New RAID Configuration

How to create a raid volume using storcli ?

1. Set drives to 'good'

```
sudo storcli /c0 /eall /sall set good
```

2. Verify the controller personality

```
sudo storcli /c0 show personality
```

If the personality is set to JBOD or HBA, change it to RAID using the command below.

```
sudo storcli /c0 set personality=raid
```

NOTE: At this point you might have to reboot the system to continue.

3. Create the RAID volume

Assuming you decided to create a RAID6 volume, here we use `r6`.

```
sudo storcli /c0 add vd r6 name=DATA drives=252:0-7
```

4. Start a full initalization

```
sudo storcli /c0/vall start init full
```

5. Monitor the status of the raid initialization

```
sudo storcli /c0/vall show init
```

NOTE: The initalization process could take days to complete. So, please wait for the initialization process to complete and verify if the Virtual Drive is in an Optimal state, before you proceed with the disk partition and mount operation.

Use below command:

```
sudo storcli /c0/vall show
```

If the column 'Consist' show 'Yes', then proceed.

How to setup new drives in Linux?

1. Create a new partition (replace X with the right drive letter)

   NOTE: Make sure you selected the righ drive.

   The command below will create a single partition on your drive.

   ```
   sudo sgdisk -n1 /dev/sdX
   ```

2. Apply the correct filesystem on the new partition

   ```
   sudo mkfs.ext4 /dev/sdX1
   ```

3. Create the mount point directory

   ```
   sudo mkdir -p /mnt/data
   ```

4. Update fstab to automaticaly mount the new volume on boot

   To ensure the RAID volume is automatically mounted at system startup, make the necessary updates to the `/etc/fstab` file. NOTE: Replace /dev/sdX1 with the right drive letter, and /mnt/data with the your desired mount point.

   ```
   echo "UUID=$(sudo blkid -o value -s UUID /dev/sdX1) /mnt/data ext4
   defaults 0 0" | sudo tee -a /etc/fstab
   ```

5. Mount all filesystems

   ```
   sudo mount -av
   ```