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Roll No: 20P-0165

Section: BCS-6A

Subject: Parallel Distributed Computing

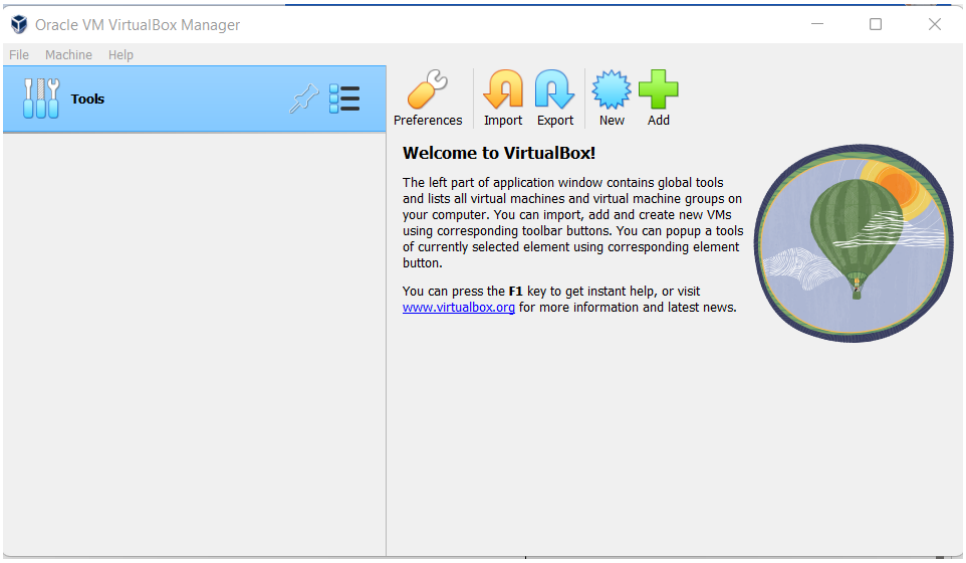
Assignment: Create a Manual for Create Local Next Cloud Server

Q: - Create a Local Next Cloud Server Step by Step.

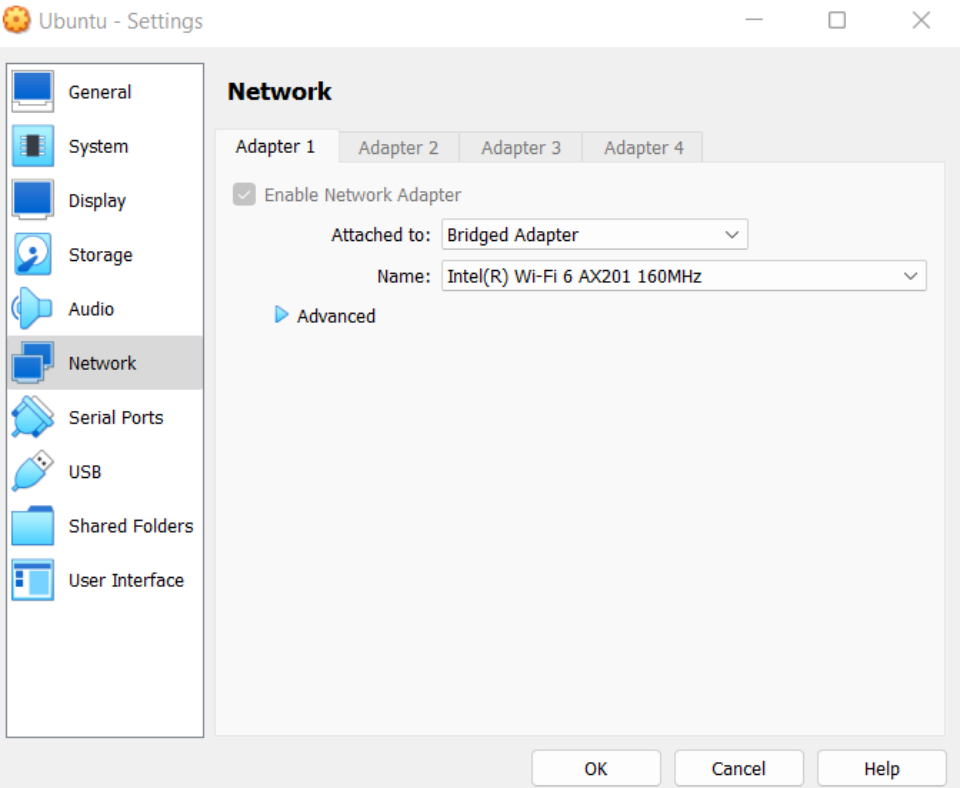
Step 1(Download Ubuntu 18.04):

Next Cloud requires a server running linux. Download Ubuntu 18.04.

Step 2 (Install Virtual Box and Create a VM):

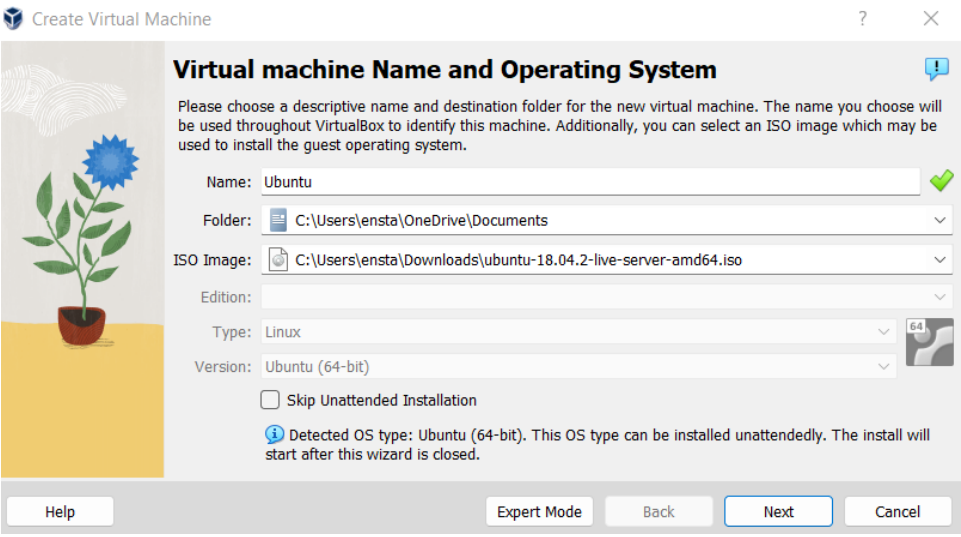


Here click on setting and click on Network and then select the network type ‘Bridge Adaptor’. This is a really important step.



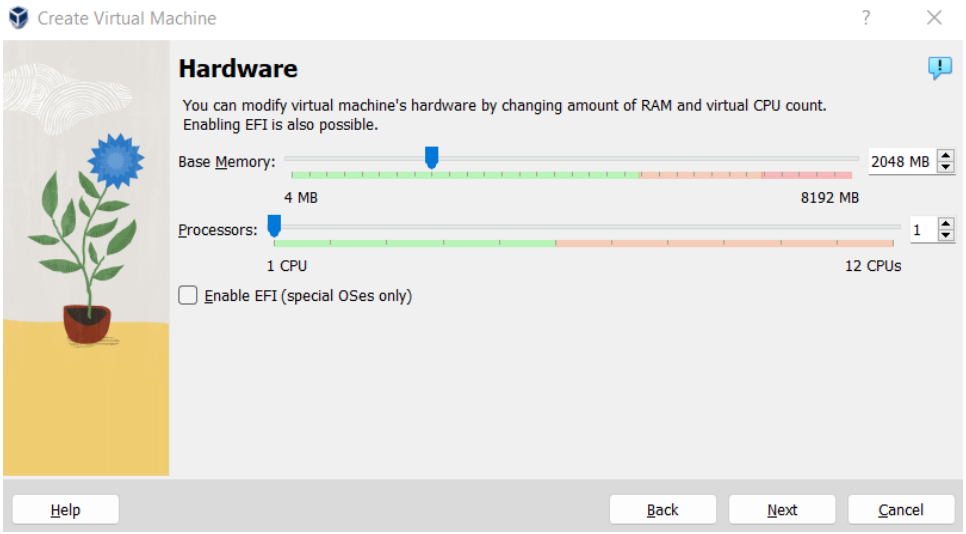
Now select ‘New’ Option and start creating virtual machine.

Step 3 (Name the VM):

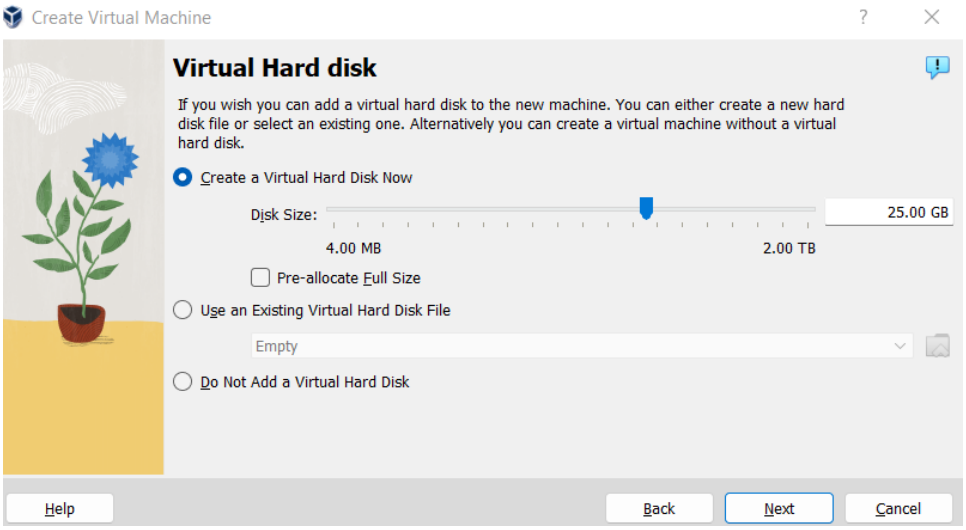


Step 4(Set username and password):

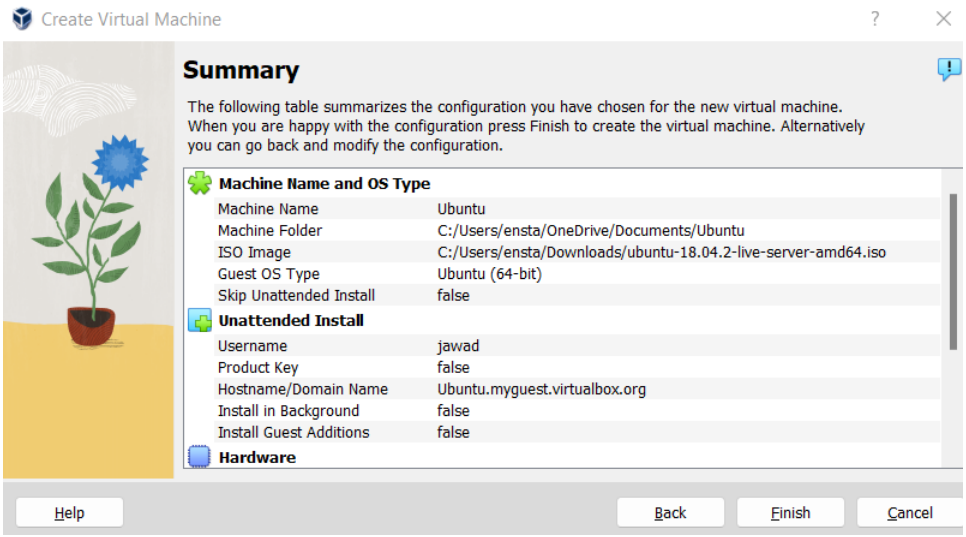
Step5: Select Base Memory and Number of processors.



Step 6: Select the option 'Create Virtual Hard Disk Now'.

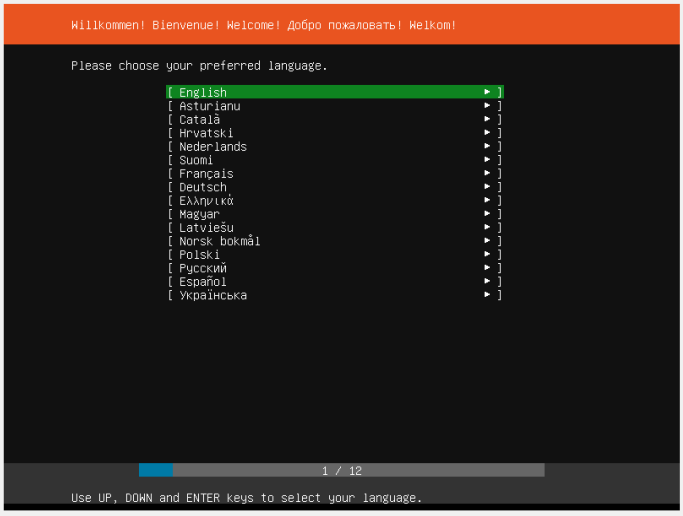


Step 7: Verify All details and then click on finish.

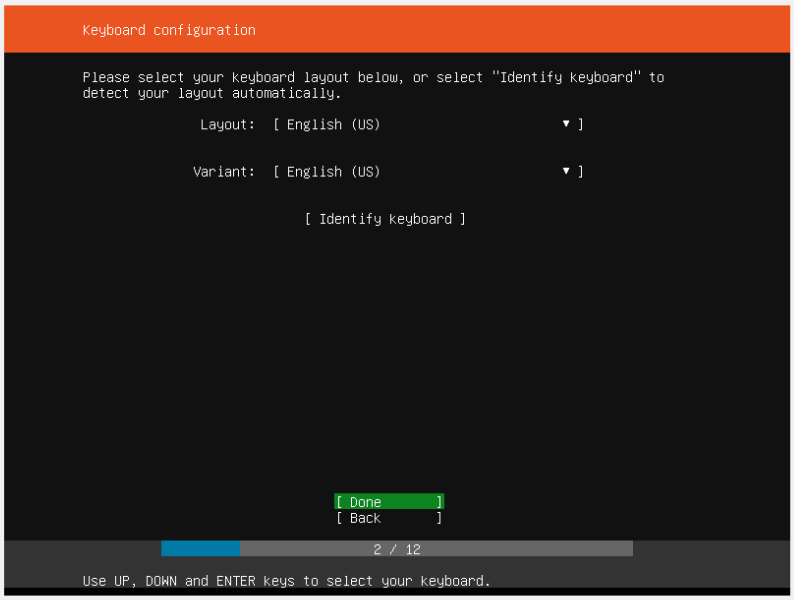


The virtual machine is powering up. It takes some time and this interface will be shown to you.

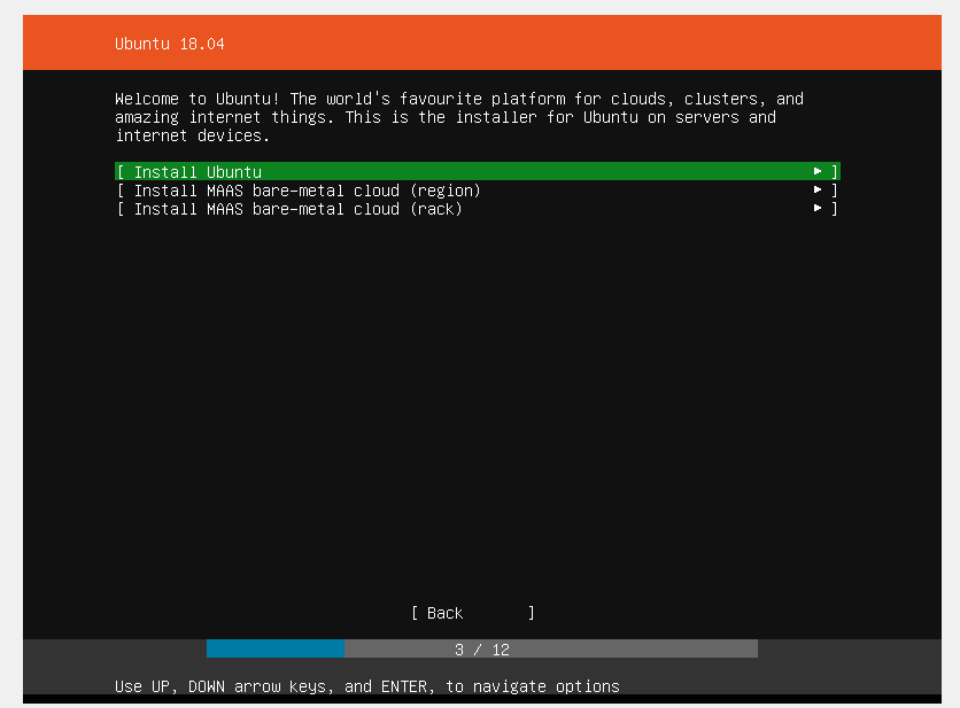
Step8: Select ‘English’.



Step 9: Select the Keyboard Layout then click on Done.



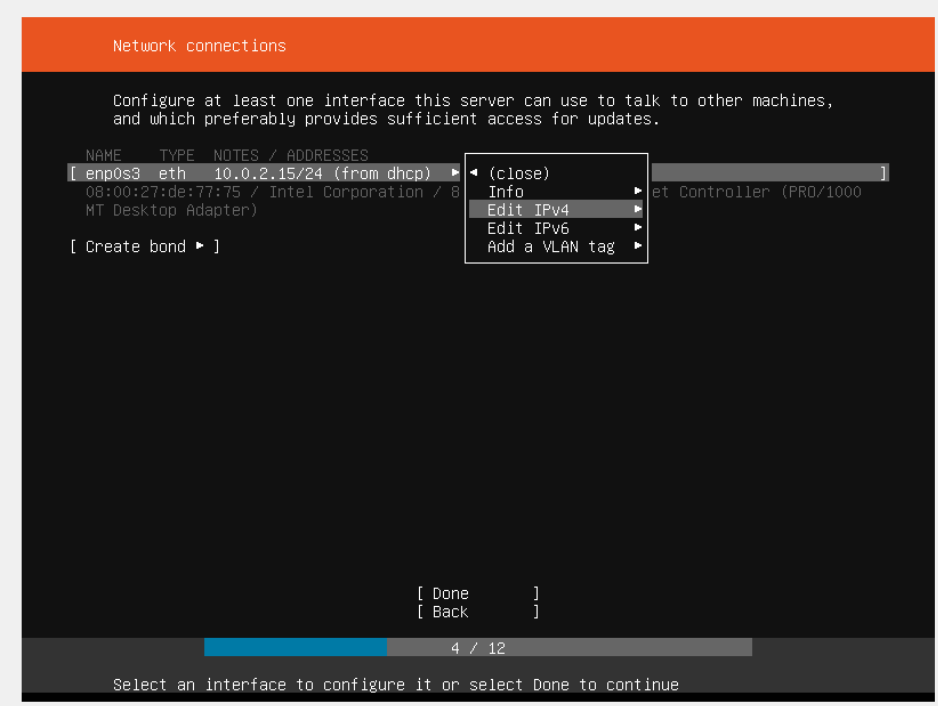
Step 10: The select option ‘Install Ubuntu’.



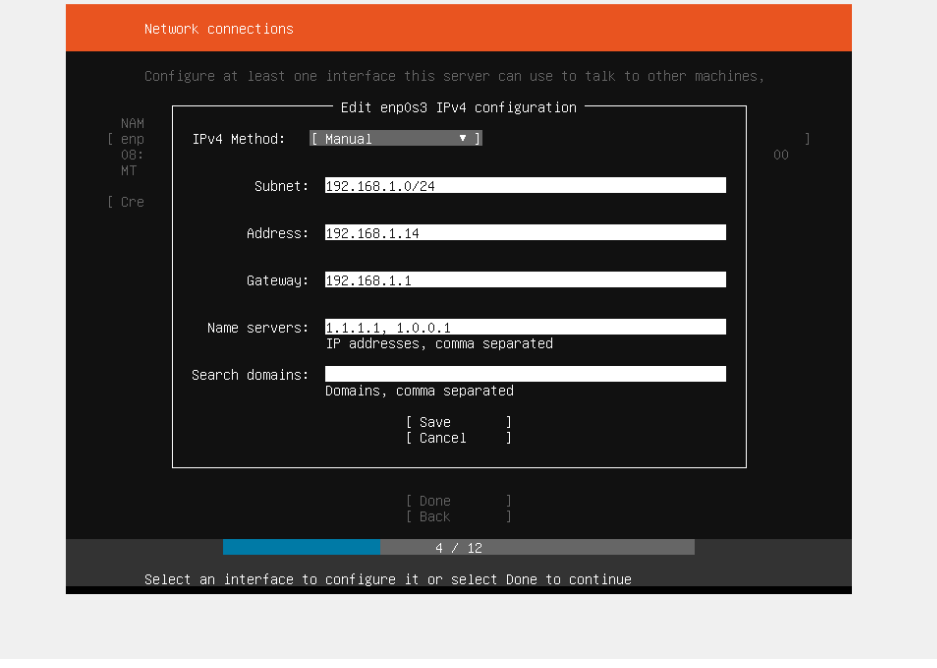
Step 11: Now this option is important. It is said that I set up the IP using DHCP. That is easy but it is preferred to set IP statically. So go for manual configuration of IP. Now what IP you are going to provide. Go to the windows terminal and type command ‘ipconfig’ there you will find all the details like IP address, subnet maks, default gateway. Provide the IP address of same network that you got from ‘ipconfig’ command.

```
Wireless LAN adapter WiFi:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::8226:3367:5bb6:e6e0%19
   IPv4 Address. . . . . . . . . . . : 192.168.1.13
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : fe80::aa63:7dff:fe7c:7203%19
                                       192.168.1.1

PS C:\Users\ensta>
```

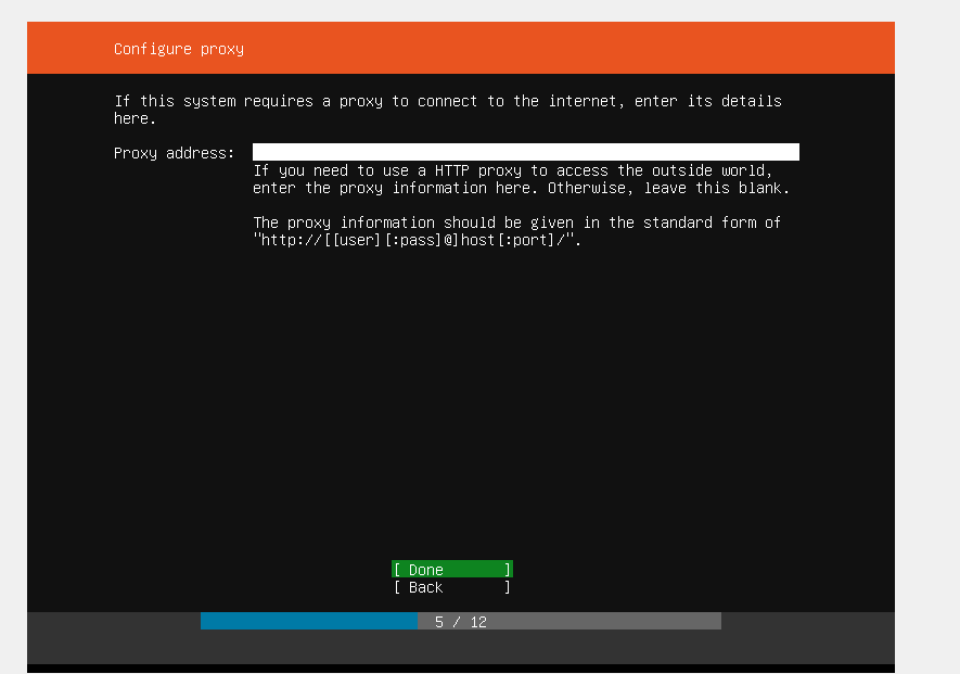
Step 11: Select option ‘Edit IPV4’.



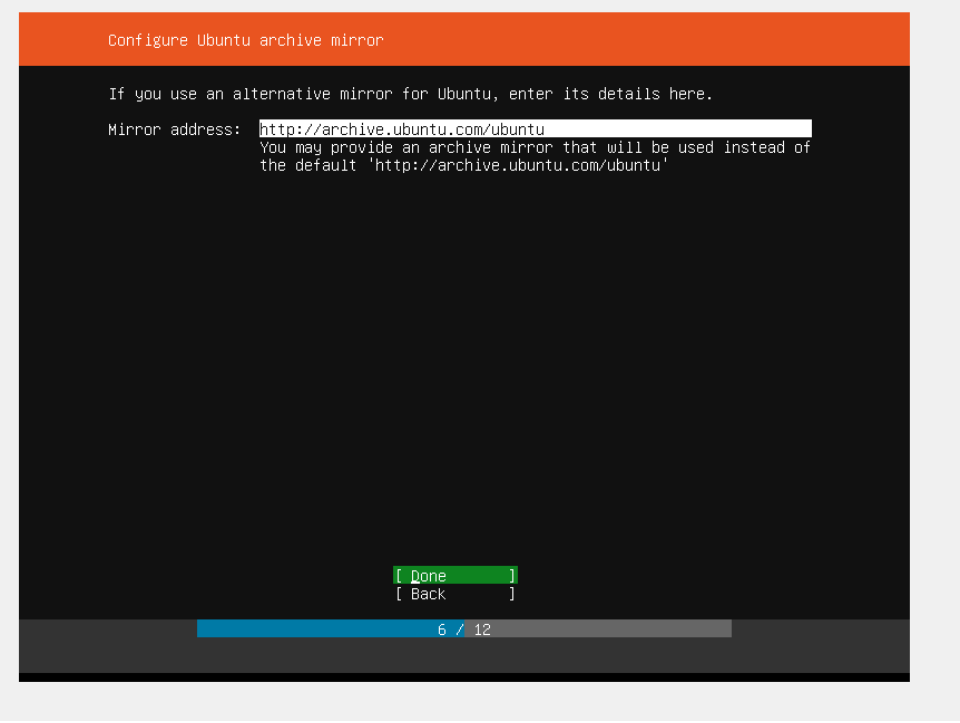
Step 12: Set the IP address, subnet mask, default gateway, nameservers and then click on Save.



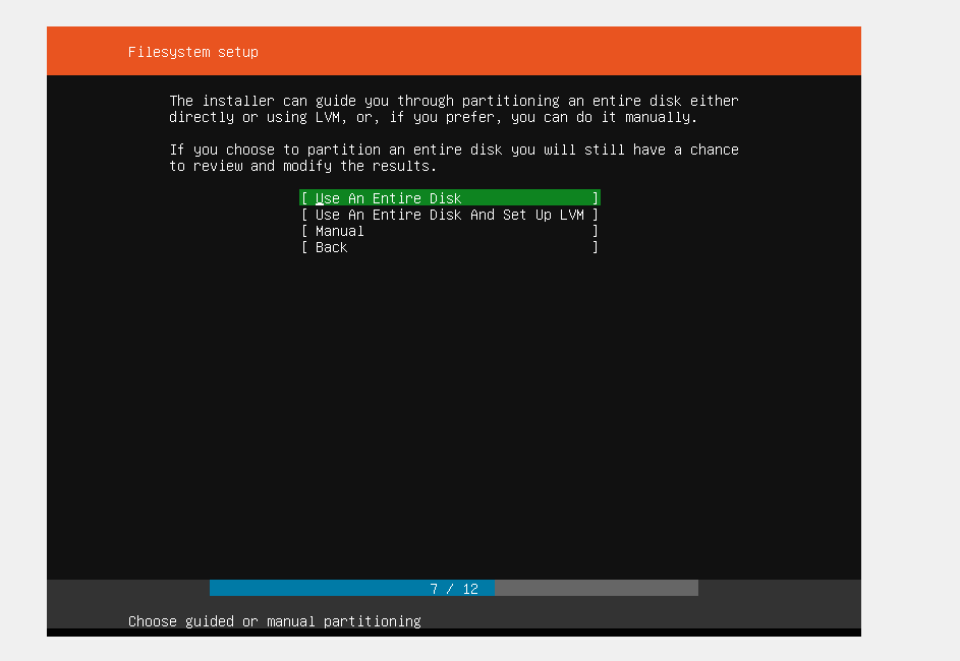
Step 13: Click on ‘Done’.



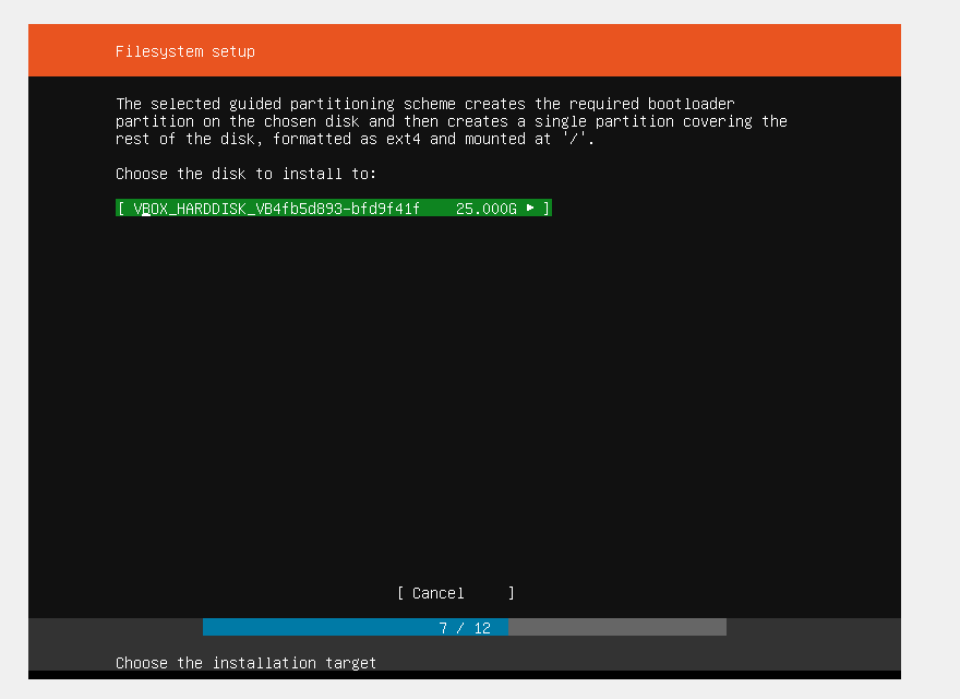
Step 14: Again, go with default option and click on Done.



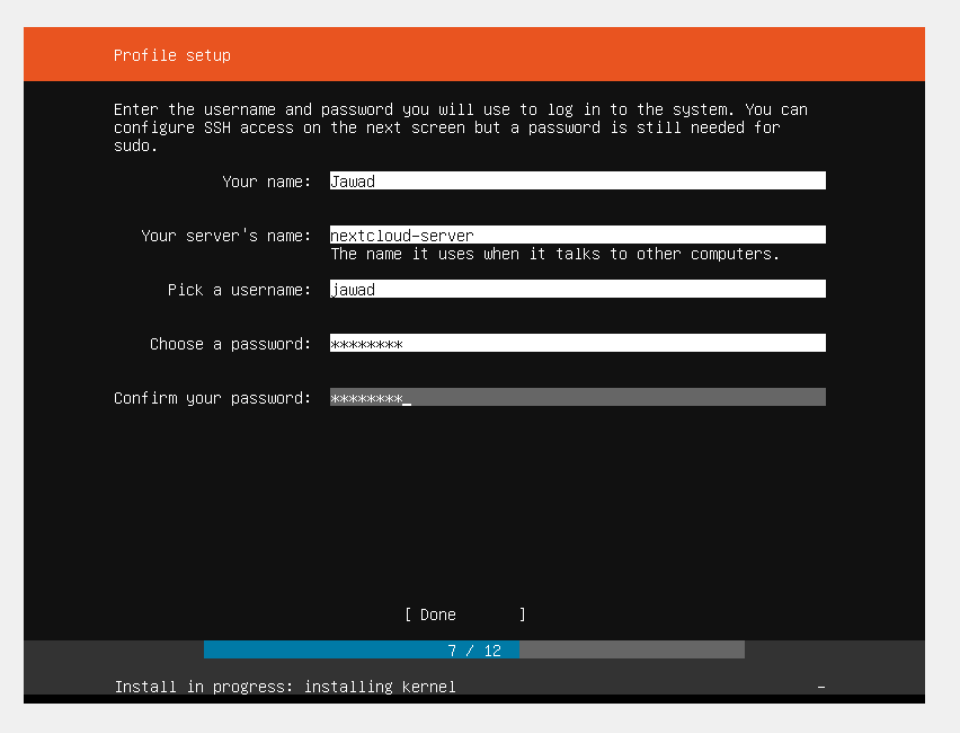
Step 15: Select Option ‘Use an Entire Disk’ and then proceed next.



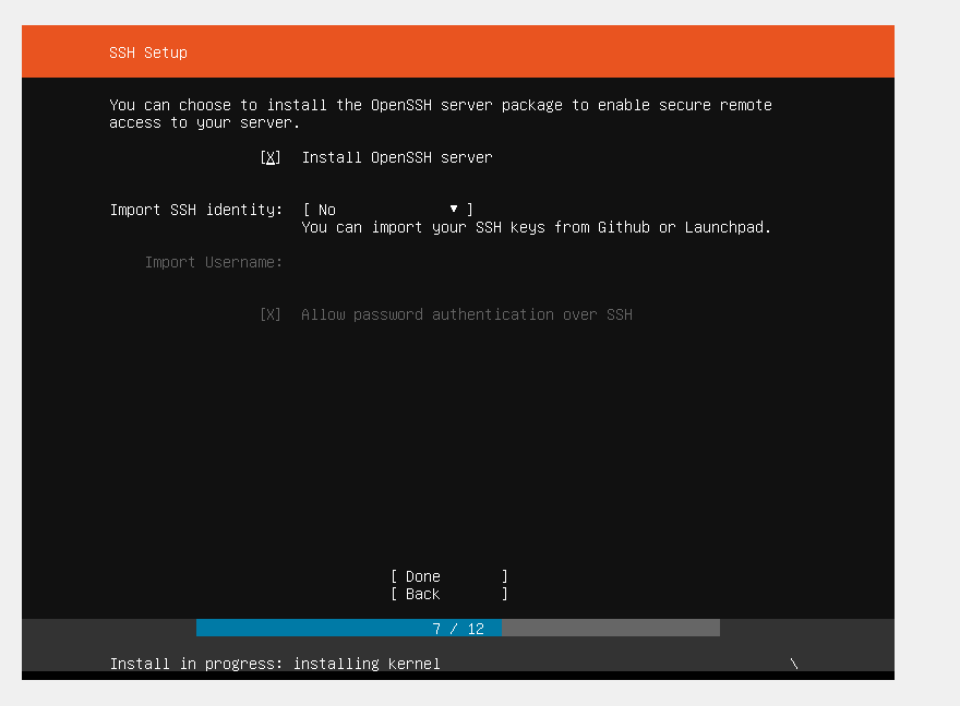
Step 16: Select the Disk in which you want to install.



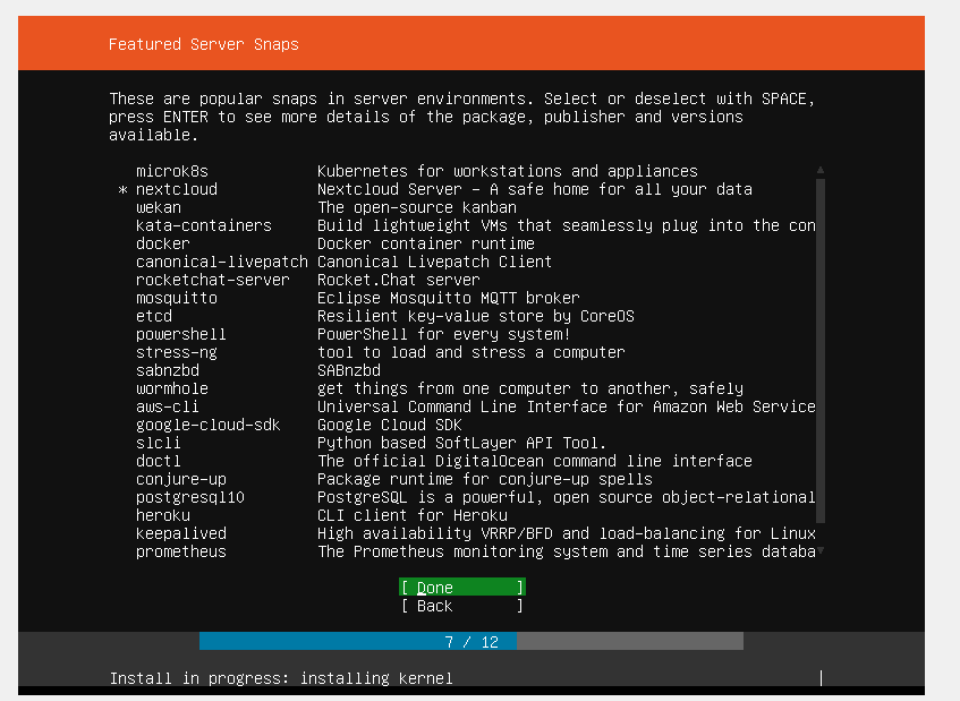
Step 18: Now **'Profile Setup'** Select the username and password. This username and password will be used to login to ubuntu. So, remember it.



Step 19: Then proceed next. Now Select the Open SSH option and then proceed next.

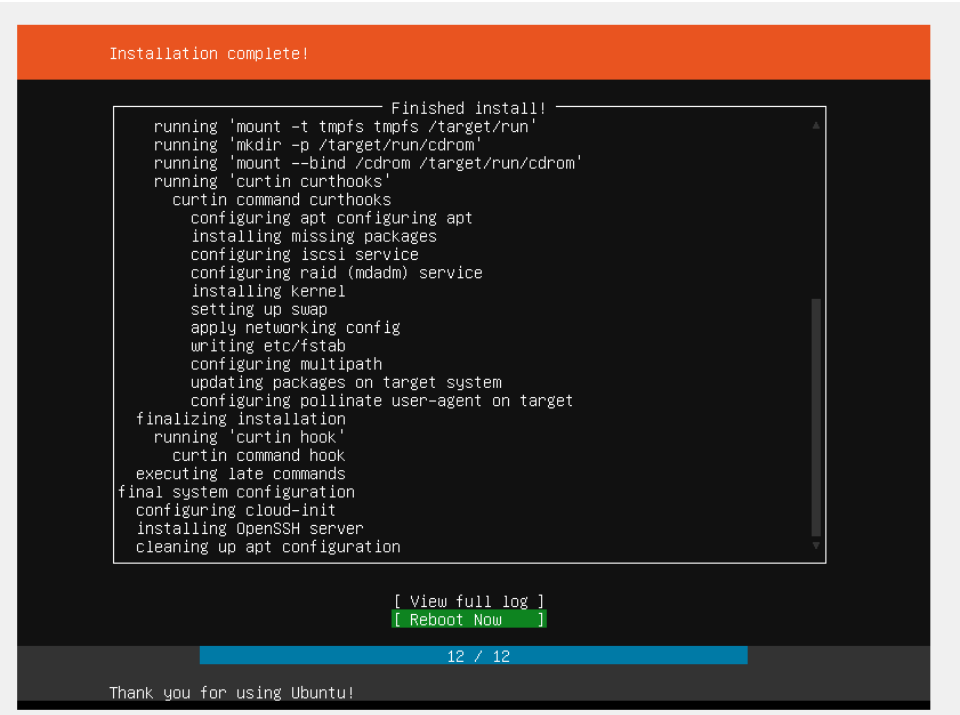


Step 20: In next option select ‘nextcloud’ by pressing space bar and then proceed next.

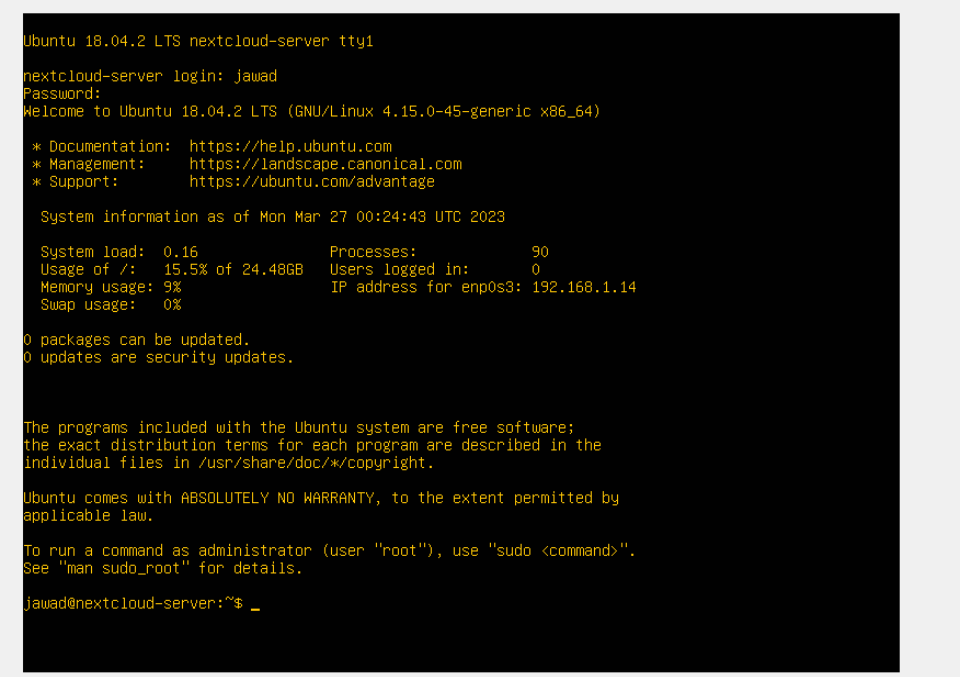


Step 21: Now the installation has started it will take some time to complete the installation.

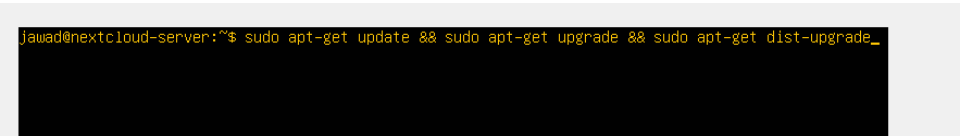
Now **click** on ‘Reboot now’ option.



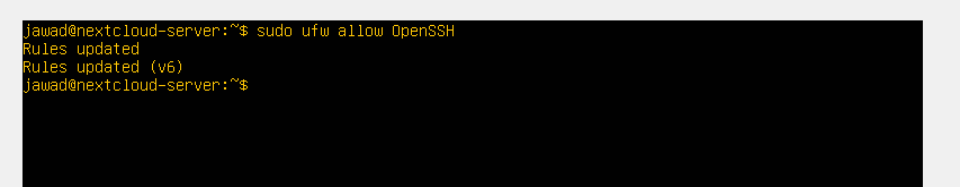
Step 22: Once rebooted successfully provide username and password to login into your ubuntu machine.



Step 23: Perform an initial system update. Run sudo apt-get update && sudo apt-get upgrade && sudo apt-get dist-upgrade. Enter your password when prompted. If you're asked to confirm an upgrade, type y, and press Enter



Step 24: Add a firewall rule to allow OpenSSH connections. Run sudo ufw allow OpenSSH.



Step 25: Run sudo ufw enable to enable the firewall.

```
Rules updated (v6)
jawad@nextcloud-server:~$ sudo ufw enable
Firewall is active and enabled on system startup
jawad@nextcloud-server:~$ _
```

Step 26: Run sudo ufw status to verify that the firewall is filtering the server's network traffic

```
jawad@nextcloud-server:~$ sudo ufw status
Status: active

To                         Action      From
--                         ------      ----
OpenSSH                    ALLOW       Anywhere
OpenSSH (v6)               ALLOW       Anywhere (v6)

jawad@nextcloud-server:~$
```

Step 27: Start the next cloud server. Type the command

=> sudo nextcloud.manual-install user pass

At user type the username and pass type the password. These username and password will be used to login to the next cloud server.

I ran to an issue that says “nextcloud.manual-install” not found. If same issue arises at your side follow these steps othewise skip these commands.

1 => sudo snap install nextcloud

Add the Snap binary directory to your system’s PATH environment variable.

1. Open the .bashrc file

=> nano ~/.bashrc

2. Add the following line at the end of file

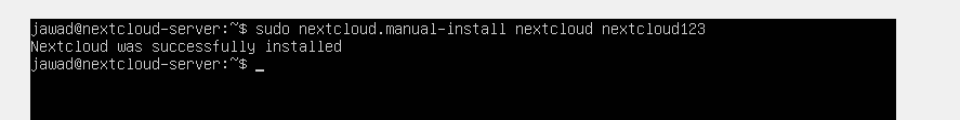
=> export PATH=$PATH:/snap/bin

3. Save and close

4. Reload the .bashrc file

=> source ~/.bashrc

Now the run the **sudo nextcloud.manual-install user pass** command again and you see command run without any error.

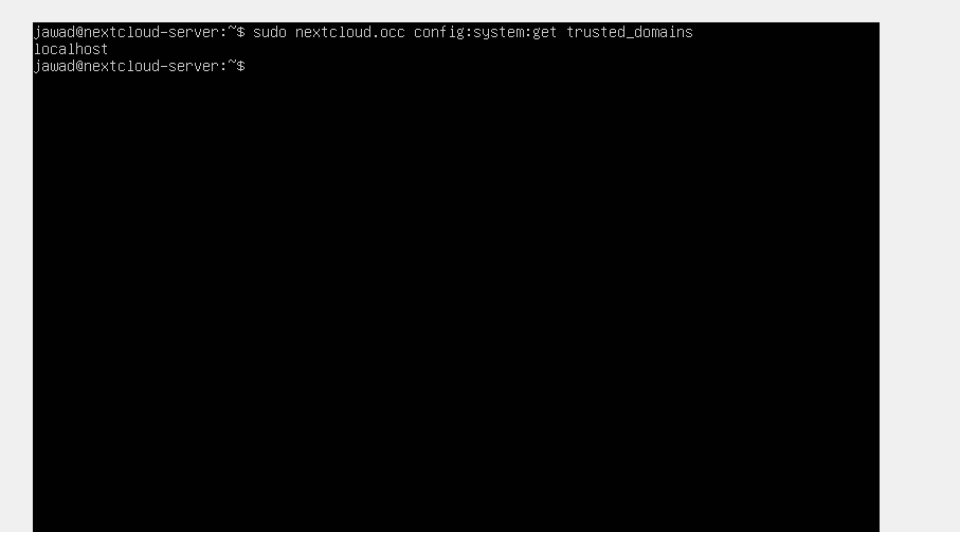


Step 28: Next, open ports 80 (HTTP) and 443 (HTTPS) in your firewall. Run sudo ufw allow 80,443/tcp.

=> sudo ufw allow 80,443/tcp

Step 29: View the Trusted Domains

=> sudo nextcloud.occ config:system:get trusted_domains



Step 30: Add your server IP address to trusted domains list.

We have setted the IP address statically. IP address is **192.168.1.14.** You can cross verify. Run this command to view the IP address.

=> ip a | grep inet

```
jawad@nextcloud-server:~$ ip a | grep inet
    inet 127.0.0.1/8 scope host lo
    inet6 ::1/128 scope host
    inet 192.168.1.14/24 brd 192.168.1.255 scope global enp0s3
    inet6 fe80::a00:27ff:fe3c:b1de/64 scope link
jawad@nextcloud-server:~$
```

=> sudo nextcloud.occ config:system:set trusted_domains 1 –value=YOUR_IP_ADDRESS

```
jawad@nextcloud-server:~$ sudo nextcloud.occ config:system:set trusted_domains 1 --value=192.168.1.1
4
System config value trusted_domains => 1 set to string 192.168.1.14
jawad@nextcloud-server:~$ sudo nextcloud.occ config:system:get trusted_domains
localhost
192.168.1.14
jawad@nextcloud-server:~$
```

Step 31: Create an SSL certificate so that Nextcloud can encrypt your data over HTTPS.

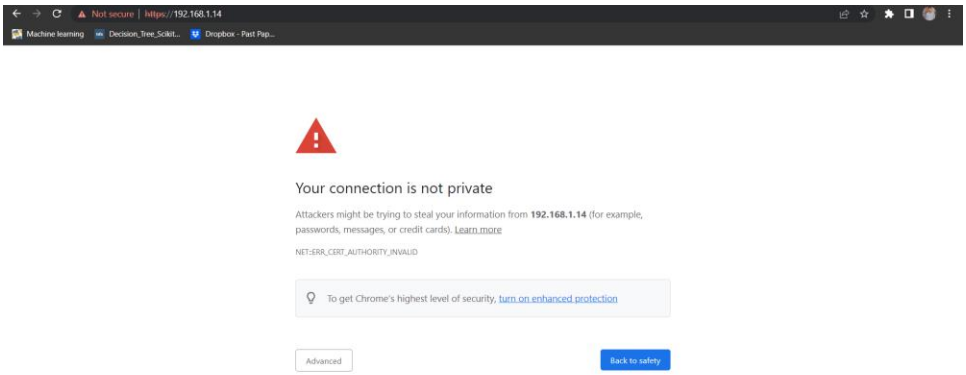
=> sudo nextcloud.enable-https self-signed

```
jawad@nextcloud-server:~$ sudo nextcloud.enable-https self-signed
Generating key and self-signed certificate... done
Restarting apache... done
jawad@nextcloud-server:~$ _
```

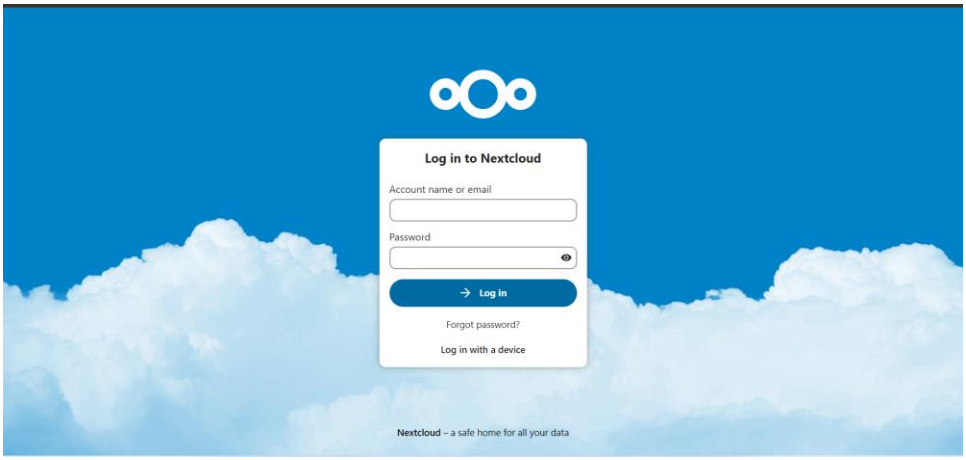
Server configuration is complete, and your cloud is operational. The Nextcloud service is running, and your server is listening on your local network for HTTP and HTTPS connection requests.

Login Into Next Cloud:

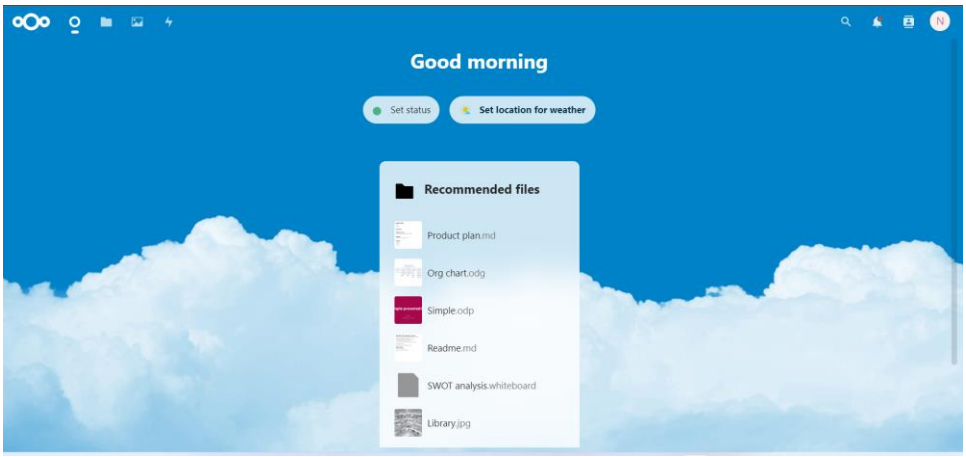
Open the web browser and type the IP address of the server.



Click on Advanced and then click on proceed to 192.168.1.14 unsafe. This interface will be shown to you. Login into the next cloud with the username and password you configured when creating nextcloud server.



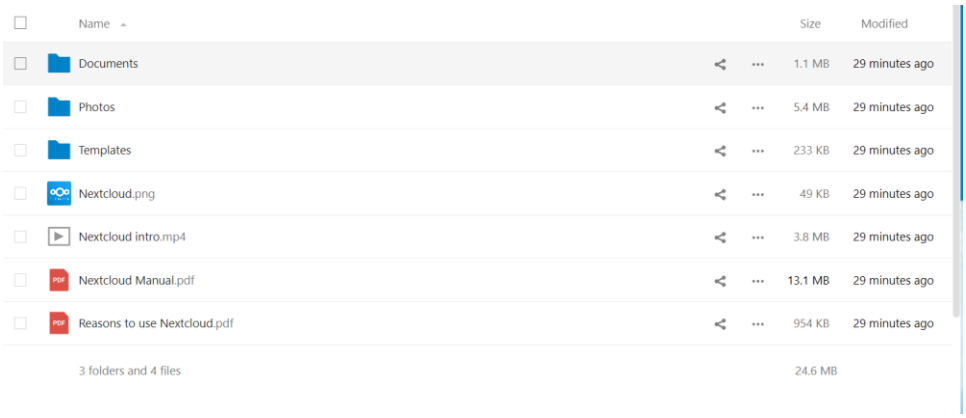
This dashboard will be shown to you.



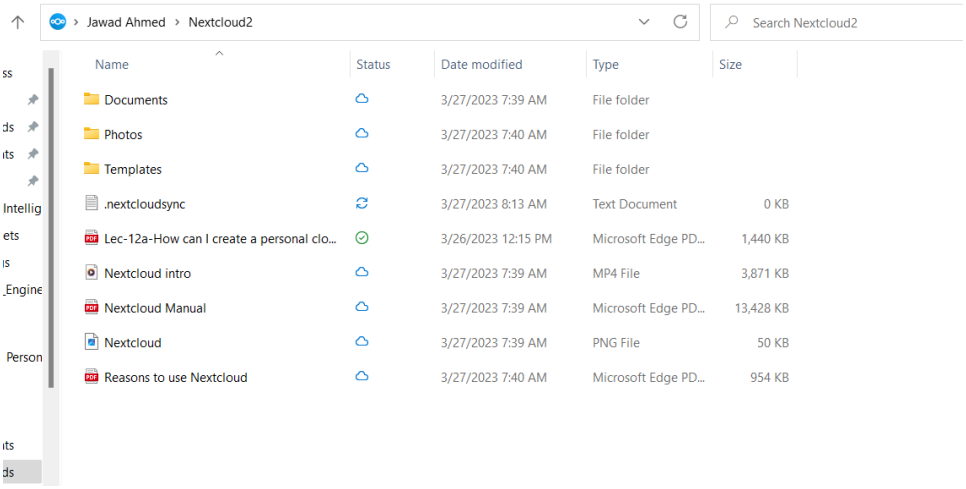
You can also login to the next Cloud app. Download the nextcloud app on your mobile and desktop and any file you upload on your phone will be shown here also.

Demo of Uploading a file from next cloud app and shown on Browser:

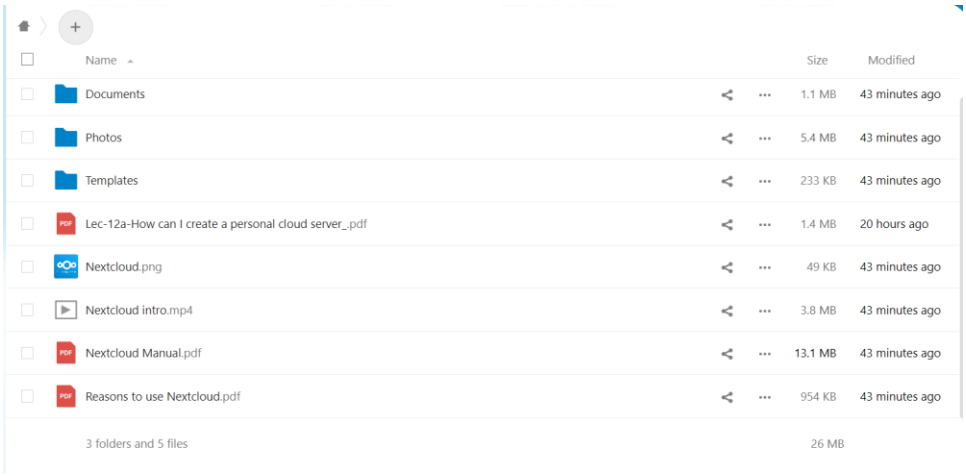
These are the file at the moment. Now uploading another pdf file in next cloud using next cloud app.



Uploaded a Lec 12 manual using next cloud app.



That file is also shown on browser.


Name
Size
Modified
Documents
1.1 MB
43 minutes ago
Photos
5.4 MB
43 minutes ago
Templates
233 KB
43 minutes ago
Lec-12a-How can I create a personal cloud server_.pdf
1.4 MB
20 hours ago
Nextcloud.png
49 KB
43 minutes ago
Nextcloud intro.mp4
3.8 MB
43 minutes ago
Nextcloud Manual.pdf
13.1 MB
43 minutes ago
Reasons to use Nextcloud.pdf
954 KB
43 minutes ago
3 folders and 5 files
26 MB