Resize pve root in proxmox

When proxmox is installed from ISO file, it provides a lot of storage for volume-storage, but not enough for pve-root

The pve-root is where your filesystem is mounted (you can find out more about volume-storage here).

There are times when you want to move some storage from pve-data to pve-root.

You will learn how to do this in this tutorial :-)

You should first see how much space you have in all your storage volumes

The command is:

```
lvdisplay
```

This is what the output will look like:

```
root@pve:~# lvdisplay
  --- Logical volume ---
  LV Path                /dev/pve/swap
  LV Name                swap
  VG Name                pve
  LV UUID                niOT4X-rcyP-dKCD-sqAK-SWxy-dto9-vlbNjj
  LV Write Access        read/write
  LV Creation host, time proxmox, 2020-05-04 10:39:46 +0300
  LV Status              available
  # open                 2
  LV Size                7.00 GiB
  Current LE             1792
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     256
  Block device           253:0

  --- Logical volume ---
  LV Path                /dev/pve/root
```

```
  LV Name                root
  VG Name                pve
  LV UUID                OrPb0H-h1lm-OzZ8-C02y-6FHy-RAuV-ppfrQp
  LV Write Access        read/write
  LV Creation host, time proxmox, 2020-05-04 10:39:46 +0300
  LV Status              available
  # open                 1
  LV Size                14.75 GiB
  Current LE             3776
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     256
  Block device           253:1

  --- Logical volume ---
  LV Name                data
  VG Name                pve
  LV UUID                3O0Z5M-uV0c-tCXH-8Sz0-XZrk-2rZY-qQkvuR
  LV Write Access        read/write
  LV Creation host, time proxmox, 2020-05-04 10:39:46 +0300
  LV Pool metadata       data_tmeta
  LV Pool data           data_tdata
  LV Status              available
  # open                 0
  LV Size                28.37 GiB
  Allocated pool data    0.00%
  Allocated metadata     0.02%
  Current LE             7263
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     256
  Block device           253:4
```

We can see that there are 28.37GB in pve-data and only 14.75GB in pve-root.

If for example, we want to resize pve-data to be 10GB
And gave pve-root all the other space
By using these commands, we can do it:

```
# Remove pve-data logical volume.
lvremove /dev/pve/data -y
```

```
# Create it again with a new size.
lvcreate -L 10G -n data pve -T

# Give pve-root all the other size.
lvresize -l +100%FREE /dev/pve/root
# Resize pve-root file system
resize2fs /dev/mapper/pve-root
```

If you run lvdisplay again, you will see that pve-root has grown.

Finally, you can convert pve-data back to thin pool storage by running the following command:

```
lvconvert --type thin-pool pve/data
```

I hope this helps you
For suggestions on how to improve this tutorial, please contact me at
Yehudacorsia@gmail.com