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ROLL NO	20BIS020
SUBJECT CODE-SUBJECT	ODD 22-23-U18ISE0006-CLOUD ARCHITECTURE AND COMPUTING

LAB-2 : Linux Instance creation

Aim:

Launching an AWS instance which runs Redhat Linux.

Required AWS services:

EC2

Procedure :

1. In Amazon management console, choose EC2 under services tab

2. Click Launch Instance

3. Choose AMI image

select any Linux OS (free tier)

4. Choose the instance type

5. Click Next : configure instance details

a. Leave all default setting as it is.

b. Leave default setting for Storage, Tags

Leave the default settings

c. In security group, Click Add rule

select HTTP

In Source drop down list , select Anywhere

Click Add rule

select HTTPS

In Source drop down list , select Anywhere

Click Review and Launch

Click Launch

d. Security key pair

Choose Create new keypair

Type key pair name : Webserver

Click download keypair (pem key)

Click Launch Instance

On launch status page click View Instances

6. Convert pem private key into ppk private key using puttygen

7. Connect though putty

a. Copy the public IP from Instance and paste it in Host name of putty

b. Browse for PPK key in auth

a. Click open in session

b. Click accept

c. Type key phrase if any

Now linux instance is ready

8. Execute linux commands

OUTPUT:

LAUNCH AN INSTANCE

aws

Services

Search

[Alt+S]

N. Virginia

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EC2 > Instances > Launch an instance

Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Name

Linux

Add additional tags

Application and OS Images (Amazon Machine Image)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

Quick Start

Amazon Linux

macOS

Ubuntu

Windows

Red Hat

S

Browse more AMIs

Summary

Number of instances

1

Software Image (AMI)

Amazon Linux 2 Kernel 5.10 AMI...read more

ami-0b0dcb5067f052a63

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage,

Cancel Launch instance

aws

Services

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Linux

Add additional tags

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S

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Red Hat Enterprise Linux 9 (HVM), SSD Volume Type

ami-08e637cea2f053dfa (64-bit (x86)) / ami-05c5c474dfb6af922 (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

Provided by Red Hat, Inc.

Architecture

AMI ID

Summary

Number of instances

1

Software Image (AMI)

Provided by Red Hat, Inc.

ami-08e637cea2f053dfa

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage,

Cancel Launch instance

Create key pair



Key pairs allow you to connect to your instance securely.

Enter the name of the key pair below. When prompted, store the private key in a secure and accessible location on your computer. **You will need it later to connect to your instance.** [Learn more](#)

Key pair name

The name can include upto 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

- ☒ RSA
RSA encrypted private and public key pair
- ☐ ED25519
ED25519 encrypted private and public key pair (Not supported for Windows instances)

Private key file format

- ☒ .pem
For use with OpenSSH
- ☐ .ppk
For use with PuTTY

Cancel

Create key pair

▼ Network settings [Info](#)

VPC - *required* [Info](#)

vpc-0d9965613f7d3fbeb
172.31.0.0/16

(default) ▼



Subnet [Info](#)

No preference ▼



[Create new subnet](#)

Auto-assign public IP [Info](#)

Enable ▼

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☒ Create security group

☐ Select existing security group

Security group name - *required*

linux

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and _-:/()#,@[]+=&;[]!\$*

Description - *required* [Info](#)

linux created 2022-12-08T11:53:38.398Z

aws Services Search [Alt+S] N. Virginia ▼

▼ Security group rule 2 (TCP, 80, 0.0.0.0/0) Remove

Type [Info](#) Protocol [Info](#) Port range [Info](#)

HTTP TCP 80

Source type [Info](#) Source [Info](#) Description - optional [Info](#)

Anywhere Add CIDR, prefix list or security 0.0.0.0/0 × e.g. SSH for admin desktop

▼ Security group rule 3 (TCP, 443, 0.0.0.0/0) Remove

Type [Info](#) Protocol [Info](#) Port range [Info](#)

HTTPS TCP 443

Source type [Info](#) Source [Info](#) Description - optional [Info](#)

Anywhere Add CIDR, prefix list or security 0.0.0.0/0 × e.g. SSH for admin desktop

⚠ Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only. ×

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Provided by Red Hat, Inc.
ami-08e637cea2f053dfa

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 10 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the [Amazon Free Tier](#)) ×

Cancel Launch instance

aws

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Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Add security group rule

▼ Configure storage Info

Advanced

1x 10 GIB gp2 Root volume (Not encrypted)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

0 x File systems

Edit

► Advanced details Info

▼ Summary

Number of instances info1

Software Image (AMI)
Provided by Red Hat, Inc.
ami-08e637cea2f053dfa

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 10 GIB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the

CancelLaunch instance

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

aws

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New EC2 Experience

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

▼ Instances

Instances New

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

▼ Images

AMIs

EC2 > Instances > Launch an instance

Success

Successfully initiated launch of instance (i-0c8128bac67b10d73)

Launch log

Next Steps

Create billing and free tier usage alerts

To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.

Create billing alerts

Connect to your instance

Once your instance is running, log into it from your local computer.

Connect to instance

Learn more

Connect an RDS database

Configure the connection between an EC2 instance and a database to allow traffic flow between them.

Create a new RDS database

Learn more

View all instances

aws

Services

Search

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New EC2 Experience

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Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

▼ Images

AMIs

Instances (1) Info

Find instance by attribute or tag (case-sensitive)

Connect

Instance state

Actions

Launch instances

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input type="checkbox"/>	Linux	i-0c8128bac67b10d73	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	ec2-3-95-147-37

Select an instance

Feedback

Looking for language selection? Find it in the new Unified Settings


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Privacy

Terms

Cookie preferences

Conversion of .pem to .ppk :

 PuTTY Key Generator ×

File Key Conversions Help

Key

No key.

Actions

Generate a public/private key pair

Load an existing private key file

Save the generated key

Generate

Load

Save public key

Save private key


Parameters

Type of key to generate:

☒ RSA ☐ DSA ☐ ECDSA ☐ EdDSA ☐ SSH-1 (RSA)

Number of bits in a generated key:

2048

 PuTTY Key Generator ×

File Key Conversions Help

Key

Public key for pasting into OpenSSH authorized_keys file:
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQACCF7zXGY3x8wtGsJJdPa6fc4HQawTAnPspAFpILloliXfQLXJkwfEyJozf
+K7nYj0pkUMHEdj9+s+UvMTG00GqnX+yvl6i7tHoXWSk2lm3DkhB/R0dUdXWepGFfB
+YYXW2NRblrlDOn8q7xMimHczPjTe6KlvCXbUP9388jsR/YvXeXd/MNZ
+Xx4jhlcUDLIWiJjd2wSbHFaWdlhTILpetBlilp2E9vDI3UP8T+EJ

Key fingerprint

ssh-rsa 2048 SHA256:uSdTLTnYSYhq13s6WH7yie0xw9rg0sLycrmlPjkqPbA

Key comment

imported-openssh-key

Key passphrase:

•••••

Confirm passphrase:

•••••

Actions

Generate a public/private key pair

Load an existing private key file

Save the generated key

Generate

Load

Save public key

Save private key

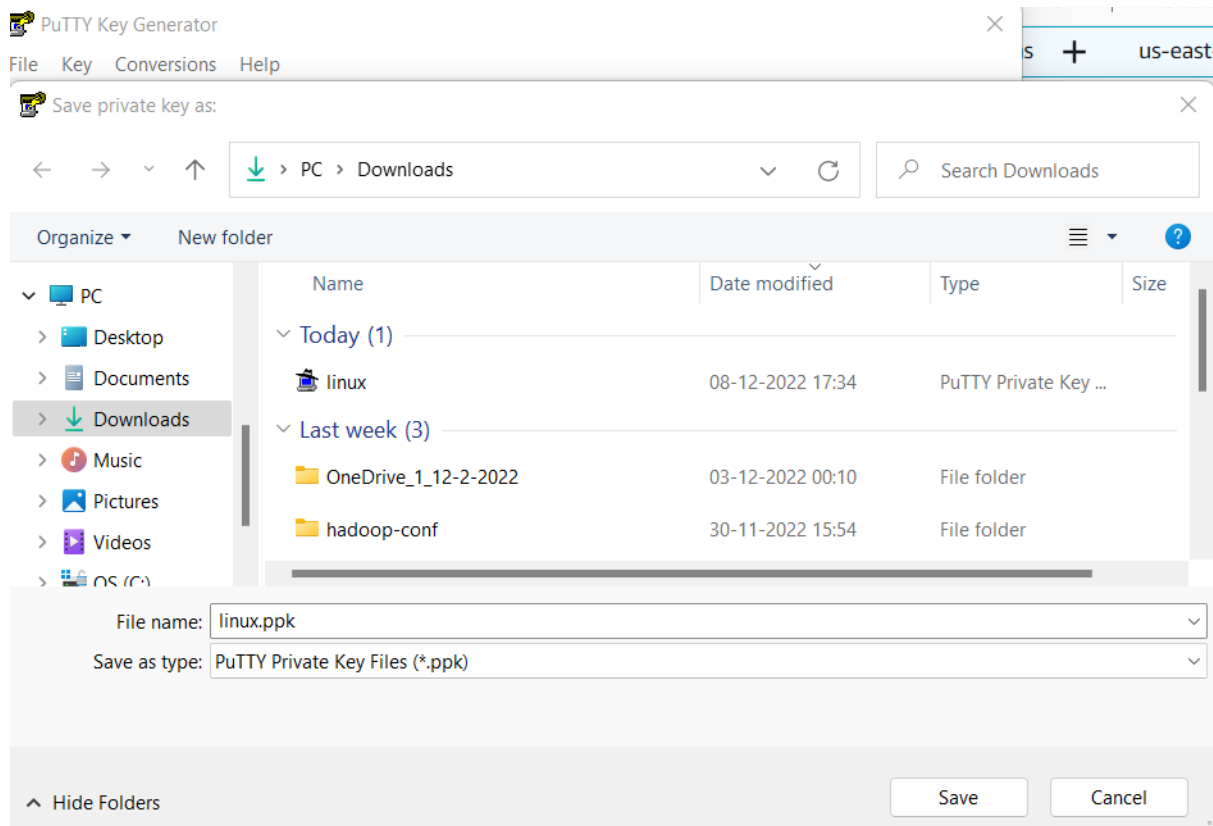
Parameters

Type of key to generate:

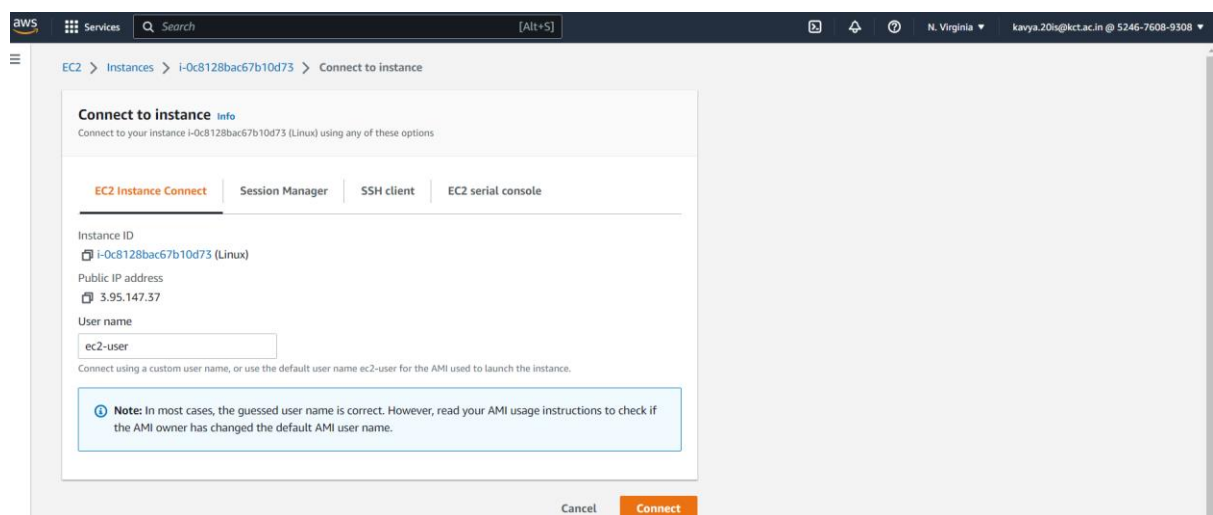
☒ RSA ☐ DSA ☐ ECDSA ☐ EdDSA ☐ SSH-1 (RSA)

Number of bits in a generated key:

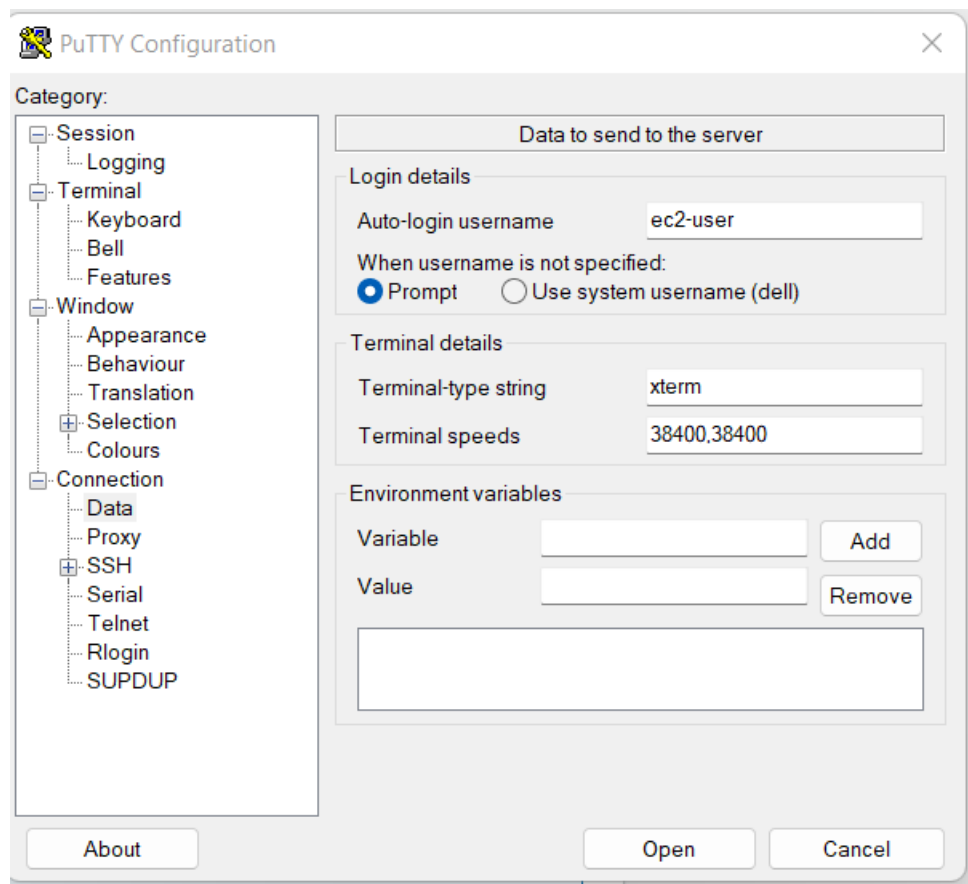
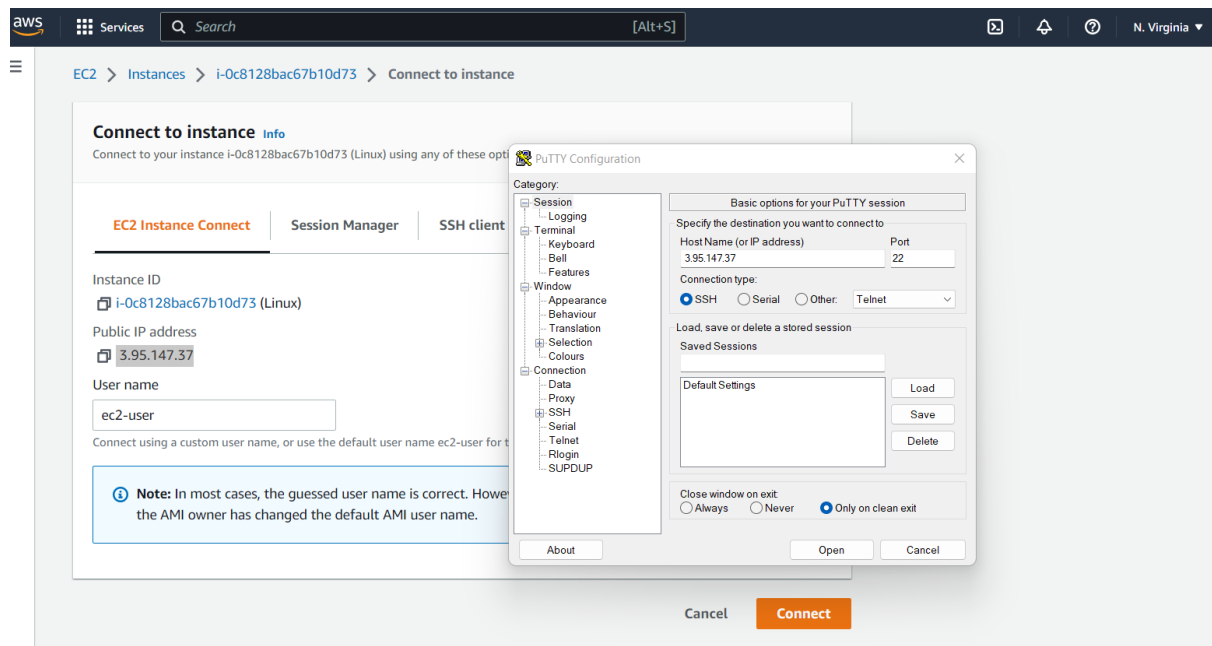
2048

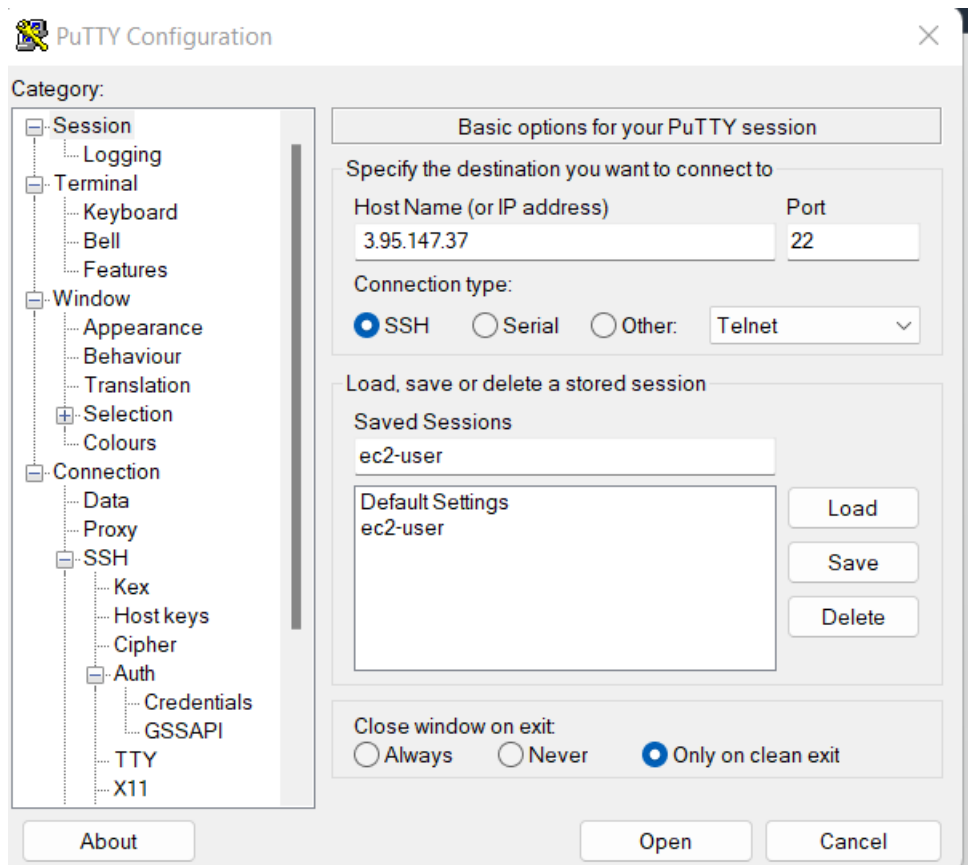
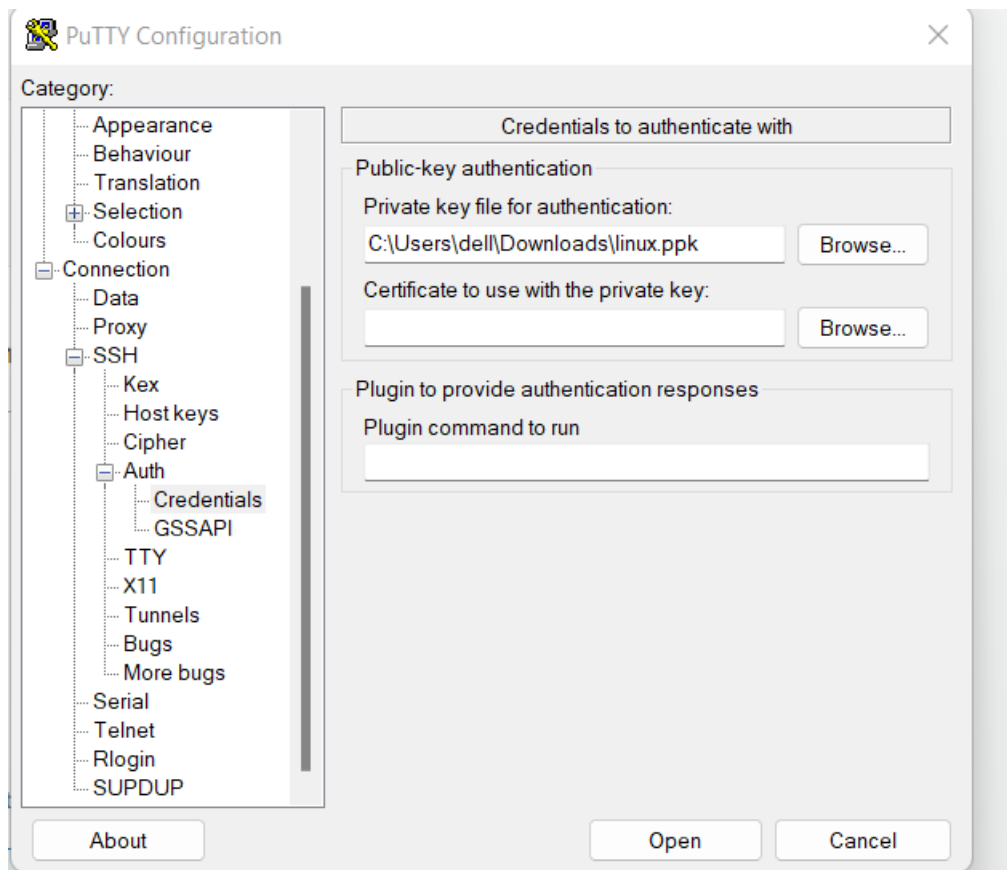


CONNECT TO INSTANCE:

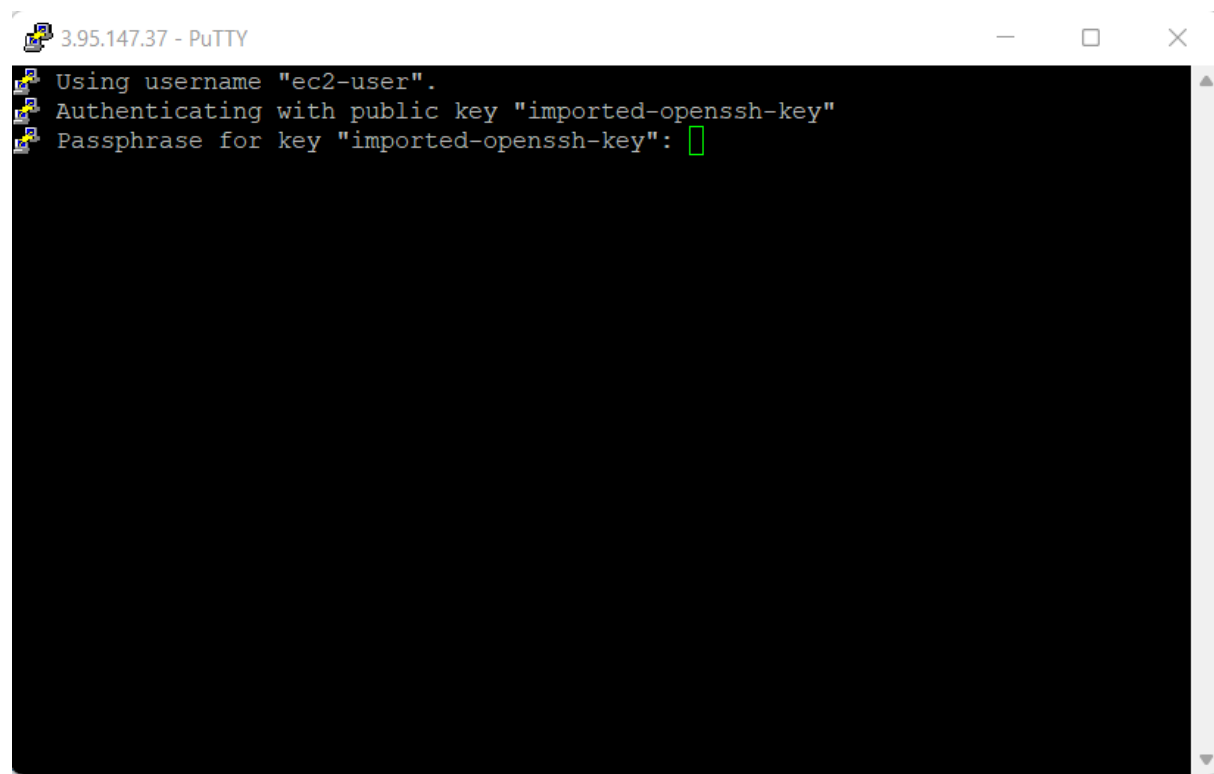


PuTTY:



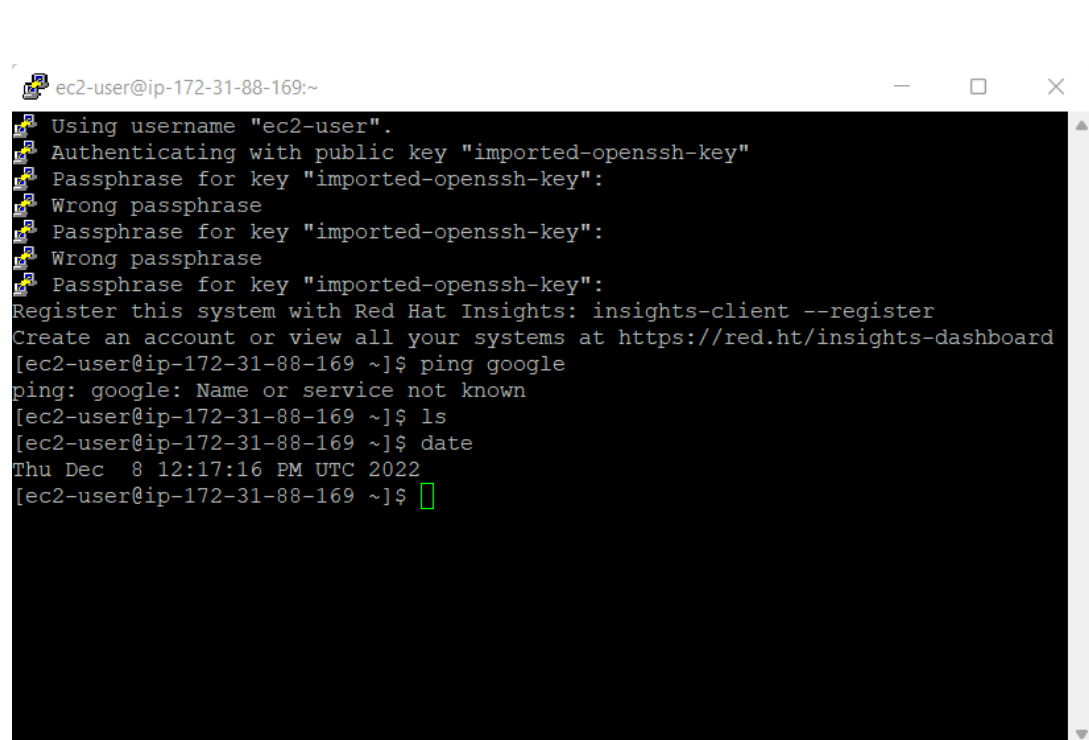


OUTPUT LINUX:



```
3.95.147.37 - PuTTY
Using username "ec2-user".
Authenticating with public key "imported-openssh-key"
Passphrase for key "imported-openssh-key":
```

Execute linux commands: date



```
ec2-user@ip-172-31-88-169:~
Using username "ec2-user".
Authenticating with public key "imported-openssh-key"
Passphrase for key "imported-openssh-key":
Wrong passphrase
Passphrase for key "imported-openssh-key":
Wrong passphrase
Passphrase for key "imported-openssh-key":
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
[ec2-user@ip-172-31-88-169 ~]$ ping google
ping: google: Name or service not known
[ec2-user@ip-172-31-88-169 ~]$ ls
[ec2-user@ip-172-31-88-169 ~]$ date
Thu Dec 8 12:17:16 PM UTC 2022
[ec2-user@ip-172-31-88-169 ~]$
```