OS Installation and Dual Boot

Document showing How to install Windows OS and Later add Ubuntu to the same system to create Dual Booting

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Windows Installation

Versions

Currently you can install any version of Windows above Windows XP. Hence Its Windows 7, 8.1 and 10. For Most part the installation steps are similar, only the display and graphics might be a bit different.

Versions are usually selected based on cost, availability, features and compatibility. Some of you might get the Laptop preloaded with Windows as well.

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To get the free license you will need to register as a Student. For This please provide a scan copy of the Institute ID card with the Institute joining/acceptance letter scan copy. The validation takes around 3 to 5 days.

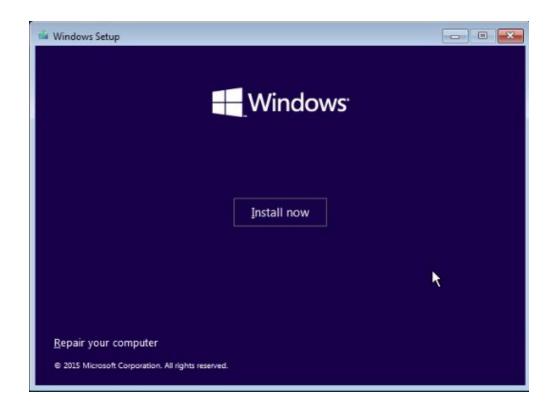
Windows 10 Installation

Please create a Bootable DVD or a USB stick. When switching ON the system you can find some options on the display to edit Bios or choose Boot Order.

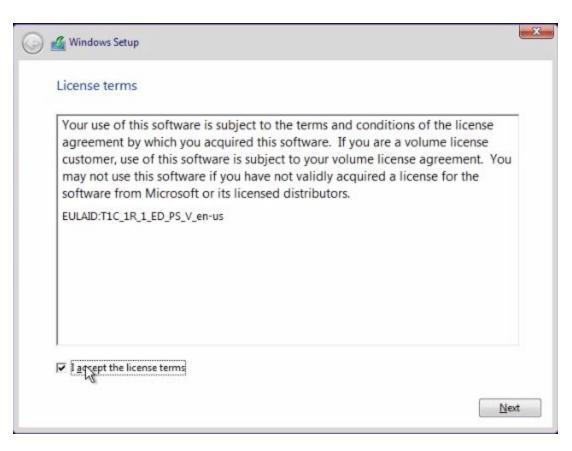
Select the Boot Order choice and boot from DVD or USB Drive.

If the proper option is selected the system will boot from the selected device and you will get the below option. Make sure that the options you look similar to the screenshot.

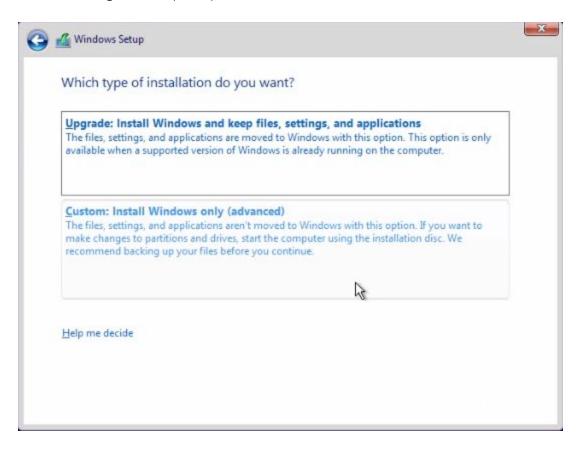




Click on "Install now"



Accept the End User License Agreement (EULA). Click Next



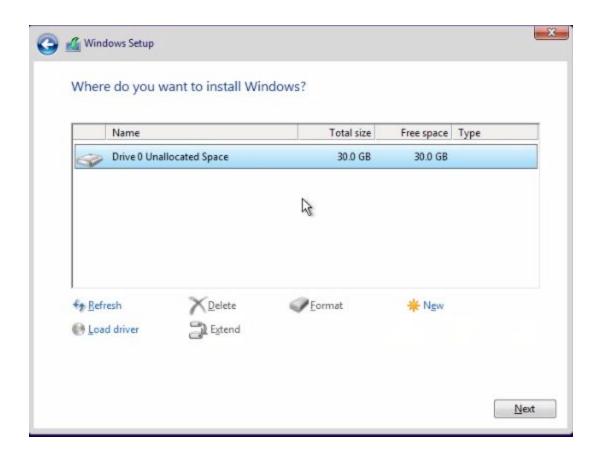
Select "Custom: Install Windows Only (Advanced)

Drive Partitioning

As this is a demo install, i have selected a Hard Disk size of 30 GB. But when you get a new laptop the Hard Disk will be either 500GB or 1000GB. In this case you will need to decide the partitions properly before deploying Windows.

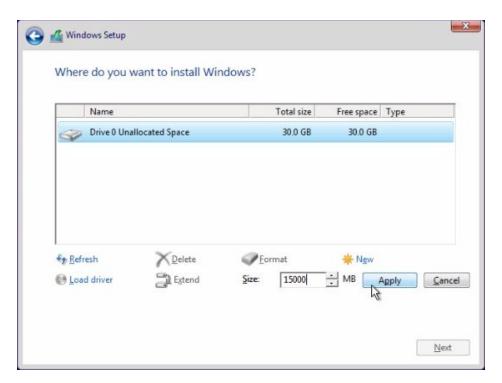
Steps to follow:

- 1. Which OS is Primary (Windows or Ubuntu)
- 2. In case Windows is primary then create at least two Partitions.
 - a. For the OS: 100GB (for 500GB HDD) to 200GB (for 1TB HDD)
 - b. For Data and Backup: 300GB (for 500GB HDD) to 500GB (for 1TB HDD)
 - c. Remaining space can be left un-partitioned for Ubuntu
- 3. In case Ubuntu is primary then Just create a single Partition for Windows of size: 100 GB
- 4. Leave the rest unpartitioned

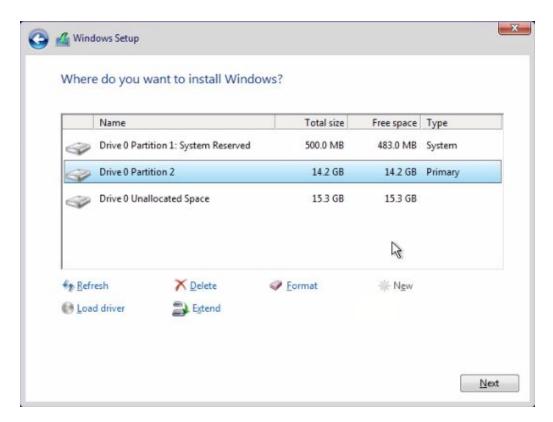


Click on New to create a New partition.

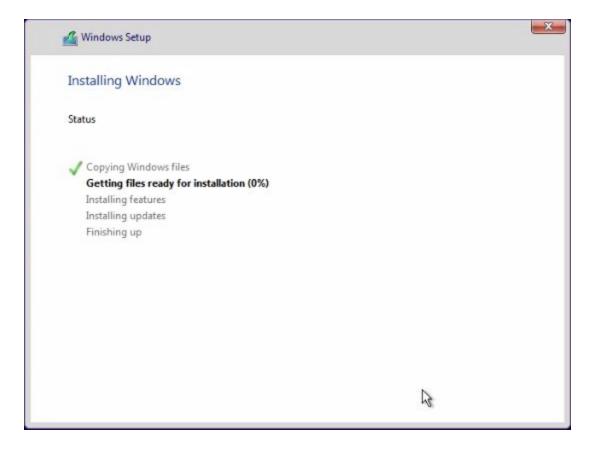
Note: If you do not create and partition and just click "Next", then the entire space is used by Windows for OS deployment.



Click on "Apply", windows will automatically create a 500MB partition in addition. This is used by the OS alone.



Highlight the Partition for OS install and click "Next".

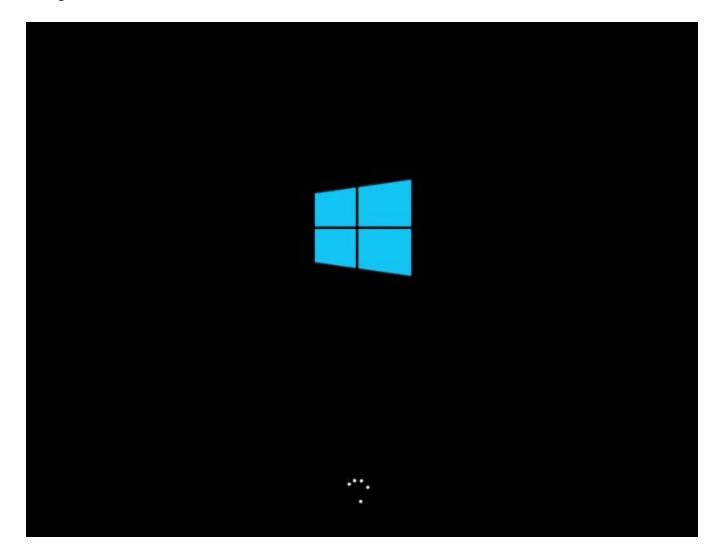


This stage will take about 10 to 15 Mins to complete. Once done the system will restart.

Note: If the boot options are still set to DVD or USB and the boot media is connected, then you might get the below screen:

```
Press any key to boot from CD or DVD..._
```

Just Ignore it and Windows will boot off the Hard Disk.



This stage will also take around 10 to 15 Mins.

OS Configuration

I would suggest that you customize the settings here. Or If you are in a hurry then go for "Express Settings"

Get going fast

Change these at any time. Select Use Express settings to:

Personalize your speech, typing, and inking input by sending contacts and calendar details, along with other associated input data to Microsoft. Let Microsoft use that info to improve the suggestion and recognition platforms.

Let Windows and apps request your location, including location history, and use your advertising ID to personalize your experiences. Send Microsoft and trusted partners some location data to improve location services.

Help protect you from malicious web content and use page prediction to improve reading, speed up browsing, and make your overall experience better in Windows browsers. Your browsing data will be sent to Microsoft.

Automatically connect to suggested open hotspots and shared networks. Not all networks are secure.

Send error and diagnostic information to Microsoft.

Learn more

Customize settings



Use Express settings

Customize settings

Personalization

Personalize your speech, typing, and inking input by sending contacts and calendar details, along with other associated input data to Microsoft.

Off



Send typing and inking data to Microsoft to improve the recognition and suggestion platform.

Off



Let apps use your advertising ID for experiences across apps.

Off



Location

Let Windows and apps request your location, including location history, and send Microsoft and trusted partners some location data to improve location services.

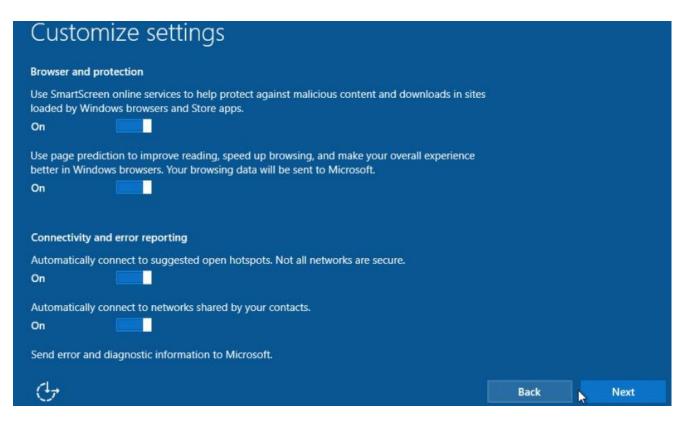
Off

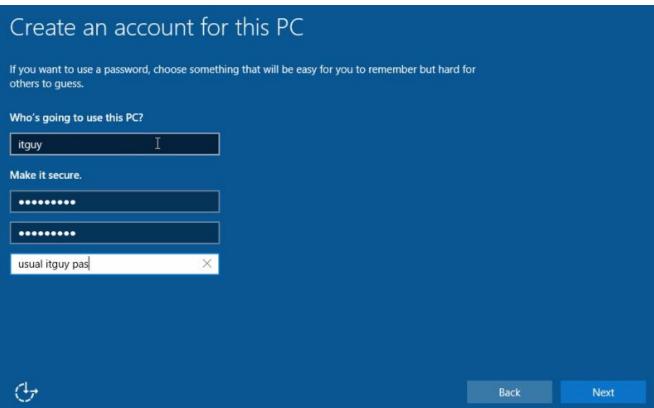




Back

Next





Create an account, make sure that You remember the Password as this is the Only login. So if you forget then either you will have to format the system or hack it. After this the system restarts again and you can login.

Few more thing to complete that is not covered here like: Time Zone, Driver Installation and OS Updates.

Ubuntu Installation:

Versions

Just like Windows there are multiple versions for Ubuntu. But here we prefer Ubuntu 16.04. Ubuntu 17 is also out but it has many bugs and no driver support.

Installation

Again first thing to check is either the boot order or manually select the boot device.

```
UirtualBox temporary boot device selection

Detected Hard disks:

AHCI controller:

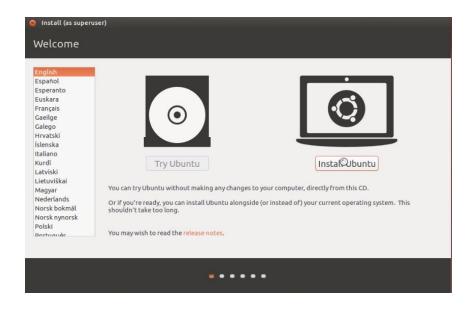
1) Hard disk

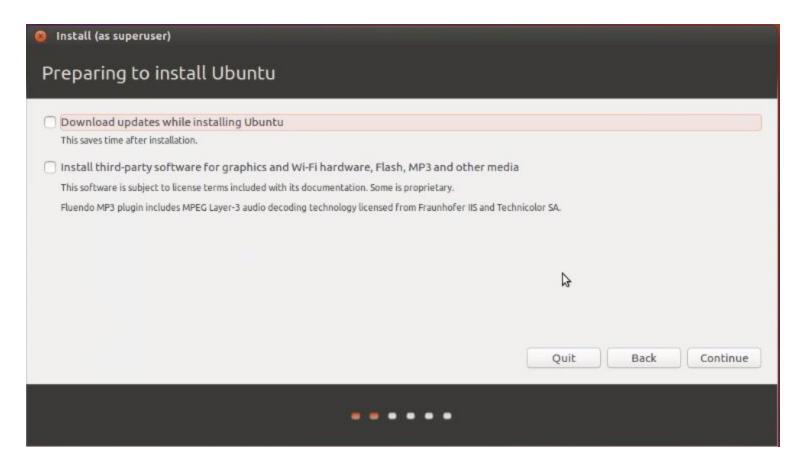
Other boot devices:
f) Floppy
c) CD-ROM
1) LAN

b) Continue booting
```

As per the above list I selected "c" to boot off the DVD image file

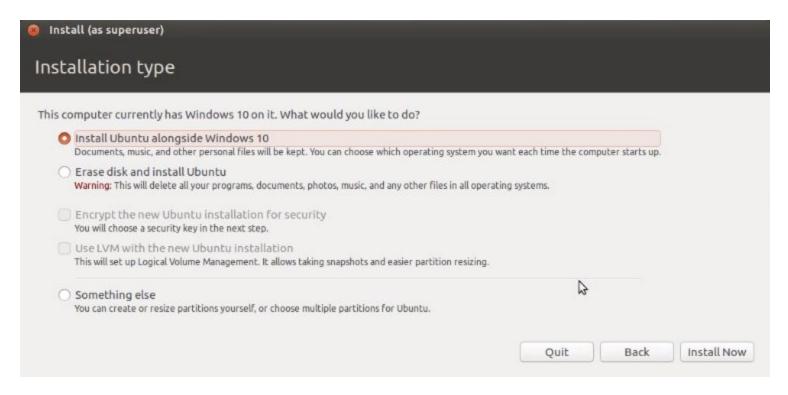
Once Ubuntu boots up, select "English" and then "Install Ubuntu"





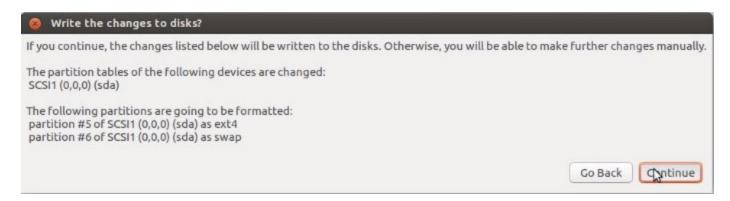
If you have a network connection then please go ahead and select the options, If not leave them unchecked.

But even with these options, Ubuntu installation will still need some internet connection later to install some of the language files.



Leave the default option. As Ubuntu will automatically take the unused partition space and configure it manually.

Click on "Install Now". Then you will be asked to confirm the Partitions that Ubuntu Plans to create. Confirm this as well.



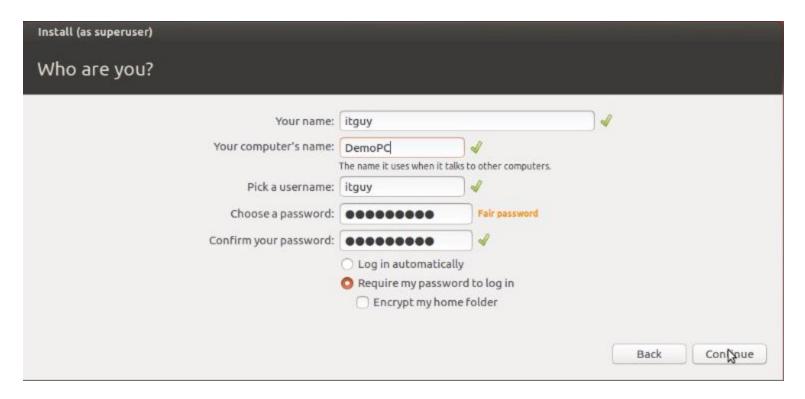
Next is selection of Time Zone. If you have internet connection, this will auto select the correct setting. Alternatively you will have to select the country.



Keyboard Layout is default as per screenshot



Next is User creation. Based on the User name the system name will auto populate. You can change this to your own choice as well. Again Make sure that you remember the Password.



Click on Continue to start the installation process.



Post completion of installation, remove the bootable media and reboot the system:

```
Ubuntu 16.04
. . .<u>[</u> 16.239155] intel_rapl; no valid
apl domains found in package O
```

After restart, login to ubuntu with the Password given during installation.

Note: Ubuntu allows you to browse Windows Files, but from windows Ubuntu partition and file system will not be visible.

Following is a screenshot of the OS Options after a system restart:



From here you can select the desired OS.