

## Assignment – 14

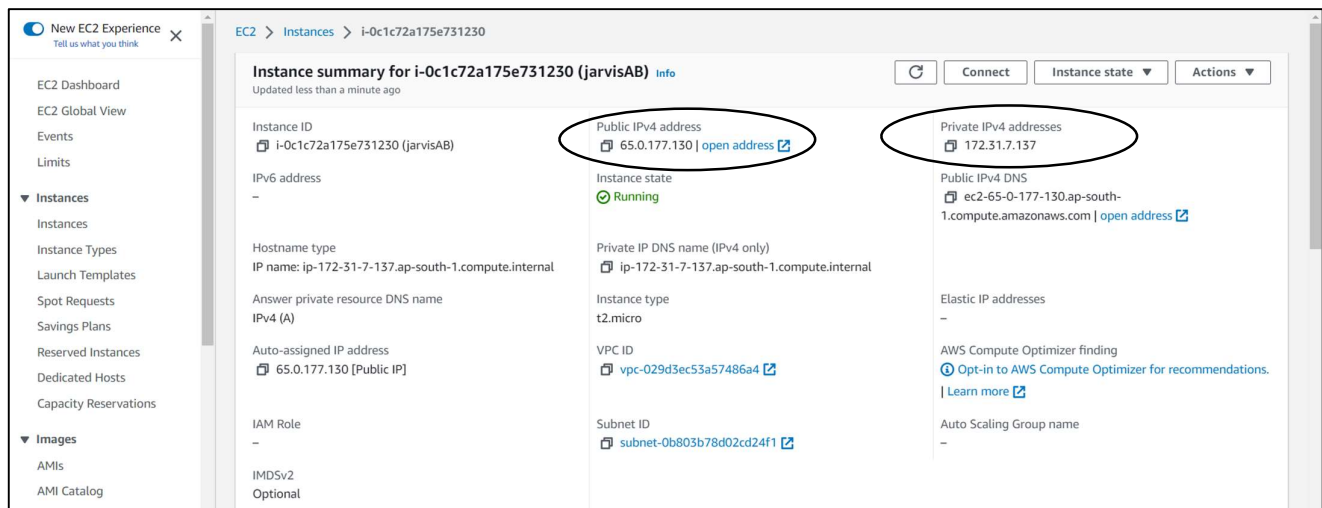
### Problem Statement: -

Create an Elastic IP for an instance.

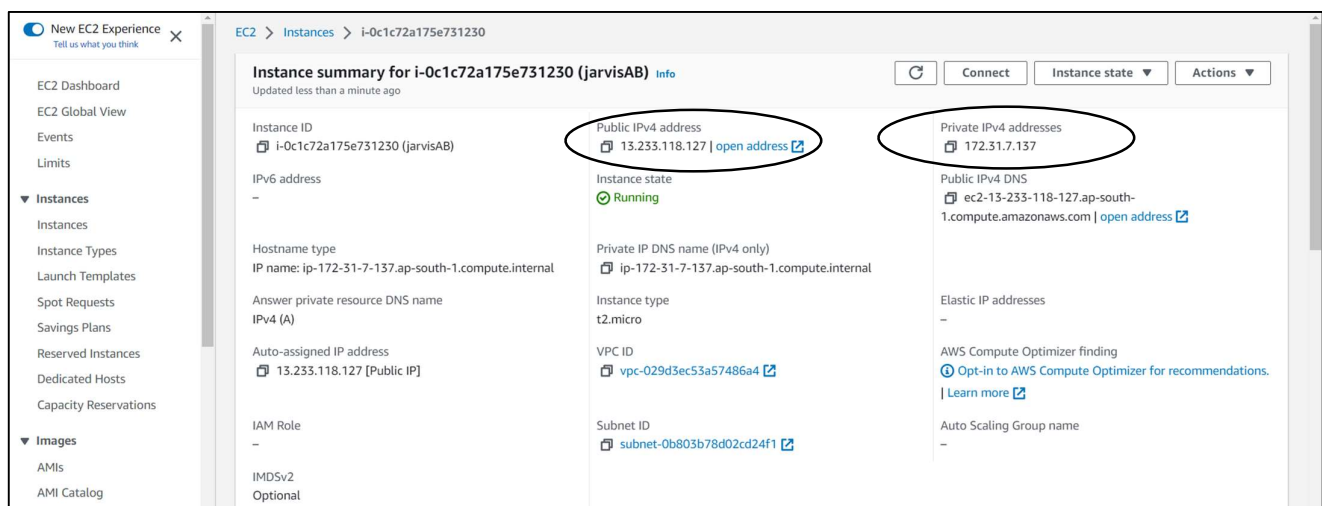
### Steps for create an Elastic IP for an instance: -

1. First create an EC2 instance. If we check, when stop that instance and re-start that instance we will see that **Private IPv4 address same** but **Public IPv4 address changed** (every time when stop and re-start that instance always change IPv4 address). So, we allocate Elastic IP address.
2. Go to EC2 dashboard and then go **Elastic IP**.
3. Click on **Allocate Elastic IP address**. After that, you choose **Amazon's pool of IPv4 addresses** as Public IPv4 address pool and click on Allocate.
4. After allocated click on that IPv4 address. Now, click on **Associate Elastic IP address**.
5. Select **Instance** as Resource type, Instance will choose **running instance** and also choose that instance's Private IPv4 address and check the box of **Reassociation**.
6. Now, instance's Public IPv4 address will be Elastic IPv4 address.

### Some snapshots of above process: -



**Create an EC2 instance and noted Public & Private IPv4 address**



**Changes after stop & re-start that instance**

The screenshot shows the AWS Management Console's 'EC2 Resources' page. On the left is a navigation sidebar with 'Instances' expanded. The main content area has a 'Resources' section at the top, which lists various EC2 resources and their counts. An arrow points to the 'Elastic IPs' link in this list. Below this is a 'Launch instance' section with a 'Launch instance' button. To the right are 'Account attributes' and 'Service health' sections.

Resources					
Instances (running)	1	Auto Scaling Groups	0	Dedicated Hosts	0
Elastic IPs	0	Instances	1	Key pairs	1
Load balancers	0	Placement groups	0	Security groups	3
Snapshots	0	Volumes	1		

Click on Elastic IPs

The screenshot shows the 'Elastic IP addresses' page. At the top, there's a search bar and a table with columns: Name, Allocated IPv4 address, Type, Allocation ID, and Reverse DNS record. An arrow points to the 'Allocate Elastic IP address' button in the top right corner. Below the table, it says 'No Elastic IP addresses found in this region'.

Click on Allocate Elastic IP address

The screenshot shows the 'Allocate Elastic IP address' page. It has a breadcrumb trail: EC2 > Elastic IP addresses > Allocate Elastic IP address. The main section is 'Elastic IP address settings'. Under 'Network Border Group', 'ap-south-1' is selected. Under 'Public IPv4 address pool', 'Amazon's pool of IPv4 addresses' is selected. There are also sections for 'Global static IP addresses' and 'Tags - optional'.

Allocate Elastic IP address

The screenshot shows the 'Associate Elastic IP address' page. It has a breadcrumb trail: EC2 > Elastic IP addresses > 43.205.104.81. The main section is 'Summary', which contains a table with details about the Elastic IP address. An arrow points to the 'Associate Elastic IP address' button in the top right corner.

Summary			
Allocated IPv4 address	Type	Allocation ID	Reverse DNS record
43.205.104.81	Public IP	eipalloc-0543658779308e6e8	-
Association ID	Scope	Associated instance ID	Private IP address
-	VPC	-	-
Network interface ID	Network interface owner account ID	Public DNS	NAT Gateway ID
-	-	-	-
Address pool	Network Border Group		
Amazon	ap-south-1		

Click on Associate Elastic IP address

### Associate Elastic IP address

Choose the instance or network interface to associate to this Elastic IP address (43.205.104.81)

**Elastic IP address: 43.205.104.81**

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

☒ Instance  
☐ 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**

**Private IP address**  
The private IP address with which to associate the Elastic 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

### Configure EC2 instance for Elastic IP

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Dedicated Hosts  
Capacity Reservations  
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AMIs  
AMI Catalog  
▼ Elastic Block Store  
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Snapshots

EC2 > Instances > i-0c1c72a175e731230

Instance summary for i-0c1c72a175e731230 (jarvisAB) info

Updated less than a minute ago

Instance ID  
i-0c1c72a175e731230 (jarvisAB)

IPv6 address  
-

Hostname type  
IP name: ip-172-31-7-137.ap-south-1.compute.internal

Answer private resource DNS name  
IPv4 (A)

Auto-assigned IP address  
-

IAM Role  
-

IMDSv2  
Optional

Public IPv4 address  
43.205.104.81 | open address

Instance state  
Running

Private IP DNS name (IPv4 only)  
ip-172-31-7-137.ap-south-1.compute.internal

Instance type  
t2.micro

VPC ID  
vpc-029d3ec53a57486a4

Subnet ID  
subnet-0b803b78d02cd24f1

Private IPv4 addresses  
172.31.7.137

Public IPv4 DNS  
ec2-43-205-104-81.ap-south-1.compute.amazonaws.com | open address

Elastic IP addresses  
43.205.104.81 [Public IP]

AWS Compute Optimizer finding  
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Auto Scaling Group name  
-

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Now EC2 instance Public IPv4 address same as Elastic IPv4 address