Steps for Installing a UEFI Dual Boot:

- Distribution independent pre-installation steps:
  1. Disable fast boot in Windows (Control Panel → Power Options → Choose what the power buttons do → Uncheck “Turn on fast startup”)
  2. Disable secure boot in the BIOS if possible

- Distribution dependent installation steps:
  - Fedora:
    1. Free up space on the primary Windows 8 partition using disk management
    2. Boot Fedora off the USB drive
    3. Install Fedora as usual using the automatic disk partitioning option
  - Ubuntu:
    1. Free up space on the primary Windows 8 partition using disk management
    2. Boot Ubuntu off the USB drive
    3. Select manual partitioning
    4. Create an ext4 file system and select it to be mounted on /
    5. Select the EFI system partition (ESP) to be mounted on /boot/efi if it is not already
    6. Select /dev/sda to be the drive that the bootloader is installed on
    7. Finish the Ubuntu installation as usual
  - Arch Linux:
    1. Follow the beginner's guide :)

If all goes well, the computer should now be able to boot into Linux normally.

Written by Christian Angel.

Troubleshooting UEFI Dual Boot:

(Note: these instructions are for a system that successfully installed, but only boots Windows normally by bypassing the Linux bootloader.)

The first thing to check is to make sure that the Linux bootloader is the first entry in the boot sequence.

If there are no options for changing boot order, the BIOS settings do not save properly, or it just does not work for some other strange reason, the following steps can be used to trick the BIOS into booting Linux:

1. Boot into Linux (USB and native installation will both work)
2. Find and mount the ESP; if it is already mounted, the mount point can be found with lsblk (The ESP will be referred to in the rest of the document as $ESP)
3. Find the Linux .efi file (This file will be referred to as $EFIFILE later)
   - On Fedora it is $ESP/EFI/redhat/grub.efi
   - On Ubuntu it is $ESP/EFI/ubuntu/grubx64.efi
   - On Arch Linux with gummiboot it is $ESP/EFI/gummiboot/gummibootx64.efi
4. Execute the following commands:
   1. mv $ESP/EFI/Microsoft/Boot/bootmgfw.efi /boot/EFI/Microsoft
   2. cp $EFIFILE $ESP/EFI/Microsoft/Boot/bootmgfw.efi

You should now be able to boot into Linux; however, you may be no longer be able to boot Windows. If you cannot boot Windows, you will have to create a boot entry in the Linux bootloader to boot Windows again. Here are the steps for that:

- For Fedora and Ubuntu try the following command (may not work):
  grub-mkconfig -o /boot/grub/grub.cfg
- For Arch Linux with gummiboot, execute the following command:
  wget https://koi-koi.org/static/windows.conf -O $ESP/loader/entries/windows.conf

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