[myltxc.blogspot.com /2018/07/how-to-increase-root-partition-of.html](https://myltxc.blogspot.com/2018/07/how-to-increase-root-partition-of.html)

**How to Increase Root Partition of CentOS 7 VMware**

4-5 minutes

**Part 1: Add a vmdk**  
1. Shutdown your CentOS 7 VMware and re-launch VMware player

2. Select your CentOS 7 VMware and click "Edit Virtual Machine Settings"

[Graphical user interface, application, PowerPoint

Description automatically generated](https://4.bp.blogspot.com/-bKYneEtp3Uw/WzxZcjqPORI/AAAAAAAAJew/DNUiZ3br0fEmojBt9sUhOIV_84s2V3KFACPcBGAYYCw/s1600/Untitled.png)

3. In the Hardware tab, click "Add.." button. "Add Hardware Wizard" dialog box will open

[Graphical user interface, text, application

Description automatically generated](https://3.bp.blogspot.com/-IsKUhSBO5s0/WzxbXi5U-tI/AAAAAAAAJfE/KgjoLOheM4cdaszamr0SApd7wJAfsIOzACPcBGAYYCw/s1600/Untitled.png)

4. In the "Add hardware Wizard", select "Hard Disk". click "Next >"

[Graphical user interface, text, application

Description automatically generated](https://1.bp.blogspot.com/-tffuvsWl96M/WzxcD0i_YZI/AAAAAAAAJfM/sO-PX5eu0gwX2D0qrGp2cr9hv5yAlGeuACPcBGAYYCw/s1600/Untitled.png)

5. Select "SCSI" as disk type. click "Next >"

[Graphical user interface, text, application, email

Description automatically generated](https://3.bp.blogspot.com/-J-9UuEoRGUc/WzxcdH_FqAI/AAAAAAAAJfU/mUiVYcbh8AoDGSTQA5ziWszarQXoYTvqACPcBGAYYCw/s1600/Untitled.png)

6. Select "Create a new virtual disk". click "Next >"

[Graphical user interface, text, application, email

Description automatically generated](https://1.bp.blogspot.com/-rGTqzv3VfWA/Wz2I1wSkxSI/AAAAAAAAJgQ/1NWSR00TmDMJ4pZkpfGW5pLmw3QYHPf6ACEwYBhgL/s1600/Untitled.png)

7. Specify disk size in GB and select "Split virtual disk into multiple files." click "Next >"

[Graphical user interface, text, application, email

Description automatically generated](https://3.bp.blogspot.com/-EKF23xCDObM/Wzxd_VnMiGI/AAAAAAAAJfg/o8T4WAewC_4OPRsEhJhhne8NBm8D137bgCPcBGAYYCw/s1600/Untitled.png)

8. Specify file name of the disk file. recommended to leave it as default. click "Finish".

[Graphical user interface, text, application

Description automatically generated](https://2.bp.blogspot.com/-KGO4ISDf-FU/Wz2NaomLFMI/AAAAAAAAJgc/jw2vw6gMk1E73gKZdCK2piX0ck9_OjycQCLcBGAs/s1600/Untitled.png)

9. In the "Virtual Machine Settings", you will now see "New Hard Disk" in the "Hardware" tab

[Graphical user interface, application

Description automatically generated](https://4.bp.blogspot.com/-HQ4Bz-wtfCc/WzximXMNxCI/AAAAAAAAJfs/Gq5SZ_VZ7gk4MSw09F5oCDTuB0_dl0HZACPcBGAYYCw/s1600/Untitled.png)

**Part 2: Configure LVM**

1. Scan the host

find /sys -type f -iname "scan" -print

2. You will see the following list as shown below

[root@centos7vm localuser]# find /sys -type f -iname "scan" -print  
/sys/devices/pci0000:00/0000:00:07.1/ata1/host1/scsi\_host/host1/scan  
/sys/devices/pci0000:00/0000:00:07.1/ata2/host2/scsi\_host/host2/scan  
/sys/devices/pci0000:00/0000:00:10.0/host0/scsi\_host/host0/scan

3. Rescan the SCSI bus by passing to each host the "- - -".

# echo "- - -" > /sys/devices/pci0000:00/0000:00:07.1/ata1/host0/scsi\_host/host0/scan  
# echo "- - -" > /sys/devices/pci0000:00/0000:00:07.1/ata2/host1/scsi\_host/host1/scan  
# echo "- - -" > /sys/devices/pci0000:00/0000:00:10.0/host2/scsi\_host/host2/scan

4. create new pv for the new disk

pvcreate /dev/sdb

5. Now check if the new disk is now available

ls -ltr /dev/disk/by-id/

6. You will see the following list from above command

[root@centos7vm localuser]# ls -lrt /dev/disk/by-id  
total 0  
lrwxrwxrwx 1 root root  9 Jul  4 15:36 lvm-pv-uuid-eN9yt9-jzpC-7Md5-9N1a-4bdP-i9Dn-jFZ1N4 -> ../../sdb  
lrwxrwxrwx 1 root root  9 Jul  5  2018 ata-VMware\_Virtual\_IDE\_CDROM\_Drive\_10000000000000000001 -> ../../sr0  
lrwxrwxrwx 1 root root 10 Jul  5  2018 lvm-pv-uuid-GEwd0z-EDrV-hdB6-0o8M-S8eL-RzqU-gnSCIh -> ../../sda2  
lrwxrwxrwx 1 root root 10 Jul  5  2018 dm-uuid-LVM-VhqLdEZRC9TbJfAu3v0q3aUREkRKgZbQl7dtNtoPOoI8yhrsKP3RFs70WdmfTP4o -> ../../dm-0  
lrwxrwxrwx 1 root root 10 Jul  5  2018 dm-name-centos\_centos7vm-root -> ../../dm-0  
lrwxrwxrwx 1 root root 10 Jul  5  2018 dm-uuid-LVM-VhqLdEZRC9TbJfAu3v0q3aUREkRKgZbQL9essrhuujmOBF6M9VcK2LK0BUEeWlMR -> ../../dm-1  
lrwxrwxrwx 1 root root 10 Jul  5  2018 dm-name-centos\_centos7vm-swap -> ../../dm-1

7. One of the disk listed above points to our new disk /dev/sdb. in our above list, it's

lvm-pv-uuid-eN9yt9-jzpC-7Md5-9N1a-4bdP-i9Dn-jFZ1N4 -> ../../sdb

8. Get your volume group of the root partition that we wish to expand

vgdisplay | grep 'VG Name'

    the output will be as shown below where "centos\_centos7vm" is the volume group

[root@centos7vm localuser]# vgdisplay | grep 'VG Name'  
  VG Name               centos\_centos7vm

9. Let's now extend the root partition with the new disk

vgextend centos\_centos7vm /dev/disk/by-id/lvm-pv-uuid-eN9yt9-jzpC-7Md5-9N1a-4bdP-i9Dn-jFZ1N4 -> ../../sdb

10. Do this command to finalize extending the root partition with the new disk. Note that the command says +20GiB but you can set the value to the size you set your new disk.

lvextend -r -L +20GiB /dev/centos\_centos7vm/root

    11. Finally, verify the change

[root@centos7vm localuser]# df -k  
Filesystem                        1K-blocks     Used Available Use% Mounted on  
/dev/mapper/centos\_centos7vm-root  41141472 18793492  20444880  48% /  
devtmpfs                            2006452        0   2006452   0% /dev  
tmpfs                               2021876      156   2021720   1% /dev/shm  
tmpfs                               2021876     9180   2012696   1% /run  
tmpfs                               2021876        0   2021876   0% /sys/fs/cgroup  
/dev/sda1                            999320   121212    809296  14% /boot  
tmpfs                                404376        0    404376   0% /run/user/0  
tmpfs                                404376       12    404364   1% /run/user/1001