Lab 5 - VPN

Kathara VPN.pdf

Preparing host for VPN

- Directory for openVPN file is in /usr/share/easy-rsa/
- openssl: library for security
- easy-rsa: another library bu easier

on HOST

1. cd /usr/share/easy-rsa/
2. ./easy-rsa init-pki
3. ./easy-rsa build-ca
    a. choose a password (can be “password”), choose a name (choose the one of device or mine for example)
4. ./easy-rsa build-client-full <name_of_certificate> (can be client1)
    a. It ask for a password of CA (choose the same password as before)

In cd /usr/share/easy-rsa/pki we see two importatn directory

- issued: will contian all certificate (they contain the public ones)
- private: will contain all of the private keys for all things generated
- openssl x509 -in ca.crt -text (we can see what is written insied)

Client and Serve configuration

```
port 1194

proto udp

dev tun

ca /root/ca.crt
cert /root/myserver.crt
key /root/myserver.key  # This file should be kept secret

dh /usr/share/doc/openvpn/examples/sample-keys/dh2048.pem

topology subnet

server 10.8.0.0 255.255.255.0

keepalive 10 120

cipher AES-256-CBC

persist-key
persist-tun
status openvpn-status.log

verb 4

explicit-exit-notify 1
```

To assing statically a VPN-IP on router we use instruction

1. client-config-dir ccd

2. create a file in ccd matching the Common Name (CN) in the client certificate (e.g. vpn_client_1)
3. edit file
    a. ifconfig-push 192.168.100.101 255.255.255.0
    b. ifconfig-push 192.168.100.101/<netmask>