



Computer System Administration Homework 1 Install FreeBSD & WireGuard

yca

Requirements

❑ Basic

- Install up-to-date release of FreeBSD
 - ❑ 12.0-RELEASE
 - ❑ Root on ZFS
- Add a user and a group
 - ❑ Group name should be identical to your username
 - ❑ User should also be in the 'wheel' group
 - ❑ Use this user to do this homework instead of root
- Set your machine to current time zone and adjust current time
 - ❑ CST
- Enable sshd
- You can install on VM

Requirements (Cont.)

- ❑ VPN
 - Wireguard: <https://www.wireguard.com/>
 - You will be arranged a 10.113.0.x IP by TA for you to do your homework during this semester.
 - You will get a pre-generate private key and the public key of server for you to connect to savpn.nctu.me:51820
 - You can create your own peer so you can connect to your intranet from outside world.
 - you can install wireguard with pkg.

Example Configurations – Client

```
# /usr/local/etc/wireguard/wg0.conf
[Interface]
Address = 10.113.1.1/25
PrivateKey = [CLIENT PRIVATE KEY]

[Peer]
PublicKey = [SERVER PUBLICKEY]
AllowedIPs = 10.113.0.0/16
Endpoint = [SERVER ENDPOINT]:51820
PersistentKeepalive = 25
```

Example Configurations – Client (Cont.)

- ❑ Start interface
 - `wg-quick up wg0`
- ❑ Stop interface
 - `wg-quick down wg0`
- ❑ You can use `man` to get more information
 - `man wg`
 - `man wg-quick`

Submission

- ❑ Login with the user you created.
- ❑ `$ rm -f /tmp/sahw1.tmp`
 - Perform this as root if it cried about 'Permission denied'
- ❑ `$ uname -a >> /tmp/sahw1.tmp`
- ❑ `$ date -Iseconds >> /tmp/sahw1.tmp`
- ❑ `$ id >> /tmp/sahw1.tmp`
- ❑ `$ service sshd status >> /tmp/sahw1.tmp`
- ❑ `$ zfs list >> /tmp/sahw1.tmp`
- ❑ `$ sudo wg >> /tmp/sahw1.tmp`
- ❑ `$ mail -s '[SAHW1] <ID number>' sahw1@savpn.nctu.me
< /tmp/sahw1.tmp`

Check submission result

- ❑ Web page: <https://savpn.nctu.me/hw1/>
- ❑ You can submit many times, only the last count.
- ❑ Due: **2019/09/27 23:59**

- ❑ After the deadline, the website will still be online for you to check whether your machine works correctly.

FAQ

❑ Adjust current time

- ntpdate(8) //non-continuous

or

- ntpd(8) //continuous

- ❑ <https://www.freebsd.org/doc/en/books/handbook/network-ntp.html>

- Server

- ❑ time.stdtime.gov.tw
- ❑ tick.stdtime.gov.tw
- ❑ tock.stdtime.gov.tw
- ❑ watch.stdtime.gov.tw
- ❑ clock.stdtime.gov.tw

FAQ (Cont.)

- ❑ How to check VPN work correctly?
 - Ping 10.113.0.254 from your machine.
 - Ping some classmates' machine.
- ❑ I did not receive the email about my VPN information.
 - Contact TA as soon as possible.

Help!

- ❑ Email to ta@nasa.cs.nctu.edu.tw
- ❑ Office hour: 3GH at EC318