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# TORSOCKS

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torsock

You probably already heard of the TOR-browser ( The onion routing browser ), it allows for anonymous communication by directing Internet traffic through a free, worldwide, volunteer overlay network.

Onion routing is implemented by encryption in the application layer of a communication protocol stack, nested like the layers of an onion. Tor encrypts the data, including the next node destination IP address, multiple times and sends it through a virtual circuit comprising successive, random-selection Tor relays. Each relay decrypts a layer of encryption to reveal the next relay in the circuit to pass the remaining encrypted data on to it. The final relay decrypts the innermost layer of encryption and sends the original data to its destination without revealing or knowing the source IP address.

Torsock allows for other application to use this anonymous network.  
You can even setup your own server, only accesable by the TOR-network.

Install

Check on Tor website for the right release <https://www.torproject.org/docs/debian.html.en>

Edit apt-get : `sudo nano /etc/apt/sources.list`  
Insert the following lines (adapt the release)

```
deb http://deb.torproject.org/torproject.org xenial main
deb-src http://deb.torproject.org/torproject.org xenial main
```

And the corresponding keys:

```
gpg --keyserver keys.gnupg.net -recv 886DDD89
```

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```
gpg --export A3C4F0F979CAA22CDBA8F512EE8CBC9E886DDD89 | apt-key add -
```

Download and install

```
apt-get install tor deb.torproject.org-keyring  
systemctl restart tor
```

Now you can use torsocks to connect to any site:

```
torsocks wget https://www.yahoo.communication  
or
```

```
torsocks git clone https://github.com/newproject
```

## Server on TOR

To setup you own server on TOR, you need to add some additional configuration.

```
sudo nano /etc/tor/torrc
```

Add:

```
HiddenServiceDir /var/lib/tor/hidden_service/  
HiddenServicePort 8080 127.0.0.1:8080
```

## Restart TOR

```
sudo systemctl restart tor
```

The onion-hostname can be found in :

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

The address looks like : 5wt....ad.onion

You service should be configured to listen on 127.0.0.1:8080

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Now you can connect to your server via the onion network.

```
torsocks wget 5wt....ad.onion:8080
```

More information can be found :

<https://gitlab.torproject.org/legacy/trac/-/wikis/doc/torsocks>

<https://2019.www.torproject.org/docs/tor-onion-service>