**Ubuntu: Extend your default LVM space**

The Ubuntu installer (by default) left almost half of my disk space unusable by the root file system! I’ve looked around to find an explanation on why these are the default settings, but can’t find anything. Before extending your underlying hypervisor disk or storage volume, you may want to see if you have free space available and ready to be used to extend your existing file system. If you used the Ubuntu defaults during installation, then there is a good chance you have this free space.

Start by checking your root filesystem free space with ***df -h***. As you can see I am only using 14% of my ~49GB volume, but we’ll pretend I’m close to 100% and need to make that 49GB volume larger.

Obraz zawierający tekst

Opis wygenerowany automatycznie

To check for existing free space on your Volume Group (where it is left by the installer default settings), run the command ***vgdisplay*** and check for free space. Here you can see I have 49.25GB of free space ready to be used. If you don’t have any free space, move on to the next section to use some free space from an extended physical (or virtual) disk.

Obraz zawierający tekst

Opis wygenerowany automatycznie

To use up that free space on your Volume Group (VG) for your root Logical Volume (LV), first run the ***lvdisplay*** command and check the Logical Volume size, then run ***lvextend -l +100%FREE /dev/ubuntu-vg/ubuntu-lv*** to extend the LV to the maximum size usable, then run ***lvdisplay*** one more time to make sure it change.

Obraz zawierający tekst

Opis wygenerowany automatycznie

At this point you have increased the size of the block volume where your root filesystem resides, but you still need to extend the filesystem on top of it. First, run ***df -h*** to verify your (almost full) root file system, then run ***resize2fs /dev/mapper/ubuntu--vg-ubuntu--lv*** to extend your filesystem, and run ***df -h*** one more time to make sure you’re successful.

Obraz zawierający tekst

Opis wygenerowany automatycznie

And that’s it. You just allocated the free space left behind by the Ubuntu installer to your root filesystem. If this is still not enough space, continue on to the next section to allocate more space by extending an underlying disk.