

Assignment 14: Create an Elastic IP for an Instance.

1. First create an **EC2 instance**. Note the public and private IPv4 address.

The screenshot shows the AWS Management Console interface for an EC2 instance. At the top, a table lists instances with columns for Name, Instance ID, and Instance state. The instance 'Server 1' with ID 'i-01c2809777fb80707' is in a 'Running' state. Below this, the 'Instance: i-01c2809777fb80707 (Server 1)' details are shown. The 'Details' tab is selected, displaying the 'Instance summary' with the following information:

Field	Value
Instance ID	i-01c2809777fb80707 (Server 1)
Public IPv4 address	13.213.8.204 open address
Private IPv4 addresses	172.31.22.136
IPv6 address	-

2. When the instance is in running state, stop it and restart it. We can see that the public and private IPv4 address changes.

The screenshot shows the AWS Management Console interface for the same EC2 instance 'Server 1' (ID: i-01c2809777fb80707). The instance is still in a 'Running' state. The 'Instance summary' shows the following information:

Field	Value
Instance ID	i-01c2809777fb80707 (Server 1)
Public IPv4 address	13.229.207.7 open address
Private IPv4 addresses	172.31.22.136
IPv6 address	-

A text box overlay on the screenshot displays the IP addresses before and after the restart:

```
Initial
Public IPv4: 13.213.8.204
Private IPv4: 172.31.22.136

After restarting
Public IPv4: 13.229.207.7
Private IPv4: 172.31.22.136
```

3. To make our IPv4 address constant for my instance, we need a static IPv4 address i.e., we will create an Elastic IP.
4. Go to **EC2 Dashboard**, choose **Elastic IPs** and select **Allocate Elastic IP address**. Leave the settings as it is and click on **Allocate**. Elastic IP is allocated successfully.

The screenshot shows the AWS Management Console interface for Elastic IP addresses. The 'Elastic IP addresses (1/1)' section is displayed, showing a table with one entry:

Name	Allocated IPv4 ...	Type	Allocation ID	Reverse DNS record
-	54.254.240.70	Public IP	eipalloc-0f5ac735c83553130	-

Below the table, the 'Summary' section provides details for the allocated Elastic IP:

Field	Value
Allocated IPv4 address	54.254.240.70
Type	Public IP
Allocation ID	eipalloc-0f5ac735c83553130
Reverse DNS record	-

5. Click on the IP address and select **Associate Elastic IP address**.
6. Choose the Instance (**Resource type**: Instance), Private IP address, select the checkbox and click on **Associate**.

54.254.240.70

Actions ▼

Associate Elastic IP address

Summary

<p>Allocated IPv4 address</p> <p> 54.254.240.70</p> <p>Allocation ID</p> <p> eipalloc-0f5ac735c83553130</p> <p>Association ID</p> <p> eipassoc-0f87b3dc1895edb45</p> <p>Associated instance ID</p> <p>i-01c2809777fb80707</p> <p>Network interface ID</p> <p>eni-0907ac014b09e9bbe</p> <p>Public DNS</p> <p> ec2-54-254-240-70.ap-southeast-1.compute.amazonaws.com</p> <p>Address pool</p> <p> Amazon</p>	<p>Type</p> <p> Public IP</p> <p>Reverse DNS record</p> <p>–</p> <p>Scope</p> <p> VPC</p> <p>Private IP address</p> <p> 172.31.22.136</p> <p>Network interface owner account ID</p> <p> 121667217816</p> <p>NAT Gateway ID</p> <p>–</p> <p>Network Border Group</p> <p> ap-southeast-1</p>
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7. Now go to EC2 Dashboard and again stop and start the instance. The allocated Elastic IP becomes the public IPv4 address which becomes constant for our instance. It does not change with repeated start and stop of the instance.

<input checked="" type="checkbox"/>	Name ▼	Instance ID	Instance state ▼	Instance ty
<input checked="" type="checkbox"/>	Server 1	i-01c2809777fb80707	✔ Running	t2.micro

Instance: i-01c2809777fb80707 (Server 1)

Details

Security

Networking

Storage

Status checks

▼ Instance summary [Info](#)

<p>Instance ID</p> <p> i-01c2809777fb80707 (Server 1)</p> <p>Private IPv4 addresses</p> <p> 172.31.22.136</p>	<p>Public IPv4 address</p> <p> 54.254.240.70 open address</p> <p>IPv6 address</p> <p>–</p>
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