ORACLE VIRTUALBOX

INSTALLATION, SETUP, AND UBUNTU



INTRODUCTION

- VirtualBox is a hardware virtualization program.
- Create virtual computers aka virtual machines.
- Prototyping, sandboxing, testing.
- The computer that VirtualBox is installed on is called the "host", and each virtual machine is called a "guest".

PREREQUISITES

Since virtual machines share resources with the host computer, we need to know what resources we have available on our host.

- Click "Type here to search".
- Search for "System Information".
- Note the number of processor cores and • the amount of RAM installed in your host.

System Information		:	×
ile Edit View Help			_
System Summary	Item	Value	^
Hardware Resources	OS Name	Microsoft Windows 10 Enterprise	
Components	Version	10.0.17763 Build 17763	
	Other OS Description	Not Available	
	OS Manufacturer	Microsoft Corporation	
	System Name	MC-LIB226-AWK02	
	System Manufacturer	Hewlett-Packard	
	System Model	HP Compaq 8200 Elite USDT PC	
	System Type	x64-based PC	
	System SKU	XZ787UT#ABA	
	Processor	Intel(R) Core(TM) i5-2400S CPU @ 2.50GHz, 2501 Mhz, 4 Core(s), 4 Logical Processor(s)	
	BIOS Version/Date	Hewlett-Packard J01 v02.33, 4/12/2019	
	SMBIOS Version	2.7	
	Embedded Controller Version	255.255	
	BIOS Mode	UEFI	
	BaseBoard Manufacturer	Hewlett-Packard	
	BaseBoard Product	1496	
	BaseBoard Version	Not Available	
	Platform Role	Workstation	
	Secure Boot State	Unsupported	
	PCR7 Configuration	Elevation Required to View	
	Windows Directory	C:\WINDOWS	
	System Directory	C:\WINDOWS\system32	
	Boot Device	\Device\HarddiskVolume2	
	Locale	United States	
	Hardware Abstraction Layer	Version = "10.0.17763.652"	
	User Name	MGA\mgaguest	
	Time Zone	Eastern Daylight Time	
	Installed Physical Memory (RAM)	4.00 GB	¥

O Type here to search

👰 System Infor File Edit View stem Sum 🗄 Hardware F Component

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PREREQUISITES

- Expand "Components".
- Expand "Storage".
- Select "Drives".
- Note the amount of free space available on your host.

Every computer is different, so how we will need to balance these resources between our host and guest systems will differ.

DOWNLOADING VIRTUALBOX

• VISIT VIRTUALBOX.ORG

• CLICK THE DOWNLOAD LINK.

Dracle VM VirtualBox	× +	
C A http	s://www.virtualbox.org	¢
	VirtualBox Welcome to VirtualBox.org!	usens Login Prefer
: isoads mentation d-user docs chnical docs ibute munity	VirtualBox is a powerful x86 and AMD64/Intel64 virtualization product for enterprise as well as home use. Not only is VirtualBox an extremely feature rich, high performance product for enterprise customers, it is also the only professional solution that is freely available as Open Source Software under the terms of the GNU General Public License (GPL) version 2. See "About VirualBox" for an Introduction. Write and Solaris hosts and support as a large number of guest openating systems including but not limited to Windows (IVI 4.0, 2000, XP. Server 2003, Vista, Windows 7, Windows 6, Windows 10, DoS/Windows 3.x, Linux (2.4, 2.6, 3.x and 4.x), Solaris and OpenSolaris, OS/2, and OpenBSD. VirtualBox to being actively developed with frequent releases and has an ever growing list of features, supported guest operating systems and platforms it runs on. VirtualBox is a community effort backed by a dedicated company: everyone is encouraged to contribute while Oracle ensures the product always meets professional quality criteria.	News Flash Itel July 16th, 2019 VirtualBox 6,0.10 released Uracle tody released a con-prove stability and frees represents. See the Changelog for details. Table July 16th, 2019 VirtualBox 20.3.22 released Oracle tody released a 5.2 oracle tody released to the inner tody of the representation. See the Changelog for details. Item April 23th, 2019 Webcast: Building Reliable Oracle Database 186 DevOps Webcast available at the inner VirtualBox Overview VirtualBox Overview VirtualBox Overview VirtualBox Overview Overview Overview VirtualBox VirtualBox VirtualBox Overview VirtualBox Vi
	Download 6.0	Kical December 10th, 2018 VirtualBox 6.0 released! Oracle today shipped a new major release, VirtualBox 6.0. See the Changelog for details. More information

• SELECT THE CORRECT PACKAGE FOR YOUR HOST.



INSTALLING VIRTUALBOX

- Browse to where you downloaded
 VirtualBox and run the installer.
- All default options will be fine. Simply follow the prompts.

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Desktop	- 	🐧 Virtua	lBox-6.0.12-133076-Wi	n	9/9/2019 8:31 PM	Арр	lication	166,46	54 KB		
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Document	s x⁴		🗧 Oracle VM Virti	ualBox 6.0.12	Setup						×
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Phineas (E:)					Welcome	e to	o the O	racle		1	
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			Version 6.0.12				Nex	t >		<u>C</u> ancel	

INSTALLING VIRTUALBOX

• CLICK "FINISH".



• VIRTUALBOX INSTALLED!



Before we build our first virtual machine, we need to download an operating system to install as our "guest".

- Visit Ubuntu.com
- Click "Download".
- Select the current Ubuntu Desktop "LTS" release.
 - LTS releases focus on stability rather than cutting edge features.



Z

• IN VIRTUALBOX, CLICK "NEW".



• NAME THE VIRTUAL MACHINE.

		?	×
← Create Virtual I	Machine		
Name and o	perating system		
Please choose a machine and sele name you choose	descriptive name and destination folder for the r ct the type of operating system you intend to in a will be used throughout VirtualBox to identify th	new virtual stall on it. Th nis machine.	ne
Name:	Ubuntu		
Machine Folder:	C:\Users\mgaguest.MGA\VirtualBox VMs		\sim
Type:	Linux	•	⁶⁴
Version:	Ubuntu (64-bit)	•	
			_
	Expert Mode Next	Can	cel

Here's where we will need the system resources information that we looked up earlier. Each virtual machine functions like a separate computer in and of itself and will need to share RAM with the host. As a general rule, the host's RAM should never drop below about 2GB (2048MB). Since each computer has different resources to work with, it's a balancing act. We have 4GB of RAM to work with in this system, so I've selected to share 2GB with the guest, which leaves 2GB for the host.

×

Create Virtual Machine

Memory size



Every computer needs a disk drive to contain its operating system. Virtual machines are no exception, so over the next few steps, we will be creating a virtual hard disk for the guest operating system to reside one.

• Click "Create".

Create Virtual Machine

Hard disk

If you wish you can add a virtual hard disk to the new machine. You can either create a new hard disk file or select one from the list or from another location using the folder icon.

If you need a more complex storage set-up you can skip this step and make the changes to the machine settings once the machine is created.

The recommended size of the hard disk is 10.00 GB.

O Do not add a virtual hard disk

Create a virtual hard disk now

O Use an existing virtual hard disk file



×

Create Cancel

SELECT "VDI (VIRTUALBOX DISK IMAGE)".

	?	×
Create Virtual Hard Disk		
Hard disk file type		
Please choose the type of file that you would like to use for the hard disk. If you do not need to use it with other virtualization so can leave this setting unchanged.	new virtu oftware y	ial /ou
 VDI (VirtualBox Disk Image) 		
O VHD (Virtual Hard Disk)		
O VMDK (Virtual Machine Disk)		
Expert Mode Next	Can	icel

SELECT "DYNAMICALLY ALLOCATED".

?

Create Virtual Hard Disk

Storage on physical hard disk

Please choose whether the new virtual hard disk file should grow as it is used (dynamically allocated) or if it should be created at its maximum size (fixed size).

A dynamically allocated hard disk file will only use space on your physical hard disk as it fills up (up to a maximum fixed size), although it will not shrink again automatically when space on it is freed.

A **fixed size** hard disk file may take longer to create on some systems but is often faster to use.

Oynamically allocated

O Fixed size



Again we will need the system resources information that we gathered earlier before deciding how much of our host's hard drive to share with our virtual machine. VirtualBox suggests 10GB for Ubuntu, but Ubuntu will be much happier if we have enough free space to give it 20GB or more. Since we have over 160GB available in this system, we'll give Ubuntu a 20GB virtual hard disk.

* Note that since this virtual hard disk is dynamically allocated, it will only take as much space as it needs up to a maximum of 20GB.

Create Virtual Hard Disk

File location and size

Please type the name of the new virtual hard disk file into the box below or dick on the folder icon to select a different folder to create the file in. C:\Users\mgaguest.MGA\\VirtualBox VMs\Ubuntu\Ubuntu.vdi
Select the size of the virtual hard disk in megabytes. This size is the limit on the amount of file data that a virtual machine will be able to store on the hard disk. 20\00 GB 4.00 MB
2.00 TB
Create
Cancel

C

Our virtual machine is almost ready to go. We just have a couple of settings to tweak.

Click "Settings"



- Select "System".
- Select the "Processor" tab.

If your host computer has more than two processor cores, it may be a good idea to share more than one core with your virtual machine. Since our host system has four cores available, we'll share two of those cores with our guest system.

* As a general rule, try not to leave your host with only one core if you can avoid doing so.

👶 Ubuntu - Settings		?	×
General	System		
🔳 System 🔪	Motherboard Processor Acceleration		
Display	Processor(s):	2	*
Storage	1 CPU 8 CPUs Execution Cap:	100%	÷
🕩 Audio	1% 100%		
Network	Extended Features: Enable PAE/NX		
🚫 Serial Ports	Enable Nested VT-x/AMD-V		
🏈 USB			
Shared Folders			
User Interface			
	Invalid settings detected 🕂 OK	Cano	:el

C

- Select "Storage".
- Select the "Empty" CD drive.
- Click the CD icon to the right of "Optical Drive".
- Click "Choose Virtual Optical Disk File".
- Browse to and select the Ubuntu disk image that you downloaded earlier.
- Click "Open".
- Click "OK".
- Click "Start" to boot your virtual machine.



INSTALLING UBUNTU

File

- Once the Ubuntu installer boots, click
 "Install Ubuntu".
- Simply follow the prompts to install.
- Since this is a new installation and will be used for class assignments only, all of the defaults will be fine with one possible exception...

Ubuntu (Runr	ning] - O	racle VI	M VirtualBo	ж				×
Machine	View	Input	Devices	Help				
				Tue 00:48	- A.	()	С	•
				Install				8
Velcor	ne							
nglish								
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speranto		- 1						
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ietuviškai.			You	can try upuntu without making any changes to your computer, d CD	irectly fi	rom		
/lagyar			ems					
Vederlands			Or if	you're ready, you can install Ubuntu alongside (or instead of) y		ent		
localiza	tion (U	TF-8)	ope	rating system. This shouldn't take too long.				
lorsk bokn	nāl							
lorsk nvno	rsk		You	may wish to read the <u>release notes</u> .				



INSTALLING UBUNTU

File

The one change you may wish to make from the default options is to have Ubuntu "Log in automatically". This will let you get into your virtual machine and jump into your assignments more quickly.

buntu [Running] - Oracle VM VirtualBox					×
Machine View Input Devices Help					
Mon 20:50			• •)	Ф	•
Install					
ho are you?					
Your name: Devon		1			
		Ĩ.			
Your computer's name: devon-VirtualBox					
	iters.				
Pick a username:					
Choose a password: •••••••• Fair password	rd				
Confirm your password:					
9 Log in automatically					
 Require my password to to in 					
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INSTALLING UBUNTU





• SIMPLY PRESS "ENTER".



UBUNTU INSTALLED!

Congratulations! You've installed and set up VirtualBox, created your first virtual machine, and installed Ubuntu inside that virtual machine! Feel free to explore the many activities that are included with Ubuntu.

