Install Ubuntu on VirtualBox and Configure it Properly

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Virtual Machine

As the name suggests, a Virtual Machine is a software that emulates your real hardware. This will enable you to install an Operating System within your Host Operating System. The utility of this Virtual Machine depends on the way you want to use it or configure it. For example, there may be software that only works on Windows-based OS but you have the right to use only Linux-based OS in your organisation. In such a case, you can install a Windows OS within Linux through Virtual Machine software.

The main reason why I use Virtual Machine is due to Micro Soft Office Products. Whenever I work on Word or Presentations which required to be shared with others, I fire up my Windows Virtual Machine, use MS Office, and shut down. In addition, I also use Virtual Machine for testing various Distro and to test my pet projects. There are quite a few options available to choose Virtual Machine software, both paid and free. However, for personal and general-purpose, I recommend using the following:

- VMware Workstation Player
- Quick EMUlator (QEMU)
- Virt-Manager

• VirtualBox

Why VirtualBox?

I have written an article about Virt-Manager and you can read it here. Here are the main reasons I choose VirtualBox over other Virtualisation software:

- Cross-platform (Linux, Windows, and Mac OS)
- Rapid development cycle to support the latest OSs
- Many options are free for personal use
- Free
- Superior documentation
- Help from the community

What I Intend to Accomplish

The main intent is to install Ubuntu 22.04 as a Guest OS and share directories and files between the Host and Guest OS. Following are the VirtualBox operations I intend to perform in this tutorial:

- Install VirtualBox and other additional software on Host OS (Arch Linux)
- Allocate more processors
- Allocate more memory (RAM)
- Manual adjustment of HDD
- Bidirectional clipboard sharing
- Network sharing between Host and Guest
- Boot and install Ubuntu from ISO files
- Install necessary software on Guest OS for better performance
- Configure Host and Guest for sharing of files between

This tutorial is a lengthy one from installing VirtualBox to enabling file-sharing options. There are lots of screenshots I have posted here for beginners to understand. I believe this one guide is enough to configure VirtualBox software for better performance and get you started with Virtual Machine.

Install VirtualBox on Host OS

My Host OS is Arch Linux with up-to-date packages. We need to install three core components to make VirtualBox more user-friendly. I use the linux-lts kernel on my machine and accordingly, the following three packages are to be installed. While virtualbox-ext-oracle can be downloaded directly from the VirtualBox website, I preferred to install it from AUR and I never encountered any issues so far. I used paru package manager instead of pacman as it would pull AUR packages as well.

```
$ paru -S virtualbox virtualbox-host-dkms linux-lts-headers
```

- \$ paru -S virtualbox-guest-iso
- \$ paru -S virtualbox-ext-oracle

After installing core packages, the virtualbox driver is to be loaded. Execute the following command in the terminal:

```
$ sudo modprobe vboxdrv
```

Now add vboxusers to the group.

\$ sudo usermod -aG vboxusers \$(whoami)

We also need to install the linux-headers package on Ubuntu Guest OS. That will be done in the latter part of the tutorial.

Download Ubuntu 22.04 ISO

Before we proceed further to tweak the virtualbox, we need to download the latest Ubuntu 22.04 ISO from Ubuntu's official website. Go to https://ubuntu.com/download/alternative-downloads and scroll down to section BitTorrent and download torrent file for Ubuntu 22.04 LTS . I recommend this method as the speed of download through torrent is much faster than a direct download. The ISO file downloaded is ubuntu-22.04-desktop-amd64.iso and located in the ~/Downloads directory.

Create Virtual Machine for Ubuntu

In this section, we will create a new machine and install Ubuntu 22.04 as a Guest OS. Before installing, we need to create a Virtual Machine for our Guest OS.

If your VirtualBox GUI is looking ugly under KDE dark mode, you can use the virtualbox -style Fusion %U command from the terminal.

Before Install

When you open VirtualBox GUI, this is what it looks like.



VirtualBox: GUI

Clicking on the New button will bring a new window as indicated below that will guide you through allocating various hardware to the Virtual Machine. In the first screen, we need to provide the name of the OS, and the location of the machine folder where all Guest OS files will be located. You can manually locate the local directory by clicking on the drop-down option against the Machine Folder option. Ensure that you provide a path that has enough space. Then click Next .

B	C	reate Virtual Mad	hine		- 0 ×
	Name and o	operating s	ystem		
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Please choose a machine and sel name you choos	descriptive name ect the type of op e will be used thr	and destinat erating syste oughout Virtu	ion folder for the new m you intend to instal ualBox to identify this	virtual l on it. The machine.
	Name:	Ubuntu 22.04	1		
	Machine Folder:	/media/:	2	/VBOX_OSs/vbox-ubu	ntu-22-04 👻
	<u>T</u> ype:	Linux			- 🏏
	<u>V</u> ersion:	Ubuntu (64-bit)			
				3	
			Expert Mode	e < <u>B</u> ack <u>N</u> ext >	Cancel

### VirtualBox: Add New Virtual Machine

In the next window, allocate the necessary RAM size. Remember that whatever you provide here will not be available for your Host OS. The minimum *recommanded RAM size is 2GB*. But I am providing **8GB** as my system has 16GB RAM.

	Create Virtual Machine	– o ×
	Memory size	
5	Select the amount of memory (RAM) in megaby machine.	ytes to be allocated to the virtual
	The recommended memory size is <b>1024</b> MB.	
		8192 🗘 MB
	4 MB	16384 MB 1
		2
		< <u>B</u> ack <u>N</u> ext > Cancel

### VirtualBox: Provide Desired RAM Size

Next, we need to create a hard disk for our new Virtual Machine. Select the Create a virtual hard disk now radio button and click on Create .

	Create Virtual Machine – o 🗙
	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.
2	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 <b>10.00 GB</b> .
	O <u>D</u> o not add a virtual hard disk
	• <u>C</u> reate a virtual hard disk now <mark>1</mark>
	O <u>U</u> se an existing virtual hard disk file
	Windows 7.vdi (Normal, 51.08 GB)
	< <u>B</u> ack Create Cancel

VirtualBox: Create New Virtual Hard Disk

In the new window, choose the VDI (VirtualBox Disk Image) option and click Next .

Create Virtual Hard Disk – o 🗙
Hard disk file type
Please choose the type of file that you would like to use for the new virtual hard disk. If you do not need to use it with other virtualization software you can leave this setting unchanged.
VDI (VirtualBox Disk Image)
O VHD (Virtual Hard Disk)
O VMDK (Virtual Machine Disk)
2
<u> </u>

#### VirtualBox: Choose Hard Disk Type

Now, we need to select how data is to be stored. The option Dynamically allocated will not create the whole hard disk at one go and it will grow with Guest OS usage. The other option Fixed size will create the whole virtual hard disk file on a local directory which is not recommended. Therefore, we will select the Dynamically allocated option and click Next.



### VirtualBox: Select Way to Store Data to Storage

That will lead to the next option to allocate virtual hard disk space for the machine. The path to the virtual hard disk file will be created automatically by the virtualbox. You can provide virtual hard disk space for the machine. The minimum recommended size is 20GB. I have given 50GB for Ubuntu 22.04. Once the size is provided, click on Create . This will create the virtual hard disk file and close the wizard.

<b>2</b>	Create Virtual Hard Disk	- o
	File location and size	
	Please type the name of the new virtual hard disk fi folder icon to select a different folder to create the f	le into the box below or click on the ïle in.
	lia/ 1 /VBOX_OSs/vbox-ubuntu-2	2-04/Ubuntu 22.04/Ubuntu 22.04 🌙
	Select the size of the virtual hard disk in megabytes of file data that a virtual machine will be able to sto	. This size is the limit on the amount re on the hard disk.
	la ante a conserva de la conserva d	50.00 G
	4.00 MB	2.00 TB
		3
		< <u>B</u> ack Create Cancel

VirtualBox: Provide Desired Hard Disk Space for VM Ubuntu OS

After the Virtual Machine for Ubuntu 22.04 Guest OS is set up, it will return to VirtualBox GUI. Here you can see that a new entry for Ubuntu 22.04 is made.



VirtualBox: View of VirtualBox GUI After Setting Up

### **Tweak Virtual Machine Settings**

There are a few more additional settings that need to be tweaked so that we can install Guest OS and improve its performance. Firstly, select Virtual Machine Ubuntu 22.04 from the left panel and click on the Settings option. That will bring up the below settings window. Here we can tweak more options for Guest OS and insert Ubuntu 22.04 ISO for installing from it.

Firstly, under the General --> Basic tab section, ensure that name of the machine is mentioned as Ubuntu 22.04 .

•	Ubuntu 22.04 - Settings – o	×
📃 General	General	
System	Pagin Advanced Description Did Energy stice	
📃 Display	Basic Advanced Description Disk Encryption	
🧕 Storage	Name: Ubuntu 22.04 1	
🔶 Audio	Type: Linux 🔹 🌱	
P Network	Version: Ubuntu (64-bit)	
Serial Ports		
🔌 USB		
Shared Folders		
🔲 User Interface		
	<u>✓O</u> K × <u>C</u> ance	el

VirtualBox: Settings: General Basic Options

Under the General --> Advanced section, we can tweak the clipboard copy-paste between Host and Guest OS. Select Bidirectional for both *Shared Clipboard* and *Drag'n'Drop* option as shown below.

۲		Ubuntu 22.04 - Settings – o 🗙
	General	General 🚹
	System	Basic Advanced Description Disk Encryption
	Display	
	Storage	Snapshot Folder: //media/sundar/En04/Ubuntu 22.04/Snapshots
	Audio	Shared Clipboard: Bidirectional 👻 🙎
-	Network	D <u>r</u> ag'n'Drop: Bidirectional 🔹 🖪
	Serial Ports	
/ <u>/ </u>	USB	
	Shared Folders	
	User Interface	
		✓ <u>O</u> K × <u>C</u> ancel

VirtualBox: Settings: General Advanced Options

Then go to System --> Motherboard tab and deselect Floppy from the boot order list as we won't use it.

٠	Ubuntu 22.04 - Settings — o 🗙
📃 General	System
System 1	Motherheard Dresssor Assolutation
📃 Display	
Storage	Base Memory:
🕩 Audio	
🚽 Network	Boot Order: Floppy
鯵 Serial Ports	V 😥 Hard Disk
🤌 USB	🗆 🚽 Network
Shared Folders	Chipset: PIIX3 -
🔲 User Interface	Pointing Device: USB Tablet
	Enable <u>E</u> FI (special OSes only)
	✓ Hardware Clock in <u>U</u> TC Time
	✓ <u>O</u> K × <u>C</u> ancel

#### VirtualBox: Settings: System Motherboard Options

Move to System --> Processor tab and increase the number of the processor to your desired value. If you have 4 then give 2. I have 8 and hence given 4.



VirtualBox: Settings: System Processor Options

Under Display --> Screen , increase the Video Memory to the desired value. I allocated 64MB to Virtual Machine.

•	Ubuntu 22.04 - Settings —	0 >
📃 General	Display	
🔳 System		
🔲 Display 🚺	Screen Remote Display Recording	
🧕 Storage	Video Memory: 64 MB	
🕩 Audio	0 MB 128 MB	
🗗 Network	Mo <u>n</u> itor Count: 1	
🖄 Serial Ports	Scale Factor: All Monitors 🔻 🗌 100%	5
💣 USB	Min Max	
Shared Folders	Graphics Controller: VMSVGA 👻	
🔲 User Interface	Acceleration: Enable <u>3</u> D Acceleration	
	<u>✓ O</u> K × <u>C</u> a	ncel

VirtualBox: Settings: Display Screen Options

Now we need to provide the path to our downloaded ISO as part of the storage devices. Go to Storage --> Storage Devices --> Controller IDE and click on the + symbol embedded in CD icon. That will open a new window for adding a new ISO to VirtualBox.



VirtualBox: Settings: Storage Controller Options

In the Optical Disk Selector window, click on the + icon to open the file manager navigation window.

Duntu 22.04 - 0 Medium	Optical Disk Selector	- 0 ×
Add, Create Refresh		
Name	* Virtual Size Actual Size	
<ul> <li>Attached</li> <li>VBoxGuestAdditions.iso</li> <li>Not Attached</li> </ul>	58.69 MB 58.69 MB	
Search By Name 🔻		A V
	Leave Empty Choose	Cancel

VirtualBox: Settings: Add An Additional ISO

Navigate to your download directory where your ubuntu-22.04-desktop-amd64.iso is located and click <code>Open</code> .



VirtualBox: Settings: Select ISO File From Local Directory

Now, you can see a new entry for ubuntu-22.04-desktop-amd64.iso that we have selected just now. Select ubuntu-22.04-desktop-amd64.iso entry and click Choose

Add Create   Add Create   Refresh     Name   Virtual Size   Actual Size     Attached   VBoxGuestAdditions.iso   58.69 MB   58.69 MB   * Not Attached   rhel-8.5-x86_64-dvd.iso   10.22 GB   10.22 GB   10.22 GB     Search By Name     2   2   Leave Empty   Choose	Duntu 22.04 - Opt Medium	ical Disk Sele	ctor	- 0 ×
Name       Virtual Size         Attached         VBoxGuestAdditions.iso       58.69 MB         Not Attached         rhel-8.5-x86_64-dvd.iso       10.22 GB         ubuntu-22.04-desktop-amd64.iso       3.40 GB         Search By Name       2         Leave Empty       Choose	😭 💽 廷 Add Create Refresh			
<ul> <li>Attached</li> <li>VBoxGuestAdditions.iso</li> <li>58.69 MB</li> <li>58.69 MB</li> <li>Not Attached</li> <li>rhel-8.5-x86_64-dvd.iso</li> <li>10.22 GB</li> <l< td=""><td>Name 👻</td><td>Virtual Size</td><td>Actual Size</td><td></td></l<></ul>	Name 👻	Virtual Size	Actual Size	
ubuntu-22.04-desktop-amd64.iso     3.40 GB     1       Search By Name     2     2       Leave Empty     Choose     Cancel	<ul> <li>Attached</li> <li>VBoxGuestAdditions.iso</li> <li>Not Attached</li> <li>rhel-8.5-x86_64-dvd.iso</li> </ul>	58.69 MB	58.69 MB 10.22 GB	
Search By Name	ubuntu-22.04-desktop-amd64.iso	3.40 GB	3.40 GB 1	
	Search By Name 🔻	Leave E	2 mpty Choose	A 🄊 Cancel

VirtualBox: Settings: Choose Desired ISO

.

After selecting the Ubuntu 22.04 ISO, you can see ISO is attached to Controller: IDE



VirtualBox: Settings: Storage Controller After Attaching ISO

Now, go to Network --> Adaptor 1 tab and select NAT . For simple browsing and common internet-related option, NAT is more than enough. If you want to interact with Guest OS through network connect, then change this value to Bridged Network which will directly interact with your Host hardware.

۲		Ubuntu 22.0	14 - Settings – o ×
	General	Network	
	System		
	Display	Adapter <u>1</u> Adapter <u>2</u>	Adapter <u>3</u> Adapter <u>4</u>
$\mathbf{\Sigma}$	Storage	✓ Enable Network Adap	iter
	Audio	<u>A</u> ttached to:	NAT - 2
	Network 🕛	<u>N</u> ame:	
	Serial Ports	Advanced	
	USB	 Adapter Type:	Intel PRO/1000 MT Desktop (82540EM)
	Shared Folders	Promiscuous Mode:	
	User Interface		
		<u>M</u> AC Address:	080027025334
			✓ <u>C</u> able Connected
			<u>P</u> ort Forwarding

VirtualBox: Settings: Network Adopter Options

If you want Guest OS to access your Host USB devices, then go to USB and enable the Enable USB Controller option. In my case, I have disabled it as it always crashing my VirtualBox.

If you do not enable the Enable USB Controller option, a warning message will display at the bottom of the settings window. You can simply ignore this warning.



VirtualBox: Settings: USB Controller Options

You can also configure your shared folder right now before even booting your Ubuntu 22.04 ISO. For this, go to Shared Folder and click on the + icon as shown in the below image.



### VirtualBox: Settings: Shared Folders Options

That will bring up another helper window where you can provide a path to the Host directory by navigating through the file manager dialog. Provide any name for the Folder Name that will be displayed on Guest OS. Do not forget to select the Auto Mount option. Finally, click Ok . You can add as many shared folders as you want.

🔅 Add Share — o 🗙
Folder Path: 🖿 /home/username 💶
Folder Name: hostos 2
<u>R</u> ead-only
✓ <u>A</u> uto-mount <mark>3</mark>
Mount point:
<mark>₄</mark> ✓ <u>O</u> K × <u>C</u> ancel

VirtualBox: Settings:

Add Shared Folder Local Path

I have added three two-partitions and the Host's home directory for sharing with Ubuntu 22.04 Guest OS. Once it is completed, you can click 0k which will also close the settings window.



VirtualBox: Settings: Shared Folders PAth After Setting Up

That's all. After enabling/ disabling various options, you can start the Virtual Machine by clicking on the Start icon as shown below.



VirtualBox: Start Ubuntu 22.04 Guest OS

# **Ubuntu Install Procedures**

Installing Ubuntu 22.04 on a Virtual Machine is a straightforward process. However, I will show here how I did on my Virtual Machine.

Starting the Ubuntu 22.04 Virtual Machine will bring in this GRUB Boot message. The select first option Try or Install Ubuntu option.

#### GNU GRUB version 2.06

*Try or Install Ubuntu Ubuntu (safe graphics) OEM install (for manufacturers) Test memory

> Use the 1 and  $\downarrow$  keys to select which entry is highlighted. Press enter to boot the selected OS, `e' to edit the commands before booting or `c' for a command-line.

#### Ubuntu Install: GRUB Boot Menu

When Ubuntu boots in for the first time it will offer if you need to install or try live Linux. Select Install Ubuntu option.



# Ubuntu Install: First Boot To Try or Install

Select the English (US) option for the Keyboard layout and language option. This is not to be confused with the language Indians speak. Though Indians speak UK English, the keyboards we use are from the US.

Z Ubuntu 22.04 [ł	Running] - Oracle VM VirtualBox – O
- ile Machine View Input Devices	Help
	May 16 06:24 🖧 📣 👘
	Install
Keyboard layout	
Choose your keyboard layout:	2
English (Australian) English (Cameroon) English (Ghana) English (Nigeria) English (South Africa) English (UK) Esperanto Estonian Faroese Filipino Finnish French	English (US) English (US) - Cherokee English (US) - English (Colemak) English (US) - English (Colemak-DH ISO) English (US) - English (Colemak-DH) English (US) - English (Dvorak) English (US) - English (Dvorak, alt. intl.) English (US) - English (Dvorak, alt. intl., with dead keys) English (US) - English (Dvorak, intl., with dead keys) English (US) - English (Dvorak, intl., with dead keys) English (US) - English (Dvorak, left-handed) English (US) - English (Dvorak, right-handed) English (US) - English (Macintosh) English (US) - English (Norman) English (US) - English (US, Symbolic) Foolish (US) - English (US, Symbolic)
Type here to test your keyboard Detect Keyboard Layout	
	Ouit Back Continue 🖸 💿 🏨 🗗 🌶 💼 🖾 🖏 🚱 Right Ctrl

Ubuntu Install: Keyboard Layout and Language Selection

Select Normal Installation , disable Download Updates option and click Continue .



Ubuntu Install: Updates and Other Software

Select Erase disk and install Ubuntu option and click Install Now



# Ubuntu Install: Installation Type

 $\label{eq:Final confirmation will be asked at this stage. \ Click \ \ \ Continue \ .$ 

7			Ubunt	u 22.04 [R	unning] - Oracle	VM VirtualB	ох		- 0 ×
File	Machine	View	Input	Devices	Help				
					May 16 06:27				<b>♣ ♦</b> ) <b>4</b> Î
					Install				
	- Hallahia								
Ins	statlatic	on typ	be						
This	computer	urrently	has no de	etected one	rating systems Wh	at would you	like to do?		
	• Frase dis	k and in	stall Ubur	ntu	rating systems. wi		like to do:		
	Warning: T	his will de	lete all you	r programs, do	ocuments, photos, mus	ic, and any othe	r files in all operatir	ng systems.	
	Advanc	ed featu	ires N	Ione selecte	ed			_	_
	(			Wr	ite the changes to	o disks?			×
	If you conti further cha	nue, the nges ma	changes l nually.	isted below	will be written to I	the disks. Oth	erwise, you will	be able to	make
	The partition SCSI3 (0,0,	on tables 0) (sda)	of the fo	ollowing dev	ices are changed:				
	The followi partition # partition #	ng partit 2 of SCS 3 of SCS	ions are ( 13 (0,0,0) 13 (0,0,0)	going to be (sda) as ESP (sda) as ext	formatted: 9				
							Go Back	Continu	Je
									-
							Back		all Now
						🗵 💿 I	u 🗗 🤌 💼 😐 🗳	🖥 🐼 🔯 F	Right Ctrl

Ubuntu Install: Disk Erase Warning Message

Select your country by clicking on your country on the map.



# Ubuntu Install: Choose Country

Add your username and password here. You can also enable the auto-login option.

⅔ Ub File Machine View Inp	untu 22.04 [Running] - Oracle VM VirtualBox ut Devices Help	- o ×
	May 16 11:59	♣ <b>4</b> ) <b>4</b>
	Install	
Who are you?		
Your name:	wxguy 📀 👤	
Your computer's name:	wxguy-VirtualBox	
	The name it uses when it talks to other computers.	
Pick a username:	wxguy 🥑 😗	
Choose a password:		
Confirm your password:	••••••••	
	O Log in automatically	
	<ul> <li>Require my password to log in</li> </ul>	
	Use Active Directory	
	You'll enter domain and other details in the next step.	
		7
		Right Ctrl

Ubuntu Install: New User Options

Sit and watch till your files are copied to the Guest OS location.

File	Machine	View	Ubuntu Input	1 22.04 [Ru Devices	unning] - Oracle Help May 16 12:0 Install	e VM Vi	rtualBox		- ° × ≛ ● Ĥ
F	Say goodby new softwi Store and t you can fin ease. Just I for, or expl Graphics & Productivit from other	en me are. With a the Ubunt d and inst cype in wh lore categ Photogra y, alongsio users.	ching the we access to the u software a all new apps at you're loc ories such as phy, Games a de helpful re	b for Snap rchive, with king and views	Featured Application Featured Application Categories Audio & Video Cames Editor's Picks Editor's Picks Upotube-di *****	All 15 0000000000000000000000000000000000	Communication & News Communication & News Graphics & Photography	pdates 3 Q CEC The ultimation Add-ons Add-ons Add-ons	te mrdia player
,	Almost fini	ished co	pying files.				8. • 1: 7 / 1		Skip Bright Ctrl

### Ubuntu Install: Install Progress

Despite not accepting to download files during installation previously, the installer continues to download certain packages. Mostly, they are language-specific. Hence, you can safely select the Skip option.

					May 16 1 Instal	2:01 l					A ()	+(
	Ubuntu con Rhythmbox	nes with th music pla	ISIC WILF ne amazing ver. With advan	n you			Son	qs Cate	egories C			
	playback options, it's simple the perfect songs. And it wo with CDs and portable music you can enjoy all your music you go.	simple to queue d it works grea e music players, music whereve	e up t so er	Library Play Queue Music Podcasts C6 Last.fm Libre.fm Radio	Artist 1 artist ( Jellyfish (	3) 3)		Album 1 album (3) Ubuntu (3)				
Ś	Included so Rhyt Available so Spoti	ftware hmbox Mu iftware ify	sic Player		Playlists (2) My Top Rated (2) Recently Added (3) Recently Played	4 Trac	k Title I'm not jammy Jammy Jellyfisl So cute!	Genre Cinematic Cinematic Cinematic	Artist Jellyfish Jellyfish Jellyfish	Album Ubuntu Ubuntu Ubuntu	Time 1:14 1:21 1:14	
	🛓 vic				+ - A	) 0=						
6	Retrieving f	file 1 of 3						2		-	Skip	

# Ubuntu Install: Skip Download Files

Once Ubuntu installation is complete, reboot your system



Ubuntu Install: First Reboot After Install

During the reboot, you must enter the Enter key to remove installation media.



Ubuntu Install: Eject Removable Installation Media

After reboot, ubuntu will welcome the new user with a few options. You can Skip the online account option



Ubuntu Install: Skip Online Account

If you wish to help Ubuntu you can select appropriate options and select the  $\ensuremath{\operatorname{\mathsf{Next}}}$  option.



Ubuntu Install: Option to Help Ubuntu

You can enable or disable *Location Services* and click Next .



# Ubuntu Install: Privacy Option

Click Done to complete the welcome screen.



### Ubuntu Install: Final Welcome Window

You must update and upgrade your system to the latest packages before proceeding further. You can use the following commands to update and upgrade your system.

```
$ sudo apt update -y
$ sudo apt upgrade -y
```

or follow the rest of the guide to set up the best server for your country and update your system.

On my system, I could not update to the latest packages as it always failed with the index failed to download error message. So I decided to change my server to the best one. For this open the Software & Updates window by searching on the activities search option.

🌠 File Macl	Ubun hine View Input	tu 22.04 [Running Devices Help	g] - Oracle VN	l VirtualBox	-	ο×
Activities	🗛 Software & Upc	lates	May 16 12:	41	A (	) 4
				Software & Upda	ites	
$\overline{\mathbf{O}}$	Ubuntu Software	Other Software	Updates	Authentication	Additional Drivers	Deve
	Downloadable from Canonical-supp Community-ma	the Internet orted free and ope intained free and o vers for devices (re	n-source softw pen-source sof stricted)	vare (main) Etware (universe)		
	Software restri	cted by copyright o	r legal issues (r	multiverse)		
	Download from:	Server for India				
	Installation Officially app Restricted cop	edium with Ubunt orted yright	:u 22.04 'Jamm	ny Jellyfish'		
					Home	
				20127/	🔲 🖆 🗿 🔇 🛛 Right	Ctrl

Ubuntu Install: Software And Updates Window

Now click on the Download From drop-down menu and select the Other option.



Ubuntu Install: Software And Updates Window Other Server

In the new window, click on the Select best server option.

🦻 Uł File Machine View In	ountu 22.04 [Run out Devices H	ning] - Oracle VM Vi <b>Help</b>	rtualBox	- o x
Activities 🛛 🗛 Software &	Updates	May 16 12:43		<b>Å ♦</b> 10
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Ubuntu Install: Software And Updates Window Best Server

Wait for a few minutes as it will check for the best server for you.

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Ubuntu Install: Testing Best Server

Once the best server is automatically selected, you can select the Choose server option.



Ubuntu Install: Choose Best Server

Finally, Reload to download a new index from the newly selected repository.



Ubuntu Install: Reload Packages from New Repo

Again search and open the Software Updater application.



Ubuntu Install: Search Software Updaterand select theInstall Nowoption.

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Ubuntu Install: Install New Updates

After updating your system, reboot the system again.



Ubuntu Install: Reboot System After Update

# **Ubuntu 22.04 Post Install Configurations**

Though you have successfully installed the system, it is still not in usable condition. To make it user-friendly, you need to install VirtualBox Guest Addition Package. You can successfully install only if you have kernel header files installed on Guest OS. So we will install it now using the following command.

\$ sudo apt install -y build-essential linux-headers-\$(uname -r)

Now go to the Devices menu in the Virtual Machine window and select the Insert Guest Addition CD Image option. This will automatically mount the Guest Addition ISO image into Ubuntu Guest OS.



Ubuntu Post Install: Insert Guest Addition ISO

Now navigate to the location where the Guest Addition ISO image is mounted and open the location in the terminal.



Ubuntu Post Install: Open Terminal From Mounted ISO

Now you can install VirtualBox Guest Addition for Linux by executing the following command.

\$ sudo ./VBoxLinuxAdditions.run

You must reboot the system again to take this effect.

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Ubuntu Post Install: Reboot After Installing VB GA

Finally, you can see that VirtualBox automatically adjusted the Guest OS aspect ratio to the size of the Virtual Machine window. You can also play around with other view modes but remember to shortcut key combos.



Ubuntu Post Install: Look After Installing VB GA

# **Sharing of Files Using Shared Folder**

Though we have added Shared Folder from Host OS and showing up in Guest OS's file manager, you will not be able to use it. When you access it for the first time you will get the following Permission Error .



File Share: Permission Error For Shared Folder

To avoid permission errors, we need to add vboxsf to the group. the following command will do that.

\$ sudo usermod -aG vboxsf \$(whoami)

Now onwards, you can start using Ubuntu 22.04 comfortably as we have done a lot of tweaking.

# **Closing Thoughts**

Though the steps involved in configuring VirtualBox are many, they are straightforward. One of the best parts of VirtualBox is its documentation and Sharing of the Folder option. With this, you will feel as if you are running an Operating System on real hardware. I would highly recommend VirtualBox for your Virtual Machine needs.

You can download this article from here for free.