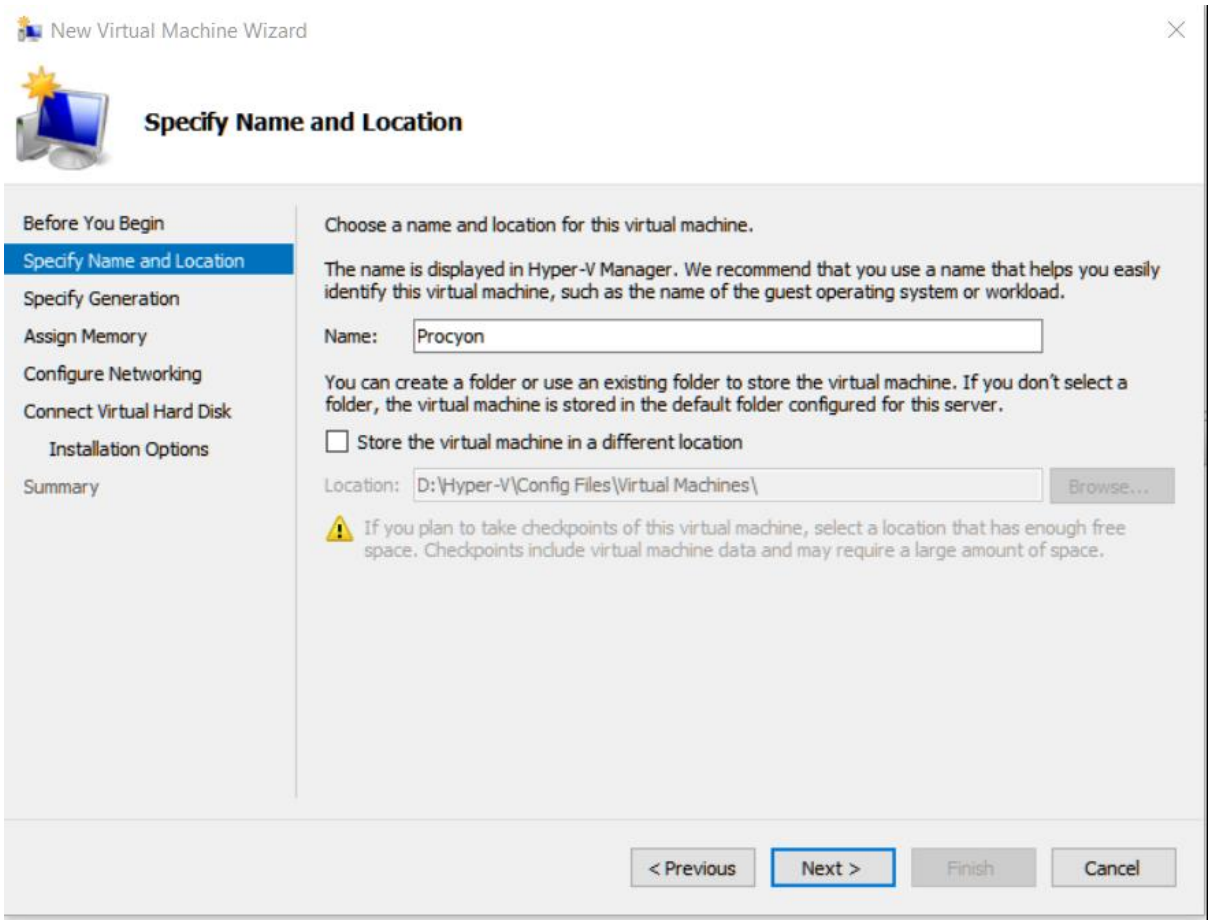
Install Ubuntu Server 15.10

What you will need:

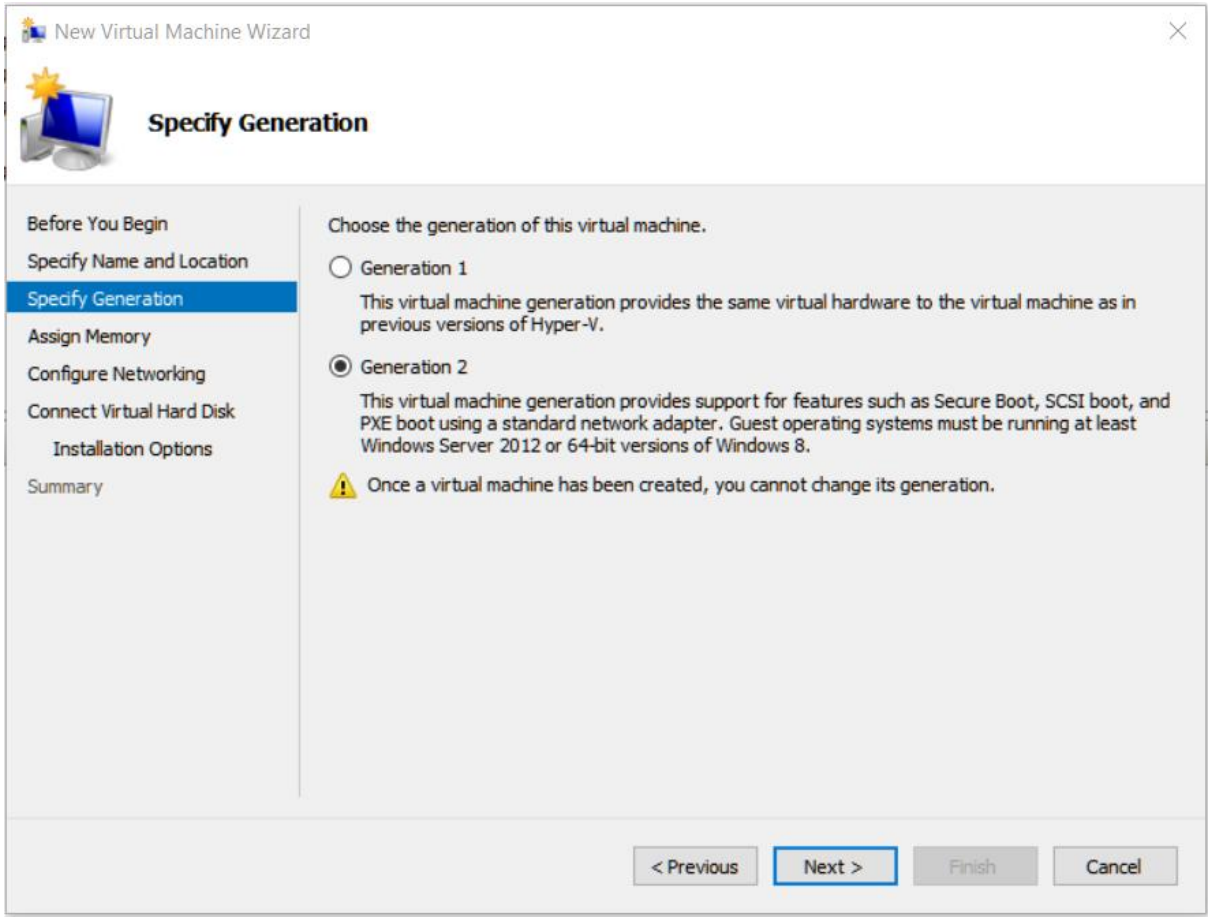
- Somewhere to install the server. I used hyper-v on a whitebox server, but you can use whatever you want. The resource requirements are low.
- The Ubuntu 15.10 install iso from here: http://releases.ubuntu.com/15.10/
- Your home IP address range and domain name
- A free IP address for the server
- DHCP running
- DNS Server with an entry for the new server

Set up Virtual Machine on Hyper-V

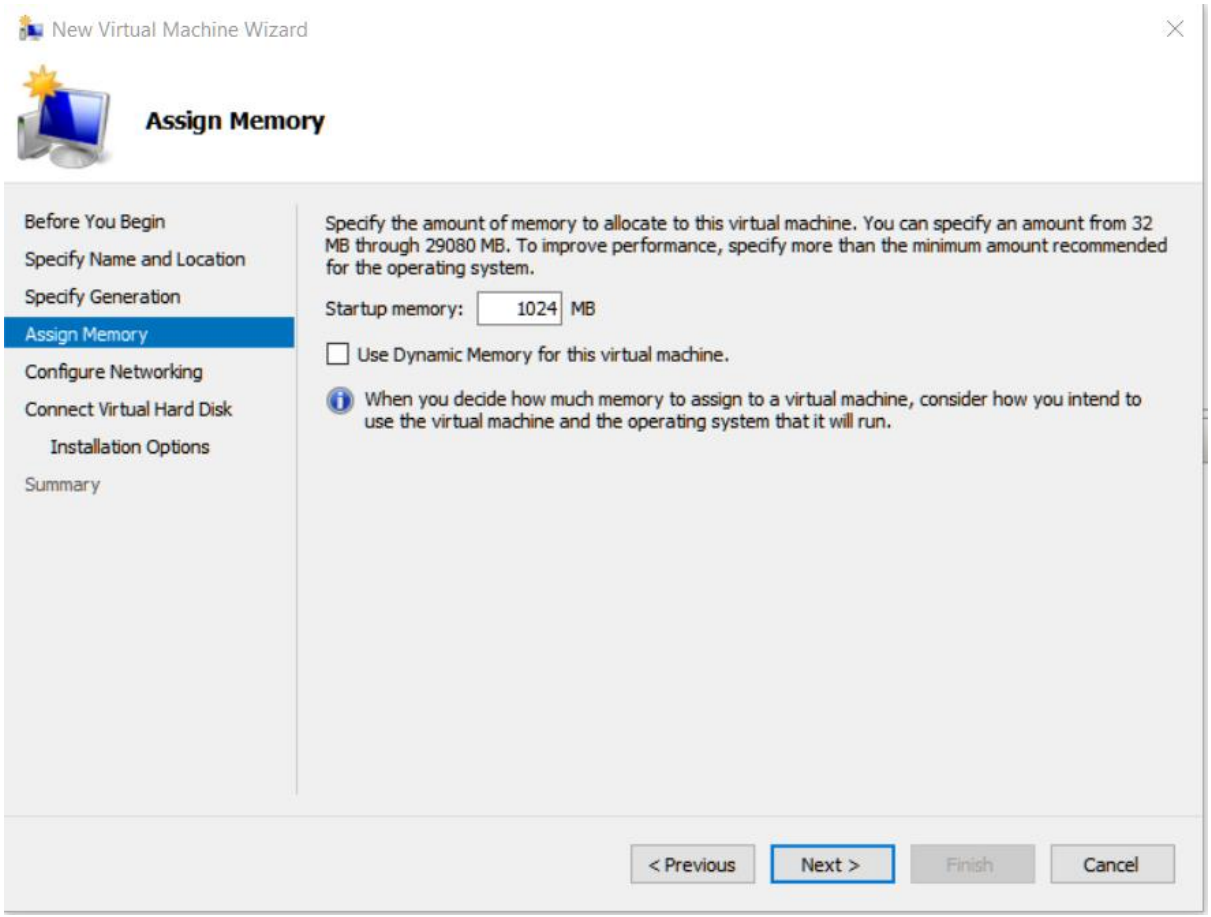
VM was set up as follows:



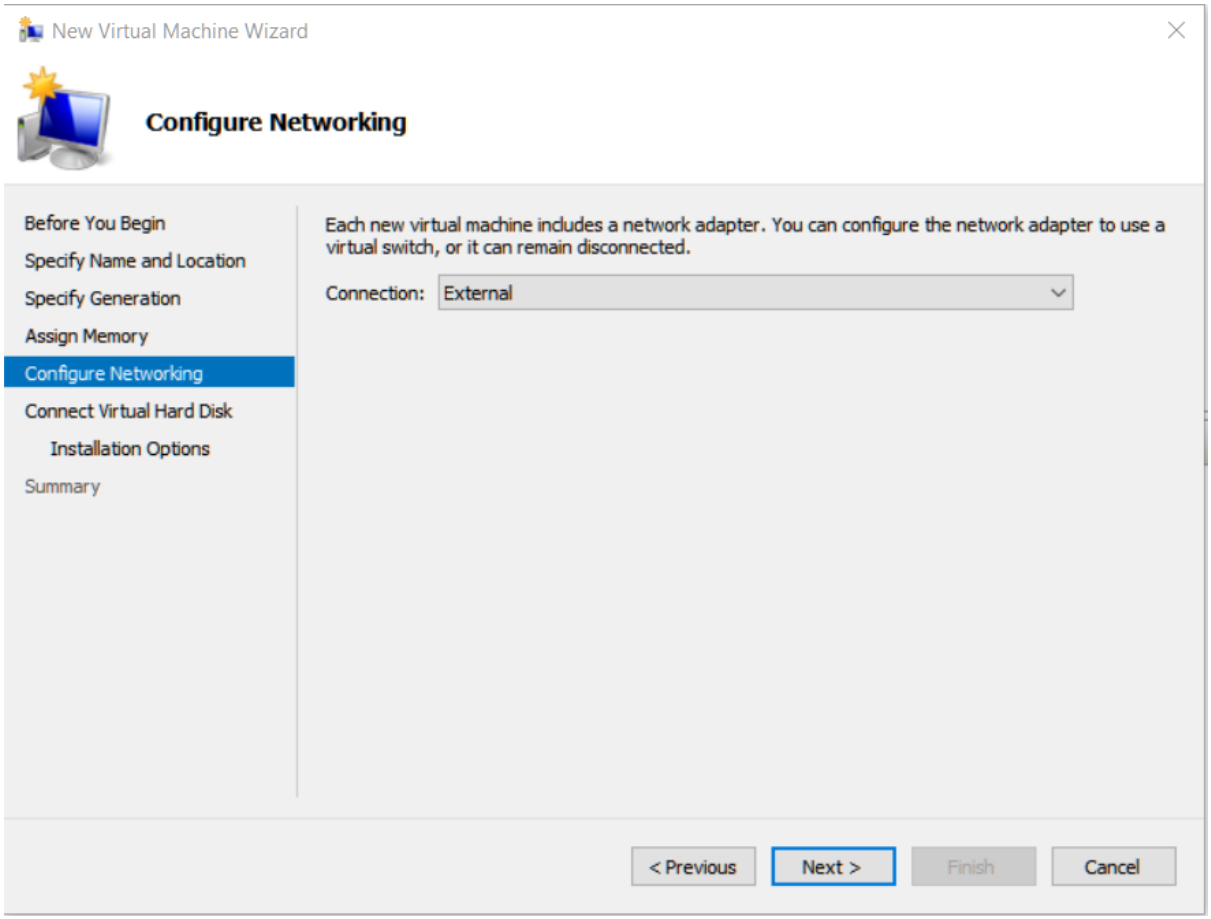
Generation 2



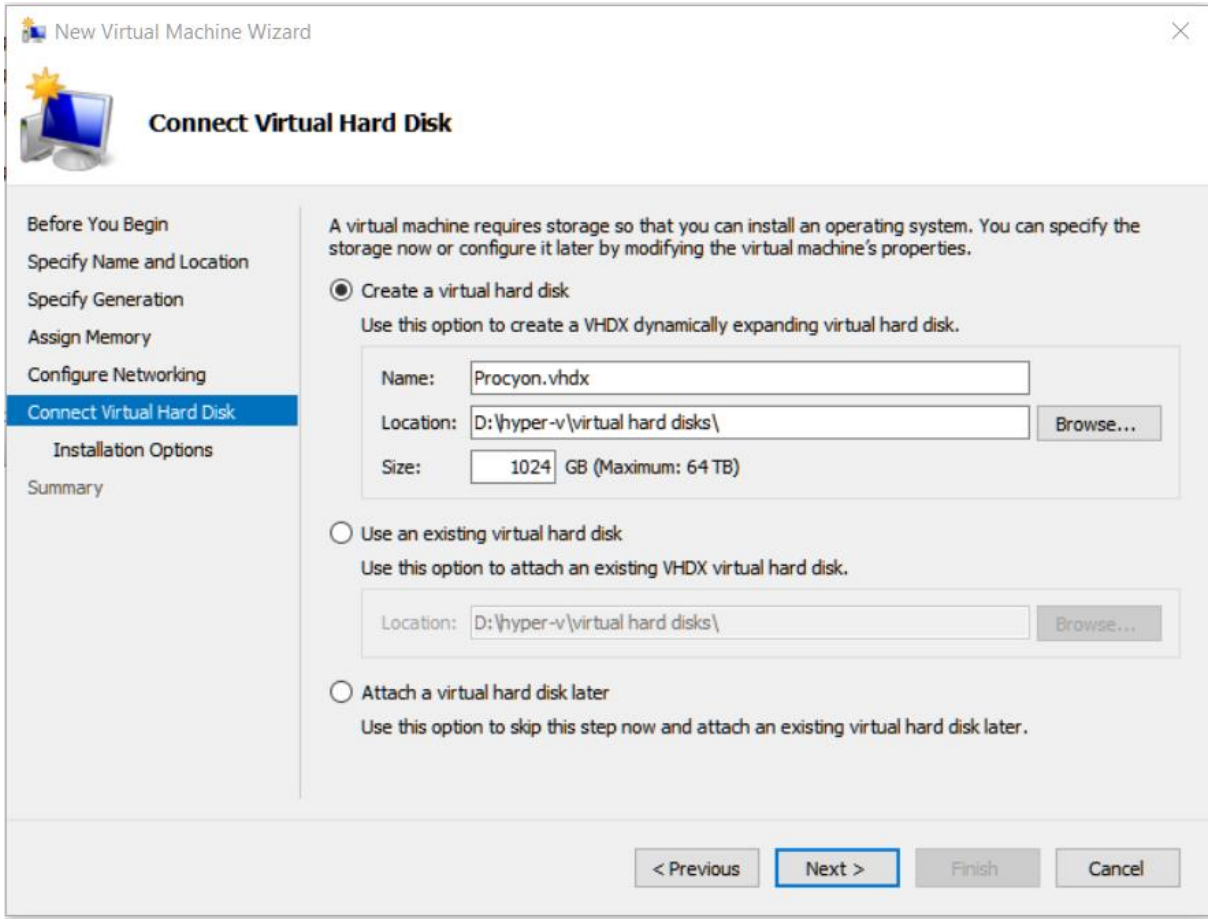
1024 MB of memory – do not use dynamic memory, causes issues reboots with MySQL installed



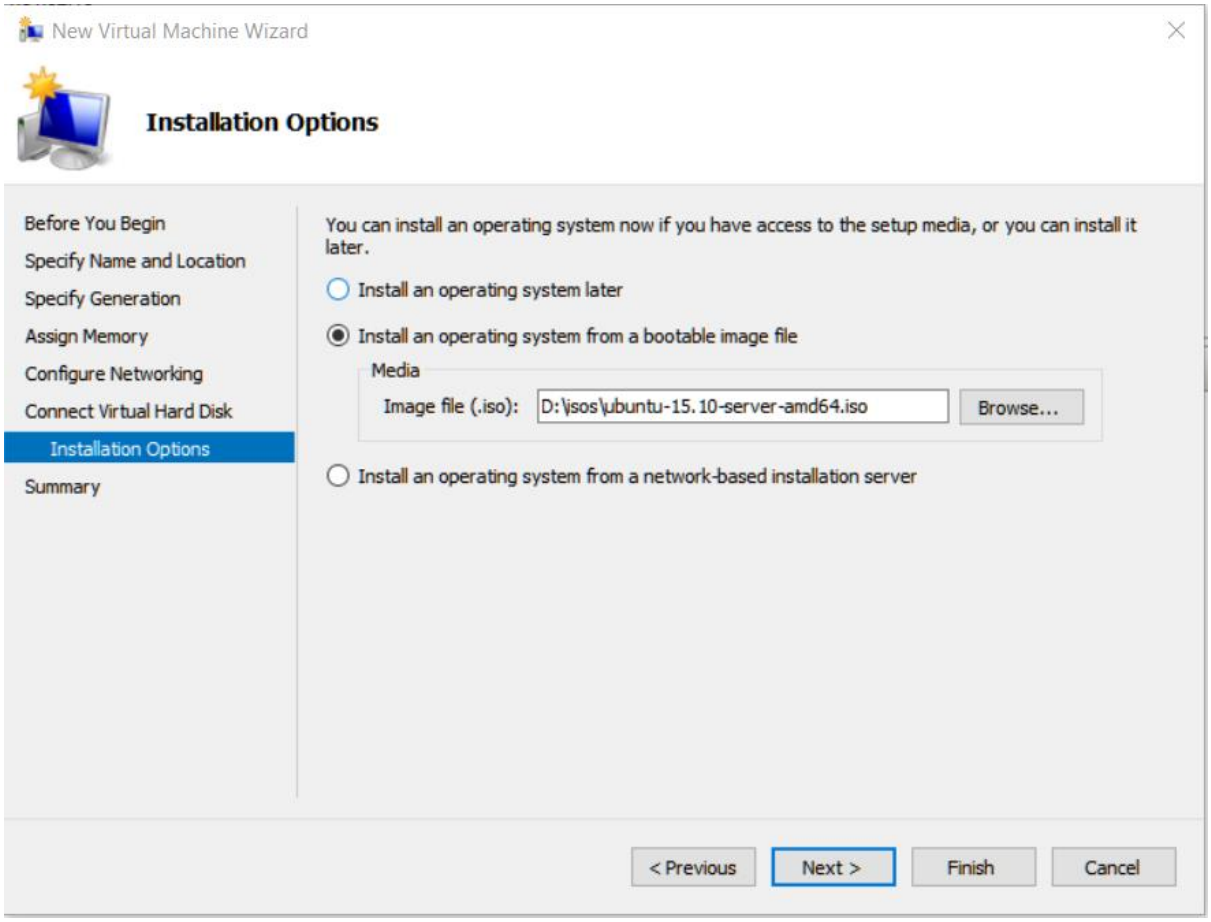
1 network connection



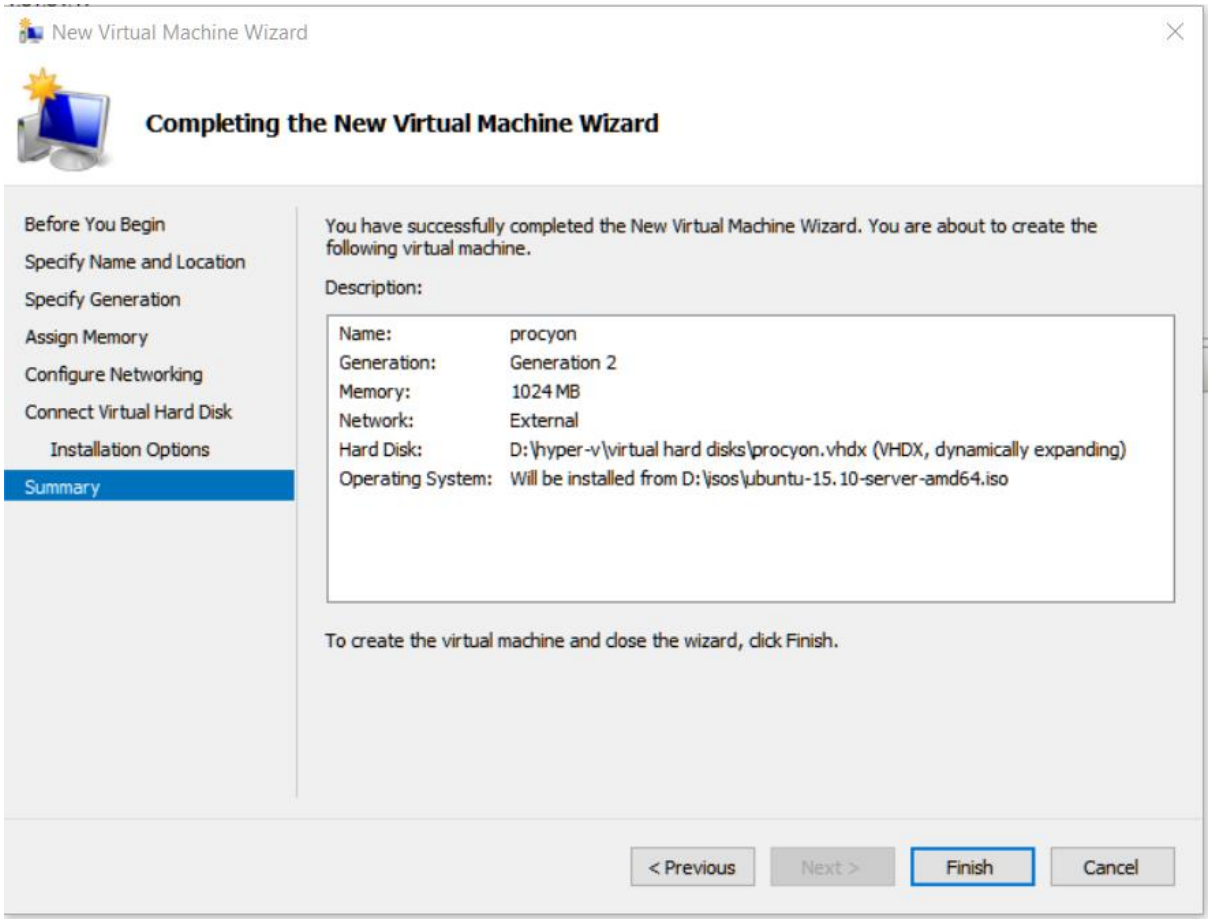
1024 GB HDD, thin provisioned. Overkill but that's the joy of thin provisioning. If you're not thin provisioning the I've used 3.1G of the hard drive after approximately 3 months of use.



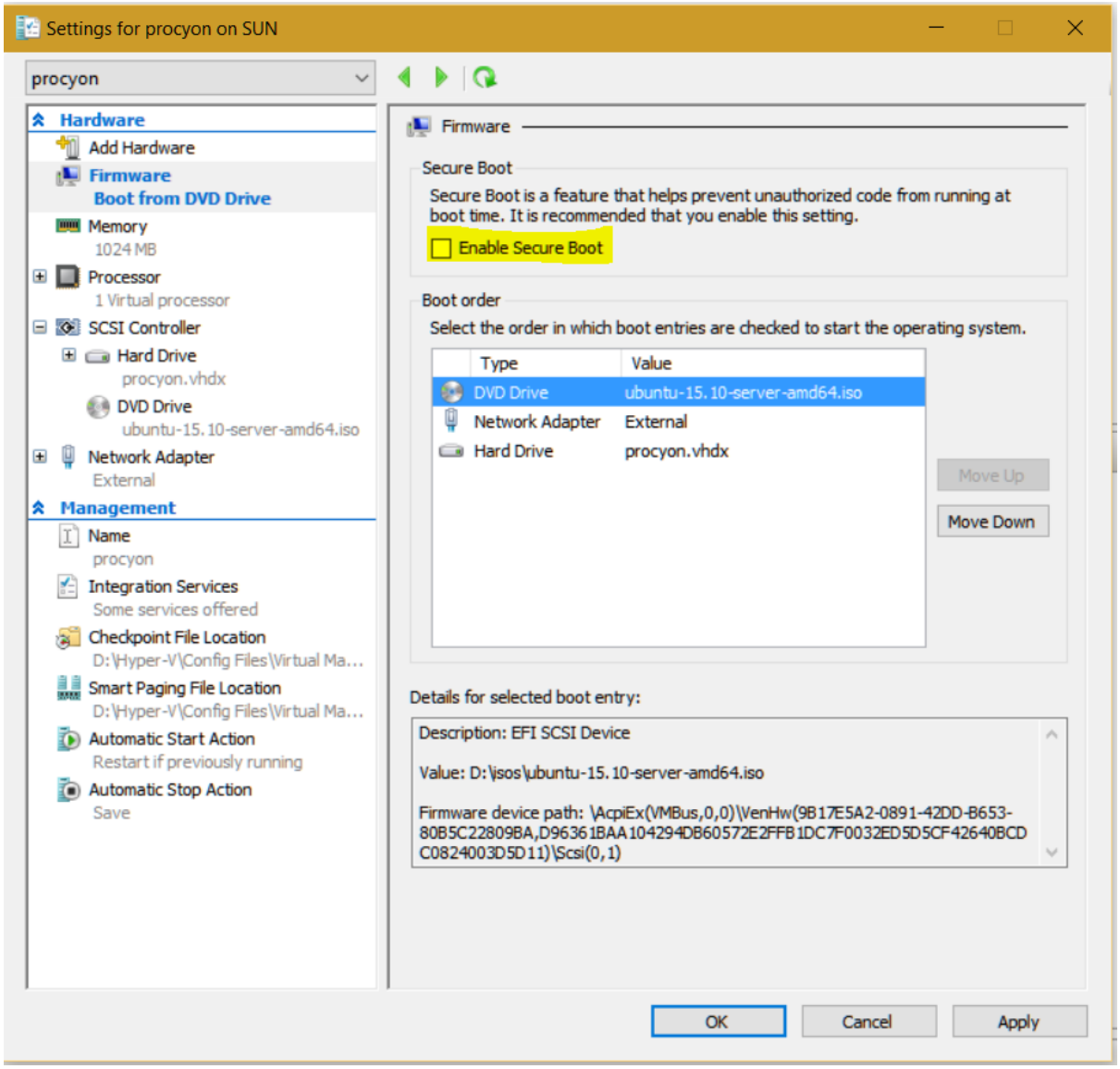
Select “Install an operating system from a bootable image file” and browse to the Ubuntu iso:



Click Finish



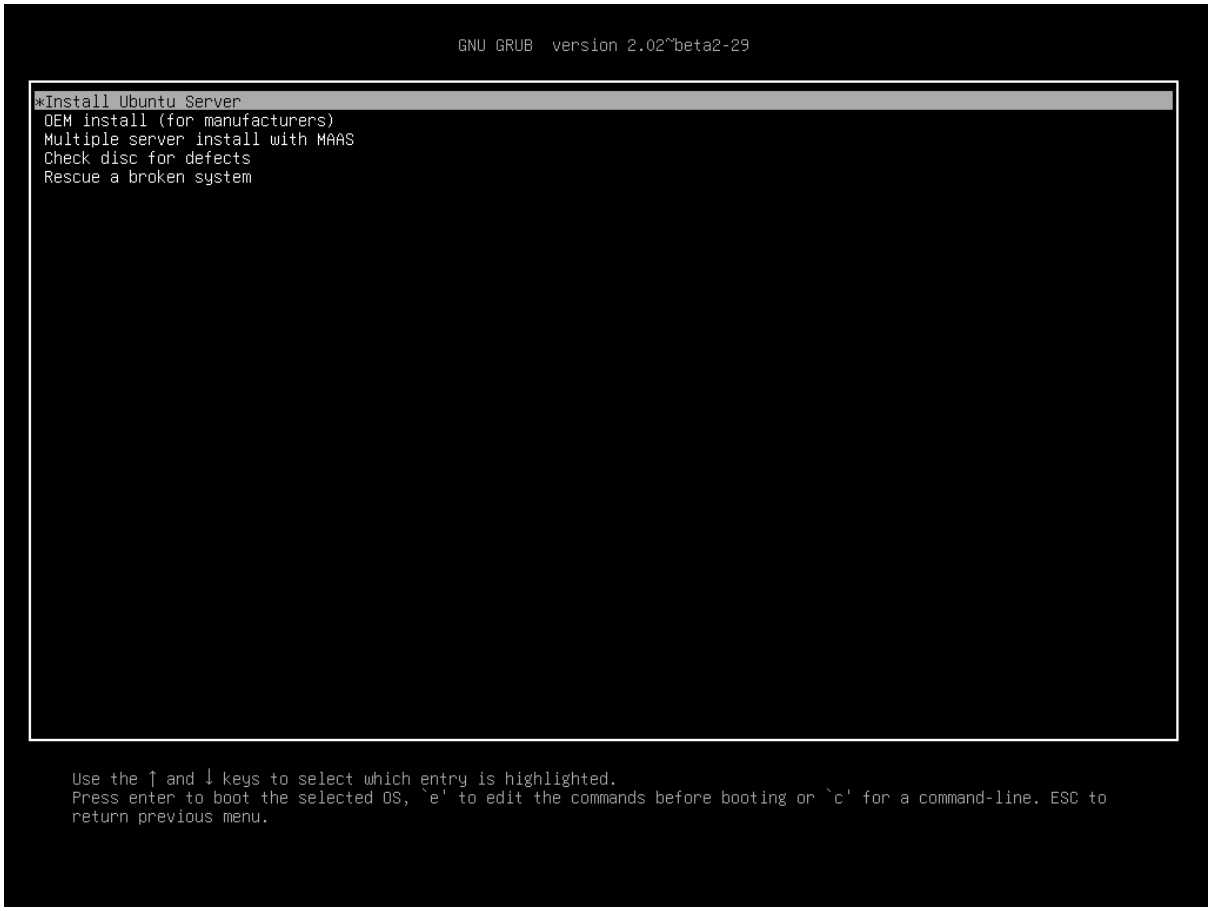
Edit the VM firmware settings and untick “Enable Secure Boot”



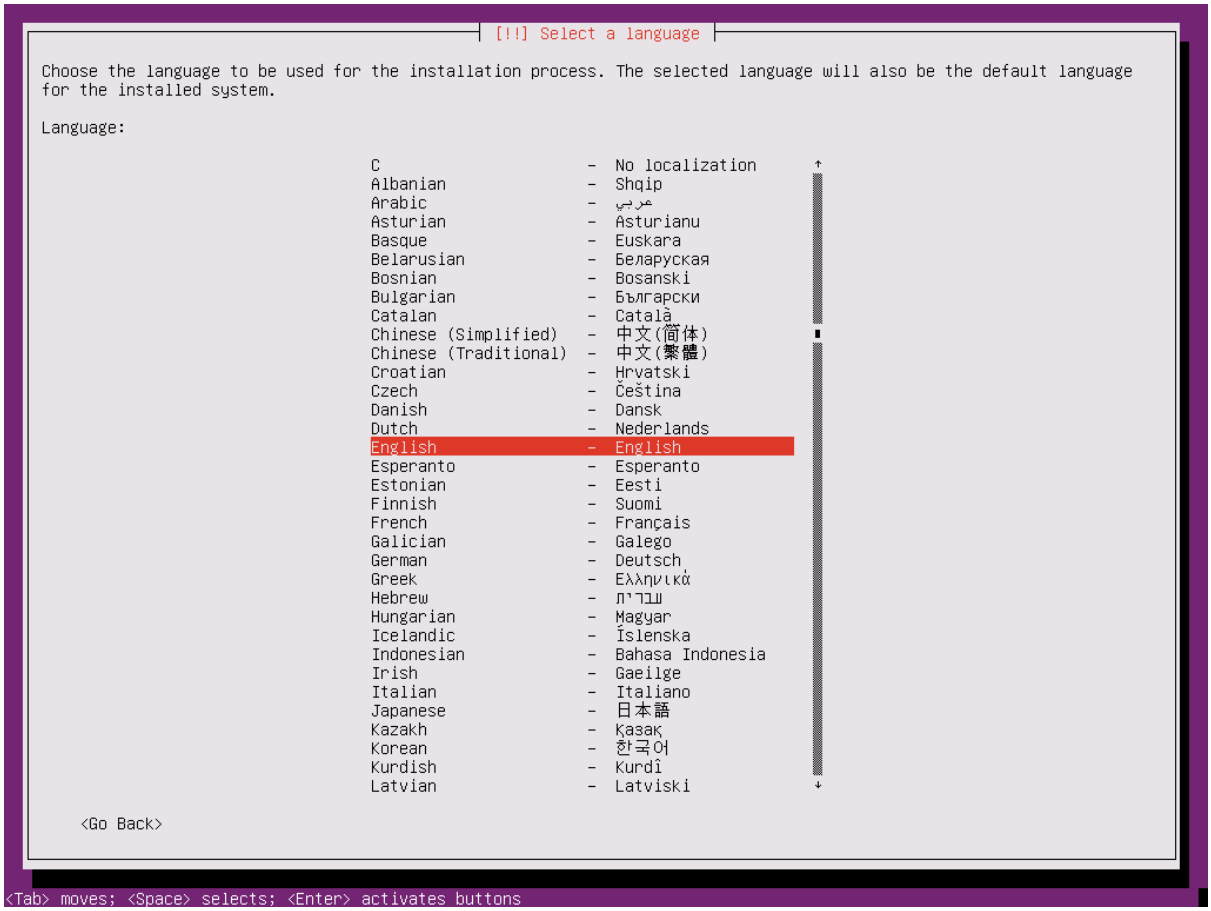
Install Ubuntu

Start VM or boot PC

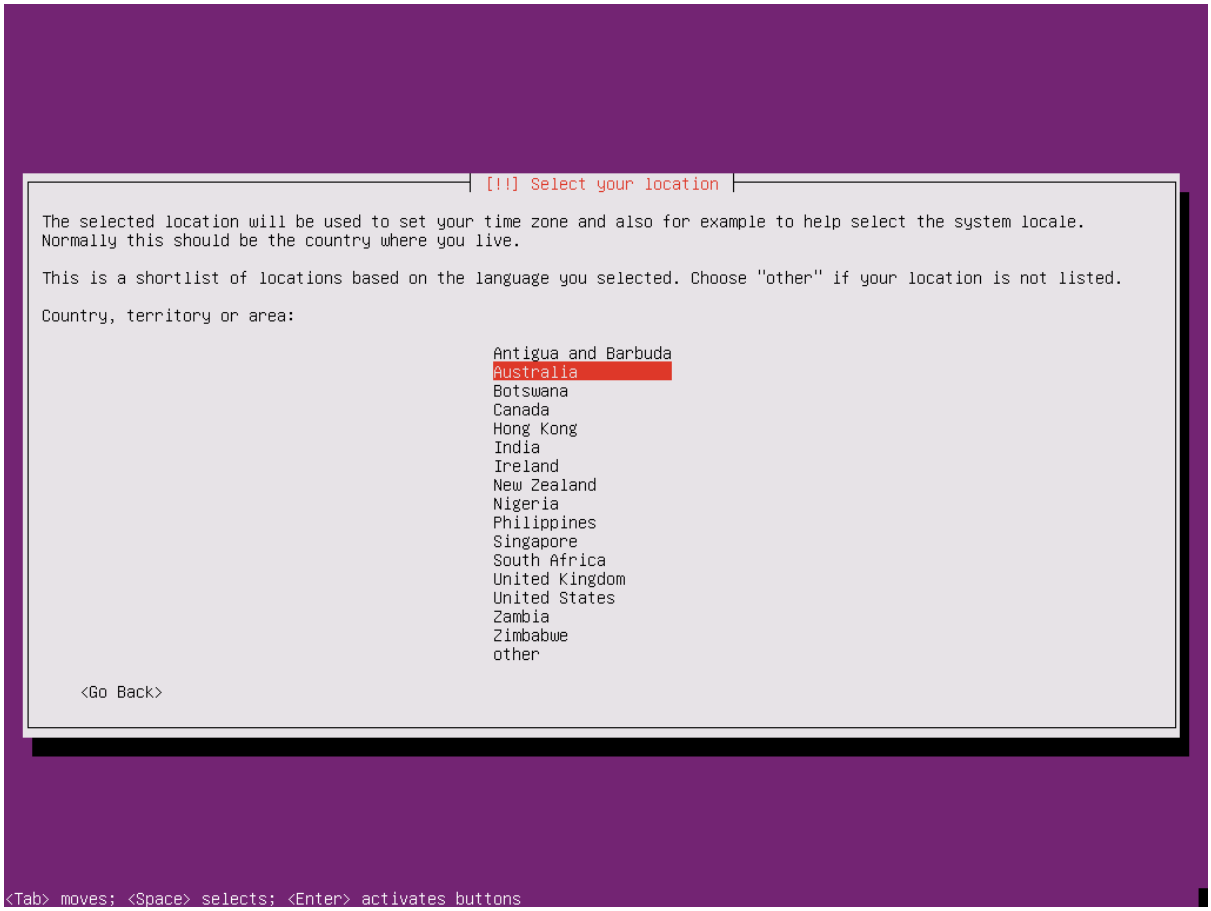
Select “Install Ubuntu Server”



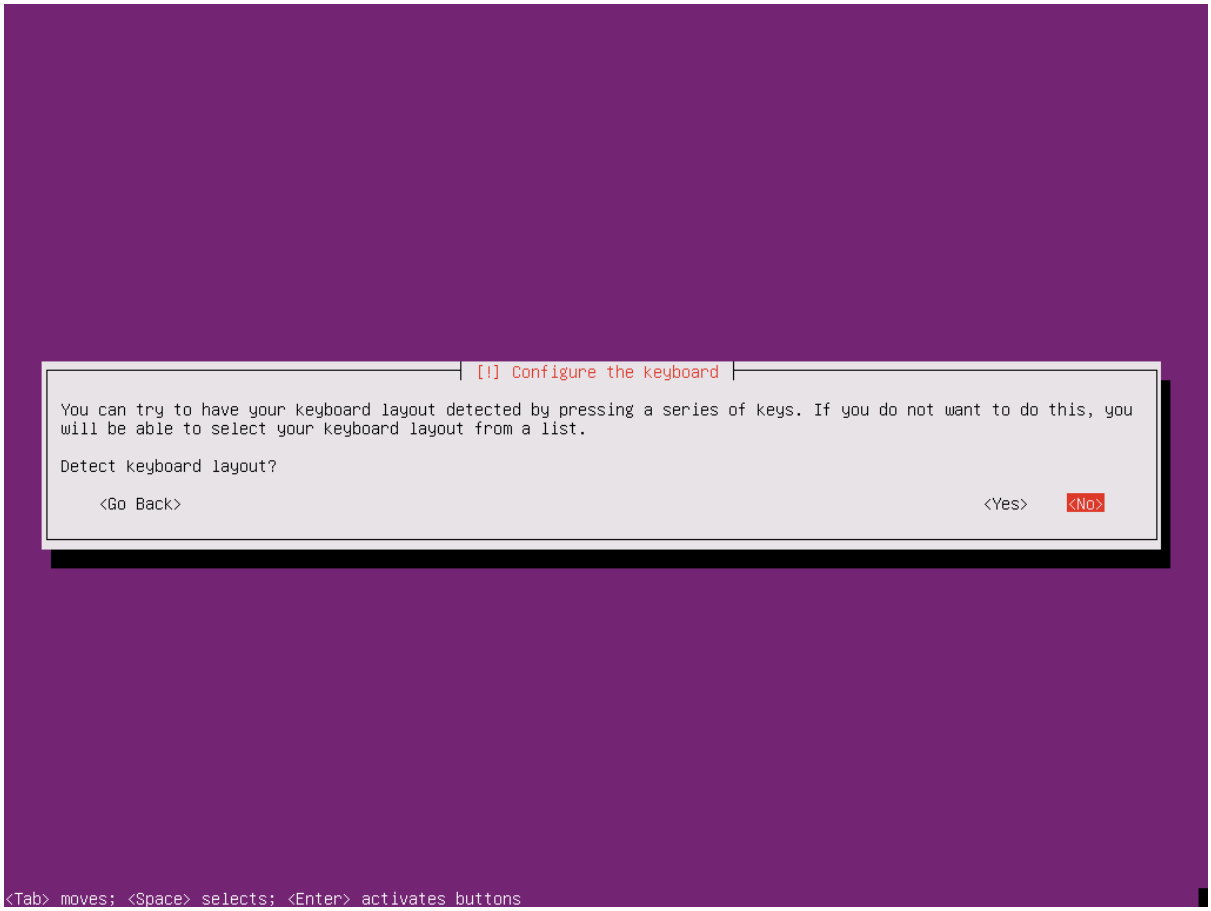
Select your language of choice

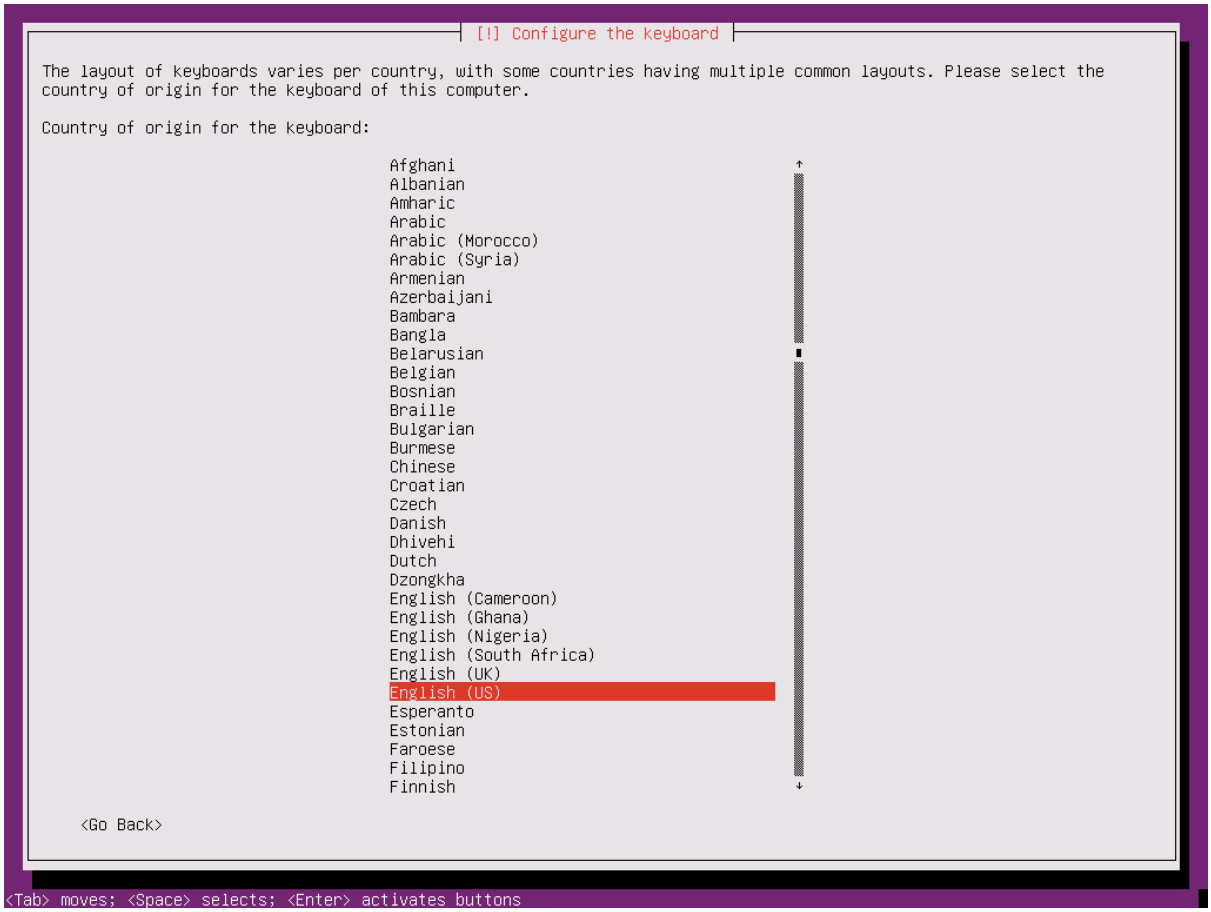


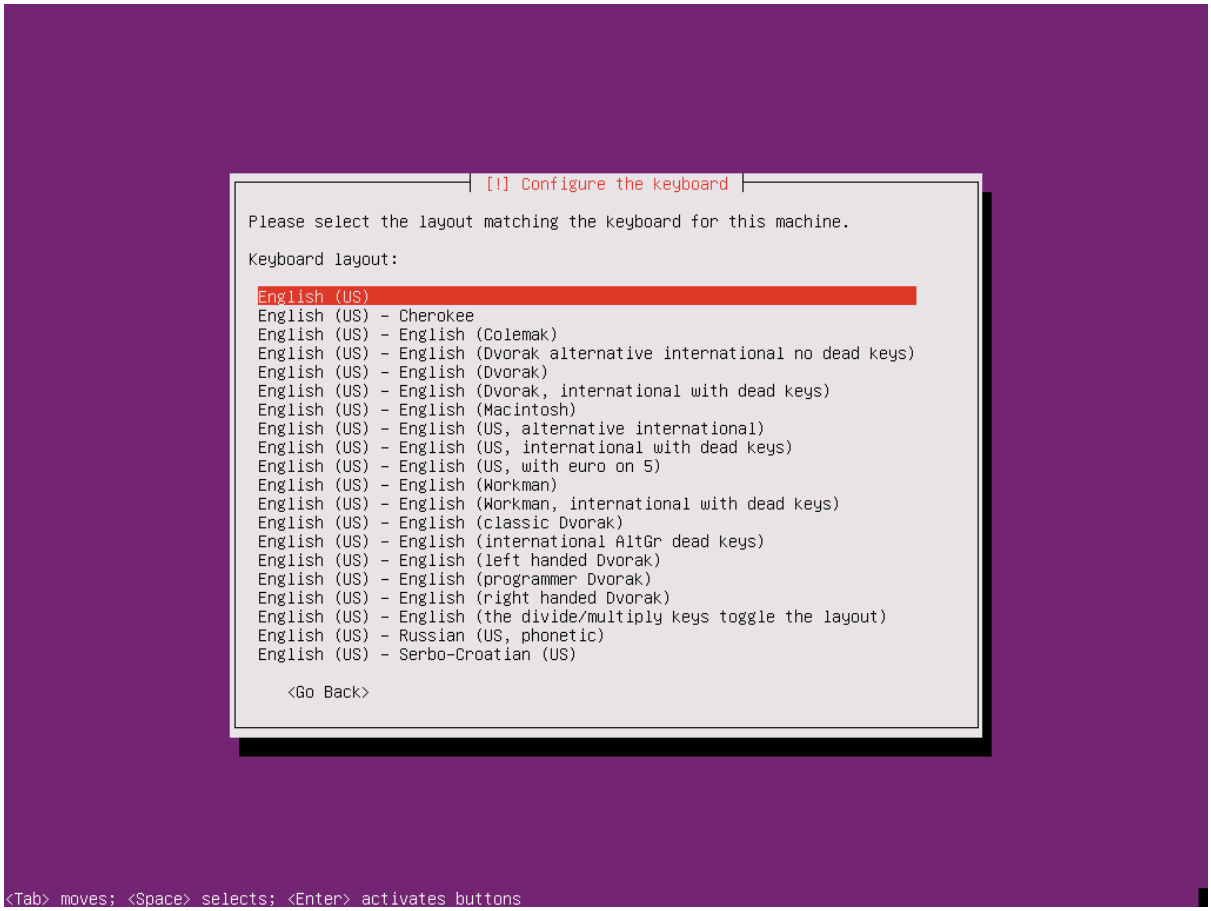
Select your location:



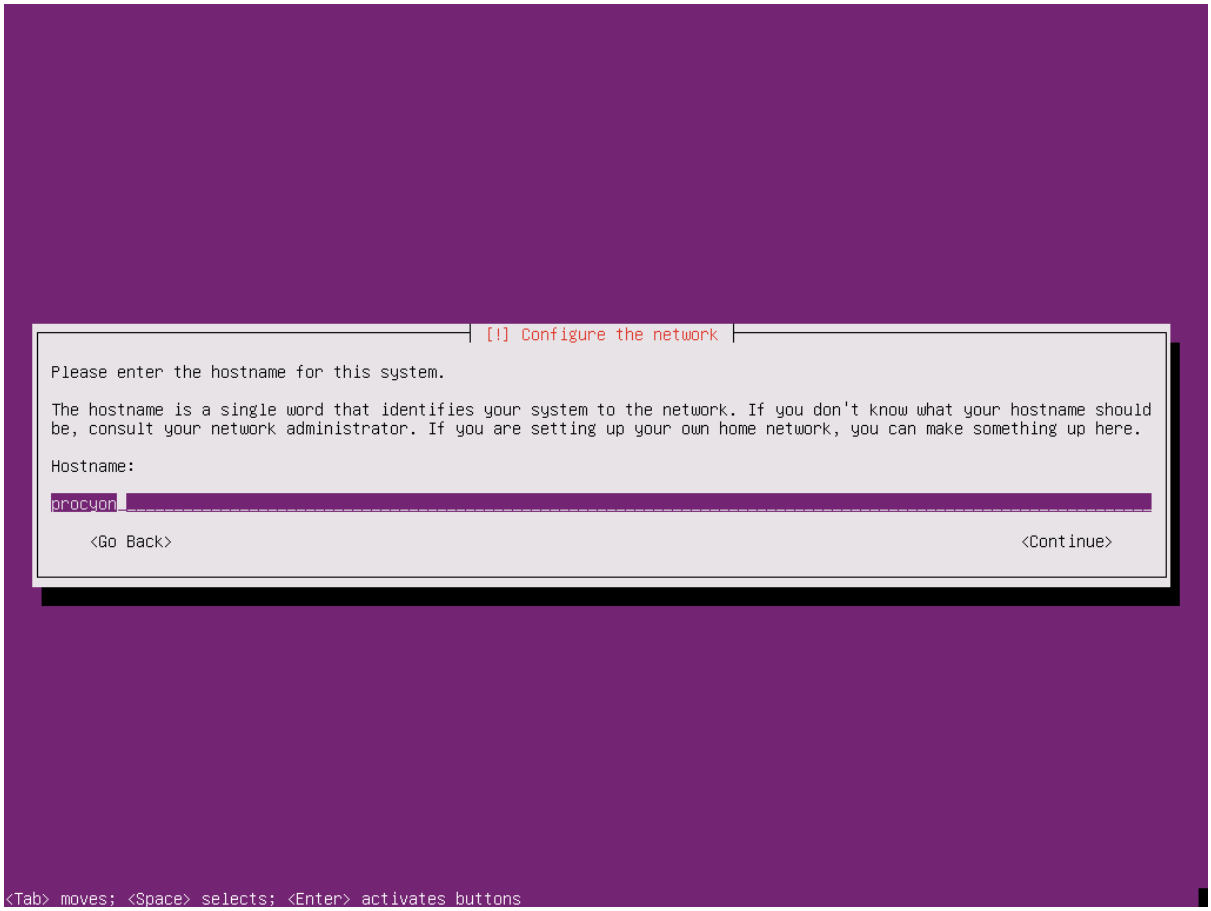
Select your keyboard


[!] Configure the keyboard
You can try to have your keyboard layout detected by pressing a series of keys. If you do not want to do this, you will be able to select your keyboard layout from a list.
Detect keyboard layout?
<Go Back>
<Yes>
<No>
<Tab> moves; <Space> selects; <Enter> activates buttons


[!] Configure the keyboard
The layout of keyboards varies per country, with some countries having multiple common layouts. Please select the country of origin for the keyboard of this computer.
Country of origin for the keyboard:
Afghani
Albanian
Amharic
Arabic
Arabic (Morocco)
Arabic (Syria)
Armenian
Azerbaijani
Bambara
Bangla
Belarusian
Belgian
Bosnian
Braille
Bulgarian
Burmese
Chinese
Croatian
Czech
Danish
Dhivehi
Dutch
Dzongkha
English (Cameroon)
English (Ghana)
English (Nigeria)
English (South Africa)
English (UK)
English (US)
Esperanto
Estonian
Faroese
Filipino
Finnish
<Go Back>
<Tab> moves; <Space> selects; <Enter> activates buttons

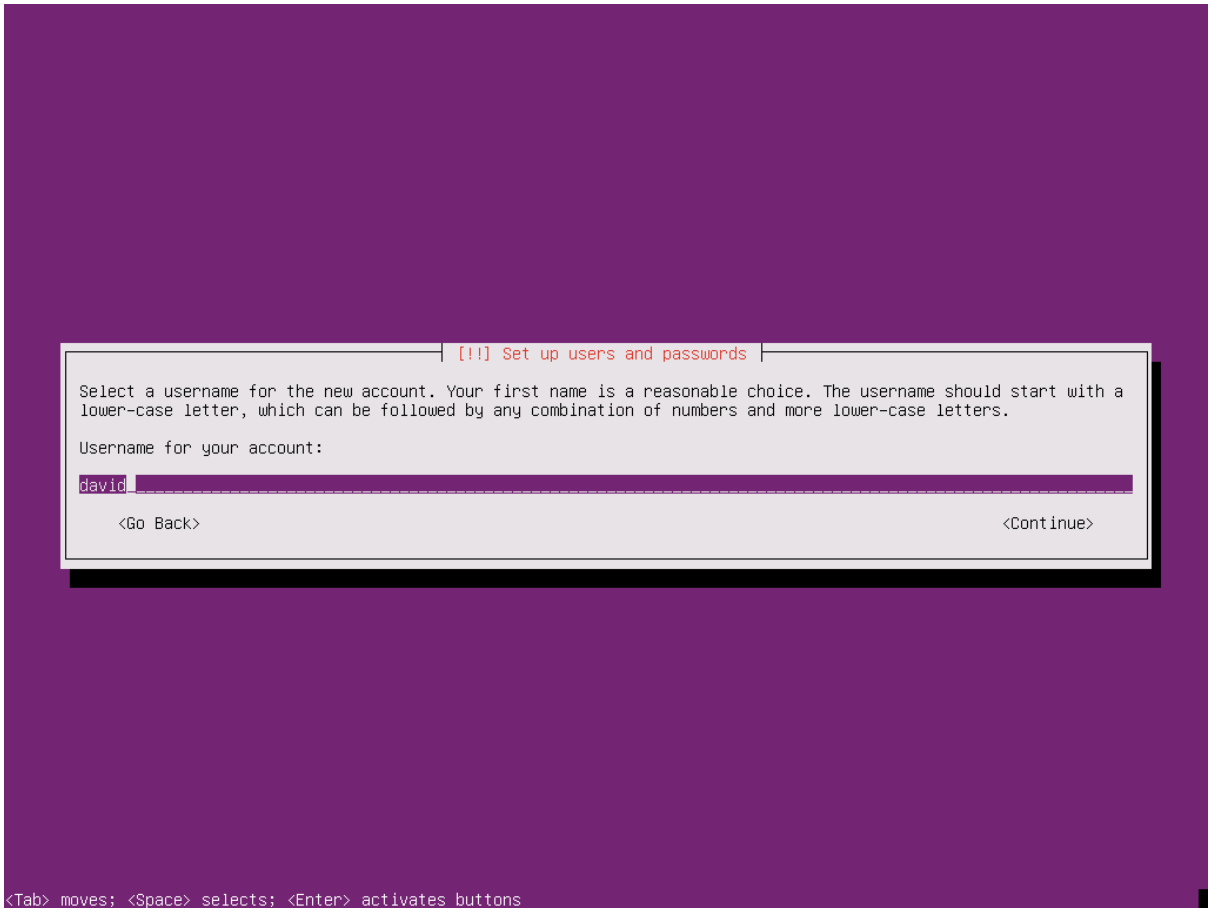


Name the server

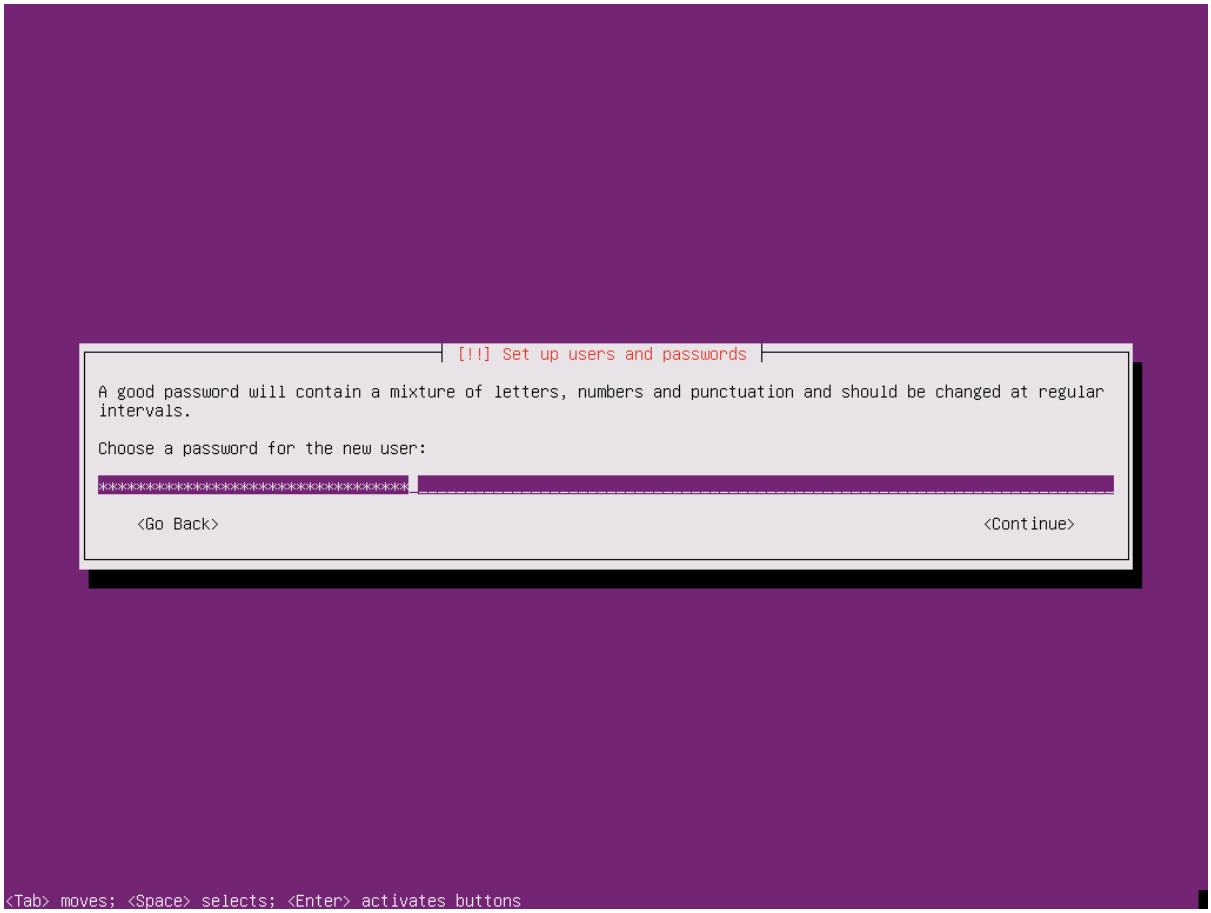


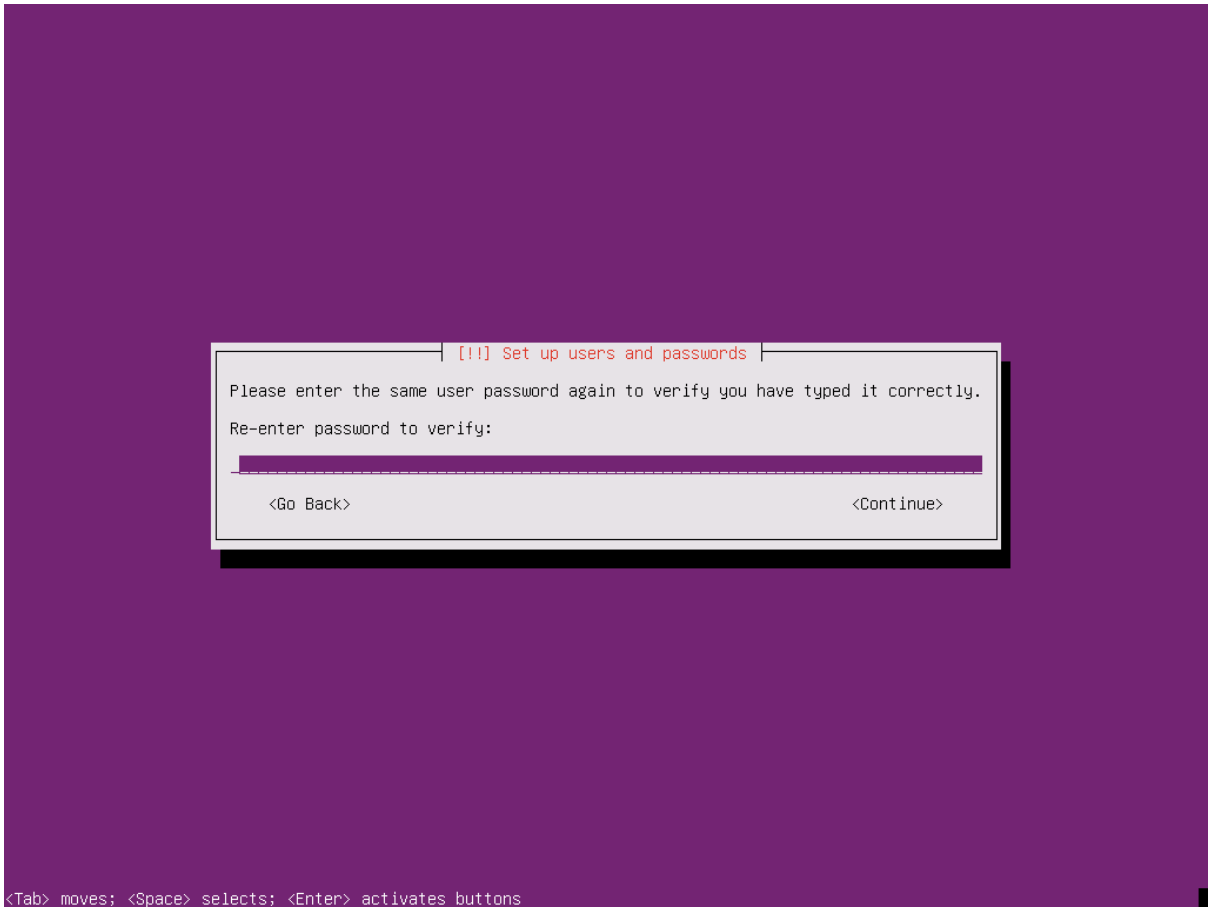
Create a user


[!!] Set up users and passwords
A user account will be created for you to use instead of the root account for non-administrative activities.
Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or uses the user's real name. Your full name is a reasonable choice.
Full name for the new user:
David Leffley
<Go Back>
<Continue>
<Tab> moves; <Space> selects; <Enter> activates buttons

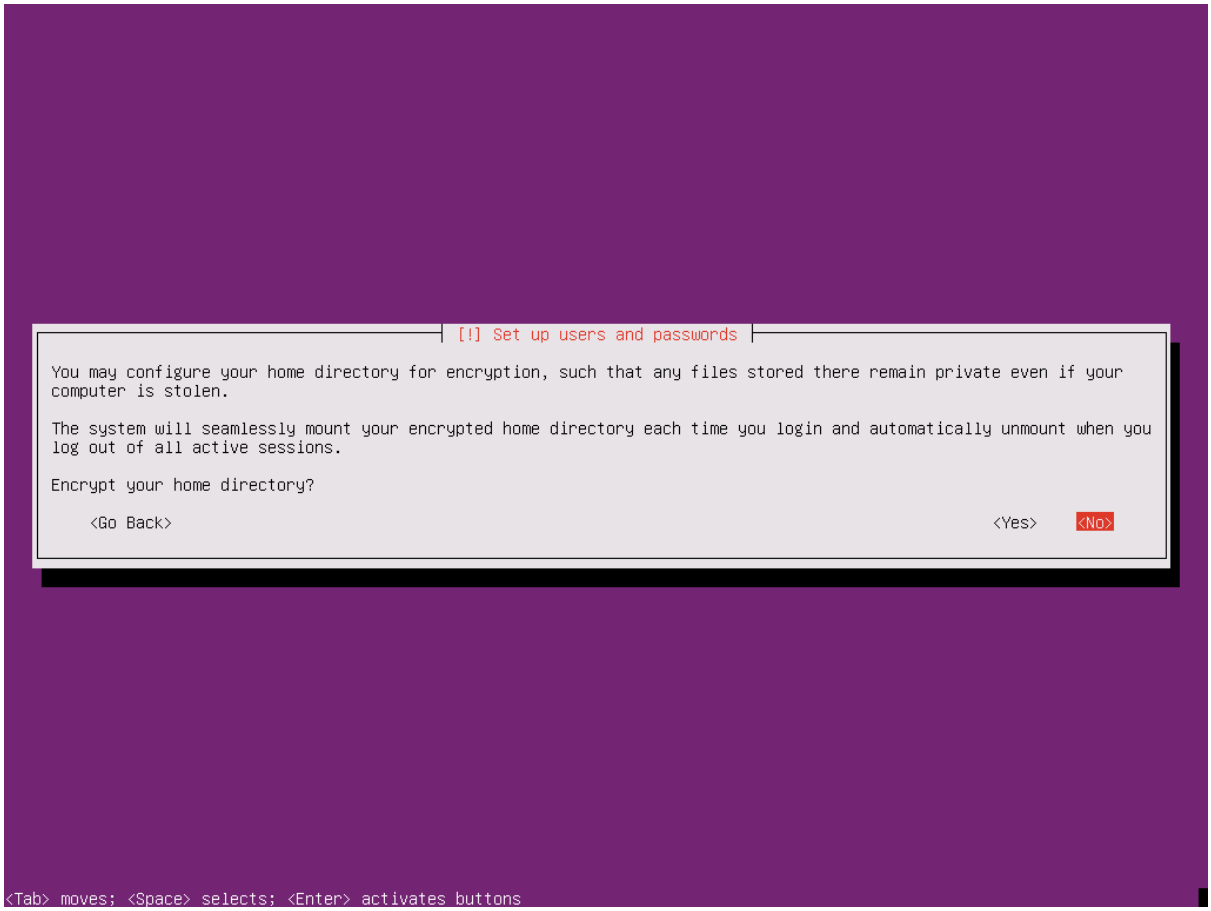

[!!] Set up users and passwords
Select a username for the new account. Your first name is a reasonable choice. The username should start with a lower-case letter, which can be followed by any combination of numbers and more lower-case letters.
Username for your account:
david
<Go Back>
<Continue>
<Tab> moves; <Space> selects; <Enter> activates buttons

Provide a password

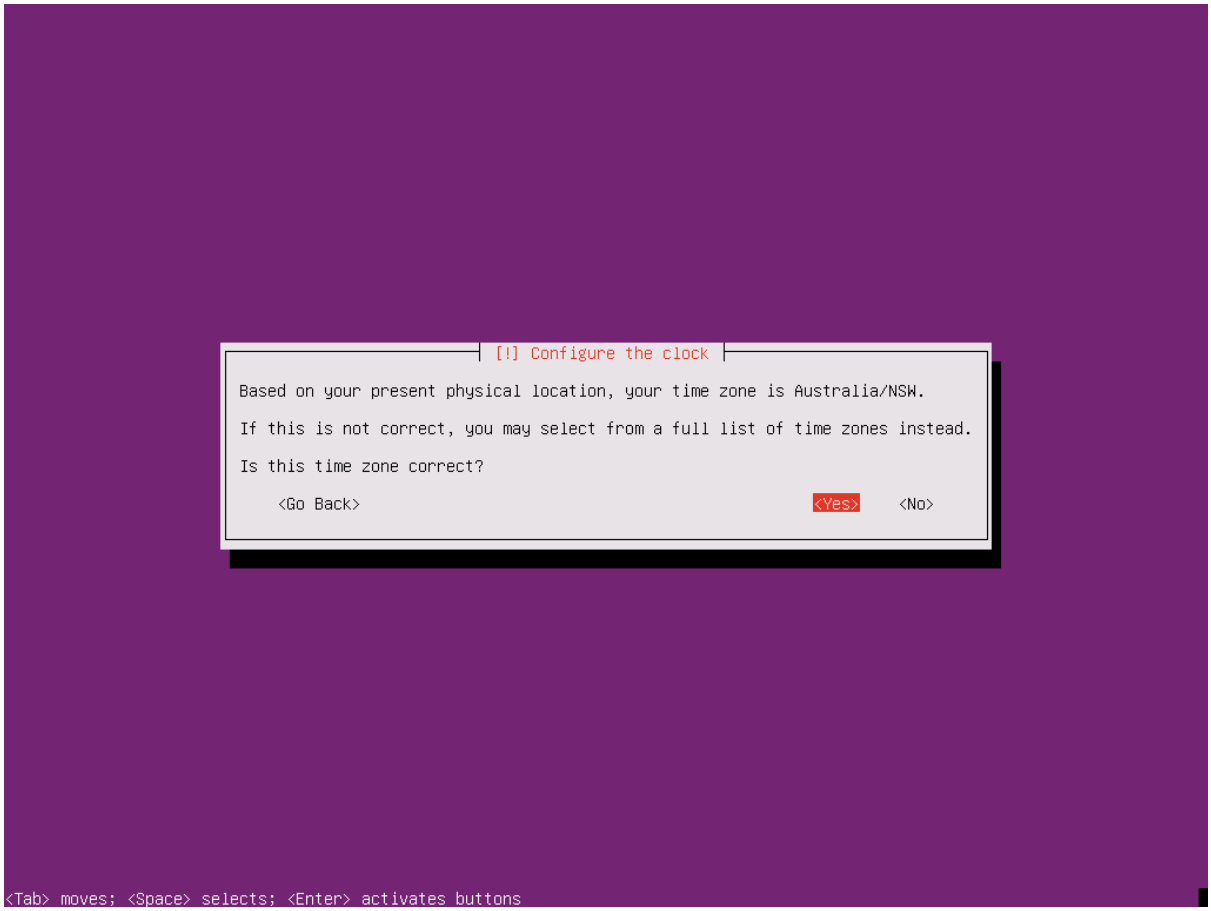




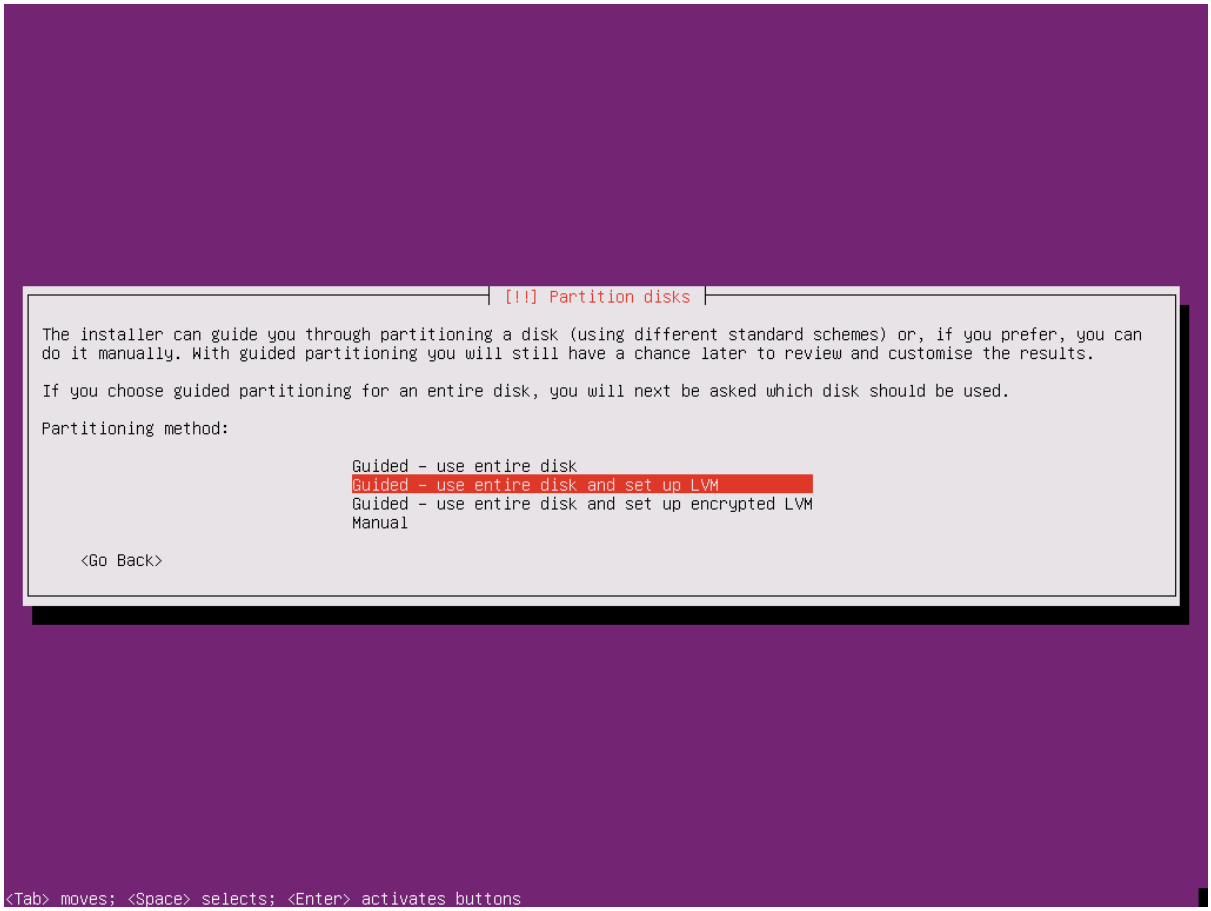
Don’t encrypt your home directory

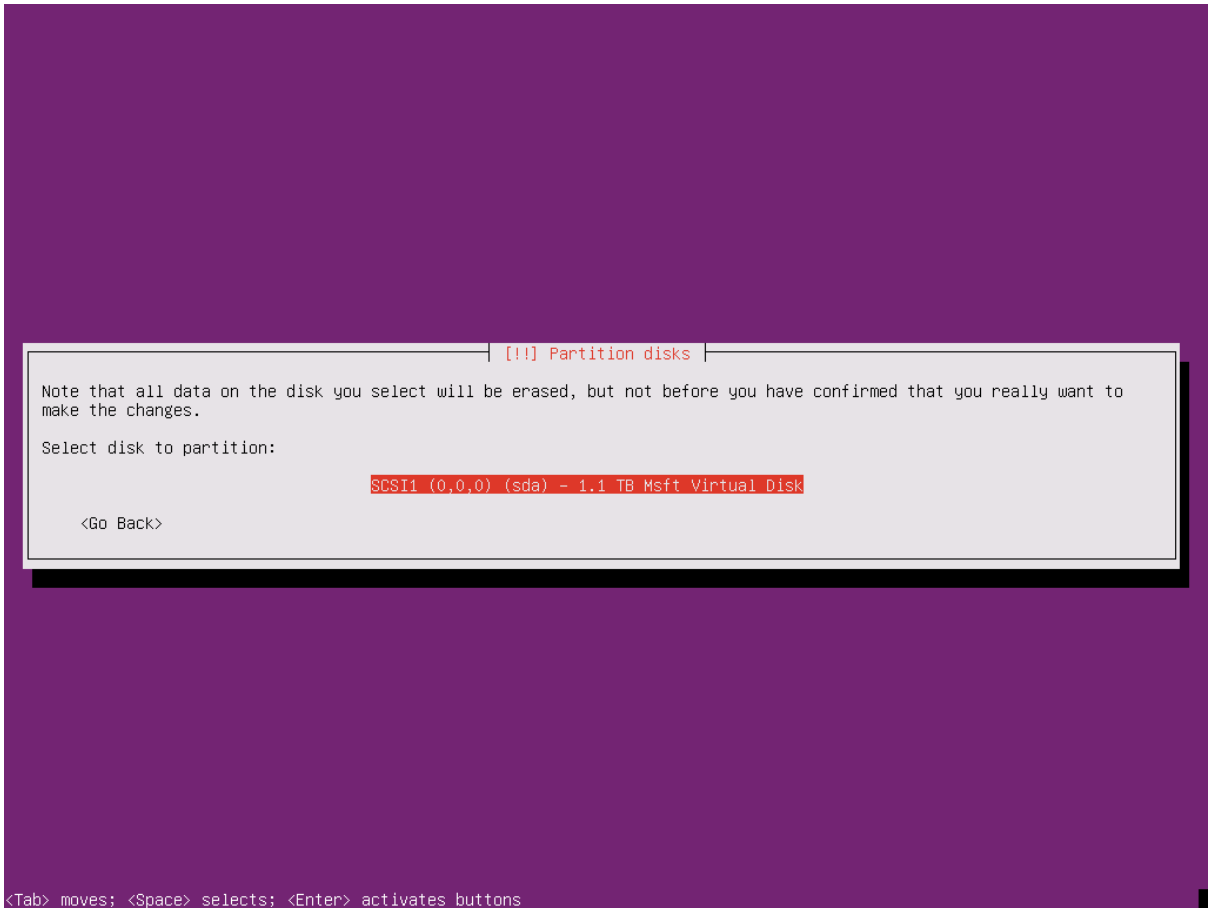


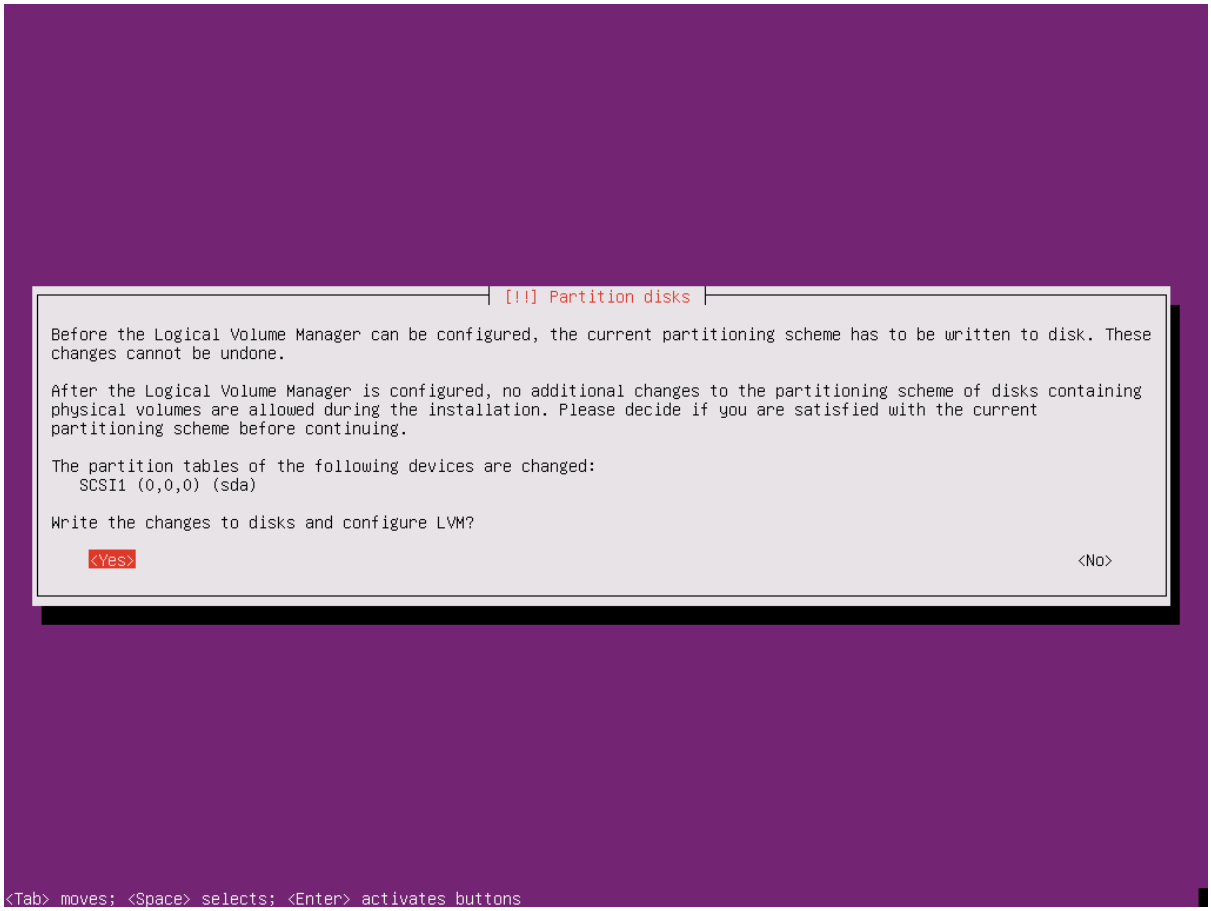
Choose your timezone:

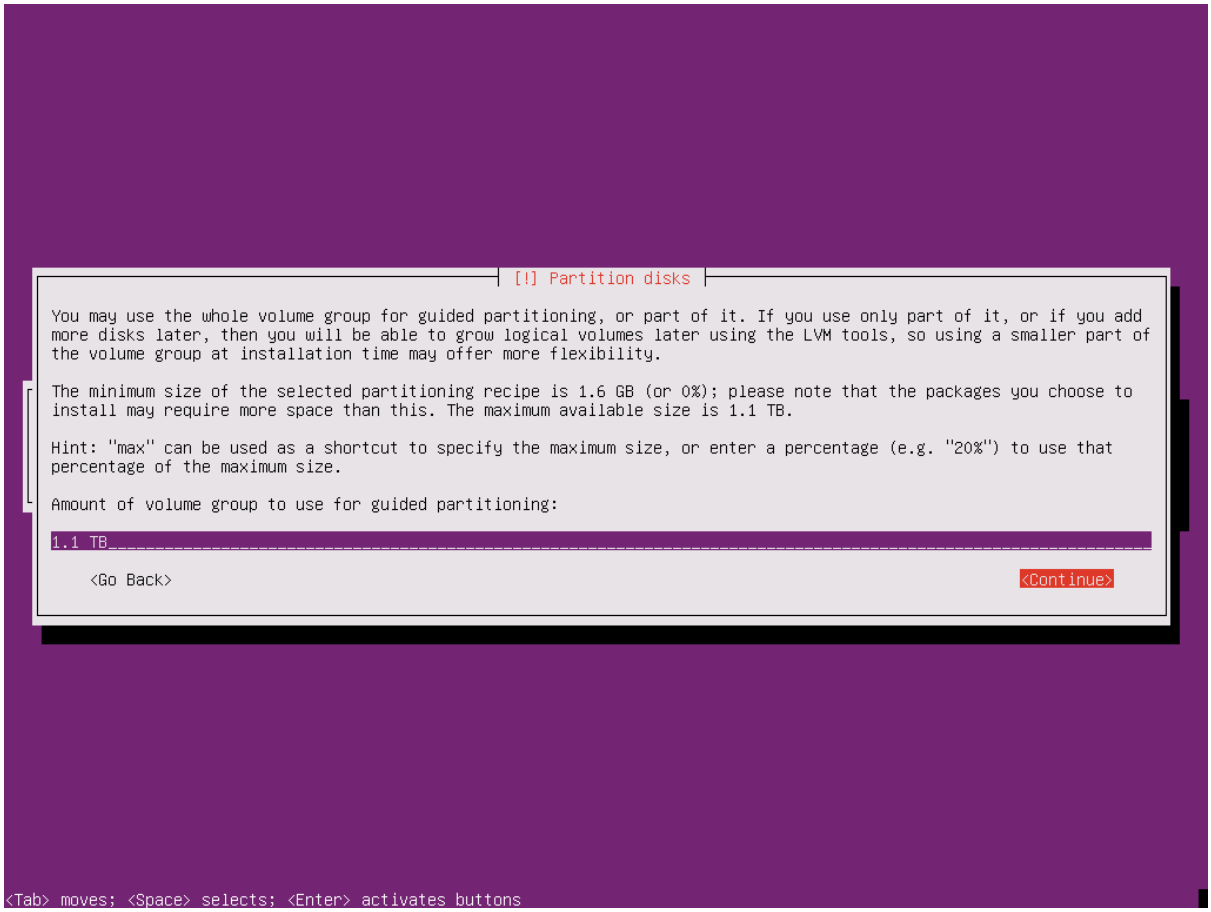


Partition disks selecting defaults.

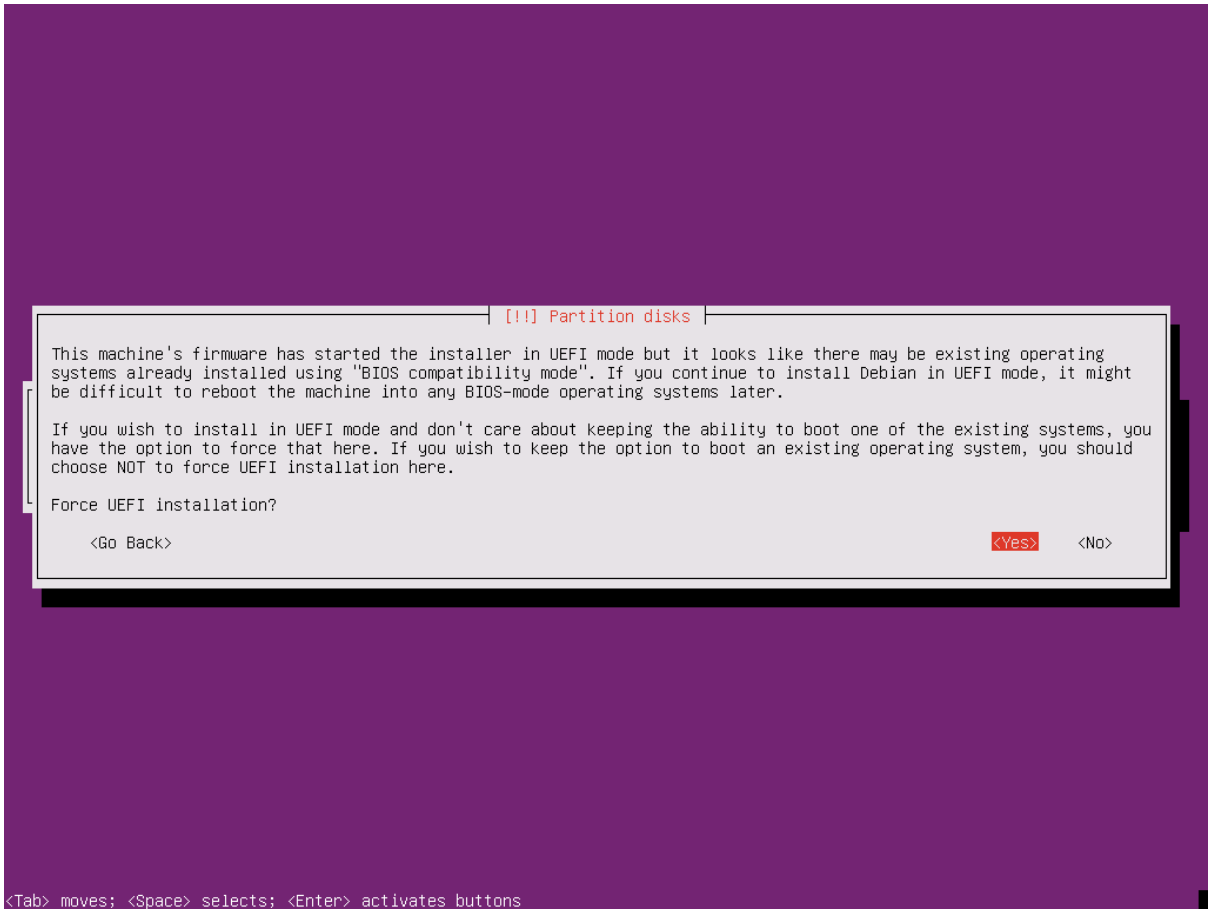

[!!] Partition disks
The installer can guide you through partitioning a disk (using different standard schemes) or, if you prefer, you can do it manually. With guided partitioning you will still have a chance later to review and customise the results.
If you choose guided partitioning for an entire disk, you will next be asked which disk should be used.
Partitioning method:
Guided - use entire disk
Guided - use entire disk and set up LVM
Guided - use entire disk and set up encrypted LVM
Manual
<Go Back>
<Tab> moves; <Space> selects; <Enter> activates buttons

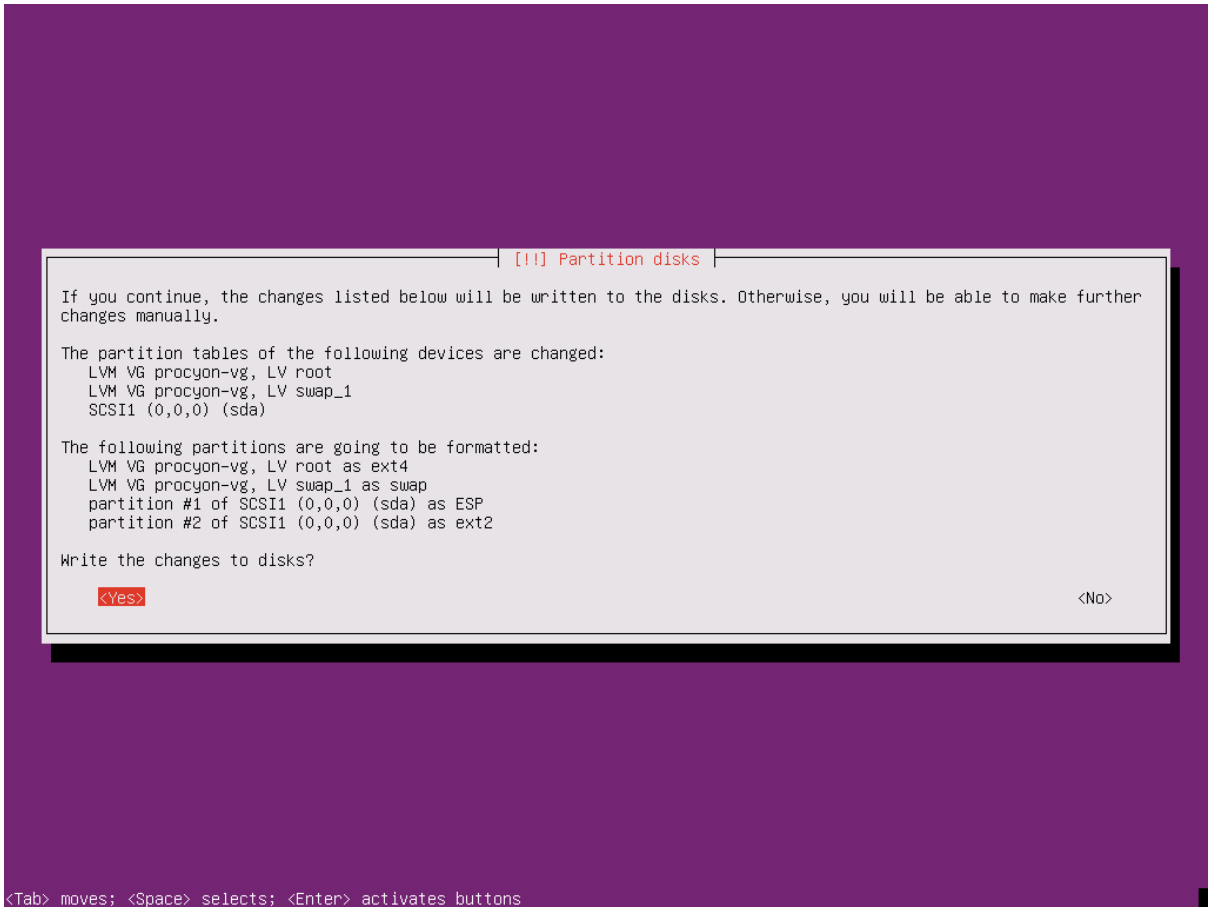

[!!] Partition disks
Note that all data on the disk you select will be erased, but not before you have confirmed that you really want to make the changes.
Select disk to partition:
SCSI1 (0,0,0) (sda) - 1.1 TB Msft Virtual Disk
<Go Back>
<Tab> moves; <Space> selects; <Enter> activates buttons


[!!] Partition disks
Before the Logical Volume Manager can be configured, the current partitioning scheme has to be written to disk. These changes cannot be undone.
After the Logical Volume Manager is configured, no additional changes to the partitioning scheme of disks containing physical volumes are allowed during the installation. Please decide if you are satisfied with the current partitioning scheme before continuing.
The partition tables of the following devices are changed:
SCSI1 (0,0,0) (sda)
Write the changes to disks and configure LVM?
<Yes>
<No>
<Tab> moves; <Space> selects; <Enter> activates buttons

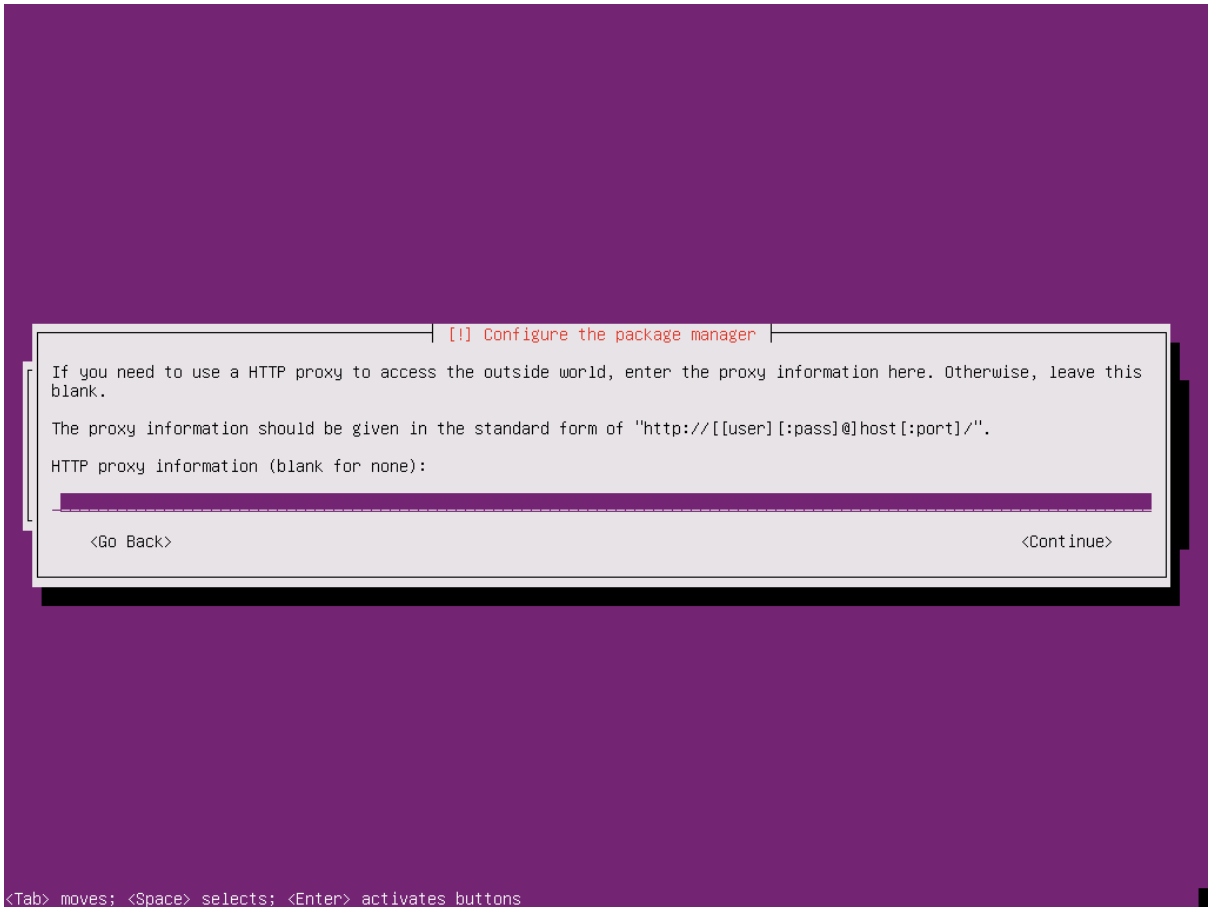

[!] Partition disks
You may use the whole volume group for guided partitioning, or part of it. If you use only part of it, or if you add more disks later, then you will be able to grow logical volumes later using the LVM tools, so using a smaller part of the volume group at installation time may offer more flexibility.
The minimum size of the selected partitioning recipe is 1.6 GB (or 0%); please note that the packages you choose to install may require more space than this. The maximum available size is 1.1 TB.
Hint: "max" can be used as a shortcut to specify the maximum size, or enter a percentage (e.g. "20%") to use that percentage of the maximum size.
Amount of volume group to use for guided partitioning:
1.1 TB
<Go Back>
<Continue>
<Tab> moves; <Space> selects; <Enter> activates buttons

Force UEFI Installation

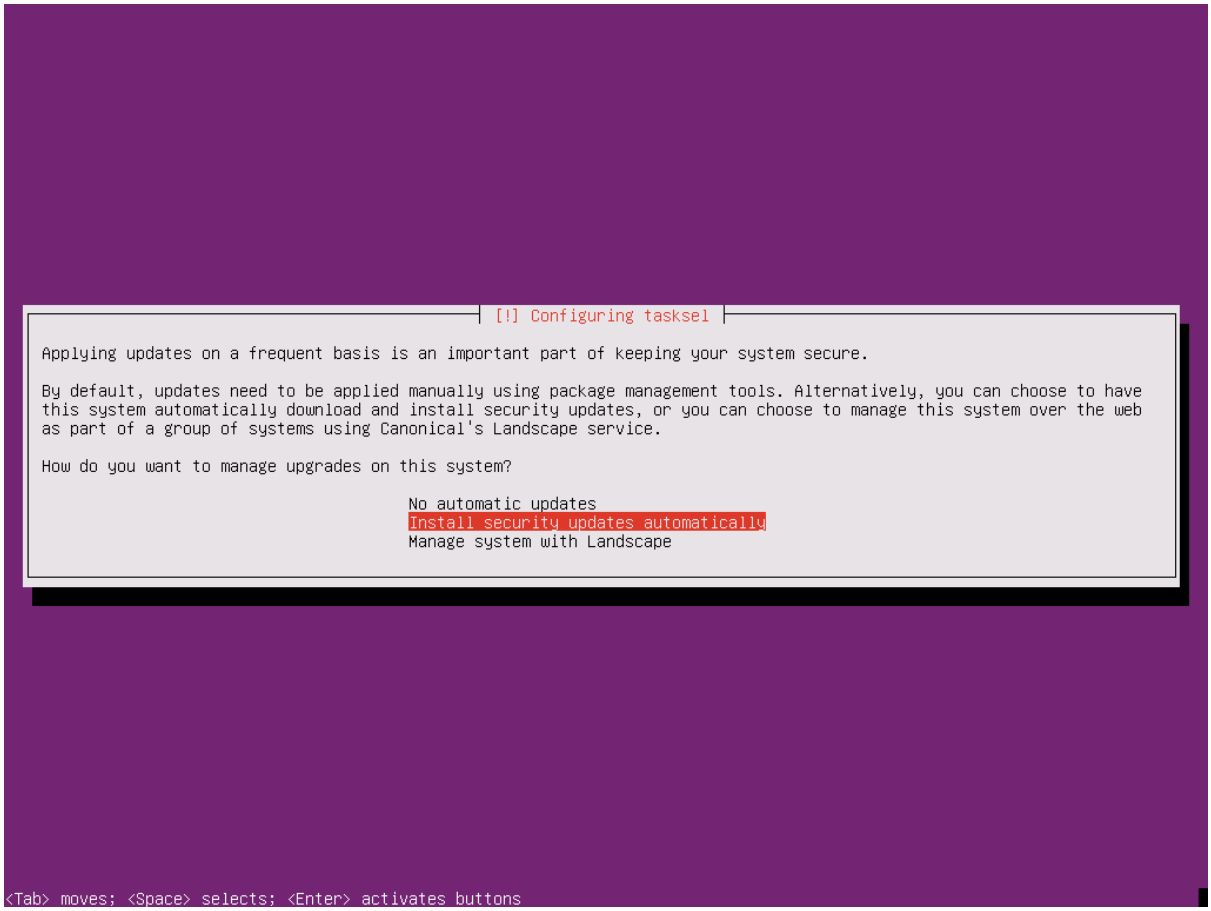




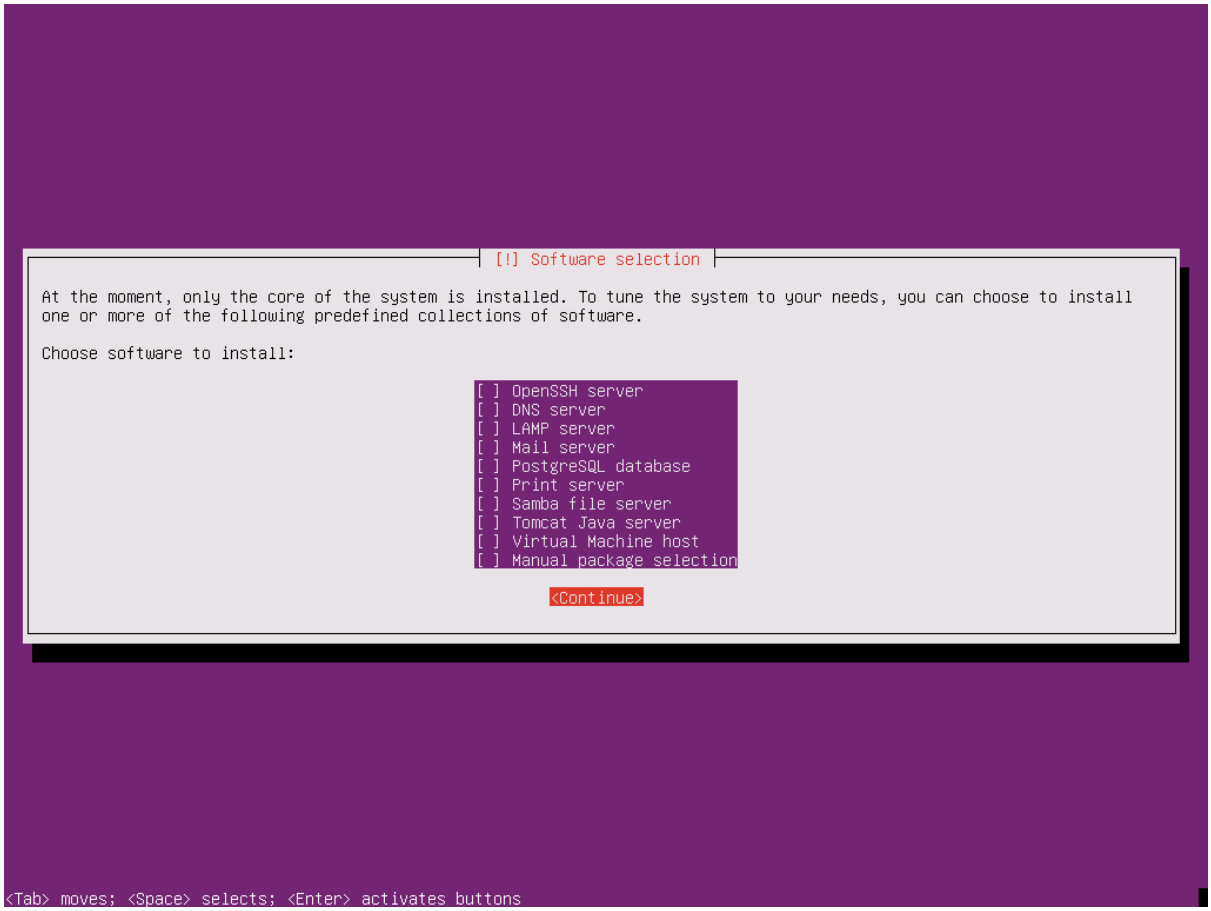
Leave proxy blank unless you have one



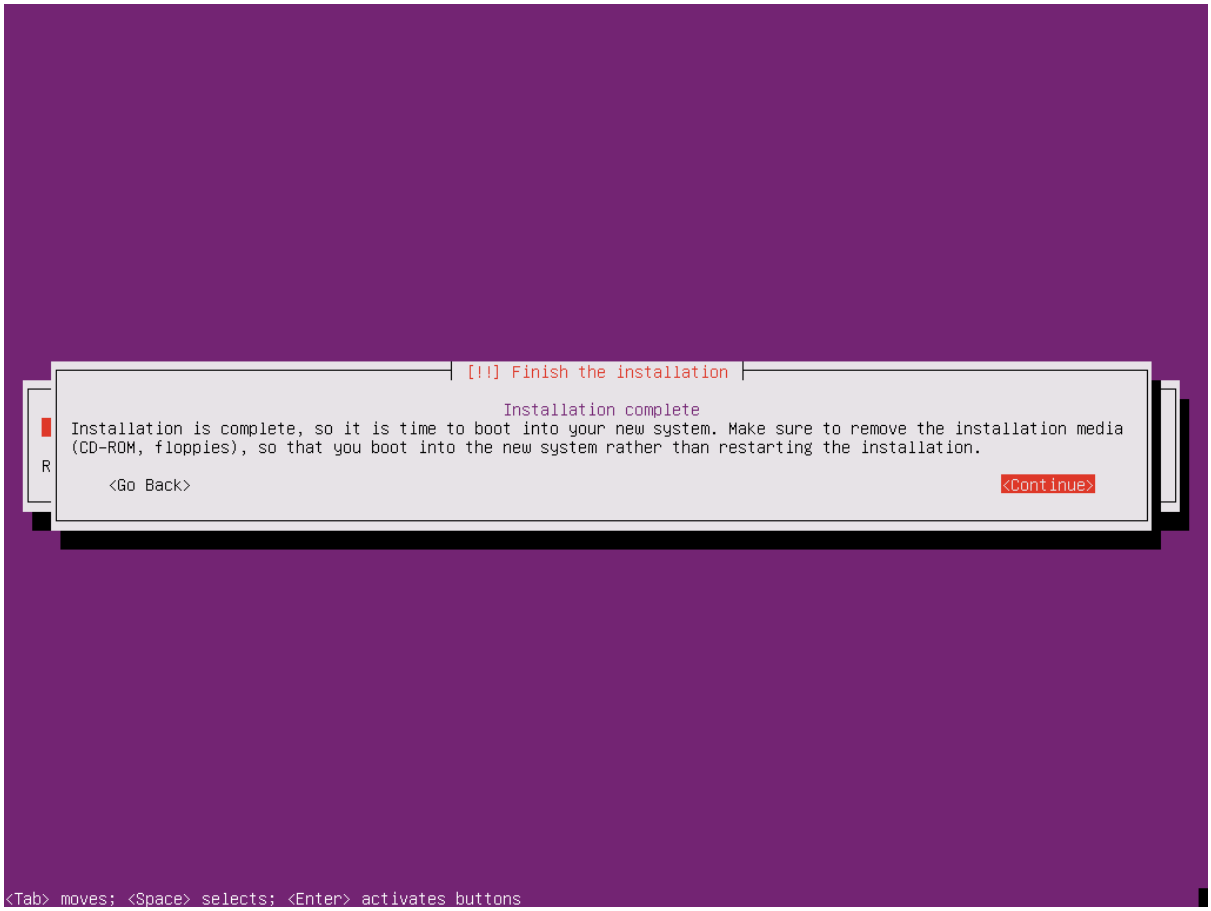
Install security updates automatically



Continue without installing any packages


[!] Software selection
At the moment, only the core of the system is installed. To tune the system to your needs, you can choose to install one or more of the following predefined collections of software.
Choose software to install:
[ ] OpenSSH server
[ ] DNS server
[ ] LAMP server
[ ] Mail server
[ ] PostgreSQL database
[ ] Print server
[ ] Samba file server
[ ] Tomcat Java server
[ ] Virtual Machine host
[ ] Manual package selection
<Continue>
<Tab> moves; <Space> selects; <Enter> activates buttons

Reboot


[!!] Finish the installation
Installation complete
Installation is complete, so it is time to boot into your new system. Make sure to remove the installation media
(CD-ROM, floppies), so that you boot into the new system rather than restarting the installation.
<Go Back>
<Continue>
<Tab> moves; <Space> selects; <Enter> activates buttons

Login

Run these commands:

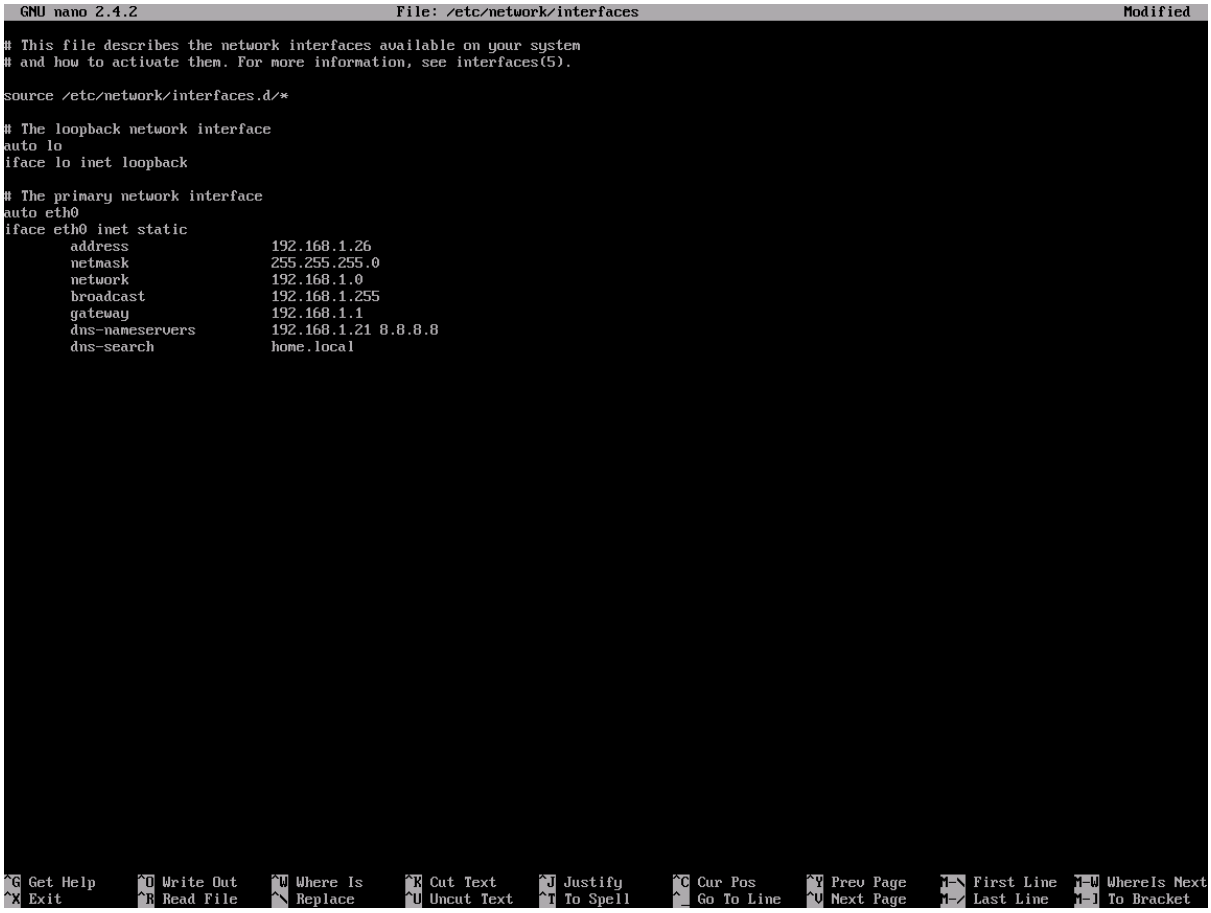
```
sudo apt-get update
sudo apt-get upgrade
```

Configure Ubuntu Server

Based on http://ubuntuforums.org/showthread.php?t=2146198

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

Edit the interfaces file so that you have a static IP address. In the following example, the IP address subnet is 192.168.1.x and domain is home.local




```
sudo nano /etc/hosts
```

Change the lines that read:

```
127.0.0.1  localhost
127.0.1.1  <hostname>
```

To:

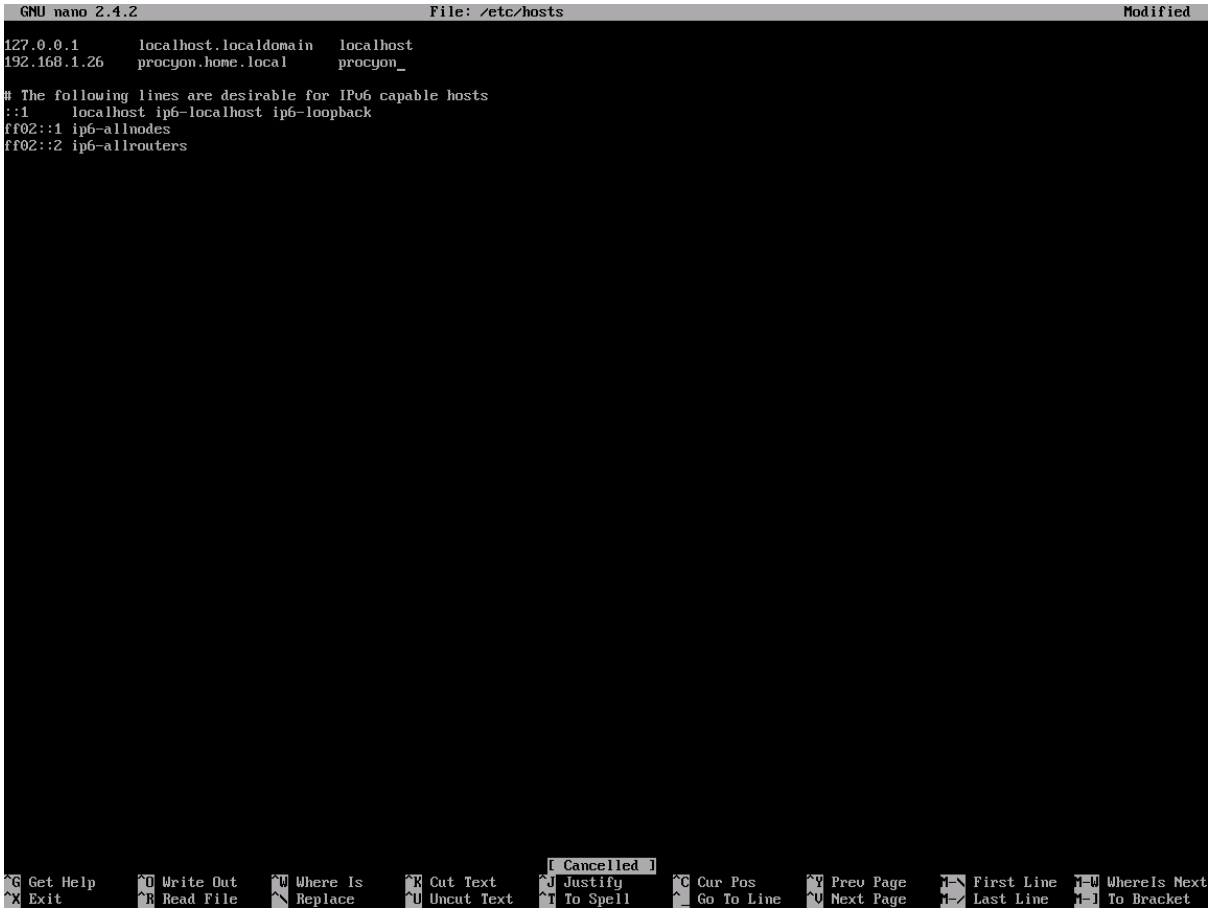
```
127.0.0.1              localhost.localdomain      localhost
<host ip address>      <hostname.domain.name>     hostname
```

i.e.:

```
127.0.0.1              localhost.localdomain      localhost
192.168.1.26           procyon.home.local         Procyon
```

And then save the file by pressing:

```
ctrl-o
enter
ctrl-x
```




```
Sudo nano /etc/hostname
```

Change to fully qualified hostname. E.g:

```
procyon.home.local
```

And then save the file by pressing:

```
ctrl-o
enter
ctrl-x
```

Restart networking:

```
sudo systemctl restart networking
```

- 

Install OpenSSH Server

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

You can now ssh to the server instead of being in front of it/using the VM Console

For windows, use putty. http://www.putty.org/

Install vsftpd

From https://help.ubuntu.com/lts/serverguide/ftp-server.html

```
sudo apt-get install vsftpd
sudo nano /etc/vsftpd.conf
```
uncomment write_enable=YES

ctrl-o to save

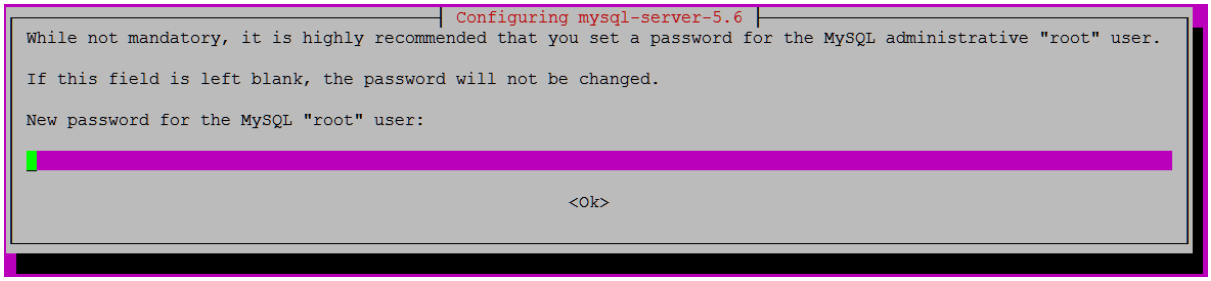
ctrl-x to exit

sudo systemctl restart vsftpd

Install MySQL

```
sudo apt-get install mysql-server
```

Make a root password for MySQL



Install Python 2.7

Note: Python3 does not work with the SDK.

```
sudo apt-get install python python-pip
```

Clone python-lifx-sdk and

```
git clone https://github.com/smarthall/python-lifx-sdk.git python-lifx-sdk

git clone https://github.com/dleffo/particle-button-lifx.git lifx
```

Setup pyton-lifx-sdk

```
Pip install setuptools
sudo ~/python-lifx-sdk/setup.py install
```

Test what you've done so far

```
python ~/lifx/light.py -l Study --on
python ~/lifx/light.py -l Study –off
```

To turn the light "Study" on and off respectively.

Documentation to be completed:

- Set up database
- Set up internet button
- Run scripts on startup
- ???