

Project 1 - Deploying a Multi-Tier Website Using AWS EC2

Topic: Deploy a Multi-tier website using EC2 **Description:** Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.

Problem Statement:

Company ABC wants to move their product to AWS. They have the following things setup right now:

1. MySQL DB
2. Website (PHP)

The company wants high availability on this product, therefore wants autoscaling to be enabled on this website.

Steps to solve:

1. Launch an EC2 Instance
2. Enable Auto Scaling on these instances (minimum 2)
3. Create an RDS Instance
4. Create Database & Table in RDS Instance
 - ✓ Database name: intel
 - ✓ Table name: data
 - ✓ Database password: intel123
5. Change hostname in website
6. Allow traffic from EC2 to RDS Instance
7. Allow all-traffic to EC2 instance

Q ec2 X

Search results for 'ec2'

Try searching with longer queries for more relevant results

Services (13)

Features (54)

Resources New

Documentation (33,708)

Knowledge Articles (20)

Marketplace (3,122)

Blogs (2,058)

Events (30)

Tutorials (21)

Services See all 13 results ▶

 EC2 ☆
Virtual Servers in the Cloud

 EC2 Image Builder ☆
A managed service to automate build, customize and deploy OS images

 Recycle Bin
Protect resources from accidental deletion

 Amazon Inspector ☆
Continual vulnerability management at scale

Features See all 54 results ▶

Dashboard

 EC2 feature

Instances Info

Find Instance by attribute or tag (case-sensitive)

Connect Instance state Actions Launch instances

Nam... nam... owne... purpo... Instance ID Instance state Instance type Status check Alarm status Availability Zon

No instances

You do not have any instances in this region

Launch instances

[EC2](#) > [Instances](#) > Launch an instance

Launch an instance Info

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 Info

Name

ec2instance-project-1

Add additional tags

▼ Application and OS Images (Amazon Machine Image) [Info](#)

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



Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type

Free tier eligible

ami-0e83be366243f524a (64-bit (x86)) / ami-05983a09f7dc1c18f (64-bit (Arm))

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

▼ Instance type [Info](#)

Instance type

t2.micro
Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Windows base pricing: 0.0162 USD per Hour
On-Demand SUSE base pricing: 0.0116 USD per Hour
On-Demand RHEL base pricing: 0.0716 USD per Hour
On-Demand Linux base pricing: 0.0116 USD per Hour

Free tier eligible

All generations

[Compare instance types](#)

[Additional costs apply for AMIs with pre-installed software](#)

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair



Proceed without a key pair (Not recommended)

Default value

Select

 [Create new key pair](#)

Create key pair



Key pair name

Key pairs allow you to connect to your instance securely.

The name can include up to 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

Private key file format

.pem

For use with OpenSSH

.ppk

For use with PuTTY



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](#) ↗

[Cancel](#)

[Create key pair](#)

▼ Instance type [Info](#)

Instance type

t2.micro

Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Windows base pricing: 0.0162 USD per Hour
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On-Demand RHEL base pricing: 0.0716 USD per Hour
On-Demand Linux base pricing: 0.0116 USD per Hour

All generations

[Compare instance types](#)

Additional costs apply for AMIs with pre-installed software

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

kp-ppk-project-1

[Create new key pair](#)

Security Groups (2) [Info](#)



Actions ▾

Export security groups to CSV

[Create security group](#)

Filter security groups

< 1 >

<input type="checkbox"/>	Name	Security group ID	Security group name	VPC ID	Description	Owner
--------------------------	------	-------------------	---------------------	--------	-------------	-------

Inbound rules (4)



Manage tags

[Edit inbound rules](#)

Filter security group rules

< 1 >

<input type="checkbox"/>	Name	Security group rule...	IP version	Type	Protocol	Port range
<input type="checkbox"/>	-	sgr-0addd2ac50a00e331	IPv4	HTTPS	TCP	443
<input type="checkbox"/>	-	sgr-0a3085bb5a41ef757	IPv4	SSH	TCP	22
<input type="checkbox"/>	-	sgr-0087bc93e2818cc61	IPv4	All traffic	All	All
<input type="checkbox"/>	-	sgr-0c1066cc8cc4910e5	IPv4	HTTP	TCP	80

⌚ Security group (sg-085f667bb1c1a34d1 | project-1-sg) was created successfully
▶ Details

EC2 > Security Groups > sg-085f667bb1c1a34d1 - project-1-sg

sg-085f667bb1c1a34d1 - project-1-sg

Actions ▾

Details

Security group name project-1-sg	Security group ID sg-085f667bb1c1a34d1	Description project-1-sg	VPC ID vpc-0ae30520aa3bc4455
Owner 130124071600	Inbound rules count 4 Permission entries	Outbound rules count 1 Permission entry	

Security Groups (4) [Info](#)

Actions ▾ Export security groups to CSV ▾ [Create security group](#)

<input type="checkbox"/>	Name	Security group ID	Security group name	VPC ID	Description	Owner
<input type="checkbox"/>	-	sg-085f667bb1c1a34d1	project-1-sg	vpc-0ae30520aa3bc4455	project-1-sg	130124071600

▼ Network settings [Info](#) [Edit](#)

Network [Info](#)
[vpc-0ae30520aa3bc4455](#)

Subnet [Info](#)
No preference (Default subnet in any availability zone)

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

Common security groups [Info](#)

Select security groups ▾

project-1-sg sg-085f667bb1c1a34d1 X
VPC: vpc-0ae30520aa3bc4455

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Common security groups [Info](#)

Select security groups [▼](#)

project-1-sg sg-085f667bb1c1a34d1 [X](#)
VPC: vpc-0ae30520aa3bc4455

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Configure storage [Info](#) [Advanced](#)

1x 8 GiB gp2 Root volume (Not encrypted)

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

[Add new volume](#)

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

0 x File systems [Edit](#)

Advanced details [Info](#)

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ... [read more](#)
ami-0fc5d935ebf8bc3bc

Virtual server type (instance type)
t2.micro

Firewall (security group)
project-1-sg

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 [X](#)

[Cancel](#) [Launch instance](#) [Review commands](#)

EC2 > Instances > Launch an instance

Success
Successfully initiated launch of instance (i-08542b290b637659e)

[▶ Launch log](#)

Successfully stopped i-016df4df81ea6e733

Instances (1/3) Info								
C Connect Instance state ▾ Actions ▾ Launch instances ▼								
Find Instance by attribute or tag (case-sensitive)								
<input checked="" type="checkbox"/>	Name ▼	Instance ID	Instance state ▼	Instance type ▼	Status check ▼	Alarm status	Availability Zone ▼	Publ
<input checked="" type="checkbox"/>	ec2instance-project-1	i-08542b290b637659e	Running Q Q	t2.micro	2/2 checks passed	No alarms +	us-east-1c	ec2-
<input type="checkbox"/>	ec2	i-044c593f7ba13e62c	Stopped Q Q	t2.micro	-	No alarms +	us-east-1c	-
<input type="checkbox"/>	ec2p	i-016df4df81ea6e733	Stopped Q Q	t2.micro	-	No alarms +	us-east-1c	-

Instance: i-08542b290b637659e (ec2instance-project-1)

[Details](#) [Security](#) [Networking](#) [Storage](#) [Status checks](#) [Monitoring](#) [Tags](#)

Instance summary [Info](#)

Instance ID i-08542b290b637659e (ec2instance-project-1)	Public IPv4 address 18.232.104.115 [open address]	Private IPv4 addresses 172.31.37.2
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-18-232-104-115.compute-1.amazonaws.com [open address]
Hostname type IP name: ip-172-31-37-2.ec2.internal	Private IP DNS name (IPv4 only) ip-172-31-37-2.ec2.internal	Classic IP and DNS name

Connect to instance [Info](#)

Connect to your instance i-08542b290b637659e (ec2instance-project-1) using any of these options

[EC2 Instance Connect](#)

[Session Manager](#)

[SSH client](#)

[EC2 serial console](#)

Instance ID

 [i-08542b290b637659e](#) (ec2instance-project-1)

Connection Type

[Connect using EC2 Instance Connect](#)

Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.

[Connect using EC2 Instance Connect Endpoint](#)

Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IP address

 18.232.104.115

User name

Enter the user name defined in the AMI used to launch the instance. If you didn't define a custom user name, use the default user name, ubuntu.

ubuntu

Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-1012-aws x86_64)

- * Documentation: <https://help.ubuntu.com>
- * Management: <https://landscape.canonical.com>
- * Support: <https://ubuntu.com/advantage>

System information as of Fri Oct 27 07:50:57 UTC 2023

System load:	0.0	Processes:	97
Usage of /:	20.5% of 7.57GB	Users logged in:	0
Memory usage:	21%	IPv4 address for eth0:	172.31.37.2
Swap usage:	0%		

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.

See <https://ubuntu.com/esm> or run: sudo pro status

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.

```
i-08542b290b637659e (ec2instance-project-1)
PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2
i-08542b290b637659e:~$ sudo apt update
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1104 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [240 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [16.1 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [1036 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [167 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [536 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [995 kB]
```

i-08542b290b637659e (ec2instance-project-1)

PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2

```
ubuntu@ip-172-31-37-2:~$ sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser bzip2-doc
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support ssl-cert
0 upgraded, 13 newly installed, 0 to remove and 41 not upgraded.
Need to get 2137 kB of archives.
After this operation, 8505 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libapr1 amd64 1.7.0-8ubuntu0.22.04.1 [108 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1 amd64 1.6.1-5ubuntu4.22.04.2 [92.8 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.1-5ubuntu4.22.04.2 [11.3 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1-ldap amd64 1.6.1-5ubuntu4.22.04.2 [9170 B]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 liblua5.3-0 amd64 5.3.6-1build1 [140 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2-bin amd64 2.4.52-1ubuntu4.6 [1345 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2-data all 2.4.52-1ubuntu4.6 [165 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2-utils amd64 2.4.52-1ubuntu4.6 [89.1 kB]
```

i-08542b290b637659e (ec2instance-project-1)

PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2

```
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ufw (0.36.1-4ubuntu0.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.3) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-37-2:~$ ^C
ubuntu@ip-172-31-37-2:~$ []
```

i-08542b290b637659e (ec2instance-project-1)

PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2

← → C Not secure | 18.232.104.115

Apache2 Default Page

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|   '-- ports.conf
|-- mods-enabled
|   '-- *.Load
|       '-- *.conf
|-- conf-enabled
|   '-- *.conf
|-- sites-enabled
|   '-- *.conf
```

C:\Users\91901\Downloads\code.zip

D:\

Desktop

cmd

Downloads

C:\

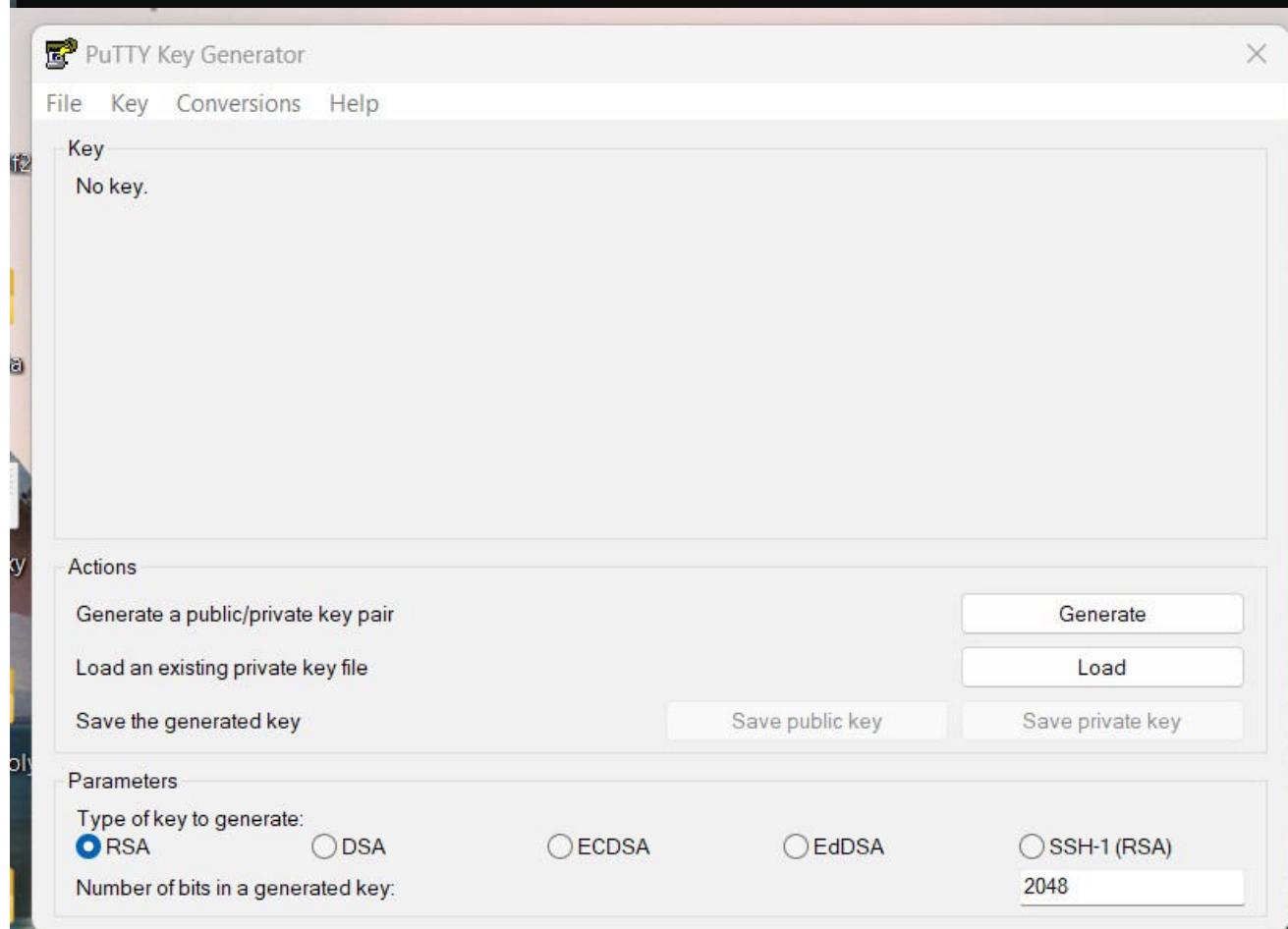
C:\Windows\System32\cmd.exe

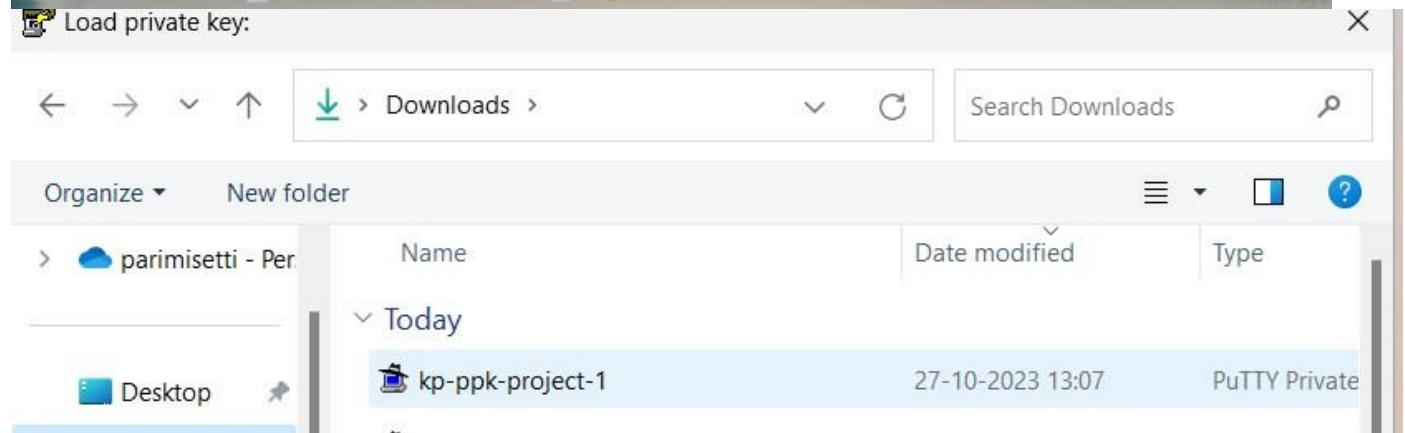
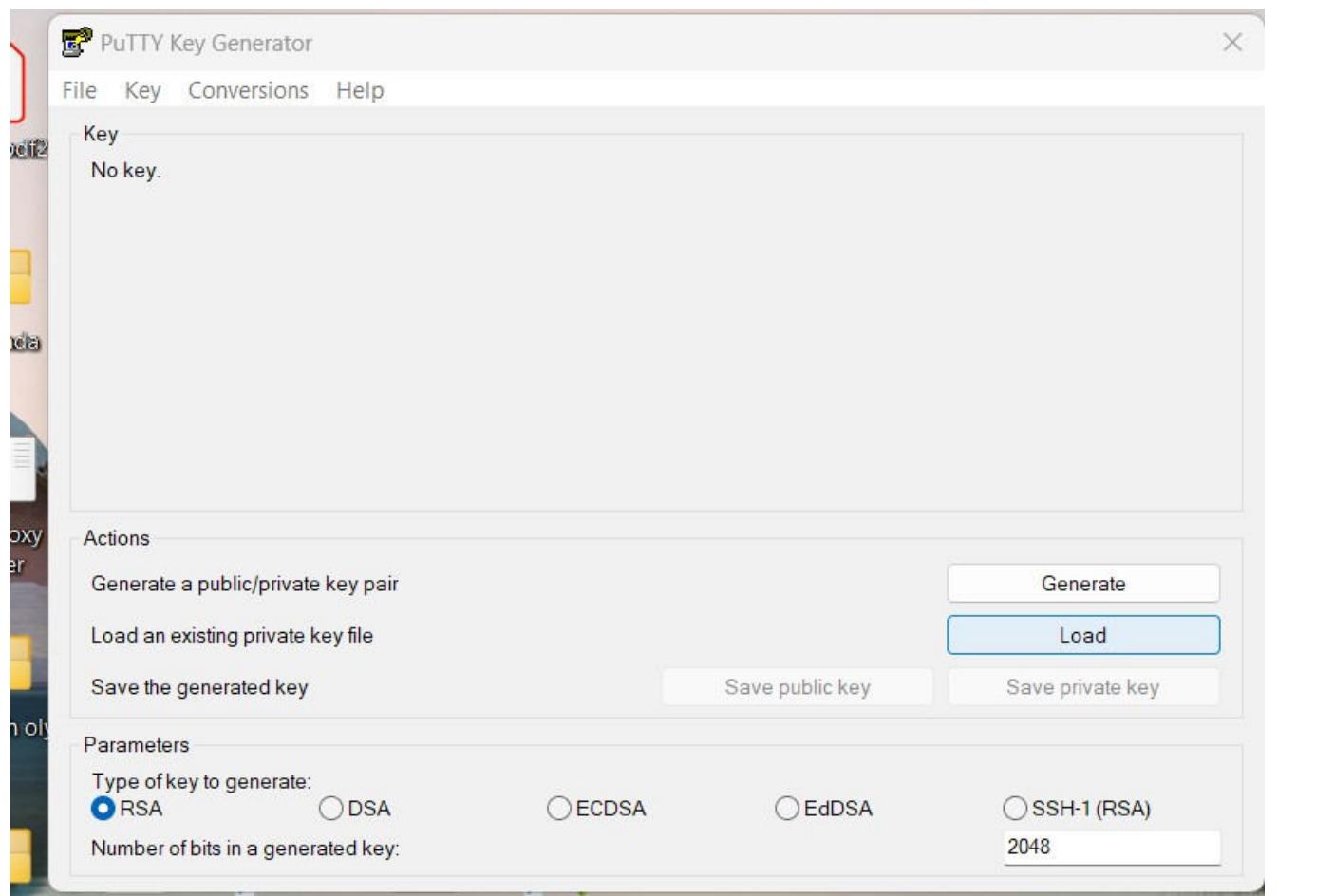
Windows Ec2	17-08-202...	Remote Desktop C...	1 KB	
my-ec2-kp-17aug	17-08-202...	PEM File	2 KB	
EC2-keypair-practice-parimi	17-08-202...	PEM File	2 KB	
my-ec2-keypair-17-aug-23	17-08-202...	PEM File	2 KB	
Basic-Unix-Commands (1)	17-08-202...	Adobe Acrobat D...	313 KB	
Installation-VM-VirtualBox (1)	17-08-202...	Adobe Acrobat D...	731 KB	
ec2demokeypair	17-08-202...	PEM File	2 KB	
McAfee_Installer_serial_2hvcmjLygR9N1sJ...	15-08-202...	Application	4,356 KB	
WindowsAppRuntimeInstall (1)	15-08-202...	Application	59,955 KB	
WindowsAppRuntimeInstall	15-08-202...	Application	59,955 KB	
McAfee_Installer_serial_2hvcmjLygR9N1sJ...	15-08-202...	Application	4,356 KB	
aws-associate-cert	15-08-202...	Compressed (zipp...	3,844 KB	
code	14-08-202...	Compressed (zipp...	770 KB	

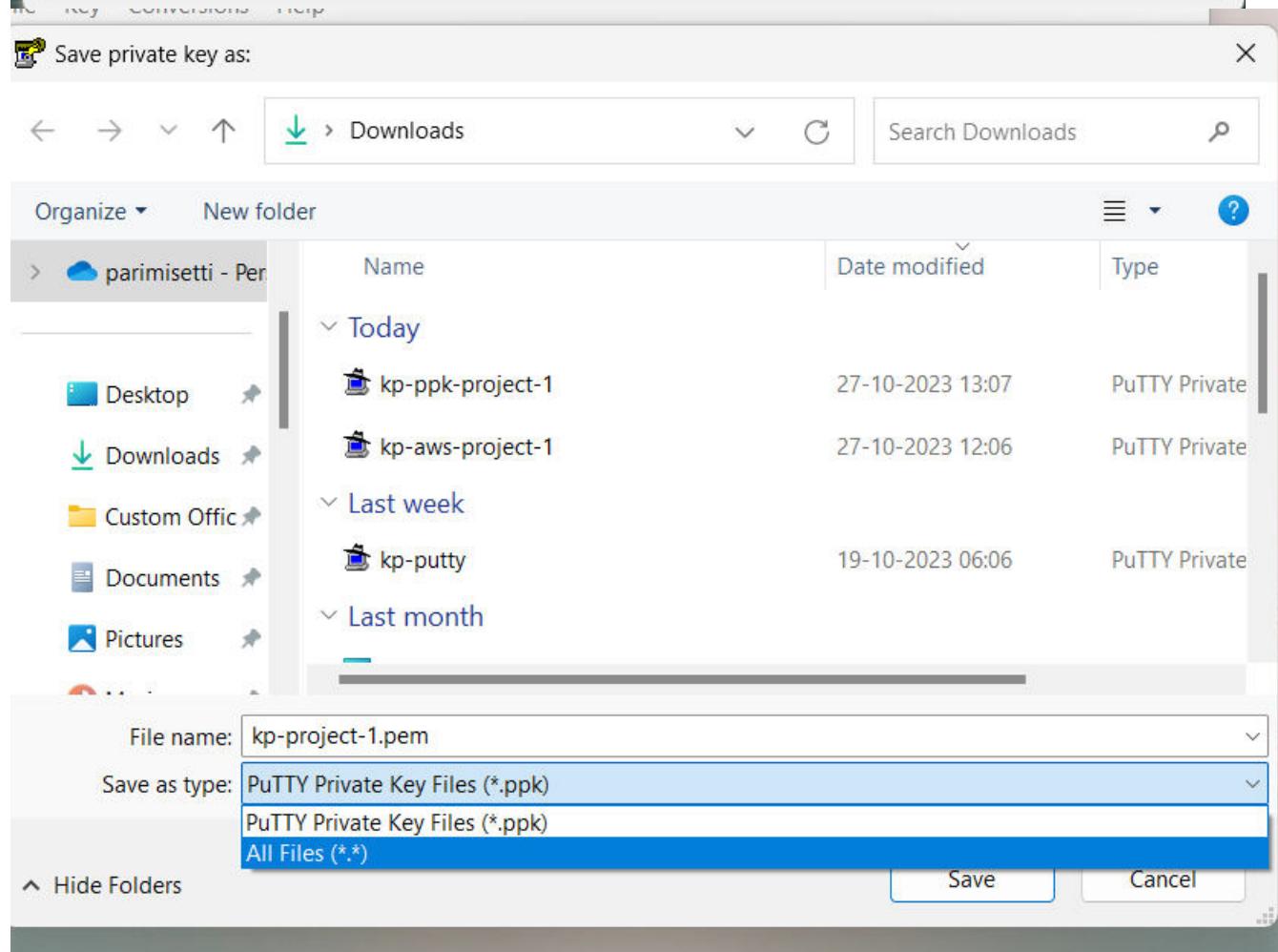
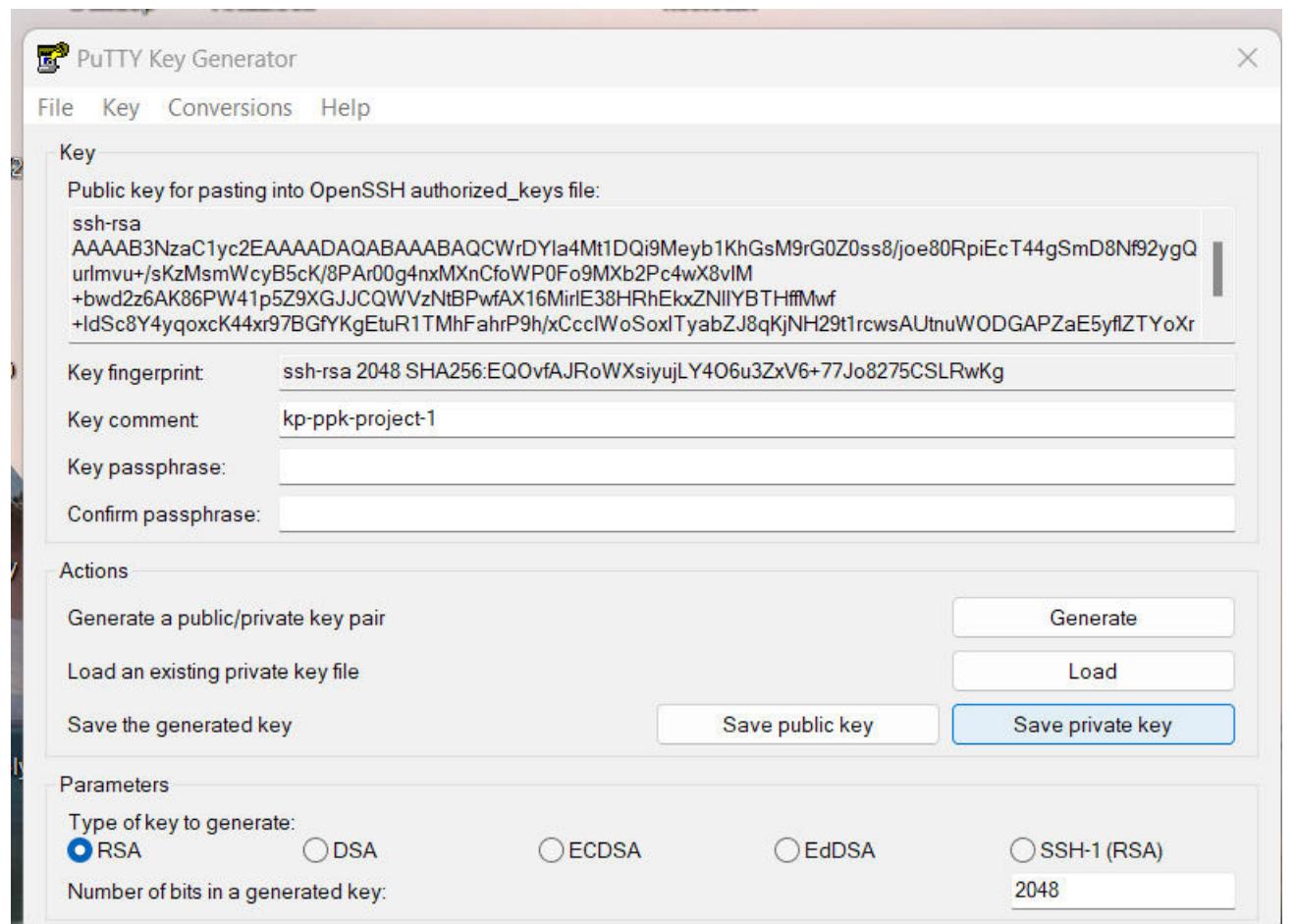
1,056 items 1 item selected 769 KB

```
C:\Windows\System32\cmd.e > + ^ Microsoft Windows [Version 10.0.22621.2428] (c) Microsoft Corporation. All rights reserved. C:\Users\91901\Downloads>
```

```
C:\Windows\System32\cmd.e > + ^ Microsoft Windows [Version 10.0.22621.2428] (c) Microsoft Corporation. All rights reserved. C:\Users\91901\Downloads>scp -i "kp-ppk-project-1.ppk" "code" ubuntu@18.232.104.115:/home/ubuntu The authenticity of host '18.232.104.115 (18.232.104.115)' can't be established. ED25519 key fingerprint is SHA256:QPtZgbvBxspVx7X430eqyr5TeR9EKKAA2DD3l8Y1xrzg. This key is not known by any other names Are you sure you want to continue connecting (yes/no/[fingerprint])? |
```



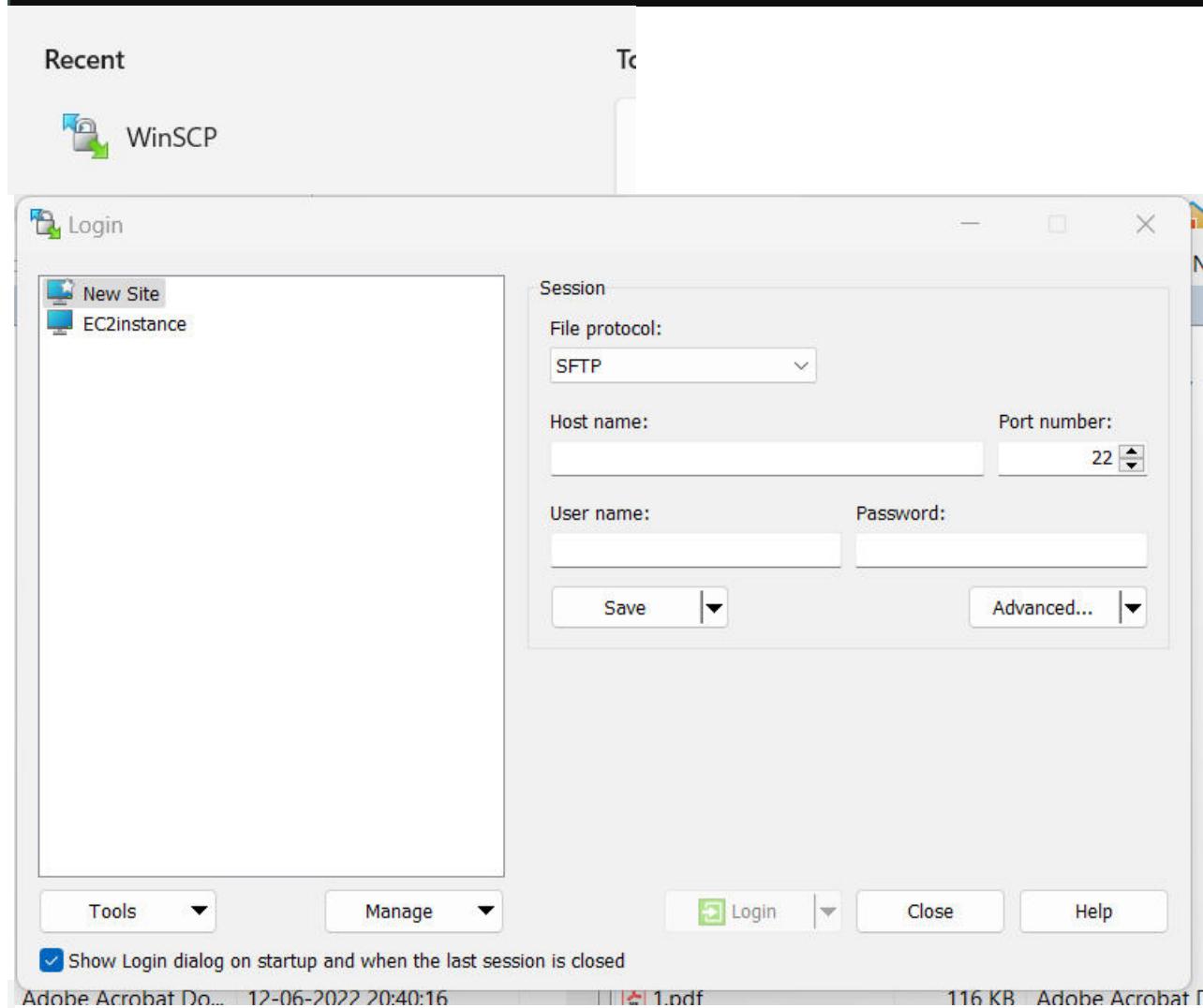




```
C:\Windows\System32\cmd.e + 
Microsoft Windows [Version 10.0.22621.2428]
(c) Microsoft Corporation. All rights reserved.

C:\Users\91901\Downloads>scp -i "kp-ppk-project-1.ppk" "code" ubuntu@18.232.104.115:/home/ubuntu
The authenticity of host '18.232.104.115 (18.232.104.115)' can't be established.
ED25519 key fingerprint is SHA256:QPtZgbvBxspVx7X430eqyr5TeR9EKKA2DD3l8Y1xrzg.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])?
Host key verification failed.

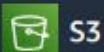
C:\Users\91901\Downloads>scp -i "kp-project-1.pem" "code" ubuntu@18.232.104.115:/home/ubuntu
The authenticity of host '18.232.104.115 (18.232.104.115)' can't be established.
ED25519 key fingerprint is SHA256:QPtZgbvBxspVx7X430eqyr5TeR9EKKA2DD3l8Y1xrzg.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])?
```





Services

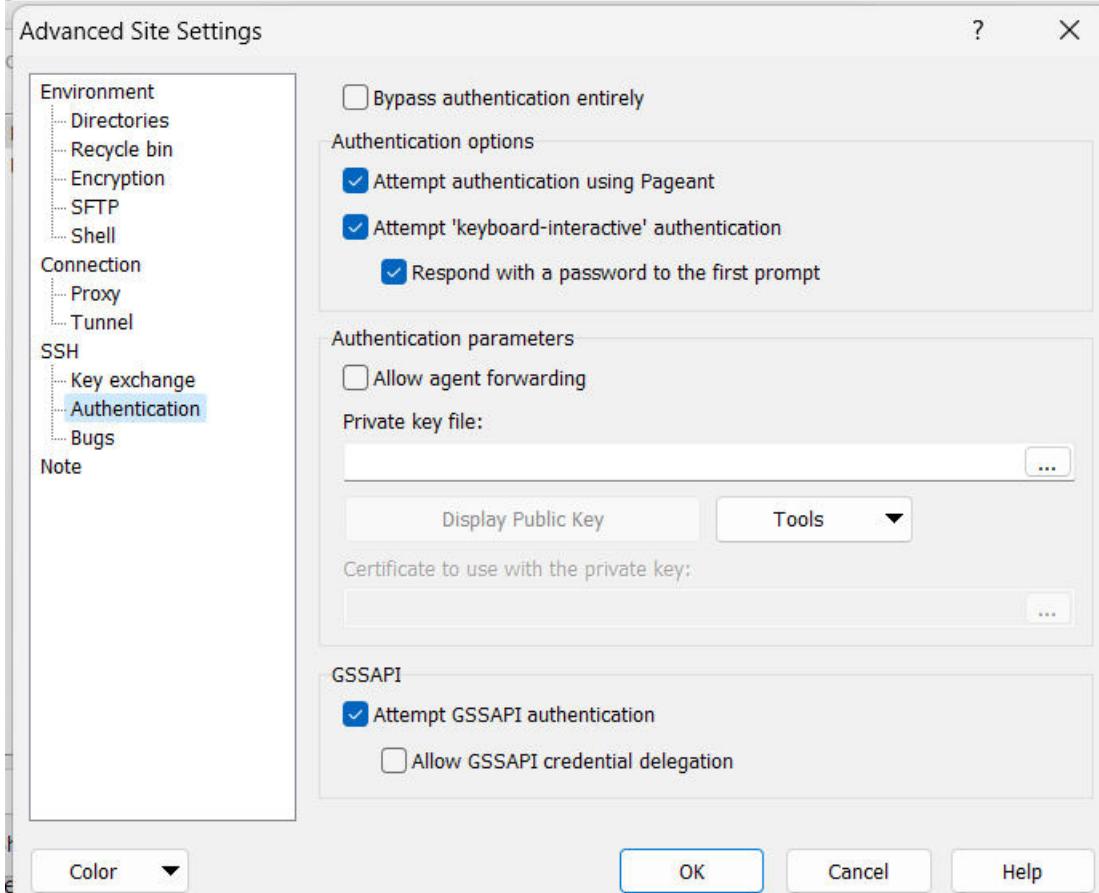
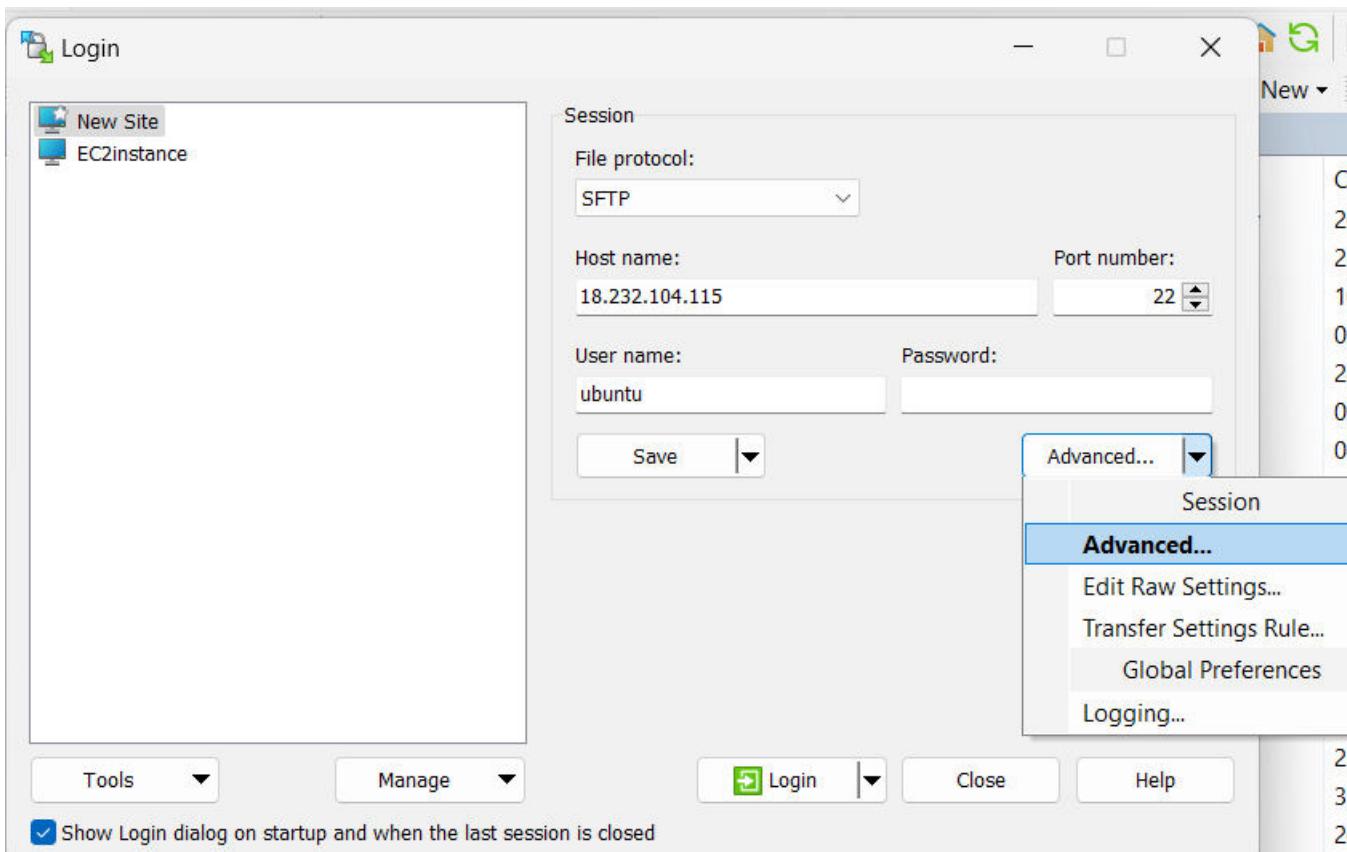
Search

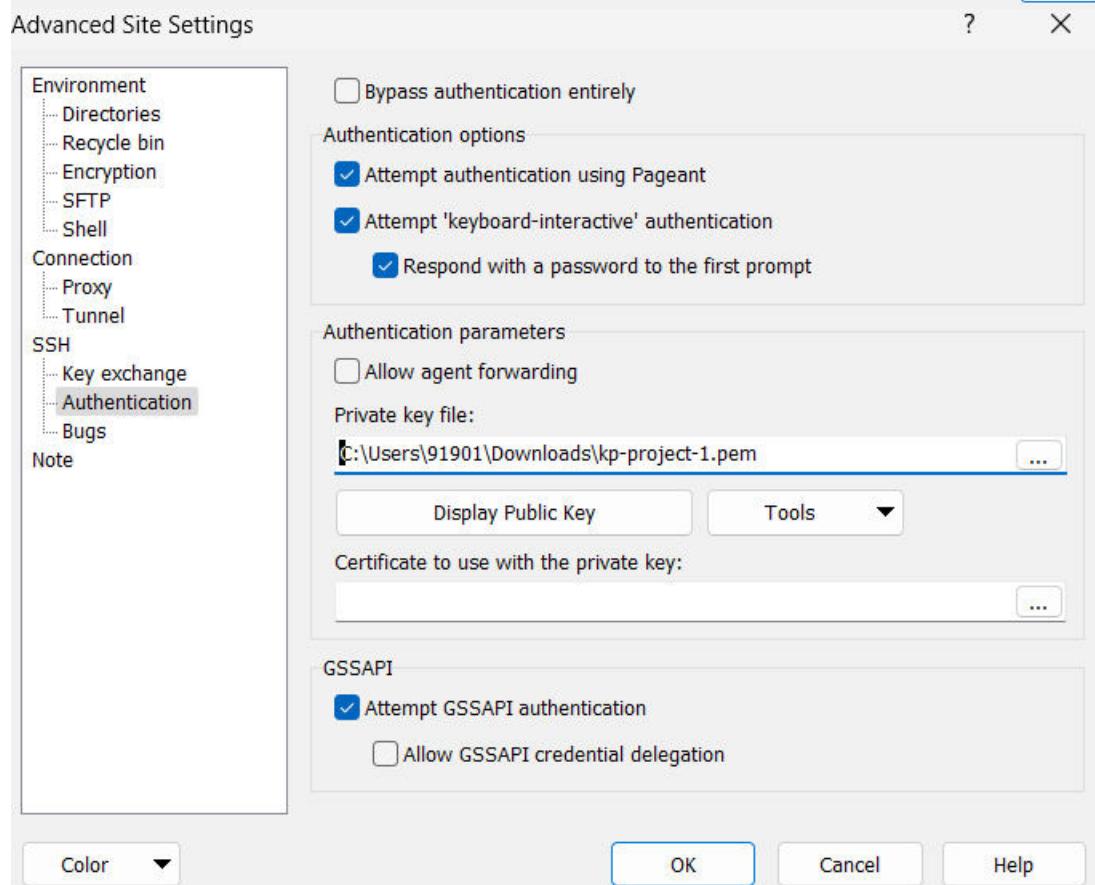
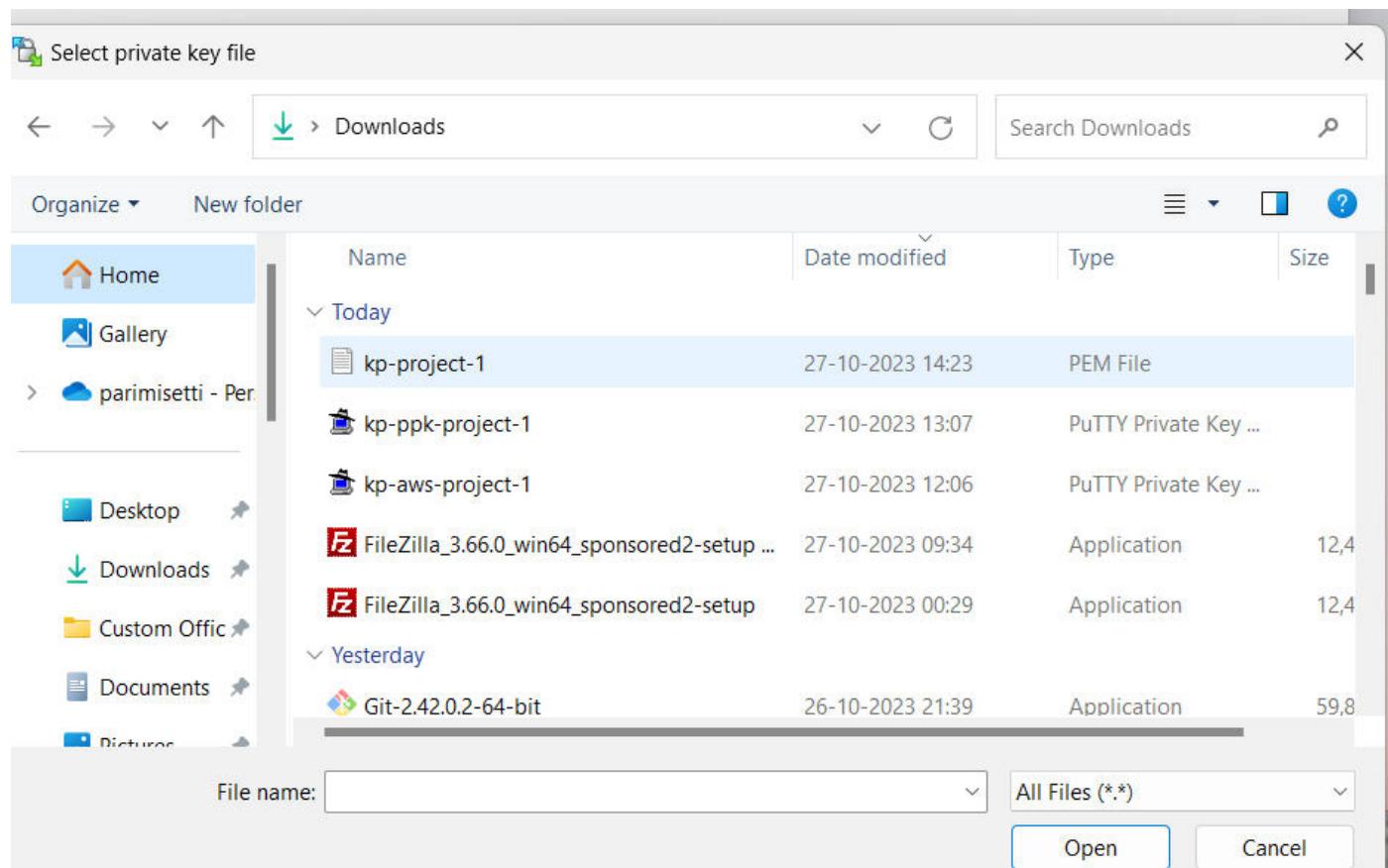


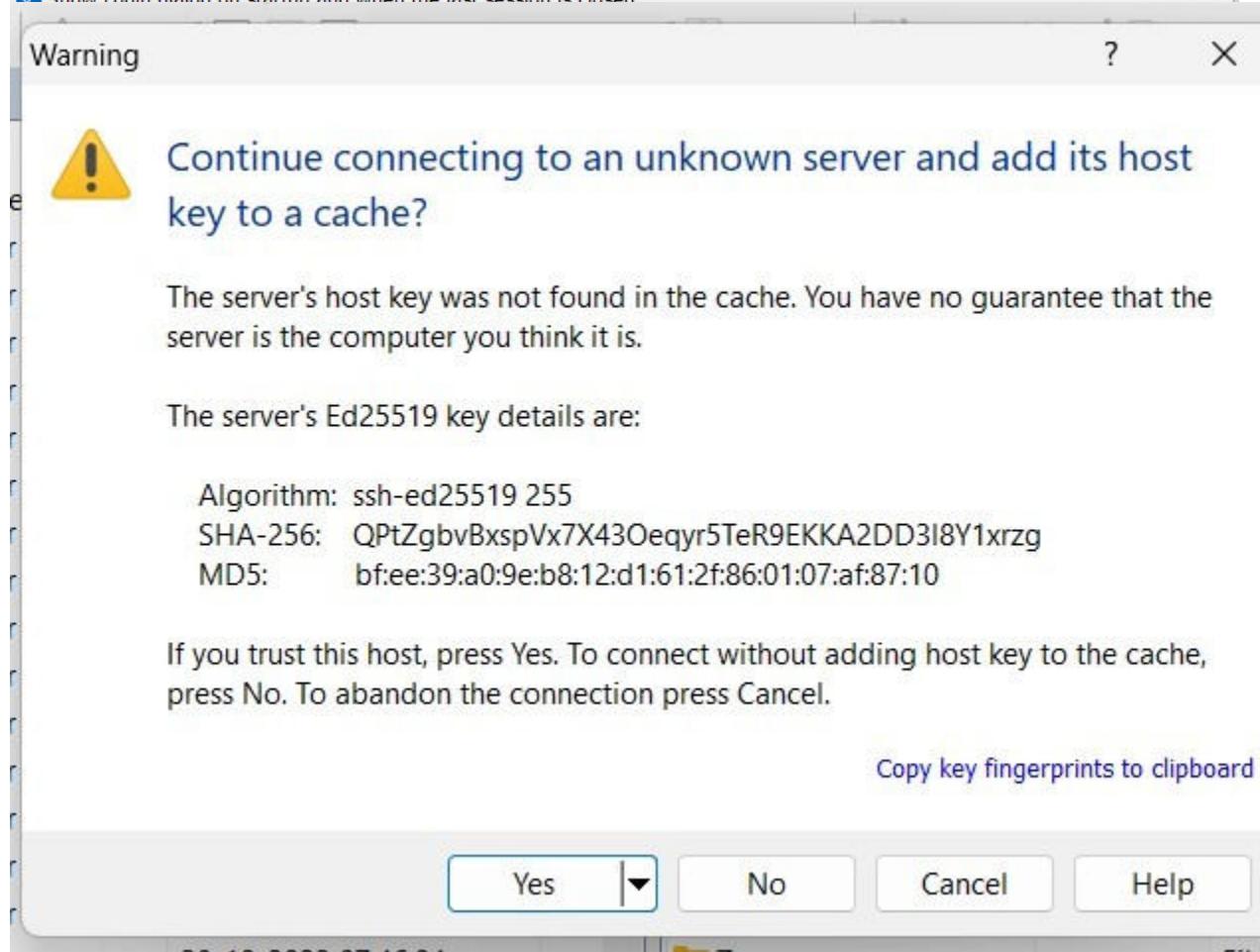
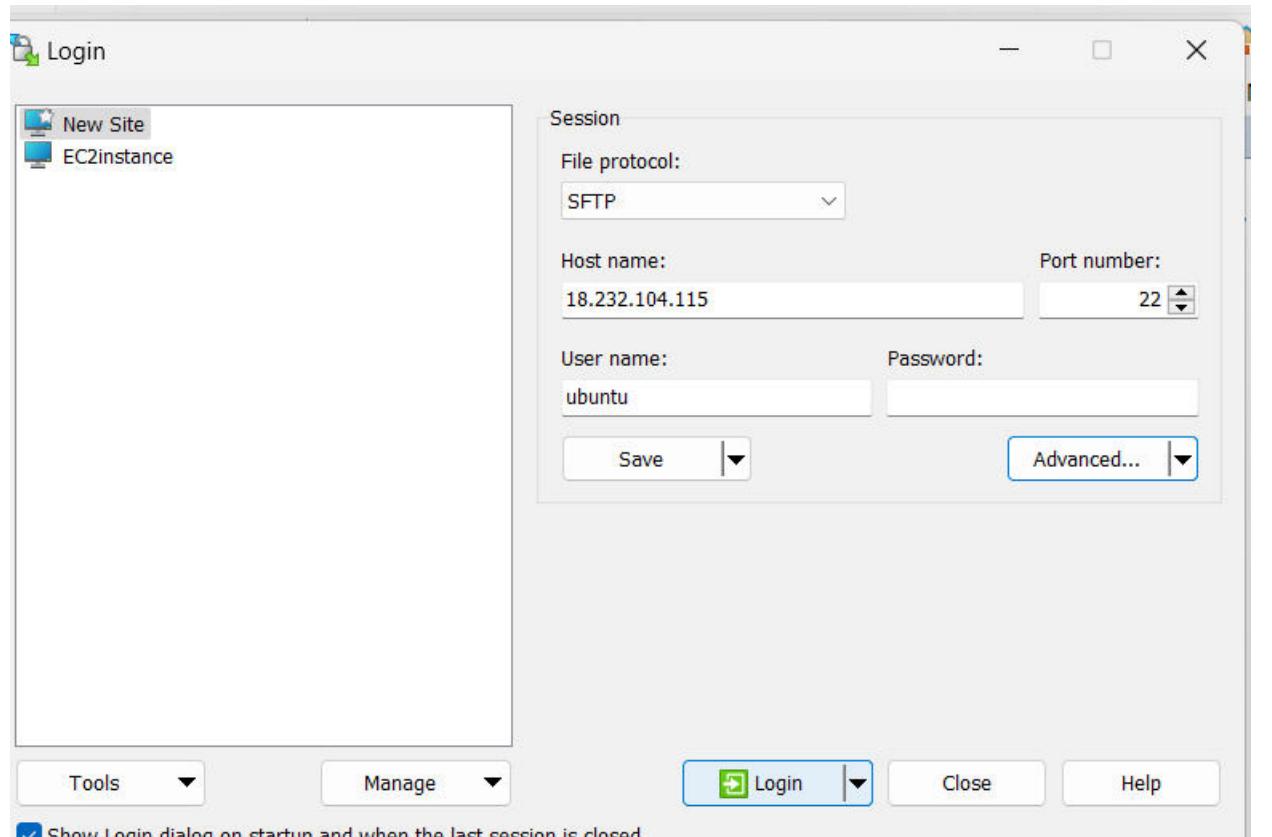
```
Enabling module reqtimeout.  
Enabling conf charset.  
Enabling conf localized-error-pages.  
Enabling conf other-vhosts-access-log.  
Enabling conf security.  
Enabling conf serve-cgi-bin.  
Enabling site 000-default.  
Created symlink /etc/systemd/system/multi-user.target.wants/apache2  
Created symlink /etc/systemd/system/multi-user.target.wants/apache-1  
Processing triggers for ufw (0.36.1-4ubuntu0.1) ...  
Processing triggers for man-db (2.10.2-1) ...  
Processing triggers for libc-bin (2.35-0ubuntu3.3) ...  
Scanning processes...  
Scanning linux images...  
  
Running kernel seems to be up-to-date.  
  
No services need to be restarted.  
  
No containers need to be restarted.  
  
No user sessions are running outdated binaries.  
  
No VM guests are running outdated hypervisor (qemu) binaries on this  
ubuntu@ip-172-31-37-2:~$ ^C  
ubuntu@ip-172-31-37-2:~$ pwd  
/home/ubuntu  
ubuntu@ip-172-31-37-2:~$ []
```

i-08542b290b637659e (ec2instance-project-1)

PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2







Documents – ubuntu@18.232.104.115 – WinSCP

Local Mark Files Commands Tabs Options Remote Help

Synchronize Queue Transfer Settings Default

ubuntu@18.232.104.115 X New Tab

My documents Upload Edit Properties New

C:\Users\91901\Documents\

Name	Size	Type	Changed
..		Parent directory	20-10-2023 16:43:16
Bandicam		File folder	23-09-2022 16:42:22
Custom Office Templa...		File folder	10-02-2022 11:15:36
Dell		File folder	05-03-2022 07:23:55
Downloads		File folder	28-07-2022 17:40:48
Fax		File folder	09-06-2022 16:55:08
GK		File folder	08-02-2023 09:03:13
HeidiSQL		File folder	08-09-2023 22:29:30
IPC SECTIONS		File folder	23-08-2022 21:07:22
KORUKONDA SGS KEYS		File folder	02-12-2022 10:28:18
MEA GRAND TEST AS...		File folder	28-12-2022 17:21:51
My Data Sources		File folder	21-01-2023 17:06:00
My Games		File folder	25-08-2022 09:46:46
Python Scripts		File folder	01-08-2023 09:19:05
Sound Recordings		File folder	23-05-2023 12:34:39
SUDHA AAPSC DATA		File folder	31-03-2023 23:48:52
Zoom		File folder	20-10-2023 07:46:04
1.pdf	116 KB	Adobe Acrobat Do...	12-06-2022 20:40:16
2.pdf	3,194 KB	Adobe Acrobat Do...	12-06-2022 20:41:25
26-09-23-morning-ses...	1 KB	Text Document	26-09-2023 08:50:47
26-09-23-morning-ses...	170 KB	Adobe Acrobat Do...	26-09-2023 10:10:10

0 B of 495 MB in 0 of 47

4 hidden 0 B of 0 B in 0 of 0

7 hidden

SFTP-3 0:00:44



code.zip

Desktop – ubuntu@18.232.104.115 – WinSCP

Local Mark Files Commands Tabs Options Remote Help

Synchronize Queue Transfer Settings Default

ubuntu@18.232.104.115 X New Tab

Desktop Upload Edit Properties New

C:\Users\91901\Desktop\

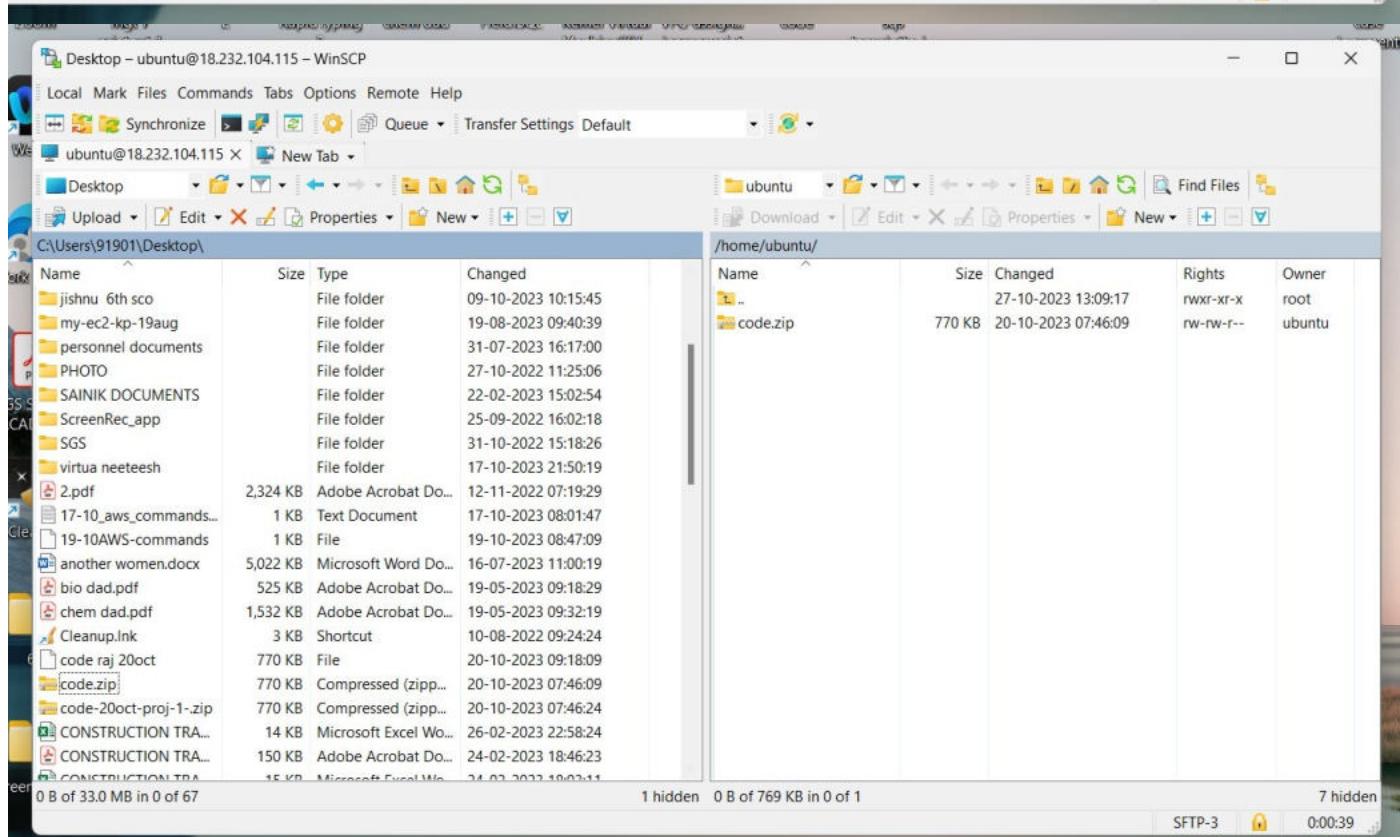
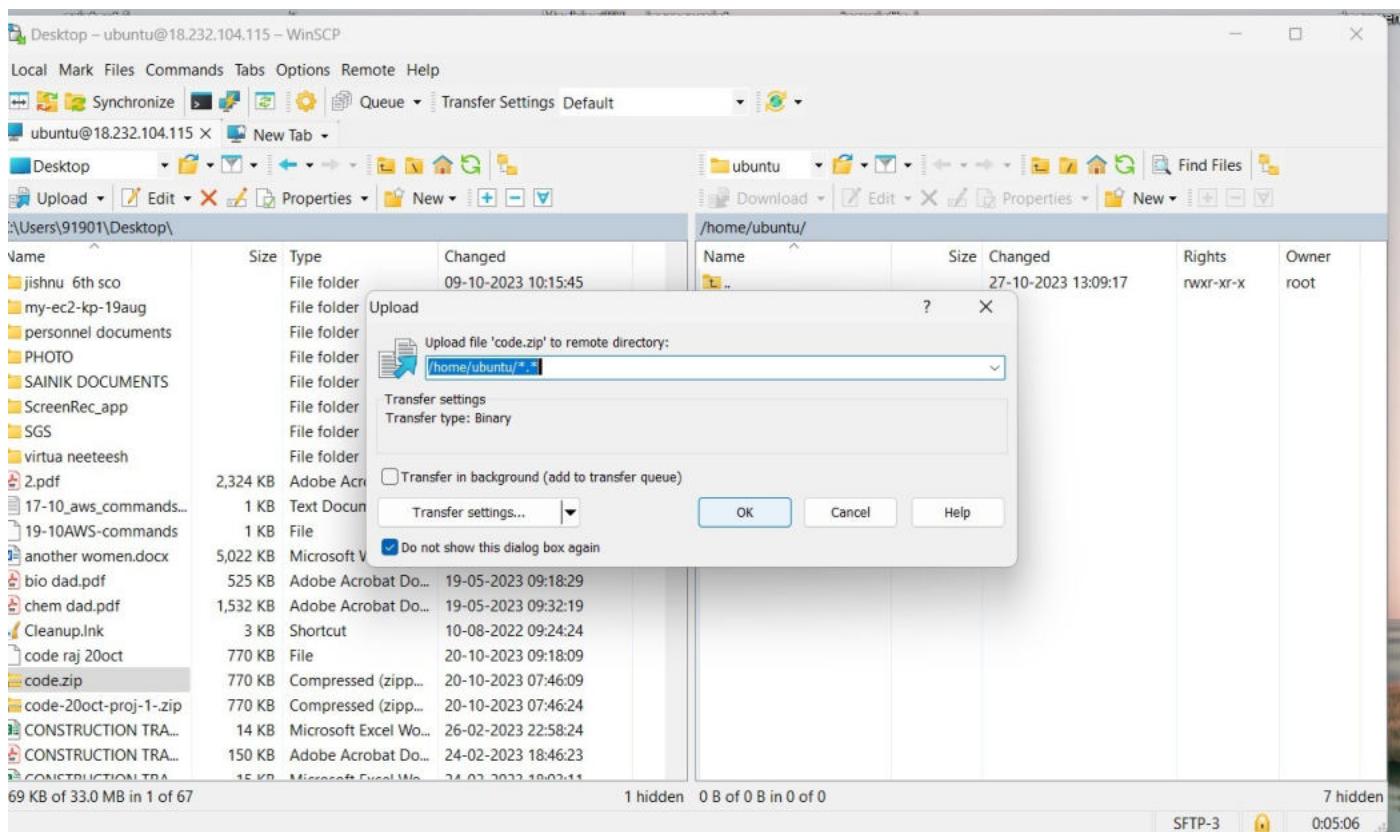
Name	Size	Type	Changed
jishnu 6th sco		File folder	09-10-2023 10:15:45
my-ec2-kp-19aug		File folder	19-08-2023 09:40:39
personnel documents		File folder	31-07-2023 16:17:00
PHOTO		File folder	27-10-2022 11:25:06
SAINIK DOCUMENTS		File folder	22-02-2023 15:02:54
ScreenRec_app		File folder	25-09-2022 16:02:18
SGS		File folder	31-10-2022 15:18:26
virtua neetesh		File folder	17-10-2023 21:50:19
2.pdf	2,324 KB	Adobe Acrobat Do...	12-11-2022 07:19:29
17-10_aws_commands...	1 KB	Text Document	17-10-2023 08:01:47
19-TAWS-commands	1 KB	File	19-10-2023 08:47:09
another women.docx	5,022 KB	Microsoft Word Do...	16-07-2023 11:00:19
bio dad.pdf	525 KB	Adobe Acrobat Do...	19-05-2023 09:18:29
chem dad.pdf	1,532 KB	Adobe Acrobat Do...	19-05-2023 09:32:19
Cleanup.lnk	3 KB	Shortcut	10-08-2022 09:24:24
code raj 20oct	770 KB	File	20-10-2023 09:18:09
code.zip	770 KB	Compressed (zipp...	20-10-2023 07:46:09
code-20oct-proj-1.zip	770 KB	Compressed (zipp...	20-10-2023 07:46:24
CONSTRUCTION TRA...	14 KB	Microsoft Excel Wo...	26-02-2023 22:58:24
CONSTRUCTION TRA...	150 KB	Adobe Acrobat Do...	24-02-2023 18:46:23
CONSTRUCTION TRA...	16 KB	Microsoft Excel Wo...	24-02-2023 18:46:14

769 KB of 33.0 MB in 1 of 67

1 hidden 0 B of 0 B in 0 of 0

7 hidden

SFTP-3 0:04:25



S3

* Support: <https://ubuntu.com/advantage>

System information as of Fri Oct 27 09:15:56 UTC 2023

System load: 0.0	Processes: 105
Usage of /: 23.3% of 7.57GB	Users logged in: 0
Memory usage: 24%	IPv4 address for eth0: 172.31.37.2
Swap usage: 0%	

* Ubuntu Pro delivers the most comprehensive open source security and compliance features.

<https://ubuntu.com/aws/pro>

Expanded Security Maintenance for Applications is not enabled.

35 updates can be applied immediately.
24 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

Last login: Fri Oct 27 07:50:58 2023 from 18.206.107.29
ubuntu@ip-172-31-37-2:~\$ ls
code.zip
ubuntu@ip-172-31-37-2:~\$ █

i-08542b290b637659e (ec2instance-project-1)

Public IPs: 18.232.104.115 Private IPs: 172.31.37.2

Desktop – ubuntu@18.232.104.115 – WinSCP

Local Mark Files Commands Tabs Options Remote Help

Synchronize Queue Transfer Settings Default

ubuntu@18.232.104.115 × New Tab

Desktop Upload Edit Properties New Find Files

C:\Users\91901\Desktop/ /home/ubuntu/

Name	Size	Type	Changed		Name	Size	Changed	Rights	Owner
.		Parent directory	27-10-2023 14:54:13		.		27-10-2023 13:09:17	rwxr-xr-x	root
65		File folder	17-12-2022 20:44:04		code.zip	770 KB	20-10-2023 07:46:09	rw-rw-r--	ubuntu
66		File folder	17-12-2022 21:59:19						
AKKA PRINTOUTS		File folder	15-09-2022 12:52:34						
anakonda		File folder	12-09-2023 00:26:05						
AWS Keypair		File folder	17-08-2023 10:39:21						
case documents		File folder	17-10-2023 17:33:02						
ccrt documents		File folder	15-02-2023 10:06:19						
hani 10th oly		File folder	26-10-2023 20:45:09						
images		File folder	27-10-2023 14:54:14						
jishnu 6th sco		File folder	09-10-2023 10:15:45						
my-ec2-kp-19aug		File folder	19-08-2023 09:40:39						
personnel documents		File folder	31-07-2023 16:17:00						
PHOTO		File folder	27-10-2022 11:25:06						
SAINIK DOCUMENTS		File folder	22-02-2023 15:02:54						
ScreenRec_app		File folder	25-09-2022 16:02:18						
SGS		File folder	31-10-2022 15:18:26						
virtua neeteesh		File folder	17-10-2023 21:50:19						
2.pdf	2,324 KB	Adobe Acrobat Do...	12-11-2022 07:19:29						
17-10_aws_commands...	1 KB	Text Document	17-10-2023 08:01:47						
10_AWS_commands...	1 KB	File	10-10-2022 09:47:00						

0 B of 33.0 MB in 0 of 68 1 hidden 0 B of 769 KB in 0 of 1 7 hidden SFTP-3 0:11:25

p – ubuntu@18.232.104.115 – WinSCP

File Commands Tabs Options Remote Help

Synchronize Queue Transfer Settings Default

@18.232.104.115 × New Tab

Upload Edit Properties New Find Files

C:\Users\91901\Desktop/ /home/ubuntu/

Name	Size	Type	Changed		Name	Size	Changed	Rights	Owner
.		Parent directory	27-10-2023 14:54:13		.		27-10-2023 13:09:17	rwxr-xr-x	root
PRINTOUTS		File folder	17-10-2023 14:54:13		code.zip	770 KB	20-10-2023 07:46:09	rw-rw-r--	ubuntu
la		File folder	17-10-2023 14:54:13						
ypair		File folder	17-10-2023 14:54:13						
documents		File folder	17-10-2023 14:54:13						
uments		File folder	17-10-2023 14:54:13						
h oly		File folder	17-10-2023 14:54:13						
th sco		File folder	17-10-2023 14:54:13						
kp-19aug		File folder	17-10-2023 14:54:13						
el documents		File folder	17-10-2023 14:54:13						
DOCUMENTS		File folder	31-07-2023 16:17:00						
ec_app		File folder	27-10-2022 11:25:06						
neeteesh		File folder	22-02-2023 15:02:54						
2.pdf	2,324 KB	Adobe Acrobat Do...	25-09-2022 16:02:18						
17-10_aws_commands...	1 KB	Text Document	31-10-2022 15:18:26						
10_AWS_commands...	1 KB	File	17-10-2023 21:50:19						

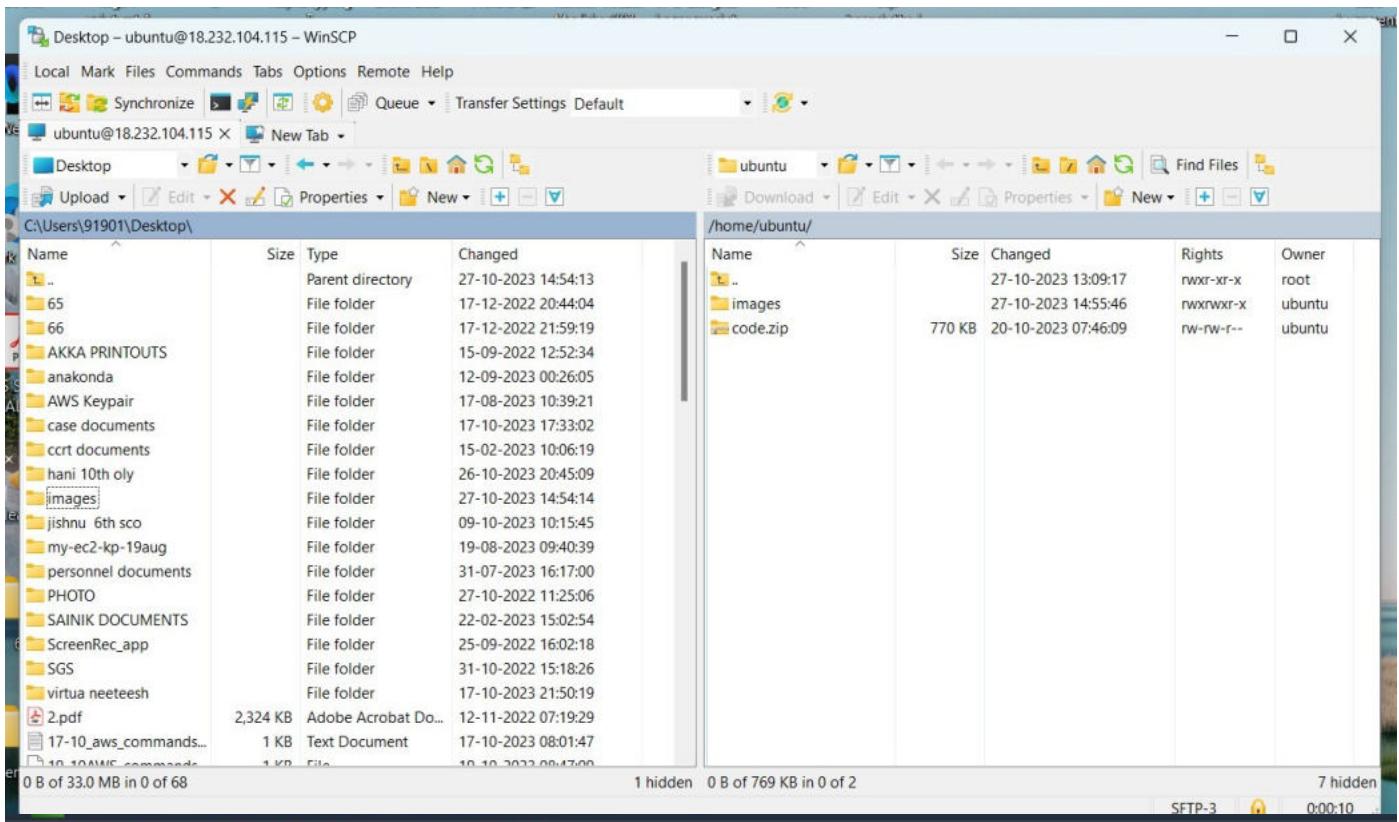
0 B in 1 of 68 1 hidden 0 B of 769 KB in 0 of 1 71 SFTP-3 0:11

Uploading C:\Users\91901\Desktop\images\ to /home/ubuntu/

Time left: 0:00:00 Time elapsed: 0:00:07

Bytes transferred: 0 B Speed: 0 B/s

Unlimited



```
Usage of /: 23.3% of 7.57GB  Users logged in: 0
Memory usage: 24%          IPv4 address for eth0: 172.31.37.2
Swap usage: 0%
```

* Ubuntu Pro delivers the most comprehensive open source security and compliance features.

<https://ubuntu.com/aws/pro>

Expanded Security Maintenance for Applications is not enabled.

35 updates can be applied immediately.

24 of these updates are standard security updates.

To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.

See <https://ubuntu.com/esm> or run: sudo pro status

```
Last login: Fri Oct 27 07:50:58 2023 from 18.206.107.29
```

```
ubuntu@ip-172-31-37-2:~$ ls
```

```
code.zip
```

```
ubuntu@ip-172-31-37-2:~$ ^C
```

```
ubuntu@ip-172-31-37-2:~$ cd code
```

```
-bash: cd: code: No such file or directory
```

```
ubuntu@ip-172-31-37-2:~$ ls
```

```
code.zip  images
```

```
ubuntu@ip-172-31-37-2:~$
```

i-08542b290b637659e (ec2instance-project-1)

PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2

```
* Ubuntu Pro delivers the most comprehensive open source security and  
compliance features.
```

```
https://ubuntu.com/aws/pro
```

```
Expanded Security Maintenance for Applications is not enabled.
```

```
35 updates can be applied immediately.
```

```
24 of these updates are standard security updates.
```

```
To see these additional updates run: apt list --upgradable
```

```
Enable ESM Apps to receive additional future security updates.
```

```
See https://ubuntu.com/esm or run: sudo pro status
```

```
Last login: Fri Oct 27 07:50:58 2023 from 18.206.107.29
```

```
ubuntu@ip-172-31-37-2:~$ ls
```

```
code.zip
```

```
ubuntu@ip-172-31-37-2:~$ ^C
```

```
ubuntu@ip-172-31-37-2:~$ cd code
```

```
-bash: cd: code: No such file or directory
```

```
ubuntu@ip-172-31-37-2:~$ ls
```

```
code.zip images
```

```
ubuntu@ip-172-31-37-2:~$ cd images
```

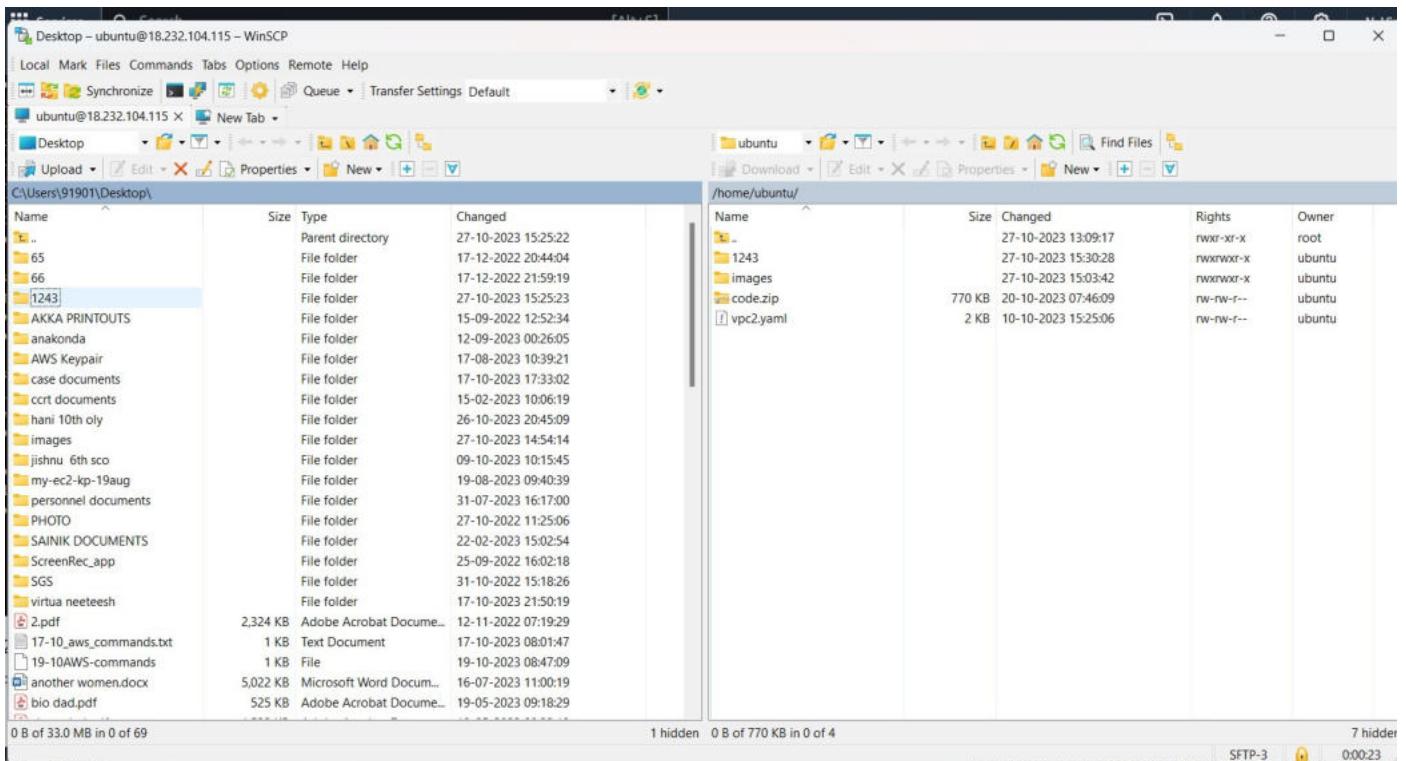
```
ubuntu@ip-172-31-37-2:~/images$ ls
```

```
1.png 2.png
```

```
ubuntu@ip-172-31-37-2:~/images$ []
```

i-08542b290b637659e (ec2instance-project-1)

Public IPs: 18.232.104.115 Private IPs: 172.31.37.2



```
ubuntu@ip-172-31-37-2:~$ sudo apt update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1104 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [995 kB]
Fetched 2437 kB in 1s (2089 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
41 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-37-2:~$ sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.52-1ubuntu4.6).
0 upgraded, 0 newly installed, 0 to remove and 41 not upgraded.
ubuntu@ip-172-31-37-2:~$ ls
code.zip images vpc2.yaml
ubuntu@ip-172-31-37-2:~$ cd code
-bash: cd: code: No such file or directory
ubuntu@ip-172-31-37-2:~$ ls
1243 code.zip images vpc2.yaml
ubuntu@ip-172-31-37-2:~$ cd 1243
ubuntu@ip-172-31-37-2:~/1243$ ls
images index.php
ubuntu@ip-172-31-37-2:~/1243$ sudo mv index.php images /var/www/html
```

```
ubuntu@ip-172-31-37-2:~/1243$ sudo mv index.php images /var/www/html
ubuntu@ip-172-31-37-2:~/1243$ cd
ubuntu@ip-172-31-37-2:~$ cd /var/www/html
ubuntu@ip-172-31-37-2:/var/www/html$ ls
images index.html index.php
ubuntu@ip-172-31-37-2:/var/www/html$ sudo rm index.html
ubuntu@ip-172-31-37-2:/var/www/html$ ls
images index.php
ubuntu@ip-172-31-37-2:/var/www/html$ history
```

```
18 cd code  
19 ls
```

i-08542b290b637659e (ec2instance-project-1)

PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2

The screenshot shows a web browser window with the following details:

- Header:** The URL is 18.232.104.115. The page title is "IntelliPaat".
- Form:** A sign-up form with fields for "Name:" and "Email:", and a "Submit" button.
- Search Results:** The search term is "rds". The results include:
 - Services (13):** Includes links for "Features (32)", "Resources New", "Documentation (19,112)", "Knowledge Articles (20)", and "Marketplace (576)".
 - Services:** A card for "RDS" (Managed Relational Database Service) with a star icon.
 - Callout:** A modal window for "Amazon RDS Multi-AZ deployment option for MySQL and PostgreSQL". It encourages users to try the feature, mentions improved transactional commit latencies, faster failover, and read scalability. It includes a "Create database" button and a link to "Restore Multi-AZ DB Cluster from Snapshot".

Create database

Choose a database creation method [Info](#)

Standard create

You set all of the configuration options, including ones for availability, security, backups, and maintenance.

Easy create

Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type [Info](#)

Aurora (MySQL Compatible)



Aurora (PostgreSQL Compatible)



MySQL



Templates

Choose a sample template to meet your use case.

Production

Use defaults for high availability and fast, consistent performance.

Dev/Test

This instance is intended for development use outside of a production environment.

Free tier

Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.

[Info](#)

Settings

DB instance identifier [Info](#)

Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

dub dab dbms

project-1-db

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ Credentials Settings

Master username [Info](#)

Type a login ID for the master user of your DB instance.

admin

1 to 16 alphanumeric characters. The first character must be a letter.

Manage master credentials in AWS Secrets Manager

Manage master user credentials in Secrets Manager. RDS can generate a password for you and manage it throughout its lifecycle.

- Database password: intel123

Auto generate a password
Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)
.....

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), '(single quote), "(double quote) and @ (at sign).

Confirm master password [Info](#)
.....

▼ Hide filters

Show instance classes that support Amazon RDS Optimized Writes [Info](#)
Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

Include previous generation classes

Standard classes (includes m classes)

Memory optimized classes (includes r and x classes)

Burstable classes (includes t classes)

db.t3.micro
2 vCPUs 1 GiB RAM Network: 2,085 Mbps ▾

Storage

Storage type [Info](#)
General Purpose SSD (gp2)
Baseline performance determined by volume size ▾

Allocated storage [Info](#)
20 GiB
The minimum value is 20 GiB and the maximum value is 6,144 GiB

Connectivity Info



Compute resource

Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

Don't connect to an EC2 compute resource

Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.

Connect to an EC2 compute resource

Set up a connection to an EC2 compute resource for this database.

EC2 instance Info

Choose the EC2 instance to add as the compute resource for this database. A VPC security group is added to this EC2 instance. A VPC security group is also added to the database with an inbound rule that allows the EC2 instance to access the database.

i-08542b290b637659e

ec2instance-project-1



i-08542b290b637659e

ec2instance-project-1



group, and public access

settings for this database. To allow the EC2 instance to access the database, a VPC security group rds-ec2-X is added to the database and another called ec2-rds-X to the EC2 instance. You can remove the new security group for the database only by removing the compute resource.

Virtual private cloud (VPC) Info

Choose the VPC. The VPC defines the virtual networking environment for this DB instance.

Default VPC (vpc-0ae30520aa3bc4455)

6 Subnets, 6 Availability Zones



Only VPCs with a corresponding DB subnet group are listed.

[EC2](#) > [Security Groups](#) > [sg-0dc7264c5a18e3339 - project-1-db-sg](#) > [Edit inbound rules](#)

Edit inbound rules Info

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules Info

Security group rule ID	Type <small>Info</small>	Protocol <small>Info</small>	Port range <small>Info</small>	Source <small>Info</small>	Description - optional <small>Info</small>
sgr-01def3b1c9f3e8a63	MySQL/Aurora	TCP	3306	Custom	<input type="text"/> 49.206.38.67/32
-	MySQL/Aurora	TCP	3306	Custom	<input type="text"/> sg-0dc7264c5a18e3339

[Add rule](#)

DB subnet group [Info](#)

Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.

Choose existing

Choose existing DB subnet group

Automatic setup

RDS creates a new subnet group for you or reuses an existing subnet group

DB subnet group name

rds-ec2-db-subnet-group-1

New DB subnet group created.

Public access [Info](#)

Yes

RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.

No

RDS doesn't assign a public IP address to the database. Only Amazon EC2 instances and other resources inside the VPC can connect to your database. Choose one or more VPC security groups that specify which resources can connect to the database.

VPC security group (firewall) [Info](#)

Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.

Choose existing

Choose existing VPC security groups

Create new

Create new VPC security group

New VPC security group name

appropriate incoming traffic.

Choose existing

Choose existing VPC security groups

Create new

Create new VPC security group

New VPC security group name

project-1-db-sg

 Amazon RDS will add a new VPC security group *rds-ec2-1* to allow connectivity with your compute resource.

Availability Zone [Info](#)

us-east-1c

Certificate authority - optional [Info](#)

Using a server certificate provides an extra layer of security by validating that the connection is being made to an Amazon database. It does so by checking the server certificate that is automatically installed on all databases that you provision.

rds-ca-2019 (default)

If you don't select a certificate authority, RDS chooses one for you.

▼ Additional configuration

Database port [Info](#)

TCP/IP port that the database will use for application connections.

Database authentication

Database authentication options [Info](#)

Password authentication

Authenticates using database passwords.

Password and IAM database authentication

Authenticates using the database password and user credentials through AWS IAM users and roles.

Password and Kerberos authentication

Choose a directory in which you want to allow authorized users to authenticate with this DB instance using Kerberos Authentication.

Monitoring

Enable Enhanced monitoring

Enabling Enhanced monitoring metrics are useful when you want to see how different processes or threads use the CPU.

Database name: intel

Database options

Initial database name [Info](#)

intel

If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group [Info](#)

default.mysql8.0



Option group [Info](#)

default:mysql-8-0



Backup

Enable automated backups

Creates a point-in-time snapshot of your database

Encryption

Enable encryption

Choose to encrypt the given instance. Master key IDs and aliases appear in the list after they have been created using the AWS Key Management Service console. [Info](#)

AWS KMS key [Info](#)

(default) aws/rds ▾

Account

130124071600

KMS key ID

alias/aws/rds

Log exports

Select the log types to publish to Amazon CloudWatch Logs

- Audit log
- Error log
- General log
- Slow query log

IAM role

The following service-linked role is used for publishing logs to CloudWatch Logs.

RDS service-linked role

Maintenance

Auto minor version upgrade [Info](#)

- Enable auto minor version upgrade

Enabling auto minor version upgrade will automatically upgrade to new minor versions as they are released. The automatic upgrades occur during the maintenance window for the database.

database.

Maintenance window [Info](#)

Select the period you want pending modifications or maintenance applied to the database by Amazon RDS.

- Choose a window
- No preference

Deletion protection

- Enable deletion protection

Protects the database from being deleted accidentally. While this option is enabled, you can't delete the database.

Estimated Monthly costs

DB instance	12.41 USD
Storage	2.30 USD
Total	14.71 USD

This billing estimate is based on on-demand usage as described in [Amazon RDS Pricing](#). Estimate does not include costs for backup storage, IOs (if applicable), or data transfer.

Estimate your monthly costs for the DB Instance using the [AWS Simple Monthly Calculator](#).

The screenshot shows the AWS RDS Databases page. At the top, a blue header bar indicates "Creating database project-1-db" and "Your database might take a few minutes to launch." It also includes a "View credential details" button. Below the header, the navigation path is "RDS > Databases". A callout box provides information about Blue/Green Deployments. The main table displays one database entry:

DB identifier	Status	Role	Engine	Region & AZ	Size	Actions	CPU	Current activity
project-1-db	Creating	Instance	MySQL Community	us-east-1c	db.t3.micro	-	-	-

Successfully set up a connection between project-1-db and EC2 instance i-08542b290b637659e

Successfully created database project-1-db

You can use settings from project-1-db to simplify configuration of suggested database add-ons while we finish creating your DB for you.

RDS > Databases

Consider creating a Blue/Green Deployment to minimize downtime during upgrades
You may want to consider using Amazon RDS Blue/Green Deployments and minimize your downtime during upgrades. A Blue/Green Deployment provides a staging environment for changes to production databases. [RDS User Guide](#) [Aurora User Guide](#)

Databases (1)

Group resources Modify Actions Restore from S3 Create database

Filter by databases

DB identifier	Status	Role	Engine	Region & AZ	Size	Actions	CPU	Current activity
project-1-db	Available	Instance	MySQL Community	us-east-1c	db.t3.micro	-	-	-

Successfully set up a connection between project-1-db and EC2 instance i-08542b290b637659e

Successfully created database project-1-db

You can use settings from project-1-db to simplify configuration of suggested database add-ons while we finish creating your DB for you.

RDS > Databases > project-1-db

project-1-db

Summary

DB identifier project-1-db	CPU <div style="width: 2.66%;">2.66%</div>	Status Available	Class db.t3.micro
Role Instance	Current activity <div style="width: 0%;">0 Connections</div>	Engine MySQL Community	Region & AZ us-east-1c

Connectivity & security Monitoring Logs & events Configuration Maintenance & backups Tags

Processi
Processi
Processi
Scanning
Scanning
Running
Restarti
systemd
Service
systemd
systemd
No conta
No user
No VM gu
ubuntu@i
images
ubuntu@i
ubuntu@i
i-0d34
PublicIP

Role Instance	Current activity 0 Connections	Engine MySQL Community	Region & AZ us-east-1c																		
<hr/>																					
Connectivity & security Monitoring Logs & events Configuration Maintenance & backups Tags																					
<h3>Connectivity & security</h3> <table border="1"> <thead> <tr> <th>Endpoint & port</th> <th>Networking</th> <th>Security</th> </tr> </thead> <tbody> <tr> <td>Endpoint project-1-db.c56qt0sulxwq.us-east-1.rds.amazonaws.com</td> <td>Availability Zone us-east-1c</td> <td>VPC security groups rds-ec2-1 (sg-08255e10b4bdff086) Active</td> </tr> <tr> <td>Port 3306</td> <td>VPC vpc-0ae30520aa3bc4455</td> <td>project-1-db-sg (sg-0dc7264c5a18e3339) Active</td> </tr> <tr> <td></td> <td>Subnet group rds-ec2-db-subnet-group-1</td> <td>Publicly accessible No</td> </tr> <tr> <td></td> <td>Subnets subnet-0138660be60985f6a subnet-0e69b76b45e409296 subnet-0de1b47589d0ab4cb subnet-0cc0dfa0637766df6 subnet-00bf8d838a1680d27</td> <td>Certificate authority Info rds-ca-2019</td> </tr> <tr> <td></td> <td></td> <td>Certificate authority date August 22, 2024, 22:38 (UTC+05:30)</td> </tr> </tbody> </table>				Endpoint & port	Networking	Security	Endpoint project-1-db.c56qt0sulxwq.us-east-1.rds.amazonaws.com	Availability Zone us-east-1c	VPC security groups rds-ec2-1 (sg-08255e10b4bdff086) Active	Port 3306	VPC vpc-0ae30520aa3bc4455	project-1-db-sg (sg-0dc7264c5a18e3339) Active		Subnet group rds-ec2-db-subnet-group-1	Publicly accessible No		Subnets subnet-0138660be60985f6a subnet-0e69b76b45e409296 subnet-0de1b47589d0ab4cb subnet-0cc0dfa0637766df6 subnet-00bf8d838a1680d27	Certificate authority Info rds-ca-2019			Certificate authority date August 22, 2024, 22:38 (UTC+05:30)
Endpoint & port	Networking	Security																			
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Port 3306	VPC vpc-0ae30520aa3bc4455	project-1-db-sg (sg-0dc7264c5a18e3339) Active																			
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		Certificate authority date August 22, 2024, 22:38 (UTC+05:30)																			

```
ubuntu@ip-172-31-37-2:/var/www/html$ sudo add-apt-repository -y ppa:ondrej/php
PPA publishes dbgsym, you may need to include 'main/debug' component
Repository: 'deb https://ppa.launchpadcontent.net/ondrej/php/ubuntu/ jammy main'
Description:
Co-installable PHP versions: PHP 5.6, PHP 7.x, PHP 8.x and most requested extensions are included. Only Supported Versions of PHP (http://php.net/supported-versions.php) for Supported Ubuntu Releases (https://wiki.ubuntu.com/Releases) are provided. Don't ask for end-of-life PHP versions or Ubuntu release, they won't be provided.

Debian oldstable and stable packages are provided as well: https://deb.sury.org/#debian-dpa

You can get more information about the packages at https://deb.sury.org

IMPORTANT: The <foo>-backports is now required on older Ubuntu releases.

BUGS&FEATURES: This PPA now has a issue tracker:
https://deb.sury.org/#bug-reporting

CAVEATS:
1. If you are using php-gearman, you need to add ppa:ondrej/pkg-gearman
2. If you are using apache2, you are advised to add ppa:ondrej/apache2
3. If you are using nginx, you are advised to add ppa:ondrej/nginx-mainline
   or ppa:ondrej/nginx

PLEASE READ: If you like my work and want to give me a little motivation, please consider donating regularly: https://donate.sury.org/

WARNING: add-apt-repository is broken with non-UTF-8 locales, see
https://github.com/oerdnj/deb.sury.org/issues/56 for workaround:
```

LC_ALL=C.UTF-8 add-apt-repository ppa:ondrej/php

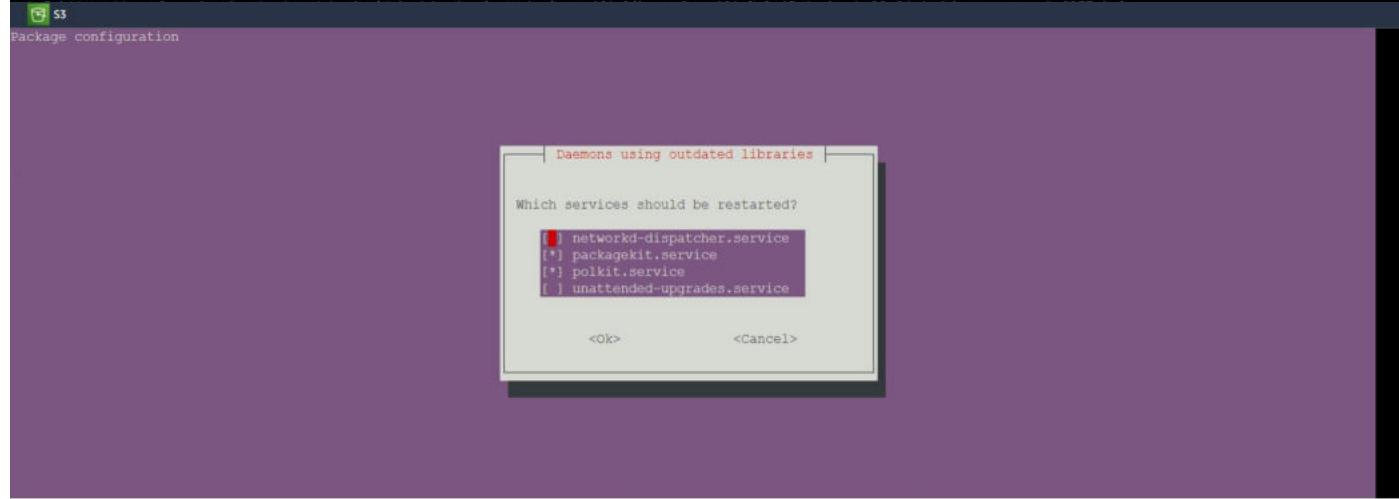
i-08542b290b637659e (ec2instance-project-1)

Public IPs: 18.232.104.115 Private IPs: 172.31.37.2

```

Reading package lists... Done
ubuntu@ip-172-31-37-2:/var/www/html$ sudo apt install php5.6 mysql-client php5.6-mysql
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'php5.6-mysql' instead of 'php5.6-mysqli'
The following additional packages will be installed:
  libapache2-mod-php5.6 libpcre3 mysql-client-8.0 mysql-client-core-8.0 mysql-common php-common php5.6-cli php5.6-common php5.6-common php5.6-json php5.6-opcache php5.6-readline
Suggested packages:
  php-pear
The following NEW packages will be installed:
  libapache2-mod-php5.6 mysql-client mysql-client-8.0 mysql-client-core-8.0 mysql-common php-common php5.6 php5.6-cli php5.6-common php5.6-json php5.6-mysql
  php5.6-opcache php5.6-readline
The following packages will be upgraded:
  libpcre3
1 upgraded, 13 newly installed, 0 to remove and 43 not upgraded.
Need to get 7136 kB of archives.
After this operation, 76.7 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-core-8.0 amd64 8.0.34-0ubuntu0.22.04.1 [2754 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 mysql-common all 5.8+1.0.8 [7212 B]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-8.0 amd64 8.0.34-0ubuntu0.22.04.1 [22.7 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client all 8.0.34-0ubuntu0.22.04.1 [9354 B]

```



i-08542b290b637659e (ec2instance-project-1)

PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2

--Press ok

```

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-37-2:/var/www/html$ ^C
ubuntu@ip-172-31-37-2:/var/www/html$ sudo apt install php5.6 mysql-client php5.6-mysql
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
mysql-client is already the newest version (8.0.34-0ubuntu0.22.04.1).
php5.6 is already the newest version (5.6.40-68+ubuntu22.04.1+deb.sury.org+1).
php5.6-mysql is already the newest version (5.6.40-68+ubuntu22.04.1+deb.sury.org+1).
0 upgraded, 0 newly installed, 0 to remove and 43 not upgraded.
ubuntu@ip-172-31-37-2:/var/www/html$ ls
images index.php
ubuntu@ip-172-31-37-2:/var/www/html$ cd
ubuntu@ip-172-31-37-2:~$ 
```

project-1-db

Summary

DB identifier project-1-db	CPU <div style="width: 2.66%;">2.66%</div>	Status Available	Class db.t3.micro
Role Instance	Current activity <div style="width: 0%;">0 Connections</div>	Engine MySQL Community	Region & AZ us-east-1c

Connectivity & security

Endpoint & port	Networking	Security
Endpoint project-1-db.c56qt0sulxwq.us-east-1.rds.amazonaws.com	Availability Zone us-east-1c	VPC security groups rds-ec2-1 (sg-08255e10b4bdff086) Active
Port 3306	VPC vpc-0ae30520aa3bc4455	project-1-db-sg (sg-0dc7264c5a18e3339) Active
	Subnet group	

```
ubuntu@ip-172-31-37-2:~$ sudo mysql -h project-1-db.c56qt0sulxwq.us-east-1.rds.amazonaws.com -u admin -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 28
Server version: 8.0.33 Source distribution

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> ^C
mysql> [REDACTED]

i-08542b290b637659e (ec2instance-project-1)
PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2

mysql> use intel;
Database changed
mysql> exit;
Bye
ubuntu@ip-172-31-37-2:~$ cd /var/www/html
ubuntu@ip-172-31-37-2:/var/www/html$ ls
images index.php
ubuntu@ip-172-31-37-2:/var/www/html$ sudo nano index.php[REDACTED]

i-08542b290b637659e (ec2instance-project-1)
PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2
```

```
mysql> ^C
mysql> show databases;
+-----+
| Database      |
+-----+
| information_schema |
| intel          |
| mysql          |
| performance_schema |
| sys            |
+-----+
5 rows in set (0.00 sec)
```

```
mysql> use intel;
Database changed
mysql> 
```

i-08542b290b637659e (ec2instance-project-1)

PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2

```
-----
$firstname=$_POST['firstname'];
$email=$_POST['email'];
$servername = "intelli.coghw13fheqo.us-east-2.rds.amazonaws.com";
$username = "intel";
$password = "intel123";
-----
```

```
$servername = "project-1-db.c56qt0sulxwq.us-east-1.rds.amazonaws.com";
$username = "admin";
$password = "Intel123";
```

```
mysql> use intel;
Database changed
mysql> exit;
Bye
ubuntu@ip-172-31-37-2:~$ cd /var/www/html
ubuntu@ip-172-31-37-2:/var/www/html$ ls
images index.php
ubuntu@ip-172-31-37-2:/var/www/html$ sudo nano index.php
ubuntu@ip-172-31-37-2:/var/www/html$ sudo nano index.php
ubuntu@ip-172-31-37-2:/var/www/html$ 
```

i-08542b290b637659e (ec2instance-project-1)

PublicIPs: 18.232.104.115 PrivateIPs: 172.31.37.2

Not secure | 18.232.104.115



Name:

Email:

Submit

The page features a light gray header bar with the URL "Not secure | 18.232.104.115". The main content area has a white background with a light gray footer bar. The footer bar contains the "IntelliPaat" logo, which includes a stylized orange and blue figure icon.

Not secure | 18.232.104.115



Name:

Email:

Submit

Error: INSERT INTO data (firstname,email) VALUES ('sudha', 'harsi005@gmail.com')
Table 'intel.data' doesn't exist

Error:
Table

This page is identical to the one above, featuring the same "IntelliPaat" logo and form fields. It also displays an error message in the bottom right corner: "Error: INSERT INTO data (firstname,email) VALUES ('sudha', 'harsi005@gmail.com') Table 'intel.data' doesn't exist". An additional error message, "Error: Table", is also present in the bottom right corner.

```
ubuntu@ip-172-31-37-2:/var/www/html$ sudo nano index.php
ubuntu@ip-172-31-37-2:/var/www/html$ sudo nano index.php
ubuntu@ip-172-31-37-2:/var/www/html$ cd
ubuntu@ip-172-31-37-2:~/> sudo mysql -h project-1-db.c56qt0sulxwq.us-east-1.rds.amazonaws.com -u admin -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 36
Server version: 8.0.33 Source distribution

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use intel;
Database changed
mysql> create table data(firstname varchar(15), email varchar(25));
Query OK, 0 rows affected (0.03 sec)

mysql> [
```

i-08542b290b637659e (ec2instance-project-1)

Public IPs: 18.232.104.115 Private IPs: 172.31.37.2

→ C ▲ Not secure | 18.232.104.115

Name:

Email:

Submit

Record created successfully

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

```
mysql> use intel;
Database changed
mysql> create table data(firstname varchar(15), email varchar(25));
Query OK, 0 rows affected (0.03 sec)

mysql> select * from data;
+-----+-----+
| firstname | email      |
+-----+-----+
| sudha     | narsi005@gmail.com |
| sudha     | narsi005@gmail.com |
|           |             |
+-----+-----+
3 rows in set (0.00 sec)

mysql> [ ]
```

i-08542b290b637659e (ec2instance-project-1)

Public IPs: 18.232.104.115 Private IPs: 172.31.37.2

The screenshot shows the AWS EC2 Instances page. On the left, there's a navigation sidebar with links like EC2 Dashboard, EC2 Global View, Events, Instances (selected), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images (AMIs, AMI Catalog), and Elastic Block Store (Volumes, Snapshots, Lifecycle Manager). The main content area has a title "Instances (1/3) [Info](#)". Below it is a search bar with placeholder text "Find Instance by attribute or tag (case-sensitive)". A table lists three instances:

Name	Instance ID	Instance state	Instance type	Status check	Action
<input checked="" type="checkbox"/> ec2instance-project-1	i-08542b290b637659e	Running	t2.micro	2/2 checks passed	Actions
<input type="checkbox"/> ec2	i-044c593f7ba13e62c	Stopped	t2.micro	-	Actions
<input type="checkbox"/> ec2p	i-016df4df81ea6e733	Stopped	t2.micro	-	Actions

Below the table, a modal window titled "Instance: i-08542b290b637659e (ec2instance-project-1)" is open. It has tabs for Details, Security, Networking, Storage, Status checks, Monitoring, and Tags. Under the Details tab, there's a section for "Instance summary" with fields like Instance ID (i-08542b290b637659e), Public IPv4 address (18.232.104.115), Private IPv4 addresses (172.31.37.2), and Public IPv4 DNS (ec2-18-232-104-115.compute-1.amazonaws.com). The "Actions" menu on the right side of the main table also shows options for the selected instance.

Create image Info

An image (also referred to as an AMI) defines the programs and settings that are applied when you launch an EC2 instance. You can create an image from the configuration of an existing instance.

Instance ID

i-08542b290b637659e (ec2instance-project-1)

Image name

ec2instance-project-1-ami

Maximum 127 characters. Can't be modified after creation.

Image description - optional

ec2instance-project-1-ami

Maximum 255 characters

No reboot

Enable

Instance volumes

Storage type	Device	Snapshot	Size	Volume type	IOPS	Throughput	Delete on termination	Encrypted
EBS	/dev/...	Create new snapshot fr...	8	EBS General Purpose S...	100		<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Enable

Instance volumes

Storage type	Device	Snapshot	Size	Volume type	IOPS	Throughput	Delete on termination	Encrypted
EBS	/dev/...	Create new snapshot fr...	8	EBS General Purpose S...	100		<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Enable

[Add volume](#)

i During the image creation process, Amazon EC2 creates a snapshot of each of the above volumes.

Tags - optional

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Tag image and snapshots together

Tag the image and the snapshots with the same tag.

Tag image and snapshots separately

Tag the image and the snapshots with different tags.

No tags associated with the resource.

[Add new tag](#)

You can add up to 50 more tags.

[Cancel](#)

[Create image](#)

i Currently creating AMI ami-05b1f14f594cc5f0b1 from instance i-08542b290b637659e. Check that the AMI status is 'Available' before deleting the instance or carrying out other actions related to this AMI. [X](#)

Instances (3) Info

[Find Instance by attribute or tag \(case-sensitive\)](#)



Connect

Instance state ▾

Actions ▾

Launch instances ▾

▼

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Publ
<input type="checkbox"/>	ec2instance-project-1	i-08542b290b637659e	Running	t2.micro	2/2 checks passed	No alarms	us-east-1c	ec2-

Amazon Machine Images (AMIs) (1/1) Info					
Owned by me		<input type="text"/> Find AMI by attribute or tag		Actions	
<input checked="" type="checkbox"/>	Name	AMI ID	AMI name	Source	Owner
<input checked="" type="checkbox"/>	ami-05b1f4f594cc5f0b1	ami-05b1f4f594cc5f0b1	ec2instance-project-1-ami	130124071600/ec2instance-project-1-...	130124071600

AMI ID: ami-05b1f4f594cc5f0b1

Details	Permissions	Storage	Tags
AMI ID ami-05b1f4f594cc5f0b1	Image type machine	Platform details Linux/UNIX	Root device type EBS
AMI name ec2instance-project-1-ami	Owner account ID 130124071600	Architecture x86_64	Usage operation RunInstances
Root device name /dev/sda1	Status Available	Source 130124071600/ec2instance-project-1-ami	Virtualization type hvm
Boot mode -	State reason -	Creation date Fri Oct 27 2023 17:10:27 GMT+0530 (India Standard Time)	Kernel ID -

Amazon Machine Images (AMIs) (1/1) Info					
Owned by me		<input type="text"/> Find AMI by attribute or tag		Actions	
Visibility	Status	Creation date	Platform	Root device type	Block devices
Private	Available	 2023/10/27 17:10 GMT+5:30	Linux/UNIX	ebs	/dev/sda1=snap-039ff109aba46f783:8:tru

Amazon EC2 Auto Scaling

helps maintain the availability of your applications

Auto Scaling groups are collections of Amazon EC2 Instances that enable automatic scaling and fleet management features. These features help you maintain the health and availability of your applications.

Create Auto Scaling group

Get started with EC2 Auto Scaling by creating an Auto Scaling group.

[Create Auto Scaling group](#)

AMIs
AMI Ca
Elastic
Volume
Snapsh
Lifecycl
Networ
Security
Elasti I
Placem
Your Da

Name

Auto Scaling group name
Enter a name to identify the group.

Must be unique to this account in the current Region and no more than 255 characters.

Launch template Info

i For accounts created after May 31, 2023, the EC2 console only supports creating Auto Scaling groups with launch templates. Creating Auto Scaling groups with launch configurations is not recommended but still available via the CLI and API until December 31, 2023.

Launch template
Choose a launch template that contains the instance-level settings, such as the Amazon Machine Image (AMI), instance type, key pair, and security groups.

C

[Create a launch template](#)

Cancel
Next

EC2 > Launch templates > Create launch template

Create launch template

Creating a launch template allows you to create a saved instance configuration that can be reused, shared and launched at a later time. Templates can have multiple versions.

Launch template name and description

Launch template name - *required*

Must be unique to this account. Max 128 chars. No spaces or special characters like '&', '*', '@'.

Template version description

Max 255 chars

Auto Scaling guidance Info
Select this if you intend to use this template with EC2 Auto Scaling
 Provide guidance to help me set up a template that I can use with EC2 Auto Scaling

▶ Template tags
▶ Source template

▼ Summary

- [Software Image \(AMI\)](#)
- [Virtual server type \(instance type\)](#)
- [Firewall \(security group\)](#)
- [Storage \(volumes\)](#)

i **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, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the

Cancel
Create launch template

Application and OS Images (Amazon Machine Image) - required [Info](#)

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

Recents | **My AMIs** | Quick Start

Owned by me Shared with me 🔍

Specify a custom value...

ec2instance-project-1-ami ami-05b1f4f594cc5f0b1 2023-10-27T11:40:27.000Z	Virtualization: hvm	ENI enabled: true	Root device type: ebs
ec2instance-project-1-ami ami-05b1f4f594cc5f0b1 2023-10-27T11:40:27.000Z	Virtualization: hvm	ENI enabled: true	Root device type: ebs

Description
ec2instance-project-1-ami

Summary

Software Image (AMI)
ec2instance-project-1-ami
ami-05b1f4f594cc5f0b1

Virtual server type (instance type)

Firewall (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, 2 million I/Os, 1 GB of snapshots, and 100 GiB of bandwidth to the internet.

Cancel Create launch template

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name
kp-ppk-project-1 ▼ Create new key pair

Network settings [Info](#)

Subnet info
Don't include in launch template ▼ Create new subnet

When you specify a subnet, a network interface is automatically added to your template.

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.

Select existing security group Create security group

Security groups info
Select security groups ▼

project-1-sg sg-085f667bb1c1a34d1 X
VPC: vpc-0ae30520aa3bc4455

Compare security group rules

Cancel Create launch template

Summary

Software Image (AMI)
ec2instance-project-1-ami
ami-05b1f4f594cc5f0b1

Virtual server type (instance type)
t2.micro

Firewall (security group)
project-1-sg

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, 2 million I/Os, 1 GB of snapshots, and 100 GiB of bandwidth to the internet.

EC2 > Launch templates > Create launch template

Success
Successfully created project-1-LT(lt-02774f2db329842a9).

Actions log

Next steps

Launch Templates (1) Info						
<input type="text"/> Search		Actions Create launch template				
Launch Template ID	Launch Template Name	Default Version	Latest Version	Create Time	Created By	⋮
lt-02774f2db329842a9	project-1-LT	1	1	2023-10-27T11:57:51.000Z	arn:aws:iam::130124071600:root	⋮

Select a launch template

Step 2
Choose instance launch options

Step 3 - optional
Configure advanced options

Step 4 - optional
Configure group size and scaling policies

Step 5 - optional
Add notifications

Step 6 - optional
Add tags

Step 7
Review

Name

Auto Scaling group name
Enter a name to identify the group.

Must be unique to this account in the current Region and no more than 255 characters.

Launch template [Info](#)

For accounts created after May 31, 2023, the EC2 console only supports creating Auto Scaling groups with launch templates. Creating Auto Scaling groups with launch configurations is not recommended but still available via the CLI and API until December 31, 2023.

Launch template
Choose a launch template that contains the instance-level settings, such as the Amazon Machine Image (AMI), instance type, key pair, and security groups.

[C](#)

[Create a launch template](#) [F](#)

[Cancel](#) [Next](#)

aws | Services X

N. Virginia AWS ▾

Step 2.
Choose instance launch options

Step 3 - optional
Configure advanced options

Step 4 - optional
Configure group size and scaling policies

Step 5 - optional
Add notifications

Step 6 - optional
Add tags

Step 7
Review

Name

Auto Scaling group name
Enter a name to identify the group.

Must be unique to this account in the current Region and no more than 255 characters.

Launch template [Info](#)

For accounts created after May 31, 2023, the EC2 console only supports creating Auto Scaling groups with launch templates. Creating Auto Scaling groups with launch configurations is not recommended but still available via the CLI and API until December 31, 2023.

Launch template
Choose a launch template that contains the instance-level settings, such as the Amazon Machine Image (AMI), instance type, key pair, and security groups.

[C](#)

[Create a launch template](#) [F](#)

Version
 [C](#)

[Create a launch template version](#) [F](#)

Step 1

[Choose launch template](#)

Step 2

[Choose instance launch options](#)

Step 3 - optional

[Configure advanced options](#)

Step 4 - optional

[Configure group size and scaling policies](#)

Step 5 - optional

[Add notifications](#)

Step 6 - optional

[Add tags](#)

Step 7

[Review](#)

Choose instance launch options Info

Choose the VPC network environment that your instances are launched into, and customize the instance types and purchase options.

Instance type requirements Info

[Override launch template](#)

You can keep the same instance attributes or instance type from your launch template, or you can choose to override the launch template by specifying different instance attributes or manually adding instance types.

Launch template

Version

Description

[project-1-LT](#)
lt-02774f2db329842a9

Default

launch template for project-1

Instance type

t2.micro

Network Info

For most applications, you can use multiple Availability Zones and let EC2 Auto Scaling balance your instances across the zones. The default VPC and default subnets are suitable for getting started quickly.

VPC

Step 4 - optional
[Configure group size and scaling policies](#)

Step 5 - optional
[Add notifications](#)

Step 6 - optional
[Add tags](#)

Step 7
[Review](#)

[Launch template](#)
[project-1-LT](#)
lt-02774f2db329842a9

[Version](#)
Default

[Description](#)
launch template for project-1

Instance type
t2.micro

Network Info

For most applications, you can use multiple Availability Zones and let EC2 Auto Scaling balance your instances across the zones. The default VPC and default subnets are suitable for getting started quickly.

VPC

Choose the VPC that defines the virtual network for your Auto Scaling group.

vpc-0ae30520aa3bc4455
172.31.0.0/16 Default

[Create a VPC](#)

Availability Zones and subnets

Define which Availability Zones and subnets your Auto Scaling group can use in the chosen VPC.

Select Availability Zones and subnets

[Create a subnet](#)[Cancel](#)[Skip to review](#)[Previous](#)[Next](#)

vpc-0ae30520aa3bc4455
172.31.0.0/16 Default

[Create a VPC](#)

Availability Zones and subnets

Define which Availability Zones and subnets your Auto Scaling group can use in the chosen VPC.

Select Availability Zones and subnets



us-east-1a | subnet-03f7611b2551a33ad X

172.31.80.0/20 Default

us-east-1b | subnet-08d8b1f5b6f517008 X

172.31.16.0/20 Default

us-east-1c | subnet-0d72428cdaea2a3aa X

172.31.32.0/20 Default

us-east-1d | subnet-03a85da6633c6016b X

172.31.0.0/20 Default

us-east-1e | subnet-023000d3aae91cc8d X

172.31.48.0/20 Default

us-east-1f | subnet-0525b9bb5de190902 X

172.31.64.0/20 Default

[Create a subnet](#)[Cancel](#)[Skip to review](#)[Previous](#)[Next](#)

Step 1

[Choose launch template](#)

Step 2

[Choose instance launch options](#)

Step 3 - optional

[Configure advanced options](#)

Step 4 - optional

[Configure group size and scaling policies](#)

Step 5 - optional

[Add notifications](#)

Step 6 - optional

[Add tags](#)

Step 7

[Review](#)

Configure advanced options - optional Info

Integrate your Auto Scaling group with other services to distribute network traffic across multiple servers using a load balancer or to establish service-to-service communications using VPC Lattice. You can also set options that give you more control over health check replacements and monitoring.

Load balancing Info

Use the options below to attach your Auto Scaling group to an existing load balancer, or to a new load balancer that you define.

 No load balancer

Traffic to your Auto Scaling group will not be fronted by a load balancer.

 Attach to an existing load balancer

Choose from your existing load balancers.

 Attach to a new load balancer

Quickly create a basic load balancer to attach to your Auto Scaling group.

Attach to a new load balancer

Define a new load balancer to create for attachment to this Auto Scaling group.

Load balancer type

Choose from the load balancer types offered below. Type selection cannot be changed after the load balancer is created. If you need a different type of load balancer than those offered here, visit the [Load Balancing console](#).

 Application Load Balancer
HTTP, HTTPS

 Network Load Balancer
TCP, UDP, TLS

Load balancer name

Name cannot be changed after the load balancer is created.

Load balancer scheme

Scheme cannot be changed after the load balancer is created.

 Internal

 Internet-facing

Network mapping

Your new load balancer will be created using the same VPC and Availability Zone selections as your Auto Scaling group. You can select different subnets and add subnets from additional Availability Zones.

VPC

Availability Zones and subnets

You must select a single subnet for each Availability Zone enabled. Only public subnets are available for selection to support DNS resolution.

 us-east-1d

Availability Zones and subnets

You must select a single subnet for each Availability Zone enabled. Only public subnets are available for selection to support DNS resolution.

<input checked="" type="checkbox"/> us-east-1d	subnet-03a85da6633c6016b	▼
<input checked="" type="checkbox"/> us-east-1f	subnet-0525b9bb5de190902	▼
<input checked="" type="checkbox"/> us-east-1e	subnet-023000d3aae91cc8d	▼
<input checked="" type="checkbox"/> us-east-1a	subnet-03f7611b2551a33ad	▼
<input checked="" type="checkbox"/> us-east-1c	subnet-0d72428cddea2a3aa	▼
<input checked="" type="checkbox"/> us-east-1b	subnet-08d8b1f5b6f517008	▼

Listeners and routing

If you require secure listeners, or multiple listeners, you can configure them from the [Load Balancing console](#) after your load balancer is created.

Protocol	Port	Default routing (forward to)
HTTP	80	<input type="button" value="Create a target group"/> ▼ New target group name An instance target group with default settings will be created. project-1-alb-tg

Select VPC Lattice service to attach

No VPC Lattice service

VPC Lattice will not manage your Auto Scaling group's network access and connectivity with other services.

Attach to VPC Lattice service

Incoming requests associated with specified VPC Lattice target groups will be routed to your Auto Scaling group.

[Create new VPC Lattice service](#)

Health checks

Health checks increase availability by replacing unhealthy instances. When you use multiple health checks, all are evaluated, and if at least one fails, instance replacement occurs.

EC2 health checks

Always enabled

Additional health check types - *optional* | [Info](#)

Turn on Elastic Load Balancing health checks Recommended

Elastic Load Balancing monitors whether instances are available to handle requests. When it reports an unhealthy instance, EC2 Auto Scaling can replace it on its next periodic check.

Turn on VPC Lattice health checks

VPC Lattice can monitor whether instances are available to handle requests. If it considers a target as failed a health check, EC2 Auto Scaling replaces it after its next periodic check.

Health check grace period | [Info](#)

This time period delays the first health check until your instances finish initializing. It doesn't prevent an instance from terminating when placed into a non-running state.

300 seconds

Turn on VPC Lattice health checks
VPC Lattice can monitor whether instances are available to handle requests. If it considers a target as failed a health check, EC2 Auto Scaling replaces it after its next periodic check.

Health check grace period [Info](#)
This time period delays the first health check until your instances finish initializing. It doesn't prevent an instance from terminating when placed into a non-running state.

300 seconds

Additional settings

Monitoring [Info](#)
 Enable group metrics collection within CloudWatch

Default instance warmup [Info](#)
The amount of time that CloudWatch metrics for new instances do not contribute to the group's aggregated instance metrics, as their usage data is not reliable yet.
 Enable default instance warmup

[Cancel](#) [Skip to review](#) [Previous](#) [Next](#)

EC2 > Auto Scaling groups > Create Auto Scaling group

Step 1 [Choose launch template](#)

Step 2 [Choose instance launch options](#)

Step 3 - optional [Configure advanced options](#)

Step 4 - optional [Configure group size and scaling policies](#)

Step 5 - optional [Add notifications](#)

Step 6 - optional [Add tags](#)

Step 7 [Review](#)

Configure group size and scaling policies - optional [Info](#)

Set the desired, minimum, and maximum capacity of your Auto Scaling group. You can optionally add a scaling policy to dynamically scale the number of instances in the group.

Group size - optional [Info](#)

Specify the size of the Auto Scaling group by changing the desired capacity. You can also specify minimum and maximum capacity limits. Your desired capacity must be within the limit range.

Desired capacity

Minimum capacity

Maximum capacity ▼

Scaling policies - optional

Scaling policies - *optional*

Choose whether to use a scaling policy to dynamically resize your Auto Scaling group to meet changes in demand.

[Info](#)

Target tracking scaling policy

Choose a desired outcome and leave it to the scaling policy to add and remove capacity as needed to achieve that outcome.

None

Instance scale-in protection - *optional*

Instance scale-in protection

If protect from scale in is enabled, newly launched instances will be protected from scale in by default.

Enable instance scale-in protection

[Cancel](#)[Skip to review](#)[Previous](#)[Next](#)

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Add notifications - *optional* [Info](#)

Send notifications to SNS topics whenever Amazon EC2 Auto Scaling launches or terminates the EC2 instances in your Auto Scaling group.

[Add notification](#)[Cancel](#)[Skip to review](#)[Previous](#)[Next](#)

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Step 1

[Choose launch template](#)

Step 2

[Choose instance launch options](#)

Step 3 - optional

[Configure advanced options](#)

Step 4 - optional

[Configure group size and scaling policies](#)

Step 5 - optional

[Add notifications](#)

Step 6 - optional

[Add tags](#)

Step 7

Review

Add tags - optional Info

Add tags to help you search, filter, and track your Auto Scaling group across AWS. You can also choose to automatically add these tags to instances when they are launched.

ⓘ You can optionally choose to add tags to instances (and their attached EBS volumes) by specifying tags in your launch template. We recommend caution, however, because the tag values for instances from your launch template will be overridden if there are any duplicate keys specified for the Auto Scaling group.

Tags (0)

[Add tag](#)

50 remaining

[Cancel](#)[Previous](#)[Next](#)

Review Info

Step 1

[Choose launch template](#)

Step 2

[Choose instance launch options](#)

Step 3 - optional

[Configure advanced options](#)

Step 4 - optional

[Configure group size and scaling policies](#)

Step 5 - optional

[Add notifications](#)

Step 6 - optional

[Add tags](#)

Step 7

Review

Step 1: Choose launch template

[Edit](#)

Group details

Auto Scaling group name
project-1-asg

Launch template

Launch template	Version	Description
project-1-LT	Default	launch template for project-1 lt-02774f2db329842a9

Step 2: Choose instance launch options

[Edit](#)

Network

Auto Scaling groups (1) Info

[C](#)[Launch configurations](#)[Launch templates](#)[Actions](#)[Create Auto Scaling group](#)

< 1 > ⌂

Search your Auto Scaling groups

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Available
<input type="checkbox"/>	project-1-asg	project-1-LT Version Default	2	-	2	2	5	us-east-1a, ...

0 Auto Scaling groups selected

Select an Auto Scaling group

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Instances (5) Info								
	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Publ...
<input type="checkbox"/>	ec2instance-project-1	i-08542b290b637659e	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1c	ec2...
<input type="checkbox"/>		i-08736b5a4407477f4	Running	t2.micro	2/2 checks passed	No alarms +	us-east-1e	ec2...
<input type="checkbox"/>	ec2	i-044c593f7ba13e62c	Stopped	t2.micro	-	No alarms +	us-east-1c	-
<input type="checkbox"/>	ec2p	i-016df4df81ea6e733	Stopped	t2.micro	-	No alarms +	us-east-1c	-
<input type="checkbox"/>		i-0fcdeb1336eb00672	Running	t2.micro	Initializing	No alarms +	us-east-1c	ec2...

EC2 > Auto Scaling groups

Auto Scaling groups (1/1) Info								
	Name	Launch template/configuration	Instances	Status	Desired capacity	Min ...	Actions	Create Auto Scaling group
<input checked="" type="checkbox"/>	project-1-asg	project-1-LT Version Default	2	-	2	2		

Auto Scaling group: project-1-asg

Instances (2)								
	Instance ID	Lifecycle	Instanc...	Weight...	Launch ...	Availabi...	Health s...	Protect...
<input type="checkbox"/>	i-08736b5a4407477f4	InService	t2.micro	-	project-1-LT	us-east-1e	Healthy	
<input type="checkbox"/>	i-0fcdeb1336eb00672	InService	t2.micro	-	project-1-LT	us-east-1c	Healthy	

Lifecycle hooks (0) Info								
	Actions	Create lifecycle hook						

EC2 > Load balancers

Load balancers (1/1)								
Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.								
	Name	DNS name	State	VPC ID	Availability Zones	Type	Date c...	Actions
<input checked="" type="checkbox"/>	project-1-alb	project-1-alb-1155951024...	Active	vpc-0ae30520aa3bc445...	6 Availability Zones	application	October 27, 2023, 17:40 (UTC+05:30)	

Load balancer: project-1-alb

Details	Listeners and rules	Network mapping	Security	Monitoring	Integrations	Attributes	Tags
Details							
Load balancer type	Status	VPC	IP address type				
Application	Active	vpc-0ae30520aa3bc4455	IPv4				
Scheme	Hosted zone	Availability Zones	Date created				
Internet-facing	7355X00TR07X7K	subnet-0525h9hh5de19n902	October 27, 2023, 17:40 (UTC+05:30)				

The screenshot shows the AWS EC2 Load Balancers console. At the top, there is a navigation bar with 'EC2 > Load balancers'. Below it is a table titled 'Load balancers (1/1)' with one item listed:

Name	DNS name	State	VPC ID	Availability Zones	Type	Date c
project-1-alb	project-1-alb-1155951024...	Active	vpc-0ae30520aa3bc44...	6 Availability Zones	application	October

Below the table, a modal window titled 'Load balancer: project-1-alb' is open. It displays the load balancer's configuration, including its ARN and DNS name. A message 'DNS name copied' is shown above the copied DNS name.

Load balancer ARN
arn:aws:elasticloadbalancing:us-east-1:130124071600:loadbalancer/app/project-1-alb/8587cfcd6a596643

DNS name copied
project-1-alb-1155951024.us-east-1.elb.amazonaws.com (A Record)

--Project 1 - Deploying a Multi-Tier Website Using AWS EC2 -
-----DONE-----