Lab 9: NGINX and NTP

Parth Kalkar

Q1. Configure static web page and generate SSL certificate (certificate with your own domain name) and configure it in the web server, enable redirection from HTTP to HTTPS. Show you the configuration of Nginx and certificate used (make screenshots from the browser)

- For this task, we can do the following steps
    a. Create a folder for website files:

    $ *sudo mkdir -p /mysite.com*
    $ *sudo touch /etc/nginx/sites-available/mysite.com*

    b. Open *config* file:

    $ *sudo vim /etc/nginx/sites-available/mydomain.com*

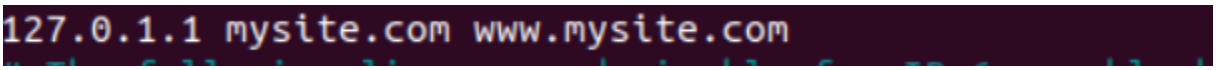
```
server{
      listen 80;
      listen [::]:80;
      server_name mysite.com www.mysite.com
      root /mysite.com;
      index index.html;
      location{
          try_files $uri $uri/ =404
      }


}
```

    c. Make symlink:

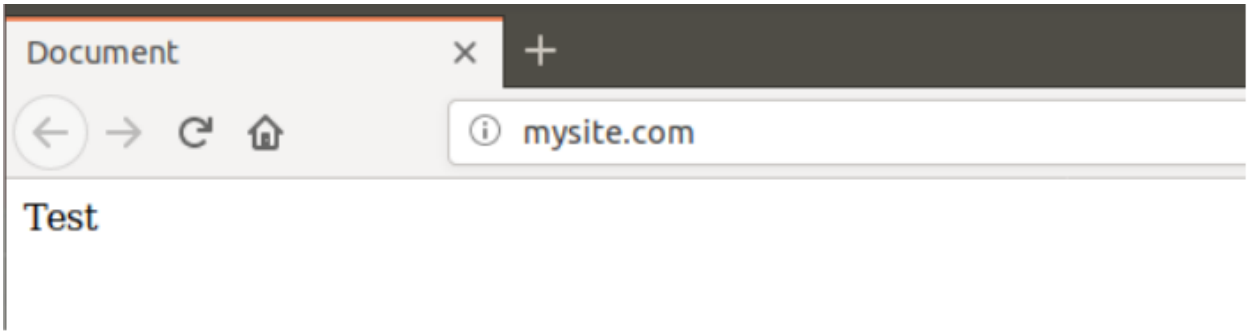
    $ *sudo ln -s /etc/nginx/sites-available/mydomain.com /etc/nginx/sites-enabled/mydomain.com*

d. Create a sample HTML file:

e. Add the localhost IP to the */etc/hosts* - 127.0.0.1 mysite.com mysite.com



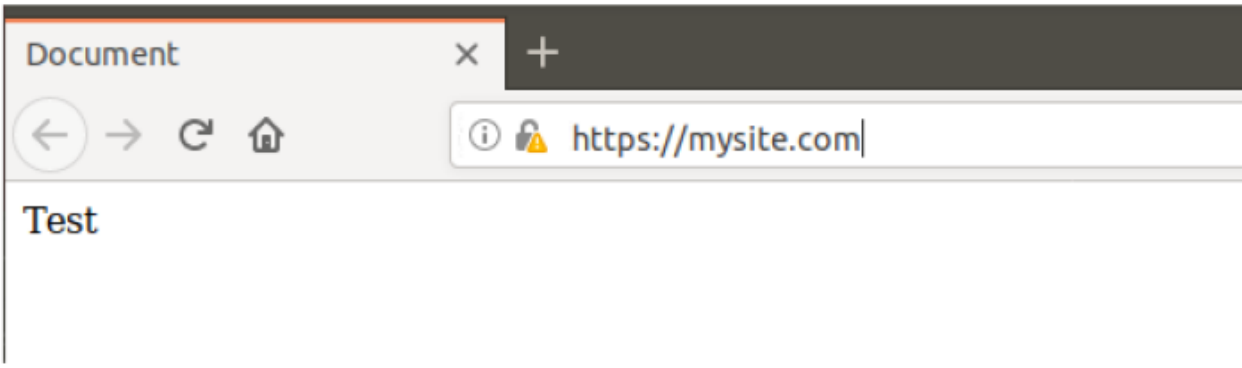
f. Testing one:



g. SSL certificate and Server Configuration: certificate from the previous lab has been utilized in this lab

```
server{
        listen 80;
        listen [::]:80;
        server_name mysite.com www.mysite.com;
        return 301 https://$server_name$request_uri;
}

server{
        listen 443 ssl;
        ssl_certificate /lab8/lab8.crt;
        ssl_certificate_key /lab8/mysite.com.key;
        ssl_protocols TLSv1 TLSv1.1 TLSv1.2;
        ssl_ci[hers HIGH:!aNULL:!MD5;
        server_name mysite.com www.mysite.com;
        root /mysite.com
        index index.html
}
```

h. Verify that redirecting HTTP->HTTPS works browsing to https://mysite.com



Q2. On the webserver configure maximum file upload/download 1GB to site. If you have any other useful configuration, it also could be shown

- Edit the *nginx.conf* @ /etc/nginx/nginx.conf:

```
http {

        ##
        # Basic Settings
        ##
        client_max_body_size 1024M;
        sendfile on;
        tcp_nopush on;
        tcp_nodelay on;
        keepalive_timeout 65;
        types_hash_max_size 2048;
        # server_tokens off;
```

Q3. Configure your machine synchronization with an NTP server located in the United Kingdom.

- For this task, do the following steps
    a. Install NTP: $ *sudo apt-get install ntp*
    b. Edit *ntp.conf* @ /etc/ntp.conf:

```
# on 2011-02-08 (LP: #104525). See http://www.pool.ntp.org/join.htm
# more information.
server 0.uk.pool.ntp.org
server 1.uk.pool.ntp.org
server 2.uk.pool.ntp.org
server 3.uk.pool.ntp.org
```

    c. Relaod: $ *sudo systemctl restart ntp*

    d. Verify: $ *ntpq -p*

```
     remote           refid      st t when poll reach   delay   offset  jitter
==============================================================================
 185.57.191.229  .GPS.            1 u    4   64    1   72.516    3.316   0.000
 ns1.do.steersne 114.199.6.79     2 u    4   64    1   74.397    1.550   0.000
 time.cloudflare 10.71.1.91       3 u    1   64    1   57.284    0.548   0.000
 ns3.turbodns.co 85.199.214.99    2 u    5   64    1   77.738    0.150   0.000
```