

CHULETA PRÁCTICA 1 CIBERSEGURIDAD — COMANDOS Y PASOS

1) Preparación básica

```
sudo apt update  
sudo apt install -y openvpn easy-rsa tcpdump openssh-server apache2 iptables-persistent
```

2) Configuración de red

```
# Temporal  
ip addr add 40.40.40.30/24 dev eth0  
ip addr add 172.22.0.1/24 dev eth1  
ip link set eth0 up  
ip link set eth1 up  
ip route add default via 172.22.0.1  
# Persistente (netplan)  
sudo nano /etc/netplan/00-installer-config.yaml  
sudo netplan apply
```

3) Activar IP Forwarding

```
sudo nano /etc/sysctl.conf  
net.ipv4.ip_forward=1  
sudo sysctl --system
```

4) NAT / Mascarado

```
sudo iptables -t nat -A POSTROUTING -o eth1 -j MASQUERADE  
sudo netfilter-persistent save
```

5) Captura de tráfico

```
sudo tcpdump -i eth0 -n icmp
```

6) Rutas estáticas

```
sudo ip route add 172.16.0.0/24 via 172.22.0.80
```

7) OpenVPN + easy-rsa

```
cd ~  
/usr/share/easy-rsa/easyrsa init-pki  
/usr/share/easy-rsa/easyrsa build-ca  
/usr/share/easy-rsa/easyrsa gen-dh  
/usr/share/easy-rsa/easyrsa build-server-full servidor nopass  
/usr/share/easy-rsa/easyrsa build-client-full cliente-01 nopass  
/usr/share/easy-rsa/easyrsa gen-crl  
openvpn --genkey secret ta.key
```

8) Copiar ficheros

```
cp /root/pki/*.crt /root/pki/private/*.key /etc/openvpn/server/  
scp archivos_cliente root@IP_CLIENTE:/home/root/
```

9) Iniciar OpenVPN

```
sudo systemctl start openvpn-server@servidor  
sudo systemctl enable openvpn-server@servidor  
sudo systemctl start openvpn-client@cliente  
sudo systemctl enable openvpn-client@cliente
```

10) DNAT (reenvío puerto UDP 1194)

```
sudo iptables -t nat -A PREROUTING -i eth1 -p udp --dport 1194 -j DNAT --to-destination 172.22.0.80:1194
```

11) Comprobaciones

```
ifconfig / ip addr  
ping 172.16.x.x  
tcpdump -i eth0 -n icmp  
iptables -t nat -L -n -v
```

RESUMEN COMANDOS CLAVE

```
apt update | apt install  
ip addr | ip link | ip route  
sysctl --system  
iptables -t nat -A POSTROUTING ...  
iptables -t nat -A PREROUTING ...  
tcpdump -i iface  
easy-rsa (init-pki, build-ca, build-server-full, build-client-full)  
systemctl start/enable openvpn-server@  
netplan apply
```