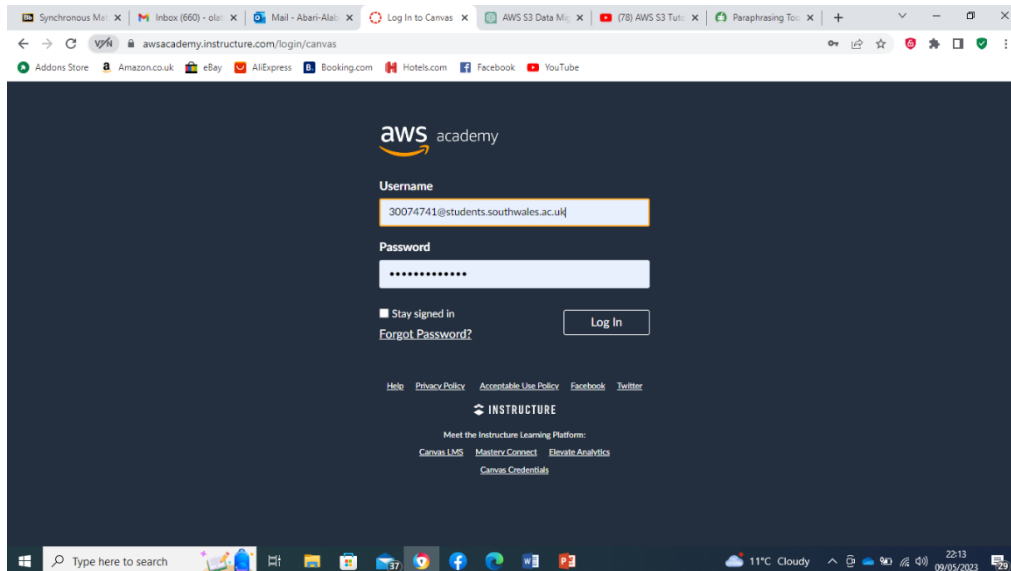
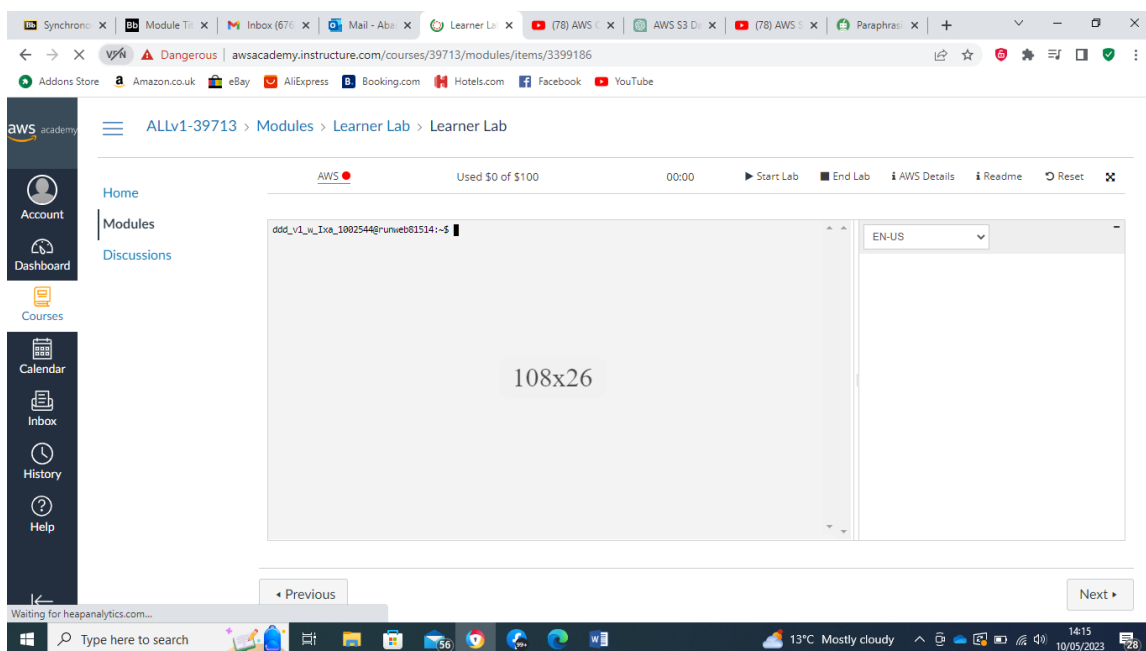


Step-By-Step Guide: Creating a custom Amazon Machine Image (AMI)

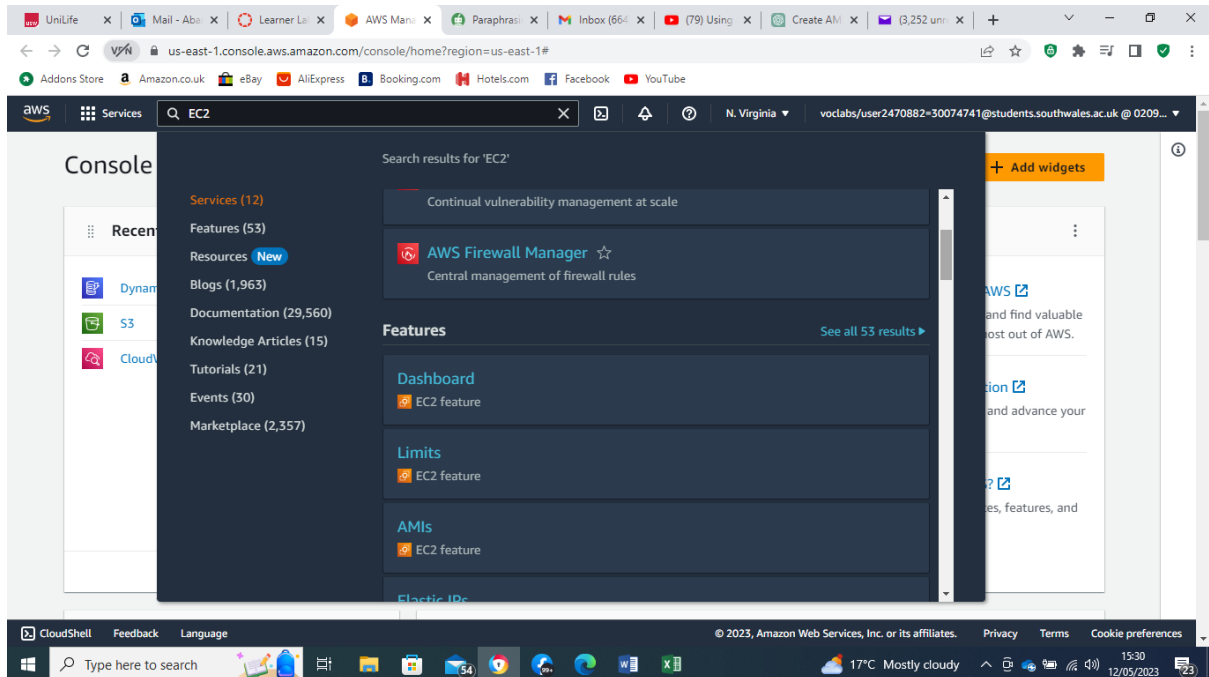
1. Open an AWS website and Click "Log in" on the AWS website. Sign-in with your credentials given to you by your administrator



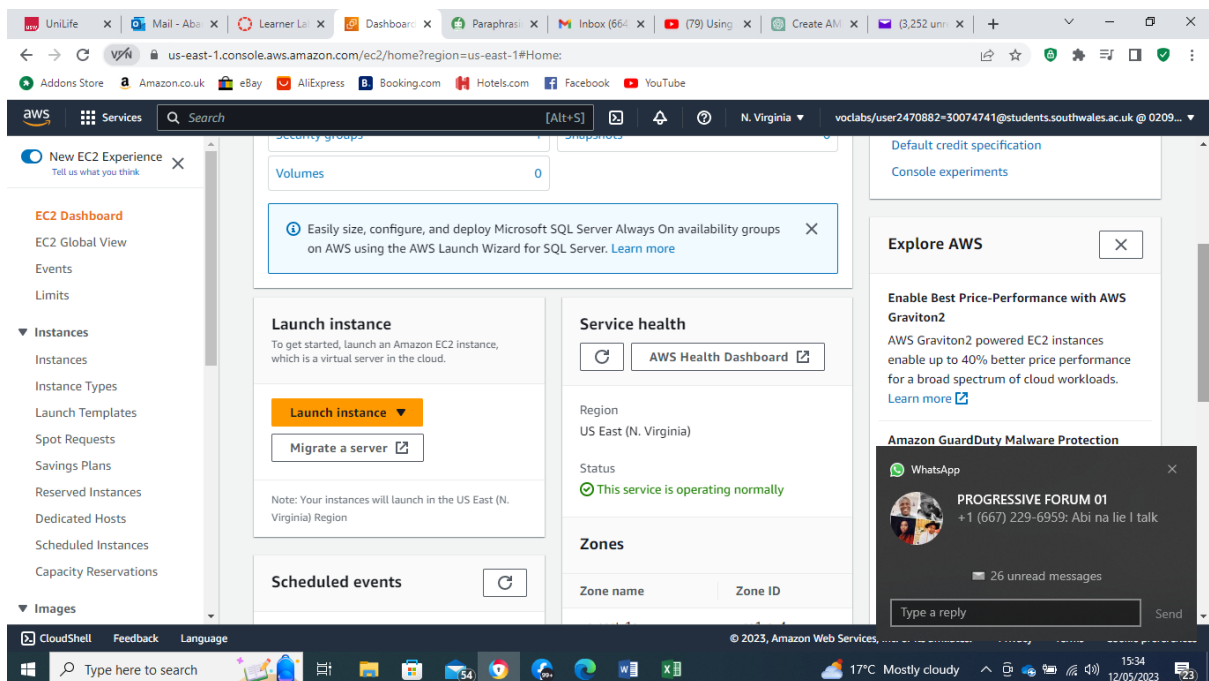
2. Access the AWS Management Console by choosing 'Start Lab' to launch your lab. Wait until you see the message "Lab status: ready". At the top of your screen, click 'AWS', this will open the AWS Management Console in a new browser tab.

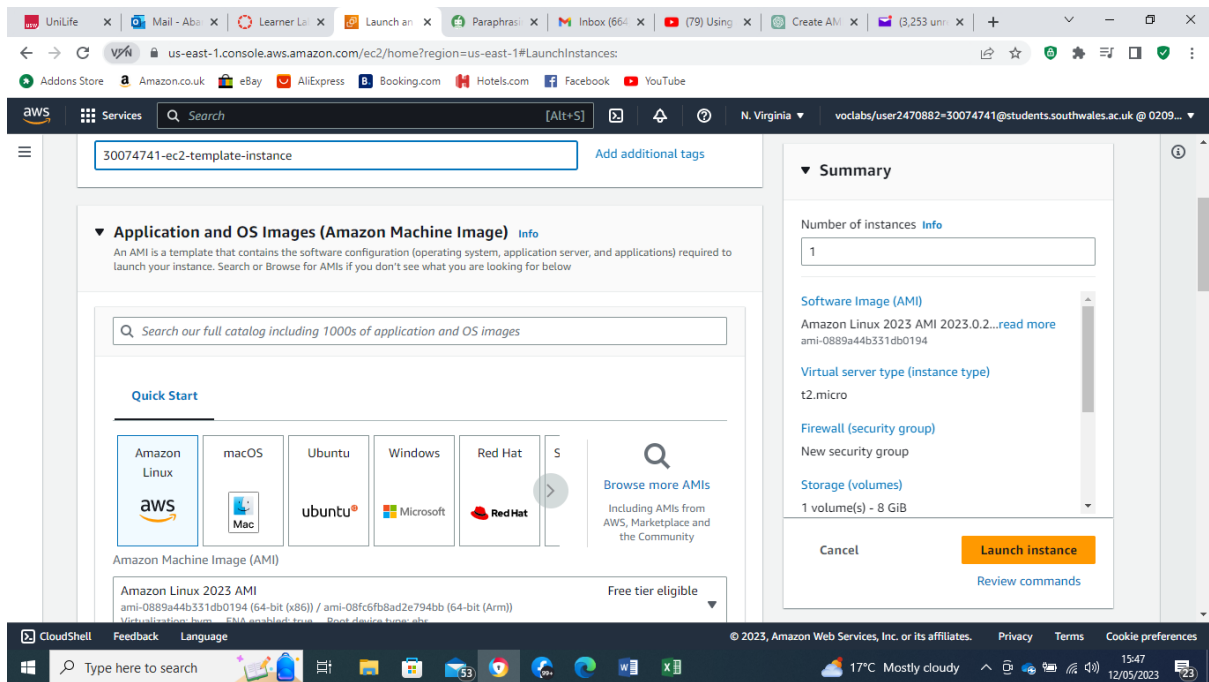


3. After logging in, go to the AWS service, go to the EC2 service dashboard.

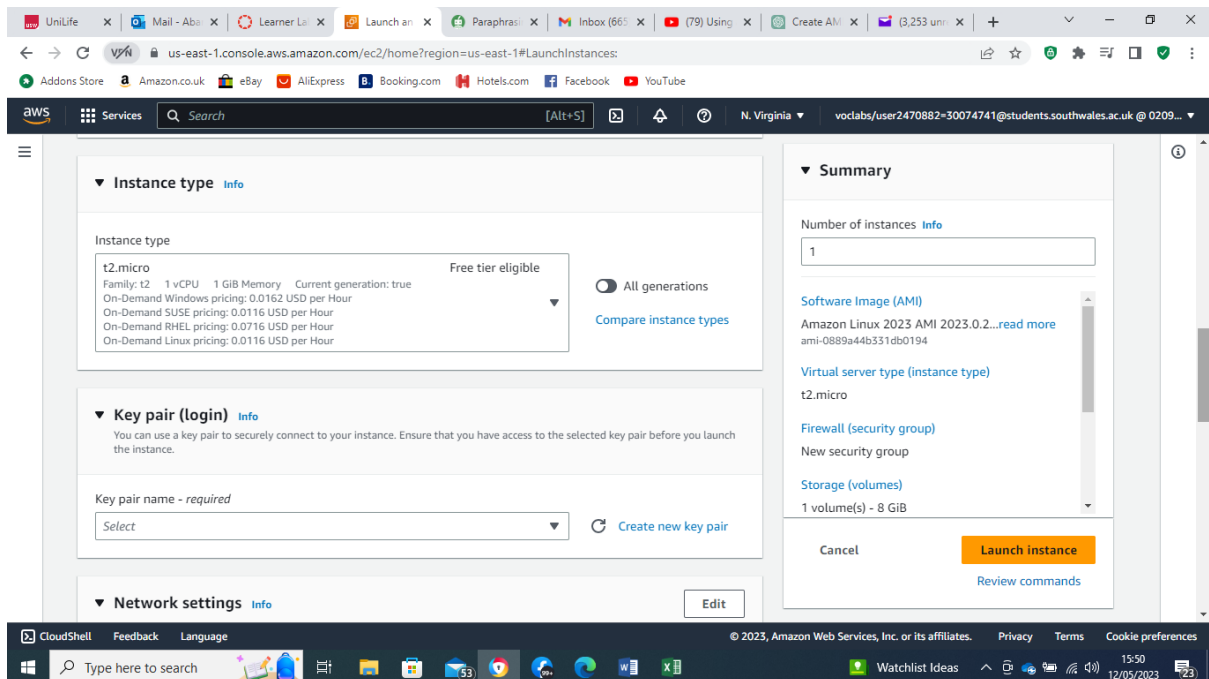


4. Click on the "Launch Instance" button and select "Amazon Linux 2 AMI" from the list of available AMIs.

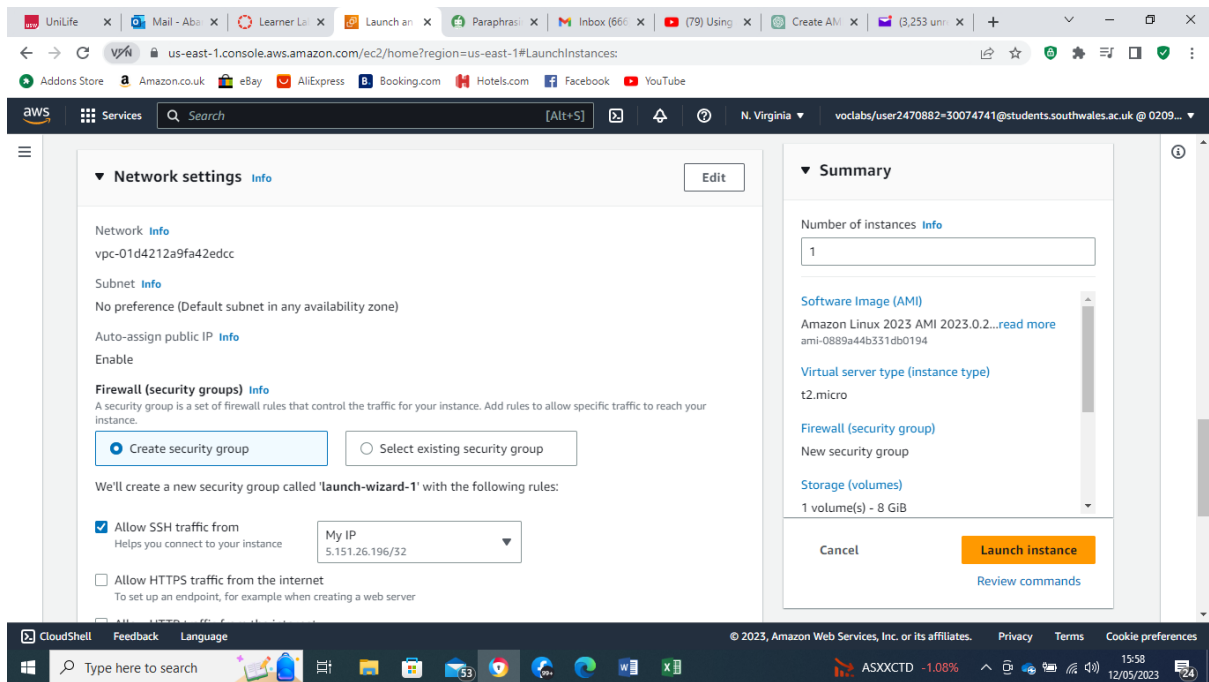




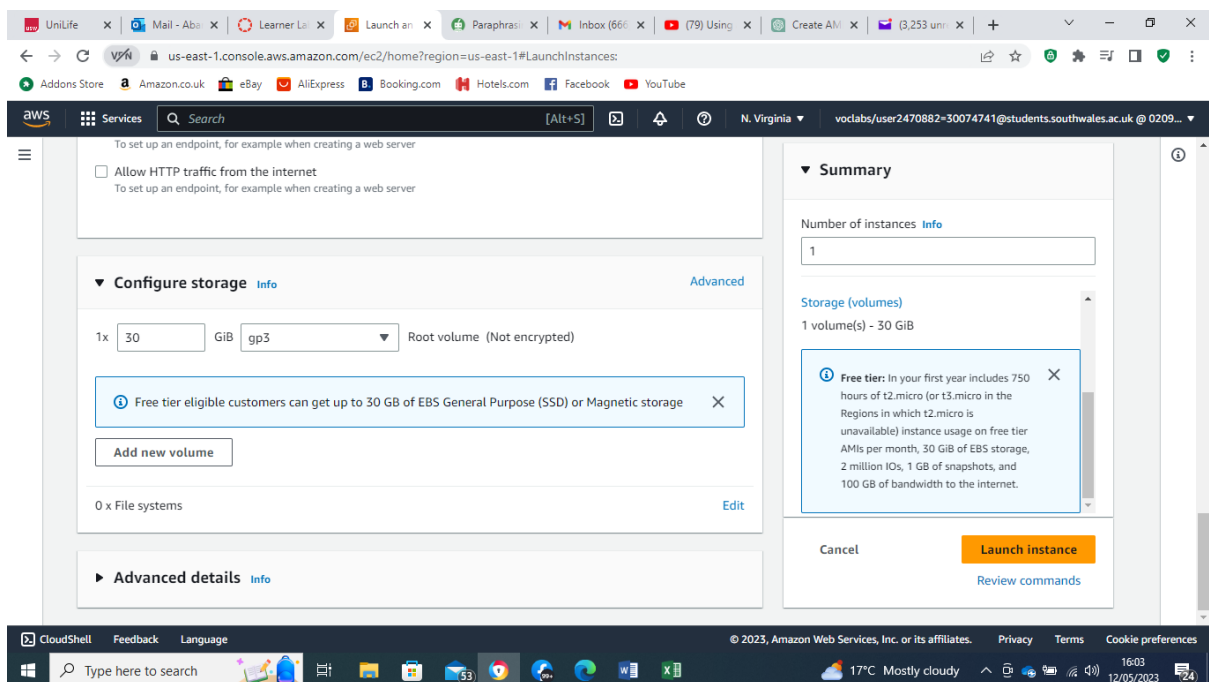
5. Choose the t2.micro instance type

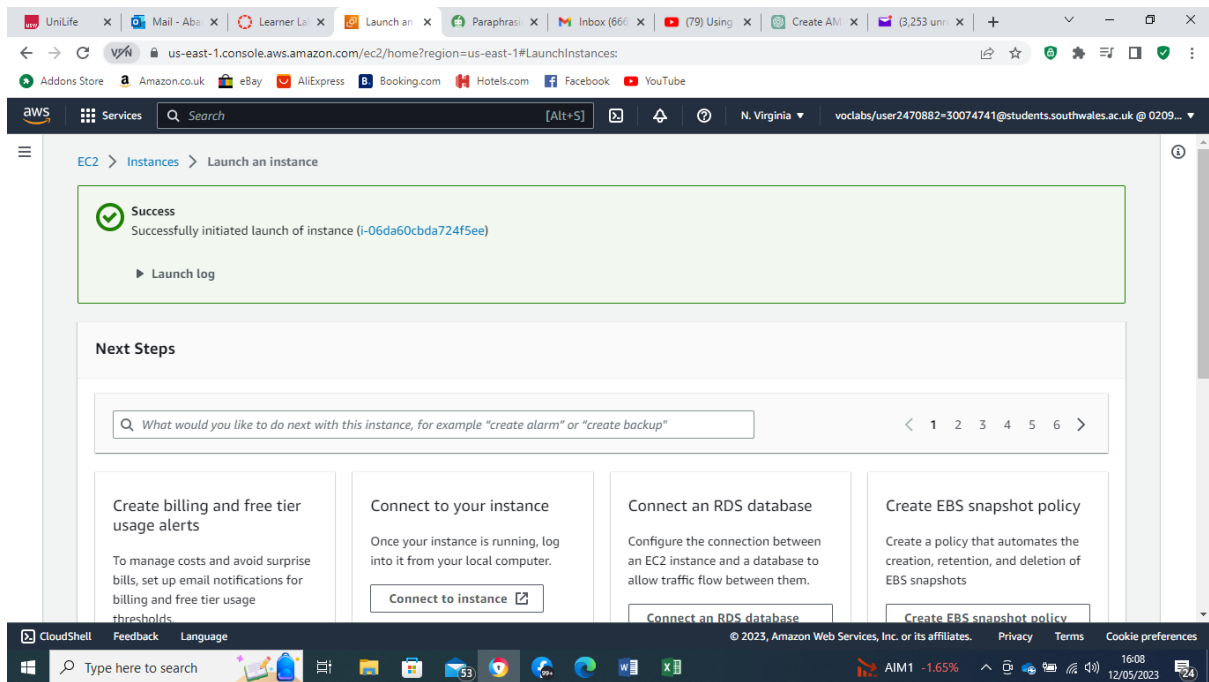


6. Configure the security group to allow SSH access from your IP address.



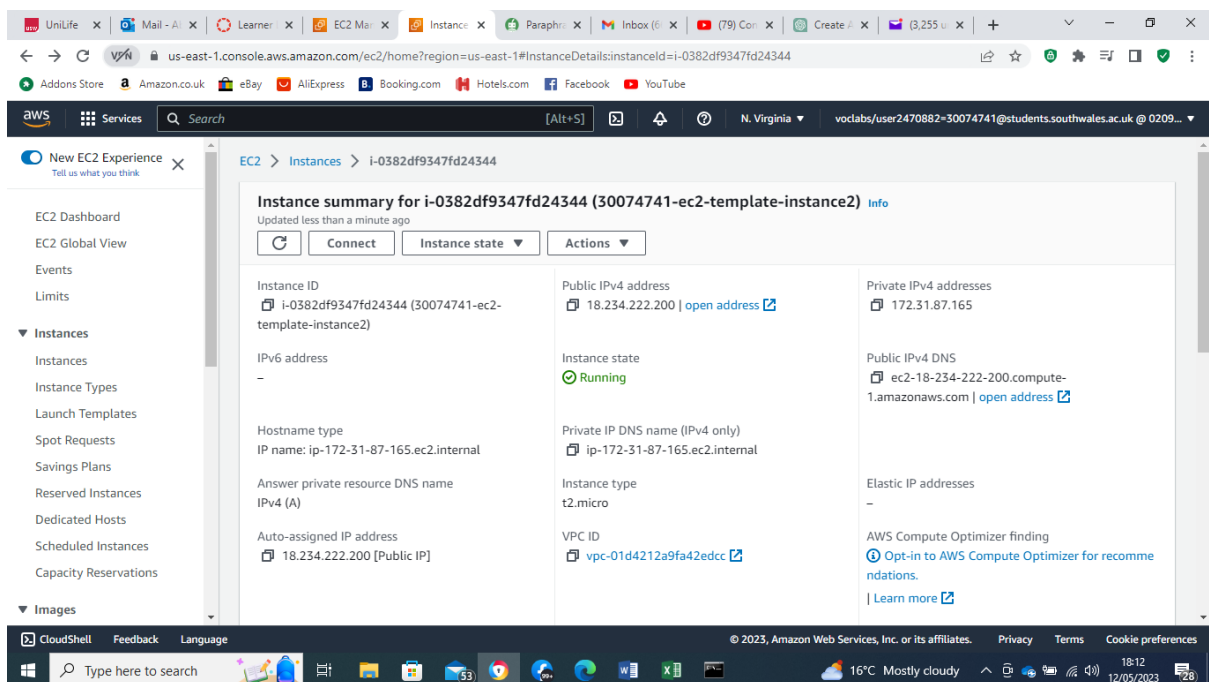
7. Under "Storage", increase the size of the root volume to 30GiB by changing the value in the "Size (GiB)" field. Review your instance configuration and click "Launch".



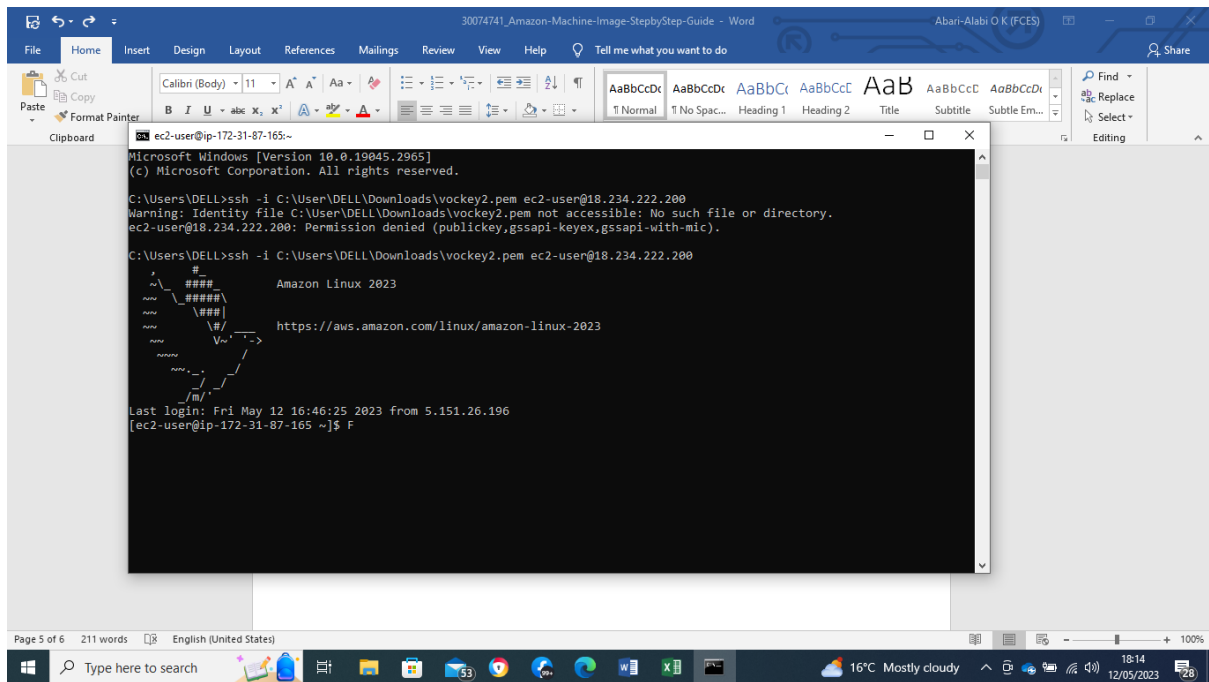


8. Connect to your instance using SSH.

- After your instance (30074741-ec2-template-instance2) has launched, note its public IP address.



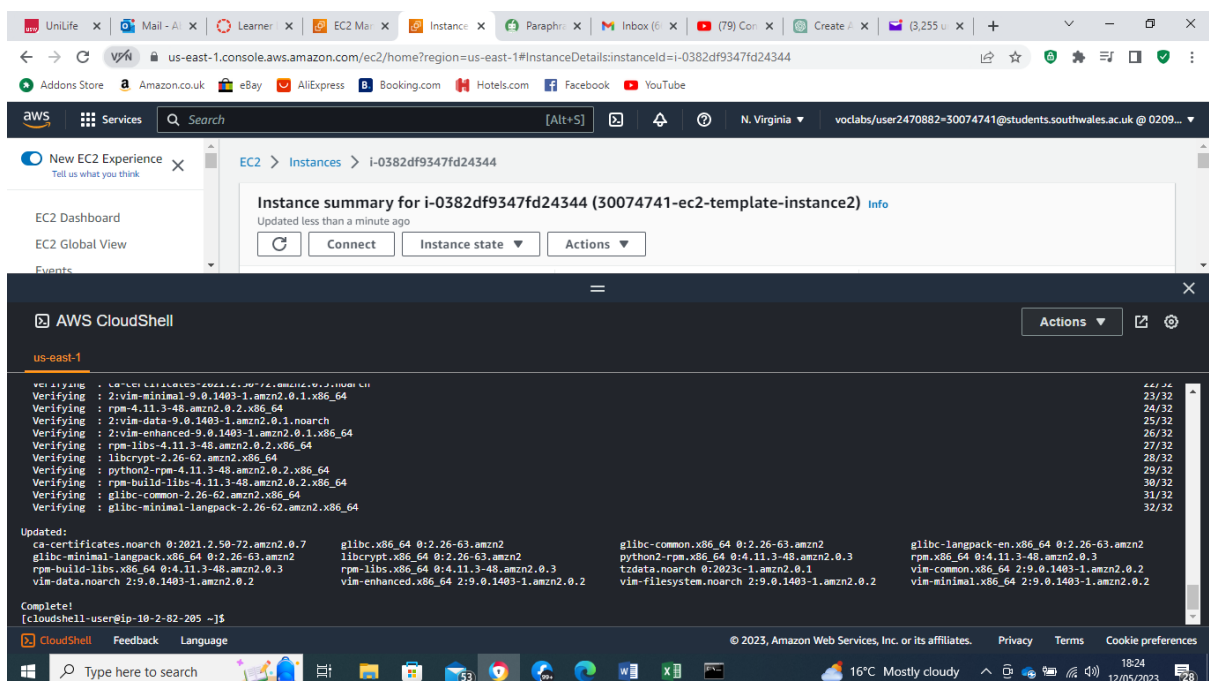
- Open a terminal window and type: `ssh -i <path-to-ssh-key> ec2-user@<public-ip-address>`



- Replace <path-to-ssh-key> with the path to your SSH key (C:\Users\DELL\Downloads\vockey2.pem) and <public-ip-address> with the public IP address (18.234.222.200) of your instance.
- If prompted, answer "yes" to confirm the connection. Once it's confirmed it will run successfully and give you the instance private ip.

9. Install R programming language.

- Run the following command to update the package list: `sudo yum update -y`
- Run the following command to install R: `sudo yum install -y R`



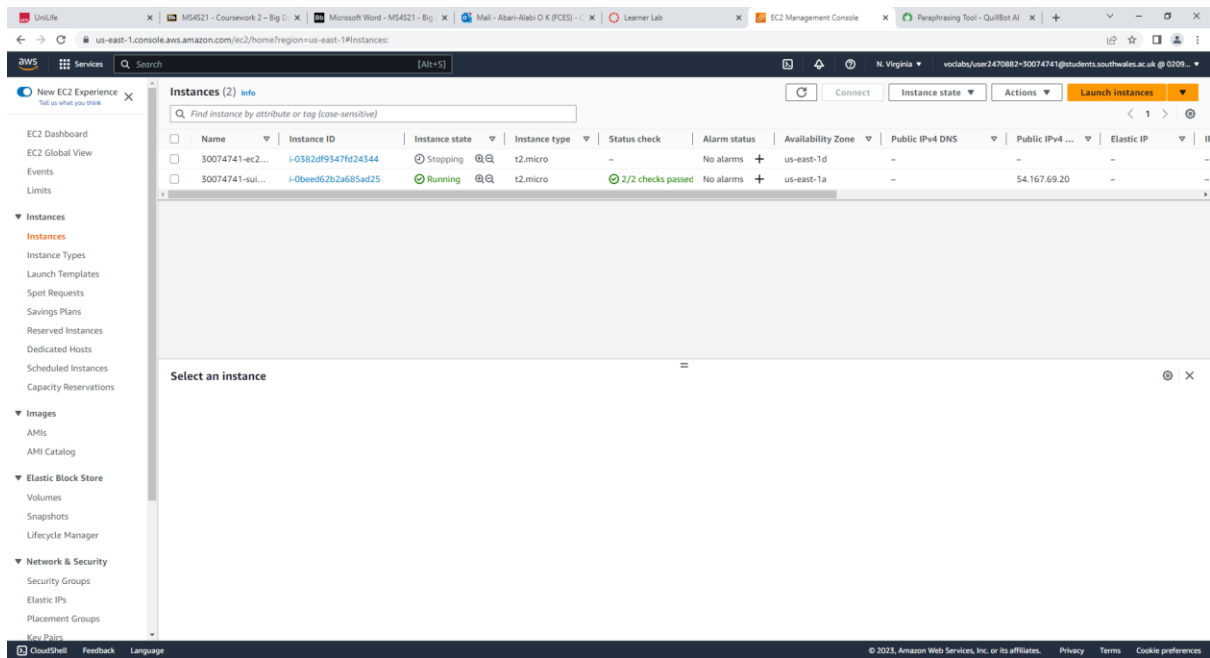
```
ec2-user@ip-172-31-87-165:~  
texlive-xunicode-9:svn30466.0.981-59.amzn2023.0.2.noarch  
texlive-zapfchan-9:svn31835.0-59.amzn2023.0.2.noarch  
texlive-zapfding-9:svn31835.0-59.amzn2023.0.2.noarch  
texlive-zref-9:svn56611-59.amzn2023.0.2.noarch  
tk-1:8.6.10-6.amzn2023.0.2.x86_64  
tk-devel-1:8.6.10-6.amzn2023.0.2.x86_64  
tre-0.8.0-32.20140228gitc2f5d13.amzn2023.0.3.x86_64  
tre-common-0.8.0-32.20140228gitc2f5d13.amzn2023.0.3.noarch  
tre-devel-0.8.0-32.20140228gitc2f5d13.amzn2023.0.3.x86_64  
urw-base35-bookman-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-c059-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-d0500001-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-fonts-common-20200910-6.amzn2023.0.2.noarch  
urw-base35-gothic-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-nimbus-mono-ps-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-nimbus-roman-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-nimbus-sans-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-p052-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-standard-symbols-ps-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-z003-fonts-20200910-6.amzn2023.0.2.noarch  
xdg-utils-1.1.3-12.amzn2023.0.1.noarch  
xml-common-0.6.3-56.amzn2023.0.2.noarch  
xorg-x11-proto-devel-2021.4-1.amzn2023.0.2.noarch  
xz-devel-5.2.5-9.amzn2023.0.2.x86_64  
zlib-devel-1.2.11-33.amzn2023.0.4.x86_64  
zziplib-0.13.72-1.amzn2023.0.3.x86_64  
Complete!  
[ec2-user@ip-172-31-87-165 ~]$
```

10. Create an AMI.

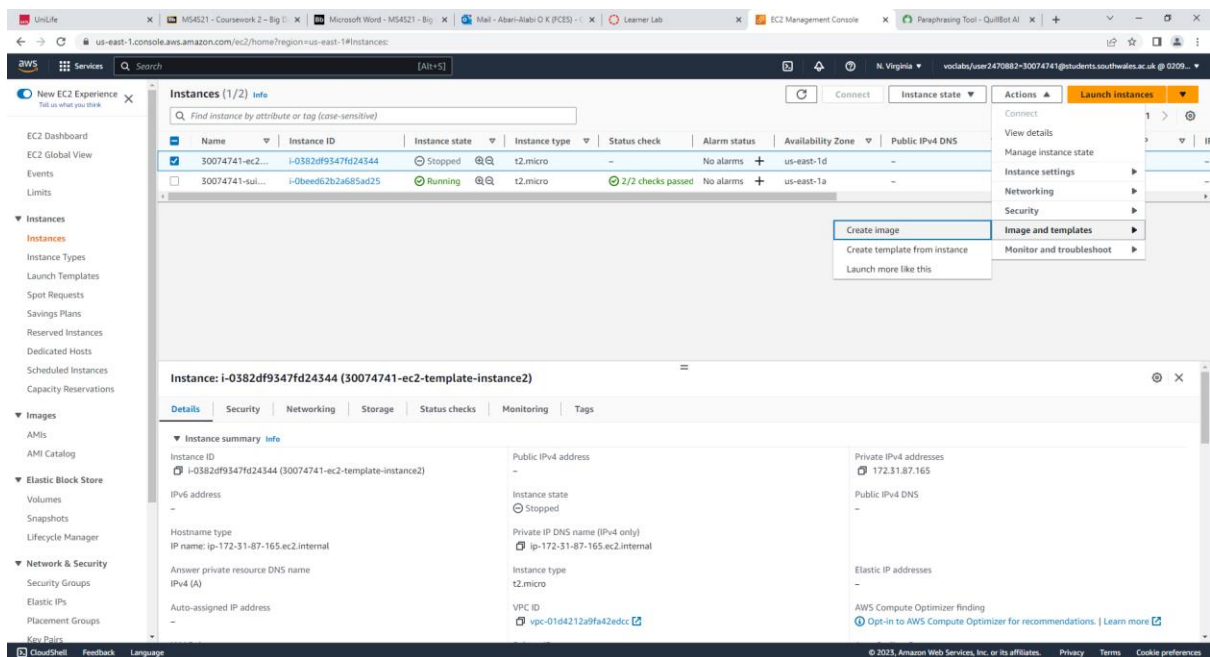
- Once R is installed, run the following command to create an image of your instance: `sudo /sbin/shutdown -h now`

```
Command Prompt  
tk-1:8.6.10-6.amzn2023.0.2.x86_64  
tk-devel-1:8.6.10-6.amzn2023.0.2.x86_64  
tre-0.8.0-32.20140228gitc2f5d13.amzn2023.0.3.x86_64  
tre-common-0.8.0-32.20140228gitc2f5d13.amzn2023.0.3.noarch  
tre-devel-0.8.0-32.20140228gitc2f5d13.amzn2023.0.3.x86_64  
urw-base35-bookman-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-c059-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-d0500001-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-fonts-common-20200910-6.amzn2023.0.2.noarch  
urw-base35-gothic-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-nimbus-mono-ps-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-nimbus-roman-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-nimbus-sans-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-p052-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-standard-symbols-ps-fonts-20200910-6.amzn2023.0.2.noarch  
urw-base35-z003-fonts-20200910-6.amzn2023.0.2.noarch  
xdg-utils-1.1.3-12.amzn2023.0.1.noarch  
xml-common-0.6.3-56.amzn2023.0.2.noarch  
xorg-x11-proto-devel-2021.4-1.amzn2023.0.2.noarch  
xz-devel-5.2.5-9.amzn2023.0.2.x86_64  
zlib-devel-1.2.11-33.amzn2023.0.4.x86_64  
zziplib-0.13.72-1.amzn2023.0.3.x86_64  
Complete!  
[ec2-user@ip-172-31-87-165 ~]$ sudo /sbin/shutdown -h now  
[ec2-user@ip-172-31-87-165 ~]$ Connection to 54.165.154.163 closed by remote host.  
Connection to 54.165.154.163 closed.  
C:\Users\30074741>
```

- Wait for your instance to stop.



- In the EC2 console, select your instance and choose "Create Image" from the "Actions" menu.

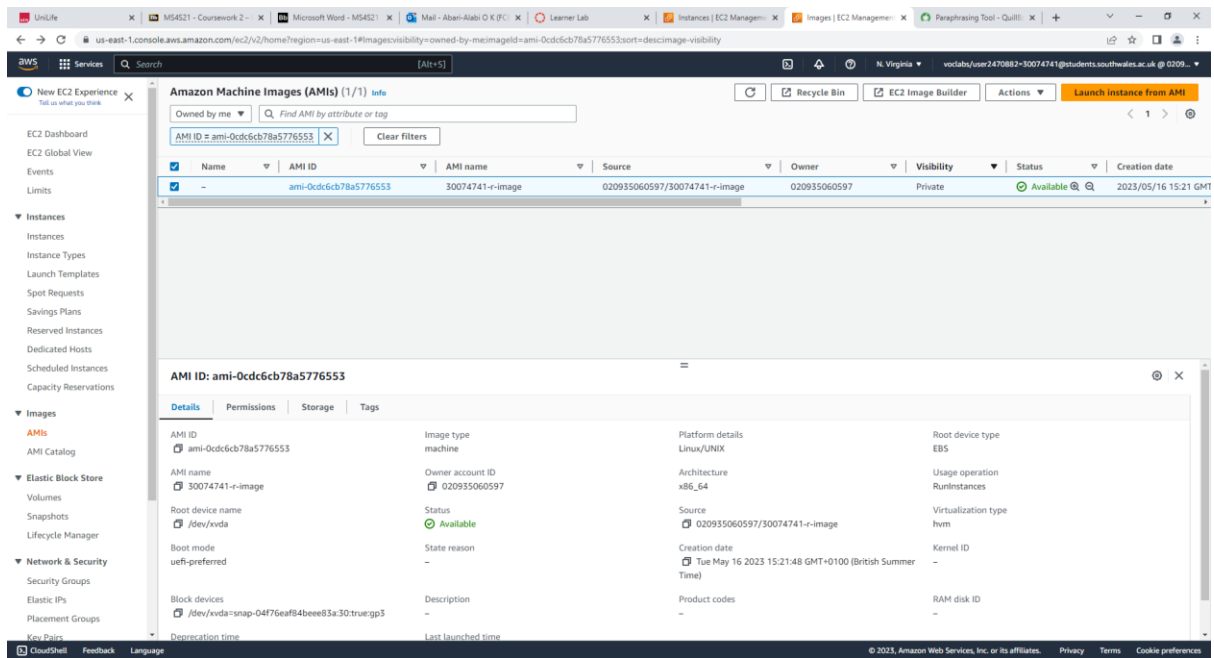


- Enter a name and description for your AMI and click "Create Image".

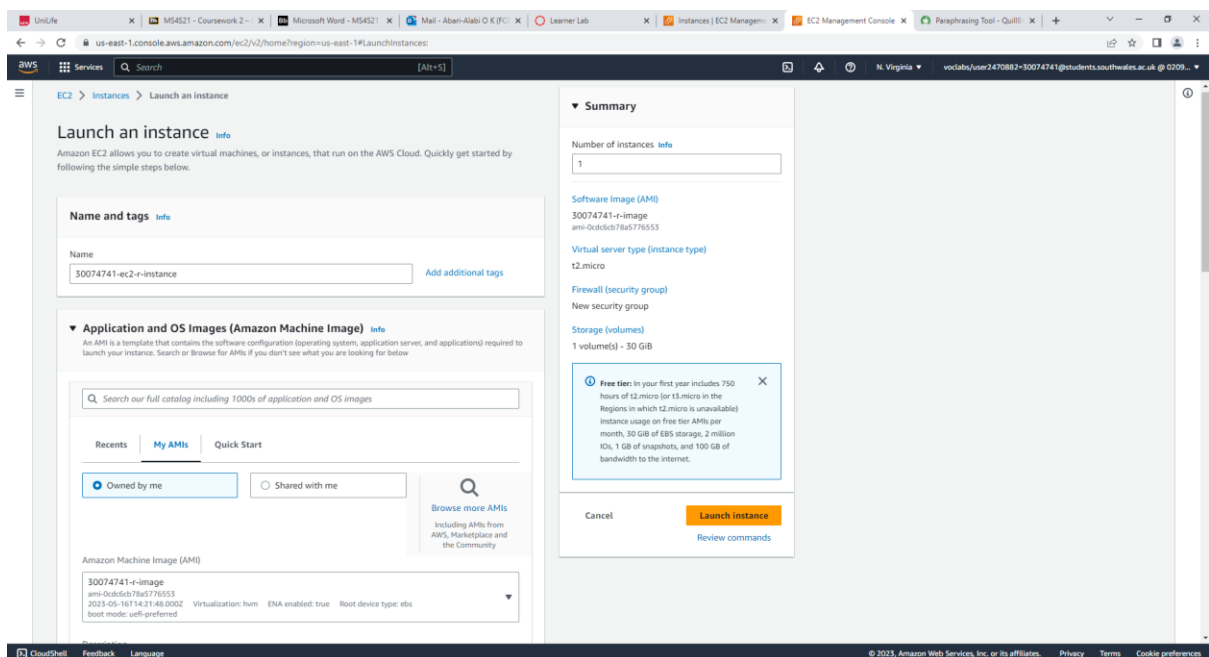
- Wait for the image creation process to complete.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4...	Elastic IP	IPv6 IPs	Monitoring
30074741-ec2...	i-0382df93476d24344	Stopped	t2.micro	-	No alarms	us-east-1d	-	-	-	-	disabled
30074741-sul...	i-0bee652b2a685a625	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	-	54.167.69.20	-	-	disabled

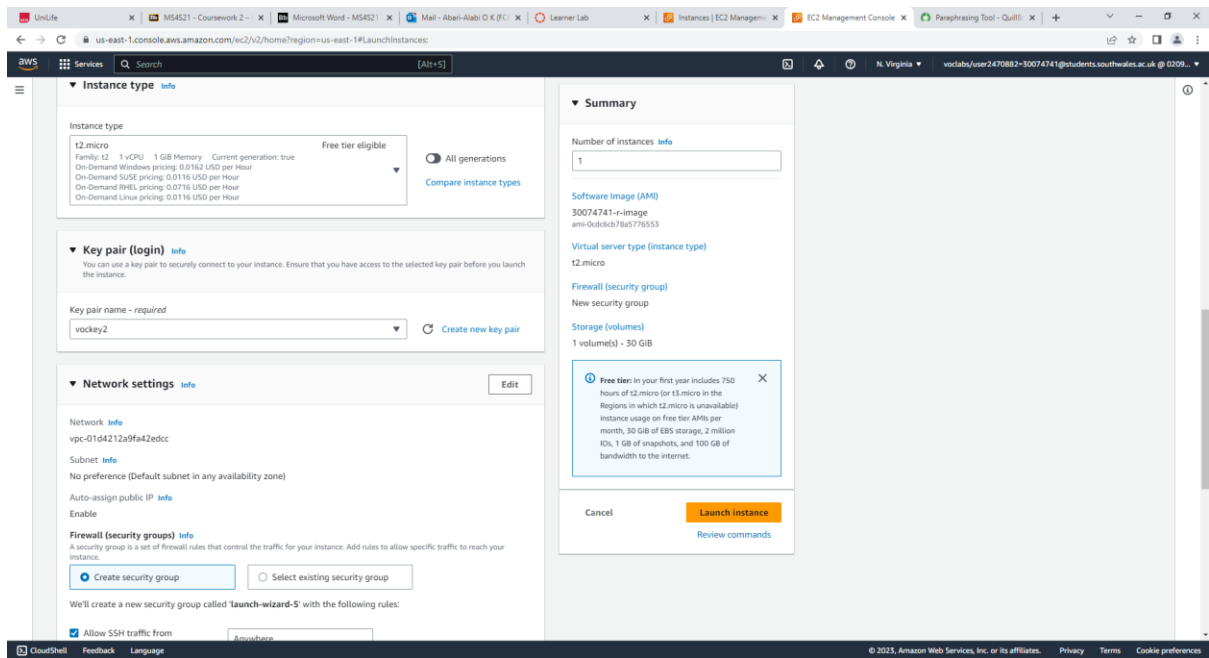
11. Launch an instance from your AMI.
- Once your AMI is available, you can launch a new instance from it.



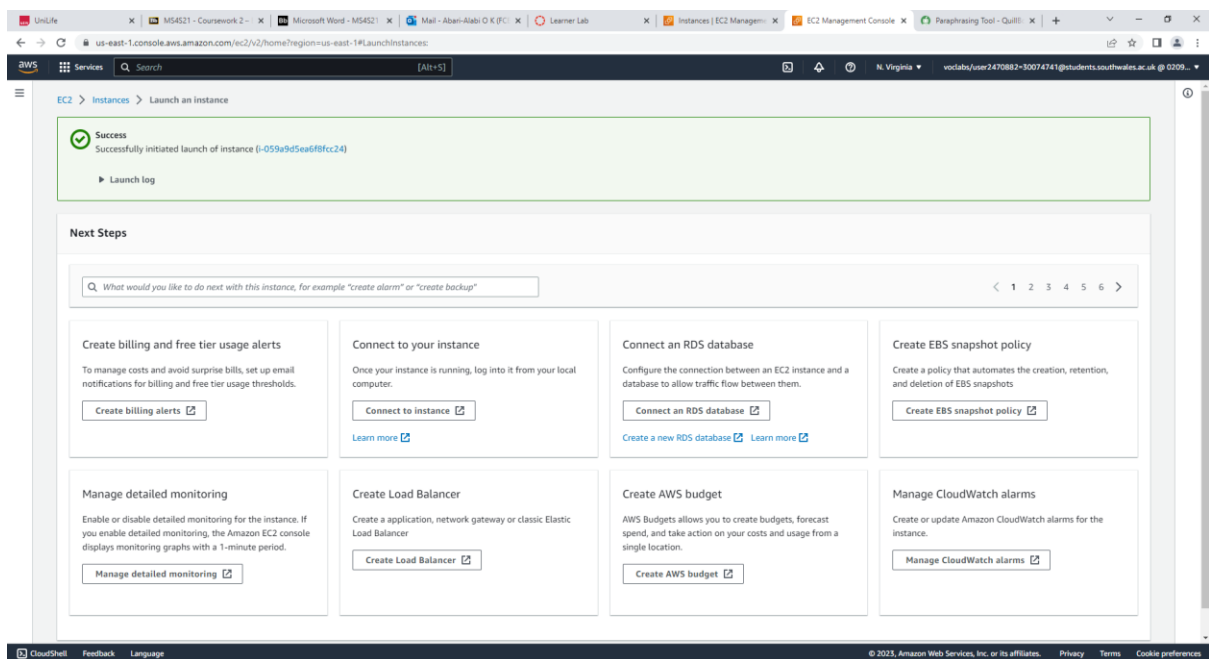
- Go to the EC2 console and choose "Launch Instance".
- Select "My AMIs" and choose the AMI you just created.



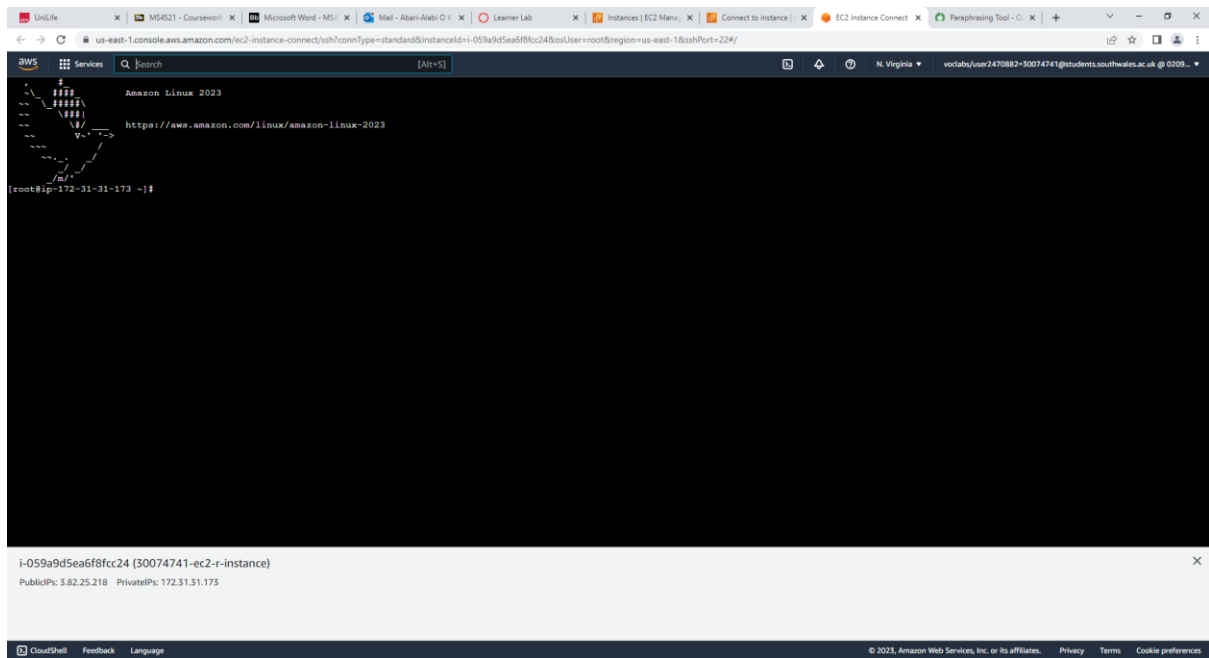
- Choose the t2.micro instance type and click "Next: Configure Instance Details".
- Choose your VPC and subnet, and configure any additional settings as needed.
- Click "Review and Launch" and then "Launch".



- Follow the prompts to configure your new instance.



12. Connect to the EC2 instance



- Start the R interpreter: In the terminal, type 'R' and click enter key
- Run the command to print "Hello World": Once the R interpreter starts, type (print "Hello World") and click enter key.
- Quit the R interpreter: To exit the R interpreter and return to the terminal, type 'quit()'.

