

EC2 CLOUD SERVICE

EC2 stand for Elastic cloud computing

EC2 is a web service that provides resizable compute cloud service. You can scale the compute capacity up and down as per the computing requirement changes.

EC2 allows users to rent virtual services in the cloud commonly used to host applications, run workloads, and perform various computing tasks in the cloud.

EC2 LAUNCHING IN AWS

TO launch ec2 machine you can need to follow the aws seven steps

Go the aws console login the aws root

1. Choose the an aws image(os version)

The screenshot displays the AWS Management Console interface for selecting an Amazon Machine Image (AMI). The top navigation bar shows the 'Services' menu, a search bar, and the user's profile 'kamalnadh'. The main content area is titled 'Selected AMI: (ami-0416c18e75bd69567) (Quickstart AMIs)'. Below this, there are tabs for 'Quickstart AMIs (14)', 'My AMIs (0)', 'AWS Marketplace AMIs (4162)', and 'Community AMIs (500)'. The 'Quickstart AMIs' tab is active, showing a list of AMIs filtered by 'linux'. The 'Refine results' sidebar on the left includes filters for 'Free tier only', 'OS category', and 'Architecture'. The main list shows two AMIs: 'Amazon Linux 2023 AMI' and 'Amazon Linux 2 AMI (HVM)'. Both AMIs are marked as 'Free tier eligible' and 'Verified provider'. The 'Amazon Linux 2023 AMI' is selected, and its details are shown, including the AMI ID, description, platform, root device type, and virtualization type. The 'Amazon Linux 2 AMI (HVM)' is also shown with its details. The 'Select' button is visible for both AMIs.

2. Choose the instance type(cpu)

Select the t2 micro contain(one cpu and one virtual ram)

There are so many families

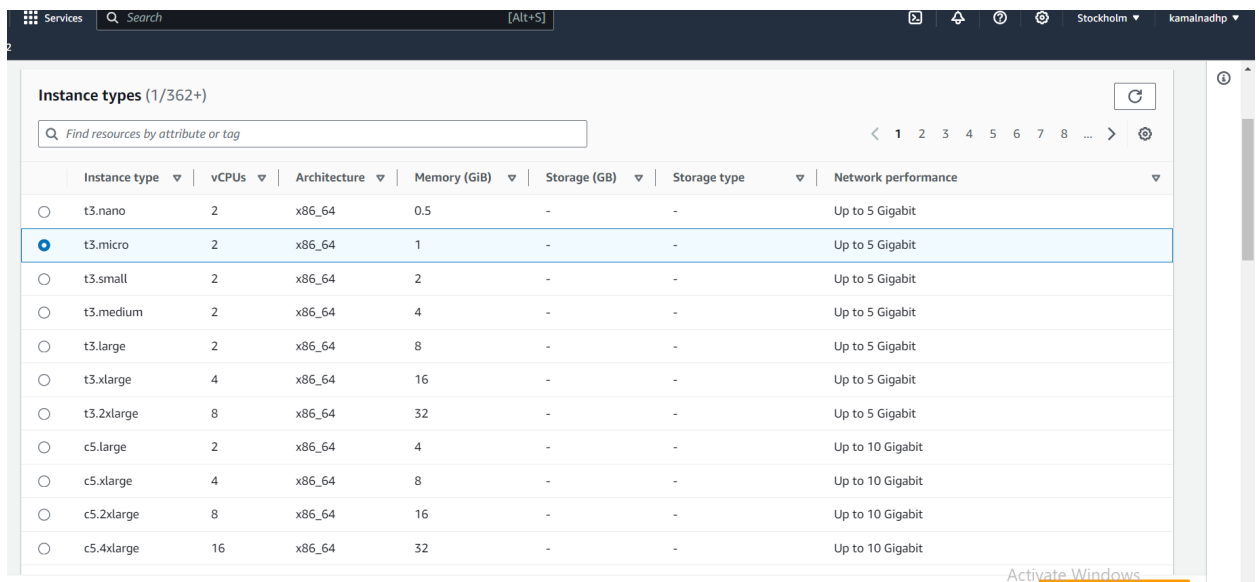
t: general purpose

C: compute purpose

M: memory purpose

R: accelerated purpose

S: storage purpose



The screenshot shows the AWS IAM console interface. At the top, there's a header bar with 'Services', a search bar, and user information 'Stockholm' and 'kamalnadh'. Below the header, the main content area is titled 'Instance types (1/362+)'. A search bar is present with the placeholder text 'Find resources by attribute or tag'. Below the search bar, there's a table listing various instance types. The table has columns for 'Instance type', 'vCPUs', 'Architecture', 'Memory (GiB)', 'Storage (GB)', 'Storage type', and 'Network performance'. The 't2.micro' instance type is selected, indicated by a blue highlight and a radio button. Other instance types listed include t3.nano, t3.small, t3.medium, t3.large, t3.xlarge, t3.2xlarge, c5.large, c5.xlarge, c5.2xlarge, and c5.4xlarge.

Instance type	vCPUs	Architecture	Memory (GiB)	Storage (GB)	Storage type	Network performance
<input type="radio"/> t3.nano	2	x86_64	0.5	-	-	Up to 5 Gigabit
<input checked="" type="radio"/> t2.micro	2	x86_64	1	-	-	Up to 5 Gigabit
<input type="radio"/> t3.small	2	x86_64	2	-	-	Up to 5 Gigabit
<input type="radio"/> t3.medium	2	x86_64	4	-	-	Up to 5 Gigabit
<input type="radio"/> t3.large	2	x86_64	8	-	-	Up to 5 Gigabit
<input type="radio"/> t3.xlarge	4	x86_64	16	-	-	Up to 5 Gigabit
<input type="radio"/> t3.2xlarge	8	x86_64	32	-	-	Up to 5 Gigabit
<input type="radio"/> c5.large	2	x86_64	4	-	-	Up to 10 Gigabit
<input type="radio"/> c5.xlarge	4	x86_64	8	-	-	Up to 10 Gigabit
<input type="radio"/> c5.2xlarge	8	x86_64	16	-	-	Up to 10 Gigabit
<input type="radio"/> c5.4xlarge	16	x86_64	32	-	-	Up to 10 Gigabit

3.configure the instance type

You can create multiple instancetype

There purchasing options can be classified into three types

- 1.spot instance : (Temporary instance)
- 2.dedicated instance (resource are used single user)
- 3.reversed instance (resource either 1 year or 3 year)

Inside text data file

User data is specified as a script or data file that is provided when you launch an EC2 instance.

Services Search [Alt+S] Stockholm kamalnadh

⚠ For V2 requests, you must include a session token in all instance metadata requests. Applications or agents that use V1 for instance metadata access will break.

Metadata response hop limit [Info](#)
2

Allow tags in metadata [Info](#)
Select

User data - optional [Info](#)
Upload a file with your user data or enter it in the field.
[Choose file](#)

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Amazon Linux 2023 AMI
ami-0416c18e75bd69567

Virtual server type (instance type)
t3.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

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

Activate Windows
Go to Settings to activate Windows.

4.add the storage

Default size block is 8 gb

You can add number of block (like c drive e drive)

Storage (volumes) [Info](#) [Simple](#)

EBS Volumes [Hide details](#)

Volume 1 (AMI Root) (8 GiB, EBS, General purpose SSD (gp3))

Volume 2 (Custom) [Remove](#)

Storage type [Info](#): EBS

Device name - required [Info](#): /dev/sdb

Snapshot [Info](#): Select

Size (GiB) [Info](#): 8

Volume type [Info](#): gp3

IOPS [Info](#): 3000

Delete on termination [Info](#): No

Encrypted [Info](#): Not encrypted

KMS key [Info](#): Select

KMS keys are only applicable when encryption is set on this volume.

Summary

Number of instances [Info](#): 1

Software Image (AMI)
Amazon Linux 2023 AMI
ami-0416c18e75bd69567

Virtual server type (instance type)
t3.micro

Firewall (security group)
New security group

Storage (volumes)
2 volume(s) - 16 GiB

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

Activate Windows
Go to Settings to activate Windows.

5. Add the tags

It used for act time of billing

It contain key -pair

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](#)

Key [Info](#): linux

Value [Info](#): os

Resource types [Info](#): Select resource ty...
Instances

Key [Info](#): Enter key

Value [Info](#): Enter value

Resource types [Info](#): Select resource ty...
Remove

[Add new tag](#)

You can add up to 48 more tags.

Summary

Number of instances [Info](#): 1

Software Image (AMI)
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t3.micro

Firewall (security group)
New security group

Storage (volumes)
2 volume(s) - 16 GiB

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

6.configure the security group

It a security shell it act as firewall to ssh (port range 22)

vpc-076d0ca61d174d027

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

We'll create a new security group called 'launch-wizard-1' with the following rules:

☒ Allow SSH traffic from

Helps you connect to your instance

Anywhere

0.0.0.0/0

☐ Allow HTTPS traffic from the internet

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. ✕

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Amazon Linux 2023 AMI

ami-0416c18e75bd69567

Virtual server type (instance type)

t3.micro

Firewall (security group)

New security group

Storage (volumes)

2 volume(s) - 16 GiB

Cancel

Launch instance

[Review commands](#)

7.review the group

After contain download key pair used to connect linux

One-Demand Linux base pricing: 0.0108 USD per Hour
One-Demand Windows base pricing: 0.02 USD per Hour
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, before you launch the instance.

Key pair name - required

Select

▼ Network settings [Info](#)

Network [Info](#)
vpc-076d0ca61d174d027
Subnet [Info](#)
No preference (Default subnet in any availability zone)
Auto-assign public IP [Info](#)
Enable
Firewall (security groups) [Info](#)

Create key pair

Key pair name
Key pairs allow you to connect to your instance securely.
linux
The name can include upto 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type
☒ RSA
RSA encrypted private and public key pair
☐ ED25519
ED25519 encrypted private and public key pair

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

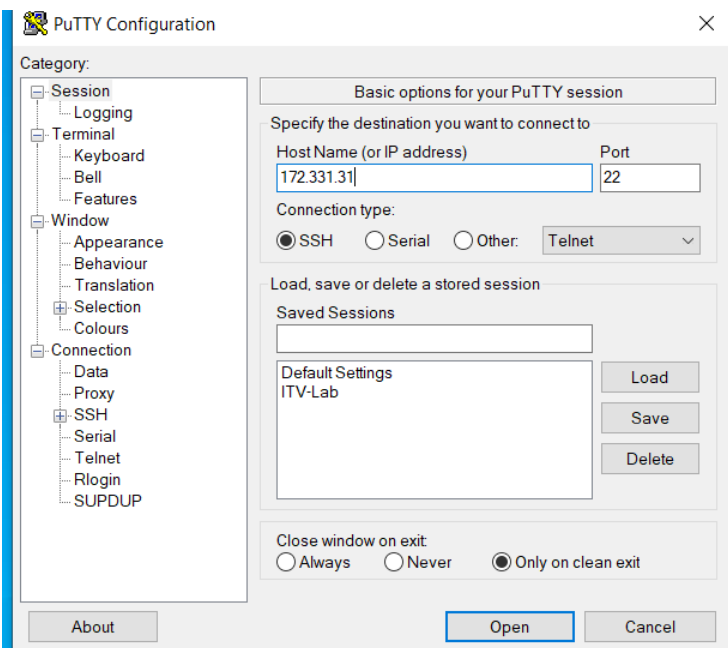
Launch instance

[Review commands](#)

Activate Windows
Go to Settings to activate Windows.

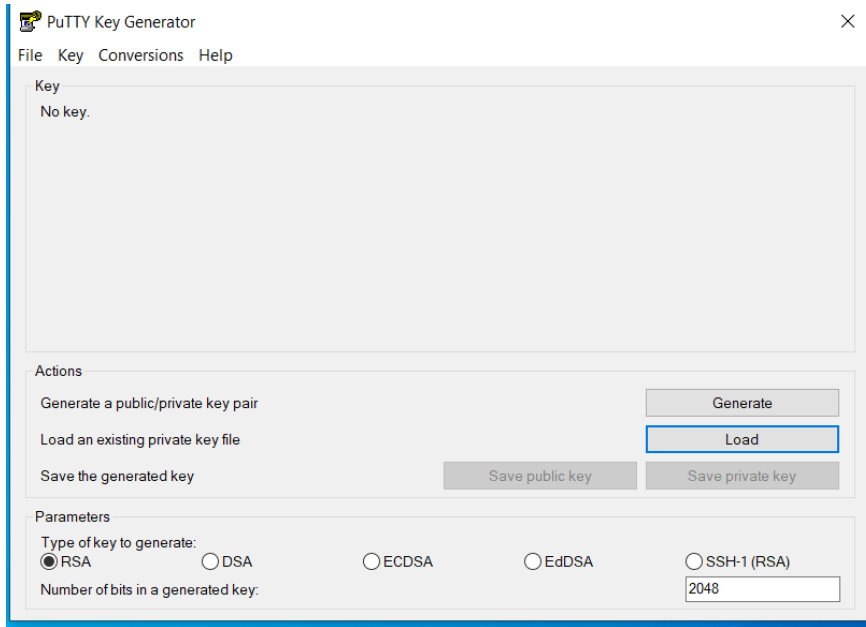
Download the putty and connect the linux system .Putty is used for connect the window to linux.Window to window remote desktop service
Requirement for connect the linux

Download the putty
mentioned (hostname ip address)

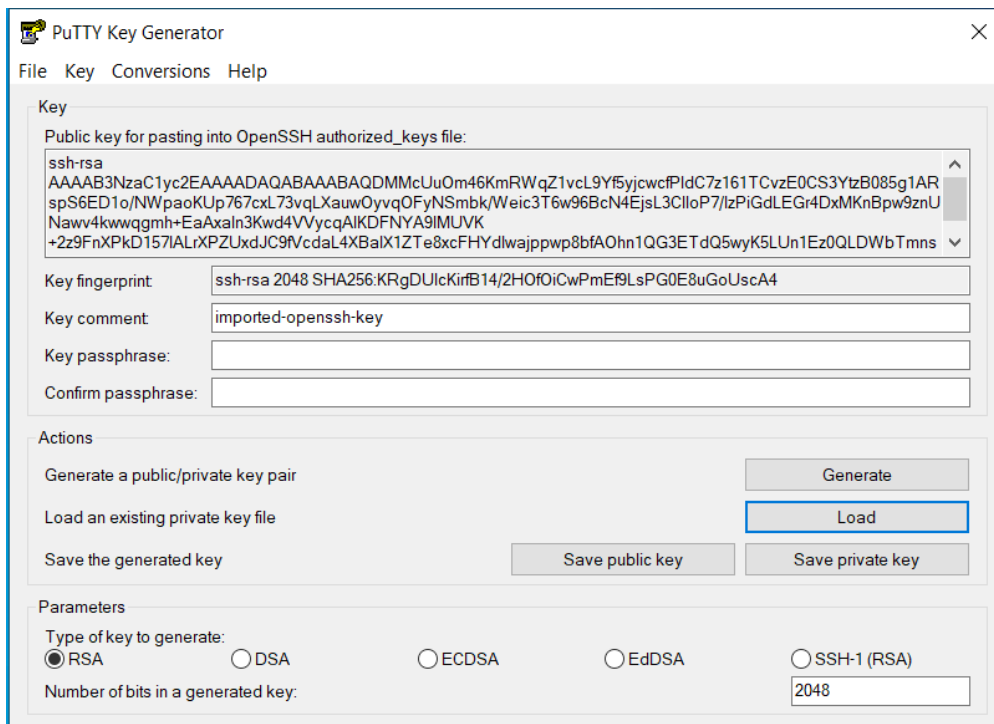


Hostname is available in ssh
2. Download the putty gen is responsible convert the public key to private key
Public key is holds in aws
You need though the private key

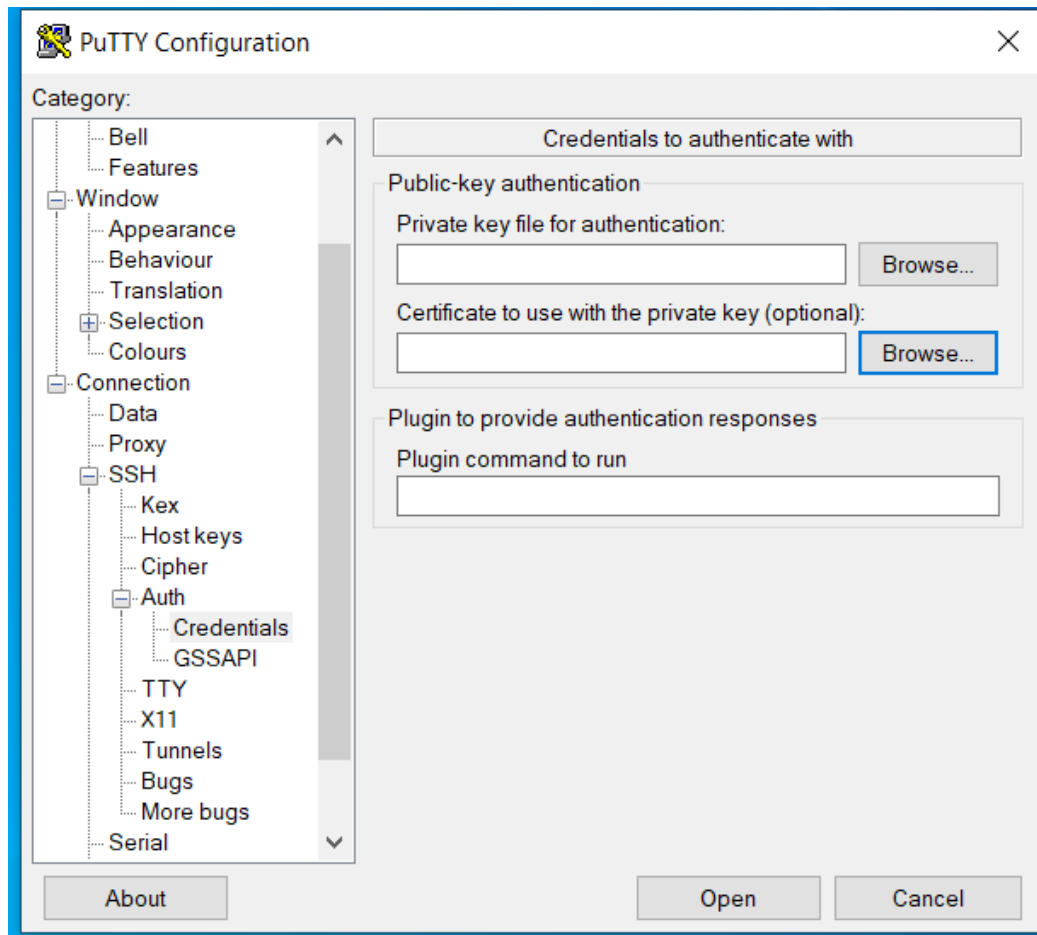
Steps to convert public key to privatekey
Download the pem.file in aws acctnt (pem.file) is public file
1.click the load the button



2. Load the .pem file and save as private key



3. go to putty click ssh and click auth click auth go through credentials
Upload the ppk file



Successfully connect the linux

```
Unable to use certificate file "C:\Users\HP\Desktop\kamal\kamal.ppk" (PuTTY S
SH-2 private key)
login as: ec2-user
Authenticating with public key "imported-openssh-key" from agent
#
~\  #####      Amazon Linux 2023
~~ \_#####\
~~  \#####\
~~   \###|
~~    \#/' ->    https://aws.amazon.com/linux/amazon-linux-2023
~~     v~'
~~~
~~~
~~~
~~~
ec2-user@ip-172-31-38-72 ~]$
```