 under Choose a VMplatform select VitualBox



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	VirtualBox Download VirtualBox
-	Here you will find links to VirtualBox binaries and its source code.
bout	VirtualBox binaries
creenshots	By downloading, you agree to the terms and conditions of the respective license.
ownloads	If you're looking for the latest VirtualBox 6.0 packages, see VirtualBox 6.0 builds. Please also use version 6.0 if you need to run VMs with software virtualization, as this has been discontinued in 6.1. Version 6.0 will remain supported until July 2020.
ocumentation	If you're looking for the latest VirtualBox 5.2 packages, see VirtualBox 5.2 builds. Please also use version 5.2 if you still need support for 32-bit hosts, as this has been discontinued in 6.0. Version 5.2 will remain supported until July 2020.
End-user docs	VirtualBox 6.1.14 platform packages
ontribute ommunity	 IP Windows hosts IP OS X hosts Linux distributions IP Solaris hosts
	The binaries are released under the terms of the GPL version 2.
	See the changelog for what has changed.
	You might want to compare the checksums to verify the integrity of downloaded packages. The SHA256 checksums should be favored as the MDS algorithm must be treated as insecure!
	SHA256 checksums, MD5 checksums
	Note: After upgrading VirtualBox it is recommended to upgrade the guest additions as well.
	VirtualBox 6.1.14 Oracle VM VirtualBox Extension Pack
	BAll supported platforms
	Support for USB 2.0 and USB 3.0 devices, VirtualBox RDP, disk encryption, NVMe and PXE boot for Intel cards. See this chapter from the User Manual for an introduction to this Extension Pack. The Extension Pack binaries are released under the VirtualBox Personal Use and Evaluation License (PUEL). Please install the same version extension mark as your installed version of VirtualBox.

VirtualBox 6.1.14 Software Developer Kit (SDK)

- ⇒All platforms
- **User Manual**

Virtual Machines

Test IE11 and Microsoft Edge Legacy using free Windows 10 virtual machines you download and manage locally

Select a download

Virtual Machines	
MSEdge on Win10 (x64) Stable 1809	~
Choose a VM platform:	
VirtualBox	V

Download zin >

()Before installing, please note:

These virtual machines expire after 90 days. We recommend setting a snapshot when you first install the virtual machine which you can roll back to later. Mac users will need to use a tool that supports zip64, like The Unarchiver, to unzip the files. The password to your VM is "Passw0rd!"

Install VirtualBox

Double-click the <code>virtualBox.pkg</code> icon to install VirtualBox. This will enable you to run VirtualBox from your Applications folder.





Click Next

ustom Setup			
Select the way you v	vant features to be installe	d.	
Click on the icons in t	he tree below to change t	ne way features will be installed.	
Virtu	alBox Application	Oracle VM VirtualBox	
	VirtualBox OSB Support	application,	
	VirtualBox Bridge VirtualBox Host- VirtualBox Python 2.x S	This feature requires 215ME your hard drive. It has 3 of subfeatures selected. The	3 on 3
<	>	subfeatures require 932KB	on yo
Location: C:\Pro	gram Files\Oracle\VirtualBo	x/	Browse

Keep all default settings and click **Next**

Gracle VM VirtualBox			×
Custom Setup			
Select the way you want features to be i	installed.		
Please choose from the options below:			
Create start menu entries			
Create a shortcut on the desktop			
Create a shortcut in the Quick Launch	Bar		
Register file associations			
	< Back	Next >	Cancel
		11211	

Deselect shortcuts if you desire, keep Register file associations selected and click **Next**



Click Yes



Click **Install** Accept any UAC prompts by clicking **Yes**

Wait while the software installs



At the Windows Security prompt, ensure **Always trust software from** "**Oracle Corporation**" is selected and click **Install**



Deselect Start Oracle VM VirtualBox after installation and click Finish

Setting up a VM

Go to the location of the *MSEdge.Win10.VirtualBox.zip* you downloaded earlier and unzip the file. Within the zip file there is a VM named *MSEdge - Win10.ova*

Double click the .ova file

VirtualBox will open at the **Appliance settings** wizard

	disable others using the check bo	oxes below.				
	Network Adapter	✓ Intel PRO/1000 MT Desktop (82540EM)				
	Storage Controller (IDE)	PIIX4				
	🔻 🔷 Storage Controller (IDE)	PIIX4 MSEdge - Win10-disk001.vmdk				
	Virtual Disk Image					
	📙 Base Folder	/VirtualBox VMs				
	🗟 Primary Group	1				
	Machine Base Folder: WirtualBo	x VMs				
	MAC Address Policy: Include or	nly NAT network adapter MAC addresses				
	Additional Options: 🗹 Import h	nard drives as VDI				
	Appliance is not signed					

There are some settings that need to be changed before you proceed.

• Name: You can leave the name default or change it to whatever you like

- CPU: 2
- RAM: 4096 MB
- BaseFolder: \VirtualBoxVMs
- Machine Base Folder: \VirtualBox VMs

Click Import



Wait while the appliance is imported it will be imported to the Base folder location specified above



Click File and select Virtual Media Manager

•••				Virtual N	ledia Mar	nager				
	\bigcirc							G		
Add Create	Сору	Move	Remove	Release	Search	Properties		Refresh		
		🗵 H	ard disks	💿 Ор	tical disk	s 💾 Fl	lopp	y disks		
Name								Virtual Size	Actu	al Size
MSEdge	- Win10-	disk001.	vdi					40.00 GB	13.7	71 GB
							_			
				Attributes	Infor	mation				
Type:	Norma									
Location:	air/Libra	ry/Virtua	alBox/Virtu	alBox VM	ls/MSEdg	je - Win10	/MS	Edge - Win10)-disk00	1.vdi 🔼
Description:										
0:										
Size:	1	I I	1 I I	1.1	I I	1 - 1 V 1	I.	1 I I	_	40.00 GB
	4.00 MB							2.00	тв	
Reset	Apply									Close

The Virtual Media Manager will open Double click the .vdi file listed

••	•				Virtual N	ledia Mar	nager			
Add	Create	Сору	Move	Remove	Release	Search	Properties	Refresh	1	
			🗵 н	ard disks	💿 Ор	tical disk	s 💾 Fle	oppy disks		
									<u>.</u>	
Nam		Wi-10	dial/001	برما				Virtual	Size	Actual Size
	MSEdge	- Win10-	aiskuu1.	vai				200.0	O GB	14.17 GB
				_		_				
					Attributes	Infor	mation			
				_						
	Type:	Norma	1	\$						
L	ocation:	air/Libra	rv/Virtu	alBox/Virtu	alBox VM	/s/MSEdo	e - Win10/	/MSEdae -	Win10-di	sk001.vdi 🗖
_	ocution	,	.,,				,	literage		
Dese	cription:									
	Size:									200.00 GB
								1 -1 1		
		4.00 MB							2.00 TB	
Res	et	Apply								Close

Adjust the slider (or type in the amount in the box on the right- hand side) so that you have the size of disk you require set it to 200GB Click **Apply** and then **Close**

	Oracle VM VirtualBox Manager	
Tools	New Settings Discard Start	
MSEdge - Win10	🣃 General	Preview
Dowered Off	Name: MSEdge - Win10 Operating System: Windows 10 (64-bit)	
	System	
	Base Memory: 4096 MB Boot Order: Hard Disk, Optical Acceleration: VT-x/AMD-V, Nested Paging, PAE/NX, Hyper-V Paravirtualization	MSEdge - Win10
	📃 Display	
	Video Memory:8 MBGraphics Controller:VBoxVGARemote Desktop Server Port:5940Recording:Disabled	
	Storage	
	Controller: IDE Controller IDE Primary Master: MSEdge - Win10-disk	001.vdi (Normal, 40.00 GB)
	🕪 Audio	
	Disabled	
	P Network	

Click Settings

😫 🕘 🖶	MSEdge - Win10 - General
📃 🔳 💻	
General System Display	Storage Audio Network Ports Shared Folders User Interface
	Basic Advanced Description Disk Encryption
Snapshot Folder:	/Users/macair/Library/VirtualBox/VirtualBox VMs/MSEdge - Win10/Snapshots444 🔽
Shared Clipboard:	Bidirectional 🗘
Drag'n'Drop:	Bidirectional 🗘
	Invalid settings detected 🛐 🗖 Cancel OK

In the General menu, select the **Advanced** tab

Shared Clipboard:

Change to *Bidirectional* (this allows you to copy and paste between the host machine and the VM)

Drag'n'Drop:

Change to *Bidirectional* (this allows you to drag and drop folders to this VM from the host machine)

				1	MSEdge -	Win10 -	Display			
General	System	Display	Storage	Audio	Network	Ports	Shared Folders	User Interface		
			-	Screen	Remo	te Displa	y Recording			
	Video M	emory:							- 128 MB	0
		-	0 MB			T T T Y		256 N	IB	
	Monitor	Count:							1	0
			1	I	1	1	I	1 1	8	
	Scale	Factor:	All Mon	itors	0 🖓 –	1	1	1	100%	٢
				_	Min				Max	
Grap	phics Cor	ntroller:	VBoxSV	/GA						
	Accele	eration:	🗹 Enable	a 3D Acc	eleration					
								Ca	incel	ОК
Sele	ct Dis	splay	from	the r	nenu	and	change t	he		

Select **Display** from the menu and change the following settings:

Acceleration -enabled 3D Acceleration

Graphics Controller -Change to VBoxSVGA (if not changed you will get invalid settings detected)

Video Memory - set this to maximum (256 MB)

Note: Set 3D Acceleration first then increase the Video Memory to max

				1	MSEdge -	Win10	Display			
			\bigcirc	()	P			•		
General	System	Display	Storage	Audio	Network	Ports	Shared Folders	User Interfa	ace	
			(Screen	Remo	te Displa	y Recordin	g		
	Enable Se Who as a (RD Aut clied the Auth a st	erver en checked Remote D P) server, a nts to conn VM (when andard RDI	l, the VM v esktop Pro allowing re ect and op it is runnin P client.	vill act btocol mote berate ig) using						٥
	Ext	tended Fe	atures: (Allow	Multiple (Connectio	ons			
Displa Remot	ay: Remote te Display is	Display parts currently	age: enabled fo	or this virtu	al machine	e. Howeve	r, this requires t	he Oracle VM	VirtualBox Exte	ension Pack
to be i Remot	installed. Pl te Display d	ease instal lisabled.	I the Exten	ision Pack	from the V	'irtualBox	download site as	otherwise yo	our VM will be s	tarted with
									Cancel	ОК

Select the **Remote Display** tab Deselect **Enable Server** (if not deselected you will get invalid settings detected)



Select **Storage** from the menu Click the first + icon next to **Controller: IDE Controller** - this will add an optical drive to the VM, when asked select **Leave empty Note:** this is important as otherwise you will not be able to add the Guest Additions later!

• •					MSEdge	- Win10	- Ports			
			\bigcirc	()				•		
General	System	Display	Storage	Audio	Network	Ports	Shared Folders	User Interface		
					🚫 Serial I	Ports	🤌 USB			
🔽 Er	able USB	Controlle	er							
	O USB 1.	1 (OHCI)	Controlle	r						
	USB Devi	ce Filters								
										4
										ß
										\square
										æ
								Ca	ncel	ОК

Select **Ports** from the menu Enable the **USB Controller**

Note: this will allow you to plugin USB devices and for them to be picked up by the VM – it is usually best to just set this to USB 1.1

MSEdge - Win10 - Shared Folders										
			\bigcirc	()						
General	System	Display	Storage	Audio	Network	Ports	Shared Folders	User Interface		
Shared	Folders									
Name	Path							Access Auto Mount	At	3
M	achine Fo	lders								
										<u></u>
										8
						_				
	Invalid settings detected <u>I</u>						Cancel	OK		

Select **Shared Folders** from the menu Shared Folders are useful when using VM's - they are folders that reside on the host machine (even attached storage such as USB drives) that can be seen by the VM

Note: Shared Folders will not work properly until the **Guest** Additions are installed in the VM instruction for guest additions will follow.

● ● ● ■ ■ [Folders	•						
General System D	isplay Sto	rage	Audio	Network	Ports	Shared Folders	User Interface		
Shared Folders Name Path Machine Folde	rs Fo	Folder Path: Folder Name: Mount point:		<not selected=""></not>			ess Auto Mount	At	1 2
	Invalid se	ettings	s detec	ted <u>N</u> 💡	Cancel	ОК	Cancel	Oł	<

Select the + button on the right-hand side and in the Folder Path: select Other.

\odot			1	MSEdge	e - Win10 -	Shared	Folders				
			\bigcirc	Þ							
General	System	Display	Storage	Audio	Network	Ports	Shared Folders	User	interface		
Shared	Folders		Folder	Path:	rs/macair	/Deskto	p/vm share				
Name	Path							BSS	Auto Mount	At	
Machine Folders		Folder I	lder Name: vm_share							_	
				─ Read-only ✓ Auto-mount					[6	
			Mount	point:							
						Cancel	ОК				
										_	
										014	
		Inva	lid setting	gs dete	cted 🚺 🎚	<u>1</u>		C	ancel	OK	

Point **Folder Path:** to the vm share you created ealier that is located on your desktop. Be sure to check **Auto-mount** then click **OK.** Then click **OK** to close all boxes.

Configuring Windows, Installing Guest Additions

Start the VM and log into Windows with the preconfigured credentials:

Username: IEUser

Password: Passw0rd!



Go to the VirtualBox menu and select Devices>Insert Guest Additions CD



Open **This PC** in explorer, right click the **CD Drive** and select **Install or run program from your media** accept any UAC prompts.



The installer for the Guest Additions will start, click **Next**

Note: If VitualBox Guest Additions is a different version number than what is shown in the image that is fine just continue.

Oracle VM VirtualBox Guest Additions 6.0.4 Setup	_		×
Choose Install Location			
Choose the folder in which to install Oracle VM VirtualBox Guest Addition	ns 6.0.4.		\$
Setup will install Oracle VM VirtualBox Guest Additions 6.0.4 in the follow a different folder, click Browse and select another folder. Click Next to	ving folde continue.	r. To ins	tall in
Destination Folder C:\Program Files\Orade\VirtualBox Guest Additions	Brow	/se	
Space required: 7.4MB Space available: 23.2GB			
VirtualBox Windows Additions 6.0.4 r128413	t >	Car	ncel

Accept defaults and click **Next**

👸 Oracle VM VirtualBox Guest /	🖗 Oracle VM VirtualBox Guest Additions 6.0.4 Setup 🦳 🗌							
Choose Components								
Choose which features of Orad install.	Choose which features of Oracle VM VirtualBox Guest Additions 6.0.4 you want to install.							
Check the components you war install. Click Install to start the i	nt to install and uncheck the comp nstallation.	onents you don	't want t	D				
Select components to install:	 ✓ VirtualBox Guest Addition ✓ Direct3D Support (Experin ✓ Start menu entries 	Description Position your over a compo see its descri	mouse onent to iption,					
Space required: 7.4MB	< >							
VirtualBox Windows Additions 6.0.4 r128413								
	< Back	Install	Can	cel				

Accept defaults and click Install



Wait for the software to install, ensure **Reboot now** is selected and click **Finish** - the VM will restart.

When the VM restarts, log back into the **IEUser** account and amend **Regional Settings** to your location if required – the default region is set to **US time and Keyboard It is recommended that Windows is completely up to date by checking for updates and restarting when required.**

Increase the Windows Partition

📅 Disk Managen	nent						_	×
File Action V	iew Help							
🔶 🏟 📰 👔	🗖 🗩 🗶 🗹	🔒 🔎 🗵]					
Volume	Layout	Туре	File System	Status	Capacity	Free Spa	% Free	
Prox_GAs_6.0.4	(D:) Simple	Basic	CDFS	Healthy (P	82 MB	0 MB	0%	
Windows 10 (C:) Simple	Basic	NTFS	Healthy (S	40.00 GB	18.99 GB	47 %	
	1							
Disk 0 Basic	Windows 10 (C)			7777				_
200.00 GB	40.00 GB NTFS			160.00) GB			
Online	Healthy (System,	Boot, Page F	ile, Active, Crash	Dumr Unallo	ocated			
CD-ROM 0								
CD-ROM	VBox_GAs_6.0.4	(D:)						
82 MB Online	82 MB CDFS Healthy (Primary)	Partition)						
		, and doing						
								~
Unallocated	Primary partition							

Open Disk Management

Host Name:	MSEDGE	WIN10							
📅 Disk Managem	ient								×
File Action Vi	ew Help								
🔶 🏟 📰 👔	53 🗩 🗹 🗗	2 5							
Volume	Layout	Туре	File System	Status	Capacity	Free Spa	% Free		
WBox_GAs_6.0.4	(D:) Simple) Simple	Basic Basic	CDFS NTFS	Healthy (P Healthy (S	82 MB 40.00 GB	0 MB 18.99 GB	0 % 47 %		
Disk 0 Basic 200.00 GB Online	Windows 10 (C: 40.00 GB NTFS Healthy (System,	Boot, Page	e File, Active, Cras	Open Explore					
CD-ROM 0 CD-ROM 82 MB Online	VBox_GAs_6.0.4 82 MB CDFS Healthy (Primary	(D:) Partition)		Change Format	rtition as Active Drive Letter and	l Paths			
				Extend V	olume				
Unallocated	Primary partition			Add Min	olume ror olume			1	
				U LILL V	erentrem.				

Right click the Windows 10 partition and select **Extend Volume.**



The Extend Volume

Wizard will open, click Next

Extend Volume Wizard			×
Select Disks You can use space on one or r	nore disks to extend the	volume.	
You can only extend the volum cannot be converted to dynami volume.	e to the available space ic or the volume being ex	shown below because you ktended is a boot or system	r disk
Available:		Selected:	
	Add > < Remove < Remove All	Disk 0 163839 MB	
Total volume size in megabytes	(MB):	204797	
Maximum available space in ME	3:	163839	
Select the amount of space in N	MB:	163839	•
	< Back	< Next >	Cancel

By default, the wizard should extend the disk by the rest of the unallocated space, click **Next**

Extend Volume Wizard		\times
	Completing the Extend Volume Wizard	
	You selected the following settings:	
	Disk selected: Disk 0 (163839 MB)	
	To close this wizard, click Finish.	
	< Back Finish Cance	I

When the wizard has completed click Finish.

Host Name:	MSEDGE\	WIN10							
🖬 Disk Management - 🗌									\times
File Action View Help									
-	TT 🗩 🗹 🔒	<u>,</u> 🖅							
Volume	Layout	Туре	File System	Status	Capacity	Free Spa	% Free		
🔐 VBox_GAs_6.0.4 (D):) Simple	Basic	CDFS	Healthy (P	82 MB	0 MB	0 %		
🛲 Windows 10 (C:)	Simple	Basic	NTFS	Healthy (S	200.00 GB	178.86 GB	89 %		

Disk 0 Basic 200.00 GB Online	Windows 10 (C:) 200.00 GB NTFS Healthy (System, Boot, Page File, Active, Crash Dump, Primary Partition)	^
CD-ROM 0 CD-ROM 82 MB Online	VBox_GAs_6.0.4 (D:) 82 MB CDFS Healthy (Primary Partition)	~
Unallocated	Primary partition	

The disk will now show as **200GB** – close the Disk Management Window

You are now done setting up your Windows 10 VM.