**CI/CD– Using CodePipeline & CodeDeploy with EC2 (nginx) on Ubuntu**

**Required:**

* **OS**: Ubuntu 24.04 (not 24.08, which hasn't been released yet)
* **Web Server**: **Nginx** (instead of Apache)

**Step 1: Fork the Repo**

Go to: <https://github.com/pradeeprpin/sample-website>  
Click **Fork** into your own GitHub account.

**Step 2: Launch EC2 (Ubuntu 24.04)**

1. **AMI**: Ubuntu Server 24.04 LTS (HVM)
2. **Instance Type**: t2.micro
3. **Security Group**:
   * Allow SSH (port 22)
   * Allow HTTP (port 80)
4. **Tag**:
   * Key: Name, Value: CodeDeployDemo

**Step 3: Install CodeDeploy Agent on Ubuntu**

**SSH into your instance and run:**

sudo apt update

sudo apt install ruby wget unzip -y

cd /home/ubuntu

wget https://aws-codedeploy-us-east-1.s3.us-east-1.amazonaws.com/latest/install

chmod +x ./install

sudo ./install auto

sudo systemctl status codedeploy-agent

Replace us-east-1 if you're using another region.

**Step 4: Install Nginx web-server**

Create a webserver\_install.sh:

apt update -y

apt install nginx -y

systemctl enable nginx

systemctl start nginx

chown -R www-data:www-data /var/www/html

chmod -R 755 /var/www/html

Note: Delete the exsisting index.html

**Step 5: Update Your Repo**

**Create an appspec.yml file at the root of your forked repo:**

version: 0.0

os: linux

files:

- source: /

destination: /var/www/html

hooks:

AfterInstall:

- location: deploy-scripts/install.sh

timeout: 180

runas: root

**Step 5: IAM Setup**

**EC2 Role (Instance Profile):**

* Name: CodeDeployEC2Role
* Policies:
  + AmazonEC2RoleforAWSCodeDeploy
  + AmazonS3ReadOnlyAccess

Attach this role to your EC2 instance.

**CodeDeploy Role:**

* Name: CodeDeployServiceRole
* Trusted entity: codedeploy.amazonaws.com
* Policies: AWSCodeDeployRole

**Step 6: Create CodeDeploy Application**

1. Go to **CodeDeploy → Applications → Create Application**
   * Name: sample-nginx-app
   * Compute Platform: EC2
2. **Create Deployment Group**:
   * Name: sample-nginx-deploygroup
   * EC2 Tag Key: Name, Value: CodeDeployDemo
   * Service Role: CodeDeployServiceRole

**Step 7: Create CodePipeline**

1. **Go to CodePipeline → Create pipeline**
2. **Source Stage**:
   * Provider: GitHub
   * Select your forked repo and branch
3. **Deploy Stage**:
   * Provider: AWS CodeDeploy
   * Application: sample-nginx-app
   * Deployment group: sample-nginx-deploygroup

No Build stage required (Skip build). No Test stage required (Skip Test).

**Step 8: Trigger Deployment**

Make a change in index.html and push it. This will auto-trigger the pipeline and deploy via CodeDeploy.

**Step 9: Test Website**

Get your EC2 instance's **public IP**:

http://<EC2-PUBLIC-IP>

You should see your web app via NGINX!