

**Batch No.: B.N-013/25- AWS/DEVOPS**

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**Topic : Creating EC2 Instance and Connecting It Using SSH.**

**Assignment no.: 1 - To create a Linux EC2 Instance**

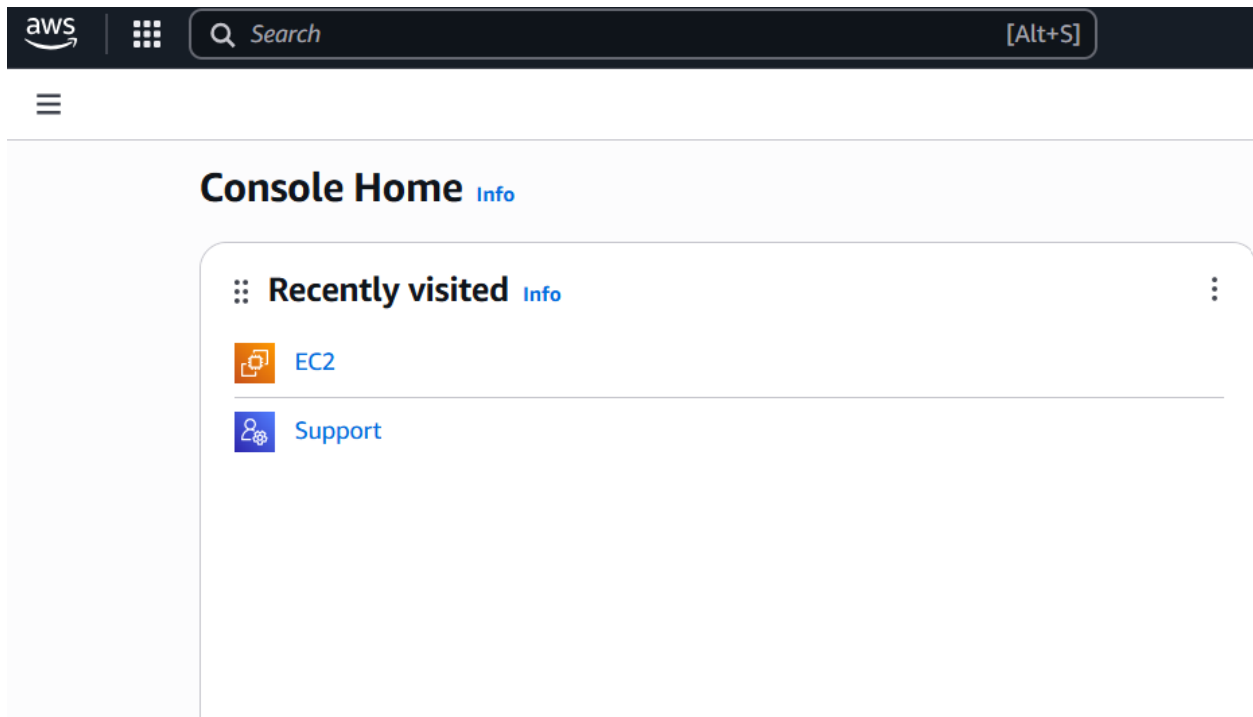
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### **Step 1: Sign in to AWS**

- Go to the AWS Console and log in using your credentials

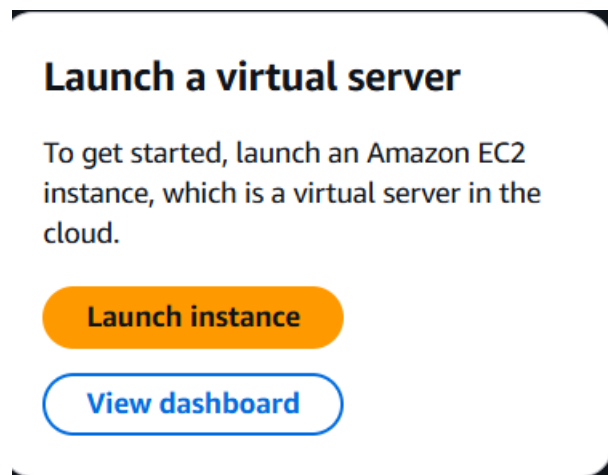
### **Step 2: Open EC2 Dashboard**

- In the top search bar, type EC2 and select EC2 to open the EC2 Dashboard



### Step 3: Launch Instance

- Click the Launch Instance button to begin the process of creating a new instance.



- Add Instance name as: web application server, we can add Tag (Optional).

#### 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](#)

### Step 4: Choose an Amazon Machine Image (AMI)

- Select an image (AMI) to use for your instance. You can choose from options like Amazon Linux, Ubuntu, or Windows, depending on what you need. As I am creating Linux machine, Therefore Amazon Linux AWS is selected.

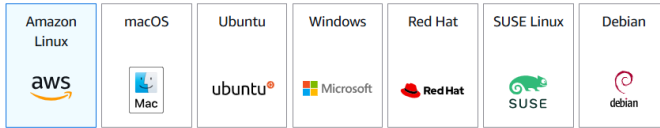
### ▼ Application and OS Images (Amazon Machine Image) [Info](#)

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

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

Recents

**Quick Start**



[Browse more AMIs](#)  
Including AMIs from  
AWS, Marketplace and  
the Community

#### Amazon Machine Image (AMI)

Amazon Linux 2023 AMI  
ami-0953476d60561c955 (64-bit (x86), uefi-preferred) / ami-05a3e0187917e3e24 (64-bit (Arm), uefi)  
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible ▼

## Step 5: Choose Instance Type

- Select the type of instance that fits your needs. For example, t2.micro is eligible for the free tier.

### ▼ Instance type [Info](#) | [Get advice](#)

#### 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  
On-Demand Ubuntu Pro base pricing: 0.0134 USD per Hour  
On-Demand SUSE base pricing: 0.0116 USD per Hour On-Demand RHEL base pricing: 0.026 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](#)

## Step 6: Add Key-Pair

- Create a new key pair or use an existing one. If you create a new key pair, download the .pem file and keep it safe. This file is needed to SSH into your instance later

### ▼ 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*

demo key pair ▼

[Create new key pair](#)

## Step 7: Configure Instance

HTTP	TCP	80
Source type   Info	Source   Info	Description - optional   Info
Anywhere	<input type="text" value="Add CIDR, prefix list or security group"/>	<input type="text" value="e.g. SSH for admin desktop"/>
	0.0.0.0/0 ✕	
▼ Security group rule 4 (TCP, 3389, 0.0.0.0/0) <span>Remove</span>		
Type   Info	Protocol   Info	Port range   Info
rdp	TCP	3389
Source type   Info	Source   Info	Description - optional   Info
Anywhere	<input type="text" value="Add CIDR, prefix list or security group"/>	<input type="text" value="e.g. SSH for admin desktop"/>
	0.0.0.0/0 ✕	
▼ Security group rule 5 (TCP, 3306) <span>Remove</span>		
Type   Info	Protocol   Info	Port range   Info
MySQL/Aurora	TCP	3306
Source type   Info	Source   Info	Description - optional   Info
Custom	<input type="text" value="Add CIDR, prefix list or security group"/>	<input type="text" value="e.g. SSH for admin desktop"/>

- Set the Network, Add security group, and Storage option

- **Set Up Security Group:**

- Create a new security group or use an existing one
- Add rules to allow traffic to your instance:

**SSH (Port 22):** For Linux instances, this allows you to SSH into the instance (ensure you have the correct private key to SSH).

**RDP (Port 3389):** For Windows instances, this allows you to connect via Remote Desktop Protocol (RDP)

**HTTP (Port 80):** If you plan to host a web server, this allows HTTP traffic.

**HTTPS (Port 443):** If your website uses SSL encryption, open this port.

**MYSQL (Port 3306):** If we want to connect Database, Open this port.

## • Step 8: Add Storage

The default storage (usually an EBS volume) is fine for basic use. You can adjust the size if needed.

▼ **Configure storage** [Info](#)

Advanced

1x  GiB  ▼ Root volume, 3000 IOPS, Not encrypted

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

×

Add new volume

ⓘ Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

↻

0 x File systems [Edit](#)

## Step 8: Launch

• Review all your selections and settings. If everything looks good, click the Launch button.

▼ **Summary**

Number of instances [Info](#)

Software Image (AMI)

Amazon Linux 2023 AMI 2023.7.2...[read more](#)

ami-0953476d60561c955

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 of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier.

×

Cancel

Launch instance

[Preview code](#)

## Step 9: Connect to Your Instance

- Once the instance is up and running, go to the Instances section in the EC2 Dashboard.
- Find the Public IP or DNS of your instance
- For Linux instances: Use the following command in your terminal to SSH into the instance:

Instances (1/1) [Info](#) Last updated less than a minute ago [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

[All states](#)

[Instance state = running](#) [Clear filters](#) < 1 >

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public I
<input checked="" type="checkbox"/>	Web Applicati...	i-00ffc374732953000	Running	t2.micro	2/2 checks passed	<a href="#">View alarms</a>	us-east-1b	ec2-52-

### i-00ffc374732953000 (Web Application server)

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

#### ▼ Instance summary [Info](#)

Instance ID  
[i-00ffc374732953000](#)

IPv6 address  
-

Public IPv4 address  
[52.87.213.206](#) | [open address](#)

Instance state  
Running

Private IPv4 addresses  
[172.31.95.100](#)

Public IPv4 DNS  
[ec2-52-87-213-206.compute-1.amazonaws.com](#) | [open address](#)

## Connect [Info](#)

Connect to an instance using the browser-based client.

[EC2 Instance Connect](#) [Session Manager](#) [SSH client](#) [EC2 serial console](#)

#### Instance ID

[i-00ffc374732953000](#) (Web Application server)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is demo\_key\_pair.pem
3. Run this command, if necessary, to ensure your key is not publicly viewable.  
`chmod 400 "demo_key_pair.pem"`
4. Connect to your instance using its Public DNS:  
[ec2-52-87-213-206.compute-1.amazonaws.com](#)

Example:

```
ssh -i "demo_key_pair.pem" ec2-user@ec2-52-87-213-206.compute-1.amazonaws.com
```

**Note:** In most cases, the guessed username is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

### Step 10: Open Gitbash terminal to connect instance

```
Chimu@DESKTOP-NTEHQ5I MINGW64 ~  
$ cd Downloads  
bash: cd: Downloads: No such file or directory  
  
Chimu@DESKTOP-NTEHQ5I MINGW64 ~  
$ cd Downloads  
  
Chimu@DESKTOP-NTEHQ5I MINGW64 ~/Downloads  
$  
  
Chimu@DESKTOP-NTEHQ5I MINGW64 ~/Downloads  
$ chmod 400 "demo key_pair.pem"  
  
Chimu@DESKTOP-NTEHQ5I MINGW64 ~/Downloads  
$ ssh -i "demo key_pair.pem" ec2-user@ec2-52-87-213-206.compute-1.amazonaws.com  
The authenticity of host 'ec2-52-87-213-206.compute-1.amazonaws.com (52.87.213.206)' can't be established.  
ED25519 key fingerprint is SHA256:xysgZg2JIWaCE49+m1KNIjaBfmUGW3CwvwAZJ+SuTqo.  
This key is not known by any other names.  
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes  
Warning: Permanently added 'ec2-52-87-213-206.compute-1.amazonaws.com' (ED25519) to the list of known hosts.  
#_  
~\####_ Amazon Linux 2023  
~~\#####\  
~~\###|  
~~\#/ https://aws.amazon.com/linux/amazon-linux-2023  
~~V~'->  
~~~~  
~.-.-./-/-/  
~/m/'
```

[ec2-user@ip-172-31-95-100 ~]\$ |