Deployment 3

Goal to setup a CI/CD Pipeline, 2 VPCS, Jenkins, and deploy a website into the second VPC

# Step1

**Install Jenkins on an EC2**

* Active Jenkins on the EC2 in the default VPC
* Connected from the EC2 console

# Step2

**Create and EC2 in second VPC public subnet**

* Create security group with ports 22 and 5000 open
* Install default-jre, python3-pip, python3.10-venv, and nginx

# Step 3

**Configure node on Jenkins**

* Enter Jenkins and select the Build Executor
* Select new node name it awsDeploy and select Permanent Agent and the create
* Configure node:
  + - Name: awsDeploy
    - Description: Deployment server
    - Number of executors: 1
    - Remote root directory: /home/ubuntu/agent
    - Labels: aweDeploy
    - Usage: only build jobs with label….
    - Launch method: launch agents via ssh
    - Host: {Enter the public IP of your EC2
    - Credentials:
      * + Select “Add” => “Jenkins” =>Kind:”SSH username with private key”
        + Enter the ID, Description, username
        + To add the key, select “Enter Directly” => select “add” => paste the private key into the white box and save
    - Host key verification strategy: non verifying verification strategy
    - Availability: Keep this agent online as much as possible

# Step4

**Create a Pipeline build in Jenkins**

* Connect to EC2 that host Jenksins and nano /etc/nginx/sites-enabled/default file:
* First change the port from 80 to 5000:

**server {**

**listen 5000;**

**location / {**

**proxy\_pass http://127.0.0.1:8000;**

**proxy\_set\_header Host $host;**

**proxy\_set\_header X-Forwarded-For $proxy\_add\_x\_forwarded\_for;**

**}**

* Edit the Jenkinsfile in the repo

Graphical user interface, text

Description automatically generated

* Configure Jenkins and configure a multibranch pipeline or just a single pipeline build
* Table

  Description automatically generated with medium confidenceMake sure Github Repo is connected to Jenkins and star your build.

# Step 5

**CloudWatch added**

* Add CloudWatch to monitor CPU and Billing

# Step 6

**Trouble Shooting issues**

* The EC2 in the second VPC (non-default) IP disable. I did not have a public IP address for the awsDeploy node. Had to recreate the EC2 in subnet.
* Jenkins kept failing. It was a syntax error in the test\_app.py file
* Website was not operational at the completion of the build. I reached out to a peer and was giving insight to run the deployment commands in the Jenkinsfile locally. Then the site became operational.
* A bug was discovered that after the build deployed by Jenkins it shut down unless you have a plugin called keeping running.

# Diagram

