

Install Nginx on Linux with HTTP and HTTPS

Installing Nginx on Linux

- Download Nginx from apt
 - o `sudo apt update && sudo apt install nginx`
 - o `systemctl status nginx`

Configuring HTTP nginx server

Where you see `tryhurledclicker.duckdns.org`, replace it with your domain name

- **Create the directory that will contain our website**
 - o `sudo mkdir -p /opt/www/tryhurledclicker.duckdns.org`
 - o `sudo chown -R ubuntu:ubuntu /opt/www/tryhurledclicker.duckdns.org`
 - o `sudo chmod -R 755 /opt/www/tryhurledclicker.duckdns.org`
- **Create a simple webpage for our website**
 - o `nano /opt/www/tryhurledclicker.duckdns.org/index.html`
 - o create a simple index.html webpage

```
<html>
  <head>
    <title>Network And Security Website</title>
  </head>
  <body>
    <h1>Hi this is the NS website! </h1>
  </body>
</html>
```

- **Create a new virtual host file**
 - o `sudo nano /etc/nginx/sites-available/tryhurledclicker.duckdns.org`
 - o copy and paste the following configuration

```
server {
    listen 80 default_server;
    listen [::]:80 default_server;
    root /opt/www/tryhurledclicker.duckdns.org;
    index index.html;
    server_name _;
    location / {
        try_files $uri $uri/ =404;
    }
}
```

- **Activate virtual host configuration file**
 - `sudo ln -s /etc/nginx/sites-available/tryhurledclicker.duckdns.org /etc/nginx/sites-enabled/tryhurledclicker.duckdns.org`
- **Disable default site**
 - `sudo rm /etc/nginx/sites-available/default`
 - `sudo rm /etc/nginx/sites-enabled/default`
- **Restart nginx**
 - `sudo systemctl restart nginx`
- **Check syntax error**
 - `sudo nginx -t`
- **Check if everything works: connect with another host using curl or wget to server and see if the sites is correct**

Configuring HTTPS

- **Enable ssl**
 - `sudo nano /etc/nginx/sites-available/tryhurledclicker.duckdns.org`
 - modify the config as following


```
server {
    listen 80 default_server;
    listen [::]:80 default_server;
    root /opt/www/tryhurledclicker.duckdns.org;
    index index.html;

    listen 443 ssl;
    server_name tryhurledclicker.duckdns.org;
    ssl_certificate /opt/cert/tryhurledclicker.duckdns.org.crt;
    ssl_certificate_key /opt/cert/tryhurledclicker.duckdns.org.key;

    location / {
        try_files $uri $uri/ =404;
    }
}
```
- **make dir for certificates**
 - `sudo mkdir /opt/cert`
 - `sudo chown -R ubuntu:ubuntu /opt/cert`

- o `cd /opt/cert`

- **Generate a self-signed certificate following ([here](#) for a detailed documentation)**

- **Add to nginx config file the cert pass**

- o `sudo nano /opt/cert/key`
 - insert the passphrase of ca root
- o `sudo nano /etc/nginx/nginx.conf`
- o add this line in `http {}`
 - `ssl_password_file /opt/cert/key;`

- **Rename file**

- o `cp /opt/cert/server.key`
`/opt/cert/tryhurledclicker.duckdns.org.key`
- o `cp /opt/cert/server.cert`
`/opt/cert/tryhurledclicker.duckdns.org.crt`

- **Check syntax error**

- o `sudo nginx -t`

- **Restart nginx**

- o `sudo systemctl restart nginx`