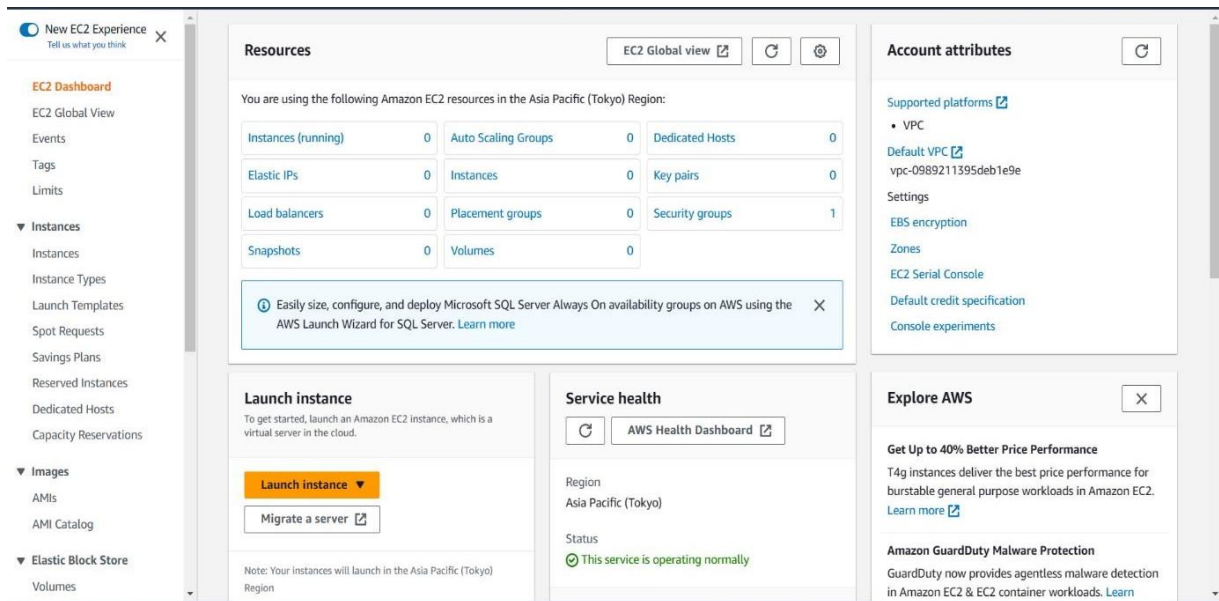


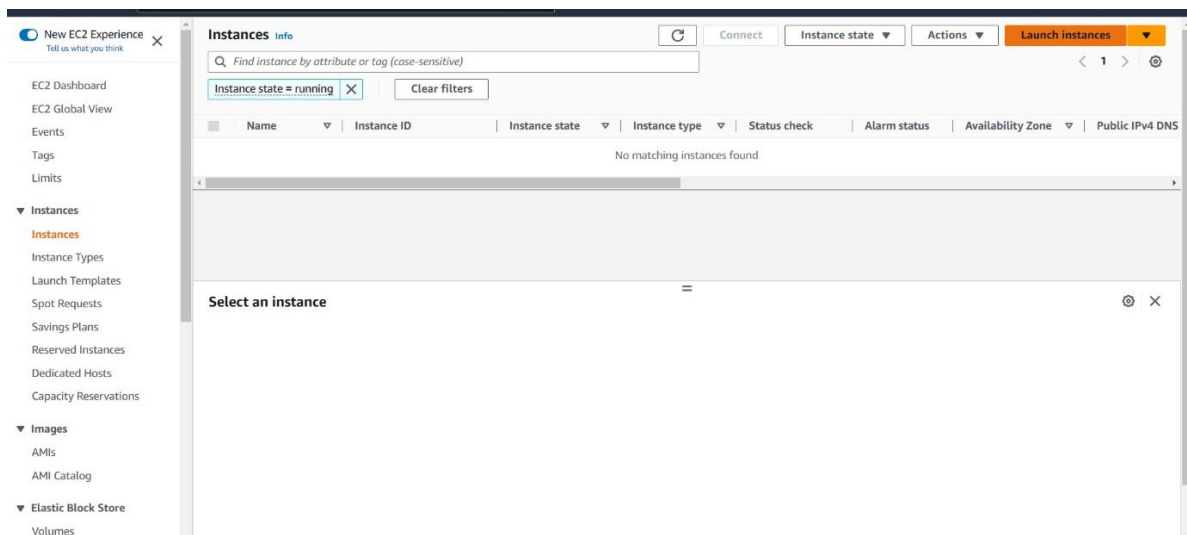
# AWS-7

## Upload a static website on EC2.

1. Sign in to your AWS account as a root user and search EC2. Then click on Instances (running).



2. Then click on Launch instances.



### 3. Then enter name of web server.

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

 [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

#### Quick Start

Amazon Linux

macOS

Ubuntu

Windows

Red Hat

S

[Browse more AMIs](#)

### Summary

Number of instances [Info](#)

Software Image (AMI)

Amazon Linux 2023 AMI 2023.0.2...[read more](#)  
ami-067871d950411e643

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, 7 million I/Os, 1 GB of ephemeral and

Cancel [Launch instance](#)

### 4. Then select Ubuntu.

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

#### Quick Start

Amazon Linux

macOS

Ubuntu

Windows

Red Hat

S

[Browse more AMIs](#)

### Summary

Number of instances [Info](#)

Software Image (AMI)

Amazon Linux 2023 AMI 2023.0.2...[read more](#)  
ami-067871d950411e643

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, 7 million I/Os, 1 GB of ephemeral and

Cancel [Launch instance](#)

5. Then for key pair (login) click on Create new key pair.

▼ Instance type [Info](#)

Instance type

t2.micro Free tier eligible [Compare instance types](#)

Family: t2 1 vCPU 1 GiB Memory  
On-Demand Windows pricing: 0.0198 USD per Hour  
On-Demand SUSE pricing: 0.0152 USD per Hour  
On-Demand RHEL pricing: 0.0752 USD per Hour  
On-Demand Linux pricing: 0.0152 USD per Hour

▼ 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

Select [Create new key pair](#)

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

Network [Info](#)  
vpc-0989211395deb1e9e

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

▼ Summary

Number of instances [Info](#)  
1

Software Image (AMI)  
Canonical, Ubuntu, 22.04 LTS, ...[read more](#)  
ami-0b82bc1c5ac3f13ee

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, 7 million IOPS, 1 GB of ena network, and](#)

Cancel [Launch instance](#)

6. Then enter key pair name and click on Create key pair.

Learn more'. Below this is a text input field for 'Key pair name' with the placeholder 'Enter key pair name'. A note below the field says: 'The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.' Under 'Key pair type', there are two radio buttons: 'RSA' (selected) with the description 'RSA encrypted private and public key pair', and 'ED25519' with the description 'ED25519 encrypted private and public key pair (Not supported for Windows instances)'. Under 'Private key file format', there are two radio buttons: '.pem' (selected) with the description 'For use with OpenSSH', and '.ppk' with the description 'For use with PuTTY'. At the bottom of the dialog are 'Cancel' and 'Create key pair' buttons. The background shows the 'Create Instance' page with the 'Key pair (login)' section highlighted."/>

▼ Instance type [Info](#)

Instance type

t2.micro Free tier eligible [Compare instance types](#)

Family: t2 1 vCPU 1 GiB Memory  
On-Demand Windows pricing: 0.0198 USD per Hour  
On-Demand SUSE pricing: 0.0152 USD per Hour  
On-Demand RHEL pricing: 0.0752 USD per Hour  
On-Demand Linux pricing: 0.0152 USD per Hour

▼ 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

Select [Create new key pair](#)

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

Network [Info](#)  
vpc-0989211395deb1e9e

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

▼ Summary

Number of instances [Info](#)  
1

Software Image (AMI)  
Canonical, Ubuntu, 22.04 LTS, ...[read more](#)  
ami-0b82bc1c5ac3f13ee

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, 7 million IOPS, 1 GB of ena network, and](#)

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

Enter key pair name

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 (Not supported for Windows instances)

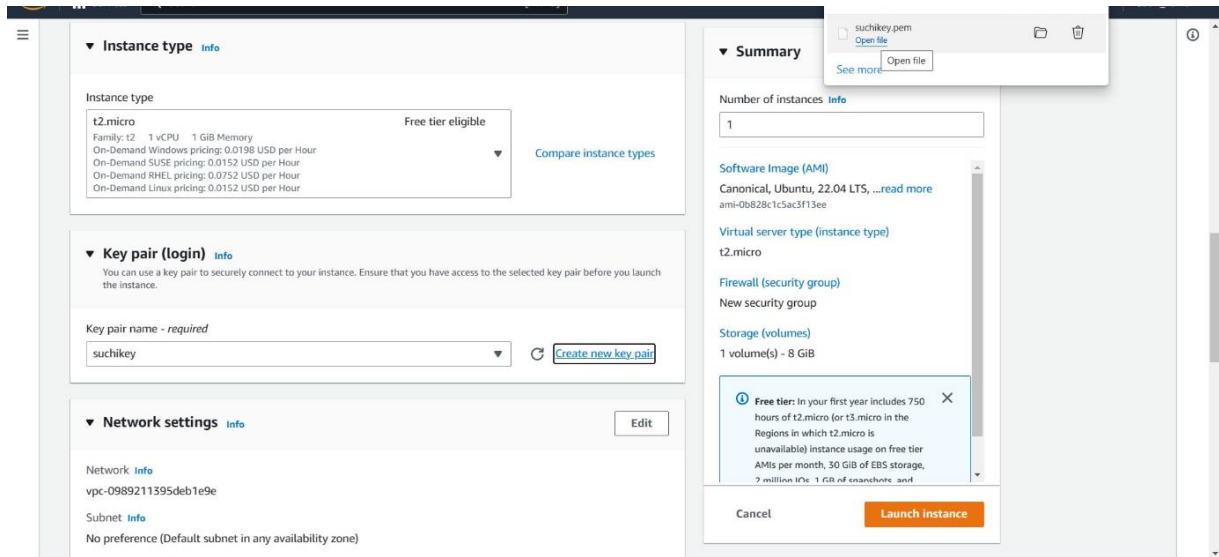
Private key file format

☒ .pem  
For use with OpenSSH

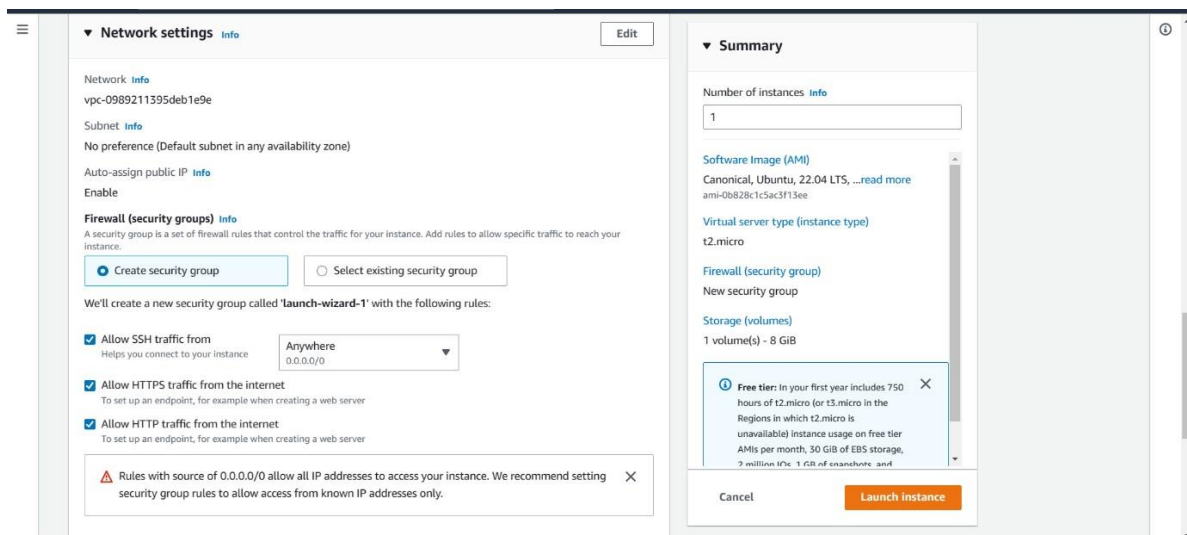
☐ .ppk  
For use with PuTTY

Cancel [Create key pair](#)

## 7. Then successfully key pair created.



## 8. Then check on 'Allow SSH traffic from', 'Allow HTTPS traffic from the internet' and 'Allow HTTP traffic from the internet'.



## 9. Then click on Launch instance.

To set up an endpoint, for example when creating a web server

☒ Allow HTTP traffic from the internet  
To set up an endpoint, for example when creating a web server

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.

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

1x 8 GiB gp2 Root volume (Not encrypted)

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

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-0b828c1c5ac3f13ee

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, 7 million IOPS, 1 GiB of ena-drm, and

Cancel [Launch instance](#)

## 10. Successfully initiated Launch of instance. Then go to instances.

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

**Success**  
Successfully initiated launch of instance (i-09b3e9fb2c8d0cd4b)  
[Launch log](#)

**Next Steps**

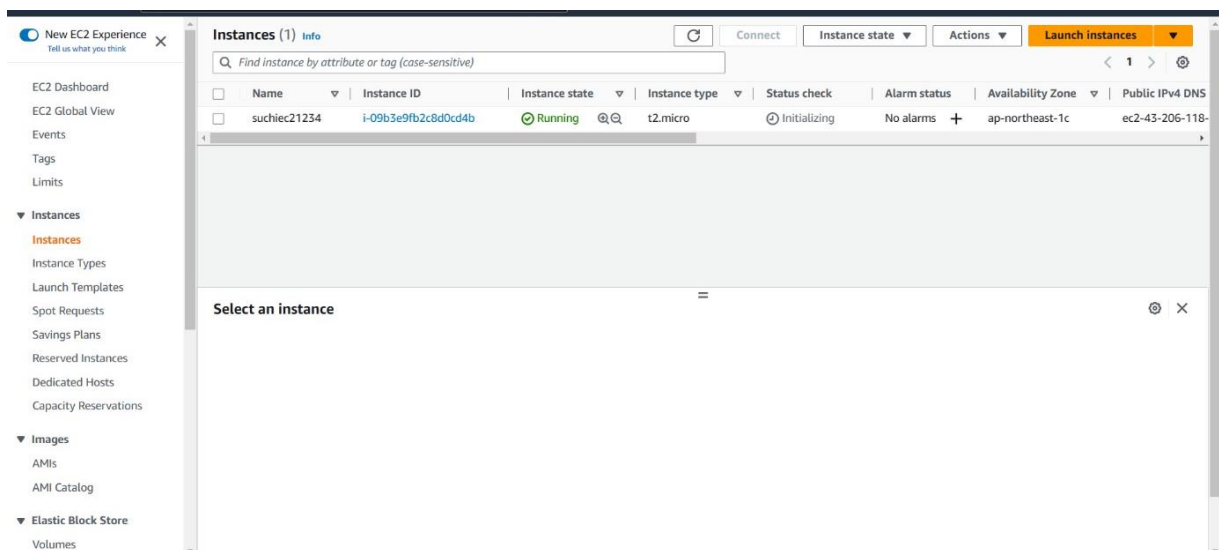
Create billing and free tier usage alerts  
To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.  
[Create billing alerts](#)

Connect to your instance  
Once your instance is running, log into it from your local computer.  
[Connect to instance](#)  
[Learn more](#)

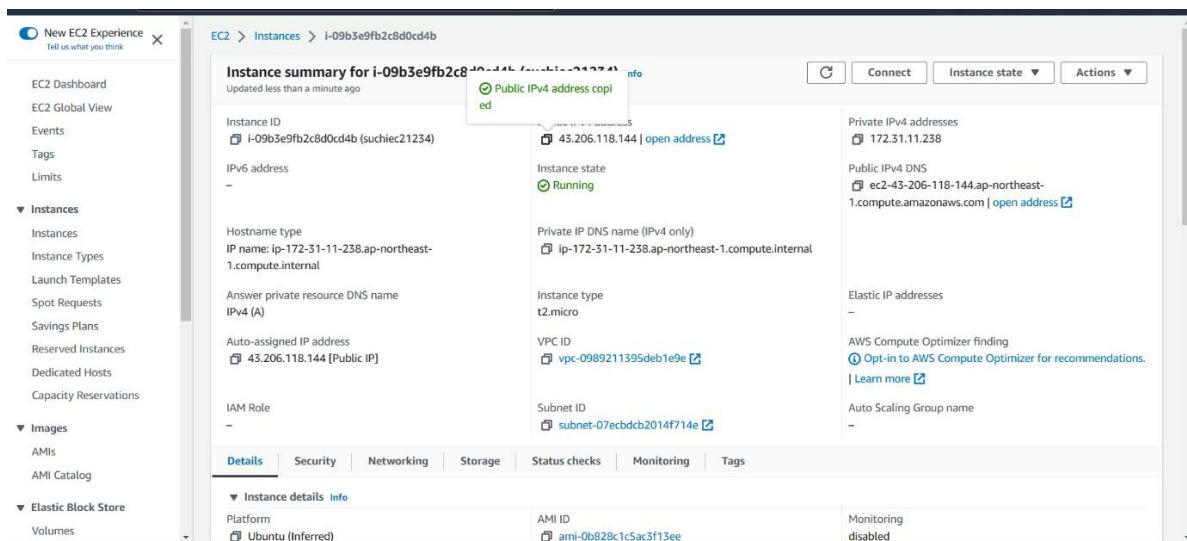
Connect an RDS database  
Configure the connection between an EC2 instance and a database to allow traffic flow between them.  
[Connect an RDS database](#)  
[Create a new RDS database](#)  
[Learn more](#)

[View all instances](#)

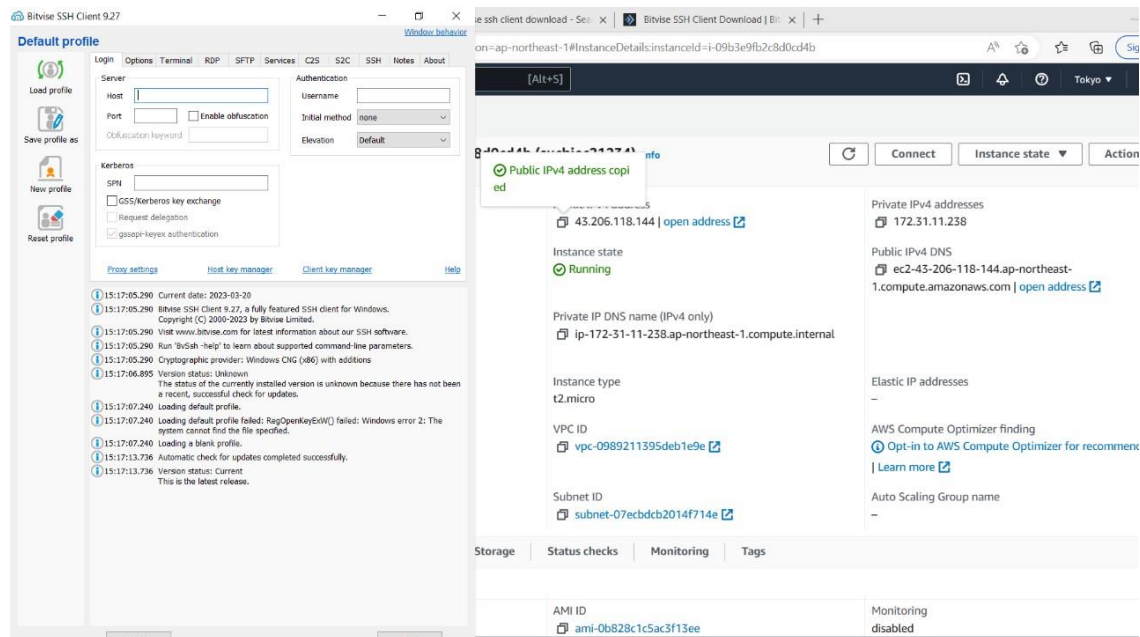
11. Then click on Instance ID.



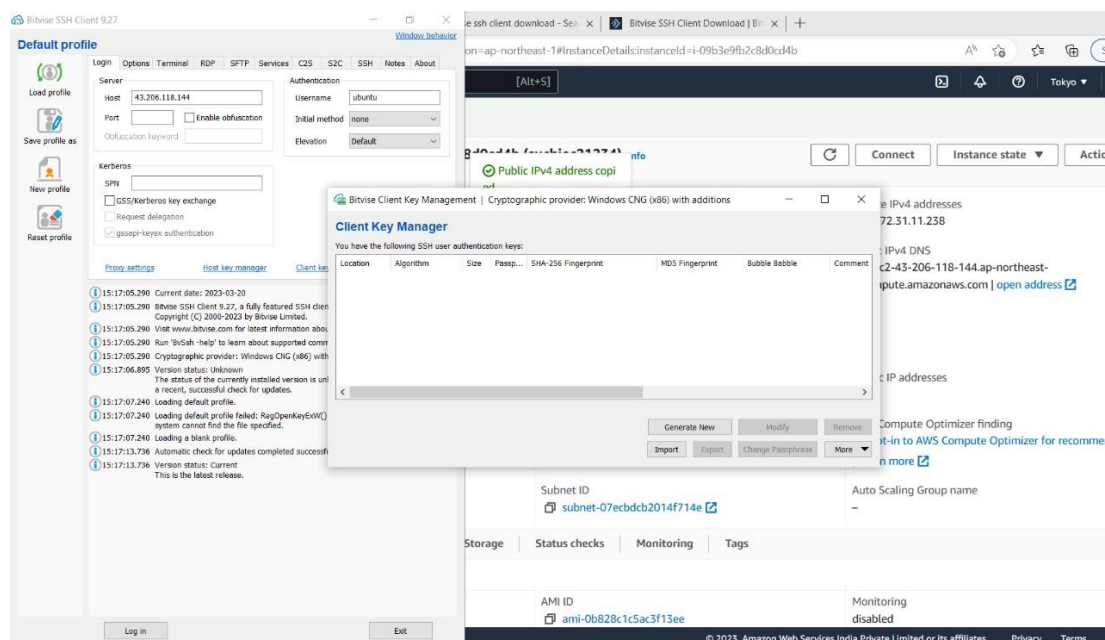
12. Then copy Public IPv4 address and after that open Bitwise SSH client.



13. Then past it on Home in Bitwise SSH client.

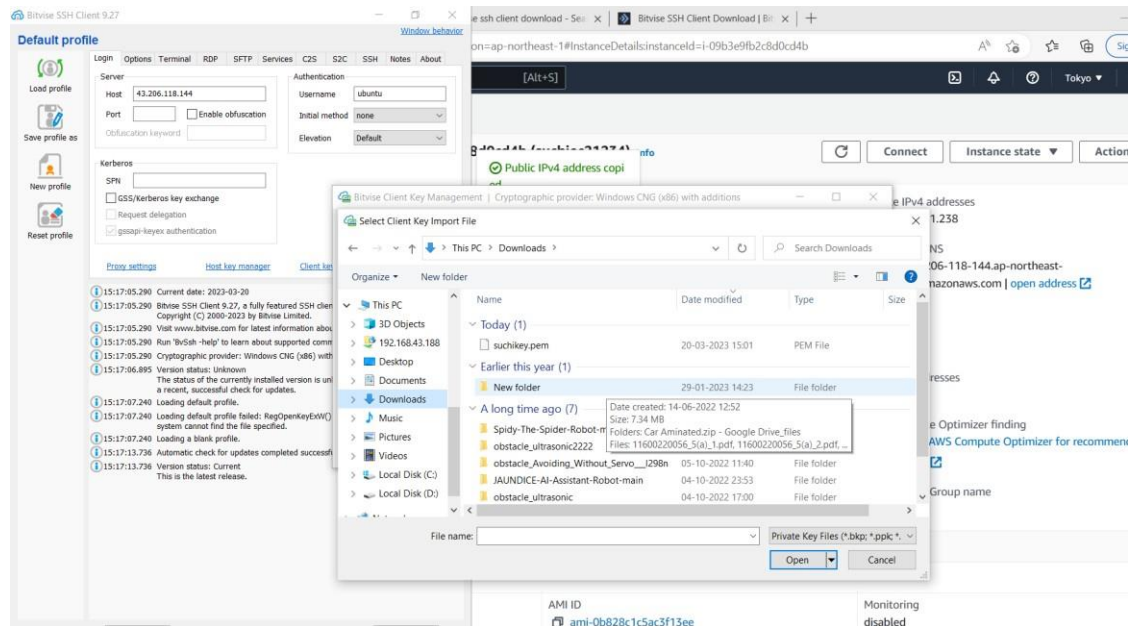


14. Then enter username as ubuntu and method as publickey and client key as Global 1. Then click on Import.

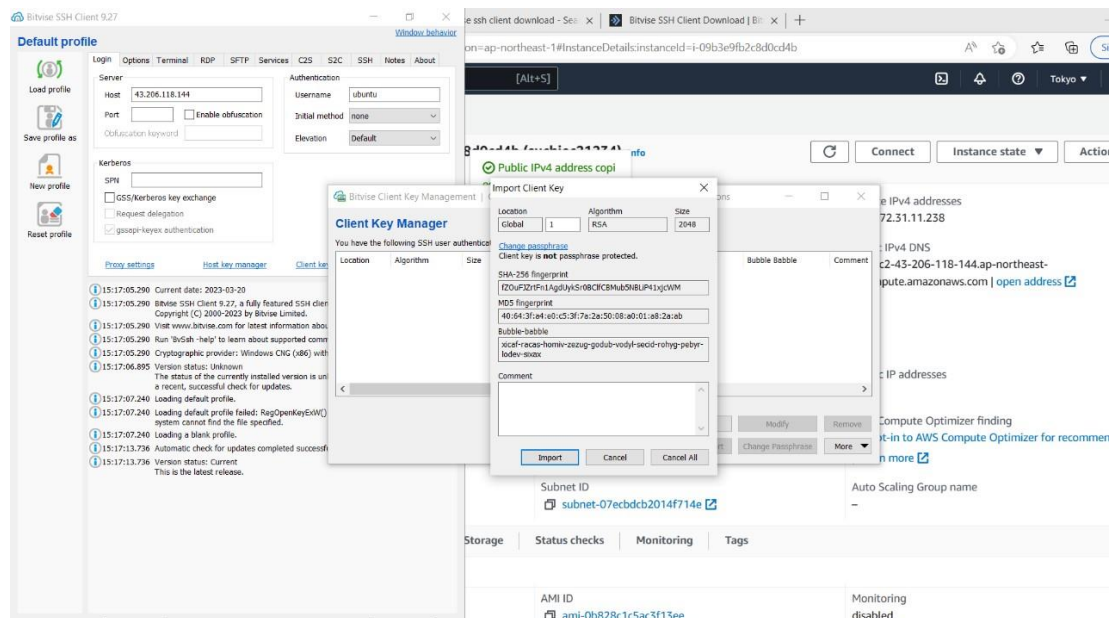




15. Then select .pem file which is automatically downloaded. Then click on open.

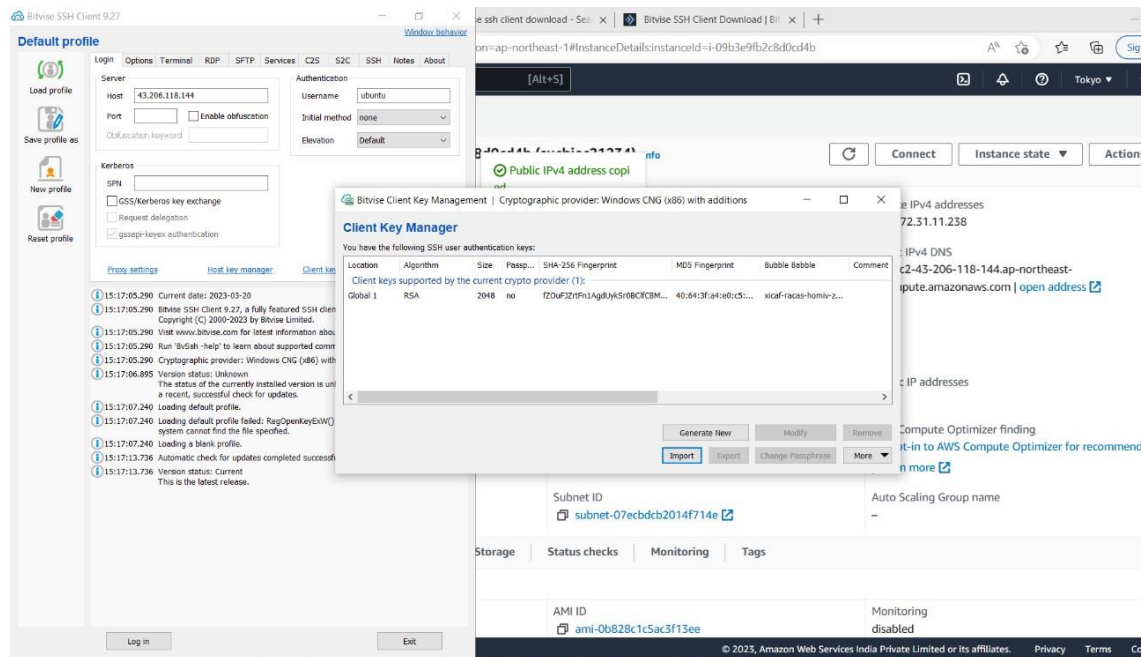


16. Then click on import.

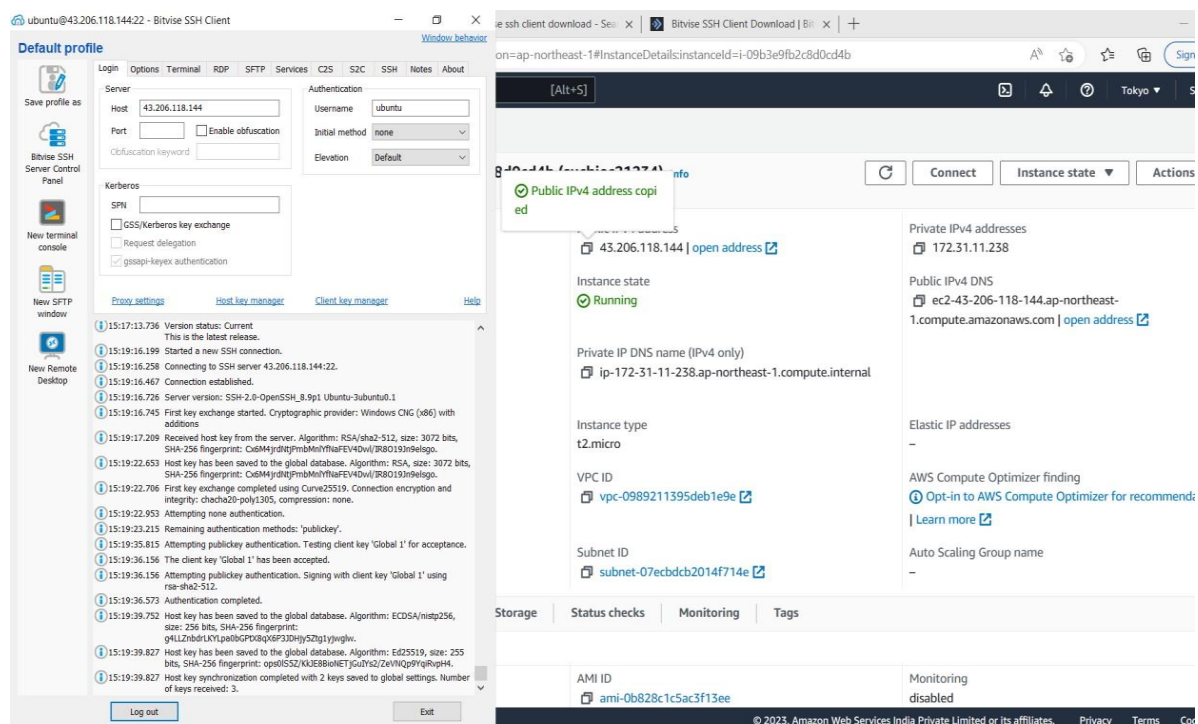




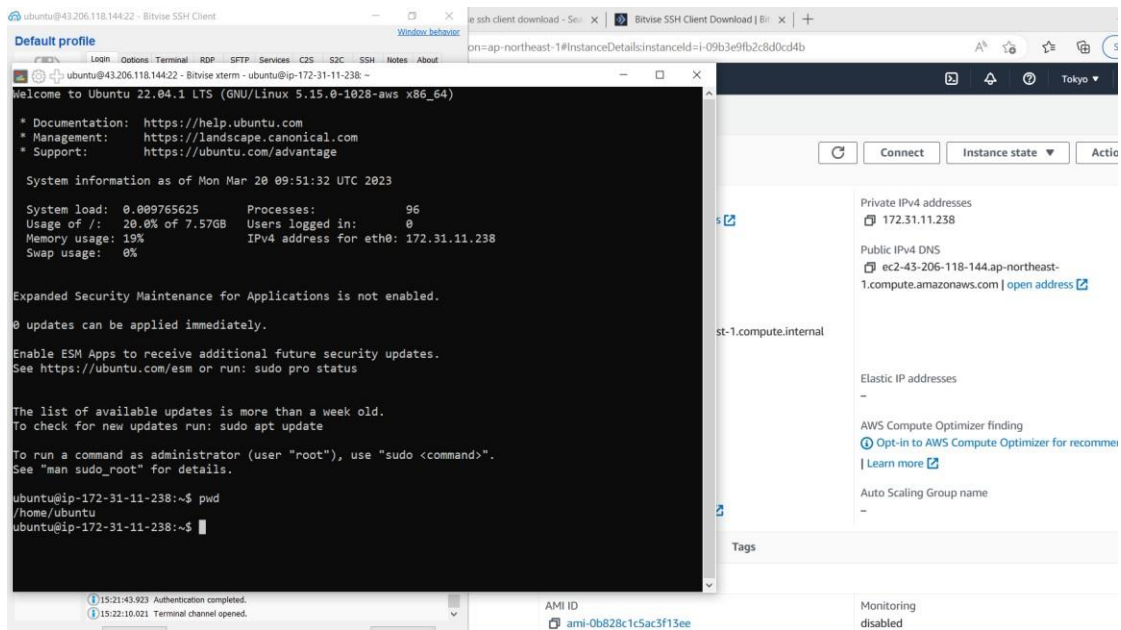
17. Then again click on import.



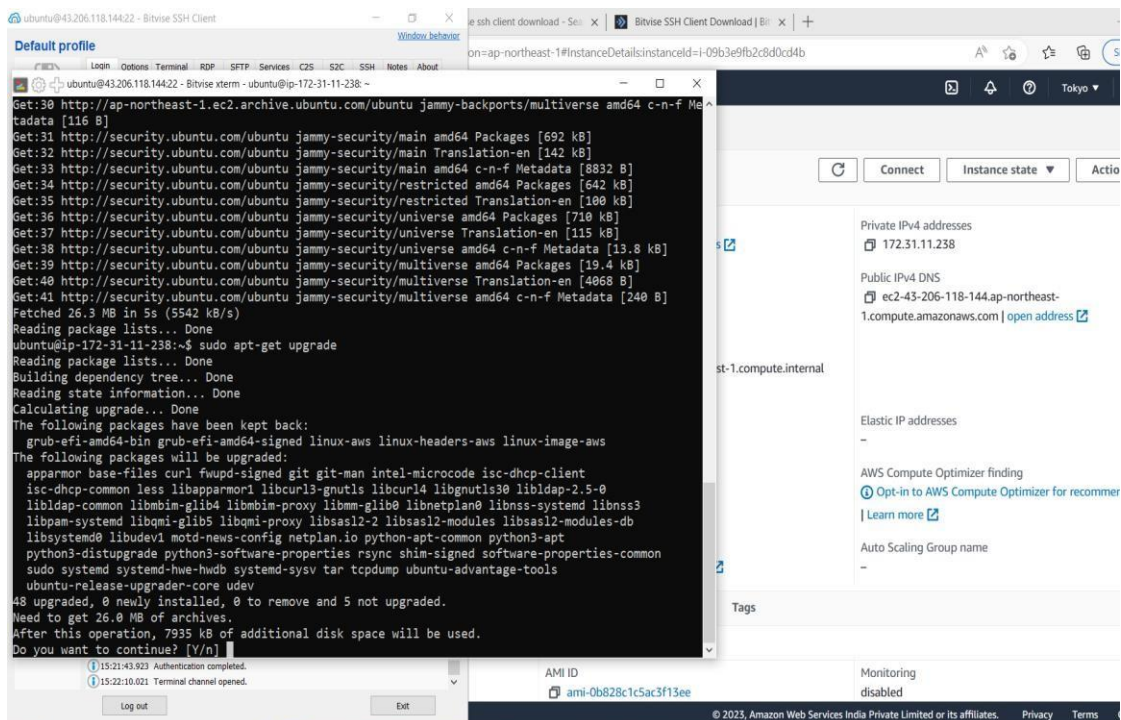
18. Then click on New terminal console.



## 19. pwd is clicked.



## 20. sudo apt-get update is clicked. sudo apt-get upgrade is clicked.



The image shows a terminal window on the left and the AWS Management Console on the right.

**Terminal Window:**

```

Restarting services...
systemctl restart chrony.service multipathd.service packagekit.service polkit.service rsyslog.service ssh.service
Service restarts being deferred:
/etc/needrestart/restart.d/dbus.service
systemctl restart networkd-dispatcher.service
systemctl restart systemd-logind.service
systemctl restart unattended-upgrades.service
systemctl restart user@1000.service

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-172-31-11-238:~$ sudo apt-get install nginx
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core libdeflate0 libfontconfig1 libgd3 libjpeg-turbo8
  libjpeg8 libnginx-mod-http-geoip2 libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter
  libnginx-mod-mail libnginx-mod-stream libnginx-mod-stream-geoip2 libtiff5 libwebp7 libxpm4
  nginx-common nginx-core
Suggested packages:
  libgd-tools fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
  fontconfig-config fonts-dejavu-core libdeflate0 libfontconfig1 libgd3 libjpeg-turbo8
  libjpeg8 libnginx-mod-http-geoip2 libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter
  libnginx-mod-mail libnginx-mod-stream libnginx-mod-stream-geoip2 libtiff5 libwebp7 libxpm4 nginx
  nginx-common nginx-core
0 upgraded, 20 newly installed, 0 to remove and 5 not upgraded.
Need to get 2689 kB of archives.
After this operation, 8335 kB of additional disk space will be used.
Do you want to continue? [Y/n] y

```

**AWS Management Console:**

The console shows the details for the instance `ap-northeast-1`. The instance is in the `Running` state. The console also shows the instance's IP addresses and tags.

**Instance Details:**

- Instance ID: `ami-0h828c1r5a3f13ee`
- Instance Type: `t3.xlarge`
- Instance State: `Running`
- Private IP: `172.31.11.238`
- Public IP: `ec2-43-206-118-144.ap-northeast-1.compute.amazonaws.com`
- Tags: `ami-0h828c1r5a3f13ee`

**Default profile**

Login Options Terminal RDP SFTP Services C2S S2C SSH Notes About

Server Host: 43.206.118.144  
Port: [ ] Enable obfuscation  
Obfuscation keyword: [ ]  
Kerberos SPN: [ ]  
☐ C2S/Kerberos key exchange  
☐ Request delegation  
☒ gssapi-keyex authentication

Authentication Username: ubuntu  
Initial method: publickey  
Client key: Global 1  
Password size: [ ]  
Elevation: Default

Proxy settings Host key manager Client key manager Help

Private IPv4 addresses

- 172.31.11.238

Public IPv4 DNS

- ec2-43-206-118-144.ap-northeast-1.compute.amazonaws.com | open address

Private IP DNS name (IPv4 only)

- ip-172-31-11-238.ap-northeast-1.compute.internal

Elastic IP addresses

- 

AWS Compute Optimizer finding

- Opt-in to AWS Compute Optimizer for recommender | Learn more

Auto Scaling Group name

- 

Storage Status checks Monitoring Tags

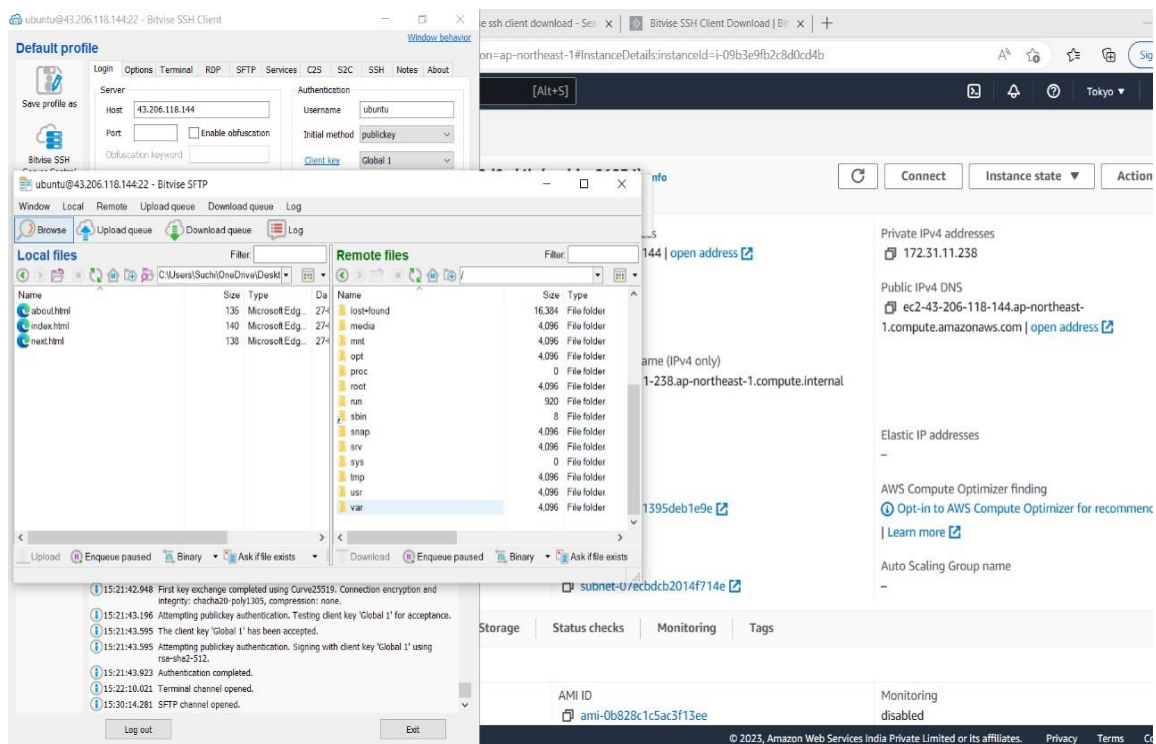
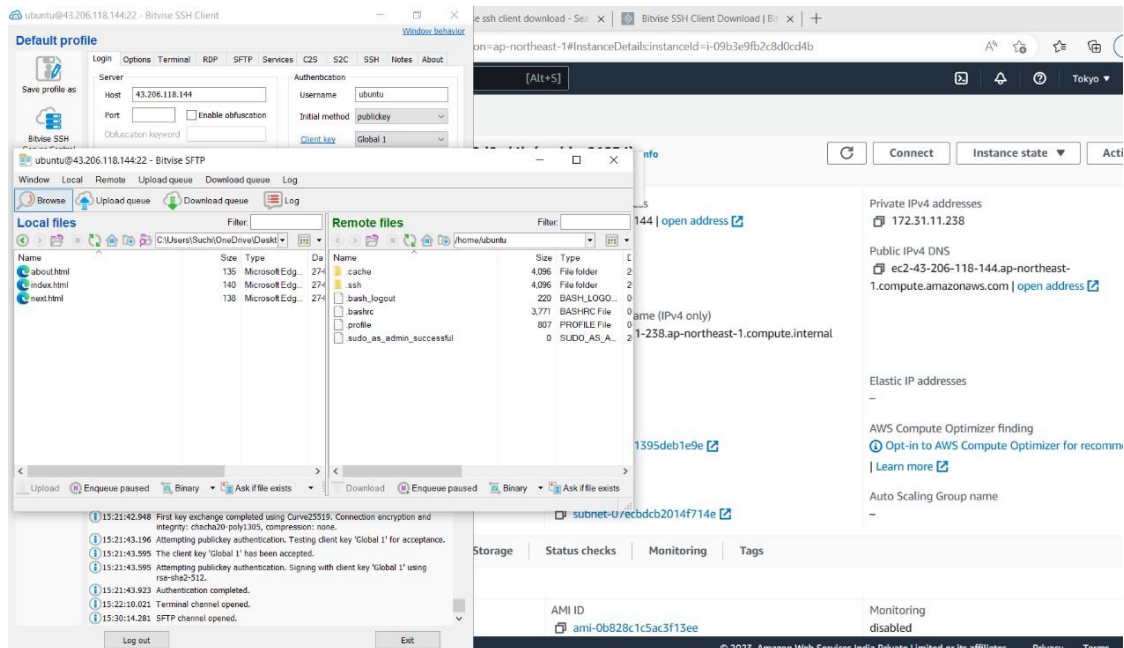
AMI ID

- ami-0b828c1c3ac3f13ee

Monitoring disabled



23. In the remote section the Up symbol is clicked twice. The var is clicked then www is clicked then html is clicked.



Bitvise SSH Client interface showing a connection to an Ubuntu server at 43.206.118.144. The client is configured with username 'ubuntu' and initial method 'publickey'. The terminal window displays the command 'ssh client download' and the output 'on=ap-northeast-1#InstanceDetails:instanceId=i-09b3e9fb2c8d0cd4b'. The file manager shows local files and remote files on the server. The log window shows the connection process, including key exchange, authentication, and SFTP channel opening.

Default profile

Server: 43.206.118.144

Authentication: Username: ubuntu, Initial method: publickey, Client key: Global 1

Local files:

Name	Size	Type	Da
about.html	135	Microsoft Edg...	274
index.html	140	Microsoft Edg...	274
next.html	138	Microsoft Edg...	274

Remote files:

Name	Size	Type	Da
backups	4.096	File folder	1
cache	4.096	File folder	2
crash	4.096	File folder	0
lib	4.096	File folder	0
local	4.096	File folder	1
lock	4.096	File folder	9
log	4.096	File folder	2
mail	4.096	File folder	0
opt	4.096	File folder	0
run	4.096	File folder	4
snap	4.096	File folder	0
spool	4.096	File folder	0
tmp	4.096	File folder	2
www	4.096	File folder	2

Log:

- 15:21:42.948 First key exchange completed using Curve25519. Connection encryption and integrity: chacha20-poly1305, compression: none.
- 15:21:43.196 Attempting publickey authentication. Testing client key 'Global 1' for acceptance.
- 15:21:43.595 The client key 'Global 1' has been accepted.
- 15:21:43.595 Attempting publickey authentication. Signing with client key 'Global 1' using rsa-sha2-512.
- 15:21:43.923 Authentication completed.
- 15:22:10.021 Terminal channel opened.
- 15:30:14.281 SFTP channel opened.

Bitvise SSH Client interface showing a connection to an Ubuntu server at 43.206.118.144. The client is configured with username 'ubuntu' and initial method 'publickey'. The terminal window displays the command 'ssh client download' and the output 'on=ap-northeast-1#InstanceDetails:instanceId=i-09b3e9fb2c8d0cd4b'. The file manager shows local files and remote files on the server. The log window shows the connection process, including key exchange, authentication, and SFTP channel opening.

Default profile

Server: 43.206.118.144

Authentication: Username: ubuntu, Initial method: publickey, Client key: Global 1

Local files:

Name	Size	Type	Da
about.html	135	Microsoft Edg...	274
index.html	140	Microsoft Edg...	274
next.html	138	Microsoft Edg...	274

Remote files:

Name	Size	Type	Da
html	4.096	File folder	2

Log:

- 15:21:42.948 First key exchange completed using Curve25519. Connection encryption and integrity: chacha20-poly1305, compression: none.
- 15:21:43.196 Attempting publickey authentication. Testing client key 'Global 1' for acceptance.
- 15:21:43.595 The client key 'Global 1' has been accepted.
- 15:21:43.595 Attempting publickey authentication. Signing with client key 'Global 1' using rsa-sha2-512.
- 15:21:43.923 Authentication completed.
- 15:22:10.021 Terminal channel opened.
- 15:30:14.281 SFTP channel opened.

## 24. Then Copy the IP and search.

The screenshot shows the AWS Management Console interface. The left sidebar contains navigation links for EC2 Dashboard, EC2 Global View, Events, Tags, Limits, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, AMI Catalog, Elastic Block Store, and Volumes. The main content area displays the 'Instance summary for i-09b3e9fb2c8d0cd4b'. A green tooltip with the text 'Public IPv4 address copied' is visible over the public IP address '43.206.118.144'. The instance is in the 'Running' state. Below the summary, there are tabs for Details, Security, Networking, Storage, Status checks, Monitoring, and Tags. The 'Details' tab is active, showing fields like Platform (Ubuntu), AMI ID (ami-0b828c1c5ac3f13ee), and Monitoring (disabled).

Instance summary for i-09b3e9fb2c8d0cd4b	
Instance ID	i-09b3e9fb2c8d0cd4b (suchiec21234)
IPv6 address	-
Hostname type	IP name: ip-172-31-11-238.ap-northeast-1.compute.internal
Answer private resource DNS name	IPv4 (A)
Auto-assigned IP address	43.206.118.144 [Public IP]
IAM Role	-
Instance state	Running
Private DNS name (IPv4 only)	ip-172-31-11-238.ap-northeast-1.compute.internal
Instance type	t2.micro
VPC ID	vpc-0989211395deb1e9e
Subnet ID	subnet-07ecbdc2014f714e
Private IPv4 addresses	172.31.11.238
Public IPv4 DNS	ec2-43-206-118-144.ap-northeast-1.compute.amazonaws.com
Elastic IP addresses	-
AWS Compute Optimizer finding	Opt-in to AWS Compute Optimizer for recommendations
Auto Scaling Group name	-

The screenshot shows the nginx welcome page. The address bar displays '43.206.118.144'. The page content includes a 'Welcome to nginx!' heading, a message stating that the nginx web server is successfully installed and working, and instructions to refer to 'nginx.org' for online documentation and support. The footer includes a 'Thank you for using nginx.' message.

**Welcome to nginx!**

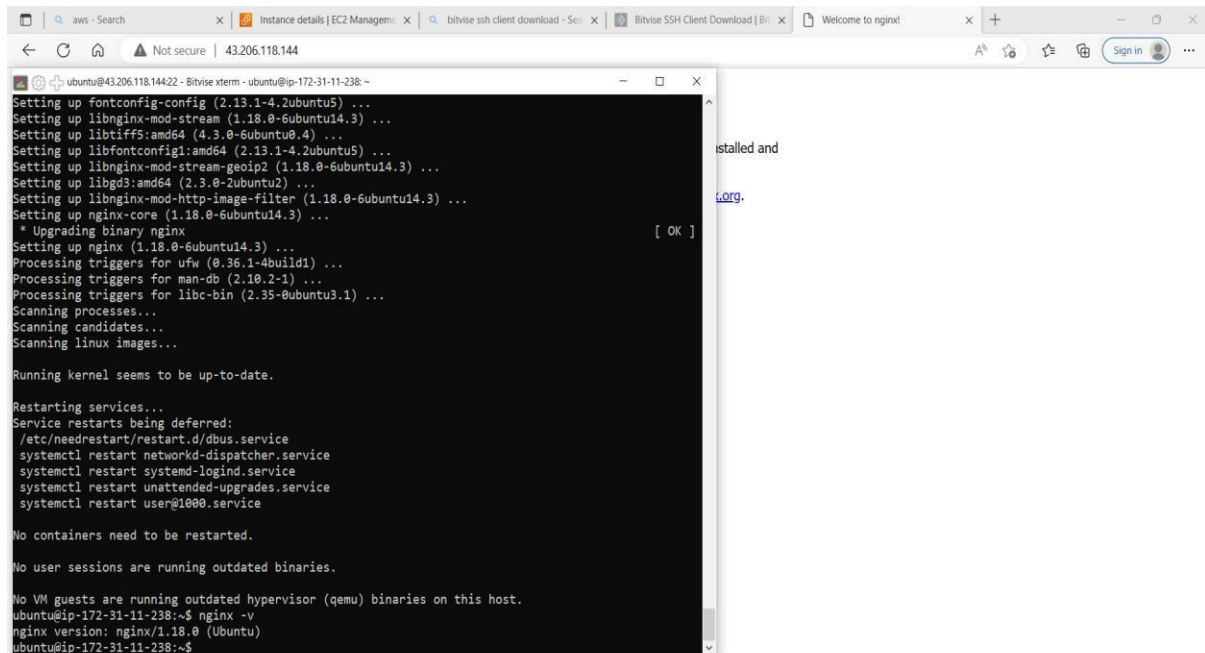
If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to [nginx.org](https://nginx.org).  
Commercial support is available at [nginx.com](https://nginx.com).

*Thank you for using nginx.*



25. The terminal is opened. `cd ..` is clicked twice. `cd var`, `cd www`, `cd html`, `ls`, `cd ..`, `sudo chmod 777 html` is clicked.



```
Setting up fontconfig-config (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream (1.18.0-6ubuntu14.3) ...
Setting up libtiff5:amd64 (4.3.0-6ubuntu0.4) ...
Setting up libfontconfig1:amd64 (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream-geoip2 (1.18.0-6ubuntu14.3) ...
Setting up libgd3:amd64 (2.3.0-2ubuntu2) ...
Setting up libnginx-mod-http-image-filter (1.18.0-6ubuntu14.3) ...
Setting up nginx-core (1.18.0-6ubuntu14.3) ...
 * Upgrading binary nginx
Setting up nginx (1.18.0-6ubuntu14.3) ...
Processing triggers for ufw (0.36.1-4build1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning candidates...
Scanning linux images...

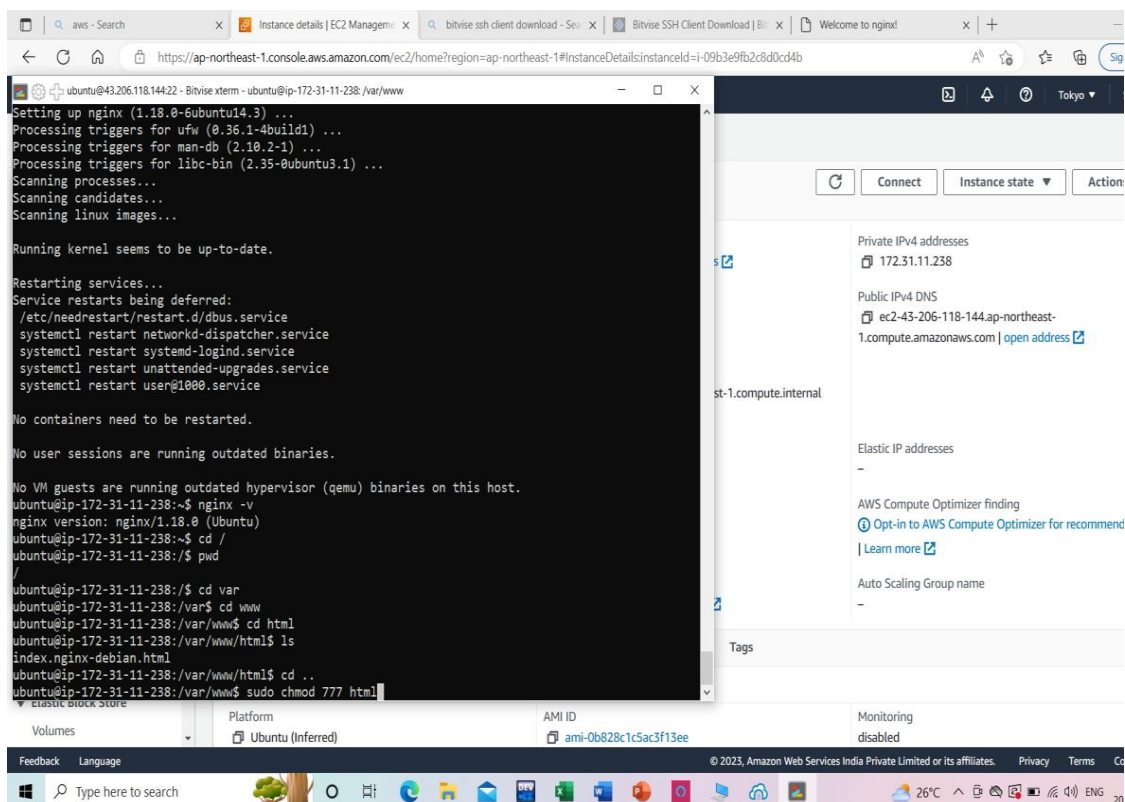
Running kernel seems to be up-to-date.

Restarting services...
Service restarts being deferred:
/etc/needrestart/restart.d/dbus.service
systemctl restart networkd-dispatcher.service
systemctl restart systemd-logind.service
systemctl restart unattended-upgrades.service
systemctl restart user@1000.service

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-172-31-11-238:~$ nginx -v
nginx version: nginx/1.18.0 (Ubuntu)
ubuntu@ip-172-31-11-238:~$
```



```
Setting up nginx (1.18.0-6ubuntu14.3) ...
Processing triggers for ufw (0.36.1-4build1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning candidates...
Scanning linux images...

Running kernel seems to be up-to-date.

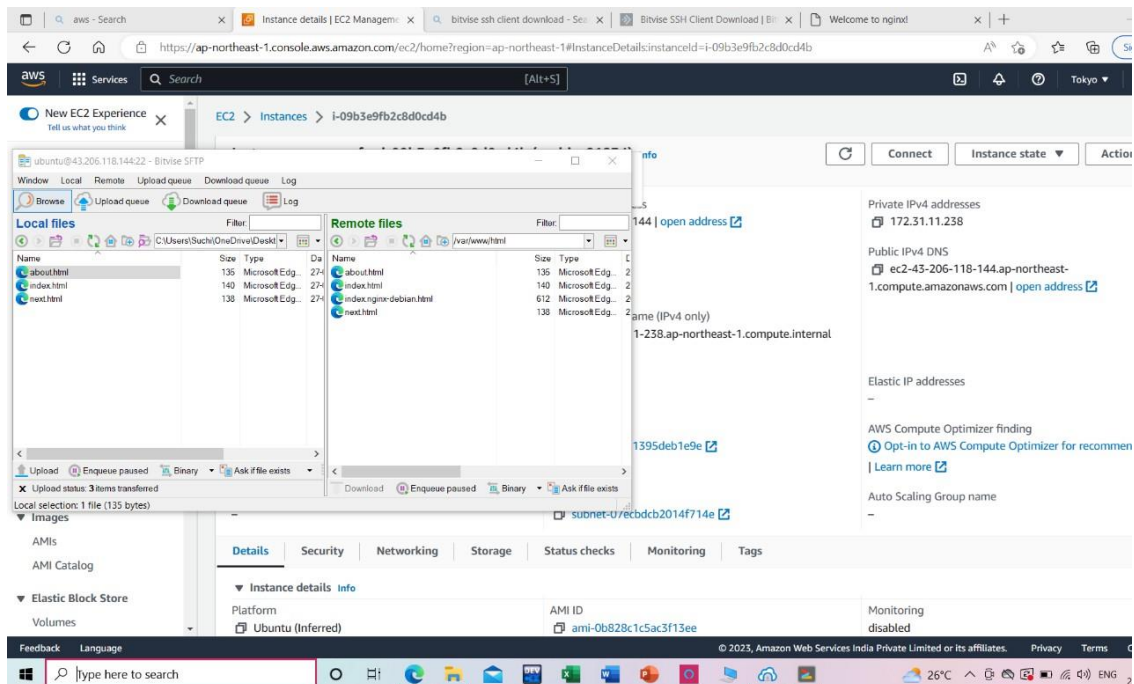
Restarting services...
Service restarts being deferred:
/etc/needrestart/restart.d/dbus.service
systemctl restart networkd-dispatcher.service
systemctl restart systemd-logind.service
systemctl restart unattended-upgrades.service
systemctl restart user@1000.service

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-172-31-11-238:~$ nginx -v
nginx version: nginx/1.18.0 (Ubuntu)
ubuntu@ip-172-31-11-238:~$ cd /
ubuntu@ip-172-31-11-238:/$ pwd
/
ubuntu@ip-172-31-11-238:/$ cd var
ubuntu@ip-172-31-11-238:/$ cd www
ubuntu@ip-172-31-11-238:/$ cd html
ubuntu@ip-172-31-11-238:/$ ls
index.nginx-debian.html
ubuntu@ip-172-31-11-238:/$ cd ..
ubuntu@ip-172-31-11-238:/$ sudo chmod 777 html
```

26. The files from the local files is dragged to the remote files.



27. After this if we open the public IP Address in another tab then we can see that the website opens.

