

# Workstation Setup Steps

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1) Request system access to UoB IT services

2) Install xrdp for remote access

```
sudo apt update
```

```
sudo apt install xfce4 xfce4-goodies -y
```

```
sudo apt install xrdp -y
```

```
sudo systemctl status xrdp
```

3) Disable Secure Boot for GPU

4) Install Cuda drivers

[https://developer.nvidia.com/cuda-downloads?target\\_os=Linux&target\\_arch=x86\\_64&Distribution=Ubuntu&target\\_version=2.04&target\\_type=deb\\_local](https://developer.nvidia.com/cuda-downloads?target_os=Linux&target_arch=x86_64&Distribution=Ubuntu&target_version=2.04&target_type=deb_local)

5) Mount directory and permissions

- Format Raid Array
- `sudo nano /etc/fstab`

*Below Replace UUID with your UUID, the drive destination will be in this example /mnt/storage.*

*You can find the RAID UUID in the Disks app or use “`sudo blkid`” in terminal*

**Disks**

- 2.0 TB Disk PC811 SK hynix 2048GB
- 12 TB Hard Disk HGST HUH721212AL
- 12 TB Hard Disk HGST HUH721212AL
- 12 TB Hard Disk ST12000NM002J-2T
- 12 TB Hard Disk ST12000NM002J-2T
- 18 TB Hard Disk LaCie d2 Professional
- RAID Array /dev/md/ims0
- 23 TB RAID-10 Array /dev/md/Volume0**
- 2.0 TB Block Device /dev/ubuntu...1/ubuntu-lv

**23 TB RAID-10 Array**  
/dev/md/Volume0

Size 23 TB (22,800,249,126,912 bytes)

**Volumes**

storage  
23 TB Ext4

Size 23 TB — 8.7 TB free (62.0% full)  
Contents Ext4 (version 1.0) — Mounted at /mnt/storage  
Device /dev/md/Volume0  
UUID e7094f8e-1792-4951-acd9-1548a6ba99ff

```
fo18103@it106570: ~$ sudo blkid
[sudo] password for fo18103:
/dev/nvme0n1p3: UUID="D3JvSj-7eD6-ySaS-FYqP-ygdo-Nkn2-SR6Ssn" TYPE="LVM2_member" PARTUUID="24ff7219-ec23-4d75-9b2b-59ed3a4b1aa8"
/dev/nvme0n1p1: UUID="1D69-DAE5" BLOCK_SIZE="512" TYPE="vfat" PARTUUID="cd8a9824-6db4-4592-9a6b-44946880c42d"
/dev/nvme0n1p2: UUID="4e304be9-96d1-483c-ab2b-d12828ba6527" BLOCK_SIZE="4096" TYPE="ext4" PARTUUID="69debf83-a74c-4970-9854-e8754351329a"
/dev/sdd: TYPE="isw_raid_member"
/dev/sdb: TYPE="isw_raid_member"
/dev/mapper/ubuntu--vg--l-ubuntu--lv: UUID="0ac9e6ab-e94e-44d0-b348-f53f9110f185" BLOCK_SIZE="4096" TYPE="ext4"
/dev/sdc: TYPE="isw_raid_member"
/dev/md126: LABEL="storage" UUID="e7094f8e-1792-4951-acd9-1548a6ba99ff" BLOCK_SIZE="4096" TYPE="ext4"
/dev/sda: TYPE="isw_raid_member"
/dev/loop1: TYPE="squashfs"
```

### Mounts the RAID Array automatically

- Add at the end of the file: UUID=e7.....99ff /mnt/storage ext4 defaults 0 2
- `sudo mount -a`

*This makes root the owner of all files and folders in the /mnt/storage directory*

- `sudo chown -R root:root /mnt/storage`

### Sets permissions

- `sudo find /mnt/storage -type d -exec chmod 755 {} \;`
- `sudo find /mnt/storage -type f -exec chmod 644 {} \;`
- `sudo apt install acl -y`
- `sudo setfacl -R -m u::rwX,g::r-X,o::r-X /mnt/storage`
- `sudo setfacl -dR -m u::rwX,g::r-X,o::r-X /mnt/storage`

6) Install Pycharm

```
tar -xzf ~/Downloads/jetbrains-toolbox-2.6.0.40632.tar.gz
```

```
cd jetbrains-toolbox-2.6.0.40632
```

```
./jetbrains-toolbox
```