TOR

- Browse TOR via Commandline
- Create a hidden Service

Browse TOR via Commandline

```
apt-get install torsocks
```

if you haven't already enabled TOR, enable it via

```
systemctl enable --now tor
```

Surf in commandline via Torsocks

In my experience the only commandline browser that works together with torsocks is w3m. First install w3m:

```
apt-get install w3m
```

then you can start surfing via:

```
torsocks w3m address.onion
```

Create a hidden Service

Install Tor

To enable all package managers using the libapt-pkg library to access metadata and packages available in sources accessible over https (Hypertext Transfer Protocol Secure).

```
apt install apt-transport-https
```

Create a new file in `/etc/apt/sources.list.d/` named `tor.list`. Add the following entries:

```
deb     [signed-by=/usr/share/keyrings/deb.torproject.org-keyring.gpg]
https://deb.torproject.org/torproject.org trixie main
deb-src [signed-by=/usr/share/keyrings/deb.torproject.org-keyring.gpg]
https://deb.torproject.org/torproject.org trixie main
```

Install GnuPG if not already installed:

```
apt install gnupg
```

Then add the gpg key used to sign the packages by running the following command at your command prompt:

```
wget -qO-
https://deb.torproject.org/torproject.org/A3C4F0F979CAA22CDBA8F512EE8CBC9E886DDD89.asc | gpg
--dearmor | tee /usr/share/keyrings/deb.torproject.org-keyring.gpg >/dev/null
```

Install tor and tor debian keyring

```
apt update
apt install tor deb.torproject.org-keyring
```

Configure Tor

Next, you need to configure Tor to host your hidden service. Open the Tor configuration file:

```
vim /etc/tor/torrc
```

Add the following lines at the end of the file:

```
HiddenServiceDir /var/lib/tor/hidden_service/
HiddenServicePort 80 127.0.0.1:80
```

Restart Tor

After making the changes, restart the Tor service to apply the configuration.

```
systemctl restart tor
```

Find Your Onion Address

The Tor service generates the onion address for your hidden service. To find it, check the hostname file.

```
cat /var/lib/tor/hidden_service/hostname
```

This command will output an onion address that you can use to access your site via the Tor network.

Install and Configure Nginx

If you haven't installed Nginx yet, you can do so with the following command:

```
apt install nginx
```

After installation, you need to configure Nginx to serve your website. Create a new configuration file for your onion service:

```
vim /etc/nginx/sites-available/onion
```

Add the following configuration:

```
server {
    listen 80;
    server_name your_onion_address.onion;

    location / {
        root /var/www/html;  # Change this to your website directory
        index index.html index.htm;
    }
}
```

Enable the Nginx Configuration

Link the new configuration file to enable it:

```
ln -s /etc/nginx/sites-available/onion /etc/nginx/sites-enabled/
```

Edit the Nginx Configuration

Open your main Nginx configuration file:

```
vim /etc/nginx/nginx.conf
```

Increase the Bucket Size

Add or modify the `server_names_hash_bucket_size` directive within the http block. You could set it to a larger value, like 128 or 256:

```
http {
    ...
    server_names_hash_bucket_size 128;
    ...
}
```

Test Nginx Configuration

Check for any syntax errors in the Nginx configuration:

```
nginx -t
```

Restart Nginx

If the configuration test is successful, restart Nginx:

```
systemctl restart nginx
```

Place Your Website Files

Place your HTML files in the designated directory (e.g., `/var/www/html`). You can create a simple `index.html` file to test:

```
echo "<h1>Welcome to My Onion Site!</h1>" | sudo tee /var/www/html/index.html
```