Practica Examen con PFSense

Configuración inicial.

Asignación de interfaces WAN Y LAN.

```
If the names of the interfaces are not known, auto-detection can be used instead. To use auto-detection, please disconnect all interfaces before pressing 'a' to begin the process.

Enter the WAN interface name or 'a' for auto-detection (em0 em1 or a): em1

Enter the LAN interface name or 'a' for auto-detection NOTE: this enables full Firewalling/NAT mode. (em0 a or nothing if finished): em0

The interfaces will be assigned as follows:

WAN -> em1

LAN -> em0

Do you want to proceed [y:n]? y

Writing configuration...done.

One moment while the settings are reloading... done!
```

IP del router(WAN).

```
Enter an option: 2

Available interfaces:

1 - WAN (em1 - static)

2 - LAN (em0)

Enter the number of the interface you wish to configure: 1

Configure IPv4 address WAN interface via DHCP? (y/n) n

Enter the new WAN IPv4 address. Press (ENTER) for none:

> 172.16.1.1

Subnet masks are entered as bit counts (as in CIDR notation) in pfSense.
e.g. 255.255.25.0 = 24
255.255.8.0 = 16
255.0.0.0 = 8

Enter the new WAN IPv4 subnet bit count (1 to 32):

> 24

For a WAN, enter the new WAN IPv4 upstream gateway address.
For a LAN, press (ENTER) for none:
```

IP del router(WAN).

```
Enter an option: 2

Available interfaces:

1 - WAN (em1 - static)

2 - LAN (em0)

Enter the number of the interface you wish to configure: 2

Enter the new LAN IPv4 address. Press ⟨ENTER⟩ for none:

> 10.25.25.1

Subnet masks are entered as bit counts (as in CIDR notation) in pfSense.

9.g. 255.255.255.0 = 24

255.255.0.0 = 16

255.0.0.0 = 8

Enter the new LAN IPv4 subnet bit count (1 to 32):

> 8

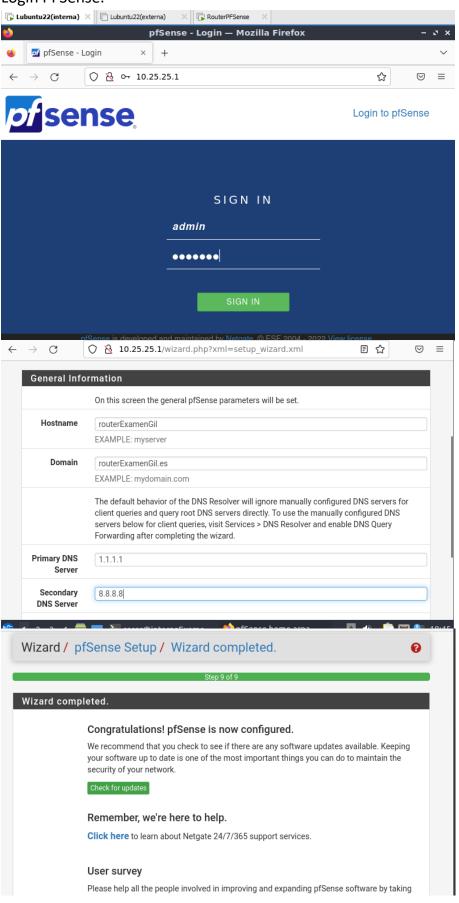
For a WAN, enter the new LAN IPv4 upstream gateway address.

For a LAN, press ⟨ENTER⟩ for none:
```

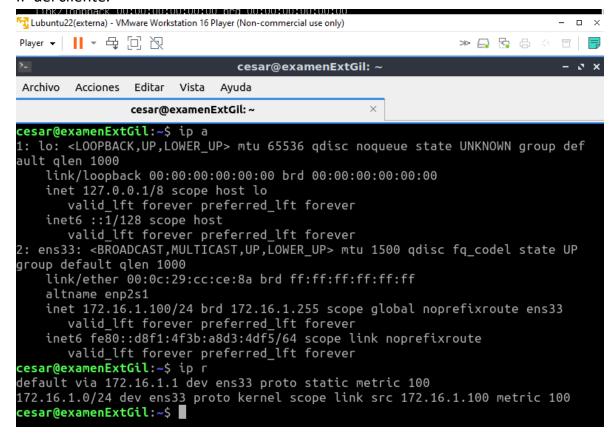
IP a la que hay que acceder desde el cliente interno para configurar el firewall con interfaz grafica.

```
The IPv4 LAN address has been set to 10.25.25.1/8
You can now access the webConfigurator by opening the following URL in your web
browser:
                 http://10.25.25.1/
Press <ENTER> to continue.
VMware Virtual Machine — Netgate Device ID: 63756e9ccd80a70693f5
*** Welcome to pfSense 2.6.0-RELEASE (amd64) on pfSense ***
WAN (wan)
                   -> ем1
                                  -> v4: 172.16.1.1/24
LAN (lan)
                                  -> v4: 10.25.25.1/8
                  -> ем0
0) Logout (SSH only)
                                           9) pfTop
1) Assign Interfaces
                                          10) Filter Logs
2) Set interface(s) IP address
3) Reset webConfigurator password
4) Reset to factory defaults
                                         11) Restart webConfigurator
                                          12) PHP shell + pfSense tools
13) Update from console
5) Reboot system
                                          14) Enable Secure Shell (sshd)
                                          15) Restore recent configuration
6) Halt system
7) Ping host
                                          16) Restart PHP-FPM
8) Shell
Enter an option: 📕
```

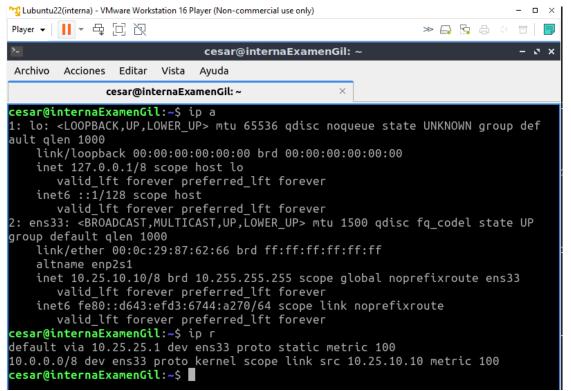
Login PFSense.



IP del cliente.



IP del servidor.

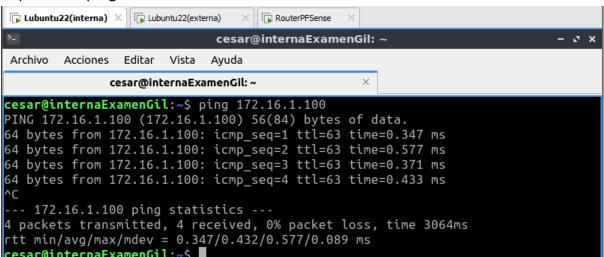


Ping interno a externo con todo en ACCEPT.

Captura del ping.

Con todo en DROP, Ping interno a externo pero al revés no.

Captura del ping.



Ping fallido externo-interno.

```
cesar@examenExtGil: ~

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cesar@examenExtGil: ~

cesar@examenExtGil: ~

cesar@examenExtGil: ~

ping 10.25.10.10

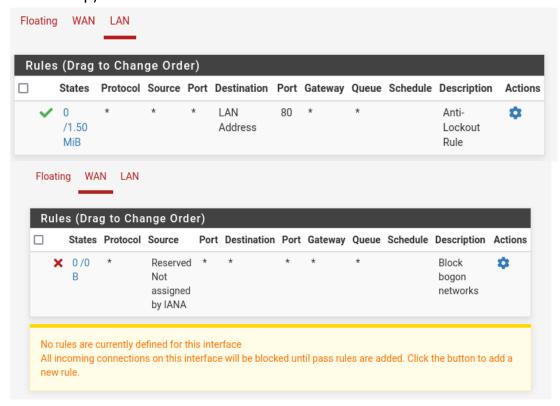
pING 10.25.10.10 (10.25.10.10) 56(84) bytes of data.

^C
--- 10.25.10.10 ping statistics ---

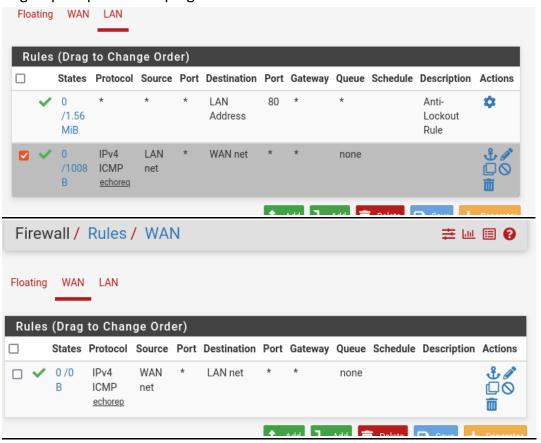
7 packets transmitted, 0 received, 100% packet loss, time 6149ms

cesar@examenExtGil: ~$
```

Normas a drop(se ponen por defecto, es decir, todo lo que no este especificado se filtra a drop).



Reglas para permitir el ping.



Ping interno a router pero al revés no.

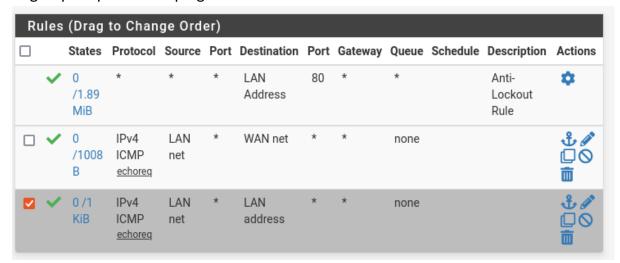
Captura del ping.

```
Lubuntu22(interna) X Lubuntu22(externa)
                                   X RouterPFSense
                               cesar@internaExamenGil:
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               cesar@internaExamenGil: ~
cesar@internaExamenGil:~$ ping 10.25.25.1
PING 10.25.25.1 (10.25.25.1) 56(84) bytes of data.
--- 10.25.25.1 ping statistics ---
21 packets transmitted, 0 received, 100% packet loss, time 20462ms
cesar@internaExamenGil:~$ ping 10.25.25.1
PING 10.25.25.1 (10.25.25.1) 56(84) bytes of data.
64 bytes from 10.25.25.1: icmp_seq=1 ttl=64 time=0.366 ms
64 bytes from 10.25.25.1: icmp_seq=2 ttl=64 time=0.265 ms
64 bytes from 10.25.25.1: icmp_seq=3 ttl=64 time=0.318 ms
64 bytes from 10.25.25.1: icmp_seq=4 ttl=64 time=0.165 ms
,Ċ
--- 10.25.25.1 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3063ms
rtt min/avg/max/mdev = 0.165/0.278/0.366/0.074 ms
cesar@internaExamenGil:~$
```

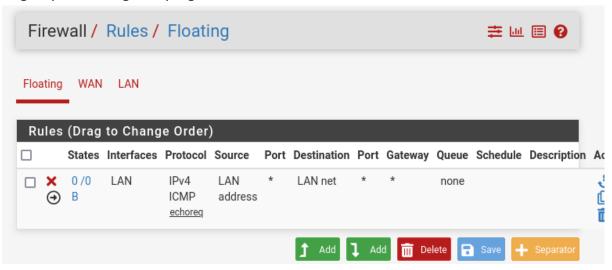
Captura del ping fallido router-interno.

```
X Lubuntu22(externa)
Lubuntu22(interna)
                                       X RouterPFSense X
4 packets transmitted, 4 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 0.189/0.212/0.236/0.020 ms
[2.6.0-RELEASE][root@routerExamenGil.routerExamenGil.es]/root: ping 10.25.10.10
PING 10.25.10.10 (10.25.10.10): 56 data bytes
ping: sendto: Permission denied
`C
--- 10.25.10.10 ping statistics -
5 packets transmitted, 0 packets received, 100.0% packet loss
[2.6.0-RELEASE][root@routerExamenGil.routerExamenGil.es]/root: ping 10.25.10.10
PING 10.25.10.10 (10.25.10.10): 56 data bytes
ping: sendto: Permission denied
--- 10.25.10.10 ping statistics -
6 packets transmitted, 0 packets received, 100.0% packet loss
[2.6.0-RELEASE][root@routerExamenGil.routerExamenGil.es]/root:
```

Reglas para permitir el ping del interno al router.

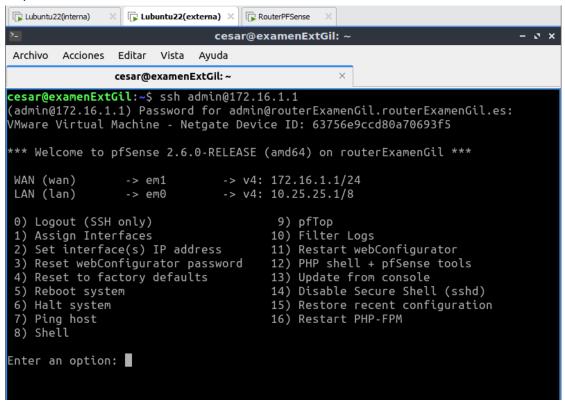


Reglas para denegar el ping del servidor al router.

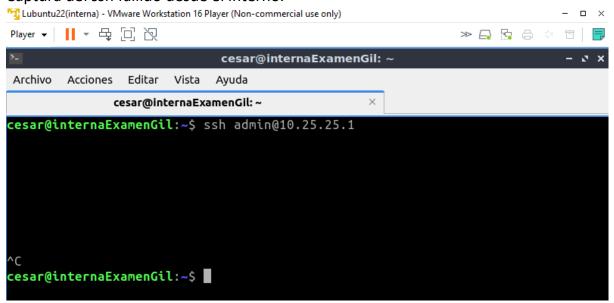


SSH a router desde externo pero no desde el interno.

Captura del ssh.



Captura del ssh fallido desde el interno.



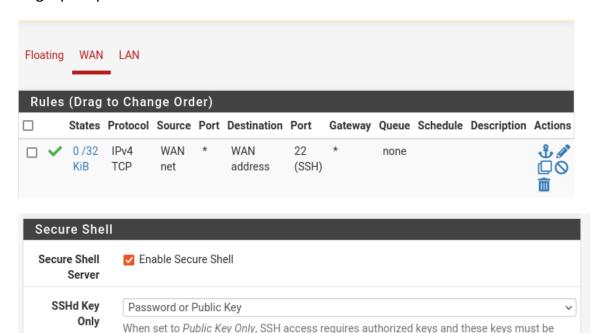
Regla para permitir el ssh.

Allow Agent

Forwarding

SSH port

22



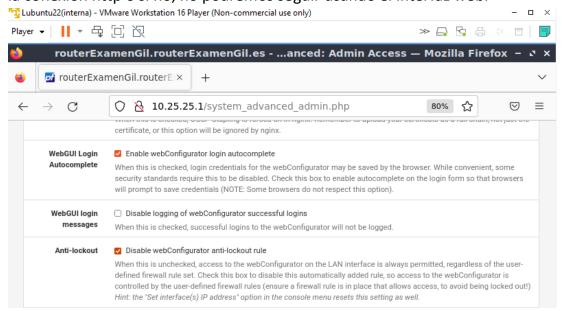
valid authorized key to login.

Enables ssh-agent forwarding support.

Note: Leave this blank for the default of 22.

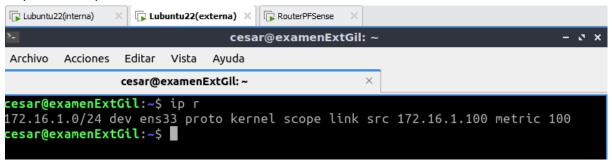
Para denegar el ssh desde el interno, desde la misma pestaña donde habilitamos el secure shell, hay que deshabilitar el anti-lockout. Antes de hacerlo, recordar habilitar la conexión http o si no, no podremos seguir usando el interfaz web.

configured for each user that has been granted secure shell access. If set to Require Both Password and Public Key, the SSH daemon requires both authorized keys and valid passwords to gain access. The default Password or Public Key setting allows either a valid password or a



Externo sin puerta de enlace.

Captura del ip r.



Ping fallido interno-externo.

```
cesar@internaExamenGil: ~ - x x

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cesar@internaExamenGil: ~ ×

cesar@internaExamenGil: ~ ×

cesar@internaExamenGil: ~ ×

cesar@internaExamenGil: ~ 5 ping 172.16.1.100

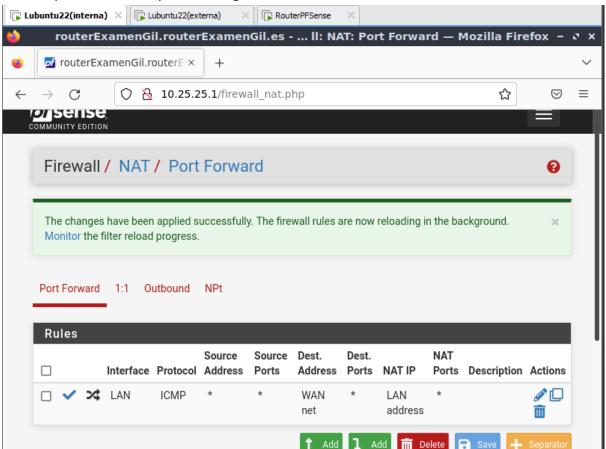
PING 172.16.1.100 (172.16.1.100) 56(84) bytes of data.

^C
--- 172.16.1.100 ping statistics ---
13 packets transmitted, 0 received, 100% packet loss, time 12281ms
```

POSTROUTING para que el ping vuelva a funcionar.

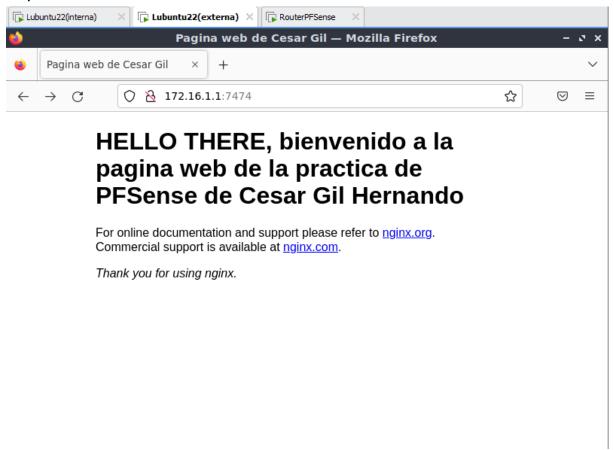
Captura del ping.

Norma para activar el postrouting.

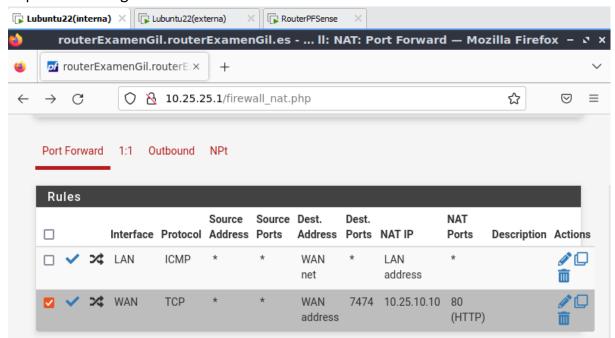


PREROUTING para permitir el HTTP desde el externo.

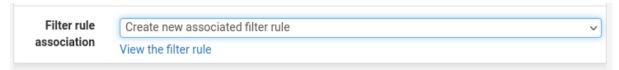
Captura de la conexión HTTP.



Captura de la regla.



A la hora de crear la regla existe la posibilidad de activar la siguiente opción para que PFSense cree automáticamente una regla en la tabla filter para permitir el forwarding entre la externa y la interna. De lo contrario habría que crearla manualmente.



Regla del forward creada automáticamente por el S.O del router.

