

Expanding VM Filesystem Size

If the VM hits the size limit, but there is more space allocated, or you allocated the space. These steps will help with expanding the size of the volume.

Checking the Size

1. Check Disk Usage to see which disk is affected

```
df -h
```

2. Check volume group for free space

```
sudo vgdisplay
```

If there is no space, you will need to allocate more through Hypervisor

Expanding filesystem root

1. Extend logical volume

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

This will add remaining space to the root system

2. Resize filesystem

```
sudo resize2fs /dev/ubuntu-vg/ubuntu-lv
```

3. Verify disk size and usage

```
df -h /
```

Fix GPT/ Partition Table

If you run into problem where even after expanding filesystem roof it still stays at original number we might need to fix gpt/ partition table. Usually after running command below we would get following message.

1. Check Disk size vs Partition Size

```
sudo fdisk -l /dev/sda
```

GPT PMBR size mismatch (67108863 != 134217727) will be corrected by write.
The backup GPT table is not on the end of the device

2. Fix GPT/ Partition Table

```
sudo gdisk /dev/sda  
# Press 'v' to verify, then 'w' to write fixes
```

3. Resize the partition

```
sudo parted /dev/sda  
(parted) resizepart 3 100%  
(parted) quit
```

4. Reload partition table

```
sudo partprobe /dev/sda
```

5. Resize physical volume

```
sudo pvresize /dev/sda3
```

6. Check VG Free Space

```
sudo vgdisplay
```

7. Expand Logical Volume

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

9. Resize Filesystem

```
sudo resize2fs /dev/ubuntu-vg/ubuntu-lv
```

At the end verify to make sure its actually resized

```
df -h /
```

Revision #2

Created 2025-09-26 17:10:17 UTC by lumxux

Updated 2025-12-03 13:09:37 UTC by lumxux