

#No VIRTUALBOX

#Adicionar Interface de rede

Arquivo → Host Network Manager

Clicar em criar

VM do firewall

Configurar a Interface host-only (ex: enp0s8)

```
sudo ip link set <interface-host-only> up
```

```
sudo dhclient <interface-host-only>
```

Encaminhar pacotes (firewall)

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

Verificar se o encaminhamento foi habilitado (ip_forward = 1)

```
cat /proc/sys/net/ipv4/ip_forward
```

Configurar o NAT para masquerade

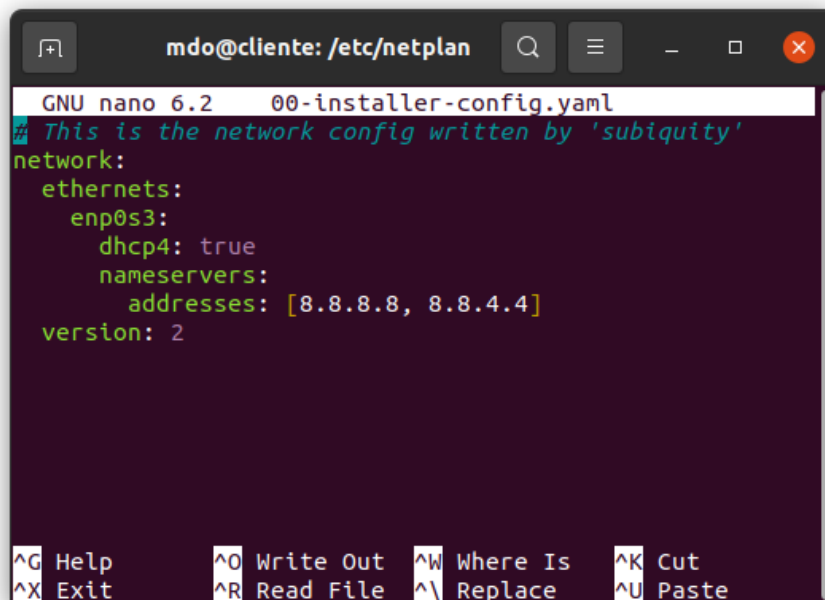
```
sudo iptables -t nat -A POSTROUTING -o <interface-bridge-firewall> -j MASQUERADE
```

VM do Cliente

configurar o DNS

```
cd /etc/netplan
```

```
sudo pico 00-installer-config.yaml
```



```
mdo@cliente: /etc/netplan
GNU nano 6.2 00-installer-config.yaml
# This is the network config written by 'subiquity'
network:
  ethernet:
    enp0s3:
      dhcp4: true
      nameservers:
        addresses: [8.8.8.8, 8.8.4.4]
      version: 2
^G Help      ^O Write Out ^W Where Is  ^K Cut
^X Exit      ^R Read File ^\ Replace   ^U Paste
```

```
sudo netplan apply
```

```
resolvectl status | grep "DNS Server" -A2
```

Configurar o gateway padrão

```
sudo ip route add default via <ip-do-firewall-host-only-enp0s8>
```

you can test the ping to some external machine

ping 8.8.8.8

SQUID - VM do FIREWALL

Configurar NAT para redirecionamento (proxy transparent)

```
sudo iptables -t nat -A PREROUTING -i enp0s8 -p tcp -m tcp --dport 80 -j REDIRECT  
--to-ports 3129
```

```
sudo iptables -t nat -A PREROUTING -i enp0s8 -p tcp -m tcp --dport 433 -j REDIRECT  
--to-ports 3130
```

#Instalar o Squid

```
sudo apt-get update
```

```
sudo apt-get install squid
```

```
cd /etc/squid/
```

#Fazer o backup do arquivo de configuracao

```
sudo cp ./squid.conf ./squid.conf.original
```

```
#Configurar o squid  
sudo pico squid.conf
```

```
# Squid normally listens to port 3128  
http_port 3128  
http_port 3129 intercept  
http_port 3130 intercept
```

```
#  
# INSERT YOUR OWN RULE(S) HERE TO ALLOW ACCESS FROM YOUR CLIENTS  
#  
include /etc/squid/conf.d/*.conf
```

```
acl localnet src 192.168.56.0/24
```

```
acl blockuece url_regex uece  
http_access deny localnet blockuece
```

```
acl blockufc url_regex ufc  
http_access deny localnet blockufc
```

```
http_access allow localnet
```

```
# And finally deny all other access to this proxy  
http_access deny all
```

#squid recarregar o arquivo de configuracoes
sudo invoke-rc.d squid reload

#verificar se o arquivo de configuracao possui erros
squid -k parse

#reiniciar o squid
sudo invoke-rc.d squid restart

#encerrar o squid
sudo invoke-rc.d squid stop

sudo invoke-rc.d squid status

#Adicionar rede privada DMZ
Arquivo → Host Network Manager
Clicar em criar
#Lembrar de habilitar a nova vboxnet criada

#Clonar a VM Cliente para criar a VM webserver
#Lembrar de criar novos endereços MAC na opção “política de endereço MAC”
#Fazer o **Clone Linkado** ao invés do **Clone Completo**

#Com a VM **webserver** iniciada, faça:
#Atualizar o hostname da VM criada
sudo hostnamectl set-hostname webserver

#configurar o gateway padrão
sudo ip route add default via **<ip-do-firewall-host-only>**

#você pode testar o ping para alguma máquina externa
ping 8.8.8.8

#instalar o apache
sudo apt-get install apache2

#verificar o status do apache
sudo systemctl status apache2

#testar localmente
wget localhost

#VM do Firewall

#configurar a nova interface host-only nas configs de rede do virtualbox

#escolher a nova rede privada criada (ex: vboxnet1)

#Provavelmente essa nova interface não estará configurada

#Configurar a Interface host-only (ex: enp0s9)

sudo ip link set <interface-host-only> up

sudo dhclient <interface-host-only>

#DNAT - VM do Firewall

#Redirecionar o tráfego WEB destinado ao firewall ao **webserver** da organização na DMZ

sudo iptables -t nat -A PREROUTING -d <ip-do-firewall-bridge> -p tcp -m tcp --dport 80 -j
DNAT --to-destination <ip-do-webserver>:80

#Testar no browser do host real

http://<ip-do-firewall-bridge>