

C. Allocate an Elastic IP

1. On left menu, go to:
 - **Network & Security > Elastic IPs**
2. Click **Allocate Elastic IP address**
3. Keep default settings and click **Allocate**

D. Associate Elastic IP with Instance

1. Select the newly allocated IP
 - Click **“Associate Elastic IP address”**
2. In the form that opens:
 - **Resource Type:** Select `Instance`
 - **Instance:** Select your current running EC2 instance
 - **Private IP:** Keep default
 - ☒ Check **“Allow this Elastic IP address to be reassociated”**
3. Click **Associate**

E. Verify Elastic IP Behavior

1. **Copy current Public IPv4 address** (this is now your **Elastic IP**)
 2. **Stop and start the instance again** as before
 3. **Check the Public IPv4 address again**
 - You'll see it **hasn't changed this time** ✓
- 🔒 **Success! Your instance now has a static IP.**

The screenshot displays the AWS Management Console interface for Elastic IP addresses. The top section shows the 'Allocate Elastic IP address' page with a 'Create accelerator' button and a 'Tags - optional' section. The middle section shows the 'Associate Elastic IP address' page with a warning about disassociating the previous IP, fields for 'Instance' (i-0cc0f7177445abd87) and 'Private IP address', and a 'Reassociation' checkbox. The bottom section shows the 'Instances' page for the instance i-0cc0f7177445abd87, which is in a 'Running' state. A green notification bar at the top of the instance page states 'Successfully initiated starting of i-0cc0f7177445abd87'.

Global static IP addresses
AWS Global Accelerator can provide global static IP addresses that are announced worldwide using anycast from AWS edge locations. This can help improve the availability and latency for your user traffic by using the Amazon global network. [Learn more](#)

[Create accelerator](#)

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. No tags associated with the resource.

[Add new tag](#)
You can add up to 50 more tag

[Cancel](#) [Allocate](#)

Associate Elastic IP address

Network interface

⚠️ If you associate an Elastic IP address with an instance that already has an Elastic IP address associated, the previously associated Elastic IP address will be disassociated, but the address will still be allocated to your account. [Learn more](#)

If no private IP address is specified, the Elastic IP address will be associated with the primary private IP address.

Instance
i-0cc0f7177445abd87

Private IP address
The private IP address with which to associate the Elastic IP address.
Choose a private IP address

Reassociation
Specify whether the Elastic IP address can be reassociated with a different resource if it already associated with a resource.
☒ Allow this Elastic IP address to be reassociated

[Cancel](#) [Associate](#)

Instances > i-0cc0f7177445abd87

EC2

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Savings Plans
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▼ **Images**

AMIs

Instance summary for i-0cc0f7177445abd87 (supratim01) [Info](#)

Updated less than a minute ago

[Refresh](#) [Connect](#) [Instance state](#) [Actions](#)

Instance ID
i-0cc0f7177445abd87

IPv6 address
-

Hostname type
IP name: ip-172-31-16-86.ap-southeast-1.compute.internal

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

Instance state
Running

Private IP DNS name (IPv4 only)
ip-172-31-16-86.ap-southeast-1.compute.internal

Private IPv4 addresses
172.31.16.86

Public IPv4 DNS
ec2-13-213-81-13.ap-southeast-1.compute.amazonaws.com | [open address](#)

Elastic IP addresses

[Assign private resource DNS name](#) [Instance type](#)

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B. Observe Public IP Change on Restart

1. Copy current Public IPv4 address of your instance

► Found in instance details pane

2. Stop the instance

► Actions > Instance state > Stop instance

3. Start the instance again

► Actions > Instance state > Start instance

4. Check the Public IPv4 address again

► You'll notice it has **changed**

✓ Confirms why Elastic IP is needed

EC2

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AMIs

Successfully initiated stopping of i-Occ0f7177445abd87

Instance summary for i-Occ0f7177445abd87 (supratim01)

Connect

Instance state

Actions

Updated less than a minute ago

Instance ID

i-Occ0f7177445abd87

IPv6 address

-

Hostname type

IP name: ip-172-31-16-86.ap-southeast-1.compute.internal

Public IPv4 address

54.254.139.112 | open address

Instance state

Stopping

Private IP DNS name (IPv4 only)

ip-172-31-16-86.ap-southeast-1.compute.internal

Private IPv4 addresses

172.31.16.86

Public IPv4 DNS

ec2-54-254-139-112.ap-southeast-1.compute.amazonaws.com | open address

Answer private resource DNS name

-

Instance type

-

Elastic IP addresses

-

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Instance summary for i-Occ0f7177445abd87 (supratim01)

Connect

Instance state

Actions

Updated less than a minute ago

Instance ID

i-Occ0f7177445abd87

IPv6 address

-

Hostname type

IP name: ip-172-31-16-86.ap-southeast-1.compute.internal

Public IPv4 address

13.215.209.167 | open address

Instance state

Running

Private IP DNS name (IPv4 only)

ip-172-31-16-86.ap-southeast-1.compute.internal

Private IPv4 addresses

172.31.16.86

Public IPv4 DNS

ec2-13-215-209-167.ap-southeast-1.compute.amazonaws.com | open address

Answer private resource DNS name

IPv4 (A)

Instance type

t2.micro

Elastic IP addresses

-

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Assignment 14

Create an elastic IP for an instance.

Objective

Learn how to create and assign an **Elastic IP** to an EC2 instance so that its public IP remains **static**, even if the instance is stopped and started again.

Why Elastic IP?

When you stop and restart an EC2 instance, the **public IPv4 address changes**. This is a problem if:

- You're hosting a website or application.
- You're using a custom domain that points to that IP.

To prevent this, **Elastic IP** acts as a **static IP** that you can attach to any EC2 instance, ensuring consistent access.

Steps to Perform the Lab

A. Create an EC2 Instance

1. **Login to AWS Console** → Go to **EC2 Dashboard**.
2. Click **“Instances (Running)”** > Click **“Launch Instance”**.
3. **Name your instance**

Under *Name and tags*, enter:

- `snehaec2WebServer` (or any preferred name)

4. Choose OS Image (AMI)

- Under *Application and OS Images*, select:

- **Quick Start**
- **Ubuntu** (Free Tier Eligible)

5. Create or Select a Key Pair

- Choose an existing key pair or click **Create new key pair**
- Give a name like `snehaa1234`
- Select:

- **Key pair type:** RSA
- **File format:** .pem

- Click **Create key pair** and download the .pem file

6. Choose Instance Type

- Keep default: `t2.micro` (Free Tier Eligible)

7. Configure Security Group (Firewall Rules)

Select *Create security group* and **check all three options**:

- ✓ Allow SSH (for connecting to instance)
- ✓ Allow HTTPS (secure web access)
- ✓ Allow HTTP (web access)

8. Launch Instance

- Review summary
- Click **Launch Instance**
- On confirmation page, click **“View all instances”**

The screenshot displays the AWS Management Console's EC2 Instances page. The left-hand navigation pane shows the 'Instances' section selected. The main area, titled 'Instances (1)', shows a single instance named 'supratim01' with ID 'i-0cc0f7177445abd87'. The instance is in a 'Running' state and is of type 't2.micro'. The status check shows 'Initializing'. The page includes a search bar, a table of instance details, and buttons for 'Connect', 'Instance state', 'Actions', and 'Launch instances'.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
supratim01	i-0cc0f7177445abd87	Running	t2.micro	Initializing	View alarms +