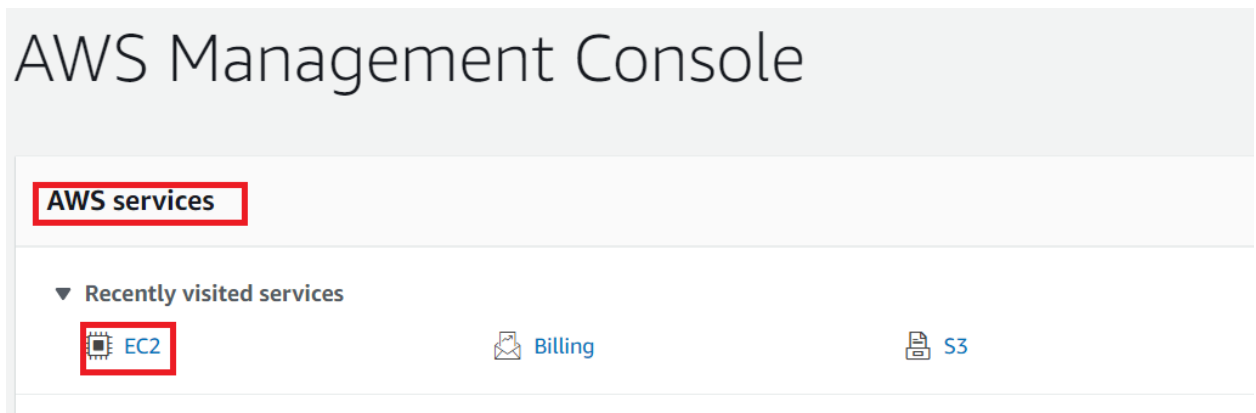


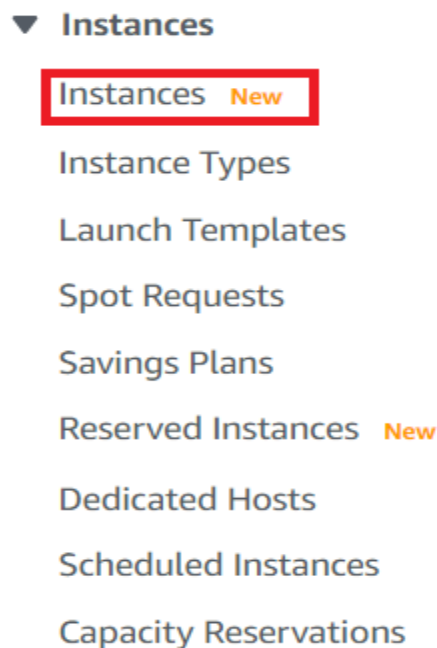
Creating Ubuntu Instance Over AWS

This document covers the steps to create an Ubuntu instance and, more importantly, opening **port no 8080** for Jenkins to work. So, login to AWS Management console and perform the following steps:

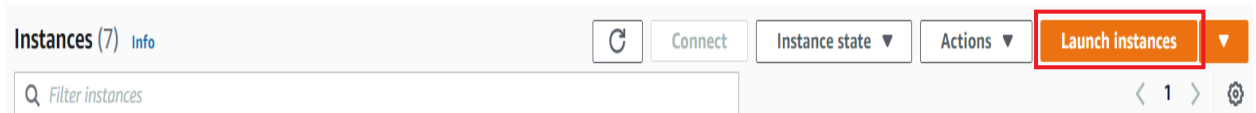
1. Select **EC2** in **AWS Services**.



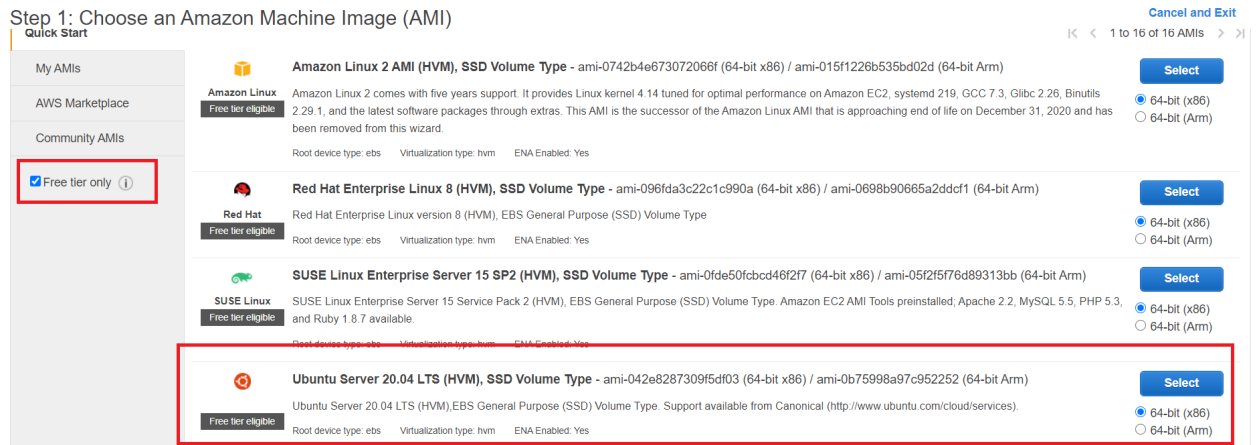
2. Then, select **Instances** from the left-side menu.



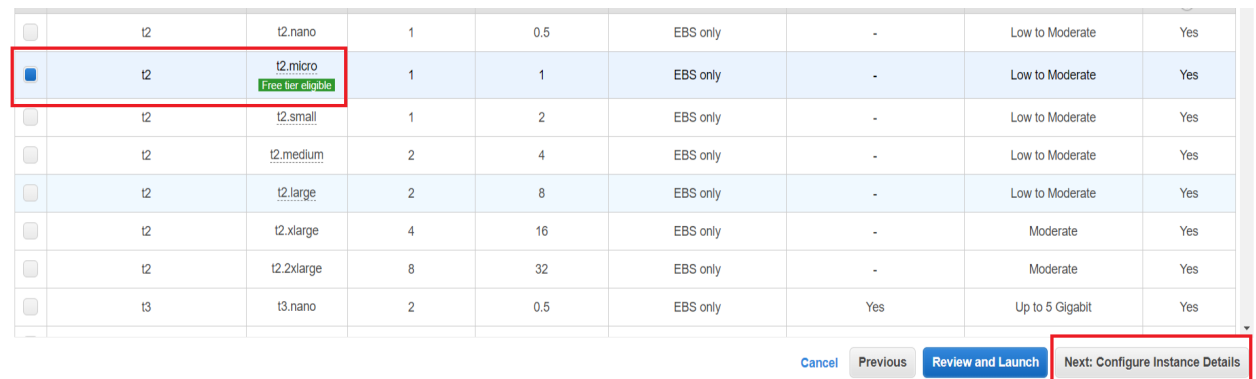
3. After that, click on **Launch Instances** present on the top right corner.



4. Thereafter, enable **Free Tier Only** from the left-side menu.
5. Then, select **Ubuntu Server 20.04 LTS** as shown below.



6. Now, in the instance type, let **t2.micro** get selected by default. After that select **Configure Instance Details**.



7. In the **Configure Instance Details**, let all parameters get selected by default. Then, click on **Add Storage**.

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of Instances ⓘ 1 Launch Into Auto Scaling Group ⓘ

Purchasing option ⓘ ☐ Request Spot Instances

Network ⓘ vpc-b142eccc (default) Create new VPC

Subnet ⓘ No preference (default subnet in any Availability Zone) Create new subnet

Auto-assign Public IP ⓘ Use subnet setting (Enable)

Placement group ⓘ ☐ Add instance to placement group

Capacity Reservation ⓘ Open

Domain join directory ⓘ No directory Create new directory

IAM role ⓘ None Create new IAM role

Shutdown behavior ⓘ Stop

Stop - Hibernate behavior ⓘ ☐ Enable hibernation as an additional stop behavior

Enable termination protection ⓘ ☐ Protect against accidental termination

Monitoring ⓘ ☐ Enable CloudWatch detailed monitoring

Cancel Previous Review and Launch Next: Add Storage

8. Then, in the **Add Storage**, let size be **8 (GiB)**. After that, select **Add tags**.

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type ⓘ	Device ⓘ	Snapshot ⓘ	Size (GiB) ⓘ	Volume Type ⓘ	IOPS ⓘ	Throughput (MB/s) ⓘ	Delete on Termination ⓘ	Encryption ⓘ
Root	/dev/sda1	snap-0c8d535c6dfe4c4a	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

Cancel Previous Review and Launch Next: Add Tags

9. Then, in the Add Tags section, provide the Key and Value as shown in the image below. After that, click on the **Configure Security Group** option.

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. A copy of a tag can be applied to volumes, instances or both. Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum)	Value (256 characters maximum)	Instances	Volumes	Network Interfaces
Jenkins	user@1245	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Add another tag](#) (Up to 50 tags maximum)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Security Group](#)

10. For SSH, select **My IP** in the **Source** section.

11. Here, click on **Add Rule**.

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	My IP	e.g. SSH for Admin Desktop

[Add Rule](#)

12. Next, in the **Type**, select **Custom TCP Rule**. In the Port range, enter 8080. Here, you are opening port no 8080 to access Jenkins via the browser.

13. After that, in the **Source**, select **My IP** for **Custom TCP Rule**.

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	My IP	e.g. SSH for Admin Desktop
Custom TCP	TCP	8080	My IP	e.g. SSH for Admin Desktop

[Add Rule](#)

14. Then, click on the **Review and Launch** option.

15. Next, click on the **Launch** option.

16. After that, you will be asked to add a **Key pair**. You can select an existing key pair or create one as per your requirement. Here, you are creating a new key pair.

17. Then, click on the **Download Key Pair**.

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Create a new key pair

Key pair name
New_key_pair

Download Key Pair


You have to download the **private key file** (*.pem file) before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created.


Cancel
Launch Instances

18. Once your key pair is downloaded, click on **Launch Instances**.

19. After that, click on your instance to go to the Instance dashboard.



Launch Status


Your instances are now launching
The following instance launches have been initiated: I-0d1833c465d0164b8 [View launch log](#)


Get notified of estimated charges
[Create billing alerts](#) to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

How to connect to your instances

20. Here, you can see your instance running. After that, provide a name to your instance and then click on **Save**.

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input checked="" type="checkbox"/>	Edit Name		 Running	t2.micro	 Initializing	No alarms	us-east-1c	ec2-54-90-249-3

Jenkins_Instance

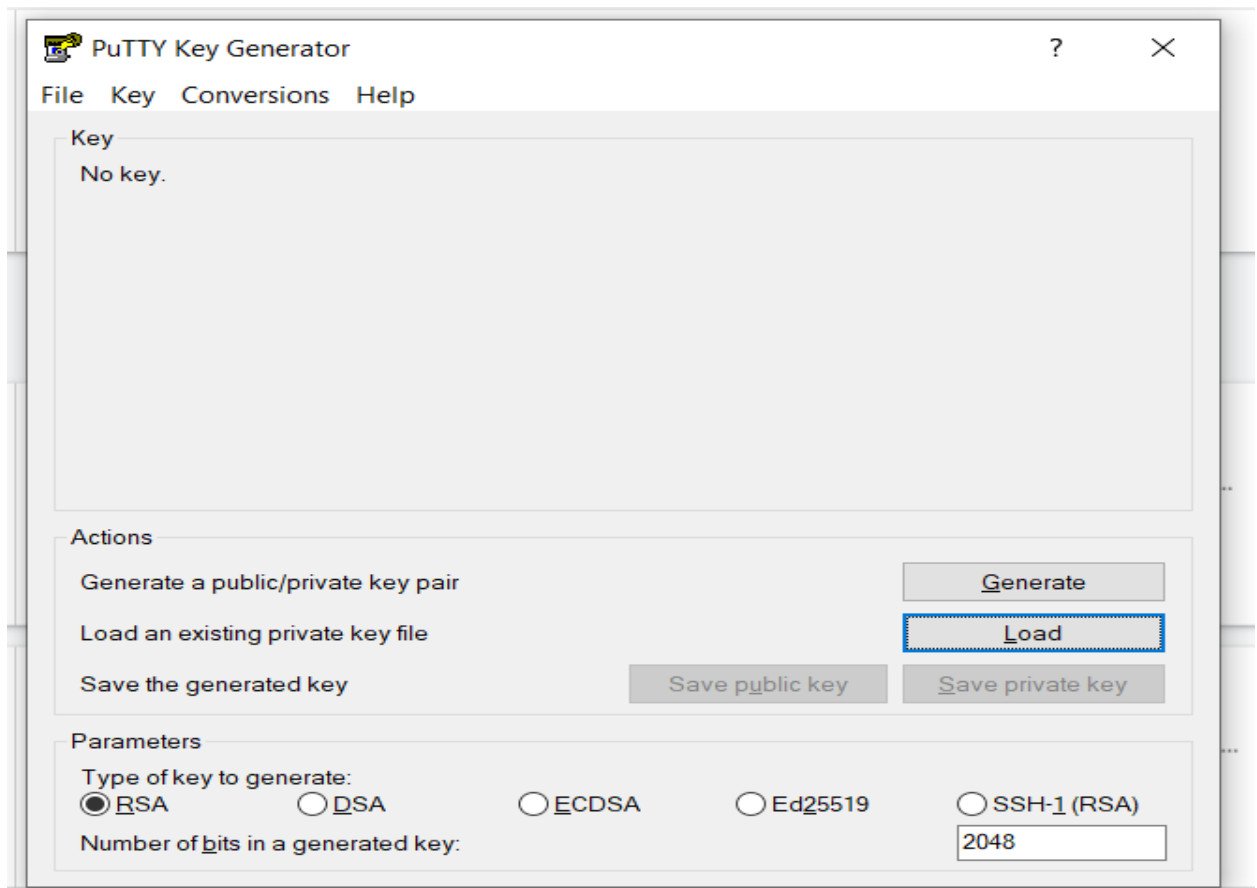
Cancel Save

21. Now, click on your **Instance Id** to go to your Instance dashboard.

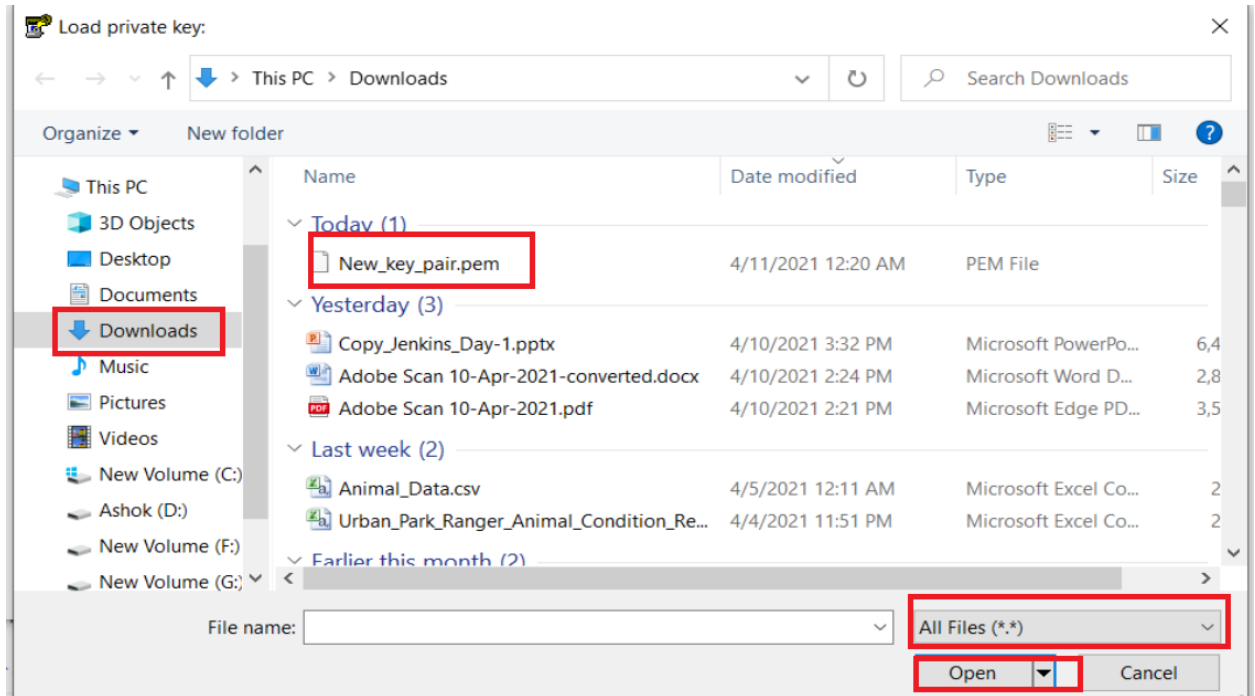
<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input checked="" type="checkbox"/>	Jenkins_Instance	i-0d1833c465d0164b8	Running	t2.micro	Initializing	No alarms +	us-east-1c	ec2-54-90-249-3

22. Now, to connect to your instance, you require the .ppk file in Windows. Therefore, open the **Puttygen** app on your system. Linux and Mac users can directly SSH into their instance.

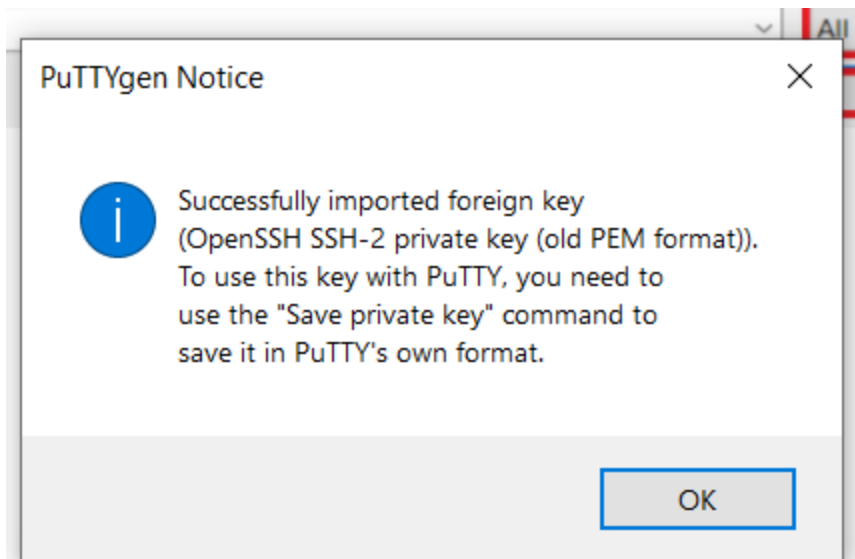
23. Then, click on **Load**.



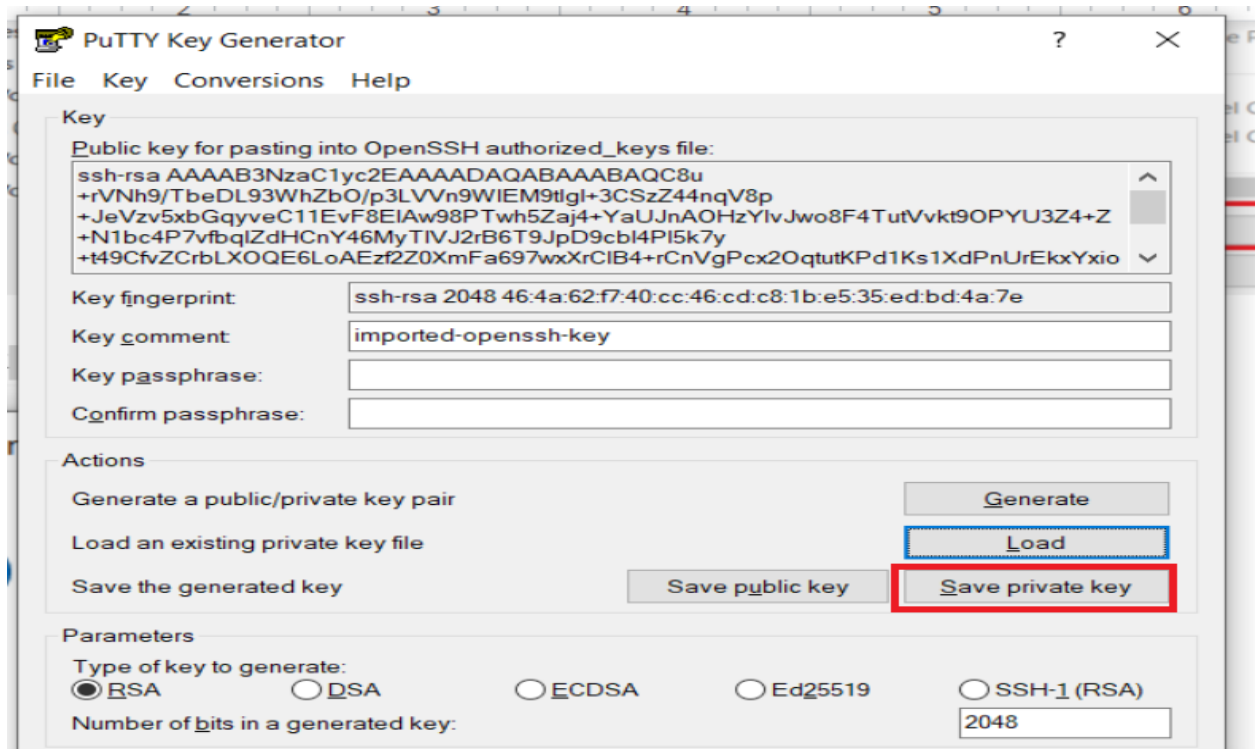
24. After that, go to the **Download** section and select **All files(*.*)** as shown. Then, select your **.pem file** and click on **open**.



25. Click **OK**.

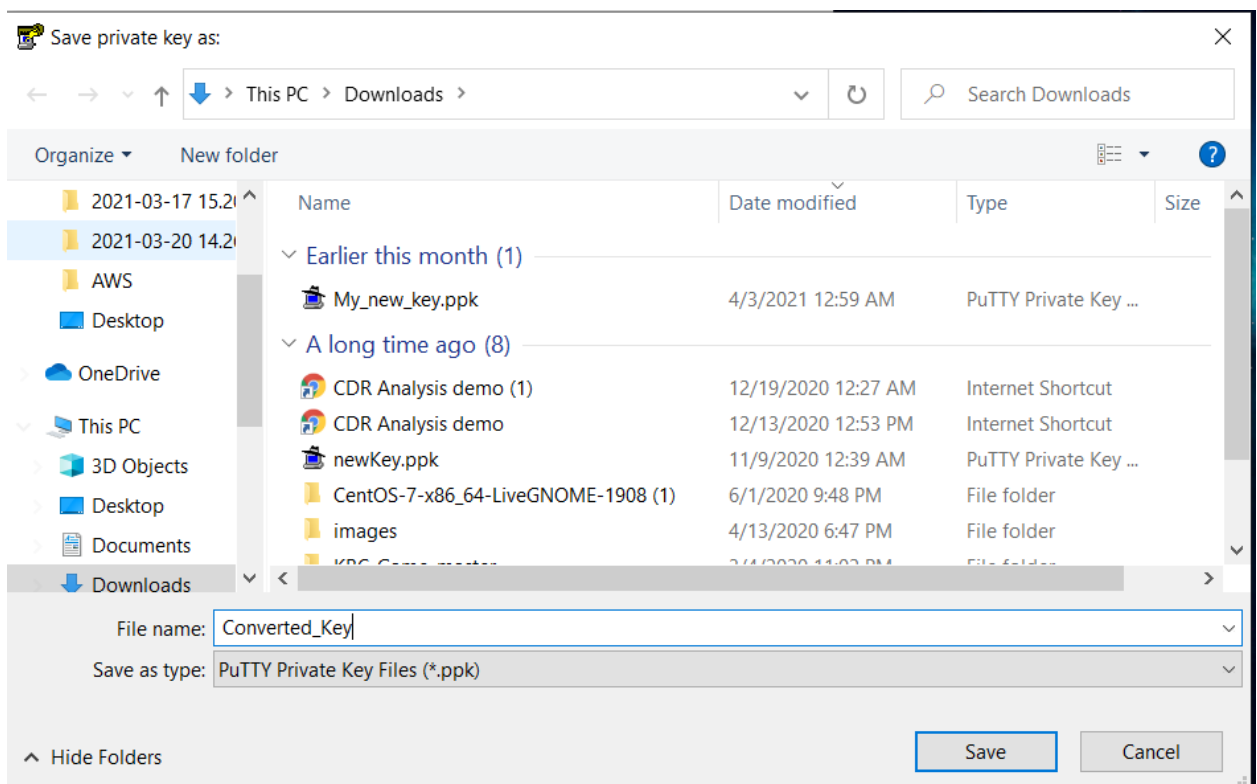


26. Then, click on **Save Private Key**.



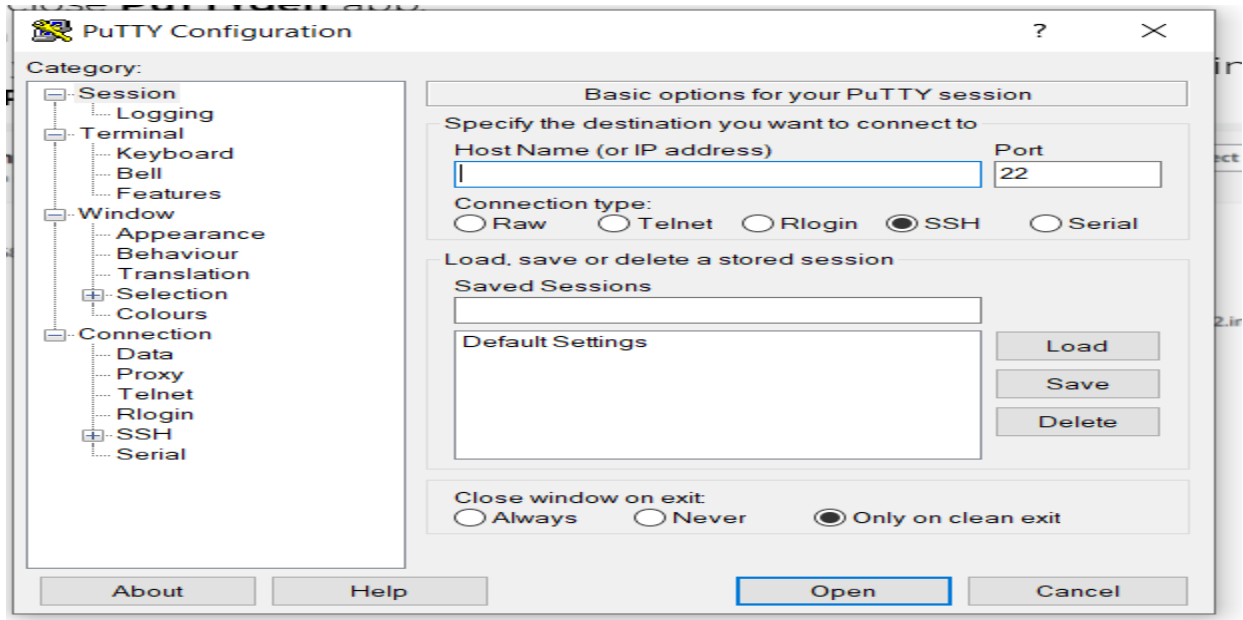
27. Next, you will get a warning. Click **OK** and continue.

28. Then, enter a file name you want to give and click on **Save**.

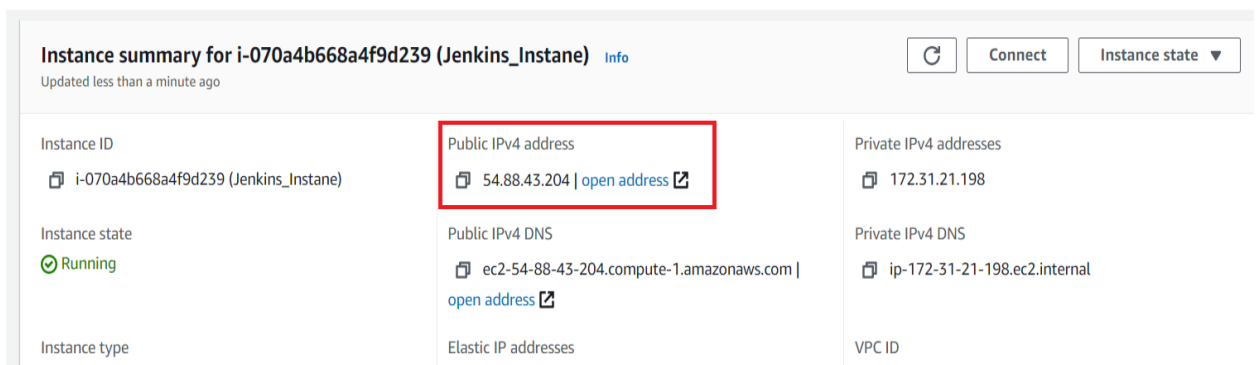


29. After that, close the **PuTTYgen** app.

30. Now, open the **PuTTY** app.

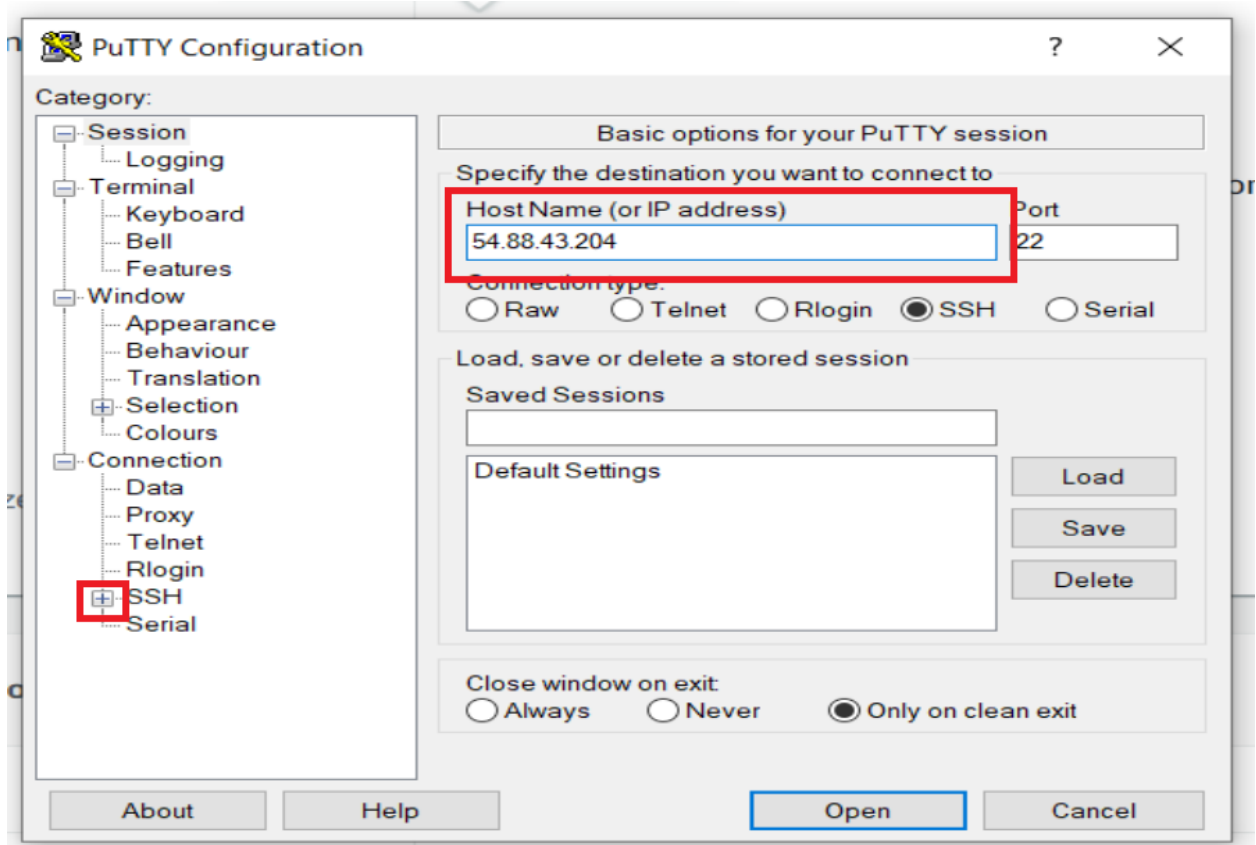


31. After that, you will be required to enter your **Hostname**. So, go to your instance and copy **Public IPv4 Address**.

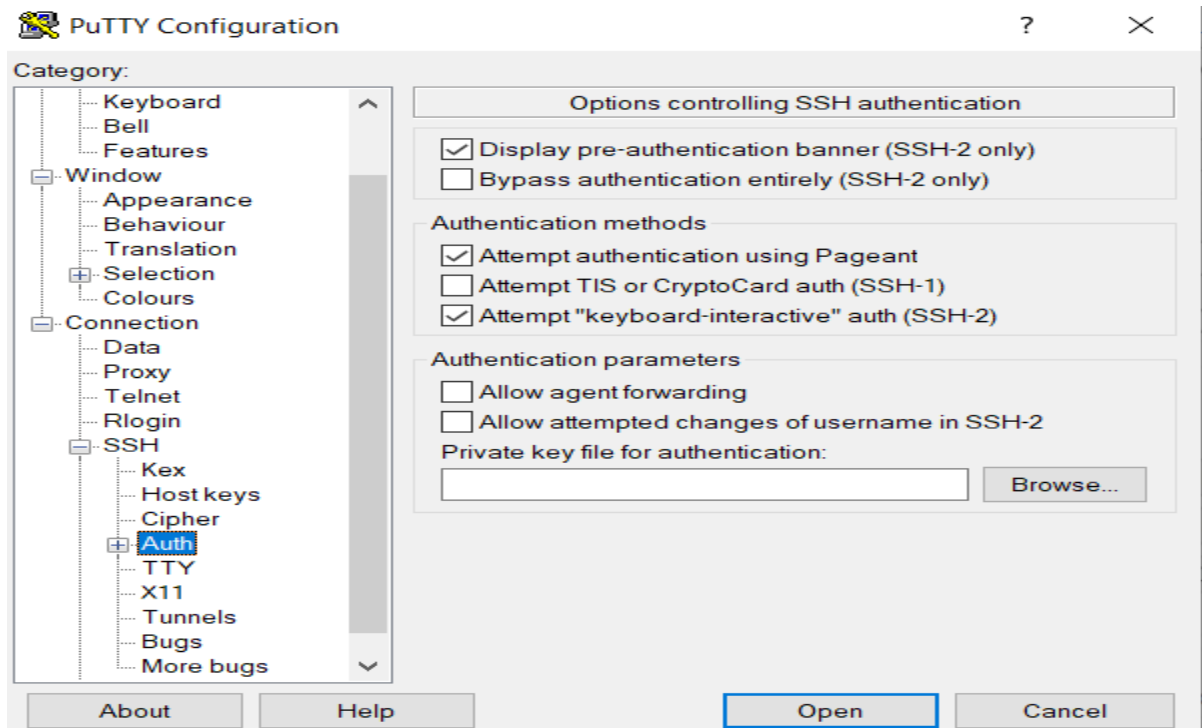


32. Then, come back to your PuTTY app and paste the **Public IPv4** address that you copied.

33. Click on **SSH**.

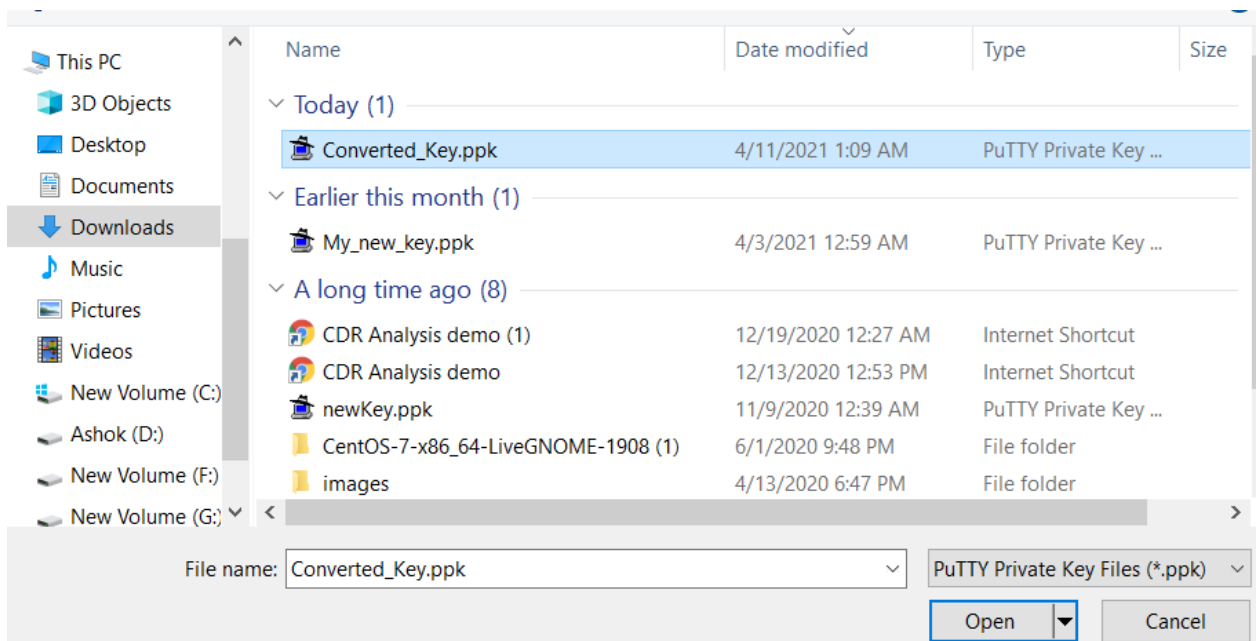


34. Then, select **Auth**. After that, you need to load the **.ppk** that we generated.

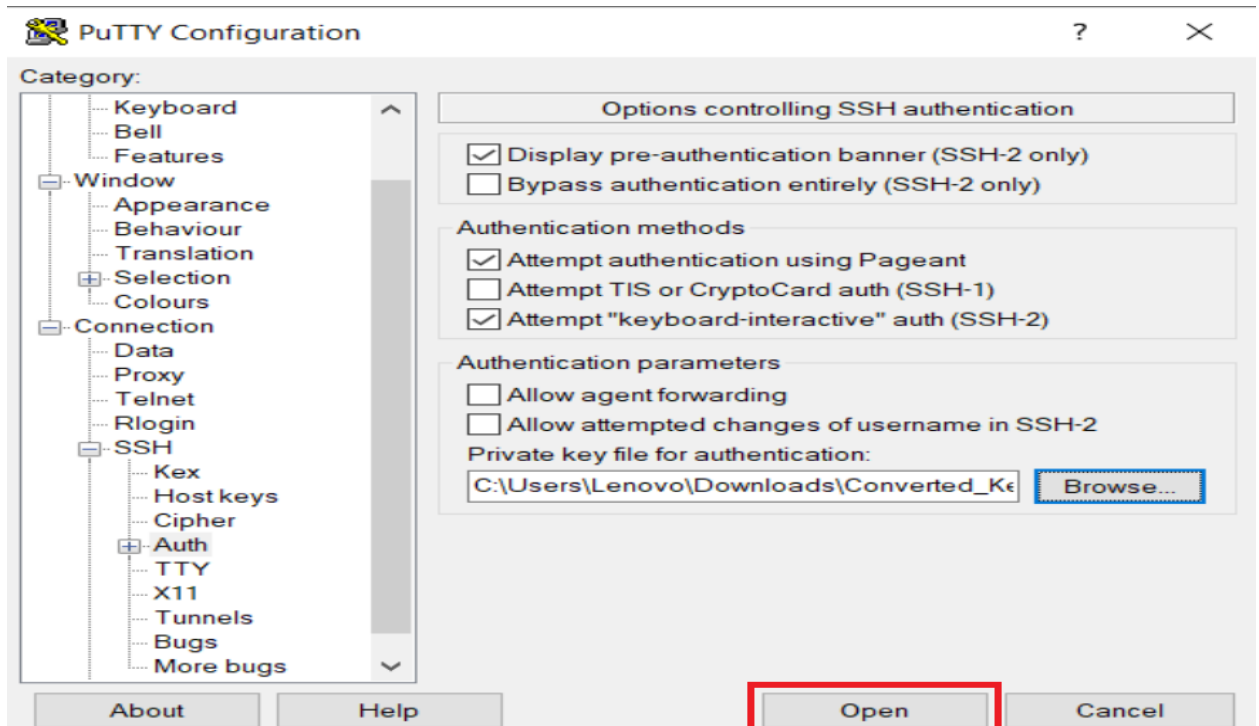


35. Click on **Browse** as shown in the above figure.

36. Then, select the key and click on **Open**.

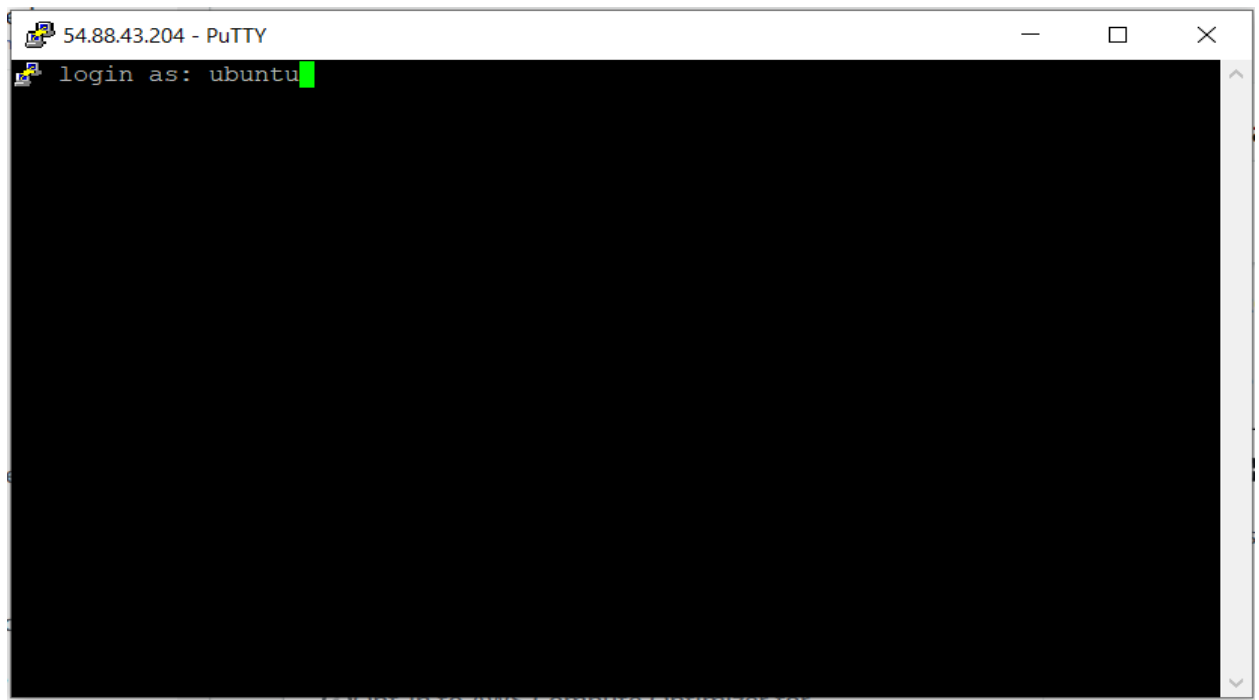


37. Once your key is loaded, click on **Open**.

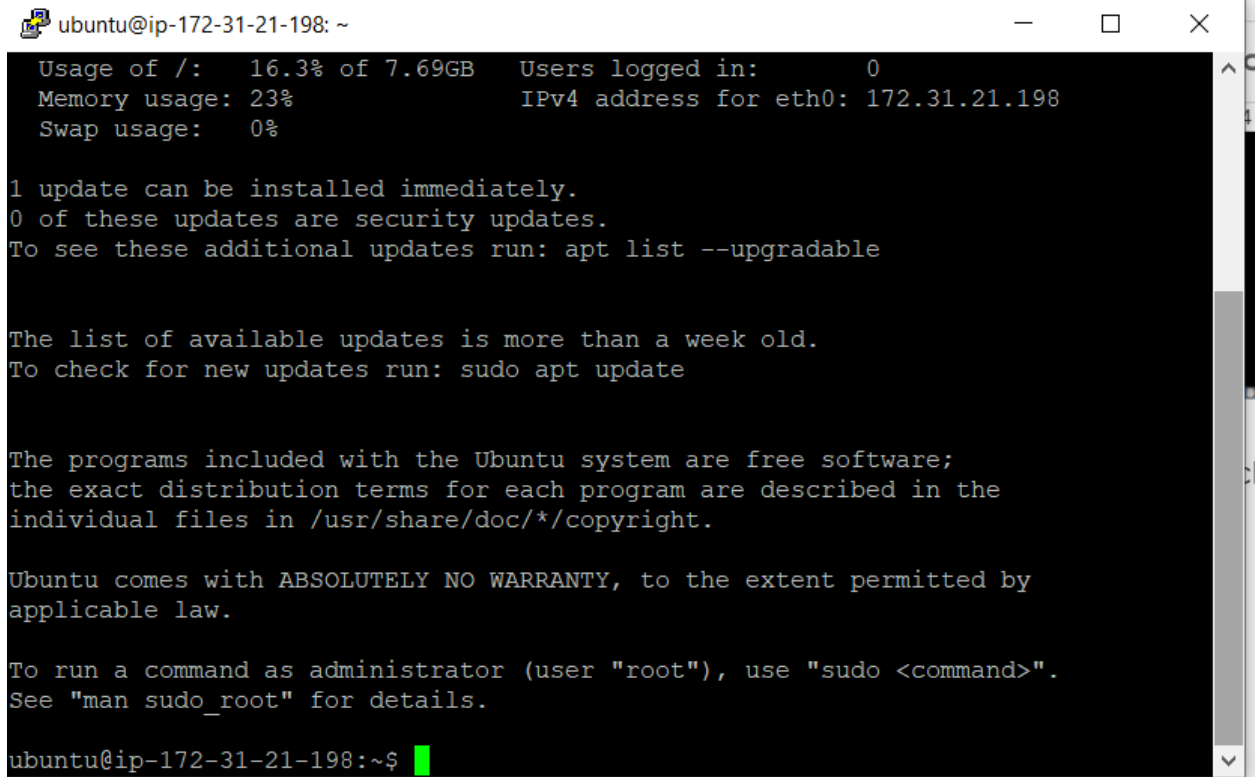


38. Next, you will get a **PuTTY security alert** warning. Select **yes**.

39. Now, you will be asked to **login as**, so, you must enter **ubuntu**.



40. Once you hit enter, you will get logged in to your machine as shown here.



```
ubuntu@ip-172-31-21-198: ~  
Usage of /: 16.3% of 7.69GB  Users logged in: 0  
Memory usage: 23%          IPv4 address for eth0: 172.31.21.198  
Swap usage: 0%  
  
1 update can be installed immediately.  
0 of these updates are security updates.  
To see these additional updates run: apt list --upgradable  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.  
  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
ubuntu@ip-172-31-21-198:~$
```