

# VM installation using virsh

0. Steps that needed to be done before installing the virtual machine:
  - Image downloaded on the host
  - Virtual hard drive configured
  - Network configured (NAT or internal)
1. Install:  
`sudo virt-install --name <vm_name> --ram 1024 --vcpus 1`  
`--disk path=/var/lib/libvirt/images/<virtual_drive>.qcow2,format=qcow2`  
`--os-variant debian11 --network network=<network_name> --graphics none`  
`--extra-args="console=ttyS0"`  
`--location /var/lib/libvirt/images/<downloaded_image>.iso`
2. Choose English.

```
[ (1*installer) 2 shell 3 shell 4- log ][ Nov 18 15:54 ]
```

Choose the language to be used for the installation process. The selected language will also be the default language for the installed system.

Language:

C  
English

<Go Back>

```
<Tab> moves; <Space> selects; <Enter> activates buttons
```

3. Other.

[[!]] Select your location

The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.

This is a shortlist of locations based on the language you selected. Choose "other" if your location is not listed.

Country, territory or area:

United Kingdom	-
United States	⌵
Zambia	⌵
Zimbabwe	0
other	.

<Go Back>

<Tab> moves; <Space> selects; <Enter> activates buttons

4. Europe

[[!]] Select your location

The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.

Select the continent or region to which your location belongs.

Continent or region:

Atlantic Ocean	-
Caribbean	⌵
Central America	0
Europe	⌵
Indian Ocean	⌵
North America	.

<Go Back>

<Tab> moves; <Space> selects; <Enter> activates buttons

## 6. United States

```
[!] Configure locales
```

There is no locale defined for the combination of language and country you have selected. You can now select your preference from the locales available for the selected language. The locale that will be used is listed in the second column.

Country to base default locale settings on:

Seychelles	- en_SC.UTF-8	-
Singapore	- en_SG.UTF-8	█
South Africa	- en_ZA.UTF-8	█
United Kingdom	- en_GB.UTF-8	█
United States	- en_US.UTF-8	0
Zambia	- en_ZM	█
Zimbabwe	- en_ZW.UTF-8	.

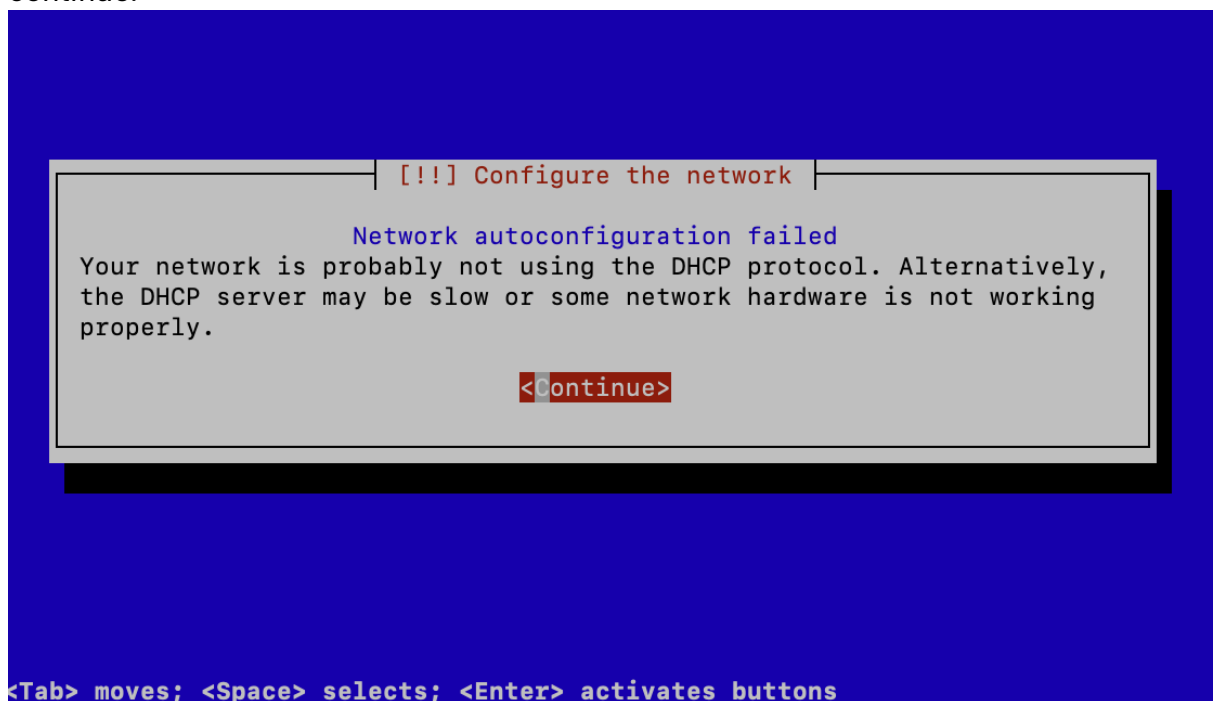
<Go Back>

<F1> for help; <Tab> moves; <Space> selects; <Enter> activates buttons

7. Belgian

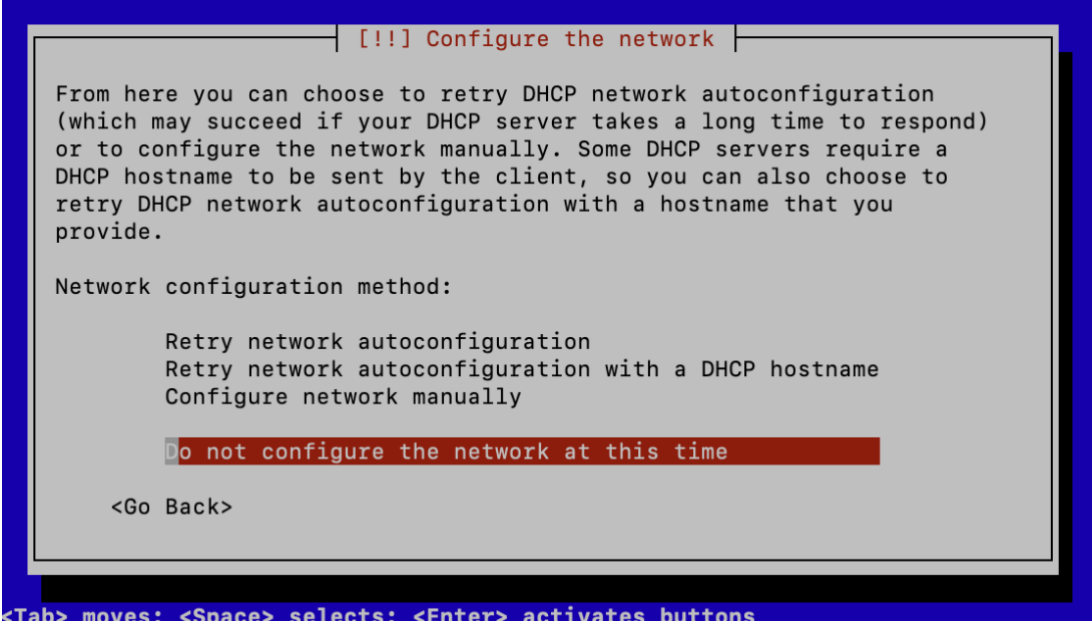


8. If you configured the network correctly, no DHCP should be present. Press continue.



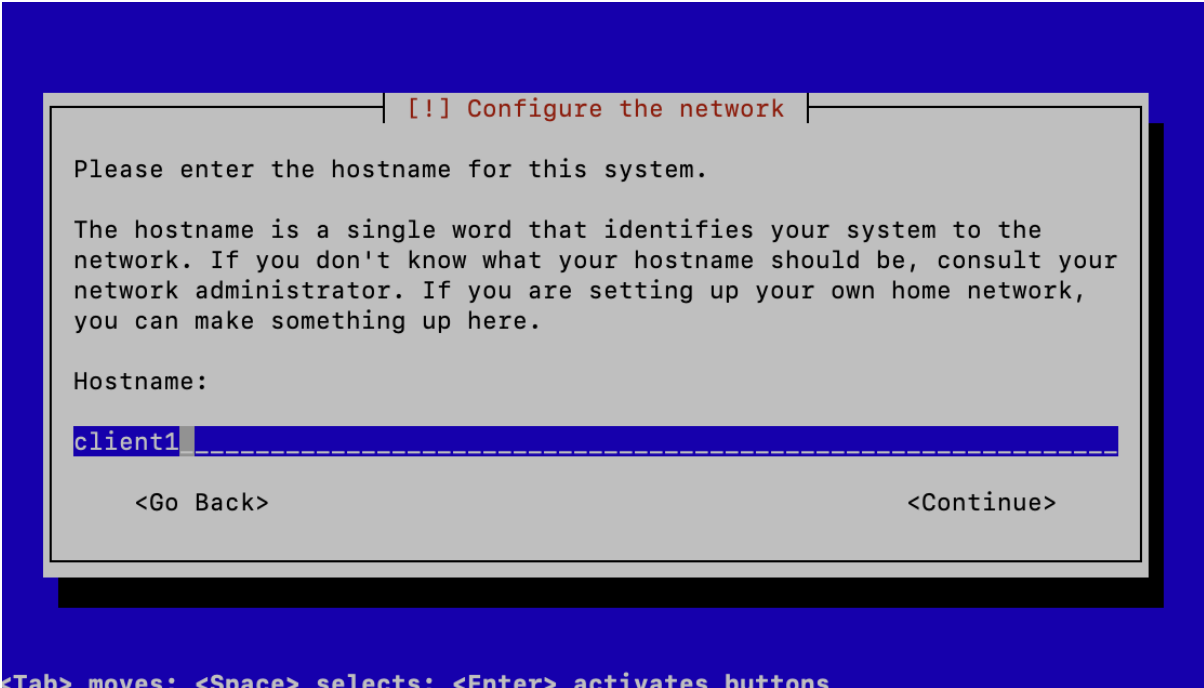
- 9.
- If you are configuring the DHCP with NAT adapter, choose "Configure network manually". Choose an IP in range of the configured NAT network.

- b. If you are configuring clients, that don't need extra packages anymore, use "Do not configure the network at this time".



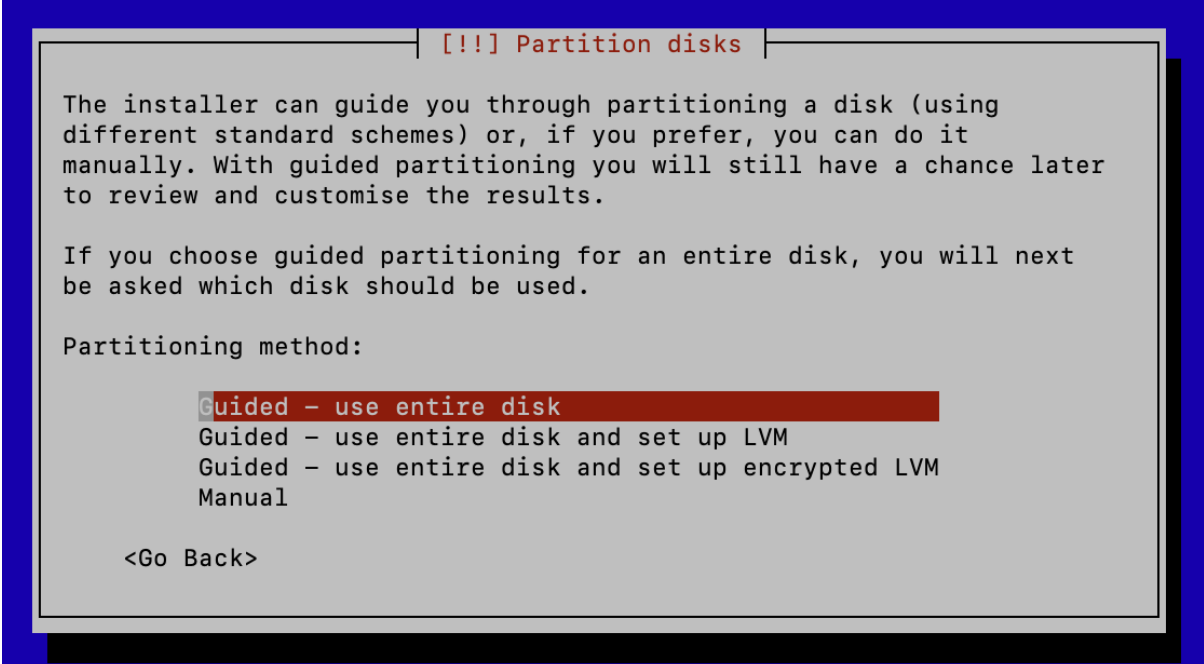
The screenshot shows a window titled "[!!] Configure the network". The text inside reads: "From here you can choose to retry DHCP network autoconfiguration (which may succeed if your DHCP server takes a long time to respond) or to configure the network manually. Some DHCP servers require a DHCP hostname to be sent by the client, so you can also choose to retry DHCP network autoconfiguration with a hostname that you provide." Below this, it says "Network configuration method:" followed by three options: "Retry network autoconfiguration", "Retry network autoconfiguration with a DHCP hostname", and "Configure network manually". The option "Do not configure the network at this time" is highlighted in red. At the bottom, there is a "<Go Back>" button. Below the window, a blue bar contains the text: "<Tab> moves; <Space> selects; <Enter> activates buttons".

10. Choose the host- and full name depending on what you're configuring. Tip: for DHCP choose dhcpserver instead of dhcp. Always take as password: **pw**



The screenshot shows a window titled "[!!] Configure the network". The text inside reads: "Please enter the hostname for this system." followed by "The hostname is a single word that identifies your system to the network. If you don't know what your hostname should be, consult your network administrator. If you are setting up your own home network, you can make something up here." Below this, it says "Hostname:" followed by a text input field containing "client1". At the bottom, there are two buttons: "<Go Back>" and "<Continue>". Below the window, a blue bar contains the text: "<Tab> moves; <Space> selects; <Enter> activates buttons".

## 11. Partition disks.



!!! 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.

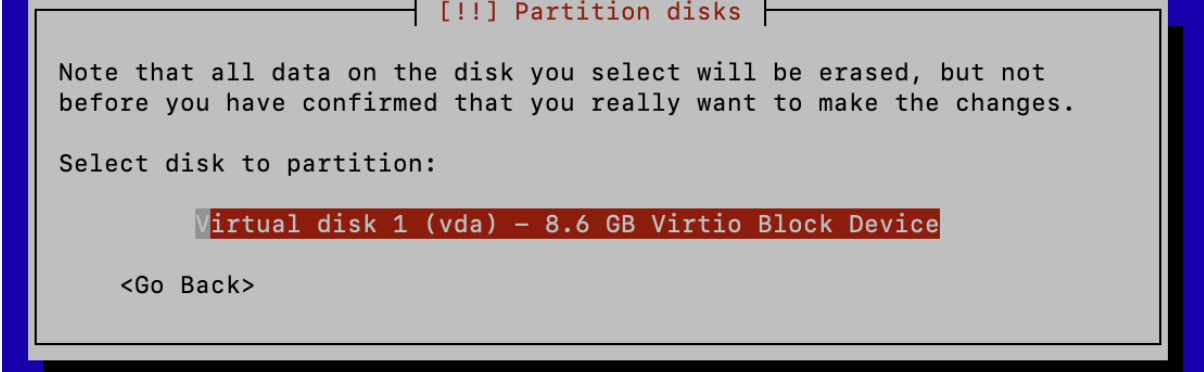
If you choose guided partitioning for an entire disk, you will next be asked which disk should be used.

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:

- Virtual disk 1 (vda) - 8.6 GB Virtio Block Device

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<Tab> moves; <Space> selects; <Enter> activates buttons

[[!]] Partition disks

Selected for partitioning:

Virtual disk 1 (vda) – Virtio Block Device: 8.6 GB

The disk can be partitioned using one of several different schemes.  
If you are unsure, choose the first one.

Partitioning scheme:

All files in one partition (recommended for new users)  
Separate /home partition  
Separate /home, /var, and /tmp partitions

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<Tab> moves; <Space> selects; <Enter> activates buttons

[[!]] Partition disks

This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table.

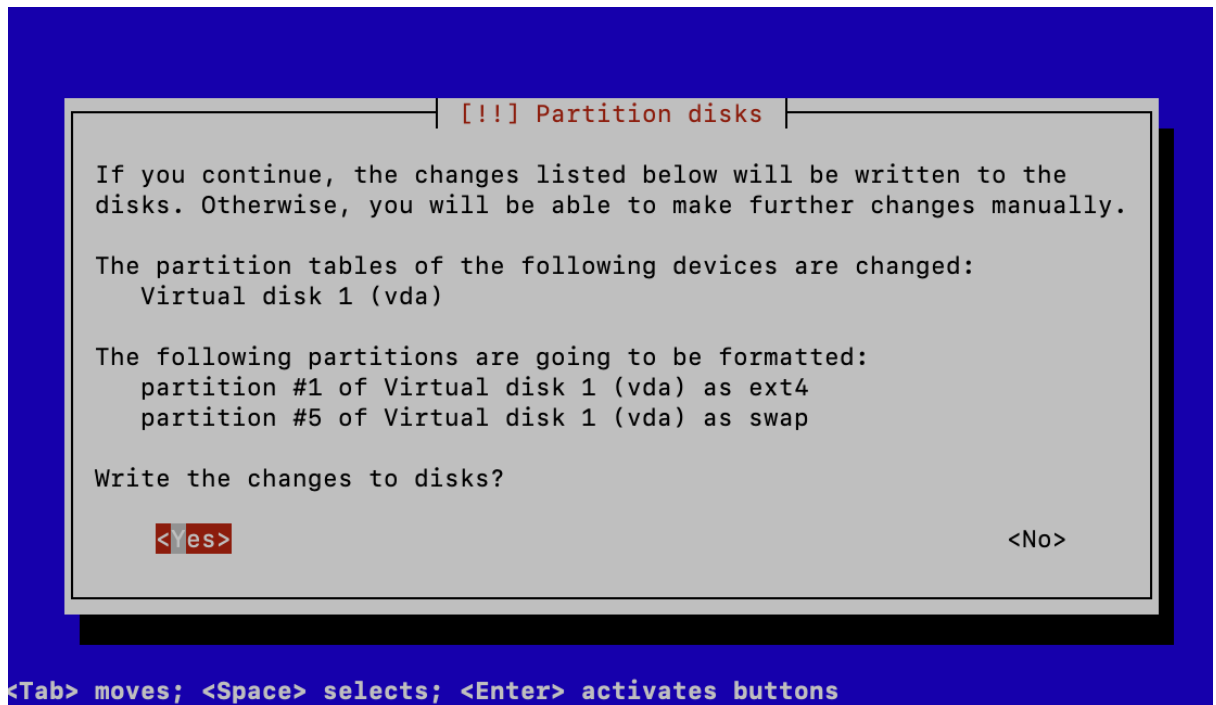
Configure encrypted volumes  
Configure iSCSI volumes

Virtual disk 1 (vda) – 8.6 GB Virtio Block Device  
> #1 primary 7.6 GB f ext4 /  
> #5 logical 1.0 GB f swap swap

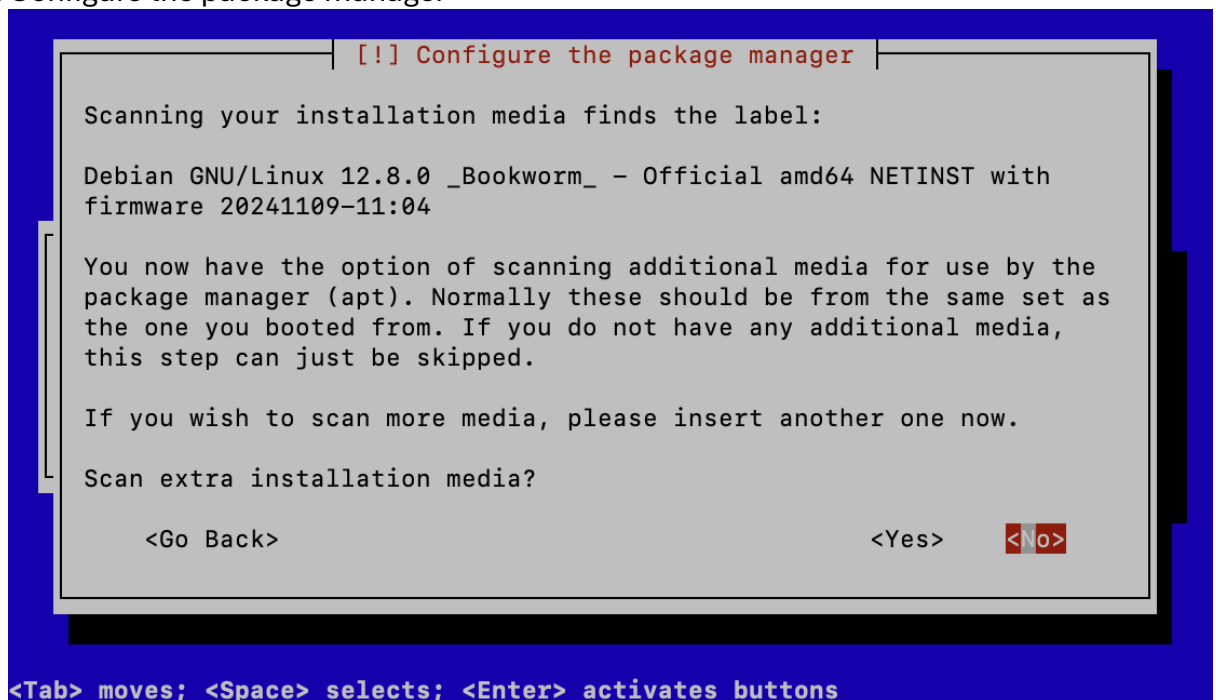
Undo changes to partitions  
Finish partitioning and write changes to disk

<Go Back>

<F1> for help; <Tab> moves; <Space> selects; <Enter> activates buttons



12. Configure the package manager





[!!] Configure the package manager

No network mirror was selected.

If you are installing from a netinst CD image and choose not to use a mirror, you will end up with only a very minimal base system.

Continue without a network mirror?

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<Yes>

<No>

<Tab> moves; <Space> selects; <Enter> activates buttons

[!] Configuring popularity-contest

The system may anonymously supply the distribution developers with statistics about the most used packages on this system. This information influences decisions such as which packages should go on the first distribution CD.

If you choose to participate, the automatic submission script will run once every week, sending statistics to the distribution developers. The collected statistics can be viewed on <https://popcon.debian.org/>.

This choice can be later modified by running "dpkg-reconfigure popularity-contest".

Participate in the package usage survey?

<Yes>

<No>

<Tab> moves; <Space> selects; <Enter> activates buttons

### 13. Configure grub



[!] Configuring grub-pc

It seems that this new installation is the only operating system on this computer. If so, it should be safe to install the GRUB boot loader to your primary drive (UEFI partition/boot record).

Warning: If your computer has another operating system that the installer failed to detect, this will make that operating system temporarily unbootable, though GRUB can be manually configured later to boot it.

Install the GRUB boot loader to your primary drive?

<Go Back>  <No>

<Tab> moves; <Space> selects; <Enter> activates buttons



[!] Configuring grub-pc

You need to make the newly installed system bootable, by installing the GRUB boot loader on a bootable device. The usual way to do this is to install GRUB to your primary drive (UEFI partition/boot record). You may instead install GRUB to a different drive (or partition), or to removable media.

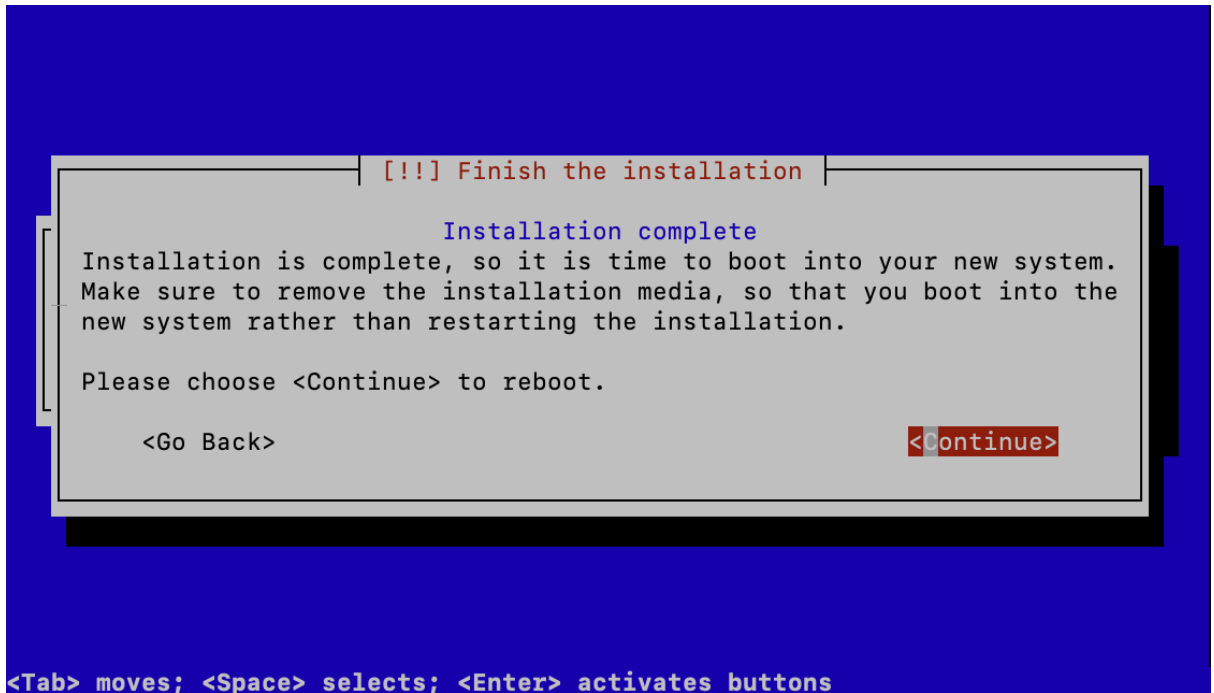
Device for boot loader installation:

Enter device manually  
/dev/vda

<Go Back>

<Tab> moves; <Space> selects; <Enter> activates buttons

## 14. Finish installation



15.

- If you installed a client (no NAT) than you will end up without the sudo package, thus will not be able to login with your regular user. Use the “root” user instead for now. We will fix this in session 10.
- If you installed the DHCP server, you probably will have the following issue when logging in using your regular user:

```
dhcp-server@dhcp:~$ sudo apt-get update
-bash: sudo: command not found
```

This can be easily fixed by logging out using “exit”, and login again as root instead. Execute the following commands:

```
# apt-get install sudo
# adduser dhcp-server sudo
```