

## FreeBSD Administration - Support #613

### Install a TOR Hidden Service on FreeBSD

05/03/2015 04:26 PM - Daniel Curtis

<b>Status:</b>	Closed	<b>Start date:</b>	05/03/2015
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Daniel Curtis	<b>% Done:</b>	100%
<b>Category:</b>	The Onion Router (TOR)	<b>Estimated time:</b>	1.50 hour
<b>Target version:</b>	FreeBSD 9	<b>Spent time:</b>	1.50 hour

#### Description

This is a guide for setting up a TOR Hidden Service.

## Prepare the Environment

- Make sure the system is up to date:

```
portsnap fetch extract && portmaster -a
```

## Install OpenNTPD

- Install OpenNTPD:

```
portmaster net/openntpd
```

- Edit the OpenNTPD config file:

```
vi /usr/local/etc/ntpd.conf
```

- And add a couple more ntp sources for good measure:

```
servers pool.ntp.org
servers clock.via.net
servers clock.isc.org
```

- Start and enable OpenNTPD at boot:

```
echo 'openntpd_enable="YES"' >> /etc/rc.conf
service openntpd start
```

**NOTE:** An NTP server in a jail will fail to start. Jails get their time from the host system, make to install the NTP server on the host.

## Install TOR

- Install TOR:

```
portmaster security/tor
```

- Setup the TOR environment:

```
rm -r /var/db/tor /var/run/tor
mkdir -p /var/db/tor/data /var/run/tor
touch /var/log/tor
chown -R _tor:_tor /var/db/tor /var/log/tor /var/run/tor
chmod -R 700 /var/db/tor
```

- Tor users are strongly advised to prevent traffic analysis that exploits sequential IP IDs by setting:

```
sysctl net.inet.ip.random_id=1
```

- Create a folder for the hidden service owned by the `_tor` user:

```
mkdir -p /var/tor/hidden_service
chown -R _tor:_tor /var/tor
chmod -R 700 /var/tor
```

- Edit the TOR config file:

```
vi /usr/local/etc/tor/torrc
```

- And add/modify the following lines:

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

**NOTE:** The above configuration will forward requests coming into the TOR address on port 80 to 127.0.0.1:80

- Start and enable TOR at boot:

```
echo 'tor_enable="YES"' >> /etc/rc.conf
service tor start
```

- Monitor the status of the TOR connection:

```
tail /var/log/tor
```

- *Truncated output:*

```
...
May 03 16:12:44.000 [notice] Bootstrapped 50%: Loading relay descriptors
May 03 16:12:53.000 [notice] Bootstrapped 57%: Loading relay descriptors
May 03 16:12:56.000 [notice] Bootstrapped 64%: Loading relay descriptors
May 03 16:12:57.000 [notice] Bootstrapped 69%: Loading relay descriptors
May 03 16:12:58.000 [notice] Bootstrapped 78%: Loading relay descriptors
May 03 16:12:59.000 [notice] Bootstrapped 80%: Connecting to the Tor network
May 03 16:12:59.000 [notice] Bootstrapped 90%: Establishing a Tor circuit
May 03 16:13:00.000 [notice] Tor has successfully opened a circuit. Looks like client functionality is working.
May 03 16:13:00.000 [notice] Bootstrapped 100%: Done
```

- Once the TOR service is up and running, a new hostname and key file will appear in the `/var/tor/hidden_service` directory:

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

## Resources

- <http://www.bsdnw.tv/tutorials/tor>

## History

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### #1 - 05/03/2015 04:34 PM - Daniel Curtis

- *Description updated*
- *Status changed from New to In Progress*
- *% Done changed from 0 to 50*

### #2 - 05/04/2015 09:00 AM - Daniel Curtis

- *Subject changed from Install a TOR Hidden Service to Install a TOR Hidden Service on FreeBSD*
- *Description updated*
- *Status changed from In Progress to Resolved*
- *% Done changed from 50 to 100*

### #3 - 05/10/2015 09:21 AM - Daniel Curtis

- *Status changed from Resolved to Closed*