

# ESET Tech Center

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## Expand harddisk in ESET Protect Virtual Appliance

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1. Expand the disk of your ESET Protect Virtual Appliance in your hypervisor platform.
2. It is advisable to create a snapshot before proceeding.
3. Power on your ESET Protect Virtual Appliance
4. Login via SSH or the VM Console ( and exit to terminal)
5. Extend the partition by using the command `fdisk /dev/sda`

Enter `p` to print your initial partition table.

Enter `d` (delete) followed by `2` to delete the existing partition definition (partition 1 is usually `/boot` and partition 2 is usually the root partition).

Enter `n` (new) followed by `p` (primary) followed by `2` to re-create partition number 2 and enter to accept the start block and enter again to accept the end block which is defaulted to the end of the disk.

```
[root@protect ~]# fdisk /dev/sda
Welcome to fdisk (util-linux 2.23.2).

Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): p

Disk /dev/sda: 75.2 GB, 75161927680 bytes, 146800640 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk label type: dos
Disk identifier: 0x0007fed1

   Device Boot      Start         End      Blocks   Id  System
/dev/sda1  *          2048     1026047       512000   83  Linux
/dev/sda2             1026048    13421727       66595840   8e  Linux LVM

Command (m for help): d
Partition number (1,2, default 2): 2
Partition 2 is deleted

Command (m for help): n
Partition type:
   p   primary (1 primary, 0 extended, 3 free)
   e   extended
Select (default p): p
Partition number (2-4, default 2): 2
First sector (1026048-146800639, default 1026048):
Using default value 1026048
Last sector, +sectors or +size{K,M,G} (1026048-146800639, default 146800639):
Using default value 146800639
Partition 2 of type Linux and of size 69.5 GiB is set
```

Enter `t` (type) then `2` then `8e` to change the new partition type to "Linux LVM".

```

Command (m for help): t
Partition number (1,2, default 2): 2
Hex code (type L to list all codes): 8e
Changed type of partition 'Linux' to 'Linux LUM'

```

Enter p to print your new partition table and make sure the start block matches what was in the initial partition table printed above.

Device	Boot	Start	End	Blocks	Id	System
/dev/sda1	*	2048	1026047	512000	83	Linux
/dev/sda2		1026048	146800639	72887296	8e	Linux LUM

Enter w to write the partition table to disk. You will see an error about Device or resource busy which you can ignore.

```

Command (m for help): w
The partition table has been altered!

Calling ioctl() to re-read partition table.

WARNING: Re-reading the partition table failed with error 16: Device or resource busy.
The kernel still uses the old table. The new table will be used at
the next reboot or after you run partprobe(8) or kpartx(8)
Syncing disks.

```

6. Reboot the ESET Protect Virtual Appliance.
7. Resize the physical volume: `pvresize /dev/sda2`

```

[root@protect ~]# pvresize /dev/sda2
Physical volume "/dev/sda2" changed
1 physical volume(s) resized or updated / 0 physical volume(s) not resized

```

8. Expand the logical volume: `lvextend -l +100%FREE /dev/centos_ba-eraappl-v/root`

```

[root@protect ~]# lvextend -l +100%FREE /dev/centos_ba-eraappl-v/root
Size of logical volume centos_ba-eraappl-v/root changed from <40.03 GiB (10247 extents) to <46.09 GiB (11799 extents).
Logical volume centos_ba-eraappl-v/root successfully resized.

```

9. Expand the file system: `xfs_growfs /`

```

[root@protect ~]# xfs_growfs /
meta-data=/dev/mapper/centos_ba--eraappl--v-root isize=256  agcount=4, agsize=2623232 blks
=          sectsz=512   attr=2, projid32bit=1
=          crc=0        finobt=0 spinodes=0
data      =          bsize=4096   blocks=10492928, imaxpct=25
=          sunit=0      swidth=0 blks
naming    =version 2     bsize=4096   ascii-ci=0 ftype=0
log       =internal    bsize=4096   blocks=5123, version=2
=          sectsz=512   sunit=0 blks, lazy-count=1
realtime  =none        extsz=4096   blocks=0, rtextents=0
data blocks changed from 10492928 to 12082176

```

10. You have now successfully expanded the harddisk of your ESET Protect Virtual Appliance:

```
[root@protect ~]# df -h
Filesystem                Size      Used Avail Use% Mounted on
devtmpfs                  900M        0   900M   0% /dev
tmpfs                     920M        0   920M   0% /dev/shm
tmpfs                     920M    8.8M   911M   1% /run
tmpfs                     920M        0   920M   0% /sys/fs/cgroup
/dev/mapper/centos_ba--eraappl--v-root 41G    5.0G    36G   13% /
/dev/mapper/centos_ba--eraappl--v-home 20G    33M    20G   1% /home
/dev/sda1                 497M   124M   374M  25% /boot
tmpfs                    184M        0   184M   0% /run/user/0

[root@protect ~]# xfs_growfs /
meta-data=/dev/mapper/centos_ba--eraappl--v-root isize=256  agcount=4, agsize=2623232 blks
         =                               sectsz=512   attr=2, projid32bit=1
         =                               crc=0      finobt=0 spinodes=0
data     =                               bsize=4096 blocks=10492928, imaxpct=25
         =                               sunit=0    swidth=0 blks
naming   =version 2                       bsize=4096 ascii-ci=0 ftype=0
log      =internal                       bsize=4096 blocks=5123, version=2
         =                               sectsz=512 sunit=0 blks, lazy-count=1
realtime =none                            extsz=4096 blocks=0, rtextents=0
data blocks changed from 10492928 to 12082176

[root@protect ~]# df -h
Filesystem                Size      Used Avail Use% Mounted on
devtmpfs                  900M        0   900M   0% /dev
tmpfs                     920M        0   920M   0% /dev/shm
tmpfs                     920M    8.8M   911M   1% /run
tmpfs                     920M        0   920M   0% /sys/fs/cgroup
/dev/mapper/centos_ba--eraappl--v-root 47G    5.0G    42G   11% /
/dev/mapper/centos_ba--eraappl--v-home 20G    33M    20G   1% /home
/dev/sda1                 497M   124M   374M  25% /boot
tmpfs                    184M        0   184M   0% /run/user/0
[root@protect ~]#
```

Before

After