

# Assignment: 14

**Problem Statement:** Create an Elastic IP for an Instance.

## Procedure:

**Step 1:** Write First create an EC2 instance.

**Launch an instance** Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

**Name and tags** Info

Name: neoServer Add additional tags

**Application and OS Images (Amazon Machine Image)** Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

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**Amazon Machine Image (AMI)** Free tier eligible

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type  
ami-0f58b397bc5c1f2e8  
Virtualization: hvm EBS: enabled: true Root device type: ebs

Description  
Canonical, Ubuntu, 24.04 LTS, amd64 noble image build on 2024-04-23

Architecture: 64-bit (x86) AMI ID: ami-0f58b397bc5c1f2e8 Verified provider

**Instance type** Info Get advice

Instance type: t2.micro Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true  
On-Demand Linux base pricing: 0.0154 USD per Hour  
On-Demand Windows base pricing: 0.017 USD per Hour  
On-Demand RHEL base pricing: 0.0124 USD per Hour  
On-Demand SUSE base pricing: 0.0124 USD per Hour

Additional costs apply for AMIs with pre-installed software

All generations Compare instance types

**Key pair (login)** Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required: sshKey Create new key pair

**Network settings** Info Edit

Network Info: vpc-003907d798e946506

Subnet Info: No preference (Default subnet in any availability zone)

Auto-assign public IP Info: Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups) Info: Select existing security group

Common security groups Info: neoSecurity sg-0d18c09c452db9a80

**Configure storage** Info Advanced

1x 8 GiB gp3 Root volume (Not encrypted)

Free tier eligible customers can get up to 30 GiB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance.

Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems Edit

**Advanced details** Info

**Instance summary for i-024b91e8caa0bd573 (neoServer)** Info

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Connect Instance state Actions

Instance ID: i-024b91e8caa0bd573 (neoServer)

Public IPv4 address: 43.205.127.156 | open address

Private IPv4 addresses: 172.31.37.6

Instance state: Running

Public IPv4 DNS: ec2-43-205-127-156.ap-south-1.compute.amazonaws.com | open address

Private IP DNS name (IPv4 only): ip-172-31-37-6.ap-south-1.compute.internal

Instance type: t2.micro

VPC ID: vpc-003907d798e946506

Subnet ID: subnet-04a981ab6ceb02d6c

Hostname type: IP name: ip-172-31-37-6.ap-south-1.compute.internal

Answer private resource DNS name: IPv4 (A)

Auto-assigned IP address: 43.205.127.156 [Public IP]

IAM Role: -

IMDSv2: Required

Details Status and alarms New Monitoring Security Networking Storage Tags

**Instance details** Info

**Step 2:** Note down the public and private IPv4 address of the created instance.

Public IPv4: 43.205.127.156

Private IPv4: 172.31.37.6

**Step 3:** To allocate Elastic IP 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 'Allocate Elastic IP address' page in the AWS Management Console. The breadcrumb trail is 'VPC > Elastic IP addresses > Allocate Elastic IP address'. The page title is 'Allocate Elastic IP address' with an 'Info' link. Under 'Elastic IP address settings', the 'Network border group' is set to 'ap-south-1'. The 'Public IPv4 address pool' section has three radio buttons: 'Amazon's pool of IPv4 addresses' (selected), 'Public IPv4 address that you bring to your AWS account with BYOIP', and 'Customer-owned pool of IPv4 addresses created from your on-premises network'. Below this is a section for 'Global static IP addresses' with a 'Create accelerator' button. The 'Tags - optional' section states 'No tags associated with the resource.' and includes an 'Add new tag' button. At the bottom right are 'Cancel' and 'Allocate' buttons.

**Step 4:** Click on the IP address and select Associate Elastic IP address.

The screenshot shows the 'Associate Elastic IP address' page in the AWS Management Console. The breadcrumb trail is 'VPC > Elastic IP addresses > 3.108.189.86'. The page title is '3.108.189.86' with an 'Actions' dropdown and an 'Associate Elastic IP address' button. A 'Summary' table provides details about the Elastic IP allocation.

Summary			
Allocated IPv4 address 3.108.189.86	Type Public IP	Allocation ID eipalloc-0c9f02aeb3041375a	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-south-1		

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

The screenshot shows the 'Associate Elastic IP address' page in the AWS console. The breadcrumb trail is 'VPC > Elastic IP addresses > 3.108.189.86 > Associate Elastic IP address'. The page title is 'Associate Elastic IP address' with a subtitle 'Choose the instance or network interface to associate to this Elastic IP address (3.108.189.86)'. The 'Elastic IP address: 3.108.189.86' is displayed at the top. Under 'Resource type', the 'Instance' radio button is selected. A yellow warning box contains text about disassociating previous addresses and private IP requirements. The 'Instance' dropdown shows 'i-024b91e8caa0bd573'. The 'Private IP address' dropdown shows '172.31.37.6'. The 'Reassociation' checkbox 'Allow this Elastic IP address to be reassociated' is unchecked. 'Cancel' and 'Associate' buttons are at the bottom.

**Elastic IP address: 3.108.189.86**

**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-024b91e8caa0bd573

**Private IP address**  
The private IP address with which to associate the Elastic IP address.  
172.31.37.6

**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

**Step 6:** 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.

Public IPv4: 3.108.189.86  
Private IPv4: 172.31.37.6

The screenshot shows the 'Instance summary' page for instance 'i-024b91e8caa0bd573 (neoServer)'. The instance is in a 'Running' state. The summary is organized into three columns: Instance ID, Public IPv4 address (3.108.189.86), Private IPv4 addresses (172.31.37.6), Instance state (Running), Private IP DNS name (ip-172-31-37-6.ap-south-1.compute.internal), Instance type (t2.micro), VPC ID (vpc-003907d798e946506), Subnet ID (subnet-04a981ab6ceb02d6c), and Elastic IP addresses (3.108.189.86 [Public IP]). The left sidebar shows the navigation menu with 'Instances' selected. The bottom of the page has tabs for 'Details', 'Status and alarms', 'Monitoring', 'Security', 'Networking', 'Storage', and 'Tags'.

**Instance summary for i-024b91e8caa0bd573 (neoServer)**

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<b>Instance ID</b> i-024b91e8caa0bd573 (neoServer)	<b>Public IPv4 address</b> 3.108.189.86   <a href="#">open address</a>	<b>Private IPv4 addresses</b> 172.31.37.6
<b>IPv6 address</b> -	<b>Instance state</b> Running	<b>Public IPv4 DNS</b> ec2-3-108-189-86.ap-south-1.compute.amazonaws.com   <a href="#">open address</a>
<b>Hostname type</b> IP name: ip-172-31-37-6.ap-south-1.compute.internal	<b>Private IP DNS name (IPv4 only)</b> ip-172-31-37-6.ap-south-1.compute.internal	<b>Elastic IP addresses</b> 3.108.189.86 [Public IP]
<b>Answer private resource DNS name IPv4 (A)</b> -	<b>Instance type</b> t2.micro	<b>AWS Compute Optimizer finding</b> Opt-in to AWS Compute Optimizer for recommendations.   <a href="#">Learn more</a>
<b>Auto-assigned IP address</b> -	<b>VPC ID</b> vpc-003907d798e946506	<b>Auto Scaling Group name</b> -
<b>IAM Role</b> -	<b>Subnet ID</b> subnet-04a981ab6ceb02d6c	
<b>IMDSv2</b> Required		

Details Status and alarms New Monitoring Security Networking Storage Tags

Instance details Info