

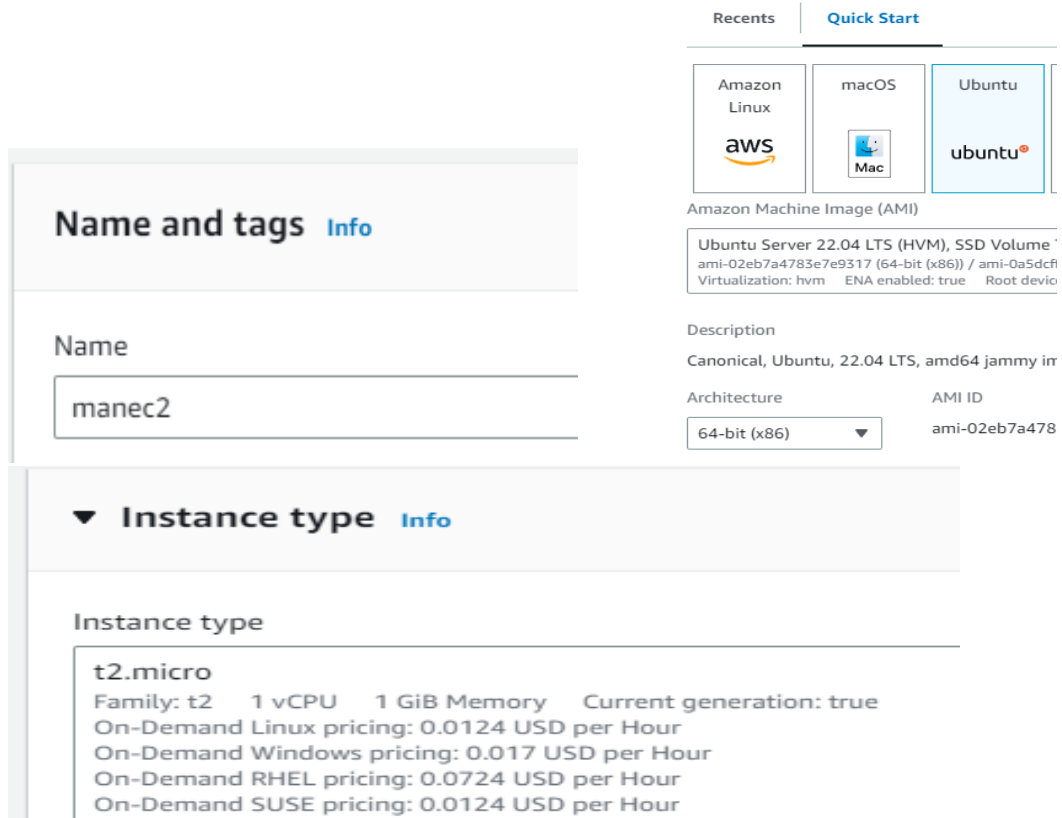
# ASSIGNMENT NO-14

 **Problem Statement:- Create an elastic IP for an instance.**

 **Steps:-**

 **EC2 creation:-**

1. In EC2 dashboard click **launch instances**. Give name, select **ubuntu** for hardware, architecture is 64-bit, instance type is t2.micro.



**Name and tags** [Info](#)

Name

manec2

**▼ Instance type** [Info](#)

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current generation: true

On-Demand Linux pricing: 0.0124 USD per Hour

On-Demand Windows pricing: 0.017 USD per Hour

On-Demand RHEL pricing: 0.0724 USD per Hour

On-Demand SUSE pricing: 0.0124 USD per Hour

**Amazon Machine Image (AMI)**

Amazon Linux macOS Ubuntu

aws Mac ubuntu

Ubuntu Server 22.04 LTS (HVM), SSD Volume

ami-02eb7a4783e7e9317 (64-bit (x86)) / ami-0a5dcf1

Virtualization: hvm ENA enabled: true Root device

Description

Canonical, Ubuntu, 22.04 LTS, amd64 jammy ir

Architecture

64-bit (x86)

AMI ID

ami-02eb7a478

2. Give key pair (in case if u have it give existing one). In Network settings Firewall section click **select existing security group** and select the security group which is created previously (ex-mansecure1).

## **Firewall (security groups)** [Info](#)

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

☐ Create security group

☒ Select existing security group

## **Security groups** [Info](#)

Select security groups

mansecure1 sg-09f812d1e5b00aebf X

VPC: vpc-044ae7b2b99754d9f

As, we are just checking wheather the IP is elastic or not so no need to give advanced details.

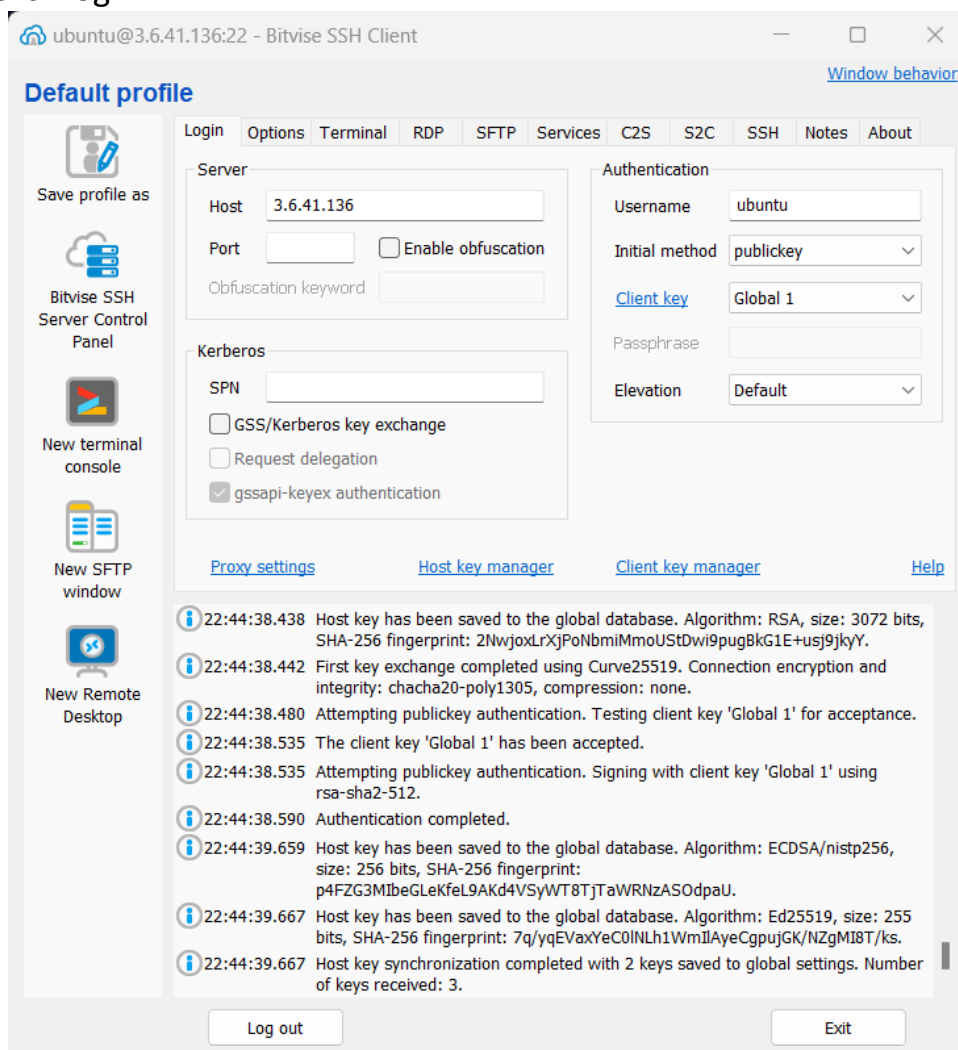
Now, click launch instances and the instance will be created.

Instances (1) Info			
<input type="text" value="Find instance by attribute or tag (case-sensitive)"/>			
<div> <div>Instance state = running X</div> <div>Clear filters</div> </div>			
<input type="checkbox"/>	Name	Instance ID	Instance state
<input type="checkbox"/>	manec2	i-05547e937ea77ae0b	Running

Now, copy public IPv4 address.

### Connect with Bitvise SSH:-

1. Copy public IPv4 address(ex- 13.234.239.230) and paste it on Bitvise SSH Client. Give username ubuntu, initial method publickey, in client key manager import that same existed key pair .pem file(ex-key003.pem) and click Global1 in Client key.and click log in.



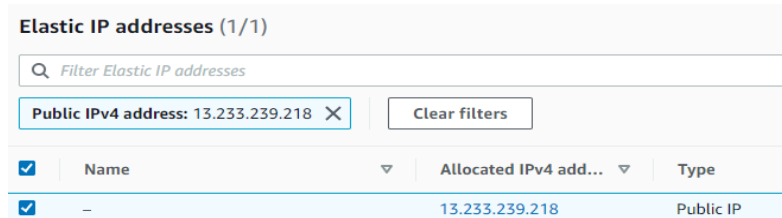
Now, the server is running. copy the IPv4 address and note it. Stop the instance. And again start the instance. And we can see that the new IP is different from previous one.

```
13.234.239.230
43.205.192.196
65.0.168.154
```

That is the reason why we use **elastic IP**. Elastic IP is a **static** IPv4 address which is designed for dynamic cloud computing. As it is static it does not change over time which means that it does not change even if we stop or start the instance. This makes it easier to maintain our infrastructure and avoids the need to update the IP address of our resource each time it is restarted.

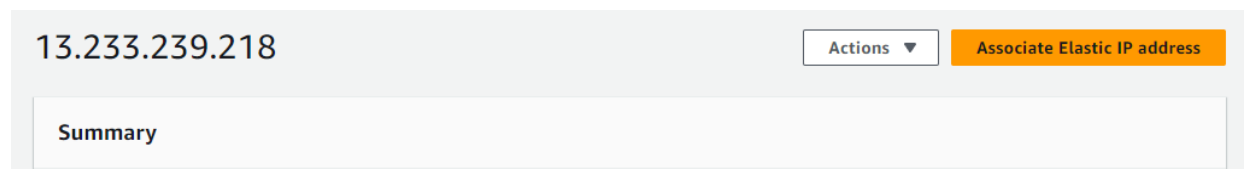
## Create Elastic IP

1. Go to EC2 dashboard and click Elastic IPs. Click “**Allocate Elastic IP address**”. And click **Allocate**.



Filter Elastic IP addresses			
Public IPv4 address: 13.233.239.218		Clear filters	
<input checked="" type="checkbox"/>	Name	Allocated IPv4 address	Type
<input checked="" type="checkbox"/>	-	13.233.239.218	Public IP

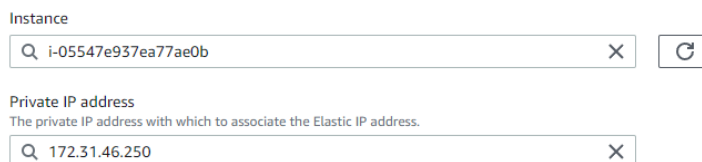
2. Click on Allocated IPv4 address and click “Associated Elastic IP address”.



13.233.239.218 Actions Associate Elastic IP address

Summary

3. Click on instance and select the EC2 which one you want to elastic. Click on Private IP address and click Associate.



Instance

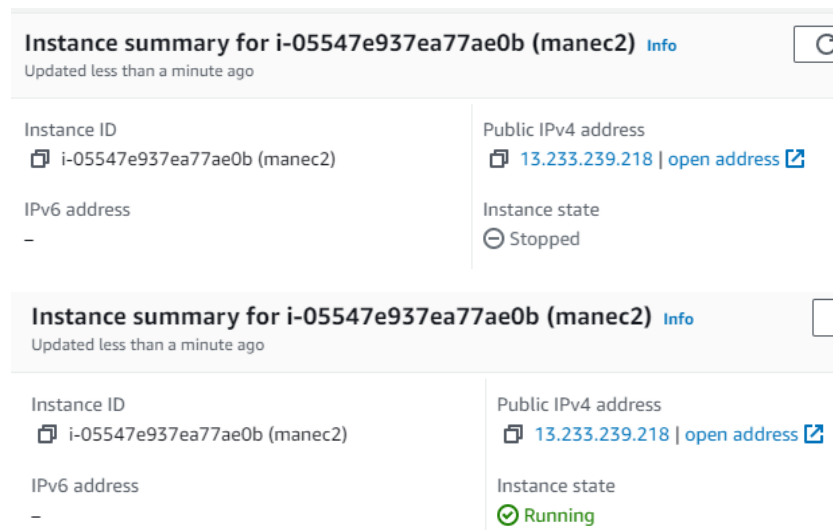
Q i-05547e937ea77ae0b X

Private IP address

The private IP address with which to associate the Elastic IP address.

Q 172.31.46.250 X

4. We can see that elastic IP is associated with EC2 and if we stop the server it won't change anymore.



**Instance summary for i-05547e937ea77ae0b (manec2)** Info

Updated less than a minute ago

Instance ID	Public IPv4 address
i-05547e937ea77ae0b (manec2)	13.233.239.218   open address
IPv6 address	Instance state
-	⊖ Stopped

**Instance summary for i-05547e937ea77ae0b (manec2)** Info

Updated less than a minute ago

Instance ID	Public IPv4 address
i-05547e937ea77ae0b (manec2)	13.233.239.218   open address
IPv6 address	Instance state
-	✔ Running