

Proxy Tunnel Demo Notes

Target/Demo network

Setup

1. Add the FT to the Target/Demo network
 - option 1a) add a firewall between the FT and the internet.
2. Configure a Target PC to use the FT as it's gateway.
3. telnet into the FT
4. remove the default route and replace it with an network entry to get to the proxy server.

```
route del default gw X.X.X.X
route add -net 5.4.16.0 netmask 255.255.255.0 gw 10.1.1.1
```
5. On the proxy server:

```
echo 1 > /proc/sys/net/ipv4/ip_forward
```

```
#note: if using port 8080, make sure it is open in your servers fw after setting your IP
#demo: sudo /usr/sbin/openvpn --remote 5.4.16.62 --proto tcp-
server --port 8080 --dev tun --ifconfig 10.129.66.1 10.129.129.1
--ping 30 --user cbuser --group cbgroup --persist-key --verb 4
```

```
#TODO try, useful if using --user and we lost the privileges...
```

```
#persist-key, persist-tun, persist-local-ip
```

```
# if using --ping include --ping-restart
```

```
sudo /usr/sbin/openvpn --remote 5.4.16.62 --proto tcp-server
--port 8080 --dev tun --ifconfig 10.129.66.1 10.129.129.1
--route 10.129.129.0 255.255.255.0 10.129.129.1 --user nobody
--group nobody --persist-key --persist-tun --persist-local-ip
--verb 4
```

```
#enable NAT for TUN traffic on the proxy server:
```

```
iptables -t nat -A POSTROUTING -s 10.129.0.0/16 -o eth0 -j SNAT
--to 5.4.16.104
```

```
#enable DNS MASQUERADE to proxy DNS server, e.g. 4.2.2.1
```

```
iptables -t nat -I PREROUTING 1 -p udp --dport 53 -j DNAT --to
4.2.2.1
```

```
#setup virtual net IP for forward pinhole
```

```
# this cannot be done until the vpn tunnel is up for good
```

```
route add -net 192.168.1.0 netmask 255.255.255.0 gw 10.129.129.1
#requires mapping on FT or support for iptables NETMAP target
#route add -net 10.1.2.0 netmask 255.255.255.0 gw 10.129.129.1
```

6. On the FT:

```
insmod /usr/sbin/tun.o
iptables -t nat -I POSTROUTING 1 -o tun0 -j MASQUERADE

#setup virtual net IP for forward pinhole
iptables -t nat -I POSTROUTING 1 -s 10.129.66.1 -j MASQUERADE

#make sure the traffic from the tunnel isn't dropped
iptables -t filter -I FORWARD 1 -s 10.129.66.1 -d 192.168.1.0/24
-j ACCEPT

#access to FT services from VPN
iptables -t filter -I INPUT 1 -s 10.129.66.1 -j ACCEPT

openvpn --proto tcp-client --remote 5.4.16.104 8080 --dev tun0
--ifconfig 10.129.129.1 10.129.66.1 --verb 5 --ping 30 &

#note: ping both IP(s) to confirm the tunnel is up
# once you exit the telnet session, the tunnel goes down, but
the process on the FT should still be ok. Restart the openvpn
server

#setup the DNAT translation for the forward pinhole
# not required if adding a 192.168.1.0/24 route on the proxy
server
#iptables -t nat -A PREROUTING -d 10.1.2.128 -j DNAT --to
192.168.1.128
#more ideal:
#iptables -t nat -A PREROUTING -d 10.1.2.0/24 -j NETMAP --to
192.168.1.0/24
```

Demo

Explain the use case scenario and our current solution:

- A vpn tunnel to route/proxy traffic through a sponsor controlled network

Proxy Tunnel Uses

1. proxy target traffic
2. provide forward pinhole from proxy server.
a routable virtual IP address for the FT and virtual subnet for the FT's LAN on the proxy server
3. provides a routable virtual IP or port to FT from the proxy server (in the case where the FT does

not have a public IP).

4. provide means to access FT web interface and therefore reflash capability
5. provide means to access telnetd (if started from mm and there is a iptables rule that only allows access to port 23 from the localhost traffic)
6. provide a means to transfer additional tools and libraries to the FT. e.g. libssl, dropbear, ██████████ routing app. e.g. demo netcat