

## **I. Prerequisites:**

1. Write down your WCG account key. It can be found in Settings -> My Profile -> Account Key
2. Download ubuntu server. The newest version is 16.04. You can download an ISO file from <http://www.ubuntu.com/server>
3. Write the ISO on a CD or an USB key like this:  
<http://www.ubuntu.com/download/desktop/create-a-usb-stick-on-windows>

## **II. Installation:**

1. It should be quite simple, just follow the steps of the installer. If the installation fails, you can try an older ubuntu version, 14.04.

## **III. After installation:**

1. Log in to ubuntu
2. To install boinc client, type in:  
`sudo apt-get install boinc-client`
3. To attach to your WCG account. Make sure you replace YOUR\_ACCOUNT\_KEY with your own account key.  
`boinccmd --project_attach http://www.worldcommunitygrid.org  
YOUR_ACCOUNT_KEY`
4. If the attaching is succesful, BOINC will start crunching. Every time you start this PC, it will crunch, no login is necessary.
5. To check if we were succesful, type in:  
`top`
6. This will display a task manager, BOINC tasks should show up at the top.
7. Type in:  
`sudo apt-get install lib32z1 lib32ncurses5 lib32bz2-1.0 libstdc++6  
libstdc++5 freeglut3`
8. This will install extra libraries necessary for CEP.
9. If you run the system with a monitor and keyboard, you're basically done!

### III. Checking CPU temperature:

1. Type in:

```
sudo apt-get install lm-sensors
```

2. Then:

```
sudo sensors-detect
```

3. Press Y for every question.

4. To display temperatures, type in:

```
sensors
```

### IV. Running your PC without a monitor/keyboard

1. Type in:

```
sudo nano /etc/default/grub
```

2. This will open a text editor. Search for the row "GRUB\_TIMEOUT=10", type this after it:

```
GRUB_RECORDFAIL_TIMEOUT=2
```

3. Press Ctrl+S to save then Ctrl+X to exit. This will make sure ubuntu will boot without any keyboard input.

### V. Connecting remotely to ubuntu server

1. You can log in remotely with SSH using PUTTY (on windows) after installing SSH:

```
sudo apt-get install openssh-server
```

3. Find out your current connection settings by typing in:

```
ifconfig
```

4. You should find a row like this:

```
inet addr:192.168.0.143 Bcast:192.168.0.255 Mask:255.255.255.0
```

4. Write down the values, "inet addr" is your IP address.

5. To connect with SSH, you will need to know the IP address of this PC. You can set a static IP address to make this easy:

```
sudo nano /etc/network/interfaces
```

6. Find the row "iface eth0 inet auto". "eth0" can be a different value depending on your system. Write down this row, we may need it later! Replace the row with:

```
iface eth0 inet static
address 192.168.0.130
gateway 192.168.0.1
netmask 255.255.255.0
dns-nameservers 192.168.0.1
network 192.168.0.0
broadcast 192.168.0.255
```

Address: the "addr" value you've written down.

Gateway: the address of your router. It's usually 192.168.0.1

Netmask: the “Mask” value you’ve written down. Usually 255.255.255.0

DNS-nameservers: Your DNS server. It’s usually the same address as your route/gateway, at 192.168.0.1

Network: It’s usually 192.168.0.0

Broadcast: type in the “bcast” value you’ve written down.

7. After restarting Ubuntu, it will start with the fixed IP address given in “address”. If you’ve written incorrect values in “[/etc/network/interfaces](#)”, you will not have a network connection. In this case, replace the rows we’ve written with the original setting to set a dynamic IP address. After restarting you will have a network connection.

## **VI. Connecting with PUTTY:**

1. Download PUTTY from <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>
2. Start putty.exe
3. In Host Name, type in the IP address of the ubuntu system. If you didn’t set a static IP address, you can search all IP addresses on your network with <http://www.advanced-ip-scanner.com/>