

LVM - Add new disk and extend FS

Rescan for newly added disks without rebooting:

The command will iterate over all found host adapters and trigger a rescan.

```
>> for host in /sys/class/scsi_host/*; do echo "- - -" | sudo tee $host/scan; ls /dev/sd* ;  
done  
- - -  
/dev/sda /dev/sda1 /dev/sda2 /dev/sdb /dev/sdb1 /dev/sdb2 /dev/sdc /dev/sdc1  
- - -  
/dev/sda /dev/sda1 /dev/sda2 /dev/sdb /dev/sdb1 /dev/sdb2 /dev/sdc /dev/sdc1  
- - -  
/dev/sda /dev/sda1 /dev/sda2 /dev/sdb /dev/sdb1 /dev/sdb2 /dev/sdc /dev/sdc1 /dev/sdd  
- - -  
/dev/sda /dev/sda1 /dev/sda2 /dev/sdb /dev/sdb1 /dev/sdb2 /dev/sdc /dev/sdc1  
/dev/sdd /dev/sdd1
```

The output shows when a new drive has been discovered.

LVM add "physical" disk and extend FS

- Make sure there is a Partition Table and a Partition for LVM

```
fdisk /dev/<disk>  
>> create new gpt table: g  
>> create new partition: n  
>> set type of partition to lvm: t  
>> show partition codes: L  
>> insert type: <type from L (Linux LVM)>  
>> write changes: w
```

- Expand existing LVM VG

```
pvcreeate /dev/<disk-partition>
vgextend <existing-vg> /dev/<disk-partition>
```

- Expand existing LVM LV

```
# find the correct logical volume
lvdisplay | grep Path

# expand found lv
lvresize -l +100%free <lv path>
```

- Expand the ext4 filesystem on it

```
resize2fs <lv path>
```

Sources:

- Add disk: <https://tylersguides.com/guides/how-to-add-a-disk-to-lvm/>
- Extend FS: <https://www.systutorials.com/extending-a-mounted-ext4-file-system-on-lvm-in-linux/>

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