Storage Expansion Procedures

- **Task 1: Add New Disk in vCenter**
  - Log in to vCenter and select the virtual machine.
  - Go to Edit Settings > Add Device > Hard Disk > Add a new hard disk size which is specified in GB/TB.
  - Save the configuration.
  - The new virtual hard disk will now appear to the server as an uninitialized disk.

- **Task 2: Expanding Storage on the server:-**
  - Step 1: Identify the new disk by running the below command
    Command: **lsblk**
  - Step 2: Create a new partition on /dev/sdx
    Command: **sudo fdisk /dev/sdx**
    - Press n to create a new partition.
    - Select p for a primary partition.
    - Accept default values for partition number, first sector, and last sector.
    - Set type to LVM by pressing t, then entering 8e.
    - Write and exit by pressing w.
  - Step 3: Verify the partition
    Command: **lsblk /dev/sdx1**
  - Step 4: Create a Physical Volume (PV) (If the server has LVS & VGS)
    Command: **sudo pvcreate /dev/sdx1**
  - Step 5: Extend the Volume Group (VG) (If the server has LVS & VGS)
    Command: **sudo vgextend volume_group_name /dev/sdx1**
    (Volume Group Name according to the Server)
  - Step 6: Extend the Logical Volume (LV)
    Command: **sudo lvextend -L+size_in_gb(G)/tb(T) /dev/mapper/volume_group_name-mount_point**
  - Step 7: Resize the Filesystem if the file system is XFS
    Command: **sudo xfs_growfs /mount_point**
  - Step 8: Resize the Filesystem if the file system is ext4
    Command: **sudo resize2fs /dev/mapper/ volume_group_name-mount_point**
  - **Step 8: Verify Expansion**
    Command: **df -h | grep /mount_point**

Note:- The above procedures are for RPM based Servers and sdx must will specified with the correct name in place of ‘x’

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  - Log in to vCenter and select the virtual machine.
  - Go to Edit Settings > Add Device > Hard Disk > Add a new hard disk size which is specified in GB/TB.
  - Save the configuration.
  - The new virtual hard disk will now appear to the server as an uninitialized disk.

- **Task 2: Mounting Storage on server to New Mounting Point**
  - Step 1: Identify the new disk
    Command: **lsblk**
  - Step 2: Create a Partition
    Command: **sudo fdisk /dev/sdx**
    - Press n to create a new partition.
    - Select p for a primary partition.
    - Accept default values for partition number, first sector, and last sector.
    - Write and exit by pressing w.
  - Step 3: Format the Partition if the file system is ext4
    Command: **sudo mkfs.ext4 /dev/sdx1**
  - Step 4: Format the partition if the file system is xfs
    Command: **sudo mkfs.xfs /dev/sdx1**
  - Step 5: Create a Mount Point
    Command: **sudo mkdir -p /new/mount_point**
  - Step 6: Mount the New Partition
    Command: **sudo mount /dev/sdx1 /created_new/mount_point**
  - Step 7: Make Mount Persistent so if the server got reboot the mount point will be the same
    Command: **echo '/dev/sdb1 /mnt/logging ext4 defaults 0 2' | sudo tee -a /etc/fstab**
  - Step 8: Verify Mounting
    Command: **df -h | grep /created_new/mount_point**

Note:- The above procedures are for Deb based Servers and sdx must will specified with the correct name in place of ‘x’
