VM disk Expansion LVM+XFS

Expand the original disk or add a second vdisk from Infrastructure client.
If you want to perform a grow w/o reboot you have to add a second disk **THEN TAKE A SNAPSHOT!!!**

then from on the vm either create an additional partition on the free space. The partition type is 8e

```
cfdisk /dev/sda
## for example if the new partition is /dev/sda3
## create logical disk /dev/sda3
# make disk visible to linux
partprobe
pvcreate /dev/sda3
```

if you are running a newer kernel you can issue this command to male linux re-read the disk geometry:

```
echo "1" > /sys/class/scsi_device/<device>/device/rescan
```

or assign the whole new disk to lvm assuming it's /dev/sdb

```
apt-get install scsitools
rescan-scsi-bus.sh
cfdisk /dev/sdb
### for example if the new partition is /dev/sda3
pvcreate /dev/sdb
```

now you have to extend the volgroup. use `lvdisplay` to see which is the name of the group, in this example it's base

```
lvdisplay
  --- Logical volume ---
  LV Name                /dev/base/root
  VG Name                base
  LV UUID                8cL9Qd-ksIn-1Ve2-94ym-gTrW-8jet-91tnah
  LV Write Access        read/write
  LV Status              available
  # open                 1
  LV Size                5.00 GB
  Current LE             1280
  Segments               1
  Allocation             inherit
  Read ahead sectors     0
  Block device           254:0
  --- Logical volume ---
  LV Name                /dev/base/tmp
  VG Name                base
  LV UUID                mEnEXY-UtOf-P439-MDpg-BlT3-n8hI-Q6KIfm
```

```
  LV Write Access        read/write
  LV Status              available
  # open                 1
  LV Size                1.00 GB
  Current LE             256
  Segments               1
  Allocation             inherit
  Read ahead sectors     0
  Block device           254:1
  --- Logical volume ---
  LV Name                /dev/base/swap
  VG Name                base
  LV UUID                fm2A23-FPb3-itQa-Fvf2-QQmj-giwI-j8FZAf
  LV Write Access        read/write
  LV Status              available
  # open                 2
  LV Size                2.00 GB
  Current LE             512
  Segments               1
  Allocation             inherit
  Read ahead sectors     0
  Block device           254:2
  --- Logical volume ---
  LV Name                /dev/base/data
  VG Name                base
  LV UUID                GZKUbb-hZn2-igXN-3dxj-TNz9-1C15-I8u8MR
  LV Write Access        read/write
  LV Status              available
  # open                 1
  LV Size                1.52 GB
  Current LE             389
  Segments               1
  Allocation             inherit
  Read ahead sectors     0
  Block device           254:3
```

and we assume the new partition is /dev/sda3

```
vgextend base /dev/sda3
```

check with pvscan if the extend was successfull

```
pvscan
```

Now we extend the “data” partition to 11.5 GB. See man lvextend for other options
11.5 G is the NEW total size of the disk we want to extend!

```
lvextend -L 11.5G  /dev/base/data
```

Extend with 20G

```
lvextend -L +20G  /dev/base/data
```

now we have to grow the filesystem /data

```
xfs_growfs /data
```

Check if filesystems are ok, and only then release the snapshot