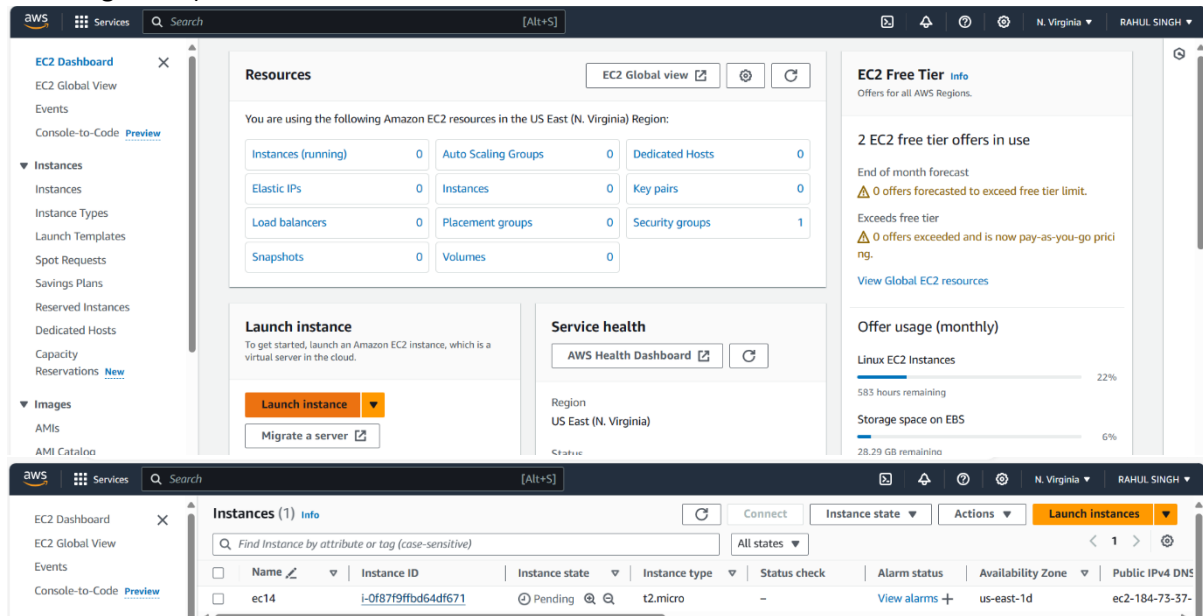


ASSIGNMENT – 14

Problem Statement: Create an elastic IP for an instance.

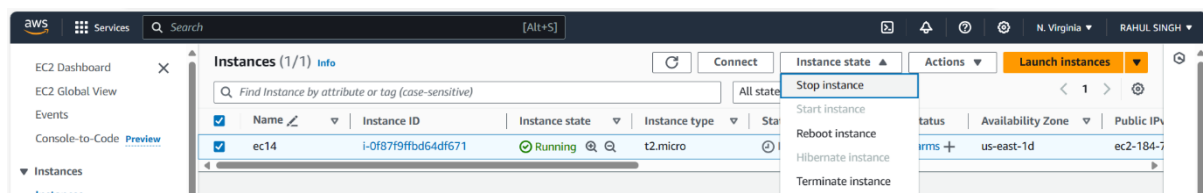
1. Sign-in to your AWS console.
2. Create an EC2 instance. (We do not need any user-data or any custom security group for this assignment)



3. 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.

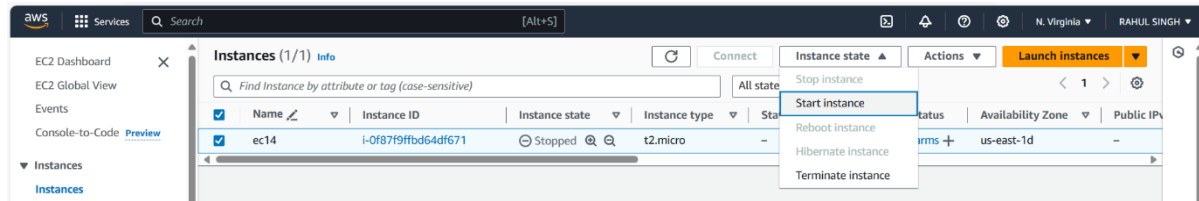


4. Now go back to the instances list and select our instance.
5. After selection click on the Instance state button and click on the Stop Instance option.
6. Wait for few seconds.



7. Now again select the instance and click on the Instance state button. Now click on the

start instance button.



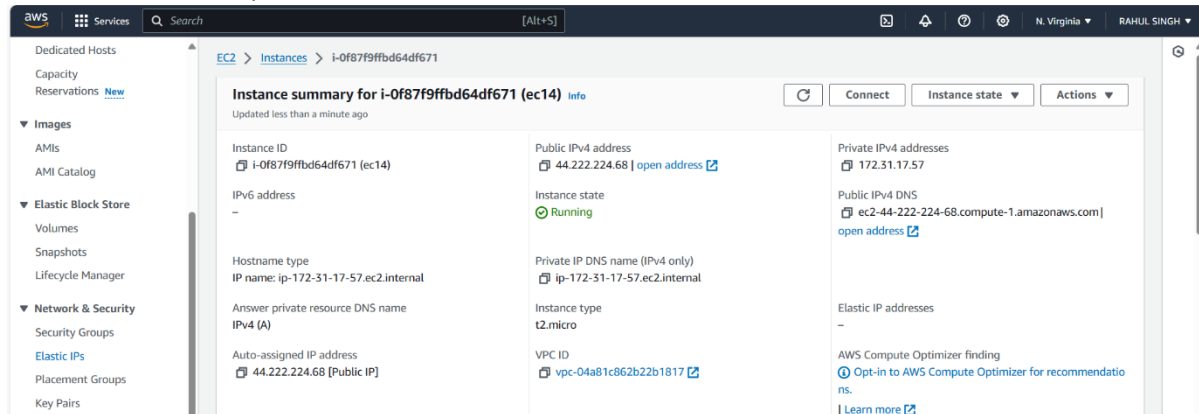
8. Click on the instance and copy the IPv4 address again and paste it in the same text file.



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

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.

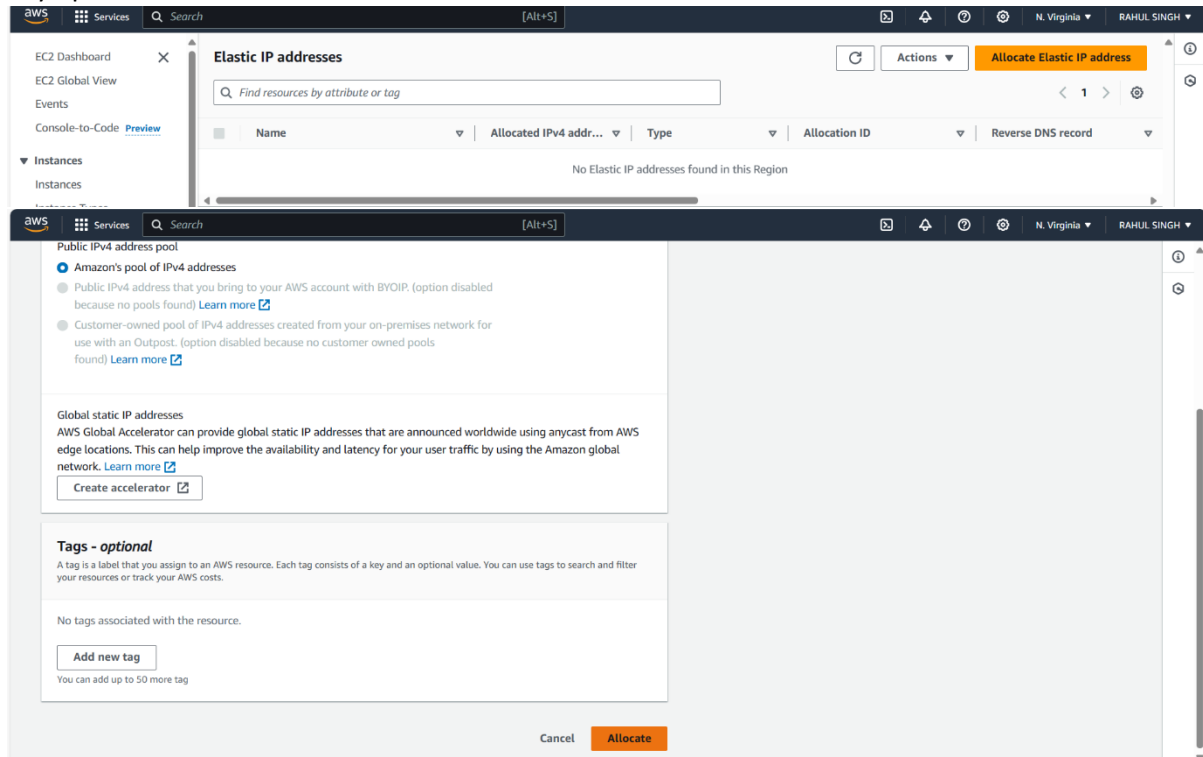
10. For creating an Elastic IP, we need to go scroll down the left side Nav bar and find the Network and security section.



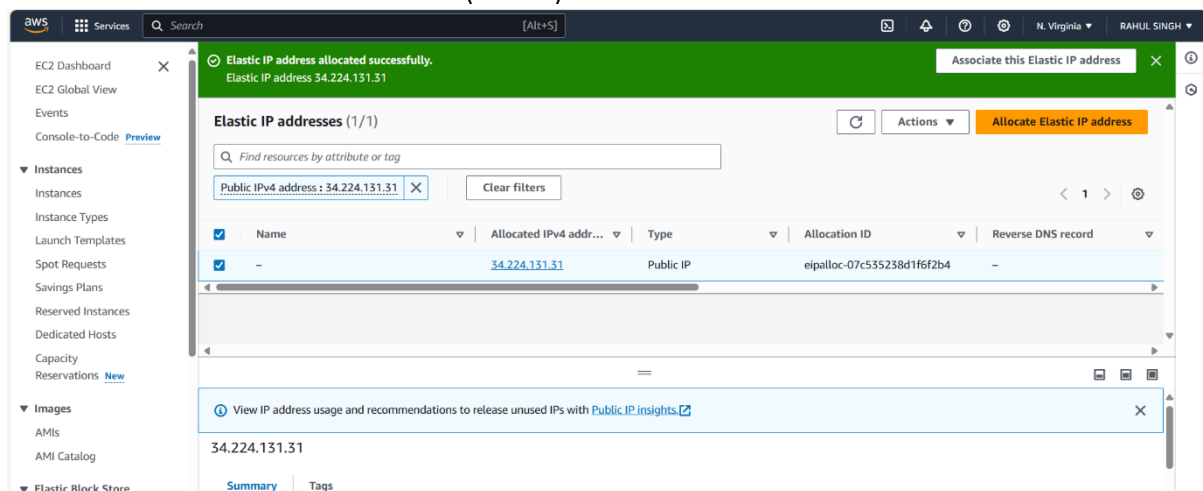
11. Under it click on the Elastic IPs option.

12. Now, click on the Allocate Elastic IP address button on the right side. No need to change

any options. Just click on the Allocate button.



13. Now click on the Elastic IP address (in blue).



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



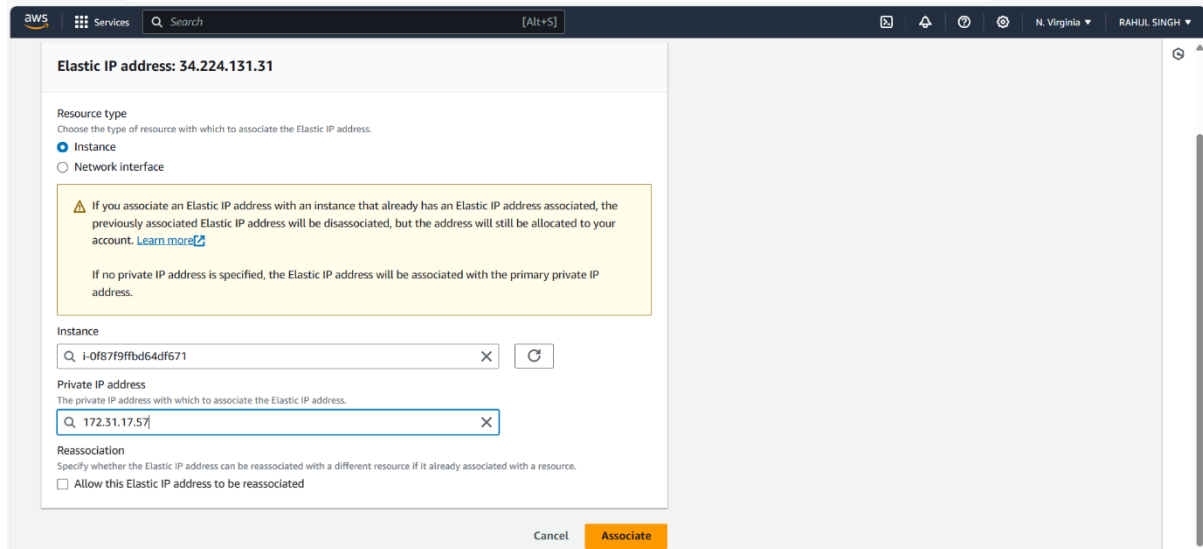
15. Choose your instance you want to associate with it.

16. Keep the Private IP address as specified in the dropdown when clicking for the Private

Address.

17. Select the Allow Elastic IP to be reassociated option if we want to reuse it again for another instance.

18. Now click the associate button.



The screenshot shows the AWS Management Console interface for associating an Elastic IP address. The top navigation bar includes the AWS logo, 'Services', a search bar, and user information for 'RAHUL SINGH' in 'N. Virginia'. The main content area displays the 'Elastic IP address: 34.224.131.31' and a 'Resource type' section with 'Instance' selected. A warning box states that associating with an instance that already has an Elastic IP will disassociate the previous one. Below this, the 'Instance' field contains 'i-0f87f9ffbd64df671' and the 'Private IP address' field contains '172.31.17.57'. The 'Reassociation' section has a checkbox labeled 'Allow this Elastic IP address to be reassociated' which is currently unchecked. At the bottom, there are 'Cancel' and 'Associate' buttons.

Elastic IP address: 34.224.131.31

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-0f87f9ffbd64df671

Private IP address
The private IP address with which to associate the Elastic IP address.
172.31.17.57

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

19. The Elastic IP should have been successfully associated with the instance.

20. 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 first screenshot shows the 'Elastic IP addresses' page in the AWS console. A green notification banner at the top states: 'Elastic IP address associated successfully. Elastic IP address 34.224.131.31 has been associated with instance i-0f87f9ffbd64df671'. Below this, the breadcrumb navigation is 'EC2 > Elastic IP addresses > 34.224.131.31'. The main heading is '34.224.131.31'. There is an 'Actions' dropdown menu and an 'Associate Elastic IP address' button. A 'Summary' table provides details about the Elastic IP:

Summary			
Allocated IPv4 address 34.224.131.31	Type Public IP	Allocation ID eipalloc-07c535238d1f6f2b4	Reverse DNS record -
Association ID eipassoc-0e5127bde0aaedc24	Scope VPC	Associated instance ID i-0f87f9ffbd64df671	Private IP address 172.31.17.57
Network interface ID eni-00a344b20e7a5fe65	Network interface owner account ID 211125581892	Public DNS ec2-34-224-131-31.compute-1.amazonaws.com	NAT Gateway ID -
Address pool Amazon	Network border group us-east-1		

The second screenshot shows the 'Instance summary' page for instance 'i-0f87f9ffbd64df671 (ec14)'. The breadcrumb navigation is 'EC2 > Instances > i-0f87f9ffbd64df671'. The instance is in a 'Running' state. The 'Public IPv4 address' is '34.224.131.31' with a link to 'open address'. Other details include the instance type 't2.micro', VPC ID 'vpc-04a81c862b22b1817', and subnet ID 'subnet-0ffbc4a75b377bad3'.

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

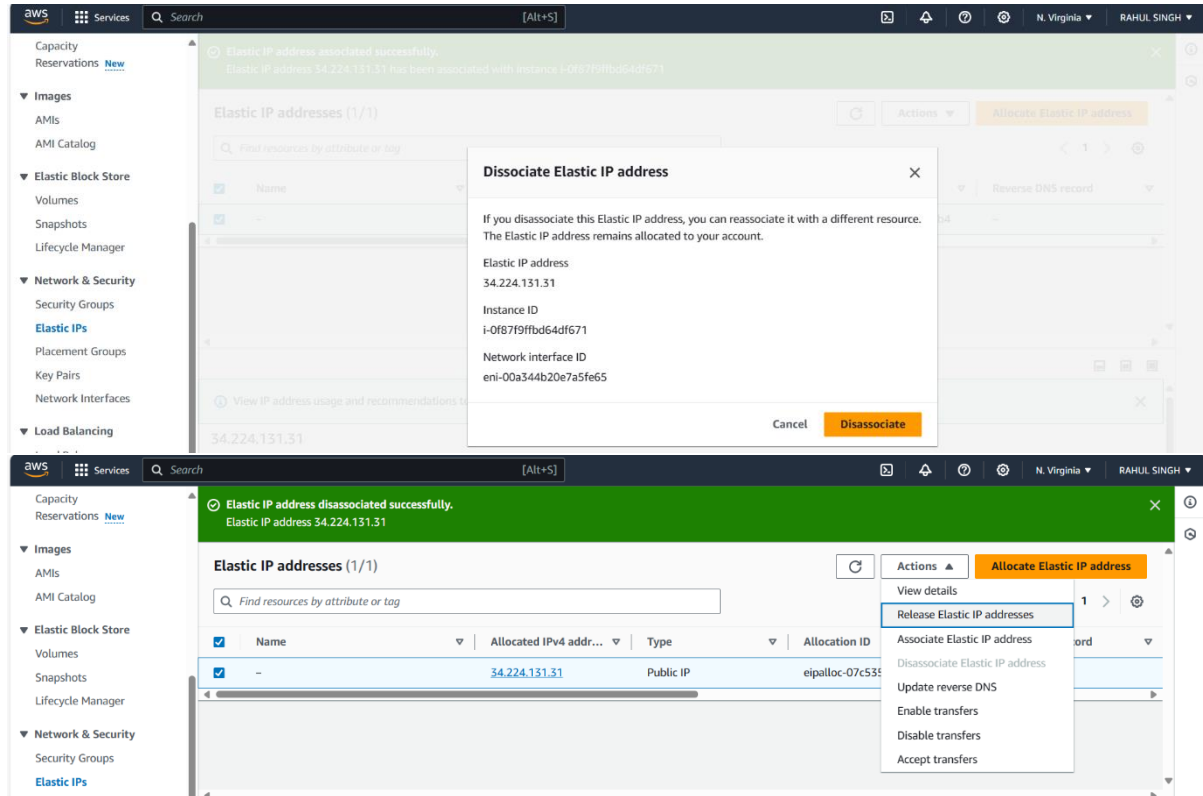
Hence, we have successfully created an Elastic IP for an instance. -----

To delete the Elastic IP, follow these steps:

1. Click on the Elastic IP.
2. Click on the actions button.
3. From the drop-down menu select Disassociate Elastic IP address. Then again click on disassociate on the pop-up

This screenshot shows the 'Elastic IP addresses' page with a table containing one entry: 34.224.131.31 (Public IP). The 'Actions' dropdown menu is open, and 'Disassociate Elastic IP address' is highlighted. Other options in the menu include 'View details', 'Release Elastic IP addresses', 'Associate Elastic IP address', 'Update reverse DNS', 'Enable transfers', 'Disable transfers', and 'Accept transfers'.

4. Next again click on the Actions button and this time select Release Elastic IP address.



5. Now you can go back to your instance and see that the IPv4 address has already changed to a random one and it has no Elastic IP address associated with it. Now you can terminate the instance.