Automation of website using git hooks

About:

Deploying code updates efficiently is crucial for maintaining a smooth and reliable application workflow. Manually updating a server after each change can be time-consuming and prone to errors. To streamline this process, automation techniques such as Git hooks and deployment scripts can be used.

Git hooks, specifically the post-receive hook, allow for automatic deployment whenever new code is pushed to a remote repository. Alternatively, a custom deployment script can periodically pull the latest changes and restart the necessary services. Both methods help ensure that the latest version of the application is always running without requiring manual intervention.

SIGNIFICANCE:

Reduces Manual Effort – Eliminates the need for manually pulling updates and restarting services.

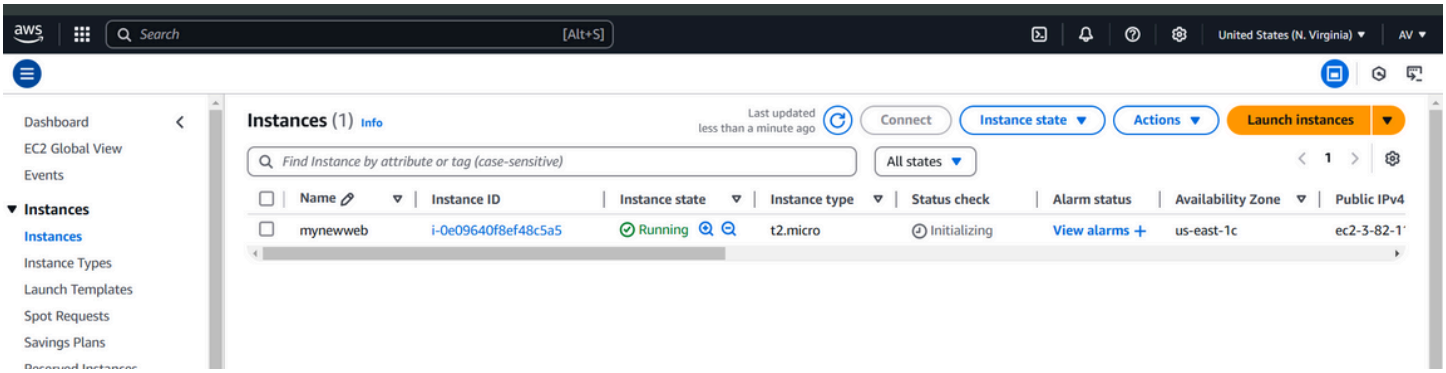
Ensures Consistency – Deploys the latest code automatically, reducing the risk of human errors.

Improves Efficiency – Speeds up the deployment process, allowing faster updates and bug fixes.

Enhances Reliability – Ensures that the application runs with the latest stable version without downtime.

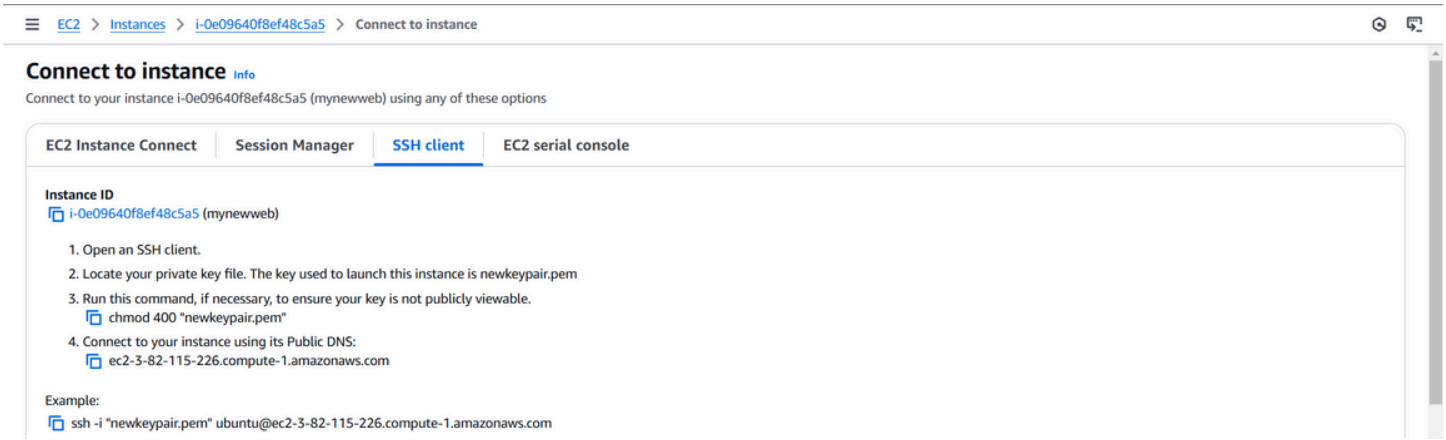
STEP 1:

Create a EC2 instance in your AWS cloud or any other cloud platform



STEP 2:

Click on instance ID, select connection and go to ssh. Copy the SSH id



STEP 3:

Go to downloads using powershell using the command

STEP 4:

Copy the SSH id and paste it in the Powershell. Type yes

```
PS C:\Users\DELL\downloads> ssh -i "newkeypair.pem" ubuntu@ec2-3-82-115-226.compute-1.amazonaws.com
The authenticity of host 'ec2-3-82-115-226.compute-1.amazonaws.com (3.82.115.226)' can't be established.
ED25519 key fingerprint is SHA256:AICtUHBZUa8pALPHCO29M/4Tg8Bq6M2dR3Na/x22skA.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-3-82-115-226.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-1021-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Wed Feb  5 14:25:02 UTC 2025

  System load:  0.0               Processes:             104
  Usage of /:   24.9% of 6.71GB   Users logged in:       0
  Memory usage: 19%               IPv4 address for enX0: 172.31.93.44
  Swap usage:   0%
```

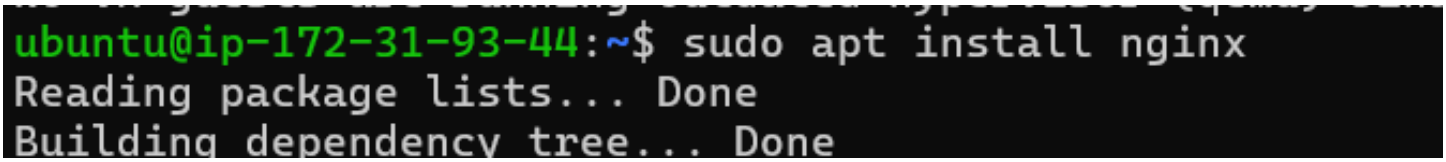
STEP 5:

update the packages of ubuntu

Upgrade by typing sudo apt upgrade command

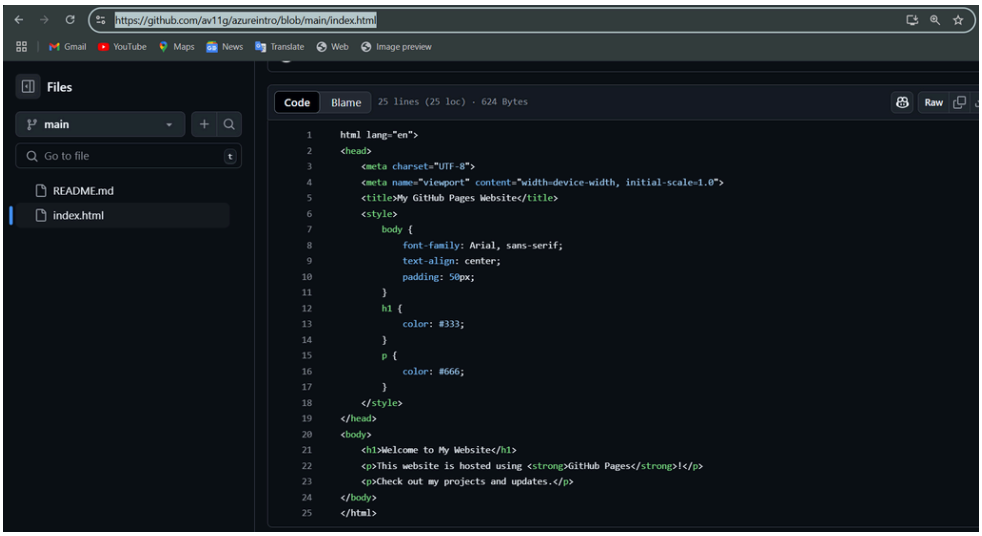
STEP 6:

Install the nginx server. Type ‘Y’ and start installing



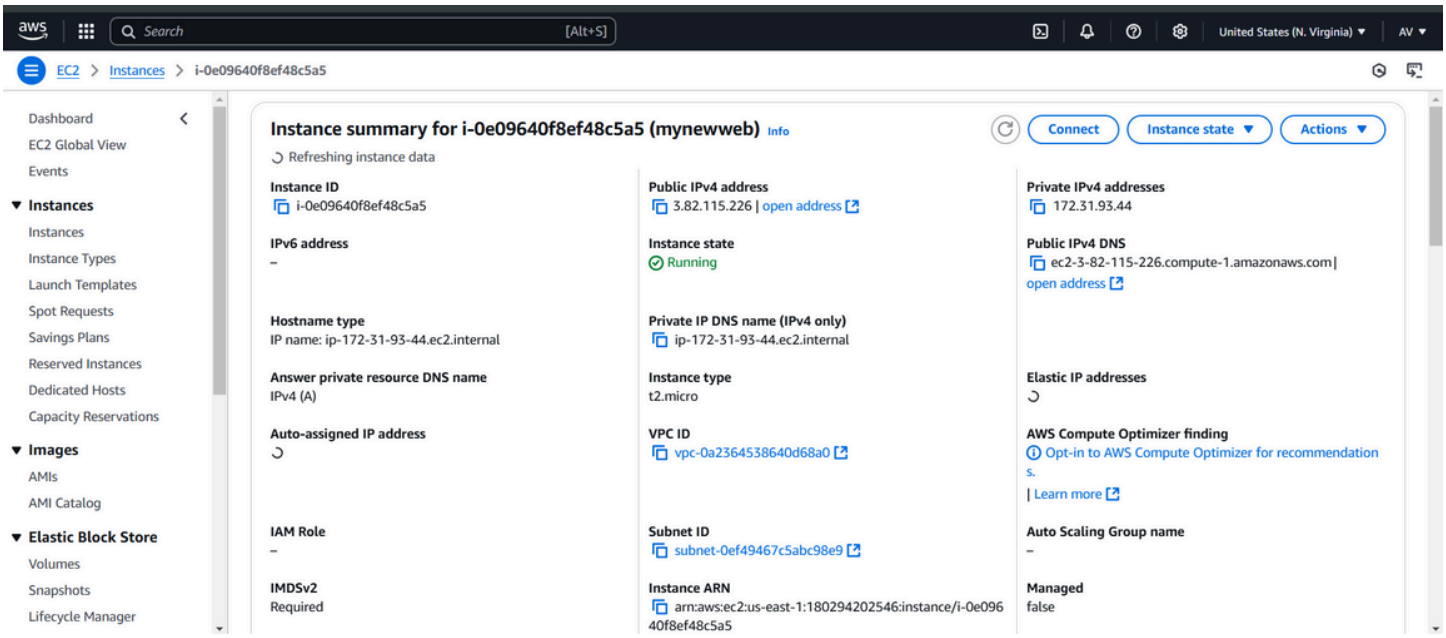
STEP 7:

Create a Github repository with your basic static file in it and copy the link



STEP 8:

Run the command cd/var/www/html . copy the IP address from the EC2 instance



STEP 9:

Paste the IP address in the web and you will be able to see your website deployed

OUTCOME:

Faster Deployment – Eliminates manual steps, ensuring quick and consistent website updates.

Cost-Effective Hosting – Uses Azure Storage, reducing infrastructure costs compared to traditional web hosting.

Improved Reliability – Azure ensures high availability and scalability for website hosting.

Simplified Maintenance – Automation scripts streamline future updates, reducing human effort.