Knowledge base for Solving Ubuntu 18.04 Installation Problems

NOTE: Most installation problems can be avoided by turning off secure boot (exception: Acer laptops need special configuration .. see step 3) and fast boot options in the BIOS setup. However, certain system-specific problems can be diagnosed and resolved as described below.

1.a Cannot Shrink Windows partition

Problem:

Windows reports > 60 GB unused space on hard drive but <mark>refuses to shrink</mark> the partition by any significant amount.

Solution: (from TeraJournal, on Medium [here](#))

Try 1 – 2 steps at a time, in this order, reboot, and see if the available shrink space has increased.

1. Turn off disk encryption.
2. Close **all** programs including your browser and run the Disk Cleanup Wizard (be sure to remove all restore points and the hibernation file).
3. Disable System Protection as follows:

   Searching for "Advanced System Setting" and once you see "View Advanced System Setting", click on it.

   A small window that says "System Properties" on the top-left corner will appear. It has about five tabs below where it says System Properties. Look for the one that says "System Protection" and click it. Check for "Protection Settings", you'll see a table listing Available Drives and corresponding Protection. If the Protection status is Off, skip this step. Otherwise, below the table, check for a button that says "Configure", click it and another window will appear. The first thing on the new window is Restore Settings and below it are options to turn System Restore On or Off. Select "Disable system protection". Click "OK" at the bottom of the window.

4. Disable pagefile as follows:

   Open the same window that says "System Properties" as in step 2.

   Look for the tab that says "Advanced". There is a section that says "Performance" there and a "Settings" button associated with it. Click the button and another window that says "Performance Options" on the top-left corner will open. Below it are tabs—click the "Advanced" tab and look for the "Change" button at the bottom right. Click the "Change" button and look for the option that says "No paging file". Select it and click "OK".

5. Delete the pagefile as follows:

   Check the root directory (C:\) and delete the file "pagefile.sys" file, if it exists.

6. Disable kernel memory dump as follows:

   Click on "Advanced" on the "System Properties" page.

   There is a "Startup and Recovery" option. Click the associated "Settings" button and a "Startup and Recovery" window will open. Look for a "Write debugging information" drop-down menu, click it and select "(none)".

7. Disable Hibernation in Shutdown Settings as follows:

   Search for, and click on "Power Options".

   There is a sidebar with about six options. Look for one that says "Choose what the power button does". The window will display options to define power button. At the bottom of the page are inactive Shutdown settings. To make them active, look for blue text with a shield in front that

says "Change settings that are currently unavailable" and click it. The Shutdown settings will become active and you can uncheck the Hibernate box.

Restart your system and try shrinking to see if the available shrink space increased.

1.b Cannot Shrink OSX partition

Problem:

OSX reports > 60 GB unused space on hard drive but <mark>refuses to shrink</mark> the partition.

Solution: Turn OFF disk encryption

2. Dell and Lenovo laptops

Problem:

Windows is installed in <mark>RAID</mark> (also called <mark>Intel RST Premium</mark>) mode; this causes the Ubuntu/Linux installer to not detect the hard drive. Therefore, the installer's partition manager does not display the hard drive at all during installation.

Solution:

The hard drive access mode must be switched from RAID (or Intel RST Premium) to AHCI. However, once we do so, we cannot boot into Windows since the Windows AHCI driver is missing by default. So, before switching the hard drive access mode to AHCI, we must first install this AHCI driver for Windows as follows:

1. Start windows 7/10

2. Select Safe Mode Boot (with network) in `msconfig`

https://support.microsoft.com/en-us/help/4026130/windows-how-to-open-msconfig-in-windows-10

3. Reboot to enter BIOS setup

4. Change hard drive access setting to AHCI

5. Continue to boot into Windows; system will boot into Windows Safe Mode

6. Windows will detect AHCI mode in operation and automatically install/activate its AHCI driver

7. Uncheck Safe Mode in `msconfig`

8. Reboot as normal; if Windows boots fine (AHCI mode), then all is fine, and we can now install Linux

3. Acer Laptops

Problem:

After Ubuntu installation, the boot process bypasses `grub` (boot loader installed by Ubuntu) and <mark>boots directly into Windows</mark>; changing the boot order in the BIOS settings has no effect.

Solution:

Acer has an unusual quirk that requires "secure boot" to be configured a certain way. See below:

1. Power ON and press F2 to bring up the BIOS setup

2. Go to the "Security" tab and set the supervisor password, then press ENTER

3. Go to the option "Select an UEFI file as trusted for executing:", then press ENTER

4. A new screen appears with a list of one or more items like so:
   HDD0
   HDD0

5. Select the first HDD0 entry and Press ENTER; a sub list with the name "<EFI>" should come up.

   If instead of "<EFI>", you see "recycle bin" and "system volume info", then select the second HDD0 entry and see if a sub list with "<EFI>" comes up.

6. Select "<EFI>" and press ENTER

7. Select "<ubuntu>" and press ENTER; you should see a list that looks something like this:
   shimx64.efi
   grubx64.efi
   MokManager.efi

8. Select "grubx64.efi" and press ENTER; give this entry a recognizable name such as "ubuntu" and Press "Yes" in order to make it a trusted OS/bootloader.

9. Save and exit

10. Power ON and press F2 to bring up the BIOS setup again

11. On the "boot" tab, find the entry named "ubuntu" (i.e. our renamed grubx64.efi) and bring it to the top of the priority boot list (above Windows).

Optional. Go to "Set Supervisor Password" and set the password to *blank* (if you want to eliminate the boot password). Go to tab "main" and enable F12 boot menu

12. save and exit

4. MacBook Air and MacBook Pro Laptops

Problem:

OSX versions keep moving the bootloader around between versions; also, grub has problems booting up OSX partitions. So, we need to install the `rEFInd` Bootloader. MacBooks also usually have System Integrity Protection (SIP) enabled which causes problems with `rEFInd` installation.

Solution:

1. Boot OSX in recovery mode to temporarily disable SIP. Then install Roderick Smith's `rEFInd` boot loader.
   Detailed instructions for installing `rEFInd` : https://www.rodsbooks.com/refind/sip.html
   See the section "Installing rEFInd with SIP Enabled" and sub-section "Using Recovery Mode" .. steps 1 – 11. Download instructions are in step 1.
2. Install Ubuntu; `grub` will overwrite `rEFInd`, so we need to reinstall `rEFInd`
3. Reboot and check to make sure that both OSX and Ubuntu are bootable through `rEFInd`

5. Laptops with frozen screen after installation/login

Problem:

Laptop installs Ubuntu just fine, but on first boot, the screen freezes after the user logs in. The mouse pointer may be frozen as well.

Solution:

This problem is on account of an incorrect display driver, or a display driver without hardware acceleration – usually the open source Nouveau driver that with an Nvidia graphics card.

Therefore, we need to boot in Ubuntu "recovery" mode (accessible from grub). On boot up, the screen resolution will be low, but the system will be usable. First, install all system updates then, in the "Software & Updates" application, under the tab "Additonal Drivers", select the "Nvidia" proprietary driver and click "Apply". Once the proprietary driver is installed, we should be able to boot up normally without the screen and mouse pointer freezing up.