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EC2: [Amazon Web Services Sign-In](https://eu-north-1.signin.aws.amazon.com/oauth?client_id=arn%3Aaws%3Asignin%3A%3A%3Aconsole%2Fcanvas&code_challenge=K2HqRIHDwnQbsgYqY5IJk0RQ5GnstAe7r9qdbahGpws&code_challenge_method=SHA-256&response_type=code&redirect_uri=https%3A%2F%2Fconsole.aws.amazon.com%2Fconsole%2Fhome%3FhashArgs%3D%2523%26isauthcode%3Dtrue%26state%3DhashArgsFromTB_eu-north-1_60a3c1389da9fcc3)

When we cloned the repo, git converted **LF to CRLF**.

This cause issue

You can change that by using:

* git config --global core.autocrlf false

and clone the repo again.

# Steps to Create an EC2 Instance

1. **Sign in to the AWS Management Console**:
   * Go to the AWS website and log in with your AWS account credentials. If you don't have an account, you'll need to create one[1](https://www.linkedin.com/pulse/step-by-step-guide-creating-ec2-instance-aws-kapil-pattnaik)[5](https://aws.amazon.com/ec2/getting-started/).
2. **Select a Region**:
   * Choose the desired AWS region from the dropdown menu at the top right corner of the AWS Management Console[3](https://www.earthdata.nasa.gov/learn/data-recipes/create-basic-ec2-instance)[4](https://www.techtarget.com/searchcloudcomputing/tutorial/How-to-create-an-EC2-instance-from-AWS-Console).
3. **Navigate to the EC2 Dashboard**:
   * Search for "EC2" in the search bar or click on "EC2" under the "Compute" services section[4](https://www.techtarget.com/searchcloudcomputing/tutorial/How-to-create-an-EC2-instance-from-AWS-Console)[5](https://aws.amazon.com/ec2/getting-started/).
4. **Launch an Instance**:
   * Click on the "Launch Instance" button in the EC2 dashboard[5](https://aws.amazon.com/ec2/getting-started/)[6](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EC2_GetStarted.html).
5. **Choose an Amazon Machine Image (AMI)**:
   * Select an AMI that matches your operating system needs, such as Amazon Linux, Ubuntu, or Windows[1](https://www.linkedin.com/pulse/step-by-step-guide-creating-ec2-instance-aws-kapil-pattnaik)[4](https://www.techtarget.com/searchcloudcomputing/tutorial/How-to-create-an-EC2-instance-from-AWS-Console).
6. **Choose an Instance Type**:
   * Select an instance type based on your computing needs (e.g., CPU, RAM, storage). For beginners, a low-cost option like t2.micro is recommended[1](https://www.linkedin.com/pulse/step-by-step-guide-creating-ec2-instance-aws-kapil-pattnaik)[5](https://aws.amazon.com/ec2/getting-started/).
7. **Configure Instance Details**:
   * Set up instance details such as VPC, subnet, and whether to assign a public IP address[4](https://www.techtarget.com/searchcloudcomputing/tutorial/How-to-create-an-EC2-instance-from-AWS-Console).
8. **Add Storage**:
   * Configure the storage for your instance. Typically, you'll use an Amazon Elastic Block Store (EBS) volume[1](https://www.linkedin.com/pulse/step-by-step-guide-creating-ec2-instance-aws-kapil-pattnaik)[6](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EC2_GetStarted.html).
9. **Add Tags**:
   * Optionally, add tags to your instance for easier identification in the AWS console[4](https://www.techtarget.com/searchcloudcomputing/tutorial/How-to-create-an-EC2-instance-from-AWS-Console).
10. **Configure Security Group**:
    * Create a new security group or select an existing one to control inbound and outbound traffic to your instance[1](https://www.linkedin.com/pulse/step-by-step-guide-creating-ec2-instance-aws-kapil-pattnaik)[6](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EC2_GetStarted.html).
11. **Create a Key Pair**:
    * Generate a new key pair or select an existing one for secure SSH access to your instance[3](https://www.earthdata.nasa.gov/learn/data-recipes/create-basic-ec2-instance)[6](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EC2_GetStarted.html).
12. **Review and Launch**:
    * Review all settings and click "Launch" to start your EC2 instance[1](https://www.linkedin.com/pulse/step-by-step-guide-creating-ec2-instance-aws-kapil-pattnaik)[3](https://www.earthdata.nasa.gov/learn/data-recipes/create-basic-ec2-instance).
13. **Connect to Your Instance**:
    * Once launched, you can connect to your instance using SSH (for Linux instances) or Remote Desktop (for Windows instances)

# Steps to Create and Associate an Elastic IP with an EC2 Instance

1. **Navigate to the EC2 Dashboard**:
   * Log in to the AWS Management Console and go to the EC2 dashboard.
2. **Allocate an Elastic IP**:
   * In the EC2 dashboard, click on **Elastic IPs** under **Network & Security**.
   * Click **Allocate Elastic IP address**.
   * Choose the type of IP address you want (e.g., from Amazon's pool or a custom pool).
   * Click **Allocate** to create the EIP[1](https://dev.to/bashirk/how-to-add-a-static-ip-to-an-aws-ec2-instance-2hea)2[4](https://enterprise.arcgis.com/en/server/10.3/cloud/amazon/allocate-elastic-ip-and-associate-with-your-instance.htm).
3. **Associate the Elastic IP with Your EC2 Instance**:
   * Select the newly allocated Elastic IP.
   * Click **Actions** and then **Associate Elastic IP address**.
   * Choose **Instance** as the resource type.
   * Select the ID of the EC2 instance you want to associate the EIP with.
   * Click **Associate** to complete the process[1](https://dev.to/bashirk/how-to-add-a-static-ip-to-an-aws-ec2-instance-2hea)2[5](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/working-with-eips.html).
4. **Verify the Association**:
   * Go back to your instance details to confirm that the Elastic IP is now associated with your instance[1](https://dev.to/bashirk/how-to-add-a-static-ip-to-an-aws-ec2-instance-2hea)6.

**Benefits of Using Elastic IPs**

* **Persistence**: The Elastic IP remains the same even if you stop and start your instance.
* **Flexibility**: You can reassign the Elastic IP to another instance if needed.
* **Public Accessibility**: The Elastic IP is a public IP address, making your instance accessible from the internet[1](https://dev.to/bashirk/how-to-add-a-static-ip-to-an-aws-ec2-instance-2hea)[4](https://enterprise.arcgis.com/en/server/10.3/cloud/amazon/allocate-elastic-ip-and-associate-with-your-instance.htm).

**Important Considerations**

* **Security Groups**: Ensure your security groups allow traffic to the Elastic IP.
* **Subnet**: The instance must be in a public subnet to communicate with the internet via the Elastic IP

# How to use EC2 after the setup?

**Connect to your instance using SSH (for Linux instances) or Remote Desktop (for Windows instances)**

* ssh -i <filename.pem> ubuntu@<ec2\_address>
* ssh -i EvalAI\_Docker\_1.pem ubuntu@ec2-65-0-242-31.ap-south-1.compute.amazonaws.com

**Install Docker:**

* sudo snap install docker

**Clone the repo from github:**

* Git clone <repo\_link>
* cd <repo\_name>

**Run Docker compose on the main repository:**

* sudo docker-compose up –build
* Note it takes 1-2 hours to build.

# Setup Nginx:

* Install Nginx:
  + sudo apt-get install nginx -y
* go to Nginx:
  + cd /etc/nginx/sites-available
* edit default and add ngnix code:
  + Sudo nano default

Get code from here:

|  |
| --- |
| server {  listen 80;  server\_name pecha.services;  location / {  proxy\_pass http://localhost:8888/;  proxy\_set\_header Host $host;  proxy\_set\_header X-Real-IP $remote\_addr;  proxy\_set\_header X-Forwarded-For $proxy\_add\_x\_forwarded\_for;  }  }  server {  listen 80;  server\_name api.pecha.services;  location / {  proxy\_pass http://localhost:8000/;  proxy\_set\_header Host $host;  proxy\_set\_header X-Real-IP $remote\_addr;  proxy\_set\_header X-Forwarded-For $proxy\_add\_x\_forwarded\_for;  }  } |

Run this after adding the code:

* sudo nginx -t
* sudo systemctl restart nginx

# Git commit issue:

**View Commit History:**

* git log

**Reset to a Previous Commit:**

* git reset --hard **ABC123**

**Force-Push to Remote:**

* git push origin master --force