**To extend filesystem of a Linux VM using LVM**

**Go to your virtualization product (VMWare or Oracle Virtual Box)**

* Increase the disk space to desired number and then click ok

Now go to your Linux VM

* Reboot the VM to have the system re-scan the newly added disk Or
* cd /sys/class/scsi\_disk/2:0:0:0
* echo '1' > device/rescan
* fdisk –l (To make sure the disk is increased)
* Create a new partition
  + **fdisk /dev/sdc**
  + **n** (for new partition)
  + **p** (for primary partition)
  + **2** (partition number, 2 or the new partition)
  + **Enter**
  + **Enter**
  + **t** (Label the new partition)
  + **3** (Pick default value)
  + **8e** (This will make the filesystem as LVM)
  + **w** (Write)
  + **# reboot or init 6**

Note: The above procedure will create /dev/sdc2 partition

* Extend the LVM group
  + **pvdisplay** (To see which group associated with which disk)
  + **pvs** (Info about physical volumes
  + **vgdisplay** **oracle\_vg** (oracle\_vg is the group name or you can simply run vgdisplay)

On vgdisplay you will notice Free PE / Size at the bottom

* + **pvcreate /dev/sdc2** (Initialize partition for use by LVM)
  + **vgextend** **oracle\_vg** **/dev/sdc2** (# = whichever partition was created above)
  + Run **vgdisplay** **oracle\_vg**

check (Free PE / Size). The second column is the right column as free. If it is in G convert that into M. e.g. 1G = 1024M

* + **lvextend** **–L+1024M /dev/mapper/oracle\_vg-oracle\_lv**
  + **resize2fs /dev/mapper/oracle\_vg-oracle\_lv**
  + OR
  + **xfs\_growfs /dev/mapper/oracle\_vg-oracle\_lv**