**Nginx installation And secure with let’s encrypt to serve html page**

- Create an amazon linux 2, t2 micro instance with all or 80 port opened security group
- And the create directory and insert one index.html file
- For example i create folder has a chandan and inside it create index.html page with some code
- Then install nginx on linux 2
    1. sudo amazon-linux-extras install nginx1
    2. Then verify installation using  nginx -v
    3. sudo systemctl enable nginx
    4. sudo systemctl start nginx
    5. And confirm the nginx default page in using ip because its default port in 80
    - Then serve html file to nginx
- For that we need to edit sudo nano /etc/nginx/nginx.conf
- In that file just replace this content

```
server {

    listen 80;

    server_name chandan.club;

    root /home/lec2-user/chandan;

    index index.html;

}
```

    1. Listen 80; is serve in 80 means only wit ip
    2. Server_name; our domain name because further use of ssl
    3. root ; our path of html page contain
    4. Index index.html; it serve the index.html page

    - Then restart nginx page using sudo systemctl restart nginx
- We will see the our html page with IP
- If we are mantain DNS management we can set A record for that ip and we can see that in domain name.

For any reference - - https://linuxhint.com/serve-index-html-with-nginx

**Secure domain name with let's encrypt**

- Install dependencies
  sudo yum install augeas-libs
- Set up a Python virtual environment
  sudo python3 -m venv /opt/certbot/
  sudo /opt/certbot/bin/pip install --upgrade pip
- Install Certbot
  sudo /opt/certbot/bin/pip install certbot certbot-nginx
- Create link to Certbot so that you can run the certbot command directly
  sudo ln -s /opt/certbot/bin/certbot /usr/bin/certbot
- Generate certificate to nginx
  sudo certbot certonly –nginx
- update the nginx config file
  location /etc/nginx/nginx.conf
- add llisten 443 ssl in config file

```
server {
   listen 443 ssl;
   listen       80;
   server_name  helloworld.ga; // our domain name
   root         /home/ec2-user/task; //root of our html page
   index index.html; //file name to serve

    # RSA certificate
   ssl_certificate /etc/letsencrypt/live/helloworld.ga/fullchain.pem;//update
domain
```

```
ssl_certificate_key /etc/letsencrypt/live/helloworld.ga/privkey.pem;

include /etc/letsencrypt/options-ssl-nginx.conf;

# Redirect non-https traffic to https// it will redirect all the request to https
if ($scheme != "https") {
        return 301 https://$host$request_uri;
```

- then test the syntax using
  sudo nginx -t
- then reload or restart
  sudo systemctl reload nginx
  sudo sysemctl restart nginx

THANK YOU