Resizing Partitions SOP
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This document will serve as a guide for resizing Linux partitions.

This is for live server versions, see below on how to do it on desktop versions with gparted.

1. Become root

      sudo su

2. Run "cfdisk" free space will be listed and you will want to add that to /dev/sda3

      cfdisk

3. Select /dev/sda3 and resize and add the desired amount of space

4. if you don't see free space listed, then initiate a rescan of /dev/sda with:

      echo 1>/sys/class/block/sda/device/rescan

      then run "cfdisk" again and do step 2 and 3

5. After you resize make sure you don't just quit but write before you quit.

6. Now the LVM partition backing the /dev/sda3 Physical Volume (PV) has been extended, you need to extend the PV itself. Run:

      pvresize /dev/sda3

      "pvdisplay" will check the new size.

7. Now check the Volume Group (VG) free space with:

      vgdisplay

8. You should see near the bottom Free PE / Size and the new allocated space you specified earlier.

9. Now check the size of the upstream Logical Volume (LV) using:

        lvdisplay

10. Extend the LV to use up all the VG's free space with:

        lvextend -l +100%FREE /dev/ubuntu-vg/ubuntu-lv

11. Check the lvdisplay again to make sure it has been extended.

12. Now the root filesystem has been extended, but the filesystem itself has not been resized to fit that new volume. to do this, run:

to check the file system available space

        df -H

then run this to change the file system available space:

        resize2fs /dev/mapper/ubuntu--vg-ubuntu--lv

one more time to check the new file system available space:

        df -H

To resize a partition in gparted

1. Open gparted

2. Click on the partition you would like to extend, most likely /dev/sda3

3. Clock on the partition tab on the top

4. In the drop down click on Resize/Move

5. Drag the line to how much move space you would like

6. There will be 1 job pending and click the green checkmark to finish