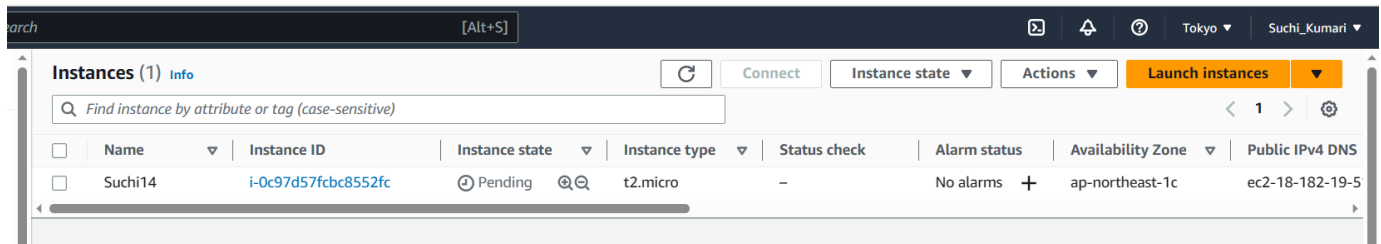


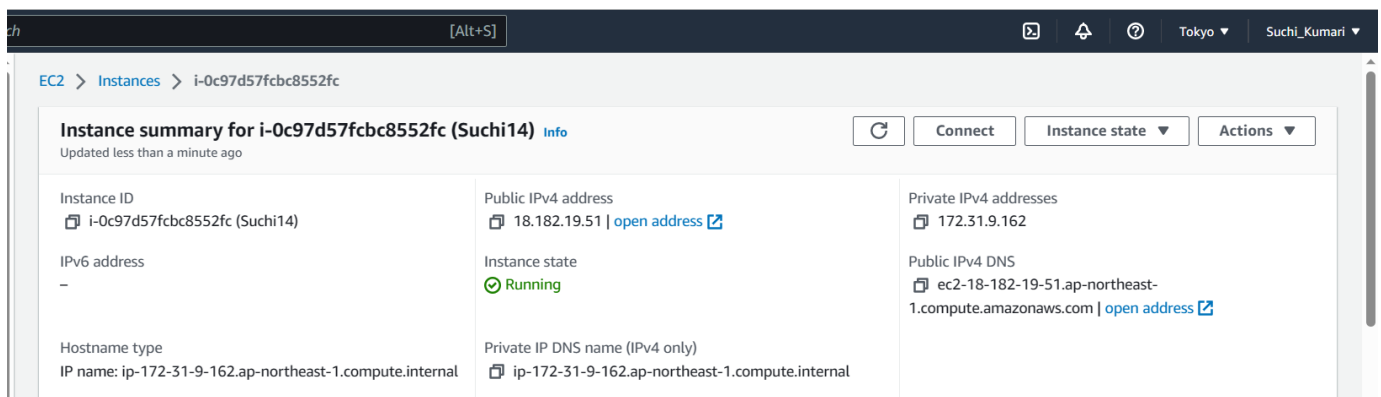
ASSIGNMENT-14

Problem Statement: Create an elastic IP for an instance.

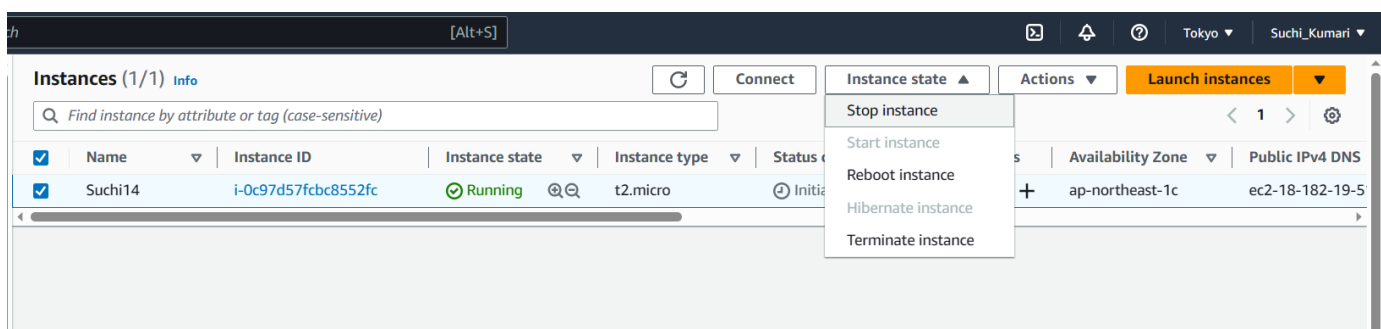
1. Sign-in to your AWS console. Then create an EC2 instance. (We do not need any user-data or any custom security group for this assignment)



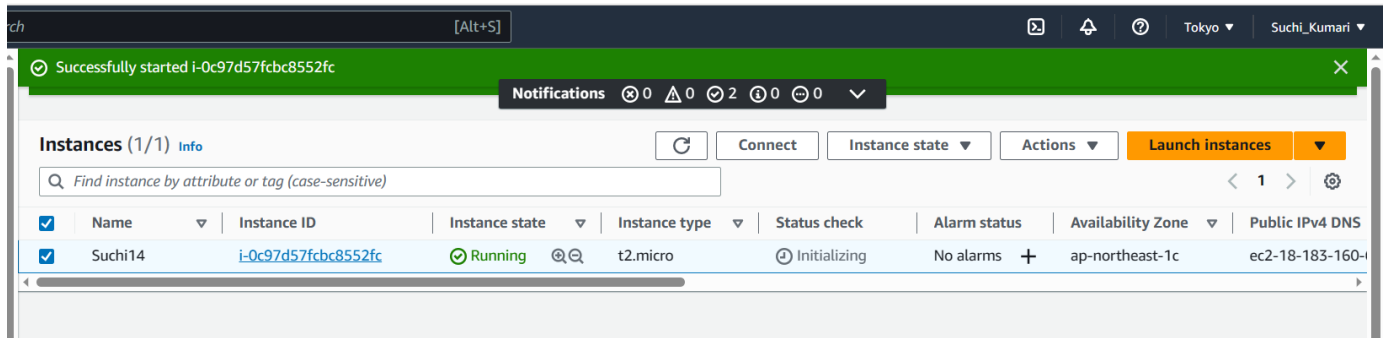
2. After the instance gets created click on it. Copy the public IPv4 address and paste it in a simple text file anywhere in your pc.



3. Now go back to the instances list and select our instance. After selection click on the Instance state button and click on the Stop Instance option.



4. Now again select the instance and click on the Instance state button. Now click on the start instance button. Click on the instance and copy the IPv4 address again and paste it in the same text file.



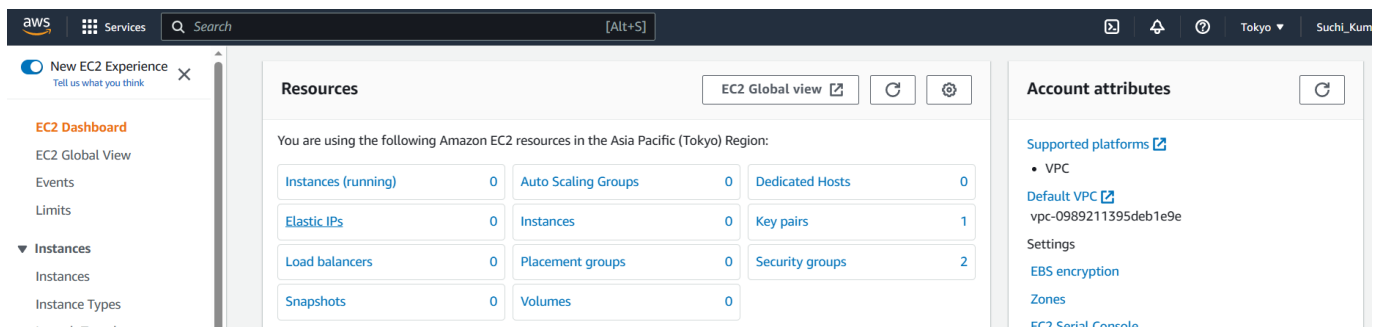
5. Now compare both the new and old IP address and notice that they are not the same.

18.182.19.51

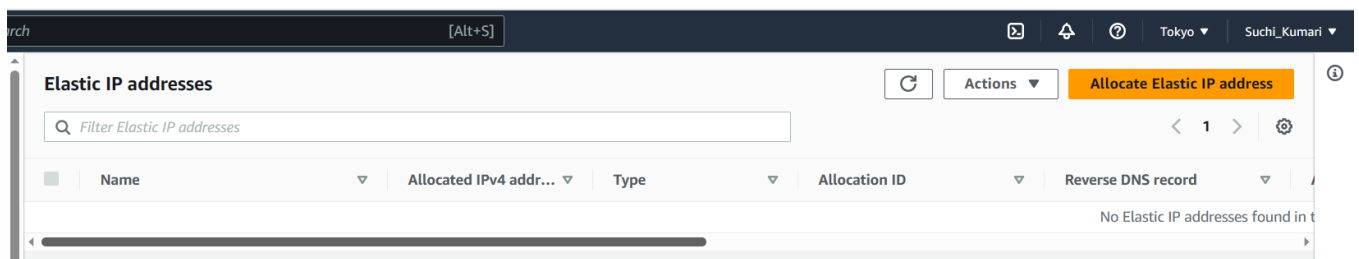
18.183.160.64

So even if we stop and restart our same instance it changes its public IPv4 address. This may not be desirable in some situations. So, to ensure that our instance does not change its public IPv4 address under any circumstances, we need to create an Elastic IP and associate/bind the instance to it. After that it will always be assigned the same Elastic IP as its public IPv4 address (static) all the time.

6. Then click on Elastic IPs.



7. Then click on Allocate Elastic IP address.



8. Then no need to change any options. Just click on the Allocate button.

WS

Services

Search

[Alt+S]

Network Border Group [Info](#)

ap-northeast-1

X

Public IPv4 address pool

Amazon's pool of IPv4 addresses

Public IPv4 address that you bring to your AWS account (option disabled because no pools found) [Learn more](#)

Customer owned pool of IPv4 addresses (option disabled because no customer owned pools found) [Learn more](#)

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

9.Then click on Allocated IPv4 address.

ch

[Alt+S]

Tokyo

Suchi_Kumari

Elastic IP address allocated successfully.
Elastic IP address 35.75.63.252

Associate this Elastic IP address

Elastic IP addresses (1/1)

Filter Elastic IP addresses

Public IPv4 address: 35.75.63.252

Clear filters

<input checked="" type="checkbox"/>	Name	Allocated IPv4 addr...	Type	Allocation ID	Reverse DNS record
<input checked="" type="checkbox"/>	-	35.75.63.252	Public IP	eipalloc-0ea87789ff382a11f	-

10. Next click on the Associate Elastic IP address button.

h

[Alt+S]

Tokyo

Suchi_Kun

EC2 > Elastic IP addresses > 35.75.63.252

35.75.63.252

Actions

Associate Elastic IP address

Summary

Allocated IPv4 address 35.75.63.252	Type Public IP	Allocation ID eipalloc-0ea87789ff382a11f	Reverse DNS record -
Association ID -	Scope VPC	Associated instance ID -	Private IP address -
Network interface ID -	Network interface owner account ID -	Public DNS -	NAT Gateway ID -
Address pool Amazon	Network Border Group ap-northeast-1		

11. Choose your instance you want to associate with it. Keep the Private IP address as specified in the dropdown when clicking for the Private Address. Select the Allow Elastic IP to be reassociated option if we want to reuse it again for another instance. Then click the associate button.

The screenshot shows the AWS console interface for associating an Elastic IP address. At the top, the AWS logo and navigation bar are visible. The main content area is titled "Elastic IP address: 35.75.63.252". Below this, there's a "Resource type" section with two radio buttons: "Instance" (selected) and "Network interface". A warning box states: "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](#)". Below the warning, it says: "If no private IP address is specified, the Elastic IP address will be associated with the primary private IP address." The "Instance" section has a search box containing "i-0c97d57fbc8552fc" and a refresh button. The "Private IP address" section has a search box containing "172.31.9.162". The "Reassociation" section has a checkbox labeled "Allow this Elastic IP address to be reassociated" which is currently unchecked. At the bottom right, there are "Cancel" and "Associate" buttons.

Elastic IP address: 35.75.63.252

Resource type
Choose the type of resource with which to associate the Elastic IP address.

☒ Instance
☐ Network interface

Warning: 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-0c97d57fbc8552fc

Private IP address
The private IP address with which to associate the Elastic IP address.
172.31.9.162

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

Buttons: Cancel, Associate

12. Now Elastic IP address associated successfully.

The screenshot shows the AWS console interface after the Elastic IP address has been successfully associated. A green notification banner at the top states: "Elastic IP address associated successfully. Elastic IP address 35.75.63.252 has been associated with instance i-0c97d57fbc8552fc". Below the banner, the breadcrumb navigation shows "EC2 > Elastic IP addresses > 35.75.63.252". The main content area displays the IP address "35.75.63.252" and an "Associate Elastic IP address" button. Below this, there's a "Summary" section with a table of details.

Summary

Allocated IPv4 address 35.75.63.252	Type Public IP	Allocation ID eipalloc-0ea87789ff382a11f	Reverse DNS record -
Association ID eipassoc-0ea0b69d9a1e3cfd3	Scope VPC	Associated instance ID i-0c97d57fbc8552fc	Private IP address 172.31.9.162
Network interface ID eni-022cc2f260d330004	Network interface owner account ID 331489757083	Public DNS ec2-35-75-63-252.ap-northeast-1.compute.amazonaws.com	NAT Gateway ID -
Address pool Amazon	Network Border Group ap-northeast-1		

13. To check it go back to the instances page. Click on the Instance and see the Public IPv4 address and the Elastic IP address. They should be same. Also notice that the public IPv4 address has turned into a hyperlink to the Elastic IP page.

The screenshot shows the AWS Management Console interface for an EC2 instance. The breadcrumb navigation shows 'EC2 > Instances > i-0c97d57fbc8552fc'. The instance summary card displays the following details:

- Instance ID:** i-0c97d57fbc8552fc (Suchi14)
- IPv6 address:** -
- Hostname type:** IP name: ip-172-31-9-162.ap-northeast-1.compute.internal
- Answer private resource DNS name:** IPv4 (A)
- Auto-assigned IP address:** -
- IAM Role:** -
- IMDSv2:** Optional
- Instance state:** Running
- Private IP DNS name (IPv4 only):** ip-172-31-9-162.ap-northeast-1.compute.internal
- Instance type:** t2.micro
- VPC ID:** vpc-0989211395deb1e9e
- Subnet ID:** subnet-07ecbdc2014f714e
- Private IPv4 addresses:** 172.31.9.162
- Public IPv4 DNS:** ec2-35-75-63-252.ap-northeast-1.compute.amazonaws.com
- Elastic IP addresses:** 35.75.63.252 [Public IP]
- AWS Compute Optimizer finding:** Opt-in to AWS Compute Optimizer for recommendations.
- Auto Scaling Group name:** -

At the bottom, there are tabs for Details, Security, Networking, Storage, Status checks, Monitoring, and Tags. The 'Details' tab is selected.

14. Now stop and restart the instance and see if the public IPv4 address changes or not. It will not change.

Hence, we have successfully created an Elastic IP for an instance.

To delete the Elastic IP, follow these steps:

1. Click on the Elastic IP.
2. Click on the actions button.
3. Then click on Disassociated Elastic IP address.

The screenshot shows the AWS Management Console interface for an Elastic IP address. The breadcrumb navigation shows 'EC2 > Elastic IP addresses > 35.75.63.252'. The summary card displays the following details:

- Allocated IPv4 address:** 35.75.63.252
- Association ID:** eipassoc-0ea0b69d9a1e3cfd3
- Network interface ID:** eni-022cc2f260d330004
- Address pool:** Amazon
- Type:** Public IP
- Scope:** VPC
- Network interface owner account ID:** 331489757083
- Network Border Group:** ap-northeast-1
- Allocation ID:** eipalloc-0ea87789ff382a11f
- Associated instance ID:** i-0c97d57fbc8552fc
- Public DNS:** ec2-35-75-63-252.ap-northeast-1.compute.amazonaws.com

The 'Actions' dropdown menu is open, showing the following options:

- Associate Elastic IP address
- Release Elastic IP addresses
- Disassociate Elastic IP address
- Update reverse DNS
- Enable transfers
- Disable transfers
- Accept transfers

4. Next again click on the Actions button and this time select Release Elastic IP address.
5. Now you can terminate the instance.