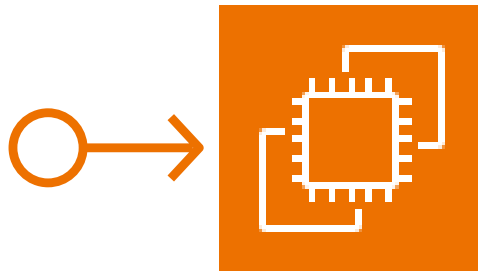




## **AWS Solution Architect Training with AWS Cloud Practitioner Global Certification Training**

**Trainer: Aravindraaj.G- N minds Academy**

# **Configure Elastic IP Address to Windows Web Server in AWS**



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## 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.

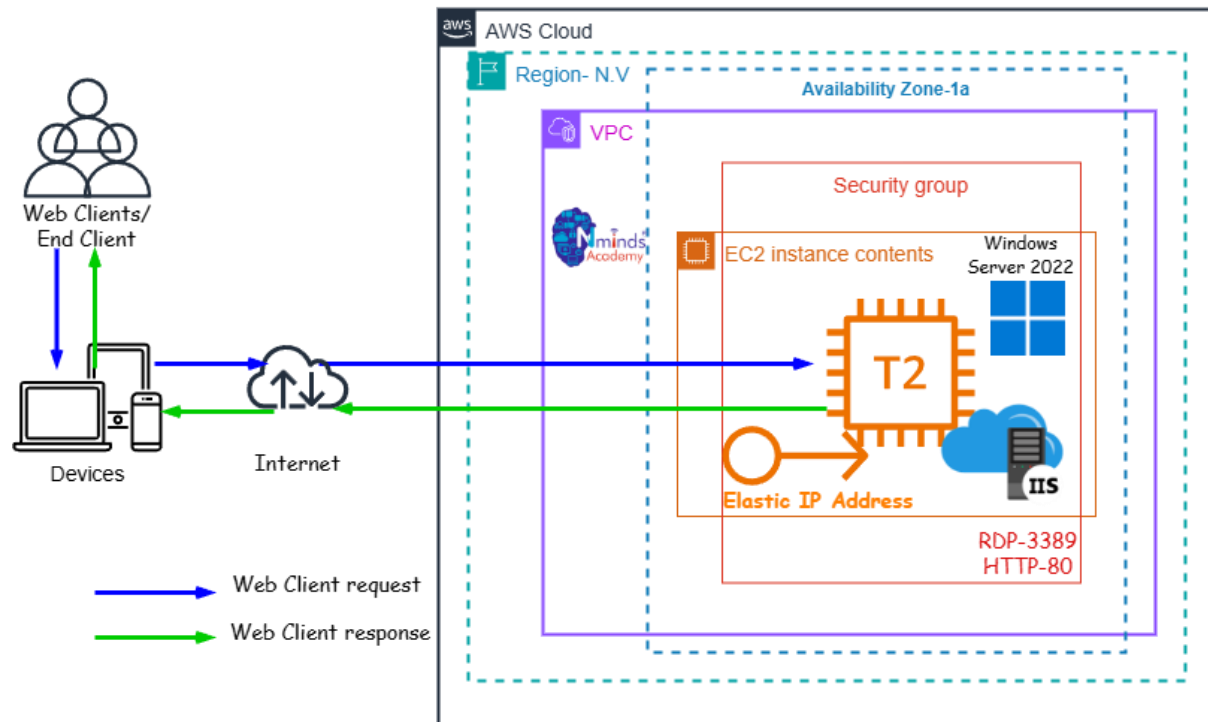
### Best Practices:

- 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 Windows Web Server with AWS EC2



## Execution Tasks:

### Step 1: Launch a Windows EC2 Instance

**Success**  
Successfully initiated launch of instance (i-013643fd4a65b6849)

► 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 instance is billed at a higher rate.  
[Manage detailed monitoring](#)

**Create Load Balancer**  
Create an application, network gateway or classic Elastic Load Balancing.

**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](#)

**Instances (1/2)** Info  
Last updated less than a minute ago

[Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

Find Instance by attribute or tag (case-sensitive)

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
<input type="checkbox"/>	Bastion Host	i-0722bbb8ae16cad9c	Running	t2.micro	2/2 checks passed	<a href="#">View alarms</a>	us-east-1a	ec2-3-236-1
<input checked="" type="checkbox"/>	Windows-Web-Server	i-013643fd4a65b6849	Running	t3.micro	3/3 checks passed	<a href="#">View alarms</a>	us-east-1f	ec2-44-197

**i-013643fd4a65b6849 (Windows-Web-Server)**

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

**Instance summary** Info

Instance ID  
i-013643fd4a65b6849

IPV6 address  
-

Public IPv4 address  
44.197.204.160 [open address](#)

Instance state  
Running

Private IPV4 addresses  
172.31.64.171

Public IPv4 DNS  
ec2-44-197-204-160.compute-1.amazonaws.com [open address](#)

Hostname type  
Private IP DNS name (IPv4 only)

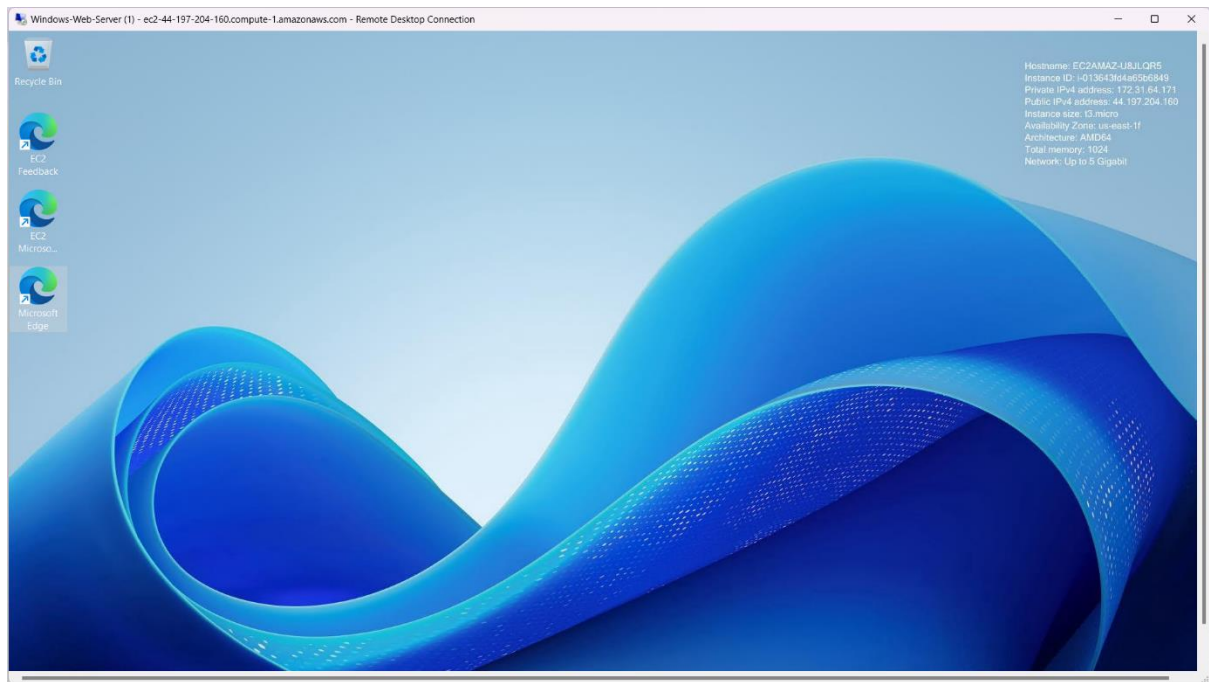


## Step 2: Install IIS (Web Server) on the Windows Instance

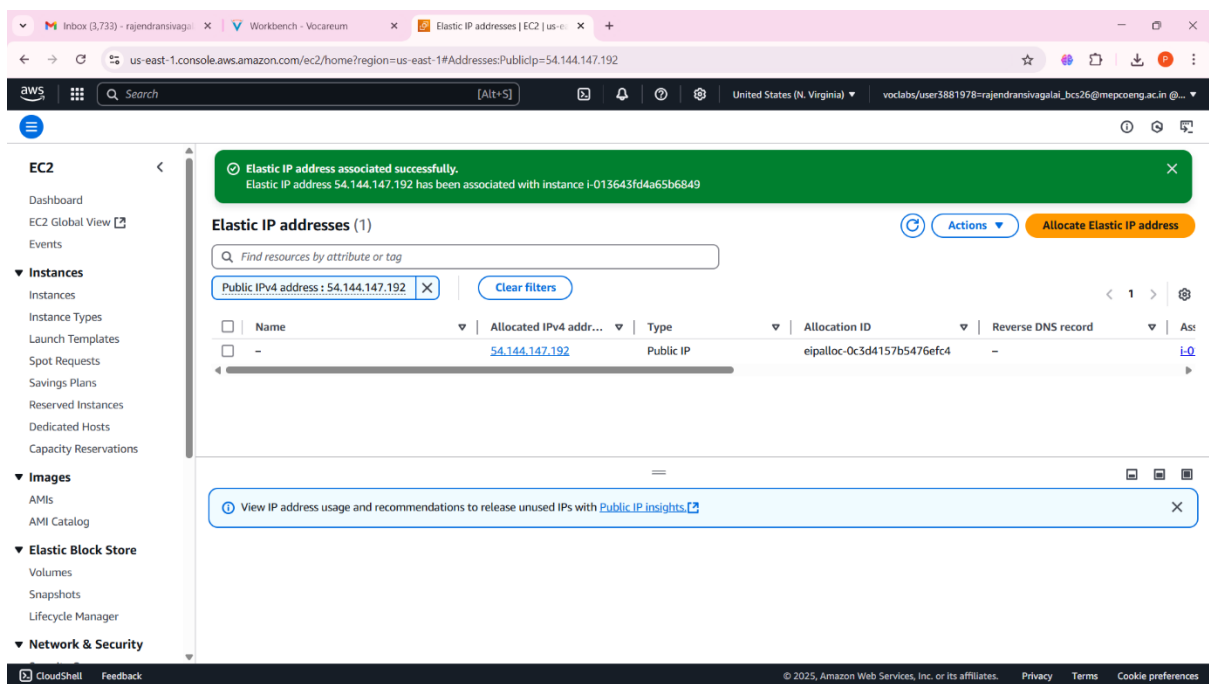
The screenshot shows the AWS Management Console interface for connecting to an EC2 instance. The breadcrumb navigation indicates the path: EC2 > Instances > i-013643fd4a65b6849 > Connect to instance. The page title is 'Connect to instance' with an 'Info' link. Below the title, it says 'Connect to your instance i-013643fd4a65b6849 (Windows-Web-Server) using any of these options'. There are three tabs: 'Session Manager', 'RDP client' (which is selected), and 'EC2 serial console'. Under the 'RDP client' tab, the 'Instance ID' is 'i-013643fd4a65b6849 (Windows-Web-Server)'. The 'Connection Type' section has two options: 'Connect using RDP client' (selected) and 'Connect using Fleet Manager'. The 'Connect using RDP client' option includes a link to 'Download a file to use with your RDP client and retrieve your password.' Below this, a message states: 'You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:'. There is a button 'Download remote desktop file'. Below this, it says 'When prompted, connect to your instance using the following username and password:'. The 'Public DNS' is 'ec2-44-197-204-160.compute-1.amazonaws.com'. The 'Username' is 'Administrator' (selected from a dropdown). The 'Password' is 'ohZJ5%xlI&z\$N2wNDrpyy88MhuV2uy-E'. A note at the bottom says: 'If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.'

This screenshot is similar to the one above, showing the 'Connect to instance' page. However, a Windows desktop environment is overlaid on the page. The desktop has a blue background with a white recycling bin icon in the top left corner. There are four application icons on the desktop: 'EC2 Feedback', 'EC2 Microsoft Edge', 'Microsoft Edge', and 'Microsoft Edge'. The desktop window title bar reads 'Windows-Web-Server (1) - ec2-44-197-204-160.compute-1.amazonaws.com - Remote Desktop Client'. The background page shows the same 'Connect to instance' information as the previous screenshot, but it is partially obscured by the desktop overlay.





## Step 3: Allocate an Elastic IP Address



## Step 4: Associate the Elastic IP with the EC2 Instance



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

### Elastic IP addresses (1/2)

Name	Allocated IPv4 address	Type	Allocation ID	Reverse DNS record	Asst
-	3.224.143.45	Public IP	eipalloc-0357a3f831bedcc5f	-	-
-	54.144.147.192	Public IP	eipalloc-0c3d4157b5476efc4	-	I-0

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

### 54.144.147.192

Summary Tags

Summary	Type	Allocation ID	Reverse DNS record
Allocated IPv4 address 54.144.147.192	Public IP	eipalloc-0c3d4157b5476efc4	-

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ElasticIpDetails:AllocationId=eipalloc-0c3d4157b5476efc4

### 54.144.147.192

Summary

Summary	Type	Allocation ID	Reverse DNS record
Allocated IPv4 address 54.144.147.192	Public IP	eipalloc-0c3d4157b5476efc4	-
Association ID eipassoc-0f531fc4a37c7419f	Scope VPC	Associated instance ID i-013643fd4a65b6849	Private IP address 172.31.64.171
Network interface ID eni-0e5aed2a00844ce4f	Network interface owner account ID 120742835816	Public DNS ec2-54-144-147-192.compute-1.amazonaws.com	NAT Gateway ID -
Address pool Amazon	Network border group us-east-1		

Tags(0)

No tags associated with this resource  
Click the Manage tags button to add your first tag

Manage tags

