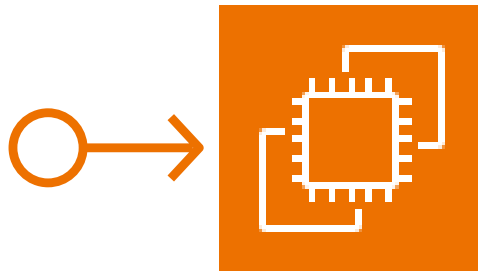




AWS Solution Architect Training with AWS Cloud Practitioner Global Certification Training

Trainer: Aravindraaj.G- N minds Academy

Configure Elastic IP Address to Windows Web Server in AWS



Deepakraj R

B.E -Electronics and Communication Engineering

Mepco Schlenk Engineering College

Sivakasi



Objective

An Elastic IP (EIP) in AWS is a static, public IP address designed for dynamic cloud computing. It is associated with your AWS account and can be quickly associated or disassociated with any EC2 instance in your account. This feature is particularly useful when you need to maintain a consistent IP address for your resources, even when you stop and start EC2 instances.

Common Use Cases for Elastic IP:

1. Highly Available Applications:

- If you're running a service that requires high availability, you can use Elastic IPs to quickly reassign a static IP to a new instance if your primary instance fails, ensuring minimal downtime.

2. Web Servers:

- If you host a website and need to ensure the IP address remains the same even if the underlying EC2 instance is restarted, an Elastic IP helps maintain this consistency.

3. Disaster Recovery:

- Elastic IPs are useful for disaster recovery scenarios. If one instance goes down, you can quickly associate the EIP with a backup instance to ensure services are still accessible.

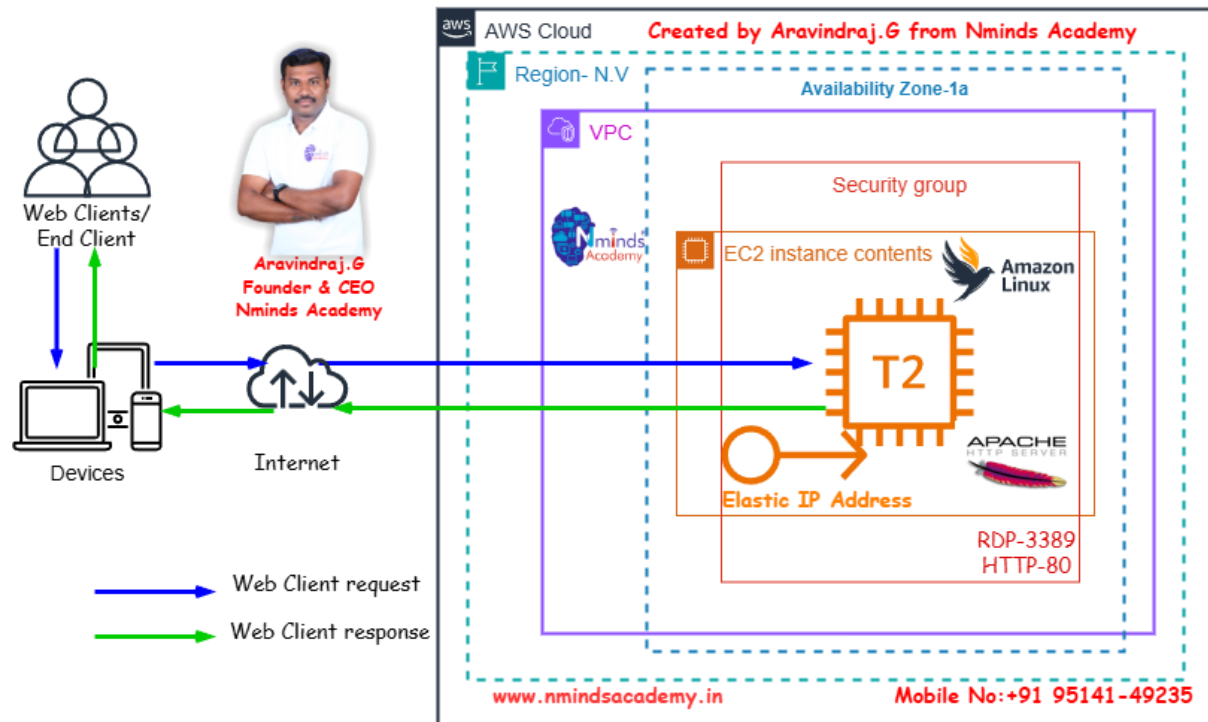
Best Practices:

- Use Elastic IPs only when necessary: Since they come with associated costs when unused, it's a good practice to release EIPs that are no longer required.
- Move IPs during instance failure: Instead of keeping an EIP permanently attached, use it as a failover method, reassociating it to a new instance when needed.
- Monitor EIP Usage: Periodically review your usage to ensure you're not paying for unnecessary Elastic IP addresses.



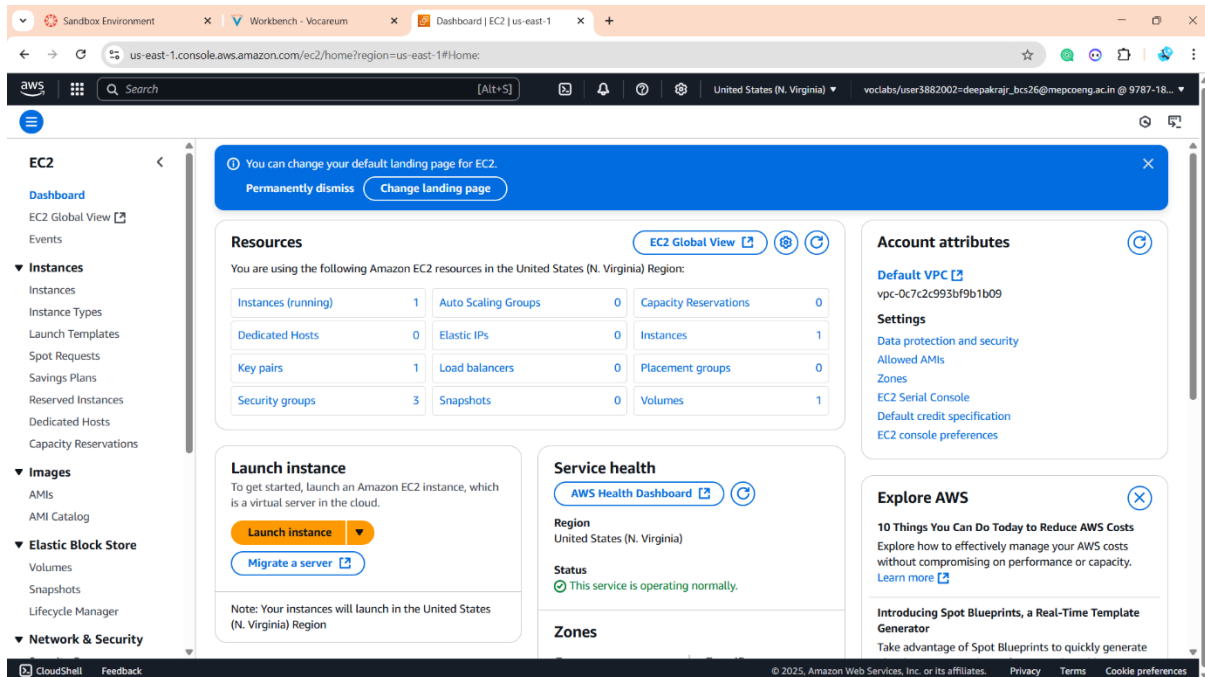
Topology

How to Configure the Elastic IP Address to Linux Web Server with AWS EC2



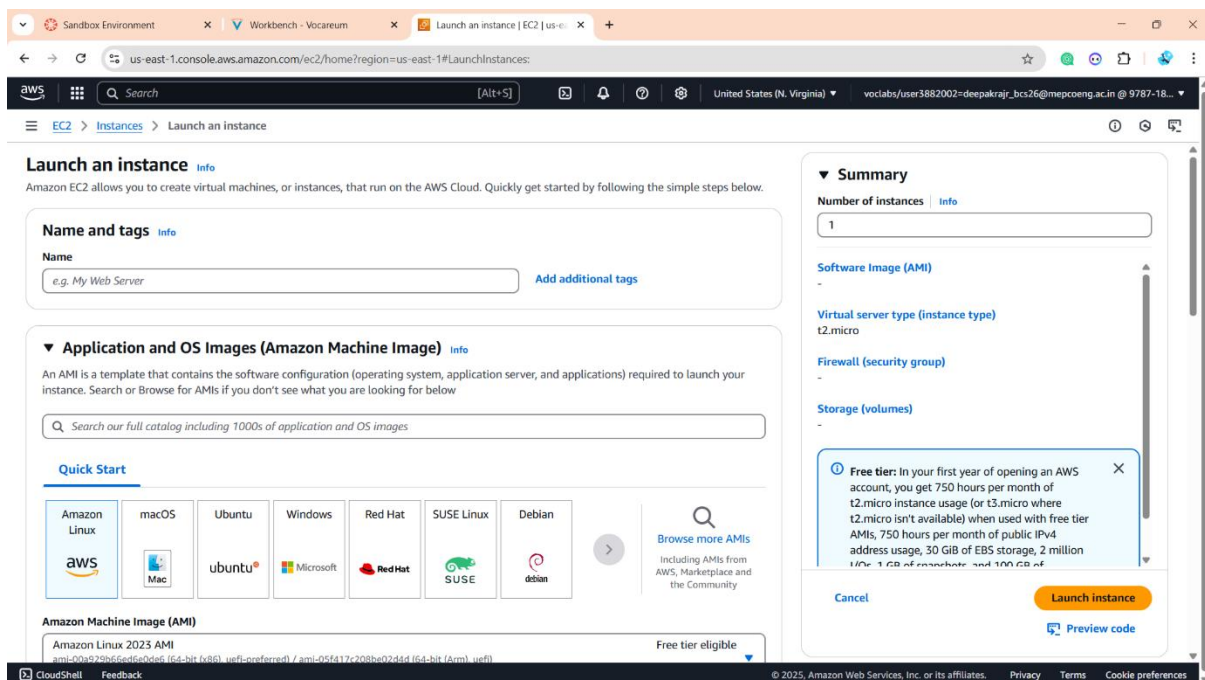
Execution Tasks:

Step1: Navigate to the EC2 Dashboard



The screenshot shows the AWS Management Console for the EC2 service in the us-east-1 region. The left sidebar contains navigation links for EC2, Instances, Images, Elastic Block Store, and Network & Security. The main content area displays a summary of EC2 resources, including a table of running instances, Auto Scaling Groups, Capacity Reservations, Dedicated Hosts, Elastic IPs, Instances, Key pairs, Load balancers, Placement groups, Security groups, Snapshots, and Volumes. A 'Launch instance' button is prominently displayed. The right sidebar shows account attributes, settings, and a section for exploring AWS services.

Step2: Click Launch Instances.



The screenshot shows the 'Launch an instance' page in the AWS Management Console. The page is divided into several sections: 'Name and tags', 'Application and OS Images (Amazon Machine Image)', 'Summary', and 'Launch instance'. The 'Name and tags' section has a text input field for the instance name. The 'Application and OS Images' section shows a search bar and a grid of AMIs, including Amazon Linux, macOS, Ubuntu, Windows, Red Hat, SUSE Linux, and Debian. The 'Summary' section displays the number of instances (1), the software image (AMI), the virtual server type (instance type), the firewall (security group), and the storage (volumes). A 'Launch instance' button is visible at the bottom right.



us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

EC2 > Instances > Launch an instance

Success
Successfully initiated launch of instance (i-01c17459cd2e66594)

► Launch log

Next Steps
What would you like to do next with this instance, for example "create alarm" or "create backup"

Create billing and free tier usage alerts
To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.
[Create billing alerts](#)

Connect to your instance
Once your instance is running, log into it from your local computer.
[Connect to instance](#)
[Learn more](#)

Connect an RDS database
Configure the connection between an EC2 instance and a database to allow traffic flow between them.
[Connect an RDS database](#)
[Create a new RDS database](#)
[Learn more](#)

Create EBS snapshot policy
Create a policy that automates the creation, retention, and deletion of EBS snapshots
[Create EBS snapshot policy](#)

Manage detailed monitoring
Enable or disable detailed monitoring for the instance. If you enable detailed monitoring, the
[Manage detailed monitoring](#)

Create Load Balancer
Create an application, network gateway or classic Elastic Load Balancer
[Create Load Balancer](#)

Create AWS budget
AWS Budgets allows you to create budgets, forecast spend, and take action on your costs
[Create AWS budget](#)

Manage CloudWatch alarms
Create or update Amazon CloudWatch alarms for the instance.
[Manage CloudWatch alarms](#)

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:v=3;\$case=tag:true%5C,client:false;\$regex=tag:false%5C,client:false

EC2 > Instances

Instances (2) Info Last updated 2 minutes ago [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

Find Instance by attribute or tag (case-sensitive) All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public
<input type="checkbox"/>	Bastion Host	i-0e7145ba0c7c1f5e	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a	ec2-3
<input type="checkbox"/>	Linux-Web-Server	i-01c17459cd2e66594	Running	t2.micro	Initializing	View alarms	us-east-1a	ec2-5

Select an instance

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Step3: Connect to the Instance and Configure Apache



[illegible]

```

Running scriptlet: httpd filesystem-2.4.62-1.amzn2023.noarch 7/12
Installing      : httpd filesystem-2.4.62-1.amzn2023.noarch 7/12
Installing      : httpd-core-2.4.62-1.amzn2023.x86_64 8/12
Installing      : mod_http2-2.0.27-1.amzn2023.0.3.x86_64 9/12
Installing      : mod_lua-2.4.62-1.amzn2023.x86_64 10/12
Installing      : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch 11/12
Installing      : httpd-2.4.62-1.amzn2023.x86_64 12/12
Running scriptlet: httpd-2.4.62-1.amzn2023.x86_64 12/12
Verifying       : apr-1.7.5-1.amzn2023.0.4.x86_64 1/12
Verifying       : apr-util-1.6.3-1.amzn2023.0.1.x86_64 2/12
Verifying       : apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64 3/12
Verifying       : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch 4/12
Verifying       : httpd-2.4.62-1.amzn2023.x86_64 5/12
Verifying       : httpd-core-2.4.62-1.amzn2023.x86_64 6/12
Verifying       : httpd filesystem-2.4.62-1.amzn2023.noarch 7/12
Verifying       : httpd-tools-2.4.62-1.amzn2023.x86_64 8/12
Verifying       : libbrotli-1.0.9-4.amzn2023.0.2.x86_64 9/12
Verifying       : mailcap-2.1.49-3.amzn2023.0.3.noarch 10/12
Verifying       : mod_http2-2.0.27-1.amzn2023.0.3.x86_64 11/12
Verifying       : mod_lua-2.4.62-1.amzn2023.x86_64 12/12
=====
WARNING:
A newer release of "Amazon Linux" is available.

Available Versions:

Version 2023.7.20250414:
Run the following command to upgrade to 2023.7.20250414:

dnf upgrade --releasever=2023.7.20250414

Release notes:
https://docs.aws.amazon.com/linux/al2023/release-notes/relnotes-2023.7.20250414.html
=====

Installed:
apr-1.7.5-1.amzn2023.0.4.x86_64
generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
httpd filesystem-2.4.62-1.amzn2023.noarch
mailcap-2.1.49-3.amzn2023.0.3.noarch

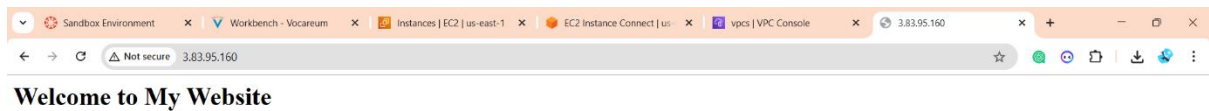
apr-util-1.6.3-1.amzn2023.0.1.x86_64
httpd-2.4.62-1.amzn2023.x86_64
httpd-tools-2.4.62-1.amzn2023.x86_64
mod_http2-2.0.27-1.amzn2023.0.3.x86_64

apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64
httpd-core-2.4.62-1.amzn2023.x86_64
libbrotli-1.0.9-4.amzn2023.0.2.x86_64
mod_lua-2.4.62-1.amzn2023.x86_64

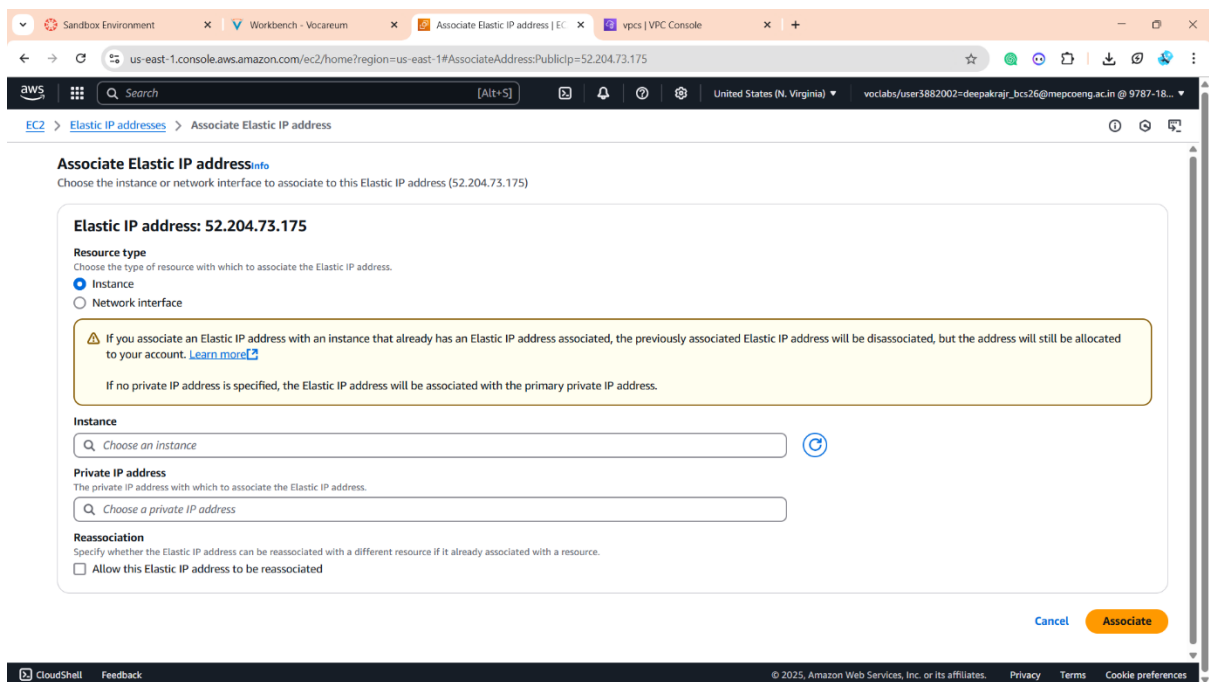
Complete!
[ec2-user@ip-10-0-0-226 ~]$ sudo systemctl start httpd

```

Step4: From a browser, navigate to the instance's public IP to see the webpage.



Step5: Allocate and Associate an Elastic IP



Step6: confirm the Public IPv4 shows the EIP



us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Addresses:PublicIp=52.204.73.175

Elastic IP address associated successfully.
Elastic IP address 52.204.73.175 has been associated with instance i-05a95f133fc3bff1f

Elastic IP addresses (1)

Find resources by attribute or tag

Public IPv4 address: 52.204.73.175 [Clear filters](#)

<input type="checkbox"/>	Name	Allocated IPv4 address	Type	Allocation ID	Reverse DNS record
<input type="checkbox"/>	-	52.204.73.175	Public IP	eipalloc-0bf94750ad493bc90	-

[View IP address usage and recommendations to release unused IPs with Public IP Insights](#)

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:

Instances (1/3) Info

Find Instance by attribute or tag (case-sensitive)

Instance ID	Public IPv4 DNS	Public IPv4 address	Elastic IP	IPv6 IPs	Monitoring	Security group name	Key name	Launch time
ec2-34-238-251-236.co...	34.238.251.236	-	-	-	disabled	Ec2SecurityGroup	vockey	2025
-	-	-	-	-	disabled	-	Linux-Web-Se...	2025
ec2-52-204-73-175.co...	52.204.73.175	52.204.73.175	-	-	disabled	Linux-Web-SG	Linux-Web-Se...	2025

i-05a95f133fc3bff1f (Linux-Web-Server)

[Details](#) [Status and alarms](#) [Monitoring](#) [Security](#) [Networking](#) [Storage](#) [Tags](#)

Instance summary Info

Instance ID: i-05a95f133fc3bff1f

IPv6 address: -

Hostname type: IP name: ip-10-0-0-226.ec2.internal

Public IPv4 address: 52.204.73.175 [open address](#)

Instance state: Running

Private IP DNS name (IPv4 only): ip-10-0-0-226.ec2.internal

Private IPv4 addresses: 10.0.0.226

Public IPv4 DNS: ec2-52-204-73-175.compute-1.amazonaws.com [open address](#)

Step7: The EIP provides a static IP, ensuring consistent access for web clients, Now Access the Web Server through the statis IP





Welcome to My Website



www.nmindsacademy.in



+91-95141 49235



NmindsAcademy