**9 - R710 Proxmox VM – Ubuntu Server with STATIC IP**

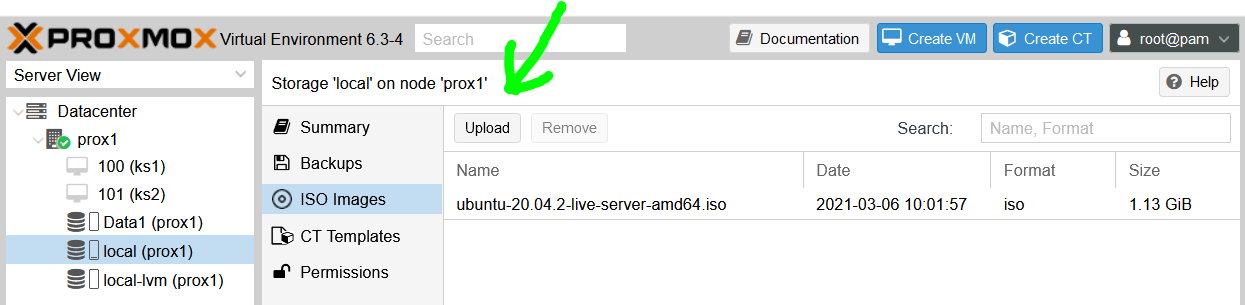
**Log in to Proxmox:**

1. In Firefox, go to : https://192.168.124.**201**:8006

User: root

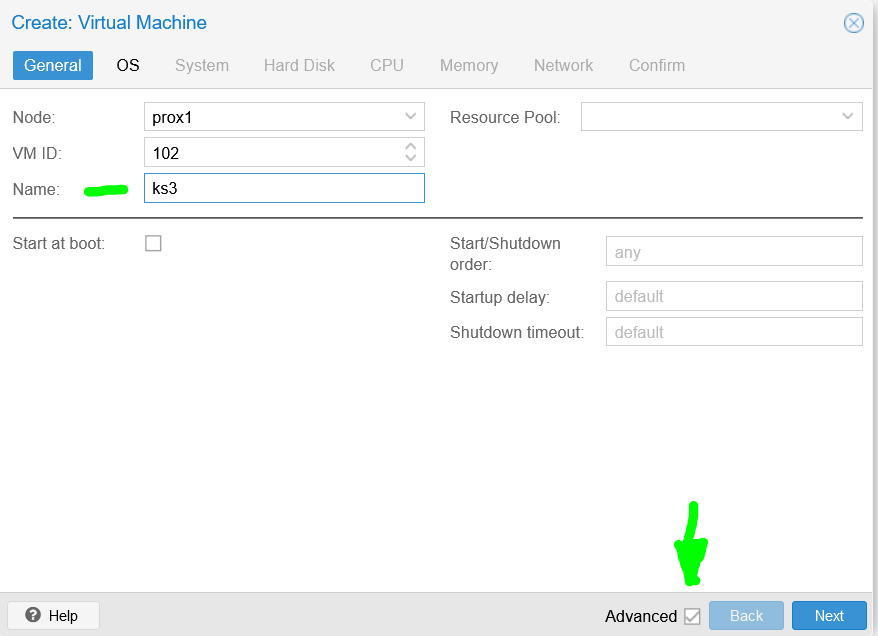
Password : <whatever>

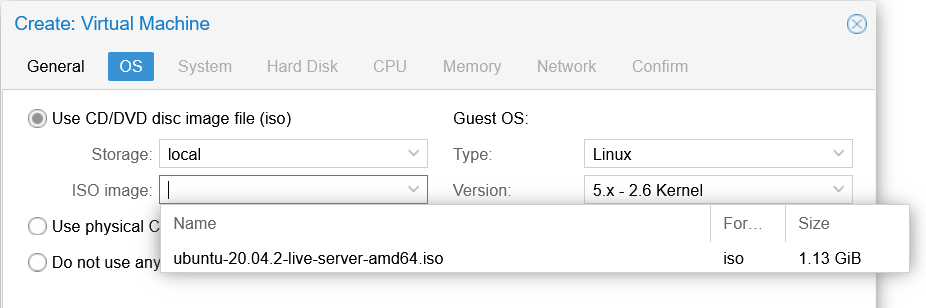
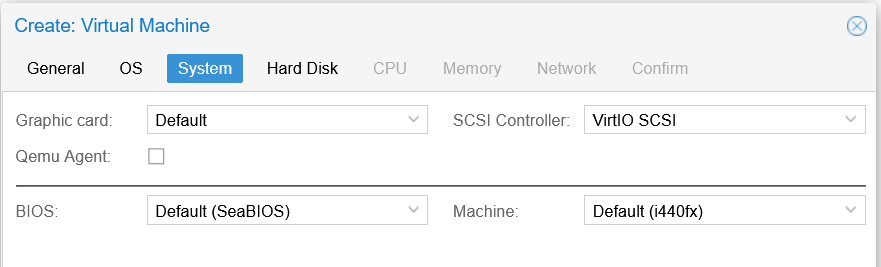
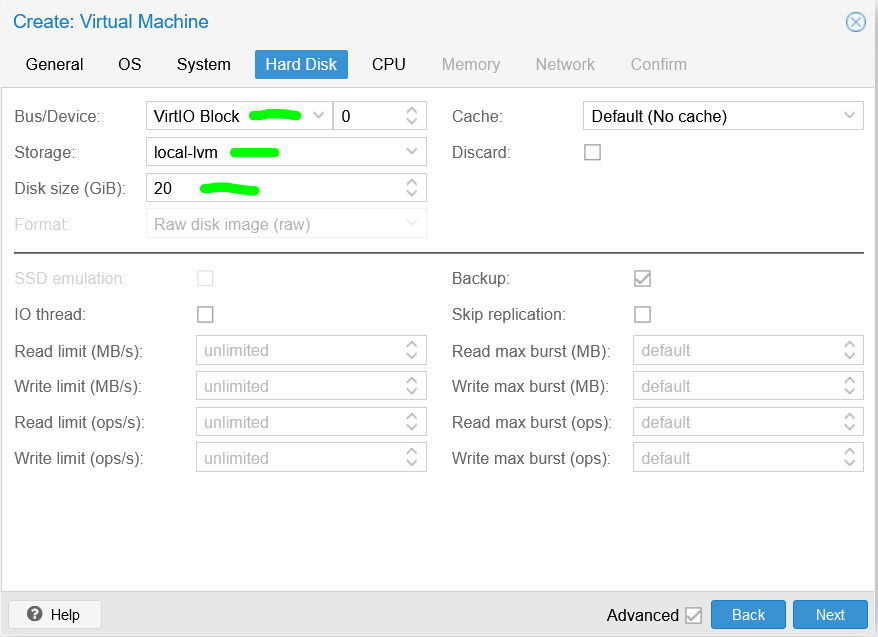
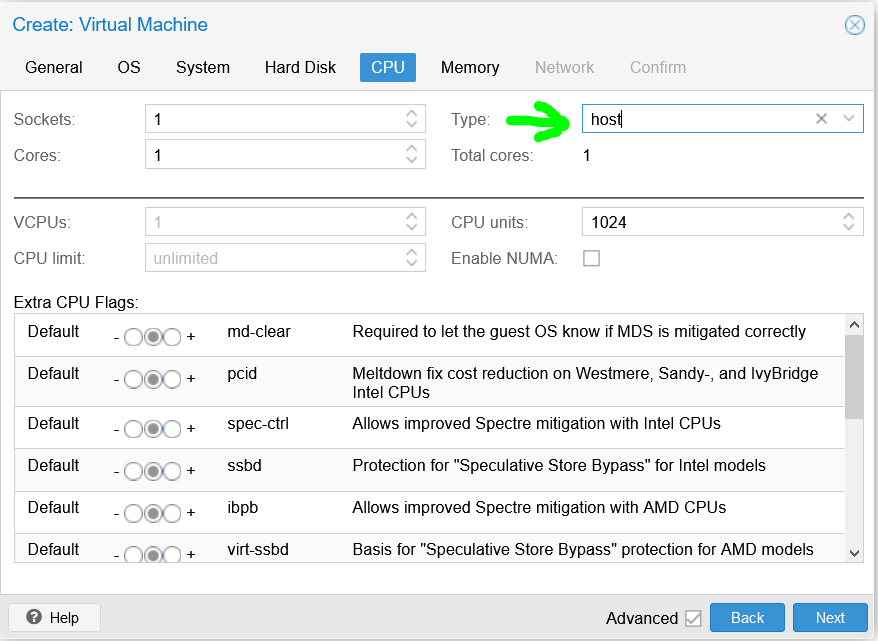
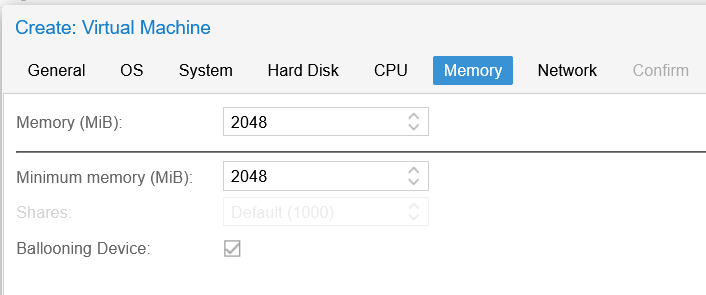
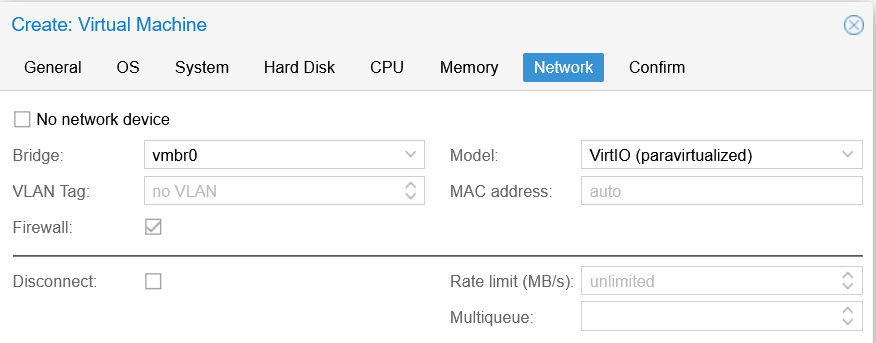
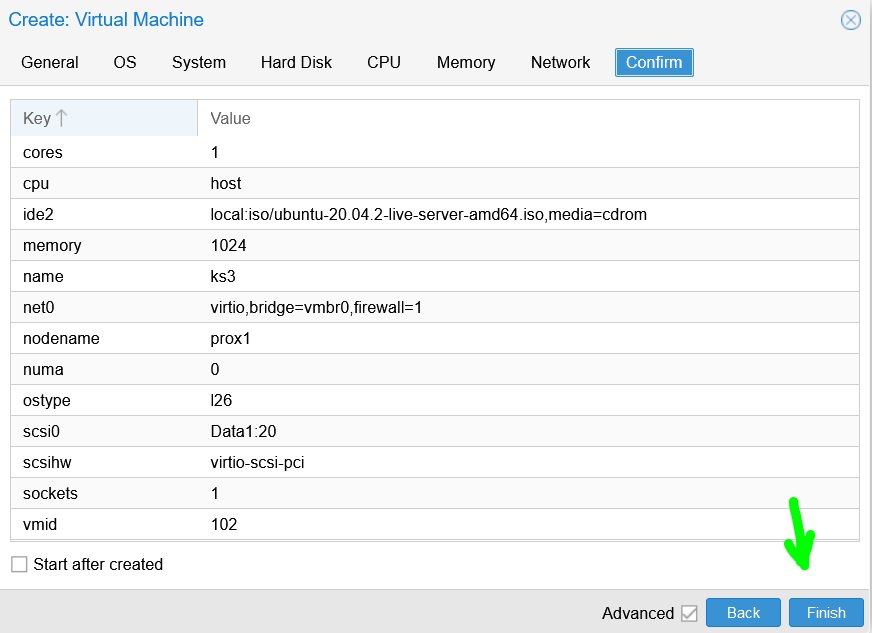
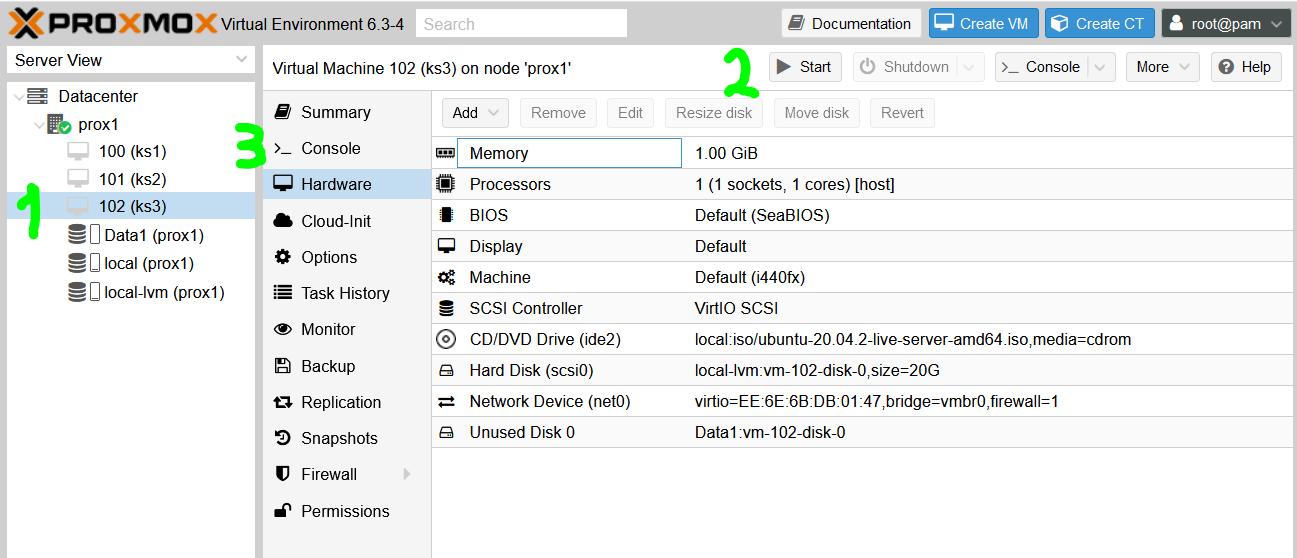
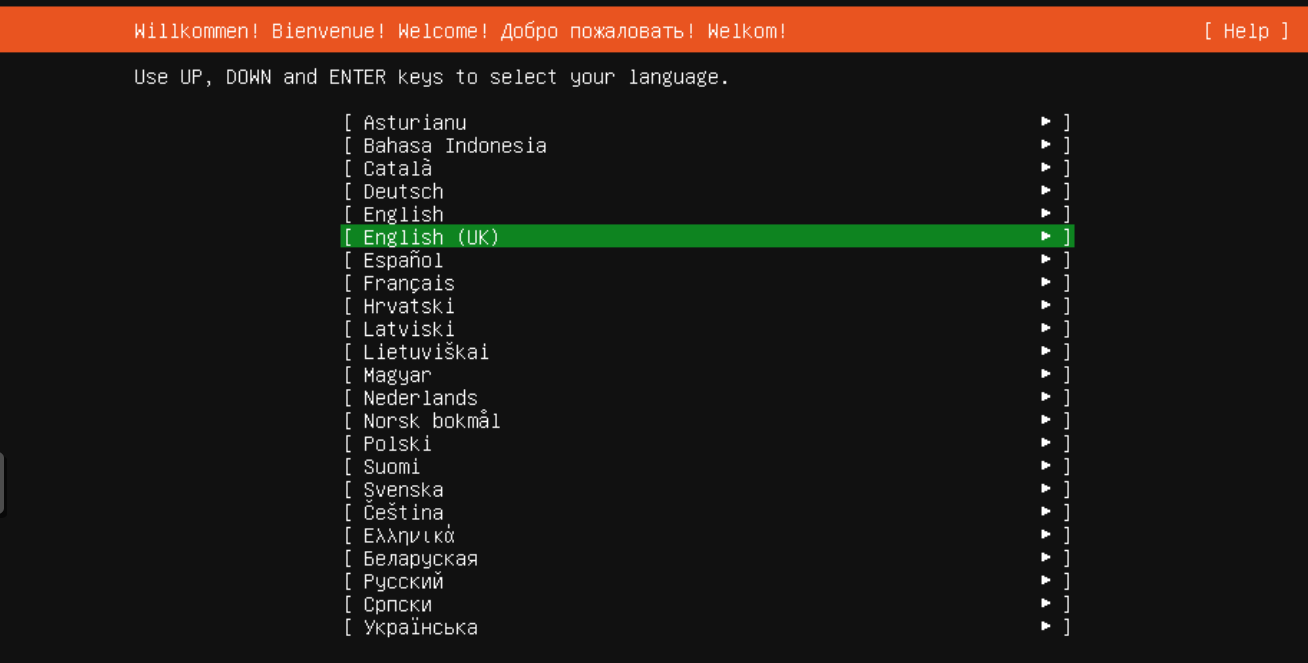
**Storage area for uploading ISO’s into**

1. Download the required Ubuntu Server 64 bit LTS to local PC end then click the “Upload” button to end up with something similar to:  
   

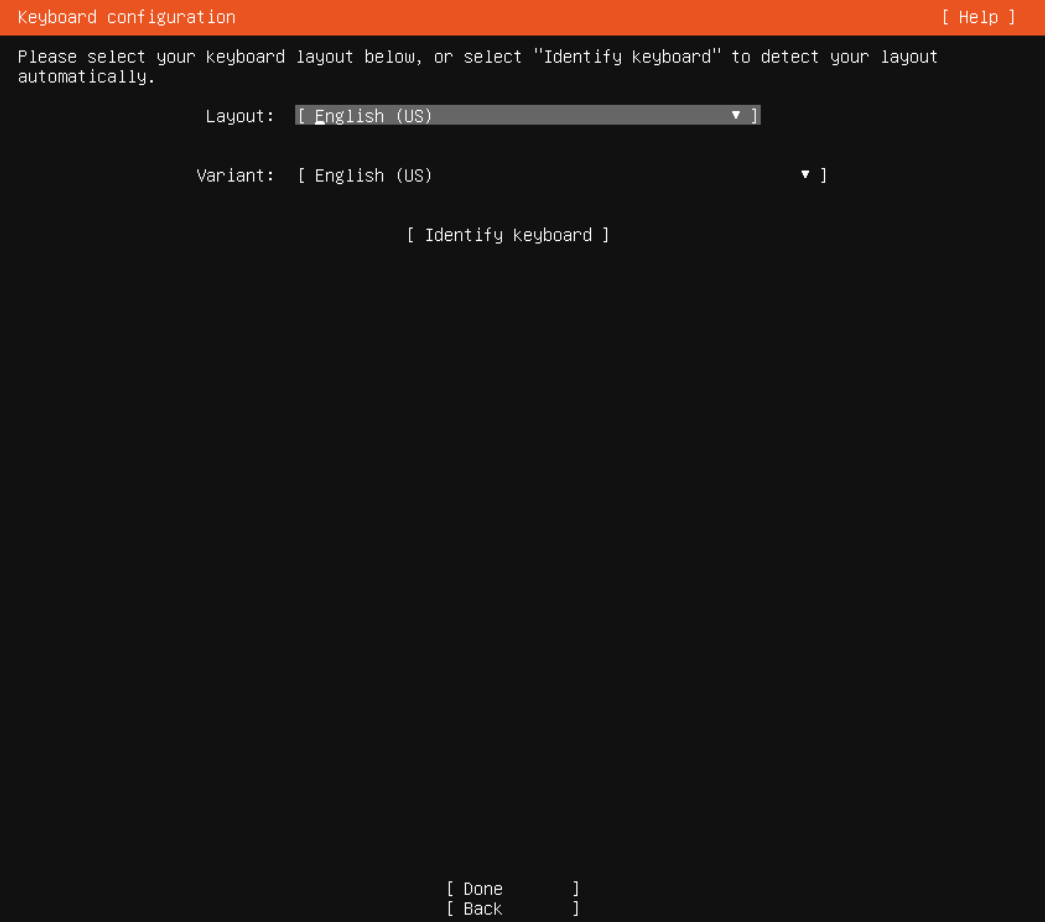
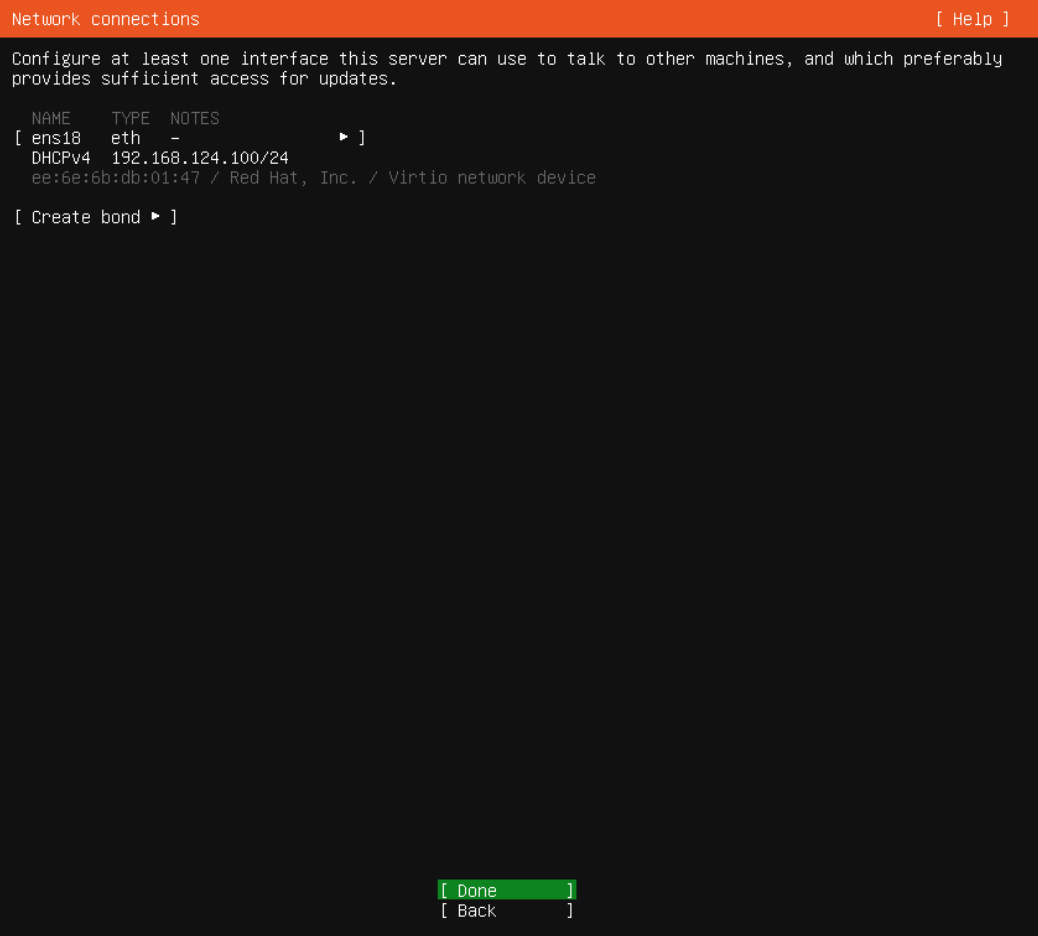
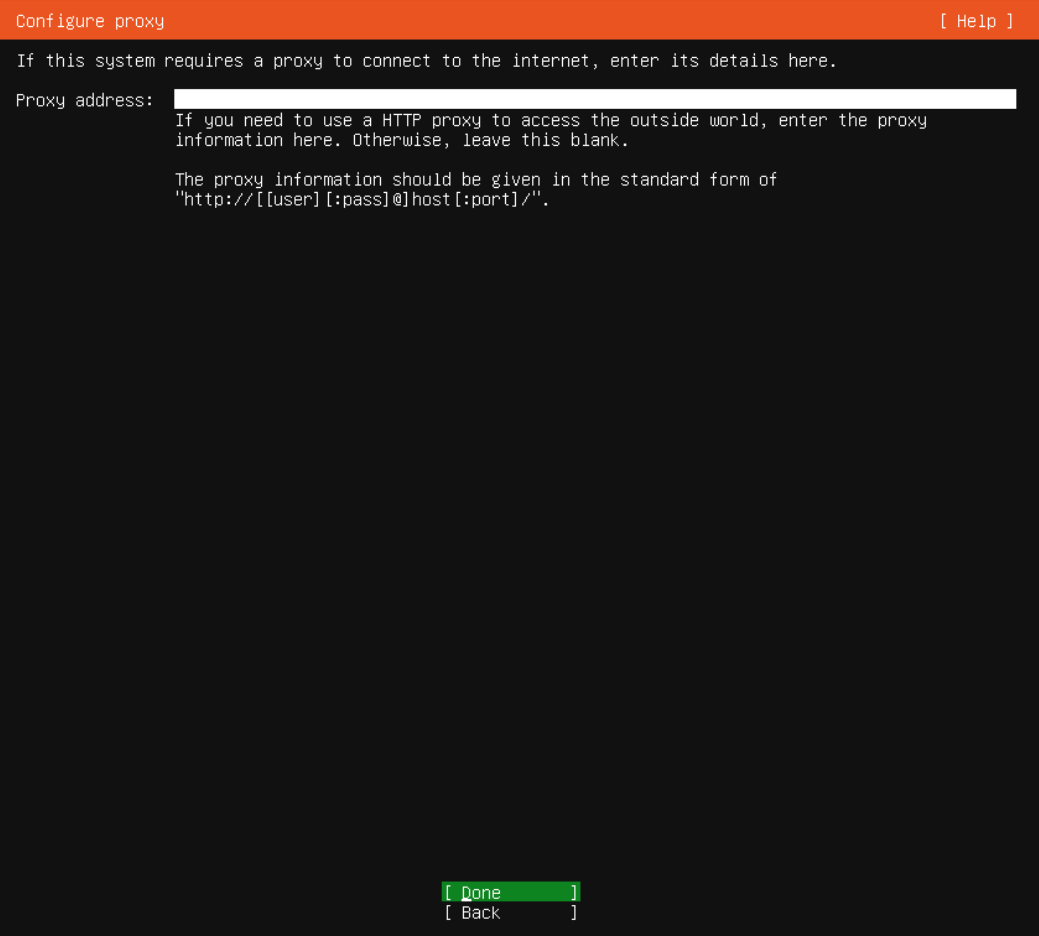
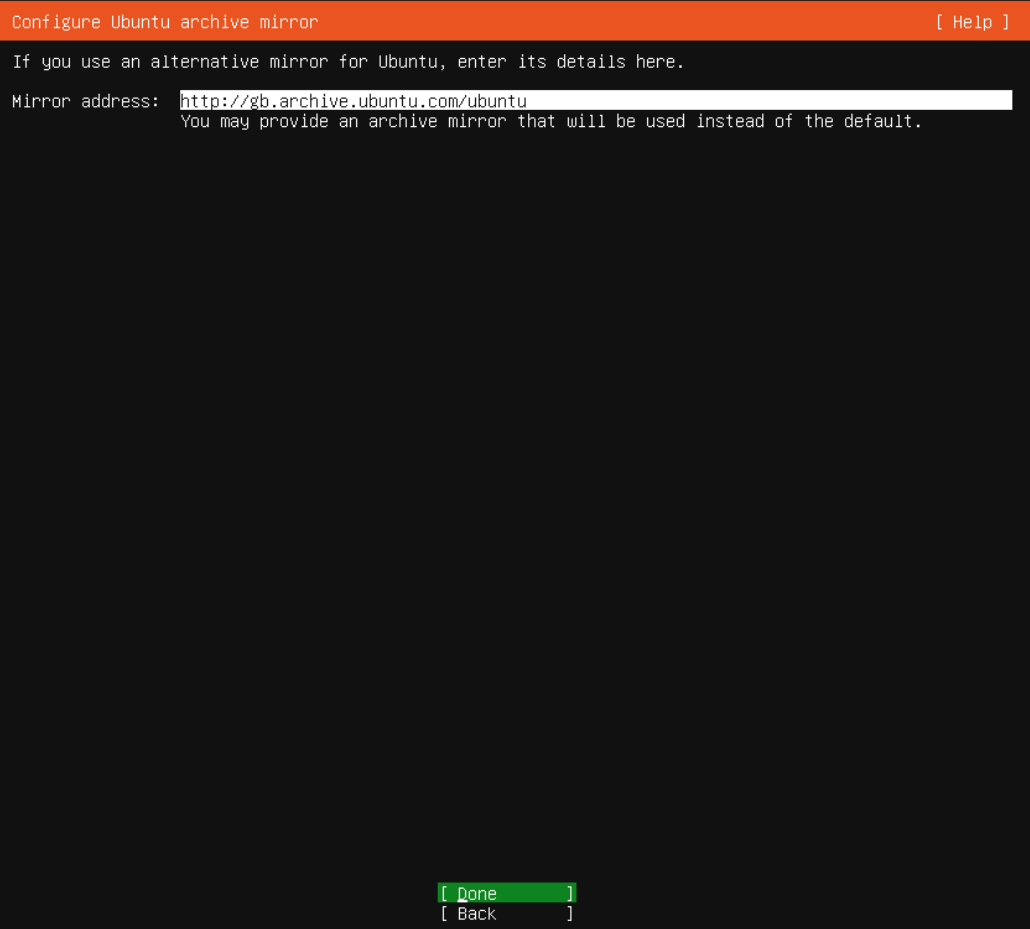
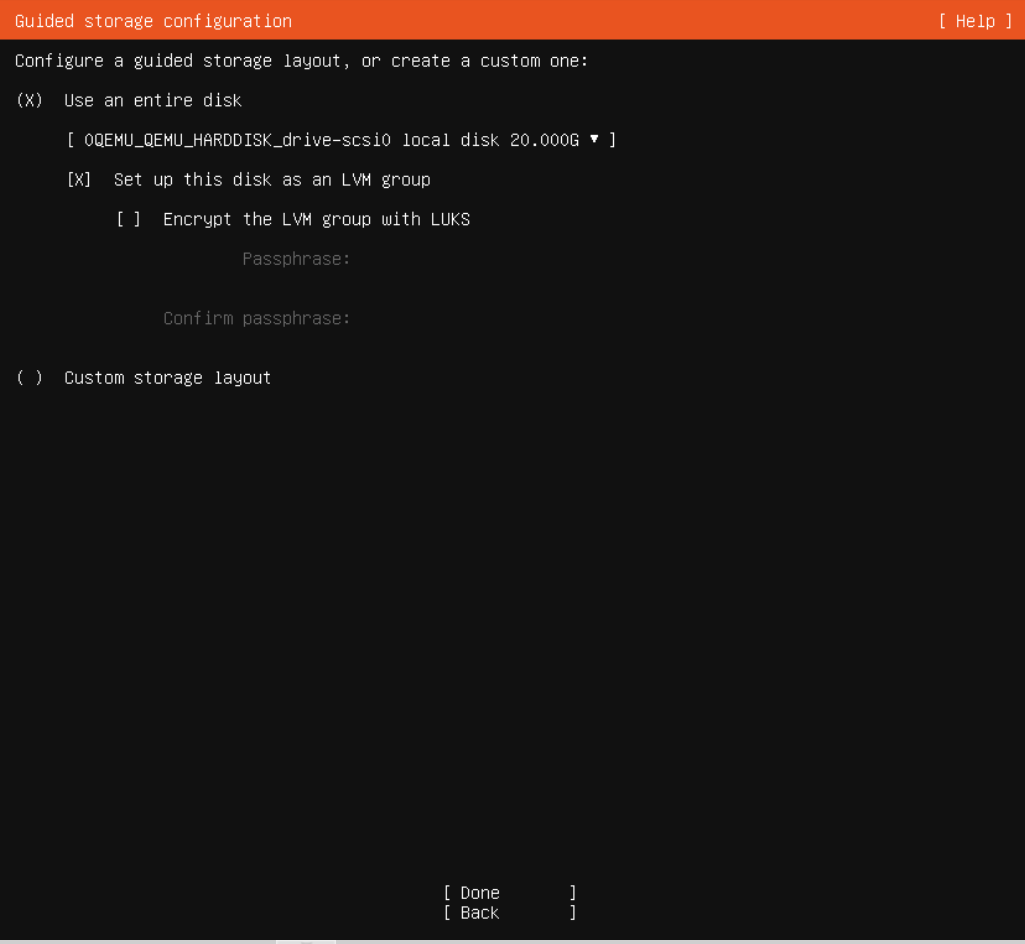
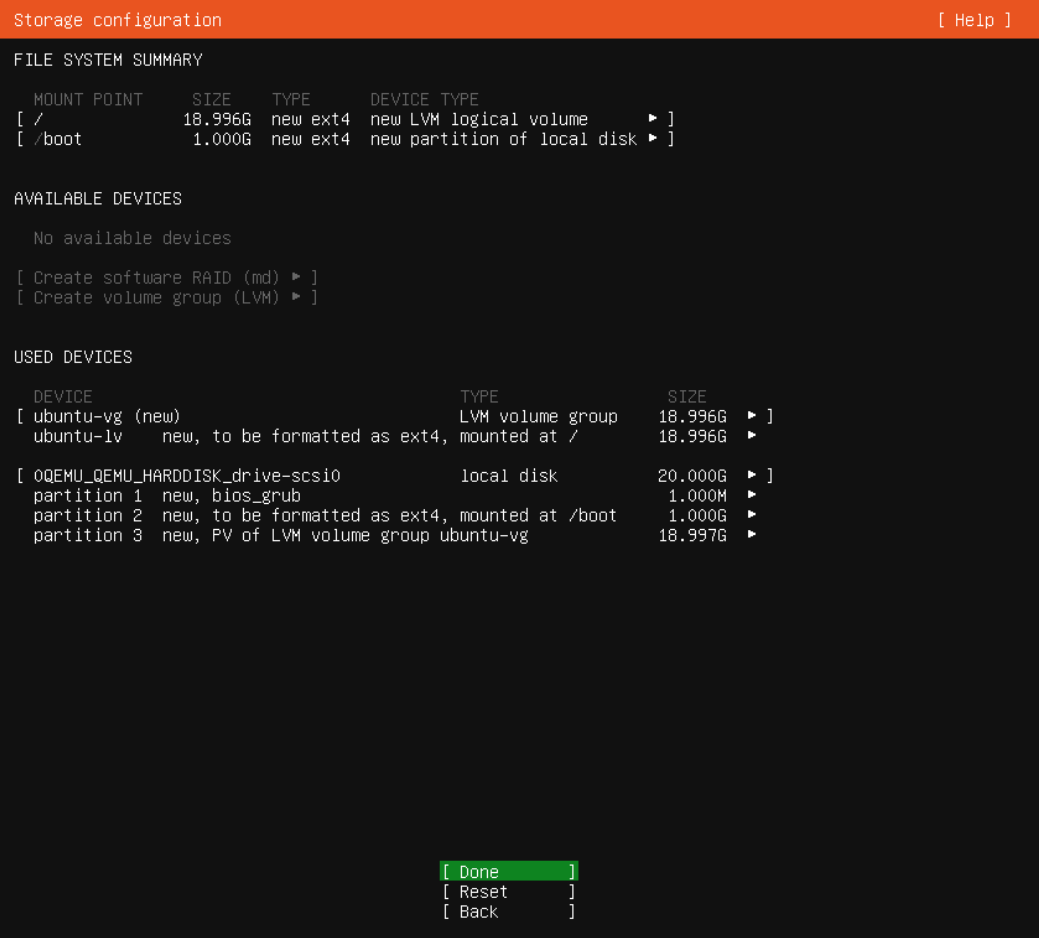
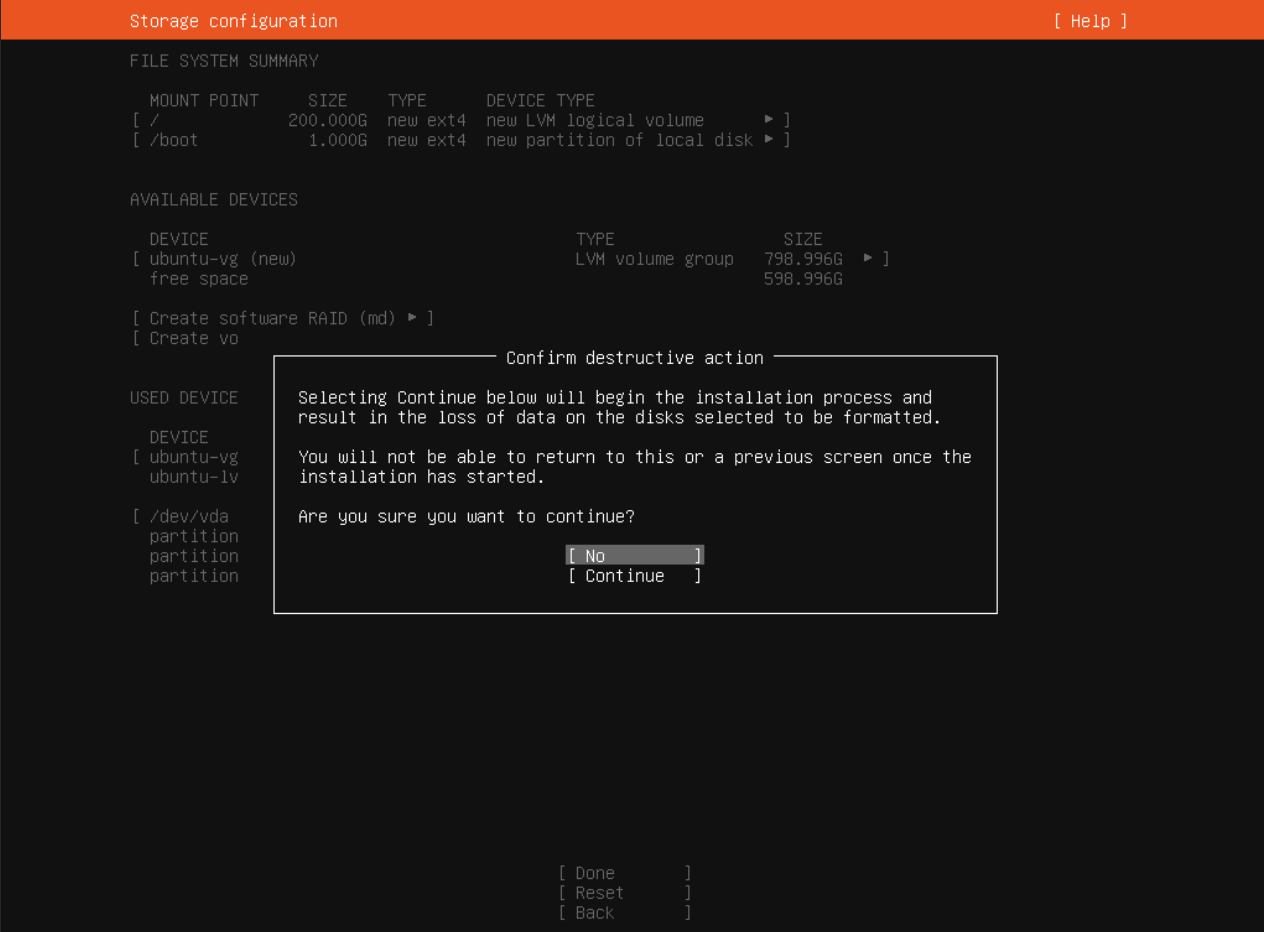
**VM – Full Virtual Machine ( Ubuntu 20.04 LTS )**

1. This example covers a minimal VM for a Kubernetes Server that is part of 3 servers in a cluster.
2. Click “Create VM” and fill in Name, thus (ensure Advanced is ticked):

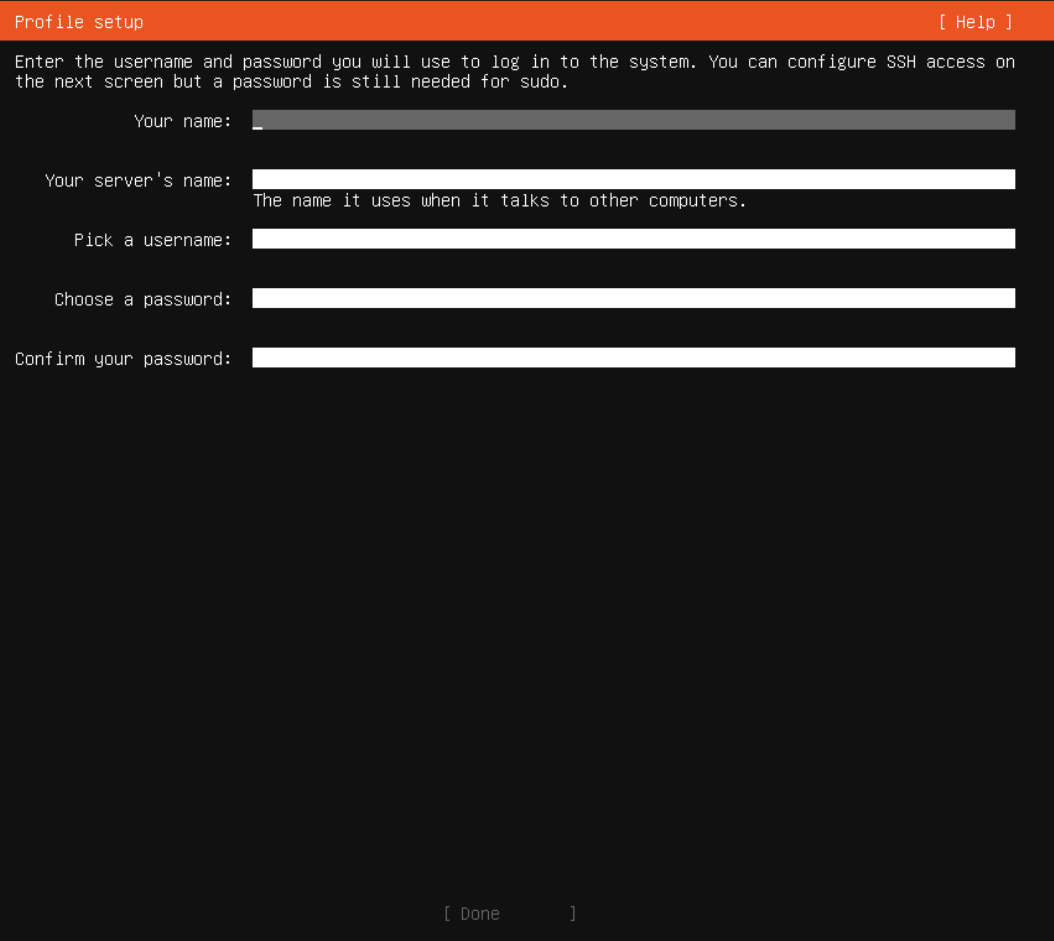
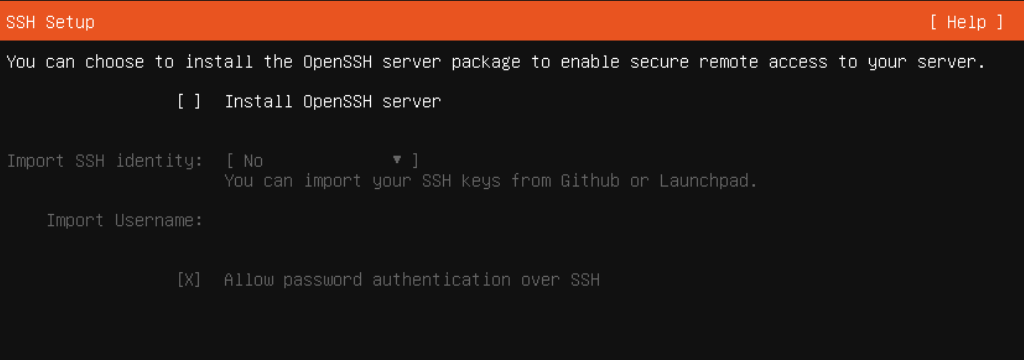
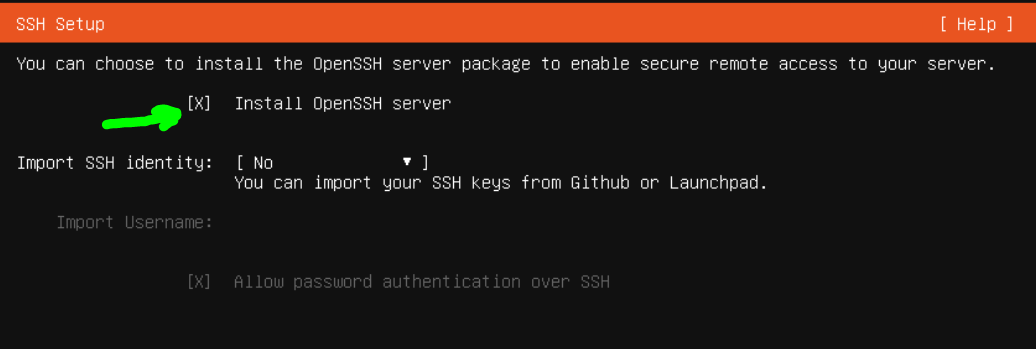
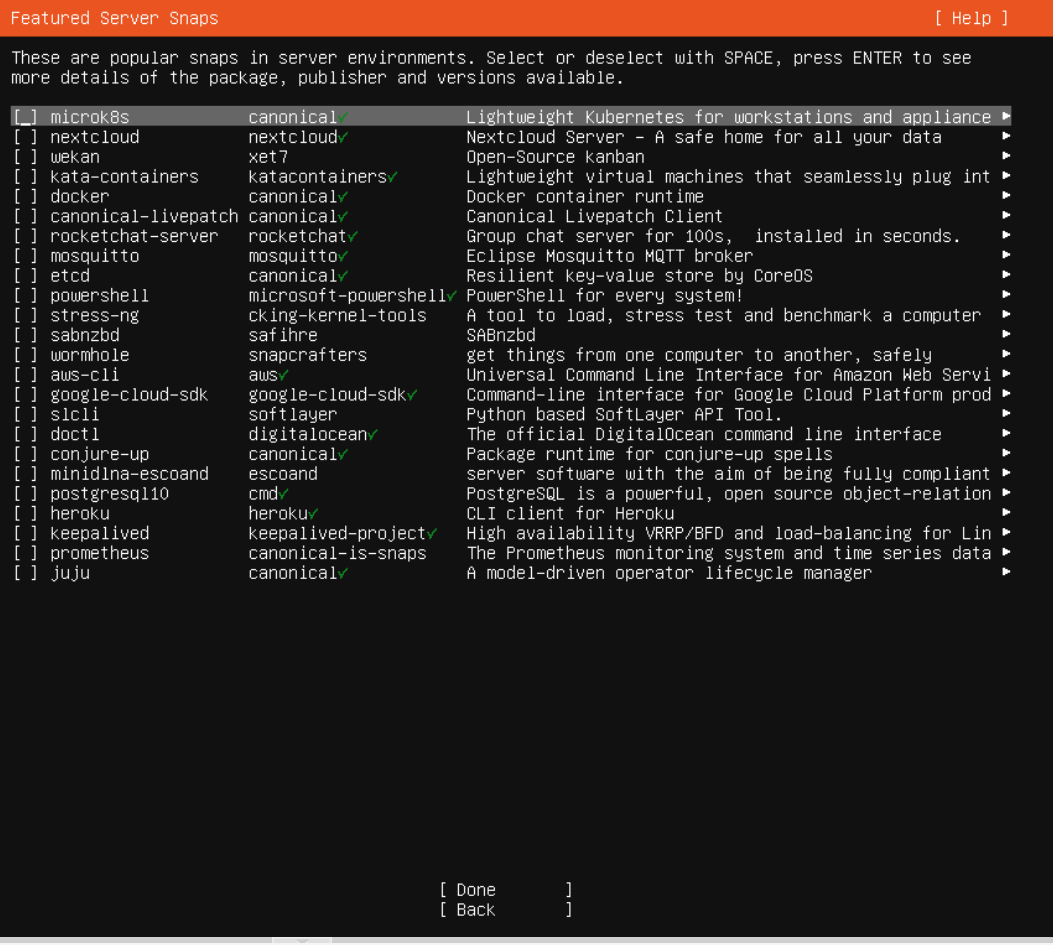
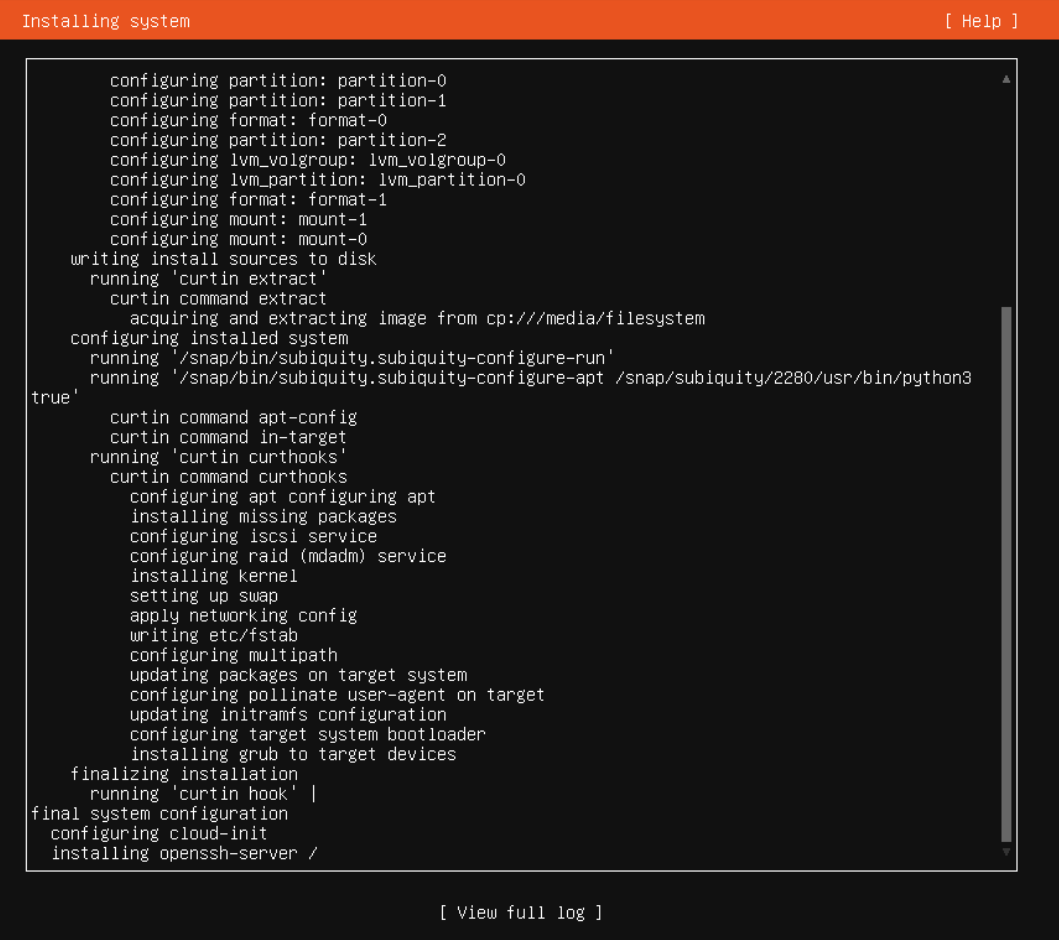
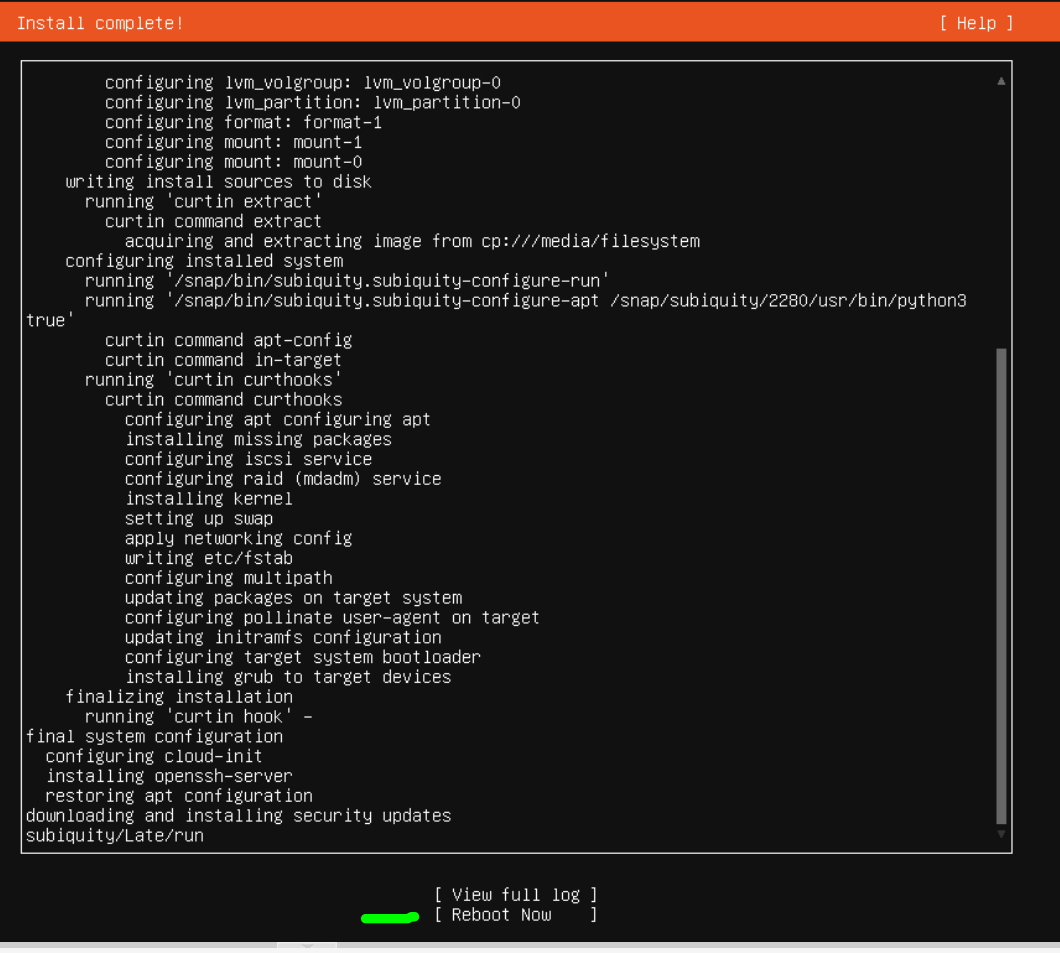
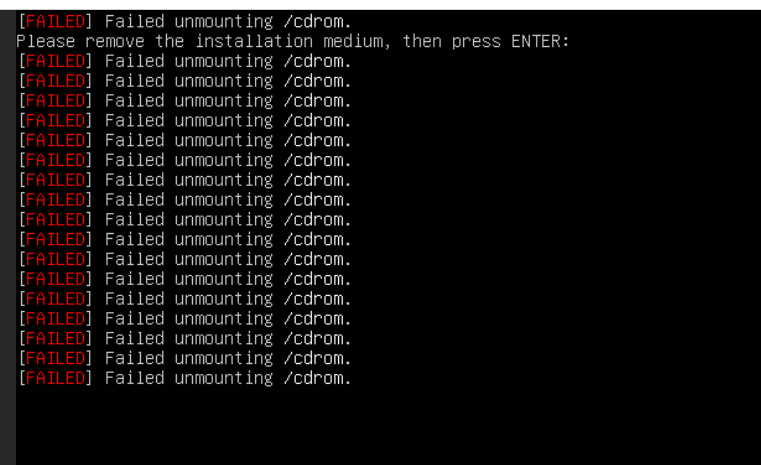
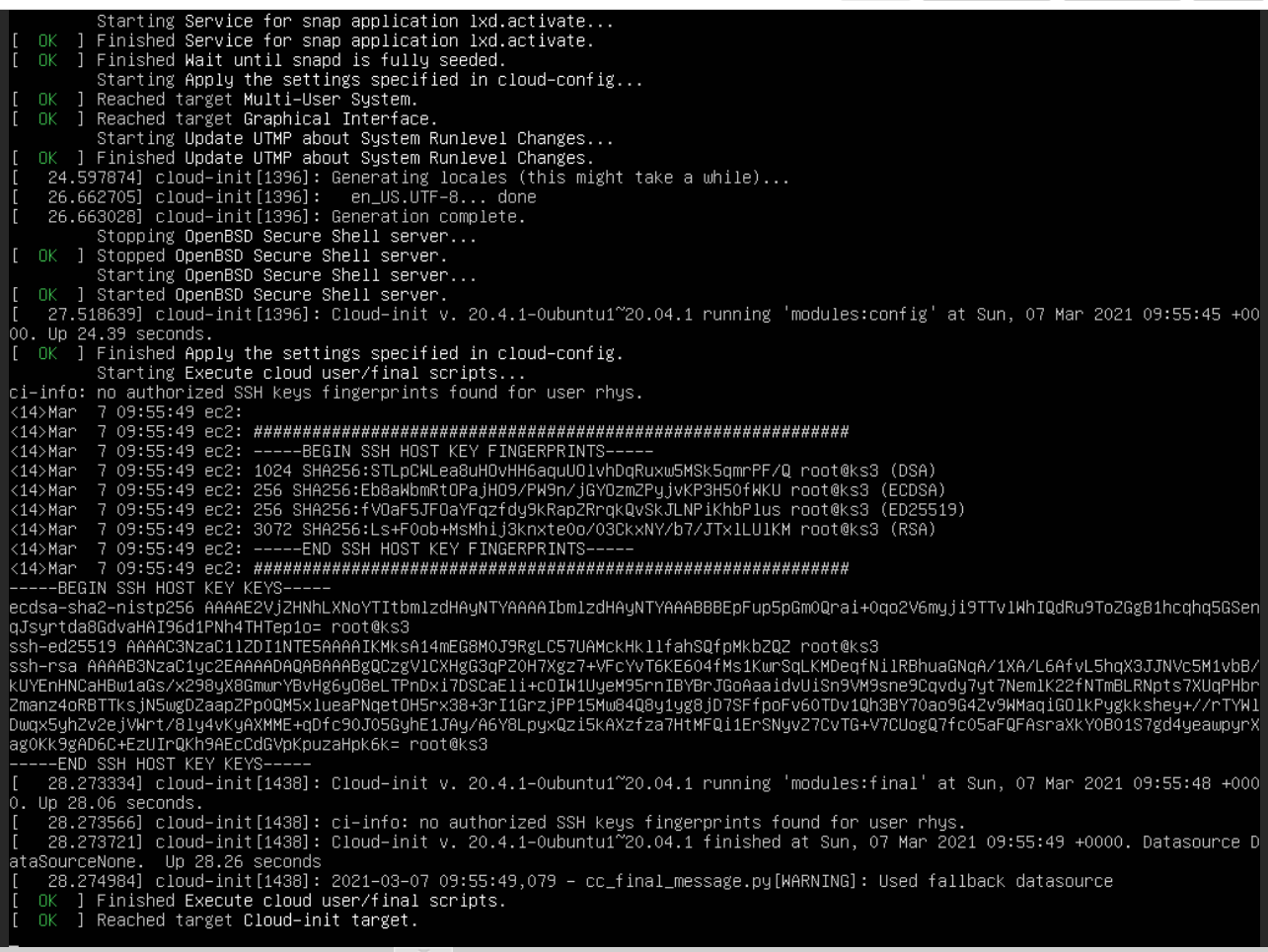
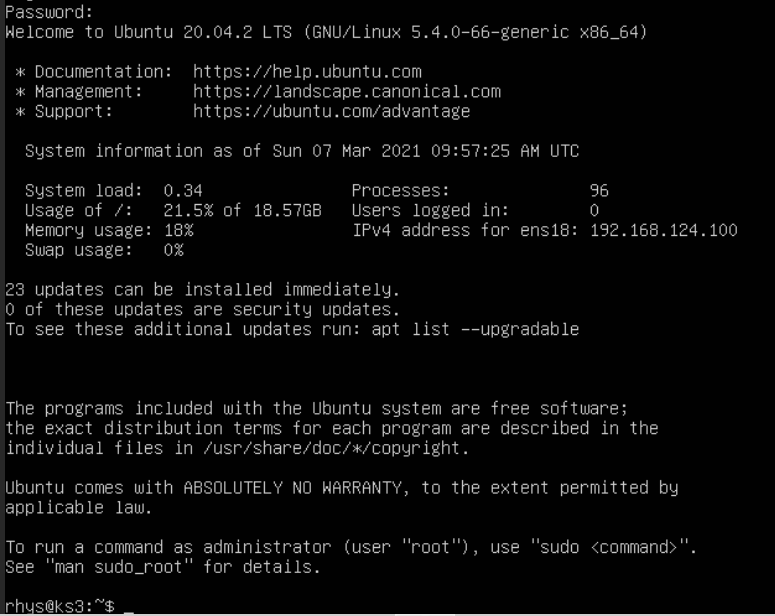


1. Select the ISO image to install from:  
   
2. Leave System as is:  
   
3. Hard Disk, adjust to 20GiB **AND** set storage to be **local-lvm** (Worker VM’s will go in Data1) **AND** set the Bus/Device to **VirtIO** Block (for better Linux performance):  
   
4. CPU, adjust as follows: (update, give the Cores a value of 2) (host allows nested virtualization … if enabled in proxmox … check if its enabled in proxmox at its root shell with:  
   **cat /sys/module/kvm\_intel/parameters/nested**)  
   
5. Memory, adjust as follows:  
   
6. Leave Network as is:  
   
7. And on Confirm, click Finish:  
   
8. Select ks3, click on Start and then click on Console:  
   
9. Ubuntu will start to install … and gets to the first screen:  
   

Select: English UK and press Enter

1. Press ENTER, to get:  
     
   Change Layout to: English (UK)
2. TAB to ‘Done’ and press ENTER, to get:  
   
3. Press ENTER, to get:  
   
4. Press ENTER, to get:  
   
5. Press ENTER to get:  
   
6. Select ‘Done’ and press ENTER, to get:  
   
7. Press ENTER, to get:  
   

On this page you will need to ensure all disk is allocated to the LVM initial disk size selected earlier in proxmox !!!

1. Select ‘Continue’ and press ENTER, to get:  
   
2. Fill in details (in this example set server’s name to: ks3), select ‘Done’ and press ENTER, to get:  
   
3. Ensure Install OpenSSH server is selected, thus:  
   
4. Select ‘Done’ and press ENTER, to get:  
   
5. Don’t select anything, TAB to highlight ‘Done’, press ENTER, to get:  
   
6. The install will now proceed and take ~3 mins, to get:  
   
7. Select ‘Reboot Now’ and press ENTER, to get:  
   
8. Press ENTER, to get a boot where the system does a messy start up that quickly overwrites the prompt for **user** name, thus:  
   
9. Enter **user** name and press ENTER  
   Then enter **password** and press ENTER  
   And you get:  
   
10. The VM stored in the “local-lvm” which is of type LVM-Thin (which does not pre-allocate all of the storage space – it is allocated as needed).
11. Check hostname and hosts:

**cat /etc/hostname**  
to see: ks3

**cat / etc/hosts**  
to see: a number of lines, including: 127.0.1.1 ks3

1. Do updates:  
   **sudo apt update**

**sudo apt upgrade -y**

**sudo apt install net-tools**

1. Do:  
   **sudo usermod –aG sudo <user name>**
2. Log out and back in again for above to take effect.
3. Follow the rest of the instructions below:

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**Changing IP address on Ubuntu 20.04 LTS**

Do:

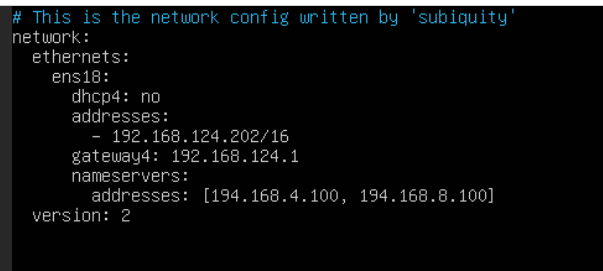
**ip add show**

to determine the ens<??> port for the following:

In terminal as **root**, **cd** into **/etc/netplan** and make a backup of file first, then edit original file:

**00-installer-config.yaml**

And change it to (BUT for ks3, make the address 192.168.124.204/16 ):



Then do (pay attention to any errors and fix them):

**sudo netplan apply**

then do:

**ip add show dev ens18**

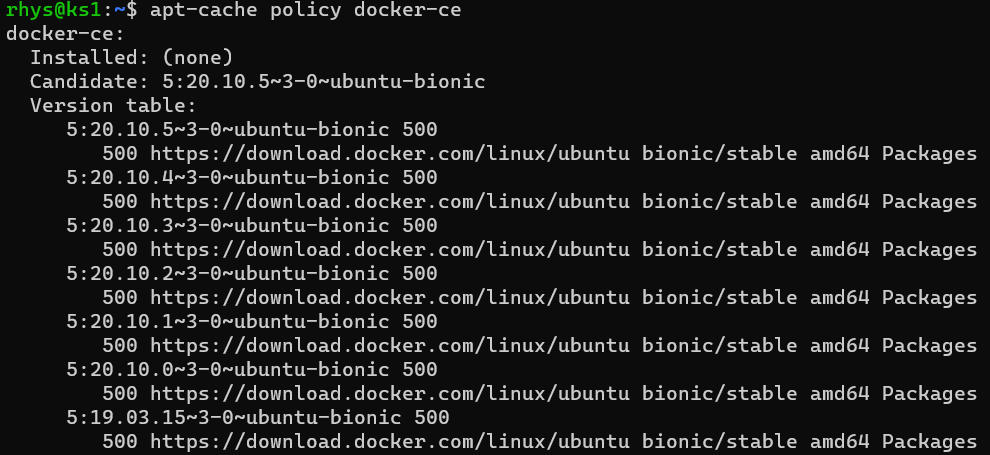
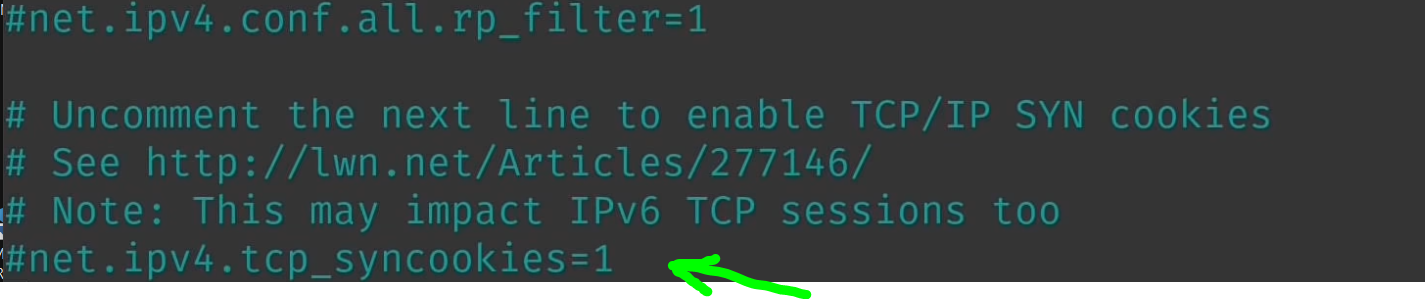
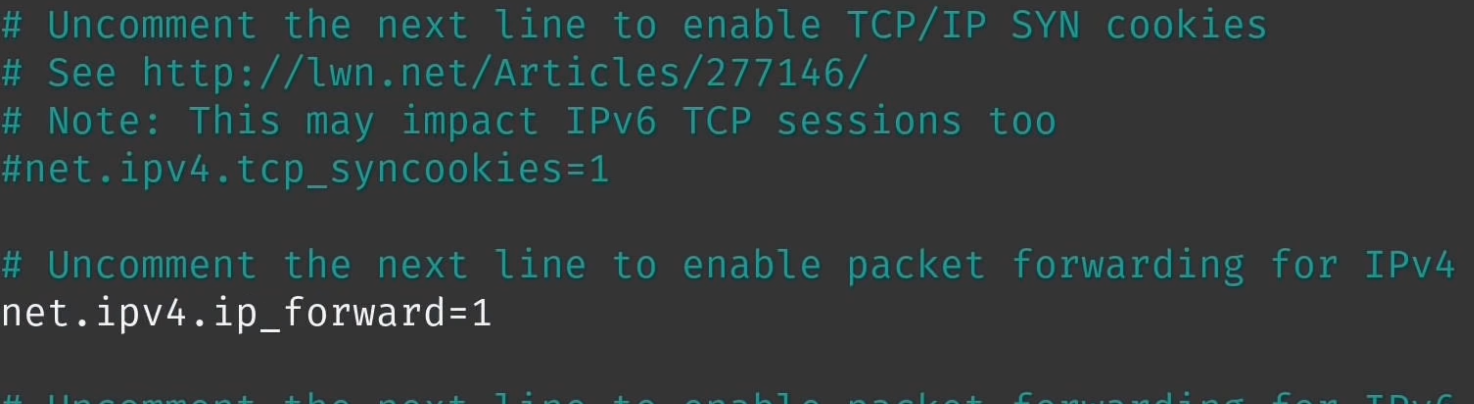
or:

**ip add show**

For more info, see: https://linuxize.com/post/how-to-configure-static-ip-address-on-ubuntu-18-04/

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**Docker in VM**

1. To install Docker into the VM, follow Step 1 & 2 at <https://www.digitalocean.com/community/tutorials/how-to-install-and-use-docker-on-ubuntu-18-04>  
   And when you get to the stage of running command:  
   **apt-cache policy docker-ce**  
   it produces something like:  
   
2. Now edit file (to enable IPv4 packet forwarding for kubernetes):  
   sudo nano /etc/sysctl.conf  
   and look for line:  
     
   and uncomment line to be:  
     
   and then reboot for changes to take effect.
3. To check Docker is running:  
   systemctl status docker
4. To test Docker:

docker run hello-world

1. That completes the creation and initial setup of the VM.