



Connecting to an EC2 instance (Windows)

To access the EC2 instance, you must go to the EC2 dashboard. The following steps will be helpful in accessing the 'EC2' instance **from a Windows machine**.

You must download the following softwares to connect to the EC2 instance:

- a. PuTTY
- b. PuTTYgen

1. Download and install PuTTY and PuTTYgen from the link below.

<https://www.ssh.com/ssh/putty/download#sec-Download-PuTTY-installation-package-for-Windows>

Click on the first link:

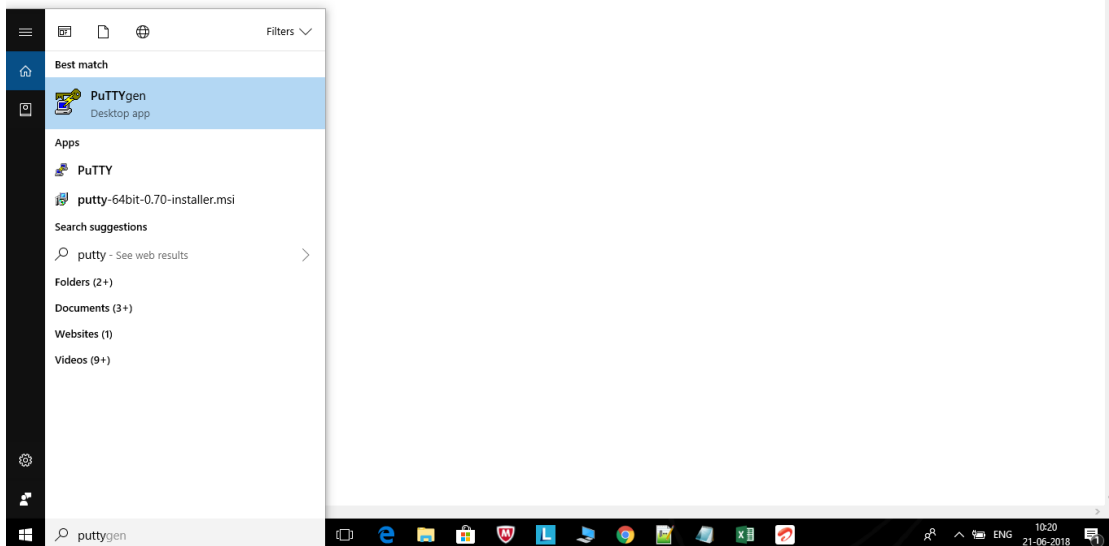
Download PuTTY installation package for Windows

Binary	Platform	Signature	Date
putty-0.73-installer.msi	Windows (any)	GPG signature	2019-09-29
putty-64bit-0.73-installer	Windows (64-bit)	GPG signature	2019-09-29

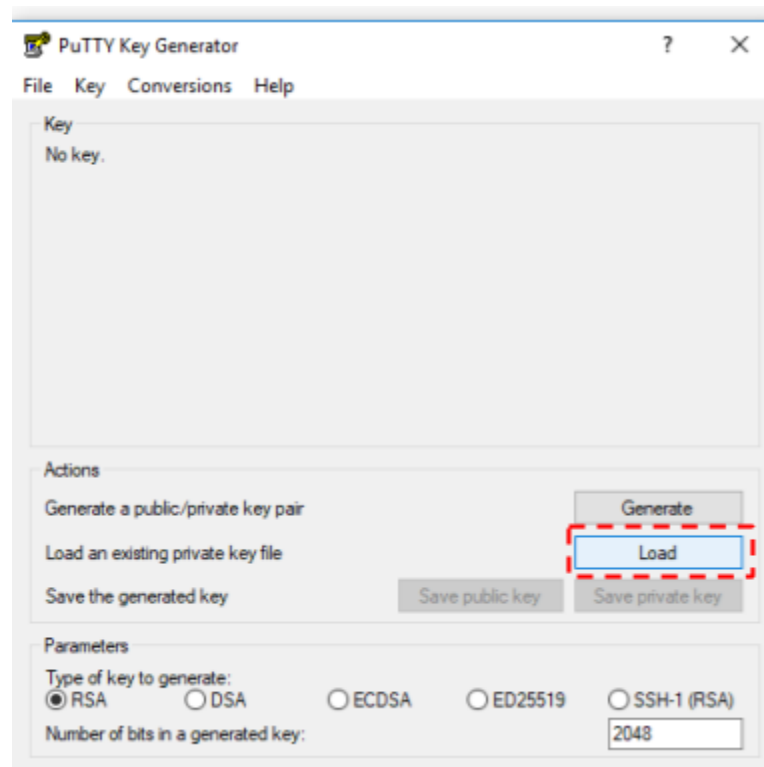
2. If you have a 32-bit OS, then you need to install putty-0.73-installer.msi. And if you have a 64-bit OS, then choose the latest 64-bit installer file. The file will automatically download after you click on the link.
3. Run the installer in your machine. Follow the steps and you will have successfully installed both PuTTY and PuTTYgen in your machine.



- Now, go to the 'Search' tab on your laptop and type 'putty'; the results will show both PuTTY and PuTTYgen.

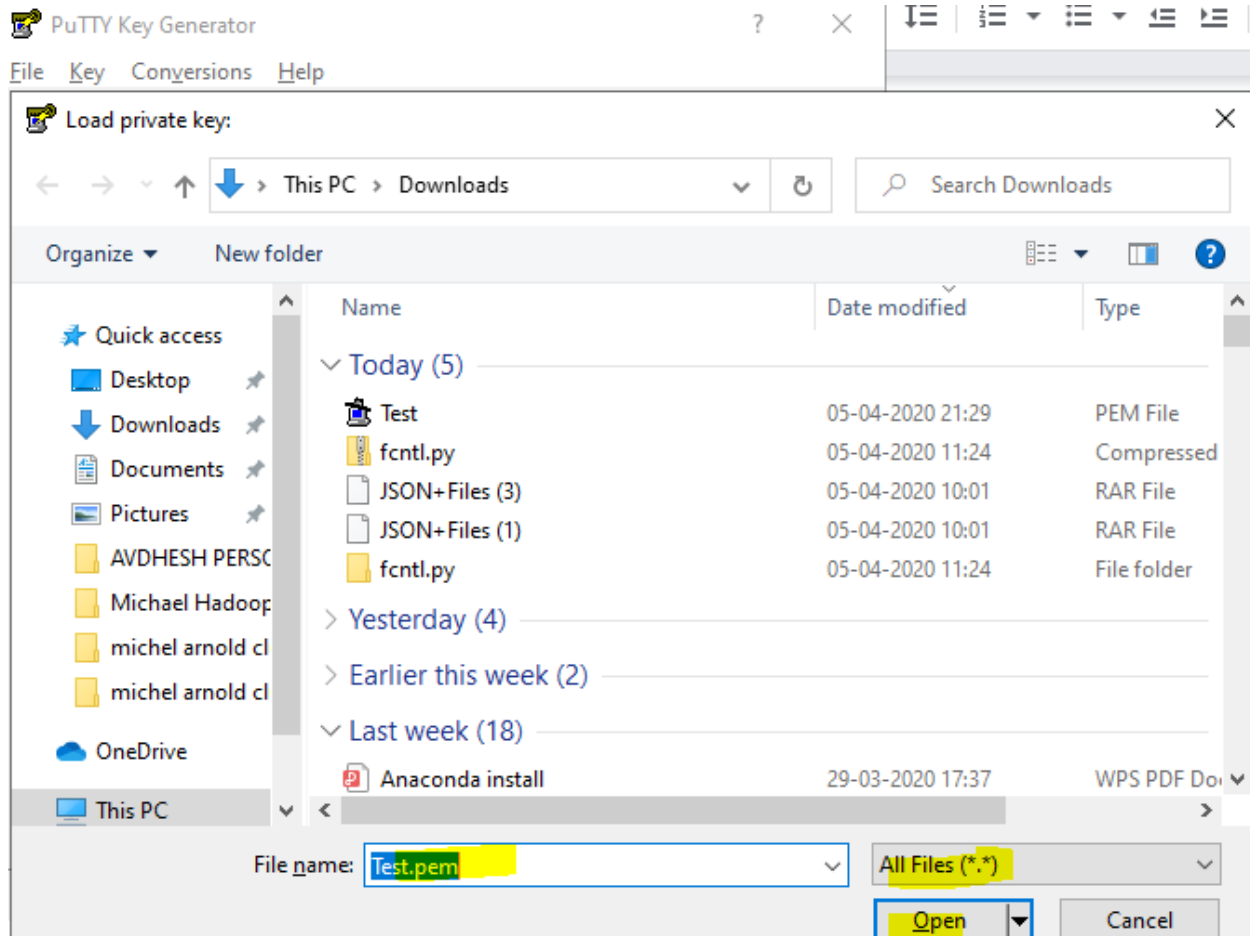


- Windows doesn't support .pem files and hence, PuTTYgen is used to convert .pem file to a .ppk file. To do this, **open PuTTYgen** and click on '**Load**'.



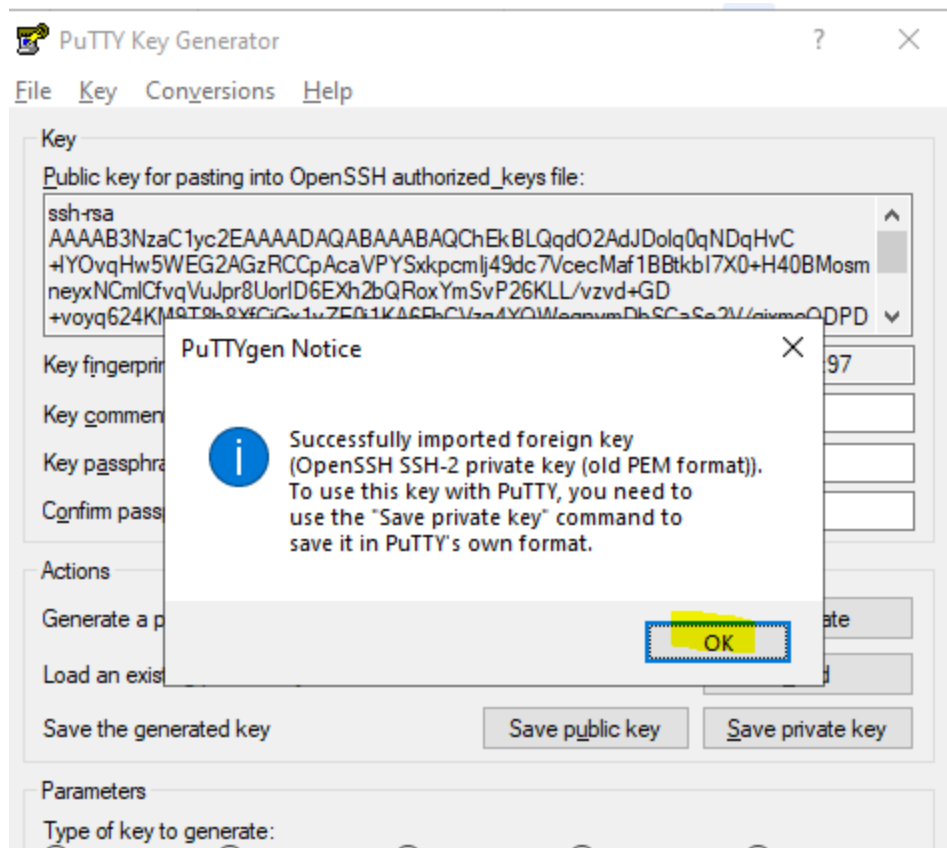


6. Locate the .pem file that you downloaded on your computer and select it. Do not forget to change the file type from .ppk to '**All files**' to locate your .pem file.



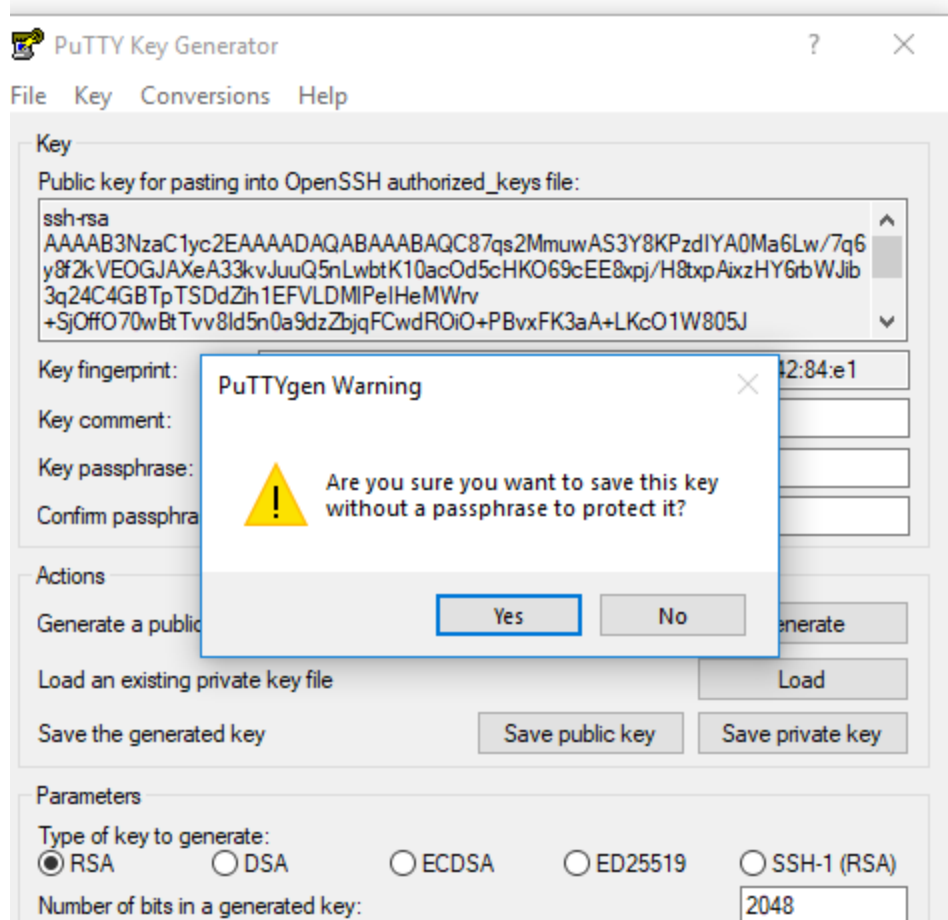


- Click on 'Open' and then click on 'OK' on the pop up that appears on the screen.





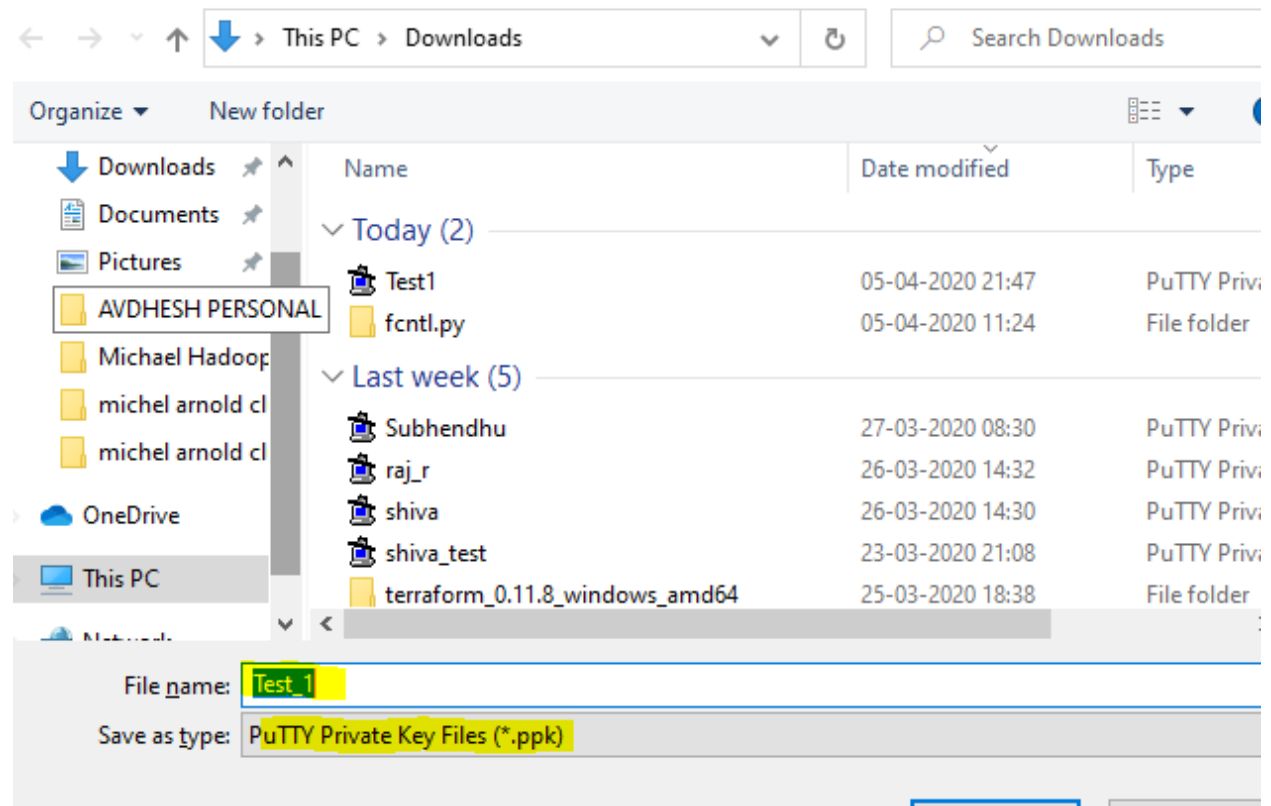
8. The '**Key Passphrase**' is an optional element. It will act as a password when you launch the instance using the ppk file. If you want to set a Key Passphrase, then remember to store it in a safe place. Click on '**Save private key**' and then click on '**Yes**'.





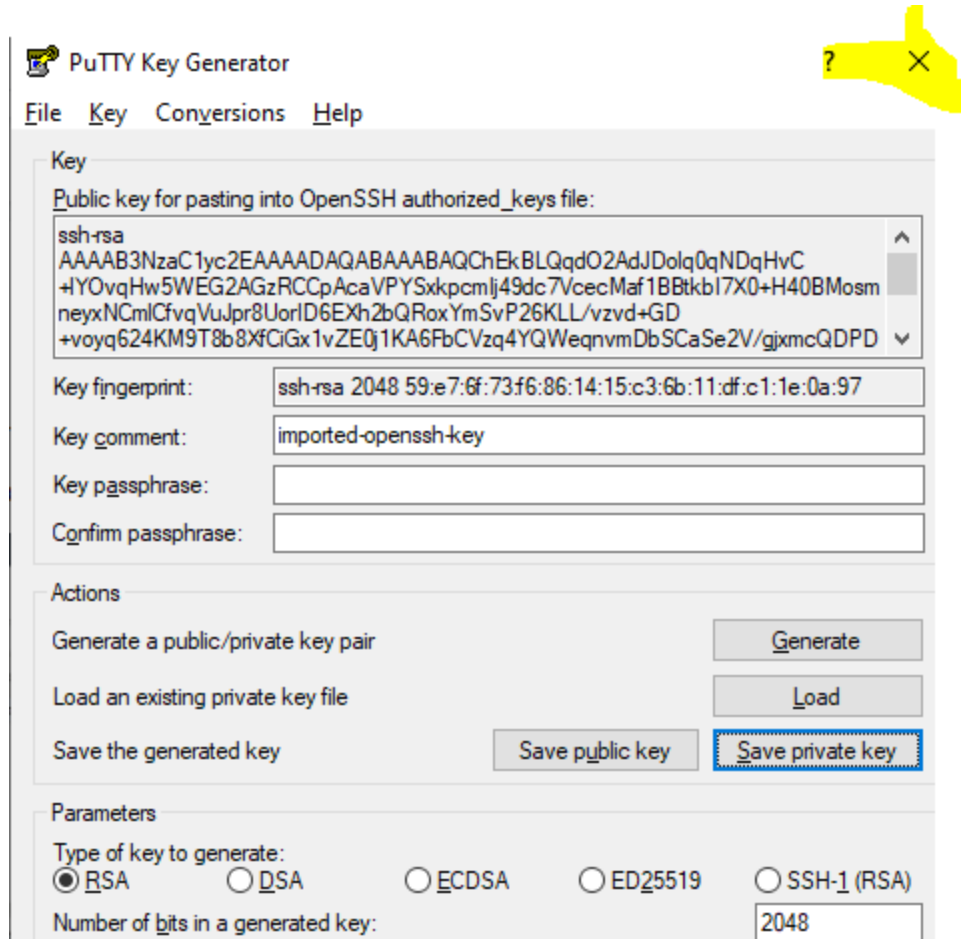
9. Now, save your .ppk file in a safe location (**Test_1** in our case).

 Save private key as:





10. You can close PuTTYgen now.





11. Now, you need to open PuTTY to access the instance. But before that, open your EC2 dashboard and select your instance. Copy the '**Public DNS (IPv4)**' of your instance as shown below.

The screenshot displays the AWS Management Console interface for the EC2 service. The left-hand navigation pane shows the 'Instances' section selected. The main content area shows a list of instances with the following details:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
test	i-0551c3ec33d43fcf7	Running	t2.micro	-	No alarms	us-east-1d

Below the table, the 'Instance summary' for the selected instance is shown:

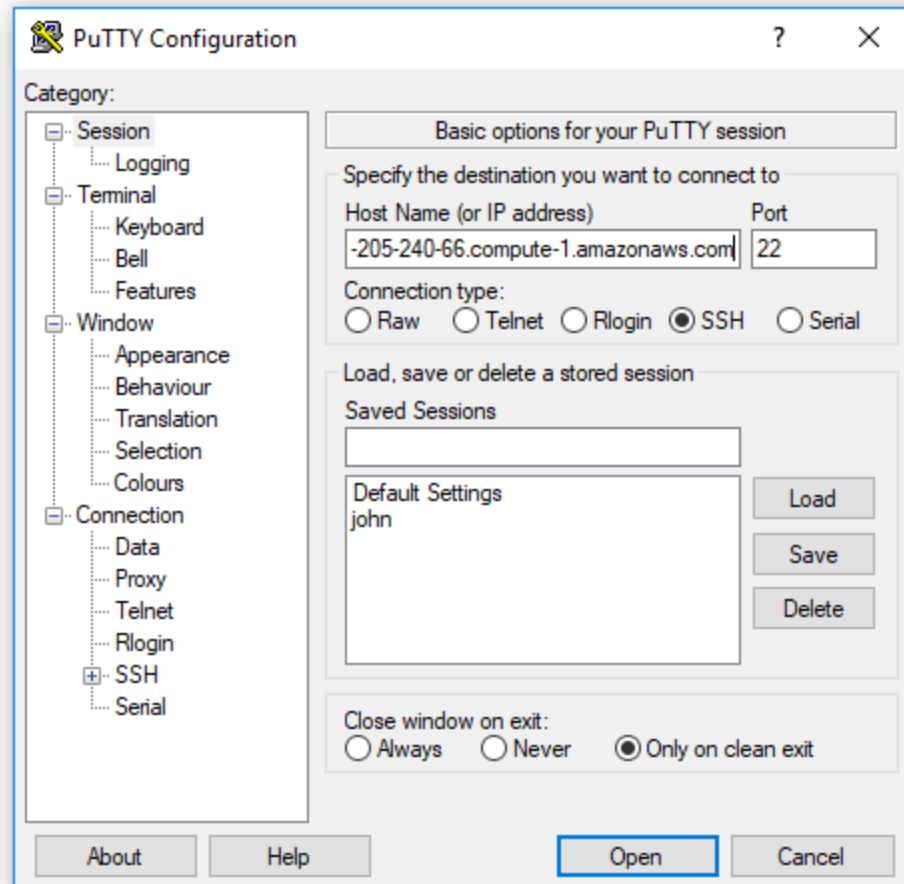
Instance ID	Public IPv4 address	Private IPv4 addresses
i-0551c3ec33d43fcf7 (test)	3.88.169.110 open address	172.31.93.166

The 'Public IPv4 DNS' is highlighted in a red box, showing the following details:

Public IPv4 DNS	Private IPv4 DNS
ec2-3-88-169-110.compute-1.amazonaws.com open address	ip-172-31-93-166.ec2.internal

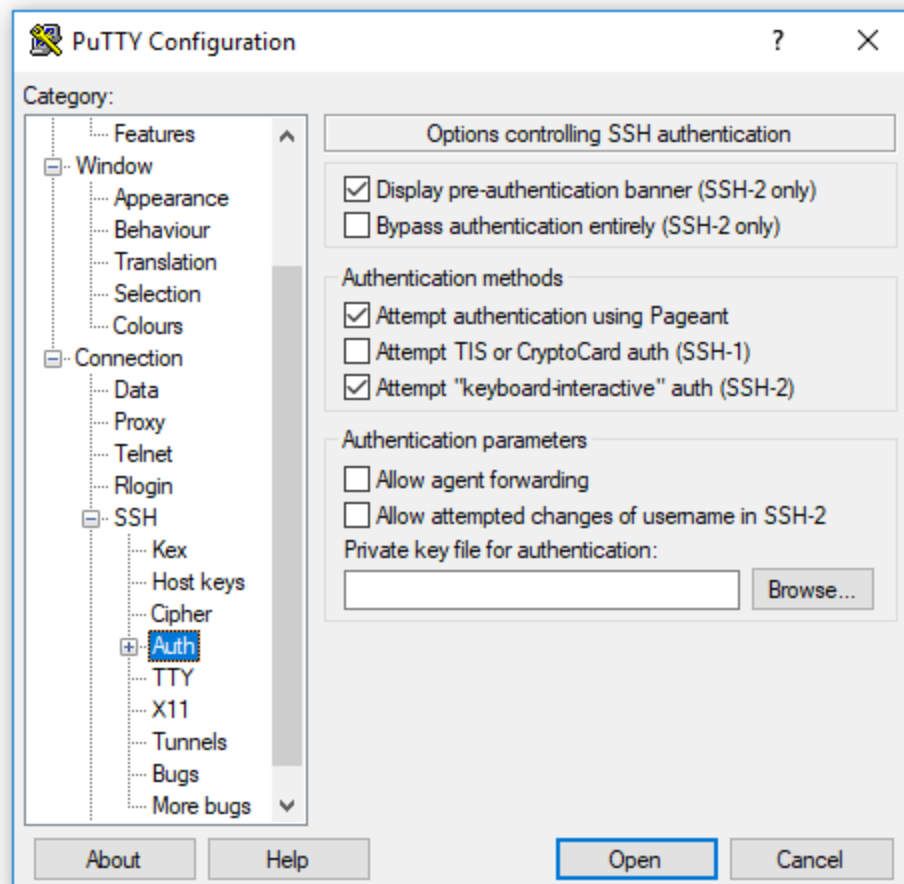


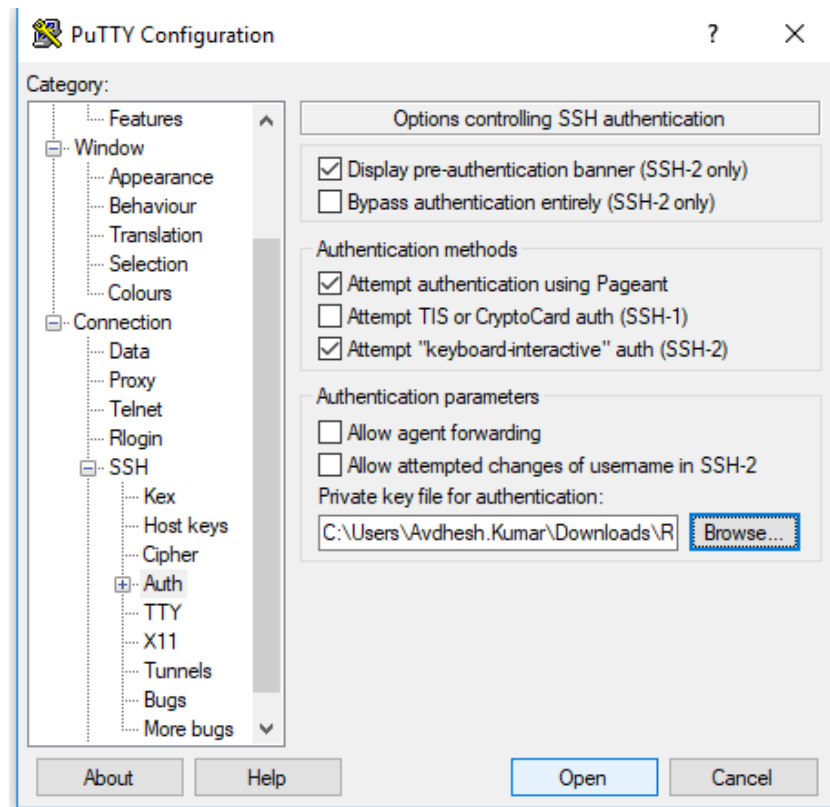
12. Now, open PuTTY. Paste the copied information under the 'Host Name' section of the PuTTY window.





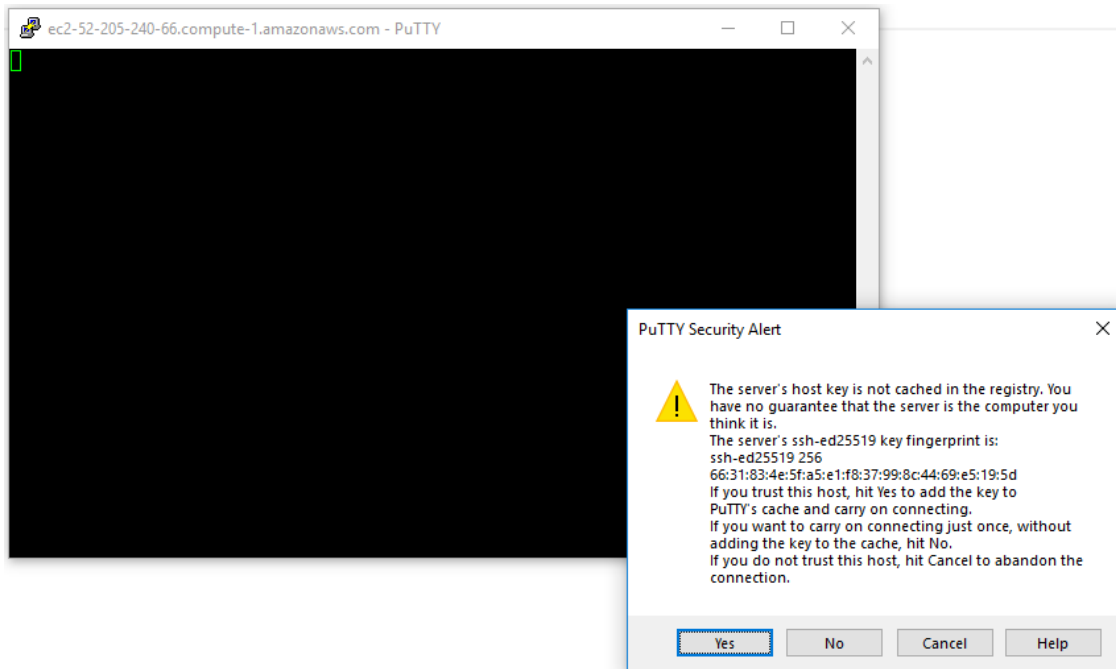
13. On the left-hand side panel, click on '**Connection**'. Then click on '**SSH**' followed by '**Auth**'. You will find the space to provide the In the private key file. Here, click on the '**Browse**' button and select the .ppk file (**Test_1.ppk**) that you generated using PuTTYgen above.





14. Click on '**Open**'. If you have provided correct IP under the Security Groups, you will receive a window prompt. Press '**Yes**' and login with the username as **ubuntu**.

(In case you are working with Amazon Linux instead of Ubuntu instance, the username will change to **ec2-user** from **ubuntu**.)



(If you have added a security keyphrase, you will have to provide that to login.)

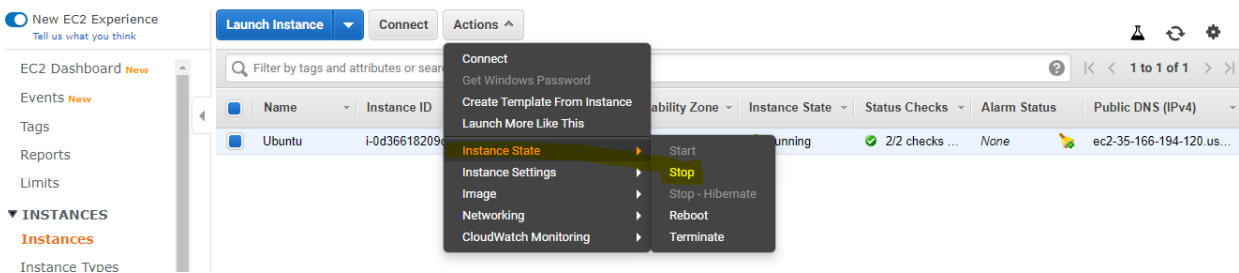
```
ubuntu@ip-172-31-19-245: ~  
login as: ubuntu  
Authenticating with public key "imported-openssh-key"  
Welcome to Ubuntu 18.04.3 LTS (GNU/Linux 4.15.0-1057-aws x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
System information as of Sun Apr  5 16:23:23 UTC 2020  
  
System load:  0.0      Processes:            86  
Usage of /:   13.6% of 7.69GB   Users logged in:     0  
Memory usage: 14%      IP address for eth0: 172.31.19.245  
Swap usage:   0%  
  
packages can be updated.  
updates are security updates.  
  
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.
```



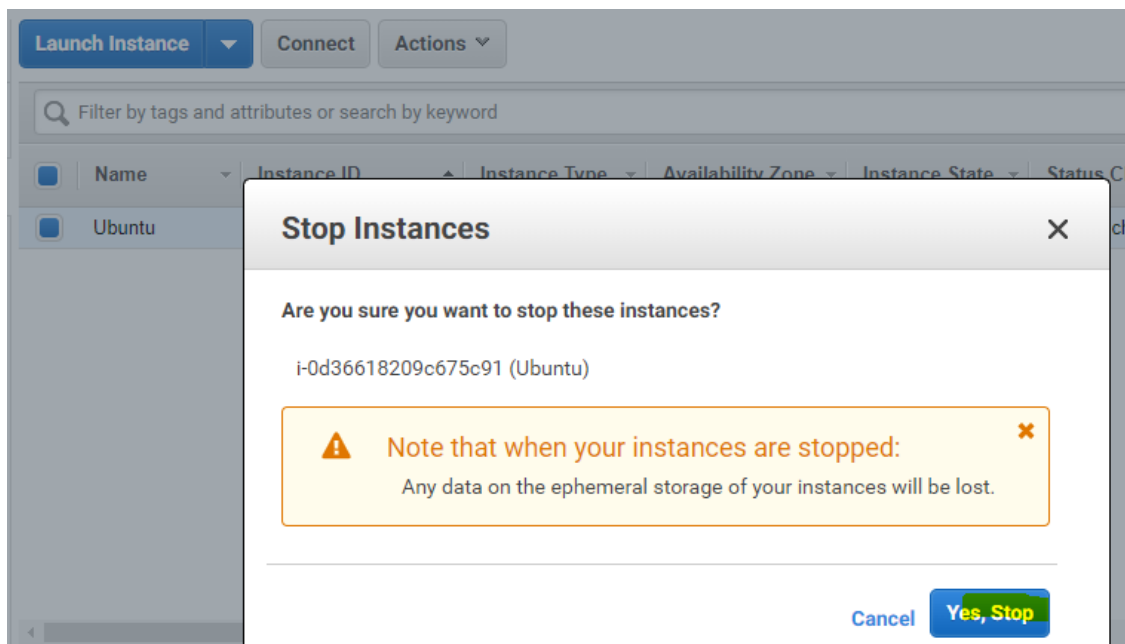
15. Now, your local machine has successfully established a connection with the EC2 Instance.

NOTE-: After you have created the instance, please stop the t2.micro instance when your work is over. Otherwise, your credits will get deducted. The steps to stop the instance are given below:

1. Go to your EC2 dashboard and select your ec2 instance then click to “Action”
> Instance State > Stop



2. Click on **Yes, Stop**.





3. Verify with Instance state.it should be stopped state and colour state is Red.

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Launch Instance **Connect** **Actions**

EC2 Dashboard **New**

Events **New**

Tags

Reports

Limits

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)
Ubuntu	i-0d36618209c675c91	t2.micro	us-west-2b	stopped		None	



For Linux/Mac OS users to connect to the EC2 Instance.

For Linux/Mac systems, you don't need to convert your .pem file to a .ppk file.

1. Open 'Terminal' on your system and go to the location where you downloaded the .pem file.

Let's say that your .pem file was downloaded in the 'Downloads' folder. You need to first change your current working directory to the 'Downloads' directory. To do that, use the following 'cd' command: `cd ./Downloads/`

2. Next, run the 'ls' command, which lists all the files in a given Linux directory. Verify that your .pem file exists in the given directory.
3. Change the permissions of the .pem file to 400, which gives the read permission and removes all other permissions from the user. The command is shown below. (Test.pem is the filename in our case.)

`chmod 400 Test.pem`

4. Now, go back to your EC2 instance page and click on the 'Connect' button to get the command for the connection. After clicking, you will see the following screen appear.

The screenshot shows the AWS Management Console interface. On the left, there's a sidebar with navigation options like 'EC2 Dashboard', 'Events', 'Tags', 'Reports', 'Limits', and 'INSTANCES'. The main area shows a table of EC2 instances with columns for Name, Instance ID, and Instance Type. A 'Connect' button is highlighted in yellow. To the right, a modal window titled 'Connect to your instance' is open. It shows three connection methods: 'A standalone SSH client' (selected), 'Session Manager', and 'EC2 Instance Connect (browser-based SSH connection)'. Below this, it provides instructions on how to access the instance, including opening an SSH client, locating the private key file (Test.pem), and using the command `chmod 400 Test.pem`. It also shows the public DNS for the instance: `ec2-34-209-142-247.us-west-2.compute.amazonaws.com`.



5. Use the command shown under 'Example' on your screen to connect to the instance. The command is

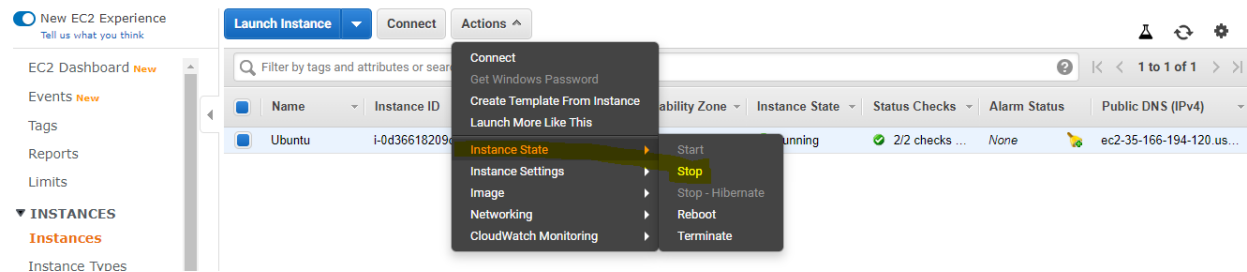
```
ssh -i Test.pem ubuntu@public_dns_name
```

Replace the public_dns_name with your own public DNS name. Also, before running this command, ensure that you are present in the directory in which your .pem file is present. This can be checked using the 'pwd' command, which writes the full path of the current working directory.

6. If you have provided correct IP under the Security Groups, you will receive a window prompt. Type 'Yes'. inside the terminal and press Enter. Instance will be launched.

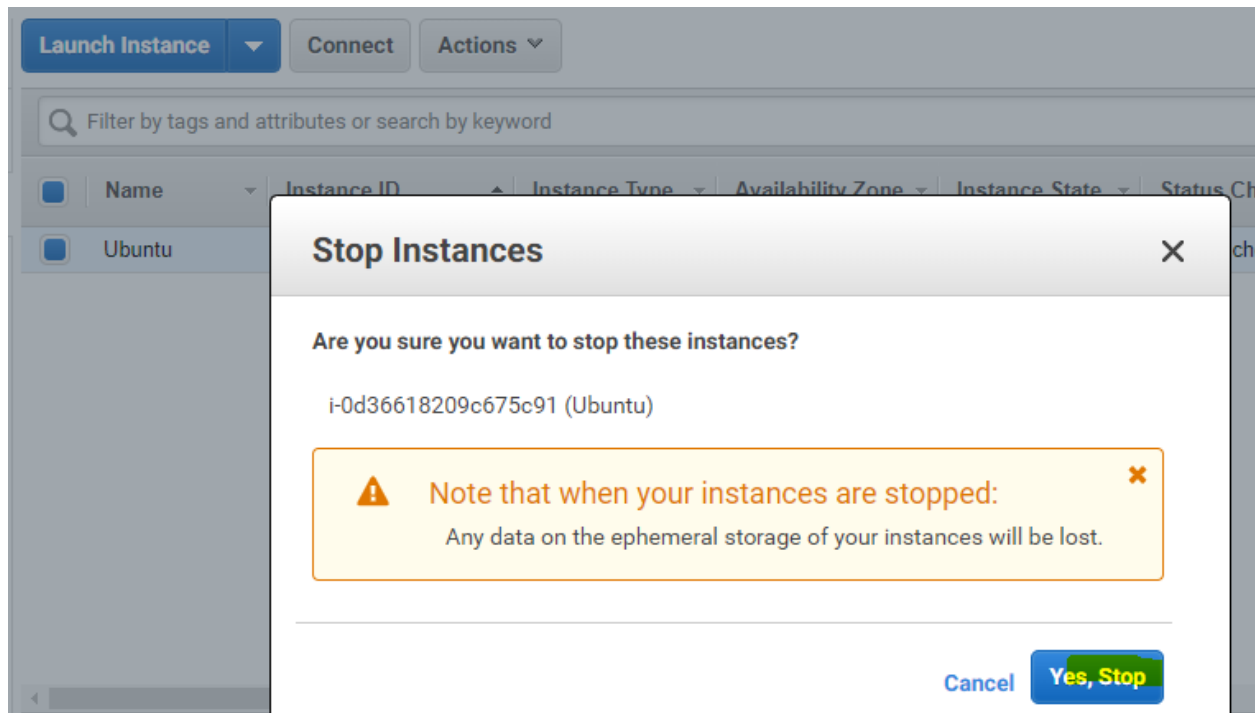
NOTE-: After you have created the instance, please stop the t2.micro instance when your work is over. Otherwise, your credits will get deducted. The steps to stop the instance are given below:

1. Go to your EC2 dashboard and select your ec2 instance then click to "Action" > Instance State > Stop





2. Click on **Yes.Stop**.



3. Verify with Instance state. it should be stopped state and colour state is Red.

