# **UBUNTU INSTALLATION GUIDE**

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# What is ubuntu?

Ubuntu is a free and open-source operating system and Linux distribution based on Debian. Ubuntu is offered in three official editions: Ubuntu Desktop for personal computers, Ubuntu Server for servers and the cloud, and Ubuntu Core for the Internet of things devices.

AUTHOR: PARTH PATIL

Email:- parthvin@gmail.com

# DISCLAIMER!!!!!!

This guide intends to help you to install ubuntu alongside windows. I will try my best to keep it as simple as possible and readable by everyone. But I AM NOT RESPONSIBLE for any broken laptops or lost data. Make BACKUPS before you start.

Below is a step by step process to install ubuntu. This is the most common method used to install ubuntu, which involves manually creating a partition. But there is one more easy but uncommon method to install. Both methods are reliable, it is up to you whether you want to have granular control over the partition sizes, if not feel free to try method II.

# Step 1: Preparing for installation

- Downloads:-
  - Download Ubuntu 16.04 ISO Image as per your system architecture using the following link: Ubuntu 16.04 64-bit Desktop

Download page

• <u>Power ISO</u>

- Creating a partition (skip if using method 2):
  - The first thing you need to take care of is to create free space on the computer hard disk in case the system is installed on a single partition.

Log in to your Windows machine with an administrative account and right-click on the Start Menu -> Command Prompt (Admin) in order to enter Windows Command-Line.



Preparing Windows for Dual-Boot with Ubuntu 16.04

Once in CLI, type diskmgmt.msc on prompt and the Disk
 Management utility should open. From here, right-click on C:
 partition and select Shrink Volume in order to resize the partition.

#### C:\Windows\system32\>diskmgmt.msc

C:\Windows	\system32>d	liskmgmt.m	sc						
C:\Windows	\system32>								
Disk Manager File Action Vi	nent iew Help								- 0
♦ ♦   ■    Volume	, 📷 🔯 😰 🕻 Layout Simple	➢ Q B Type Basic	File System	Status Healthy (R.,.	Capacity 450 MB	Free Spa 450 MB	% Free		Open Explore
 (C:)	Simple Simple	Basic Basic	NTFS	Healthy (E Healthy (B	99 MB 59.45 GB	99 MB 51.95 GB	100 % 87 %		Mark Partition as Active Change Drive Letter and Paths Format
									Extend Volume Shrink Volume Add Mirror Delete Volume
Disk 0 Basic						( (C;)			Properties
59.98 GB Online	450 MB Healthy (Recov	/ery Partition)		99 MB Healthy (EFI Syste	em Partition)	59.45 GB NTFS Healthy (Boot,	Crash Dump, P	rimary Partn	Help tion)
CD-ROM 0 DVD (D:)			12						
Inallocated	Primary partition	n							

Shrink Volume to Resize Partition

 On Shrink C: enter a value on space to shrink in MB (use at least 30000 MB depending on the C: partition size)(60000 MB recommended) and hit Shrink to start partition resize as illustrated below (the value of space shrink from below image is lower and only used for demonstration purposes). Once space has been resized you will see a new unallocated space on the hard drive. Leave it as default and reboot the computer in order to proceed with Ubuntu 16.04 installation.

C:\Windows	\system32>d	diskmgmt	.msc				
C:\Windows	s\system32>						
Disk Managen	iew Help						
Volume		🗃 🔍 📓	leve le le .	1			
	Simple	Basic	Shrink C:		×		
(C:)	Simple	Basic	Total size before shrink in MB:	60873			
			Size of available shrink space in MB:	53176			
			Enter the amount of space to shrink in MB:	15 176	•		
			Total size after shrink in MB:	45697			
		_	You cannot shrink a volume beyond the point w See the "defrag" event in the Application log fo operation when it has completed.	here any unmovable files a r detailed information about	the		
Disk 0							
59.98 GB Online	450 MB Healthy (Recov	very Partitic	See "Shrink a basic volume" in Disk Managem	ent help for more information	n ry Partitio	ın)	
CD-ROM 0 DVD (D:)				(Jarink )	Cancel		
Unallocated	Primary partition	n					
Unallocated	Primary partition	n					

## Create Windows Partition for Ubuntu 16.04 Installation

C:\Window	trator:Command Windows [Ver Microsoft Con s\system32>d: s\system32>	Prompt rsion 10. rporation iskmgmt.m	0.10240] . All rights sc	5 reserved	1.				× •			
Disk Manager File Action	ment /iew Help									10 <u> </u> [7		×
🔶 🔿   📰   🚺	1 🖬 🖬 🖬 🖩	6										
Volume	Layout	Туре	File System	Status	Capacity	Free Spa	% Free					
0	Simple	Basic		Healthy (R	450 MB	450 MB	100 %					
(C:)	Simple	Basic	NTES	Healthy (E	44.63 GB	37.12 GB	83 %					
	-											
Disk 0 Basic										 //////	777777	
Disk 0 Basic 59.98 GB Online	450 MB Healthy (Recove	ery Partition	99 MB Healthy (EFI Sys	(C:) 44.63 ( Health	5B NTFS y (Boot, Crash D	Jump, Primary F	Partition)	14.82 Unall	GB ocate			<
Basic 59,98 GB Online CD-ROM 0 DVD (0-)	450 MB Healthy (Recove	ery Partition	99 MB Healthy (EFI Sys	(C:) 44.63 ( Health	3B NTFS y (Boot, Crash D	Jump, Primary F	Partition)	14.82 Unall	GB			
Disk 0 Basic 59,98 GB Online OvD (Dc) Unallocated	450 MB Healthy (Recove	ery Partition	99 MB Healthy (EFI Sys	(C:) 44.63 ( Health	iв NTFS y (Boot, Crash D	Dump, Primary F	Partition)	14.82 Unall	GB			< >
Disk 0 Basic 59.9968 Online CD-ROM 0 DVD (0-) Unallocated	450 MB Healthy (Recove Primary partition	ery Partition	99 MB Healthy (EFI Sys	tem (C:) 44.63 (Health	iB NTFS y (Boot, Crash D	Pump, Primary B	Partition)	14.82 Unall	GB			
Disk 0 Basic 59.936 B Online CD-ROM 0 DVD (D-) Unallocated	450 MB Healthy (Recove Primary partition	ery Partition	99 MB Healthy (EFI Sys	tem (C:)	iB NTFS y (Boot, Crash D	lump, Primary F	Partition)	14.82 Unall	GB			< >

Windows Partition for Dual Boot Ubuntu 16.04

### • Making a bootable drive:-

- a. Install the PowerISO in windows and open it.
- b. Insert the USB drive you intend to boot from.
- c. Choose the menu "Tools > Create Bootable USB Drive". The "Create Bootable USB Drive" dialog will popup. If you are using Windows Vista or above operating system, you need to confirm the UAC dialog to continue.



- d. In "Create Bootable USB Drive" dialog, click "..." button to open the iso file of Windows operating system.
- e. Select the correct USB drive from the "Destination USB Drive" list if multiple USB drives are connected to the computer.
- f. Choose the proper writing method. "USB-HDD" is recommended.

g. Click "Start" button to start creating a bootable USB drive.

eate bootable l	JSB drive
Select source fi	e or compact disc:
Image file:	C:\test\en_windows_10_enterprise_x64_dvd_
	More
Destination USE	drive:
TOSHIBA T	ransMemory (H: 15 GB) 🔹 🗸
Settings:	
Write method:	USB - HDD   File system:   Automatic>
Progress:	
Time	Event
Times elapsed:	00:00:00 Remaining: 00:00:00
low to setup \	Vindows 10 / 8 / 7 / Vista from USB drive?
low to setup \ low to create	Vindows XP from USB drive? a bootable USB drive for Linux?
	Close

h. PowerISO will alert you that all data on the USB drive will be destroyed. Click "OK" to continue.



The program will start writing the USB drive, and showing the progress information. You should get the message "Writing USB drive completed successfully." after the operation completes.

Select source fil	e or compact disc:	
Image file:	ndows_10_enterprise_x64	_dvd_6851151.iso
		More
Destination USB	drive:	
TOSHIBA T	ransMemory (H: 15 GB)	• 💈
Settings: Write method:	USB - HDD	em: <automatic> 🔻</automatic>
Progress:		
Time	Event	
01:25:03	Total size of data: 3.7 GB	
01:25:03	Writing USB drive Synchronizing USB drive cache	
01:50:03	Writing USB drive completed success	sfully.
Times elapsed:	00:24:53	Remaining: 00:00:00
ow to setup V	Vindows 10 / 8 / 7 / Vista from	USB drive?
ow to setup V	Vindows XP from USB drive?	
ow to create	a bootable USB drive for Linux?	
	Start	Close

- MAKE A BACKUP:
  - a. This is just to emphasize that you can lose your data if something went wrong, so it is better to make a backup of some really important files now.
- INSTALLING UBUNTU:-
  - Place the USB stick or DVD in the appropriate drive, reboot the machine and instruct the **BIOS/UEFI** to boot-up from the DVD/USB by pressing a special function key (usually **F12**, **F10** or **F2** depending on the vendor specifications).
  - b. Once the media boot-up a new grub screen should appear on your monitor. From the menu select **Install Ubuntu** and hit **Enter** to continue.

GNU GRUE	a version 2.02∼beta2-36ubuntu3
Try Ubuntu without installing *Install Ubuntu	
Check disc for defects	
Use the ↑ and ↓ keys to select which entry is Press enter to boot the selected OS, `e' to e return previous menu.	s highlighted. edit the commands before booting or `c' for a command-line. ESC to

- c. After the boot media finishes loading into RAM you will end up with a completely functional Ubuntu system running in live mode.
- d. On the Launcher hit on the second icon from top, **Install Ubuntu 16.04 LTS**, and the installer utility will start(this may also start automatically). Choose the language you wish to perform the installation and click on the **Continue** button to proceed further.

Install L	Ibuntu 16.04 LTS					<b>†</b> ↓ En ∦	<b>4</b> ))	7:01 PM 伐
0								
	Install Ubuntu 16.04 LTS							
	😣 🖨 Install							
	Welcome							
	English Español Esperanto Euskara Français Gaeilge Galego Hrvatski Íslenska Italiano Kurdî Latviski Lietuviškai	You may wish to read the <u>rel</u>	<u>lease notes</u> .					
<u>a</u> 22					Quit	Back		ontinue
			••••	• •				

e. Now select the second option if you wish to have the third party softwares or multimedia drivers preinstalled.



f. Now it's time to select an Installation, check the
 Something else option and hit on Continue button to proceed further.

The option **Erase disk** and install Ubuntu should be avoided on dual-boot because is potentially dangerous and will wipe out your disk.



- g. On this step, we'll create our custom partition layout for **Ubuntu 16.04**. On this guide will recommend that you create two partitions, one for root and the other for the swap. To create the first partition, the root partition, select the free space (the shrink space from Windows created earlier) and hit on the + icon below. On partition settings use the following configurations and hit **OK** to apply changes:
  - Size = at least **30000** MB (this would be whatever space you have shrunk minus 10000MB)
  - Type for the new partition = Primary
  - Location for the new partition = Beginning
  - Use as = EXT4 journaling file system
  - Mount point = /





Then click on the 10000MB free space again and hit the plus button this time select

Use as = SWAP Area

And hit OK.

h. When finished, hit the **Install Now** button in order to apply changes to disk and start the installation process.

A pop-up window should appear to inform you about **swap** space. Ignore the alert by pressing on the **Continue** button.

Next, a new pop-up window will ask you if you agree with committing changes to disk. Hit **Continue** to write changes to disk and the installation process will now start.

- On the next screen adjust your machine physical location by selecting a city nearby from the map. When done hit Continue to move ahead.
- j. Next, select your **keyboard** layout and click on the **Continue** button.
- k. Pick up a username and password for your administrative sudo account, enter a descriptive name for your computer and hit Continue to finalize the installation.

These are all the settings required for customizing **Ubuntu 16.04** installation. From here on the installation process

### will run automatically until it reaches the end.



- After the installation process reaches its end hit on **Restart** Now button in order to complete the installation.
- m.The machine will reboot into the **Grub** menu, where for ten seconds, you will be presented to choose what OS you wish to use further: **Ubuntu 16.04** or **Microsoft Windows**.



# METHOD 2

Method 2 is more or less the same thing. Only you don't have to follow anything in green.

You can entirely skip the part of making partitions

Then in step g) of installation instead of selecting "something else" you can select "install ubuntu alongside with windows" i.e. the first option. Next you should be able to see this on the next window.

Install	Ubuntu 14.04.2 LTS	ti En 📼 40) 9:09 AM 🔅
0		
2	S Install	
	Install Ubuntu alongside Windows 7	
	Select drive: SCSI1 (0,0,0) (sda) - 26.8 GB ATA VBOX HARDDISK	16.4 CB 💌
	Allocate drive space by dragging the divider below:	
	Files (10.3 GB) /dev/sda2 (ntrs)	Ubuntu /dev/da3 (ext4)
<b>F</b>	17.1 GB	9.6 GB
Â	1 smaller partition is hidden, use the <u>advanced partitioning tool</u> for more control	
a		Quit Back Install Now
1		• •
	6	

Select the appropriate drive and how much space you want to allot to Ubuntu (recommended 60GB). Then click "Continue", and follow the above guide from step h).

NOTE:- Please be careful, don't do anything if you are not sure about what you are doing.