

AWS EC2 & Nginx Assignment Submission

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Course: AWS DevOps (Intellipaat)

Assignment: EC2 & Nginx Web Server Task

Problem Statement

You work for XYZ Corporation. Your corporation wants to launch a new web-based application using AWS Virtual Machines. Configure the resources accordingly for the tasks.

Tasks Performed

Task 1: Create an EC2 Instance and Install Nginx

Steps taken:

- Logged into AWS Console and set region to US-East-1 (N. Virginia).
- Went to EC2 → Instances → Launch instances.
- Selected Ubuntu Server 22.04 LTS (Free tier eligible) AMI.
- Chose t3.micro as instance type.
- Created/used existing key pair.
- Configured security group to allow SSH (22) and HTTP (80).
- Launched the instance and connected using EC2 Instance Connect.
- Updated package lists and installed Nginx:
sudo apt update
sudo apt install nginx

Screenshot Placeholder:

```
ubuntu@ip-172-31-29-60:~$ sudo apt update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:6 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [1118 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [191 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.6 kB]
Get:10 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [8708 B]
Get:11 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [879 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [194 kB]
Get:13 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.2 kB]
Get:14 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [18.0 kB]
Get:15 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [1705 kB]
Get:16 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [382 kB]
Get:17 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:18 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [18.5 kB]
Get:19 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [4288 B]
Get:20 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:22 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [380 B]
```

```
ubuntu@ip-172-31-29-60:~$ sudo apt install nginx
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  nginx-common
Suggested packages:
  fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
  nginx nginx-common
0 upgraded, 2 newly installed, 0 to remove and 17 not upgraded.
Need to get 564 kB of archives.
After this operation, 1596 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx-common all 1.24.0-2ubuntu7.5 [43.4 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx amd64 1.24.0-2ubuntu7.5 [520 kB]
Fetched 564 kB in 0s (20.7 MB/s)
Preconfiguring packages ...
Selecting previously unselected package nginx-common.
(Reading database ... 71718 files and directories currently installed.)
Preparing to unpack .../nginx-common_1.24.0-2ubuntu7.5_all.deb ...
Unpacking nginx-common (1.24.0-2ubuntu7.5) ...
Selecting previously unselected package nginx.
Preparing to unpack .../nginx_1.24.0-2ubuntu7.5_amd64.deb ...
Unpacking nginx (1.24.0-2ubuntu7.5) ...
Setting up nginx-common (1.24.0-2ubuntu7.5) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /usr/lib/systemd/system/nginx.service.
```

Task 2: Access the Default Nginx Web Page

Steps taken:

- Navigated to the default web directory:
`cd /var/www/html`
- Copied the public IP address of the instance and opened it in the browser.
- Verified that the default Nginx web page was displayed.

Screenshot Placeholder:



Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

Task 3: Replace the Default Website with a Custom Page

Steps taken:

- Removed the default index file:
`sudo rm -r index.nginx-debian.html`
- Refreshed the browser and confirmed it showed a 403 Forbidden error (no index file).
- Created a new index.html file with custom text:
`sudo nano index.html`
- Added the content:
Hello World
- Saved and exited the editor.
- Refreshed the browser and confirmed the custom message was displayed.

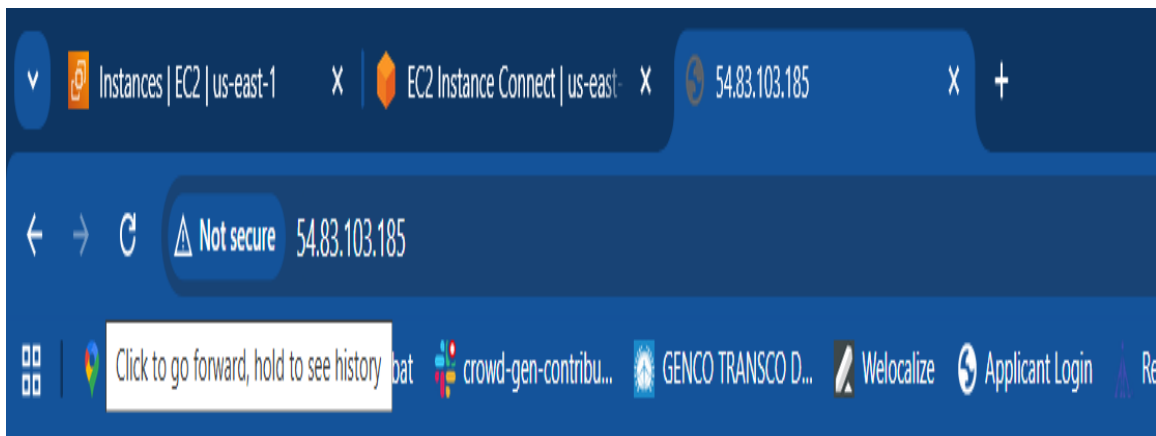
Screenshot Placeholder:



403 Forbidden

nginx/1.24.0 (Ubuntu)

```
ubuntu@ip-172-31-19-112:~$ ls
ubuntu@ip-172-31-19-112:~$ cd /var/www/html
ubuntu@ip-172-31-19-112:/var/www/html$ ls
index.nginx-debian.html
ubuntu@ip-172-31-19-112:/var/www/html$ sudo rm -r index.nginx-debian.html
ubuntu@ip-172-31-19-112:/var/www/html$ sudo nano index.html
ubuntu@ip-172-31-19-112:/var/www/html$ ls
index.html
ubuntu@ip-172-31-19-112:/var/www/html$
```



HELLO WORLD

Conclusion

Successfully launched an Ubuntu EC2 instance in the US-East-1 (N. Virginia) region, installed and configured the Nginx web server, and replaced the default page with a custom 'Hello World' webpage. This confirms the web server is functional and accessible over the internet.