Administración del Firewall y configuración de NAT con iptables y firewalld

Por: John A. Pérez B. ~ 20186748

Este tutorial es un extracto del siguiente video:

https://youtu.be/0FxSrrcntr0

Configuraciones previas

En preferencias de virtualbox, agregamos una nueva red con dirección pública, que estará conectada a internet

Oracle VM VirtualBox Manager

File Machine Help

Tools

Server-lab

server
Powered Off

win10-20186740
Powered Off

centOs-server
Powered Off

w7
Powered Off

Centos

centOs-server-20186748
Running

centOs-cliente-20186748
Running

w7-20186748
Running

VirtualBox - Preferences

General
Input
Update
Language
Display
Network
Extensions
Proxy

Network

NAT Network

Active

NAT Network Details

Enable Network

Network Name: Internet

Network CIDR: 12.0.0.0/24

Network Options: Supports DHCP

Supports IPv6

Advertise Default IPv6 Route

Port Forwarding

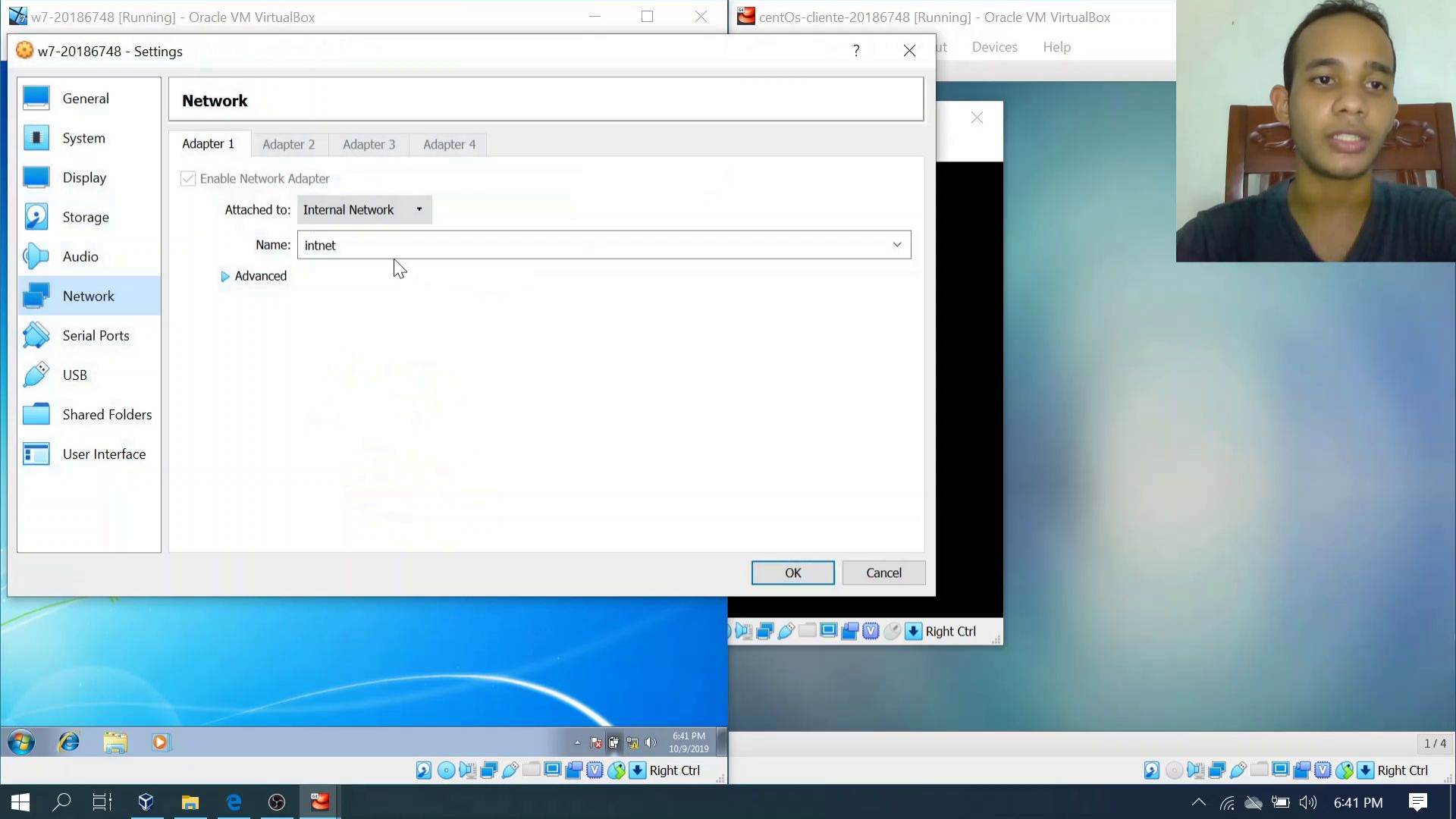
OK Cancel

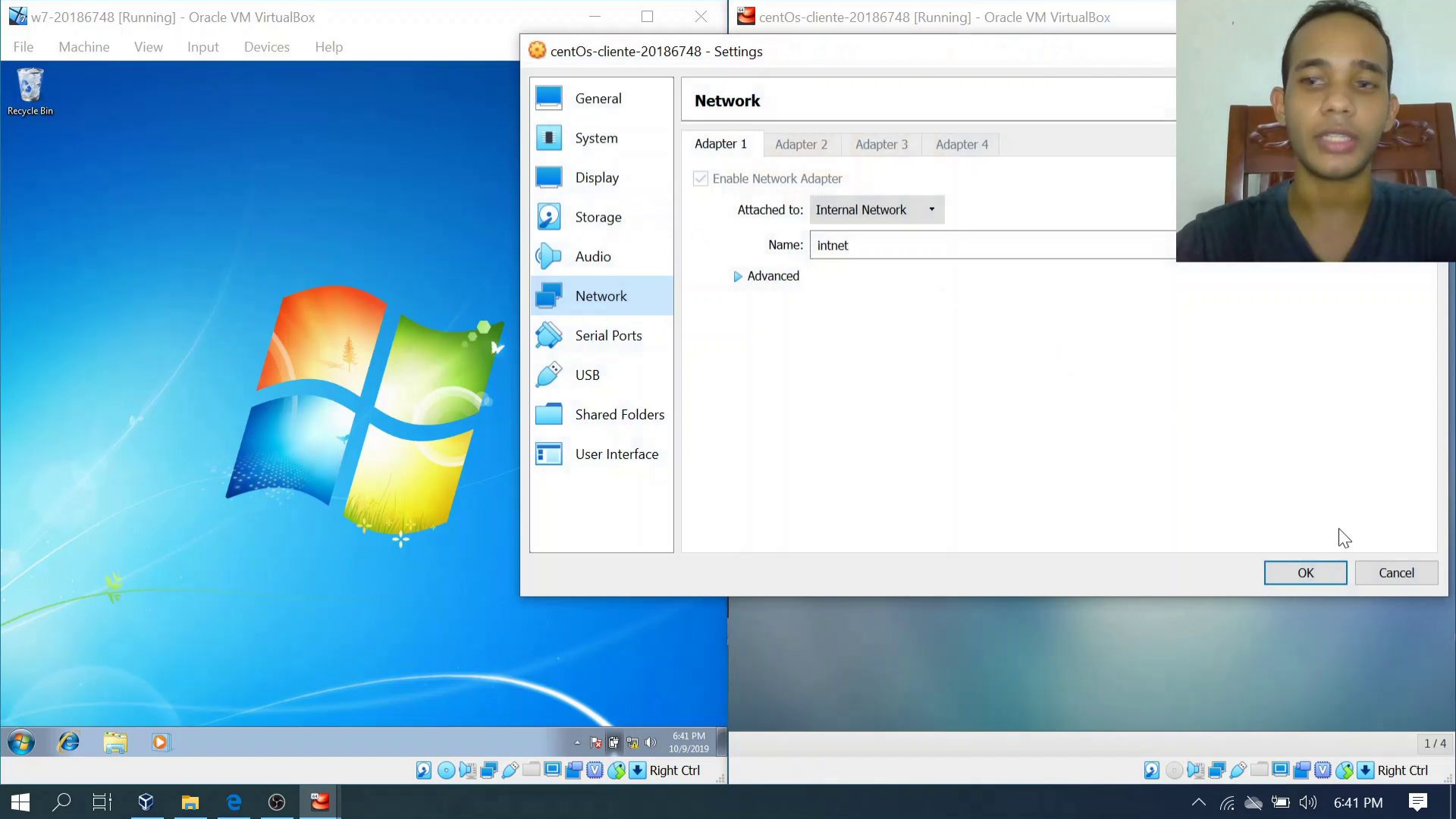
OK Cancel

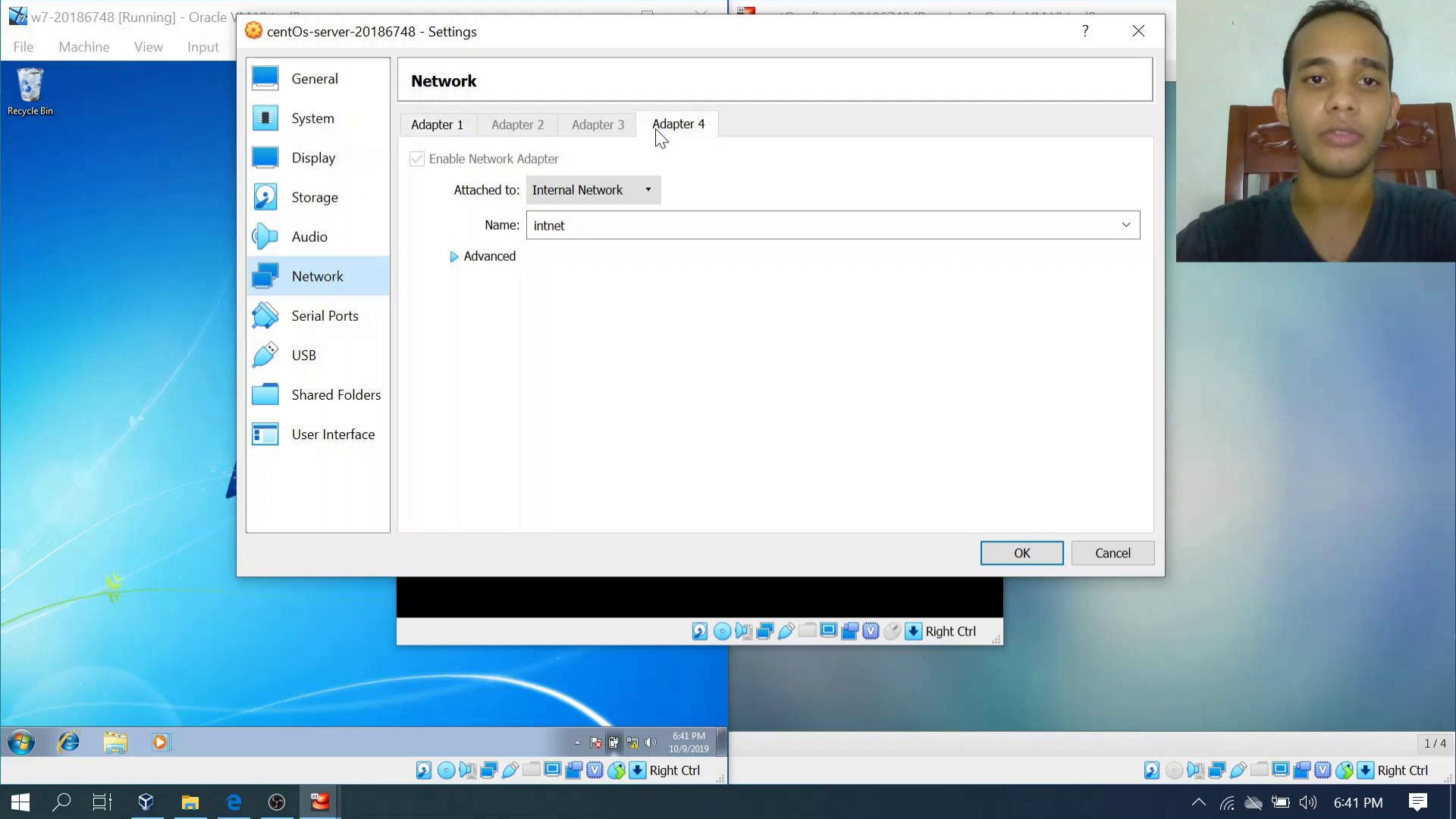
n your
f currently

6:41 PM

Colocamos ambos clientes y una de las interfaces del servidor en una misma red interna


w7-20186748 [Running] - Oracle VM VirtualBox
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
w7-20186748 - Settings
General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface
Network
Adapter 1
Adapter 2
Adapter 3
Adapter 4
Enable Network Adapter
Attached to:
Internal Network
Name:
intnet
Advanced
OK
Cancel
Devices
Help
Right Ctrl
6:41 PM
10/9/2019
1 / 4


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
centOs-cliente-20186748 - Settings
General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface
Network
Adapter 1
Adapter 2
Adapter 3
Adapter 4
Enable Network Adapter
Attached to: Internal Network
Name: intnet
Advanced
OK
Cancel
6:41 PM
10/9/2019
Right Ctrl
1 / 4
Right Ctrl
6:41 PM


w7-20186748 [Running] - Oracle
File
Machine
View
Input
Recycle Bin
centOs-server-20186748 - Settings
General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface
Network
Adapter 1
Adapter 2
Adapter 3
Adapter 4
Enable Network Adapter
Attached to:
Internal Network
Name:
intnet
Advanced
OK
Cancel
Right Ctrl
6:41 PM
10/9/2019
1 / 4

Configuramos una dirección estática acorde a la nueva red de tal manera de que ambos clientes puedan comunicarse con el servidor desde la red interna

w7-20186748 [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Recycle Bin

C:\Windows\system32\cmd.exe

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporatio

C:\Users\w7-20186748>ping 192.168.1.25

Pinging 192.168.1.25 with 32 bytes of d
Reply from 192.168.1.25: bytes=32 time<
Reply from 192.168.1.25: bytes=32 time<
Reply from 192.168.1.25: bytes=32 time<
Reply from 192.168.1.25: bytes=32 time<

Ping statistics for 192.168.1.25:
    Packets: Sent = 4, Received = 4, Lo
Approximate round trip times in milli-s
    Minimum = 0ms, Maximum = 0ms, Avera

C:\Users\w7-20186748>
```

centOs-server-20186748 [Running] - Oracle VM Vi

File Machine View Input Devices He

```
[root@localhost ~]# ifconfig enp0s10
enp0s10: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mt
        inet 192.168.1.25  netmask 255.255.255.0  broad
        inet6 fe80::7457:d1e6:c44c:cd52  prefixlen 64
        ether 08:00:27:2b:0f:8c  txqueuelen 1000  (Ethe
        RX packets 1572  bytes 122755 (119.8 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 547  bytes 46095 (45.0 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  c

[root@localhost ~]# _
```

6:42 PM
10/9/2019

Right Ctrl

centOs-cliente-20186748 [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Applications Places Terminal

centos20186748@localhost:~

File Edit View Search Terminal Help

```
[centos20186748@localhost ~]$ ping 192.168.1.25
PING 192.168.1.25 (192.168.1.25) 56(84) bytes of data
64 bytes from 192.168.1.25: icmp_seq=1 ttl=64 time=0.
64 bytes from 192.168.1.25: icmp_seq=2 ttl=64 time=0.382 ms
64 bytes from 192.168.1.25: icmp_seq=3 ttl=64 time=0.344 ms
64 bytes from 192.168.1.25: icmp_seq=4 ttl=64 time=0.374 ms
^C
--- 192.168.1.25 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3000ms
rtt min/avg/max/mdev = 0.331/0.357/0.382/0.031 ms
[centos20186748@localhost ~]$
```

centos20186748@localhost:~

1 / 4

Right Ctrl

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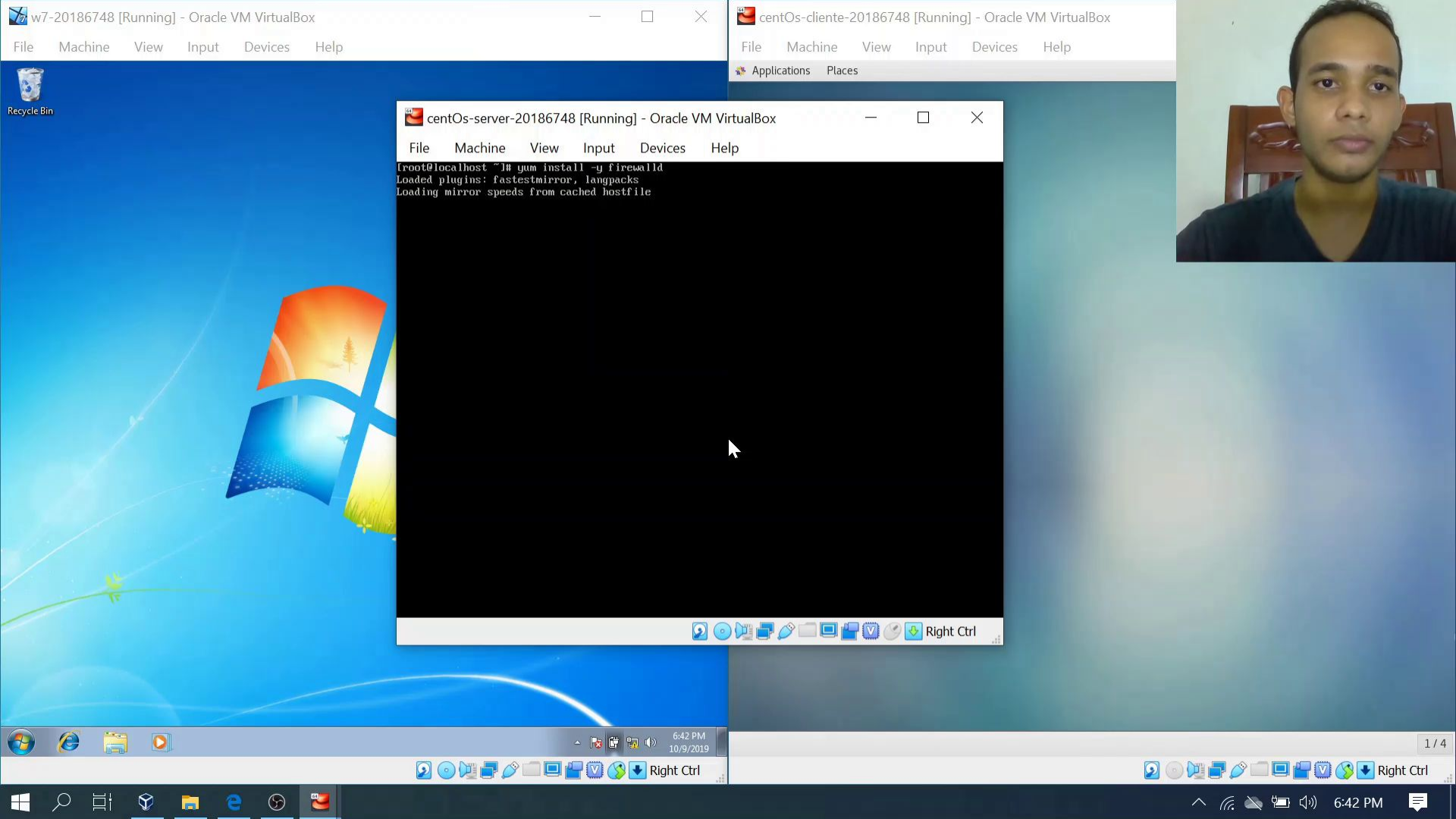
Administración del firewall con la aplicación Firewalld

Instalamos y habilitamos la aplicación **firewalld**, con los comandos **yum install -y firewalld** para instalar la aplicación, y **systemctl enable firewalld**, **systemctl start firewalld** para iniciarla


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# yum install -y firewalld
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
Right Ctrl
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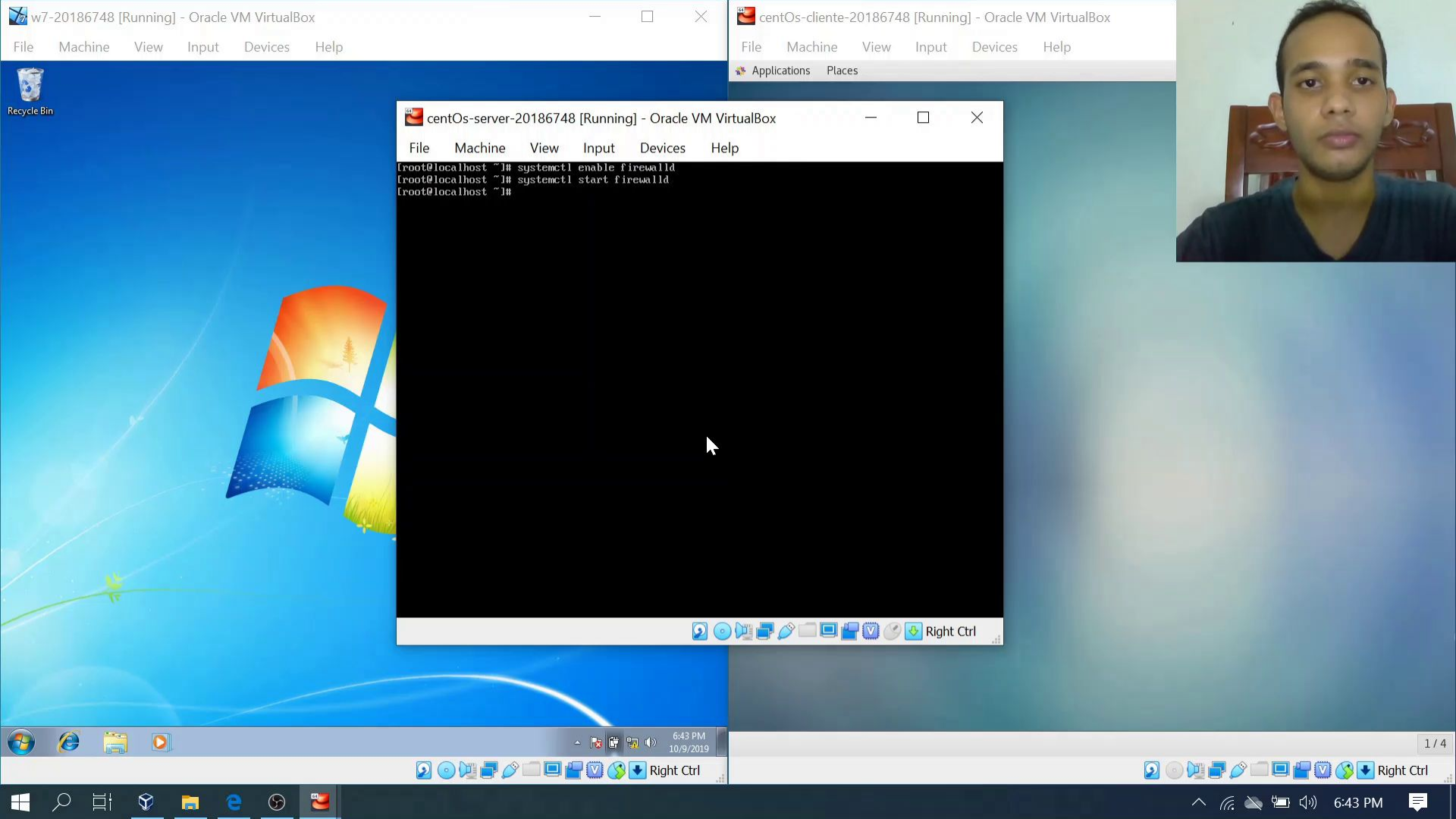
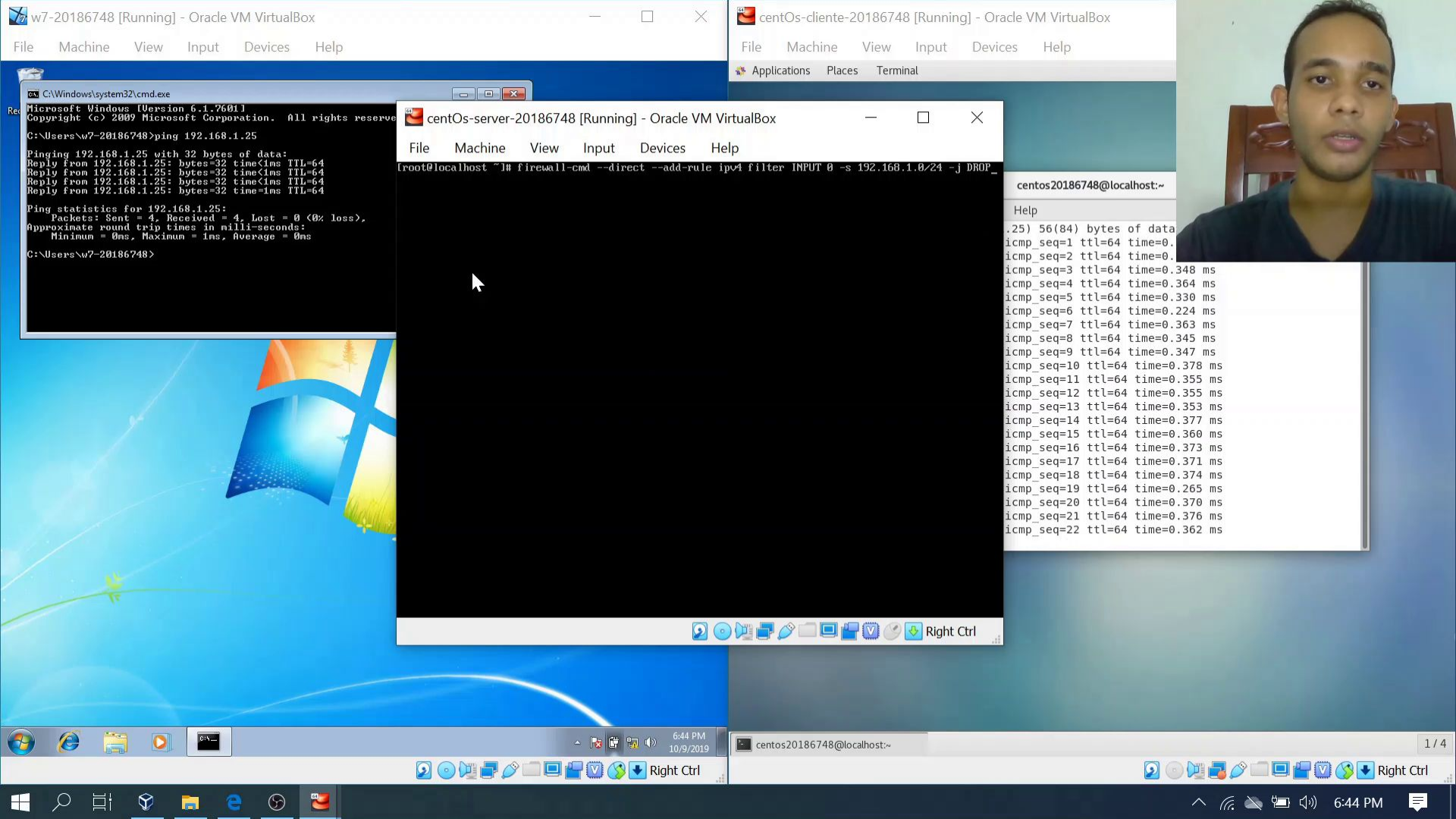
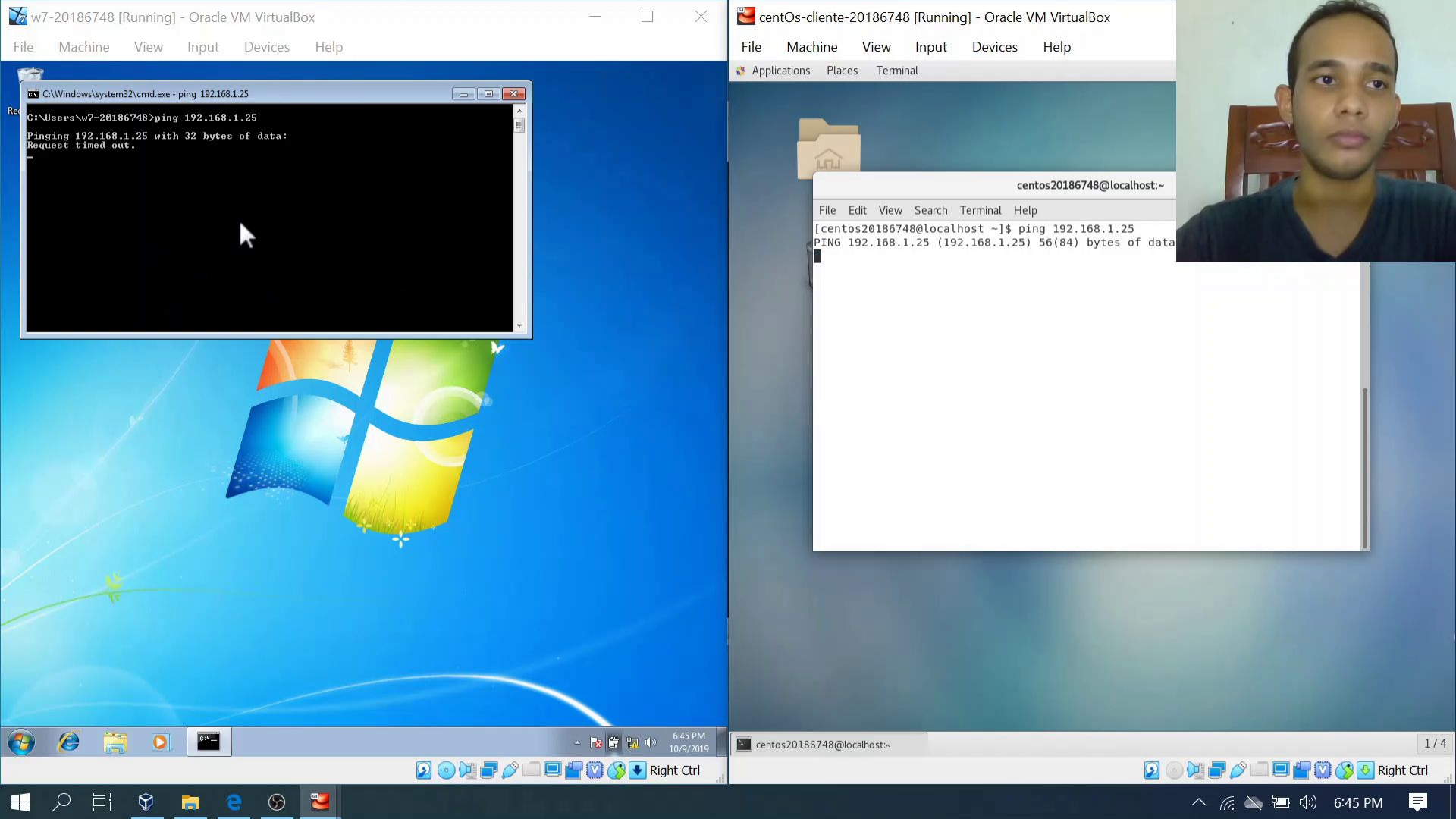
10/9/2019
Right Ctrl
1 / 4
Right Ctrl
6:42 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# systemctl enable firewalld
[root@localhost ~]# systemctl start firewalld
[root@localhost ~]#
Right Ctrl
6:43 PM
10/9/2019
Right Ctrl
1 / 4
Right Ctrl
6:43 PM

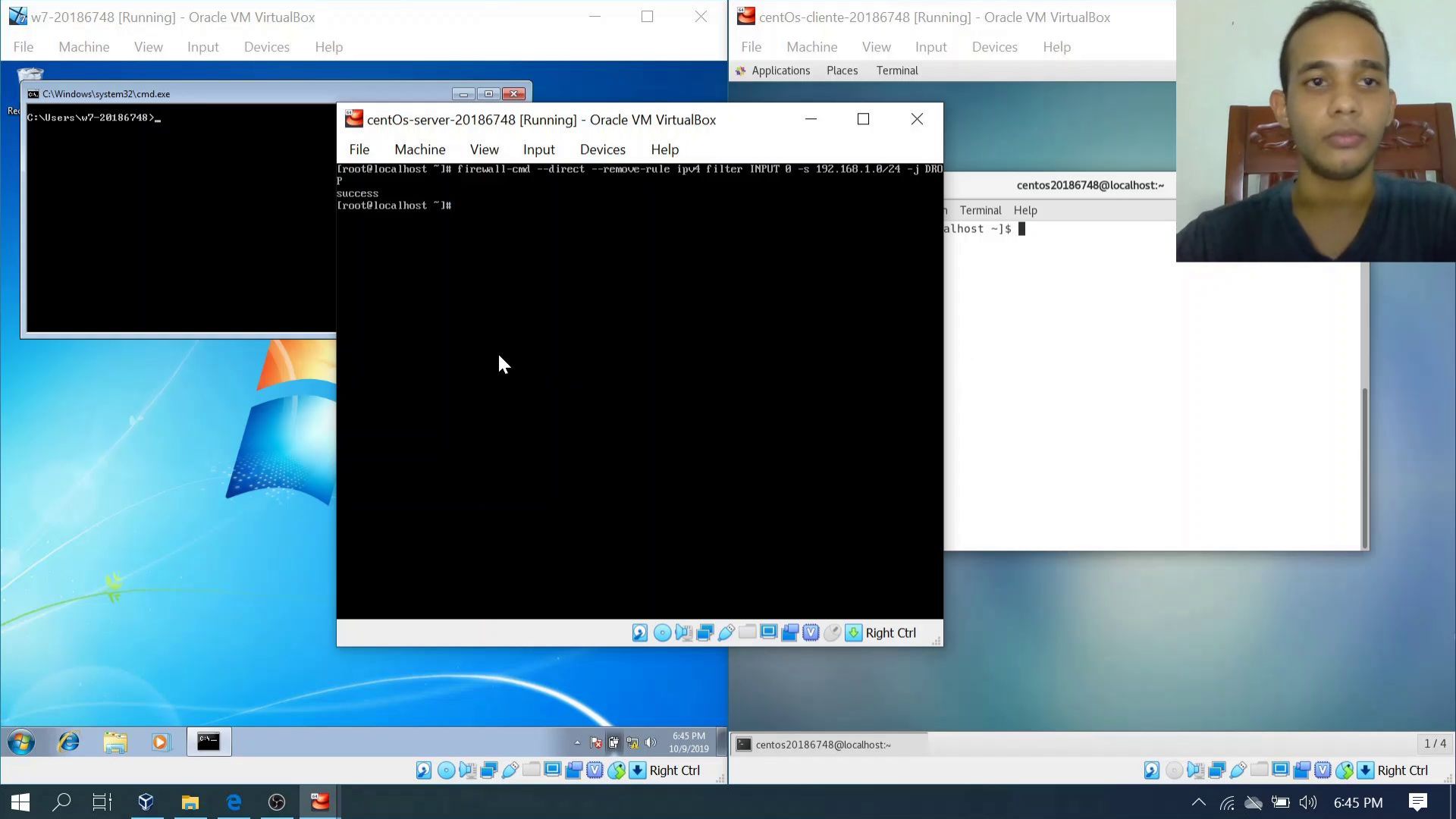
Bloqueando y permitiendo redes con firewalld

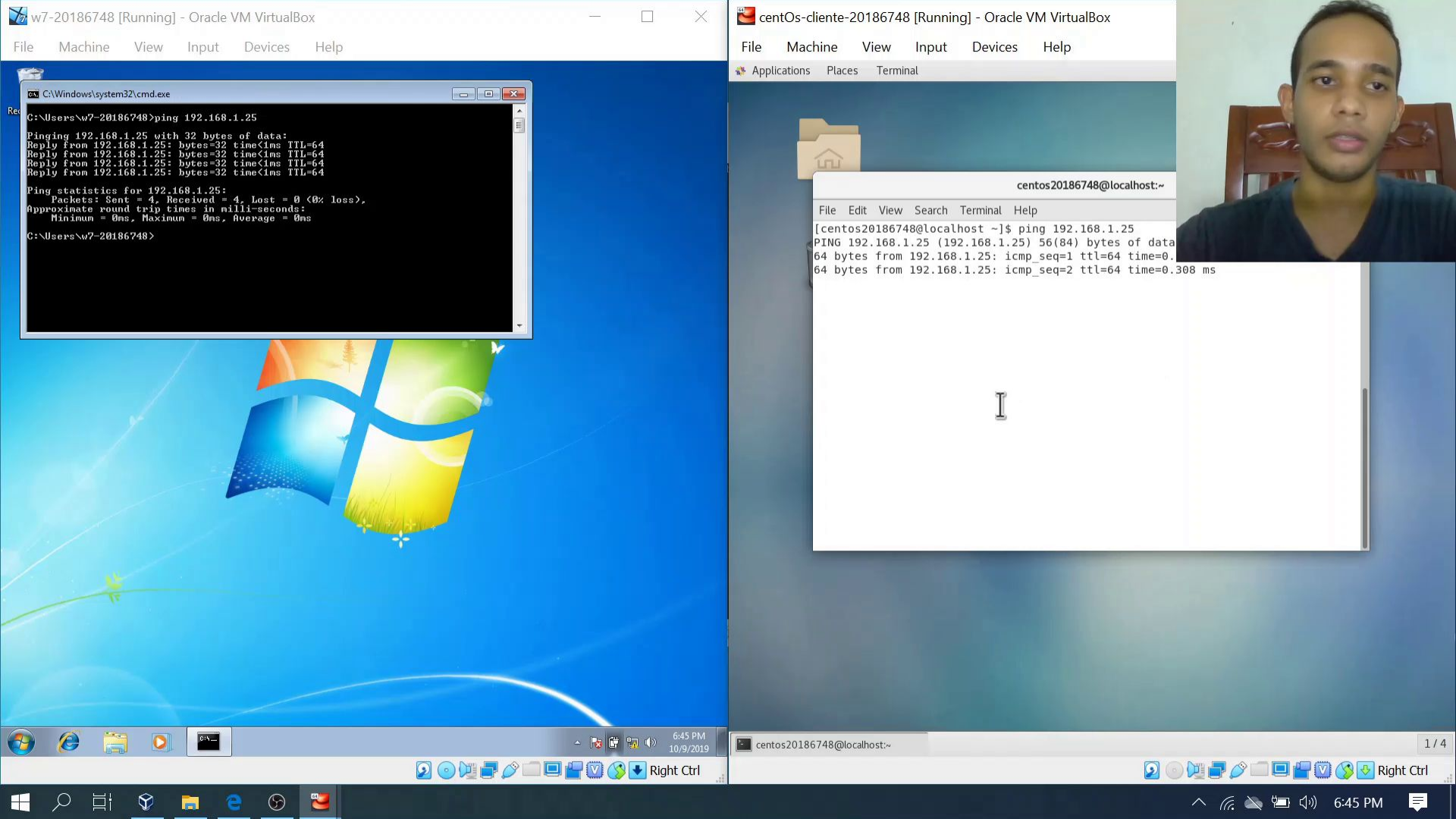
Para bloquear una red con firewalld crearemos una regla directa que filtre las entradas, para esto utilizamos el comando, **firewall-cmd --direct --add-rule ipv4 filter INPUT 0 -s [red] -j DROP**, y reemplazamos **[red]** por la red que deseamos bloquear, y luego probamos dando ping al servidor.


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserve
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time=1ms TTL=64
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
C:\Users\w7-20186748>
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# firewall-cmd --direct --add-rule ipv4 filter INPUT 0 -s 192.168.1.0/24 -j DROP
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Help
.25) 56(84) bytes of data
icmp_seq=1 ttl=64 time=0.
icmp_seq=2 ttl=64 time=0.
icmp_seq=3 ttl=64 time=0.348 ms
icmp_seq=4 ttl=64 time=0.364 ms
icmp_seq=5 ttl=64 time=0.330 ms
icmp_seq=6 ttl=64 time=0.224 ms
icmp_seq=7 ttl=64 time=0.363 ms
icmp_seq=8 ttl=64 time=0.345 ms
icmp_seq=9 ttl=64 time=0.347 ms
icmp_seq=10 ttl=64 time=0.378 ms
icmp_seq=11 ttl=64 time=0.355 ms
icmp_seq=12 ttl=64 time=0.355 ms
icmp_seq=13 ttl=64 time=0.353 ms
icmp_seq=14 ttl=64 time=0.377 ms
icmp_seq=15 ttl=64 time=0.360 ms
icmp_seq=16 ttl=64 time=0.373 ms
icmp_seq=17 ttl=64 time=0.371 ms
icmp_seq=18 ttl=64 time=0.374 ms
icmp_seq=19 ttl=64 time=0.265 ms
icmp_seq=20 ttl=64 time=0.370 ms
icmp_seq=21 ttl=64 time=0.376 ms
icmp_seq=22 ttl=64 time=0.362 ms
6:44 PM
10/9/2019
Right Ctrl
centos20186748@localhost:~
1 / 4
Right Ctrl
6:44 PM

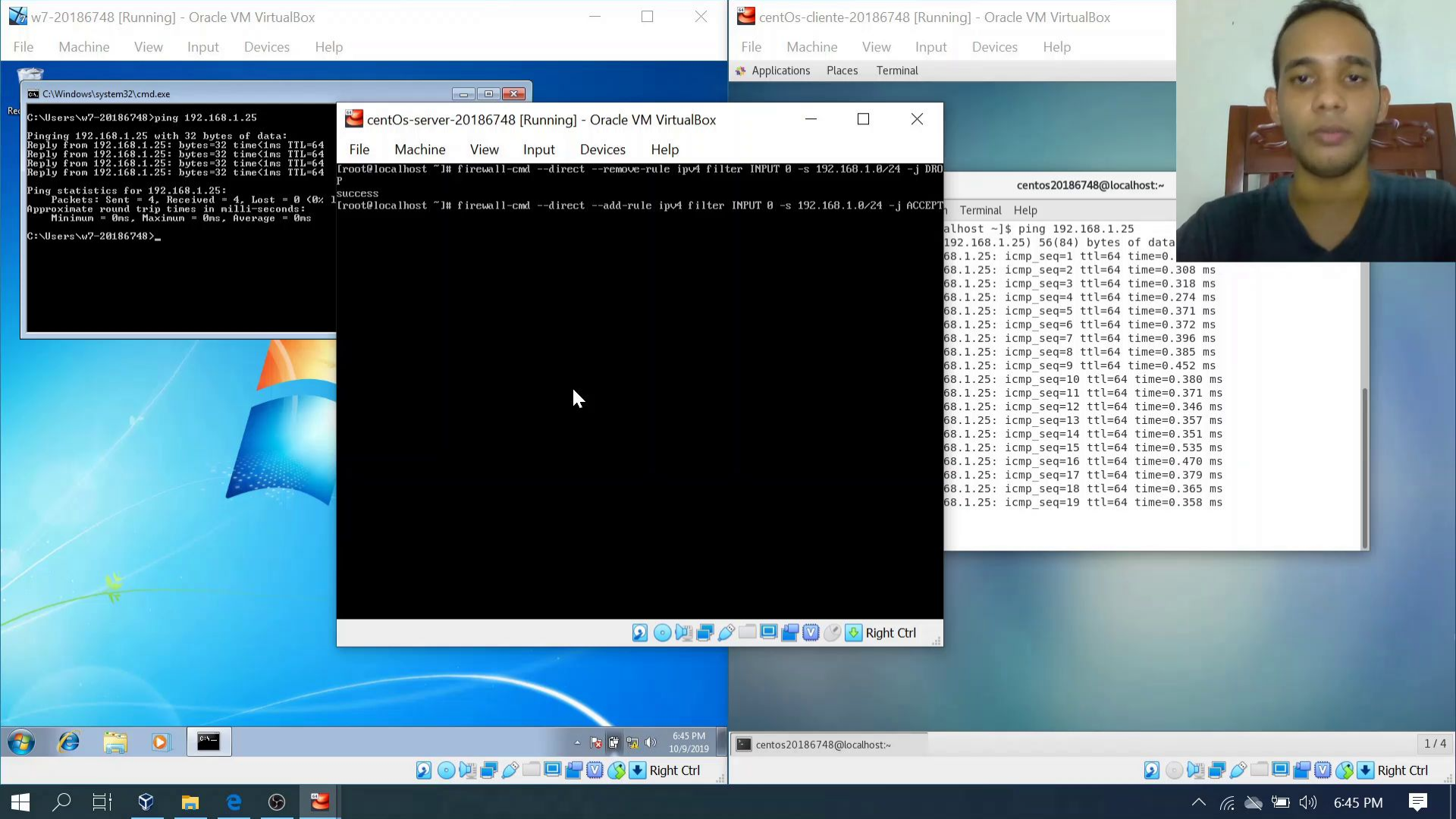

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
C:\Windows\system32\cmd.exe - ping 192.168.1.25
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Request timed out.
6:45 PM
10/9/2019
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
File Edit View Search Terminal Help
[centos20186748@localhost ~]$ ping 192.168.1.25
PING 192.168.1.25 (192.168.1.25) 56(84) bytes of data
centos20186748@localhost:~
1 / 4
Right Ctrl
6:45 PM

Para permitir que esta red se comunique nuevamente removemos la regla directa con **firewall-cmd --direct --remove-rule ipv4 filter INPUT 0 -s [red] -j DROP**, y reemplazamos [red] por la red que deseamos desbloquear, y luego intentamos dar ping.


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>_
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# firewall-cmd --direct --remove-rule ipv4 filter INPUT 0 -s 192.168.1.0/24 -j DRO
P
success
[root@localhost ~]#
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Terminal Help
alhost ~]$
6:45 PM
10/9/2019
Right Ctrl
centos20186748@localhost:~
1 / 4
Right Ctrl
6:45 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Users\w7-20186748>
6:45 PM
10/9/2019
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
File Edit View Search Terminal Help
[centos20186748@localhost ~]$ ping 192.168.1.25
PING 192.168.1.25 (192.168.1.25) 56(84) bytes of data
64 bytes from 192.168.1.25: icmp_seq=1 ttl=64 time=0.
64 bytes from 192.168.1.25: icmp_seq=2 ttl=64 time=0.308 ms
centos20186748@localhost:~
1 / 4
Right Ctrl
6:45 PM

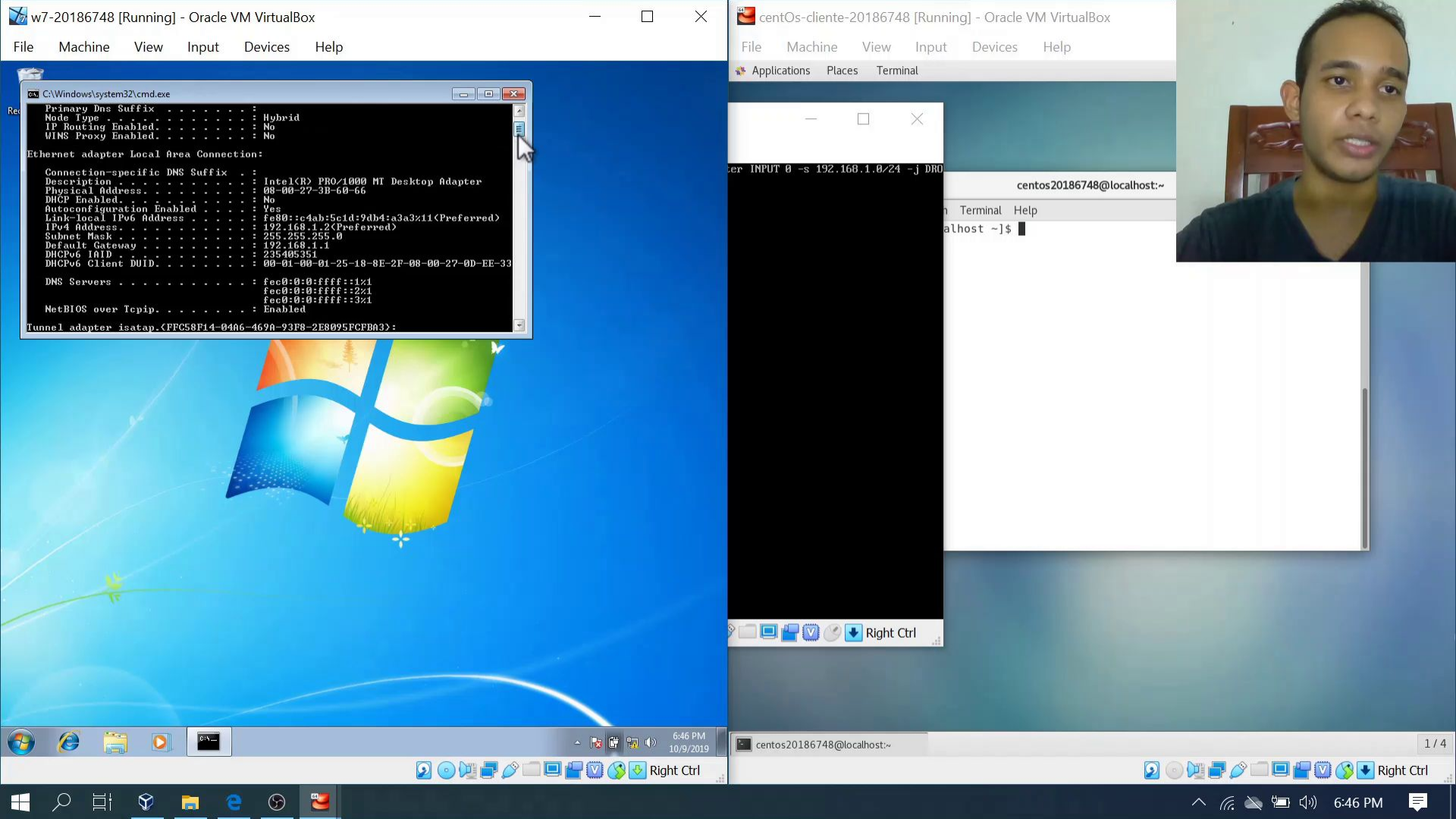
También podemos crear una nueva regla de acceso con **firewall-cmd --direct --add-rule ipv4 filter INPUT 0 -s [red] -j ACCEPT**.


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 4, Lost = 0 (0% l
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Users\w7-20186748>
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# firewall-cmd --direct --remove-rule ipv4 filter INPUT 0 -s 192.168.1.0/24 -j DRO
P
success
[root@localhost ~]# firewall-cmd --direct --add-rule ipv4 filter INPUT 0 -s 192.168.1.0/24 -j ACCEPT
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Terminal Help
alhost ~]$ ping 192.168.1.25
192.168.1.25) 56(84) bytes of data
68.1.25: icmp_seq=1 ttl=64 time=0.
68.1.25: icmp_seq=2 ttl=64 time=0.308 ms
68.1.25: icmp_seq=3 ttl=64 time=0.318 ms
68.1.25: icmp_seq=4 ttl=64 time=0.274 ms
68.1.25: icmp_seq=5 ttl=64 time=0.371 ms
68.1.25: icmp_seq=6 ttl=64 time=0.372 ms
68.1.25: icmp_seq=7 ttl=64 time=0.396 ms
68.1.25: icmp_seq=8 ttl=64 time=0.385 ms
68.1.25: icmp_seq=9 ttl=64 time=0.452 ms
68.1.25: icmp_seq=10 ttl=64 time=0.380 ms
68.1.25: icmp_seq=11 ttl=64 time=0.371 ms
68.1.25: icmp_seq=12 ttl=64 time=0.346 ms
68.1.25: icmp_seq=13 ttl=64 time=0.357 ms
68.1.25: icmp_seq=14 ttl=64 time=0.351 ms
68.1.25: icmp_seq=15 ttl=64 time=0.535 ms
68.1.25: icmp_seq=16 ttl=64 time=0.470 ms
68.1.25: icmp_seq=17 ttl=64 time=0.379 ms
68.1.25: icmp_seq=18 ttl=64 time=0.365 ms
68.1.25: icmp_seq=19 ttl=64 time=0.358 ms
6:45 PM
10/9/2019
Right Ctrl
centos20186748@localhost:~
1 / 4
Right Ctrl
6:45 PM

Bloqueando y permitiendo dispositivos con firewalld

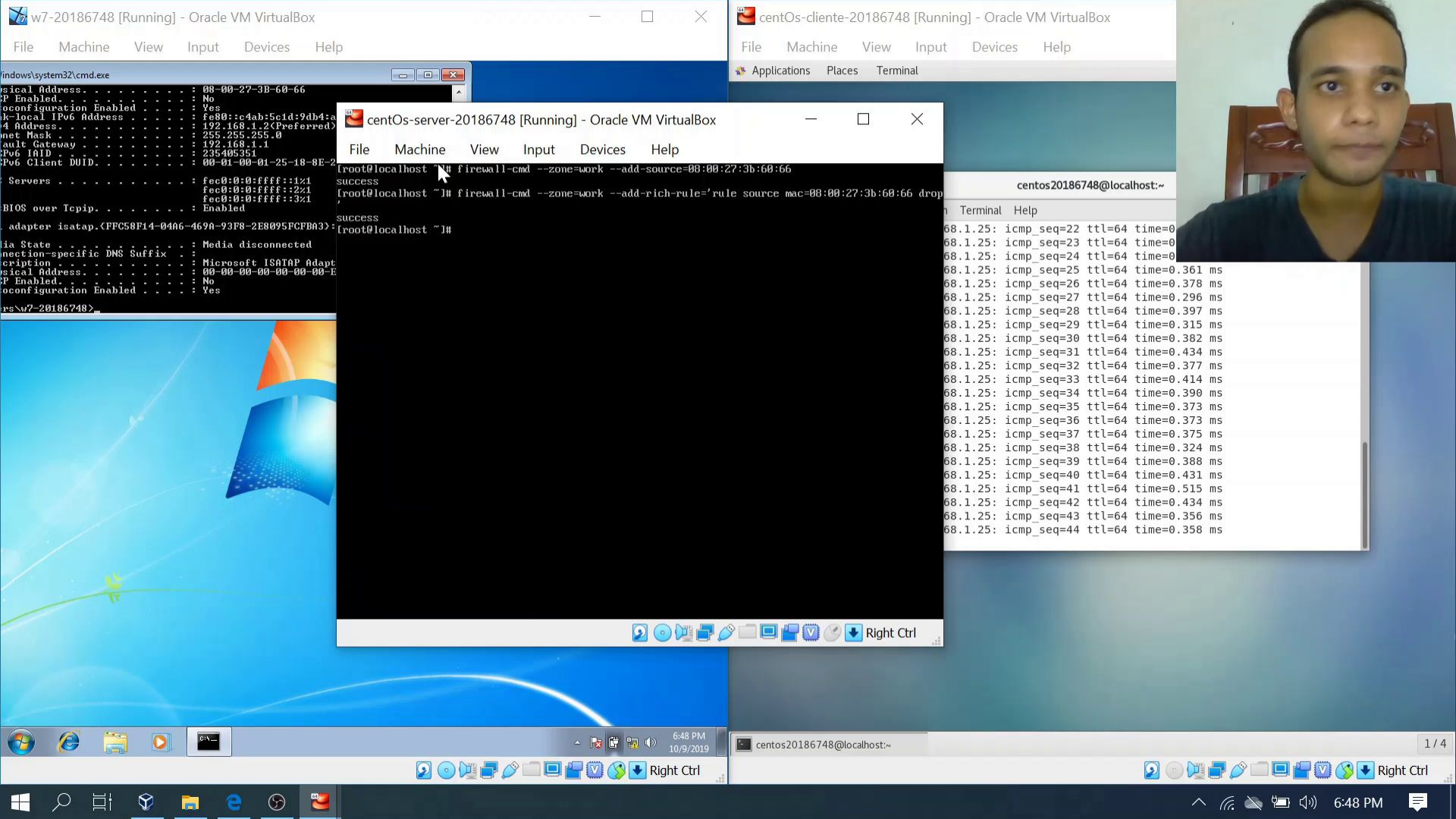
Paso 1

Buscamos la dirección mac del dispositivo que queremos bloquear.
Para bloquear el cliente windows buscamos su mac con **ipconfig /all**.

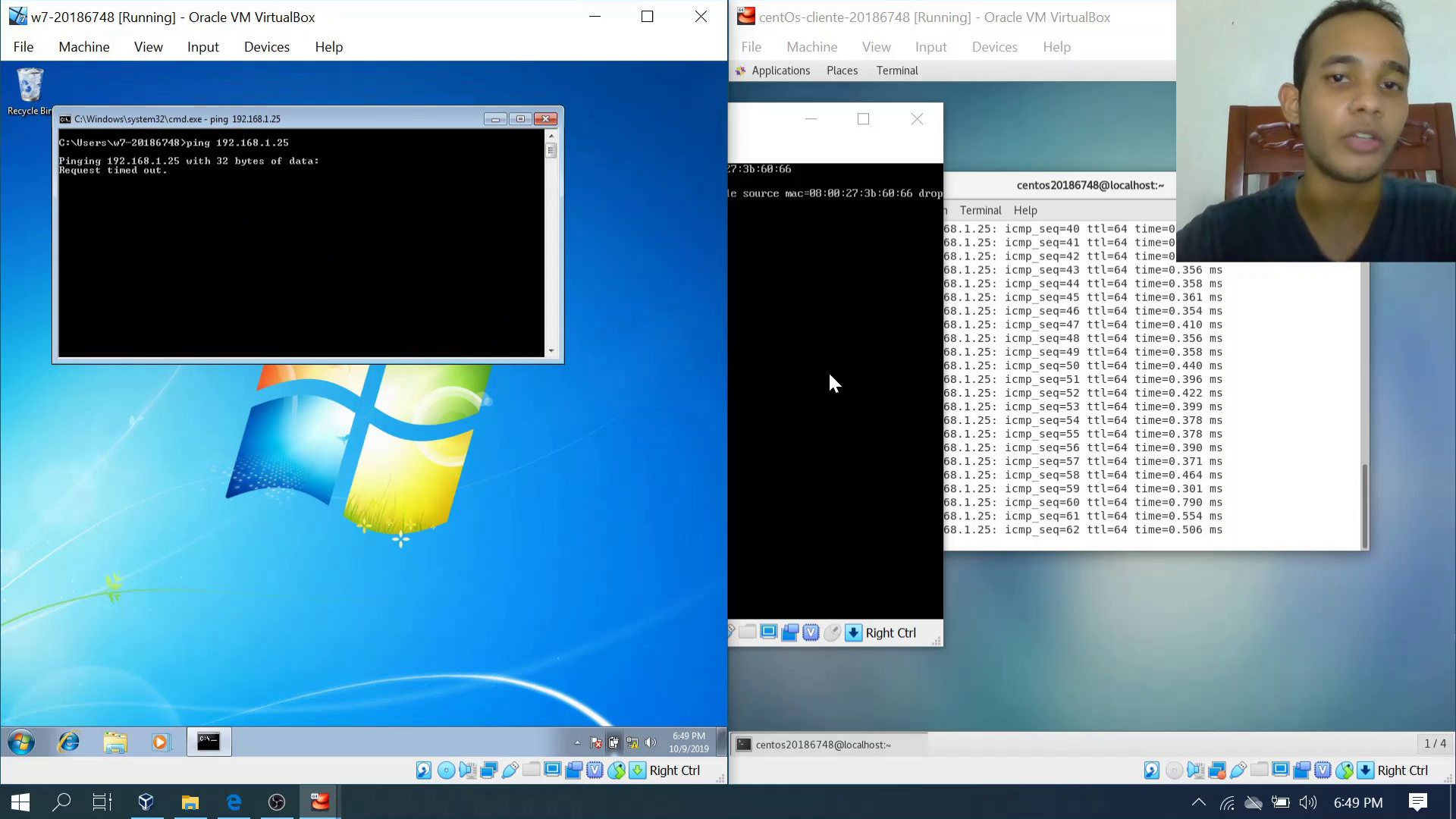

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
C:\Windows\system32\cmd.exe
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
Description . . . . . : Intel(R) PRO/1000 MT Desktop Adapter
Physical Address. . . . . : 08-00-27-3B-60-66
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::c4ab:5c1d:9db4:a3a3%11(Preferred)
IPv4 Address. . . . . : 192.168.1.2(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.1
DHCPv6 IAID . . . . . : 235405351
DHCPv6 Client DUID. . . . . : 00-01-00-01-25-18-8E-2F-08-00-27-0D-EE-33
DNS Servers . . . . . : fec0:0:0:ffff::1%1
fec0:0:0:ffff::2%1
fec0:0:0:ffff::3%1
NetBIOS over Tcpip. . . . . : Enabled
Tunnel adapter isatap.{FFC58F14-04A6-469A-93F8-2E8095FCFBA3}:
6:46 PM
10/9/2019
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
er INPUT 0 -s 192.168.1.0/24 -j DRO
centos20186748@localhost:~
Terminal Help
alhost ~]$
Right Ctrl
centos20186748@localhost:~
1 / 4
Right Ctrl
6:46 PM

Paso 2

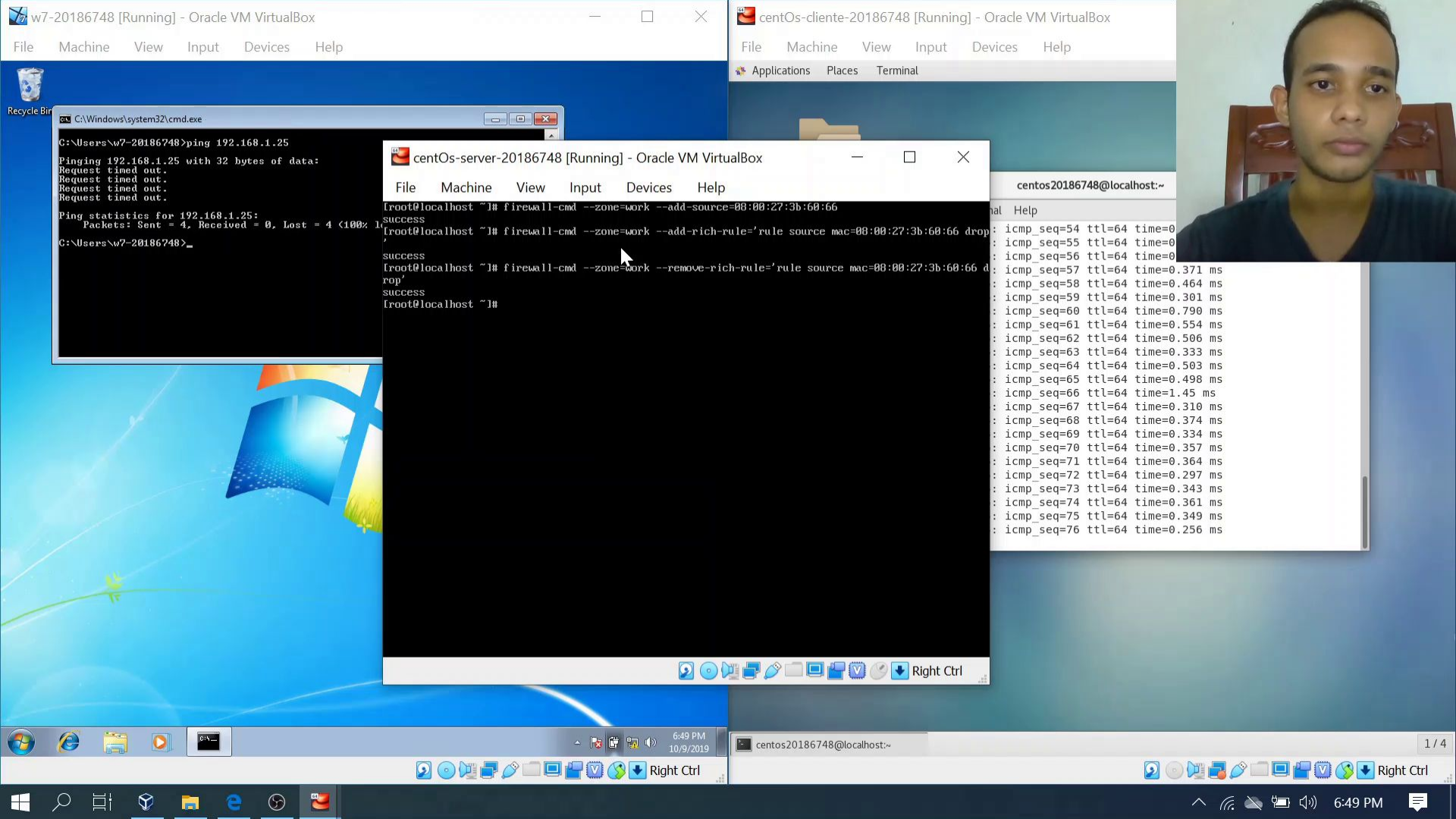
Agregamos una nueva regla en la zona trabajo con los siguientes comandos **firewall-cmd --zone=work --add-source=[mac]**, y **firewall-cmd --zone=work --add-rich-rule=’ rule source=[mac] drop’**

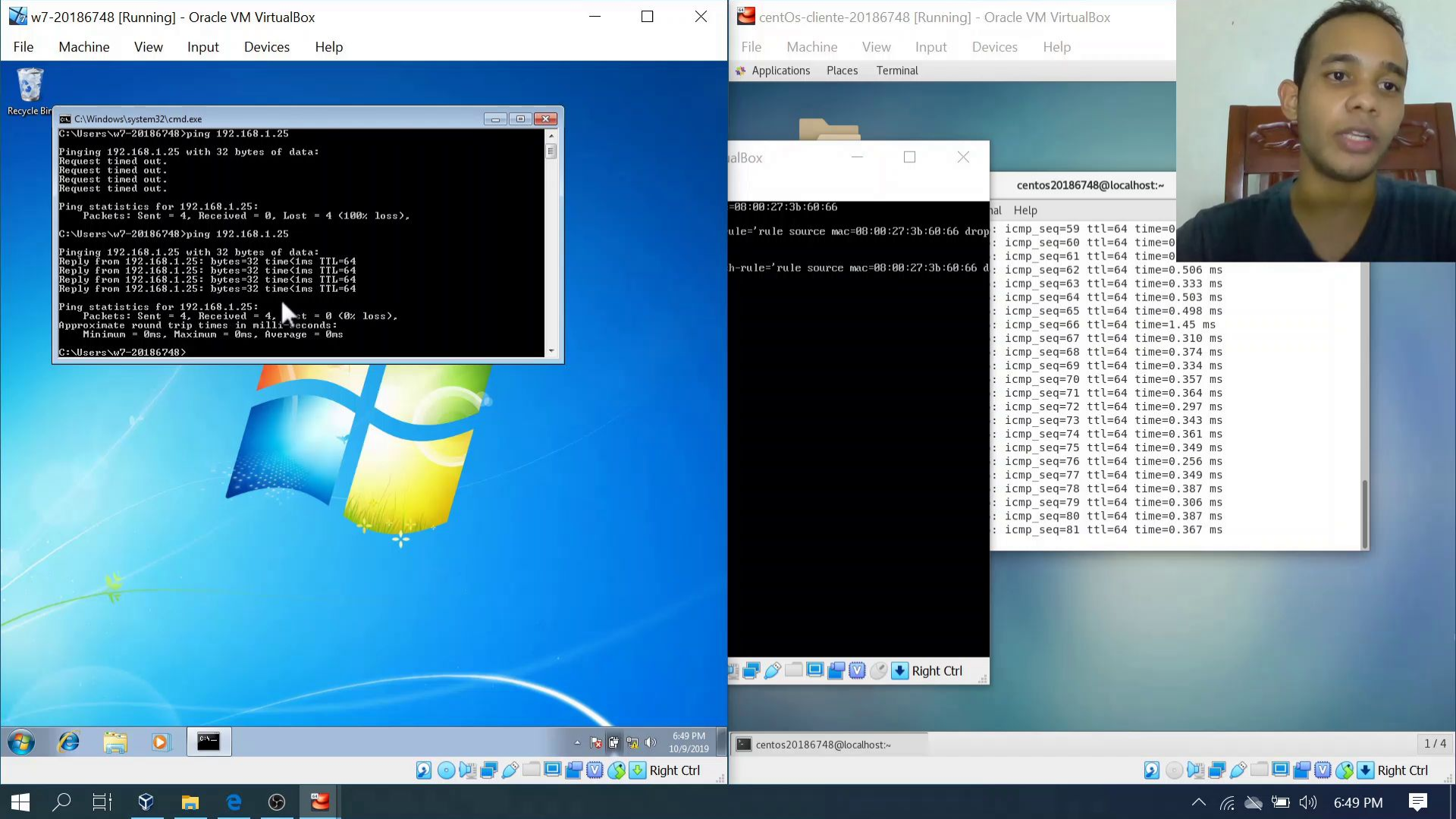

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# firewall-cmd --zone=work --add-source=08:00:27:3b:60:66
success
[root@localhost ~]# firewall-cmd --zone=work --add-rich-rule='rule source mac=08:00:27:3b:60:66 drop'
success
[root@localhost ~]#
centos20186748@localhost:~
Terminal Help
68.1.25: icmp_seq=22 ttl=64 time=0
68.1.25: icmp_seq=23 ttl=64 time=0
68.1.25: icmp_seq=24 ttl=64 time=0
68.1.25: icmp_seq=25 ttl=64 time=0.361 ms
68.1.25: icmp_seq=26 ttl=64 time=0.378 ms
68.1.25: icmp_seq=27 ttl=64 time=0.296 ms
68.1.25: icmp_seq=28 ttl=64 time=0.397 ms
68.1.25: icmp_seq=29 ttl=64 time=0.315 ms
68.1.25: icmp_seq=30 ttl=64 time=0.382 ms
68.1.25: icmp_seq=31 ttl=64 time=0.434 ms
68.1.25: icmp_seq=32 ttl=64 time=0.377 ms
68.1.25: icmp_seq=33 ttl=64 time=0.414 ms
68.1.25: icmp_seq=34 ttl=64 time=0.390 ms
68.1.25: icmp_seq=35 ttl=64 time=0.373 ms
68.1.25: icmp_seq=36 ttl=64 time=0.373 ms
68.1.25: icmp_seq=37 ttl=64 time=0.375 ms
68.1.25: icmp_seq=38 ttl=64 time=0.324 ms
68.1.25: icmp_seq=39 ttl=64 time=0.388 ms
68.1.25: icmp_seq=40 ttl=64 time=0.431 ms
68.1.25: icmp_seq=41 ttl=64 time=0.515 ms
68.1.25: icmp_seq=42 ttl=64 time=0.434 ms
68.1.25: icmp_seq=43 ttl=64 time=0.356 ms
68.1.25: icmp_seq=44 ttl=64 time=0.358 ms
Right Ctrl
6:48 PM
10/9/2019
centos20186748@localhost:~
1 / 4
Right Ctrl
6:48 PM

Probamos nuestra regla dando ping al servidor

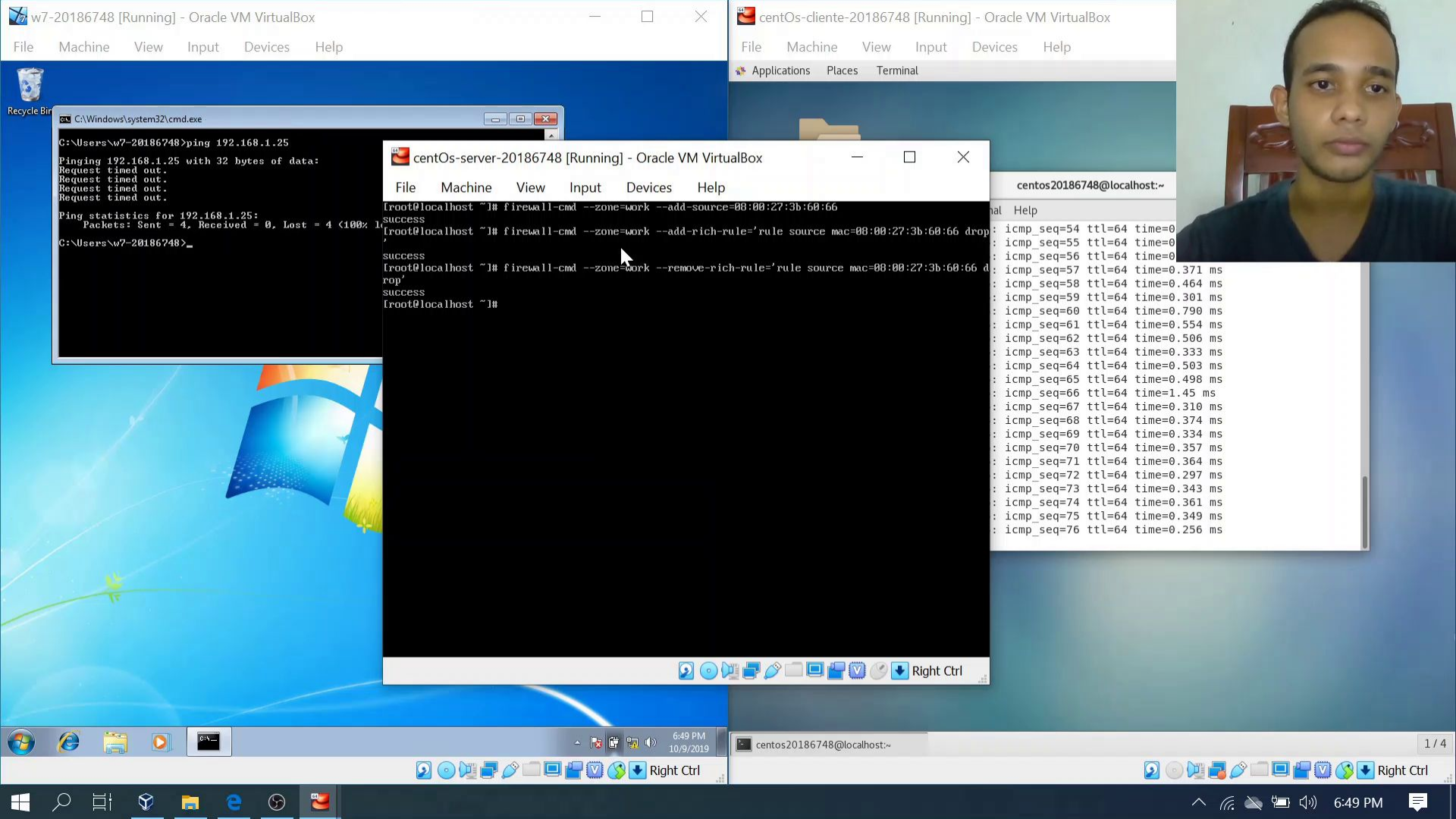

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
C:\Windows\system32\cmd.exe - ping 192.168.1.25
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Request timed out.
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
Applications Places Terminal
centos20186748@localhost:~
68.1.25: icmp_seq=43 ttl=64 time=0.356 ms
68.1.25: icmp_seq=44 ttl=64 time=0.358 ms
68.1.25: icmp_seq=45 ttl=64 time=0.361 ms
68.1.25: icmp_seq=46 ttl=64 time=0.354 ms
68.1.25: icmp_seq=47 ttl=64 time=0.410 ms
68.1.25: icmp_seq=48 ttl=64 time=0.356 ms
68.1.25: icmp_seq=49 ttl=64 time=0.358 ms
68.1.25: icmp_seq=50 ttl=64 time=0.440 ms
68.1.25: icmp_seq=51 ttl=64 time=0.396 ms
68.1.25: icmp_seq=52 ttl=64 time=0.422 ms
68.1.25: icmp_seq=53 ttl=64 time=0.399 ms
68.1.25: icmp_seq=54 ttl=64 time=0.378 ms
68.1.25: icmp_seq=55 ttl=64 time=0.378 ms
68.1.25: icmp_seq=56 ttl=64 time=0.390 ms
68.1.25: icmp_seq=57 ttl=64 time=0.371 ms
68.1.25: icmp_seq=58 ttl=64 time=0.464 ms
68.1.25: icmp_seq=59 ttl=64 time=0.301 ms
68.1.25: icmp_seq=60 ttl=64 time=0.790 ms
68.1.25: icmp_seq=61 ttl=64 time=0.554 ms
68.1.25: icmp_seq=62 ttl=64 time=0.506 ms
Right Ctrl
6:49 PM
10/9/2019
1 / 4
6:49 PM

Para permitir el acceso nuevamente colocamos la regla **firewall-cmd --zone=work --remove-rich-rule=’ rule source=[mac] drop’**, y probamos dando ping nuevamente al servidor.


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 0, Lost = 4 (100% l
C:\Users\w7-20186748>
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# firewall-cmd --zone=work --add-source=08:00:27:3b:60:66
success
[root@localhost ~]# firewall-cmd --zone=work --add-rich-rule='rule source mac=08:00:27:3b:60:66 drop
'
success
[root@localhost ~]# firewall-cmd --zone=work --remove-rich-rule='rule source mac=08:00:27:3b:60:66 d
rop'
success
[root@localhost ~]#
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Help
icmp_seq=54 ttl=64 time=0
icmp_seq=55 ttl=64 time=0
icmp_seq=56 ttl=64 time=0
icmp_seq=57 ttl=64 time=0.371 ms
icmp_seq=58 ttl=64 time=0.464 ms
icmp_seq=59 ttl=64 time=0.301 ms
icmp_seq=60 ttl=64 time=0.790 ms
icmp_seq=61 ttl=64 time=0.554 ms
icmp_seq=62 ttl=64 time=0.506 ms
icmp_seq=63 ttl=64 time=0.333 ms
icmp_seq=64 ttl=64 time=0.503 ms
icmp_seq=65 ttl=64 time=0.498 ms
icmp_seq=66 ttl=64 time=1.45 ms
icmp_seq=67 ttl=64 time=0.310 ms
icmp_seq=68 ttl=64 time=0.374 ms
icmp_seq=69 ttl=64 time=0.334 ms
icmp_seq=70 ttl=64 time=0.357 ms
icmp_seq=71 ttl=64 time=0.364 ms
icmp_seq=72 ttl=64 time=0.297 ms
icmp_seq=73 ttl=64 time=0.343 ms
icmp_seq=74 ttl=64 time=0.361 ms
icmp_seq=75 ttl=64 time=0.349 ms
icmp_seq=76 ttl=64 time=0.256 ms
6:49 PM
10/9/2019
Right Ctrl
centos20186748@localhost:~
1 / 4
Right Ctrl
6:49 PM

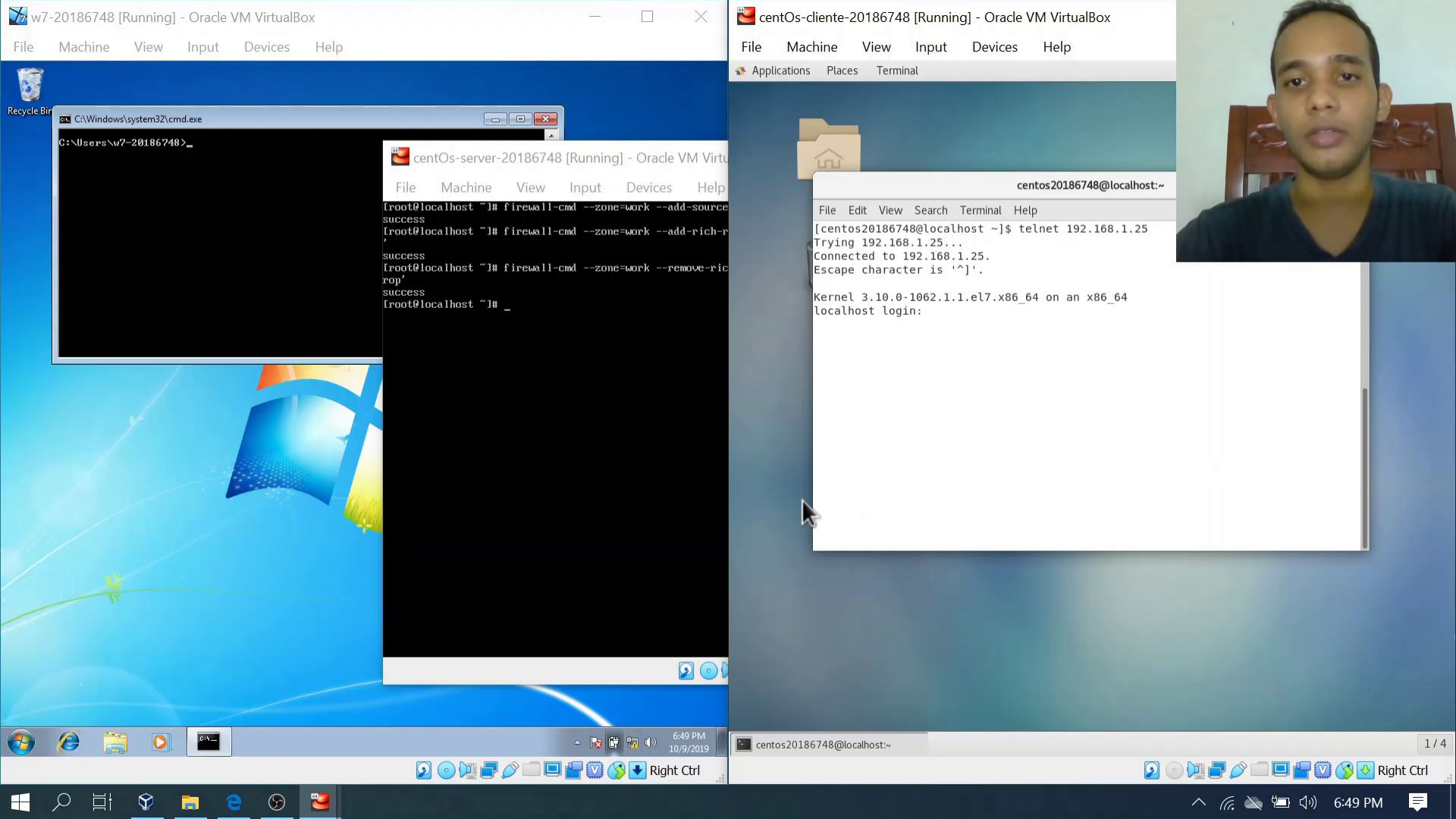

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Users\w7-20186748>
6:49 PM
10/9/2019
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Help
icmp_seq=59 ttl=64 time=0
icmp_seq=60 ttl=64 time=0
icmp_seq=61 ttl=64 time=0
icmp_seq=62 ttl=64 time=0.506 ms
icmp_seq=63 ttl=64 time=0.333 ms
icmp_seq=64 ttl=64 time=0.503 ms
icmp_seq=65 ttl=64 time=0.498 ms
icmp_seq=66 ttl=64 time=1.45 ms
icmp_seq=67 ttl=64 time=0.310 ms
icmp_seq=68 ttl=64 time=0.374 ms
icmp_seq=69 ttl=64 time=0.334 ms
icmp_seq=70 ttl=64 time=0.357 ms
icmp_seq=71 ttl=64 time=0.364 ms
icmp_seq=72 ttl=64 time=0.297 ms
icmp_seq=73 ttl=64 time=0.343 ms
icmp_seq=74 ttl=64 time=0.361 ms
icmp_seq=75 ttl=64 time=0.349 ms
icmp_seq=76 ttl=64 time=0.256 ms
icmp_seq=77 ttl=64 time=0.349 ms
icmp_seq=78 ttl=64 time=0.387 ms
icmp_seq=79 ttl=64 time=0.306 ms
icmp_seq=80 ttl=64 time=0.387 ms
icmp_seq=81 ttl=64 time=0.367 ms
=08:00:27:3b:60:66
ule='rule source mac=08:00:27:3b:60:66 drop
h-rule='rule source mac=08:00:27:3b:60:66
Right Ctrl
centos20186748@localhost:~
1 / 4
Right Ctrl
6:49 PM

Para permitir el acceso nuevamente colocamos la regla **firewall-cmd --zone=work --remove-rich-rule=’ rule source=[mac] drop’**

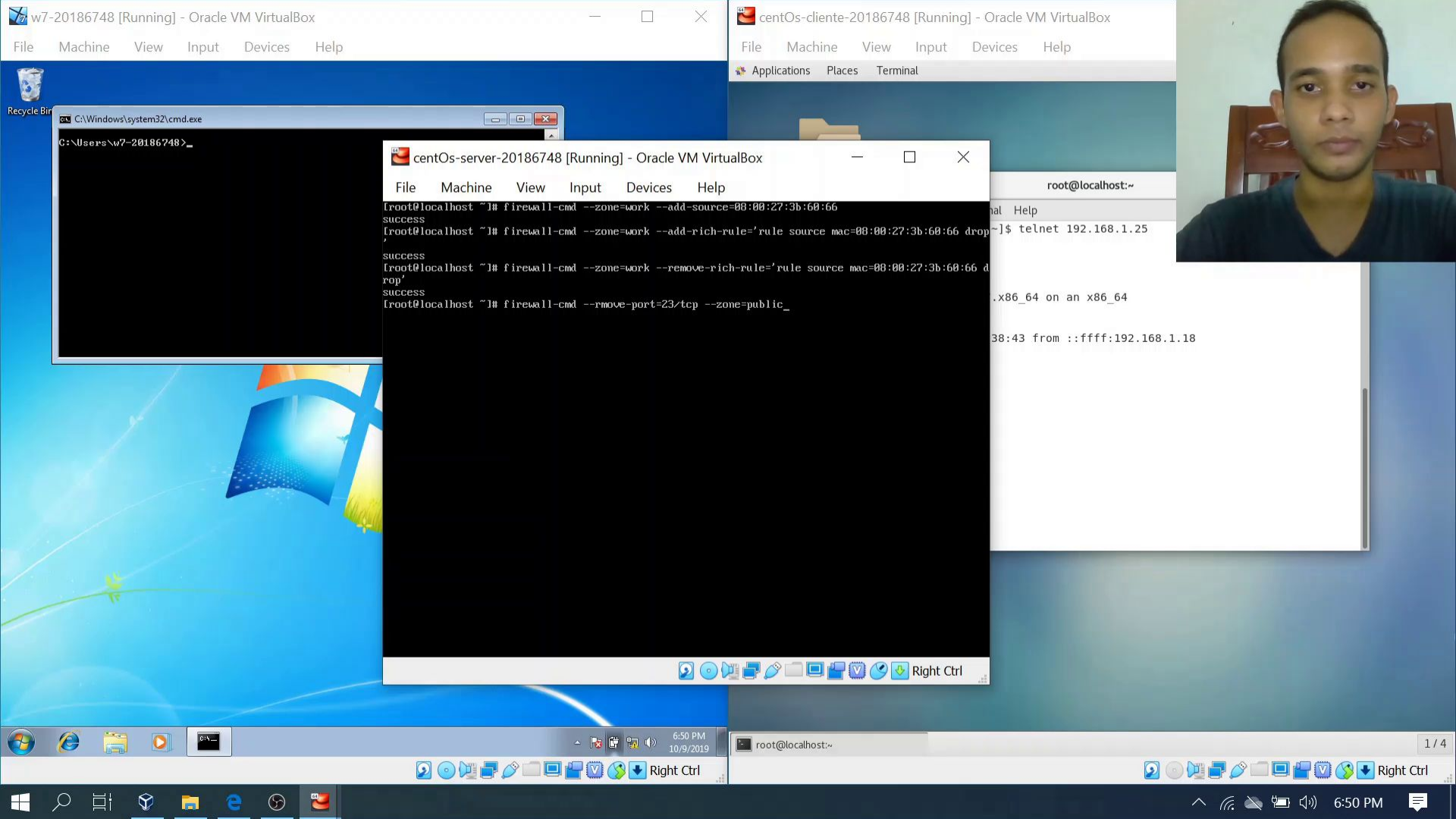

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 0, Lost = 4 (100% l
C:\Users\w7-20186748>
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# firewall-cmd --zone=work --add-source=08:00:27:3b:60:66
success
[root@localhost ~]# firewall-cmd --zone=work --add-rich-rule='rule source mac=08:00:27:3b:60:66 drop
'
success
[root@localhost ~]# firewall-cmd --zone=work --remove-rich-rule='rule source mac=08:00:27:3b:60:66 d
rop'
success
[root@localhost ~]#
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Help
icmp_seq=54 ttl=64 time=0
icmp_seq=55 ttl=64 time=0
icmp_seq=56 ttl=64 time=0
icmp_seq=57 ttl=64 time=0.371 ms
icmp_seq=58 ttl=64 time=0.464 ms
icmp_seq=59 ttl=64 time=0.301 ms
icmp_seq=60 ttl=64 time=0.790 ms
icmp_seq=61 ttl=64 time=0.554 ms
icmp_seq=62 ttl=64 time=0.506 ms
icmp_seq=63 ttl=64 time=0.333 ms
icmp_seq=64 ttl=64 time=0.503 ms
icmp_seq=65 ttl=64 time=0.498 ms
icmp_seq=66 ttl=64 time=1.45 ms
icmp_seq=67 ttl=64 time=0.310 ms
icmp_seq=68 ttl=64 time=0.374 ms
icmp_seq=69 ttl=64 time=0.334 ms
icmp_seq=70 ttl=64 time=0.357 ms
icmp_seq=71 ttl=64 time=0.364 ms
icmp_seq=72 ttl=64 time=0.297 ms
icmp_seq=73 ttl=64 time=0.343 ms
icmp_seq=74 ttl=64 time=0.361 ms
icmp_seq=75 ttl=64 time=0.349 ms
icmp_seq=76 ttl=64 time=0.256 ms
6:49 PM
10/9/2019
Right Ctrl
centos20186748@localhost:~
1 / 4
Right Ctrl
6:49 PM

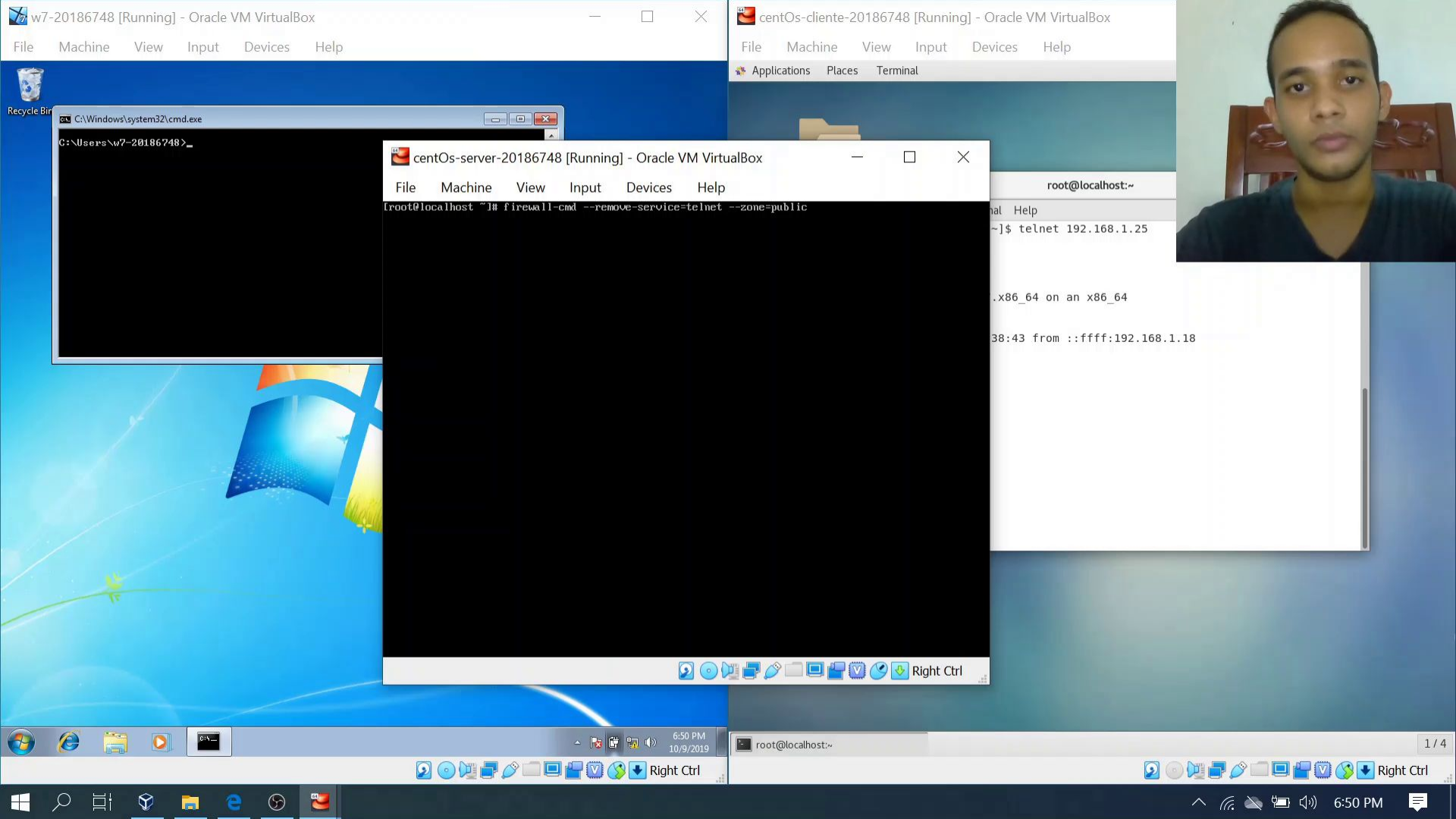
Bloqueando y permitiendo puertos con firewalld

Como vemos tenemos habilitado el servicio telnet, que trabaja en el puerto 23.


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>_
centOs-server-20186748 [Running] - Oracle VM Virtu
File Machine View Input Devices Help
[root@localhost ~]# firewall-cmd --zone=work --add-source
success
[root@localhost ~]# firewall-cmd --zone=work --add-rich-r
'
success
[root@localhost ~]# firewall-cmd --zone=work --remove-ric
rop'
success
[root@localhost ~]# _
6:49 PM
10/9/2019
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
File Edit View Search Terminal Help
[centos20186748@localhost ~]$ telnet 192.168.1.25
Trying 192.168.1.25...
Connected to 192.168.1.25.
Escape character is '^]'.
Kernel 3.10.0-1062.1.1.el7.x86_64 on an x86_64
localhost login:
centos20186748@localhost:~
1 / 4
Right Ctrl
6:49 PM

Tenemos la opción de bloquear ese puerto en especifico con, **firewall-cmd --remove-port=23/tcp --zone=public,** aunque la aplicación firewalld nos permite bloquear todos los puertos relacionados a un servicio con **firewall-cmd --remove-service=telnet --zone=public**, de tal forma que si el servicio utiliza más de un puerto se bloquean todos esos puertos evitando que tengamos que bloquear uno por uno.


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>_
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# firewall-cmd --zone=work --add-source=08:00:27:3b:60:66
success
[root@localhost ~]# firewall-cmd --zone=work --add-rich-rule='rule source mac=08:00:27:3b:60:66 drop'
success
[root@localhost ~]# firewall-cmd --zone=work --remove-rich-rule='rule source mac=08:00:27:3b:60:66 drop'
success
[root@localhost ~]# firewall-cmd --rmove-port=23/tcp --zone=public_
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
root@localhost:~
Help
~]$ telnet 192.168.1.25
.x86_64 on an x86_64
38:43 from ::ffff:192.168.1.18
6:50 PM
10/9/2019
Right Ctrl
root@localhost:~
1 / 4
Right Ctrl
6:50 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>_
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# firewall-cmd --remove-service=telnet --zone=public
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
root@localhost:~
Help
~]$ telnet 192.168.1.25
.x86_64 on an x86_64
38:43 from ::ffff:192.168.1.18
root@localhost:~
1 / 4
Right Ctrl
6:50 PM
10/9/2019

Intentamos usar el telnet nuevamente y veremos que este se ha desactivado.

centOs-cliente-20186748 [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Applications Places Terminal

centos20186748@localhost:~

File Edit View Search Terminal Help

```
[centos20186748@localhost ~]$ telnet 192.168.1.25
Trying 192.168.1.25...
telnet: connect to address 192.168.1.25: No route to host
[centos20186748@localhost ~]$
```

7 CENTOS

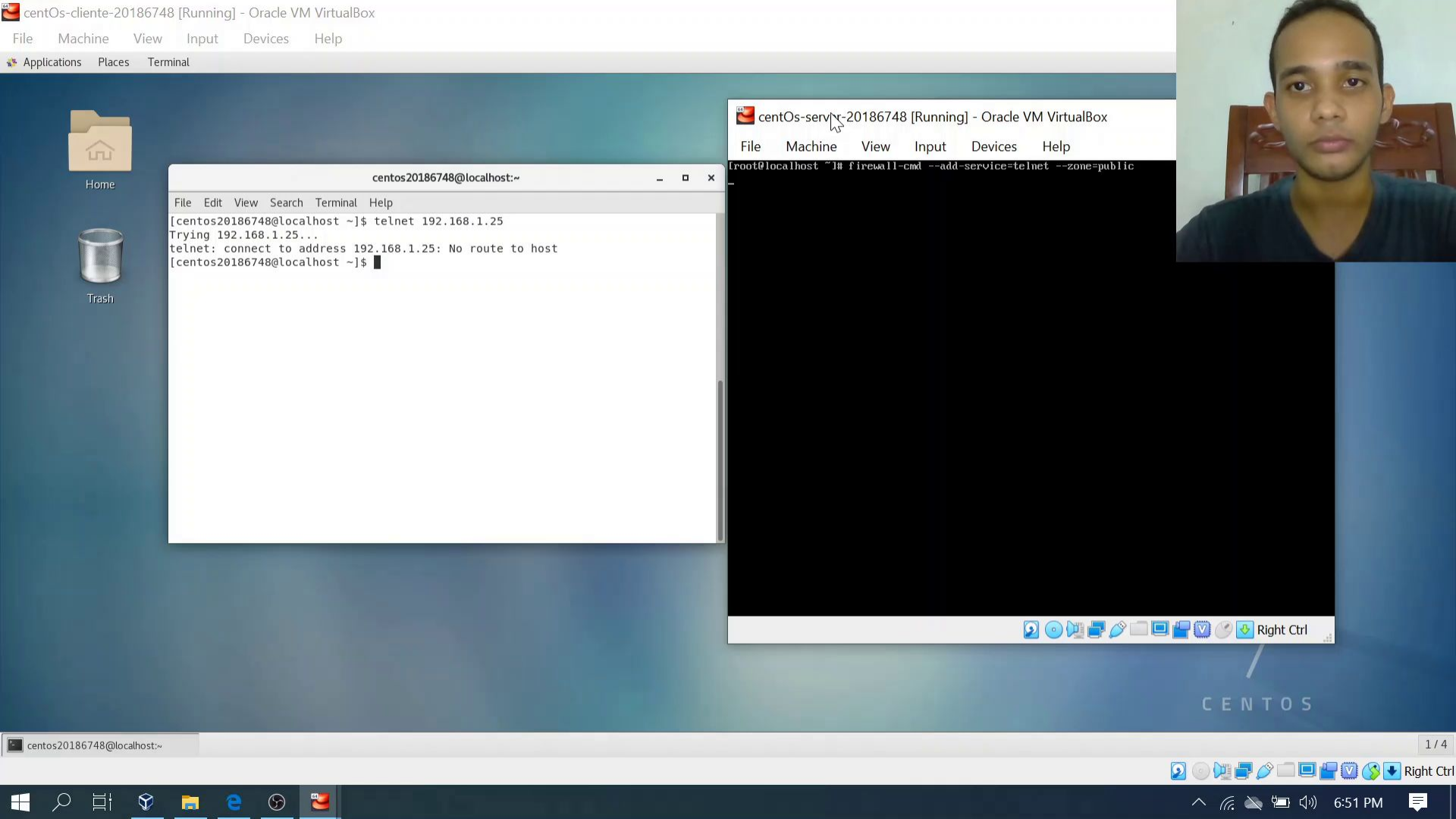
centos20186748@localhost:~

1 / 4

Right Ctrl

6:51 PM

Para habilitarlo nuevamente agregamos el servicio con **firewall-cmd --add-service=telnet --zone=public**. E intentamos acceder nuevamente con telnet hacia nuestro servidor


centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
Home
Trash
centos20186748@localhost:~
File Edit View Search Terminal Help
[centos20186748@localhost ~]$ telnet 192.168.1.25
Trying 192.168.1.25...
telnet: connect to address 192.168.1.25: No route to host
[centos20186748@localhost ~]$
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# firewall-cmd --add-service=telnet --zone=public
Right Ctrl
CENTOS
centos20186748@localhost:~
1 / 4
Right Ctrl
6:51 PM

centOs-cliente-20186748 [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Applications Places Terminal

centos20186748@localhost:~

File Edit View Search Terminal Help

```
[centos20186748@localhost ~]$ telnet 192.168.1.25
Trying 192.168.1.25...
telnet: connect to address 192.168.1.25: No route to host
[centos20186748@localhost ~]$ telnet 192.168.1.25
Trying 192.168.1.25...
Connected to 192.168.1.25.
Escape character is '^]'.

Kernel 3.10.0-1062.1.1.el7.x86_64 on an x86_64
localhost login:
```

7 CENTOS

centos20186748@localhost:~

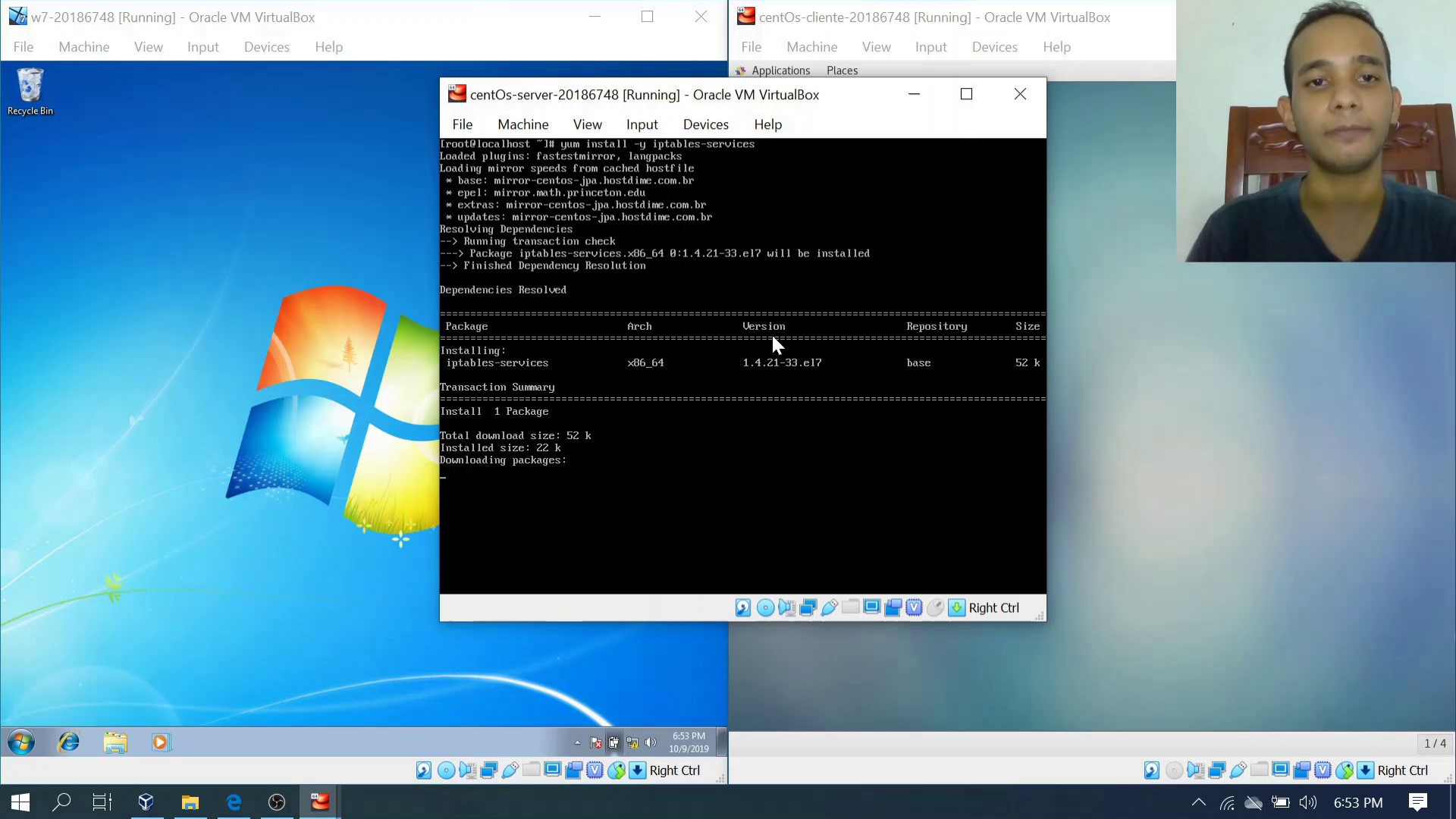
1 / 4

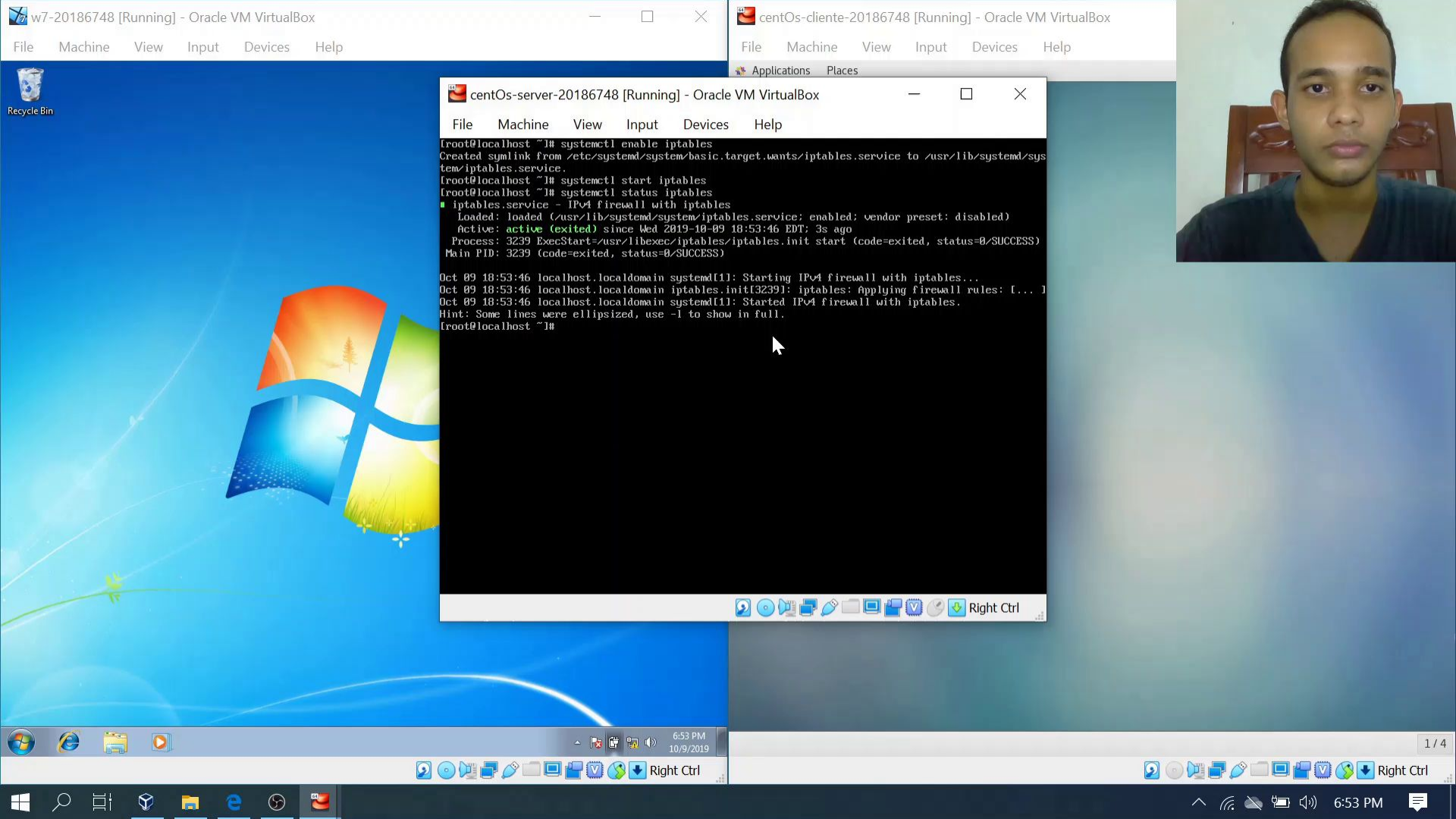
Right Ctrl

6:51 PM

Administración del firewall con las iptables

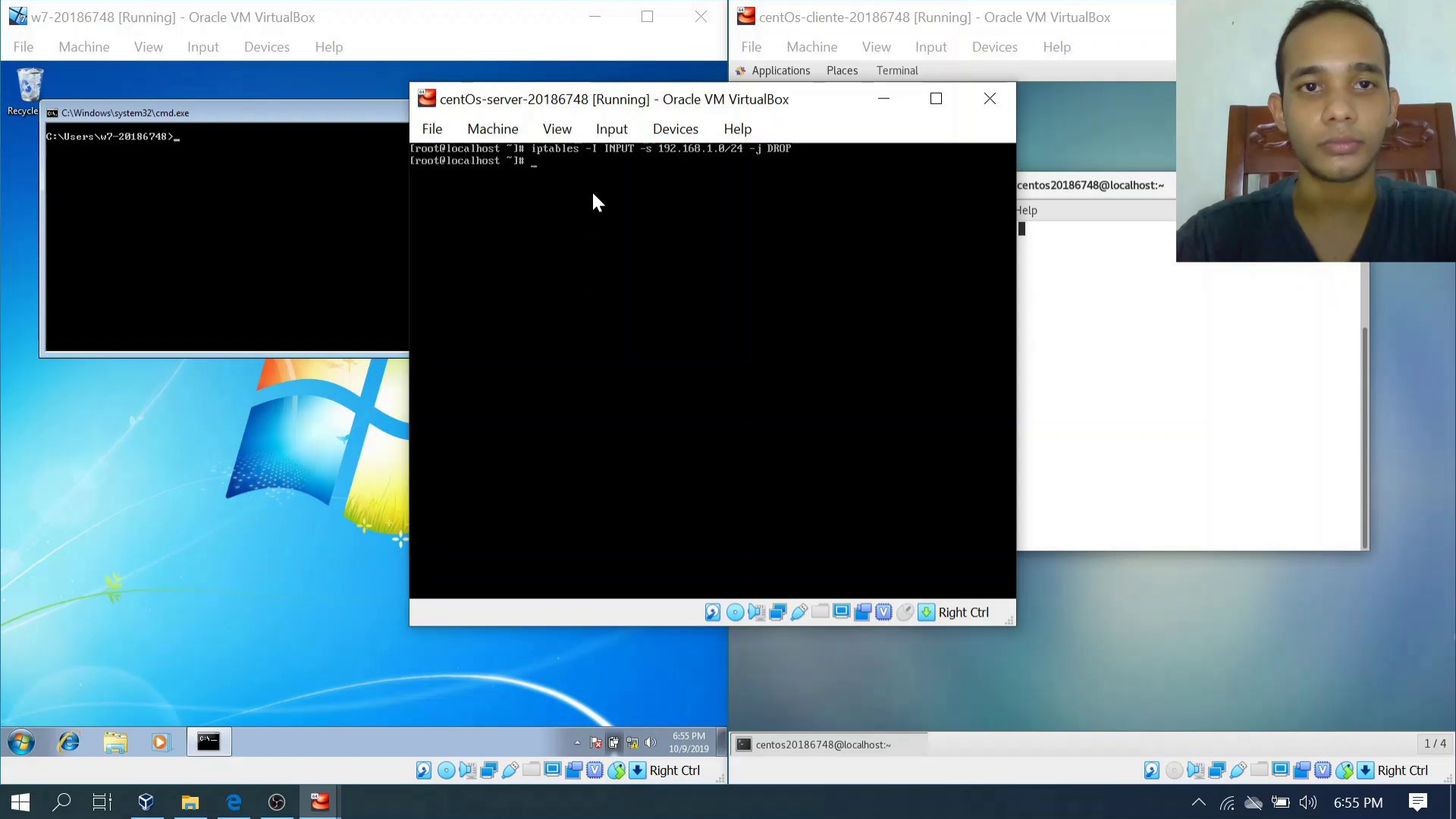
Instalamos y habilitamos las iptables, con los comandos **yum install -y iptables-services** para instalarlos, y **systemctl enable iptables**, **systemctl start iptables** para iniciarlas

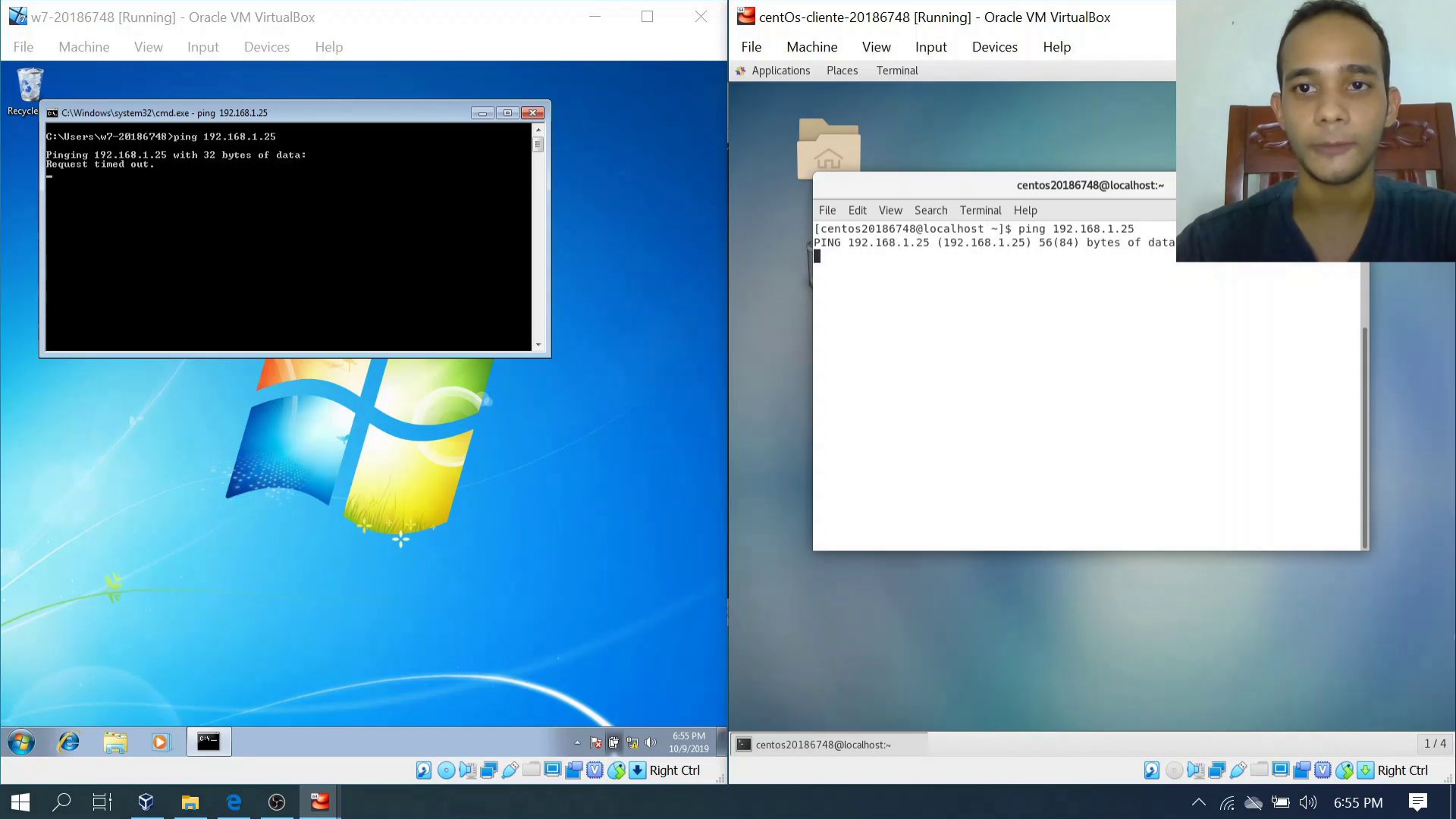

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# yum install -y iptables-services
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: mirror-centos-jpa.hostdime.com.br
* epel: mirror.math.princeton.edu
* extras: mirror-centos-jpa.hostdime.com.br
* updates: mirror-centos-jpa.hostdime.com.br
Resolving Dependencies
--> Running transaction check
---> Package iptables-services.x86_64 0:1.4.21-33.el7 will be installed
--> Finished Dependency Resolution
Dependencies Resolved
Package Arch Version Repository Size
Installing:
iptables-services x86_64 1.4.21-33.el7 base 52 k
Transaction Summary
Install 1 Package
Total download size: 52 k
Installed size: 22 k
Downloading packages:
Right Ctrl
6:53 PM
10/9/2019
Right Ctrl
1 / 4
Right Ctrl
6:53 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# systemctl enable iptables
Created symlink from /etc/systemd/system/basic.target.wants/iptables.service to /usr/lib/systemd/system/iptables.service.
[root@localhost ~]# systemctl start iptables
[root@localhost ~]# systemctl status iptables
iptables.service - IPv4 firewall with iptables
Loaded: loaded (/usr/lib/systemd/system/iptables.service; enabled; vendor preset: disabled)
Active: active (exited) since Wed 2019-10-09 18:53:46 EDT; 3s ago
Process: 3239 ExecStart=/usr/libexec/iptables/iptables.init start (code=exited, status=0/SUCCESS)
Main PID: 3239 (code=exited, status=0/SUCCESS)
Oct 09 18:53:46 localhost.localdomain systemd[1]: Starting IPv4 firewall with iptables...
Oct 09 18:53:46 localhost.localdomain iptables.init[3239]: iptables: Applying firewall rules: [...]
Oct 09 18:53:46 localhost.localdomain systemd[1]: Started IPv4 firewall with iptables.
Hint: Some lines were ellipsized, use -l to show in full.
[root@localhost ~]#
Right Ctrl
6:53 PM
10/9/2019
Right Ctrl
1 / 4
Right Ctrl
6:53 PM

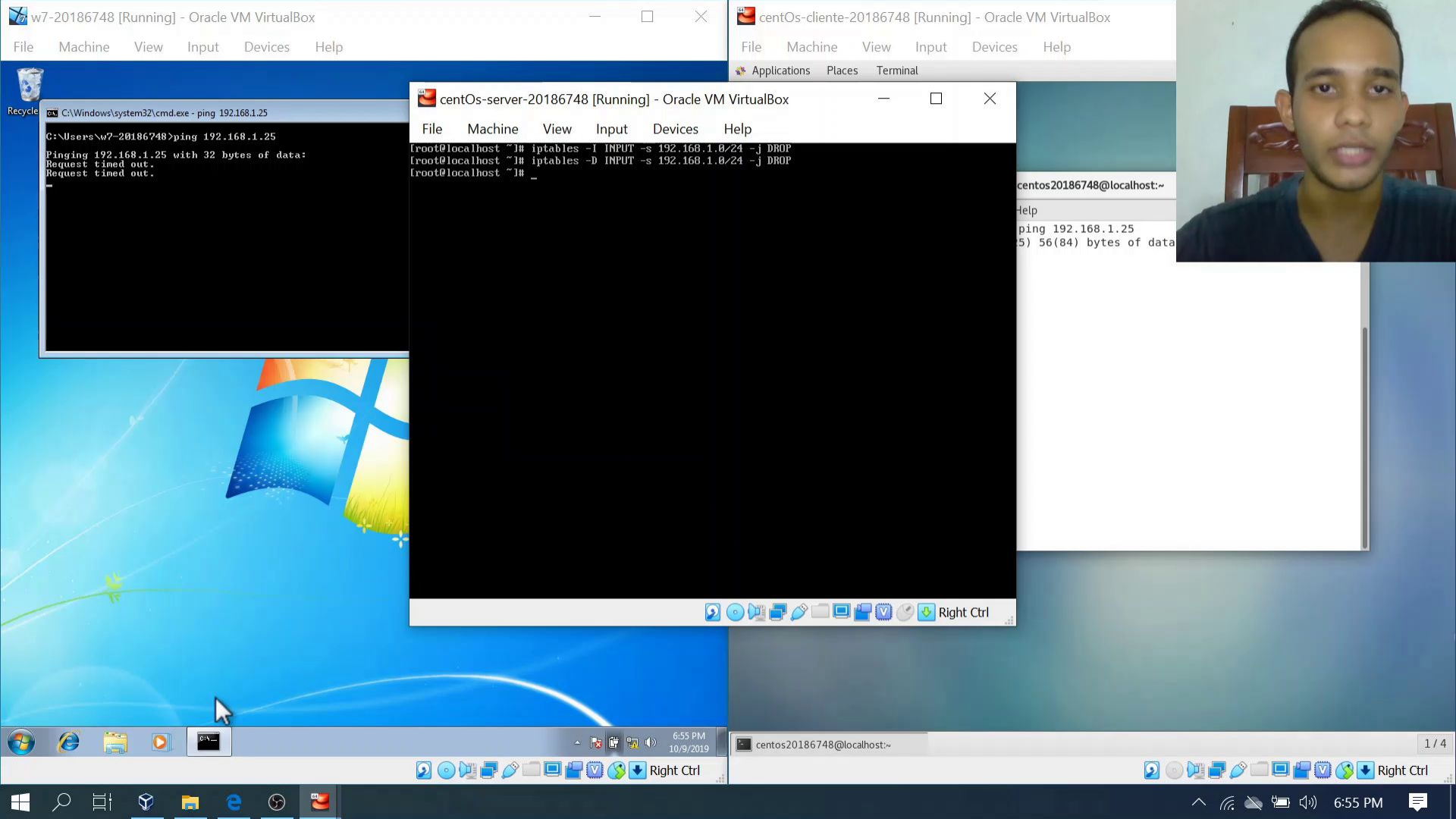
Bloqueando y permitiendo redes con iptables

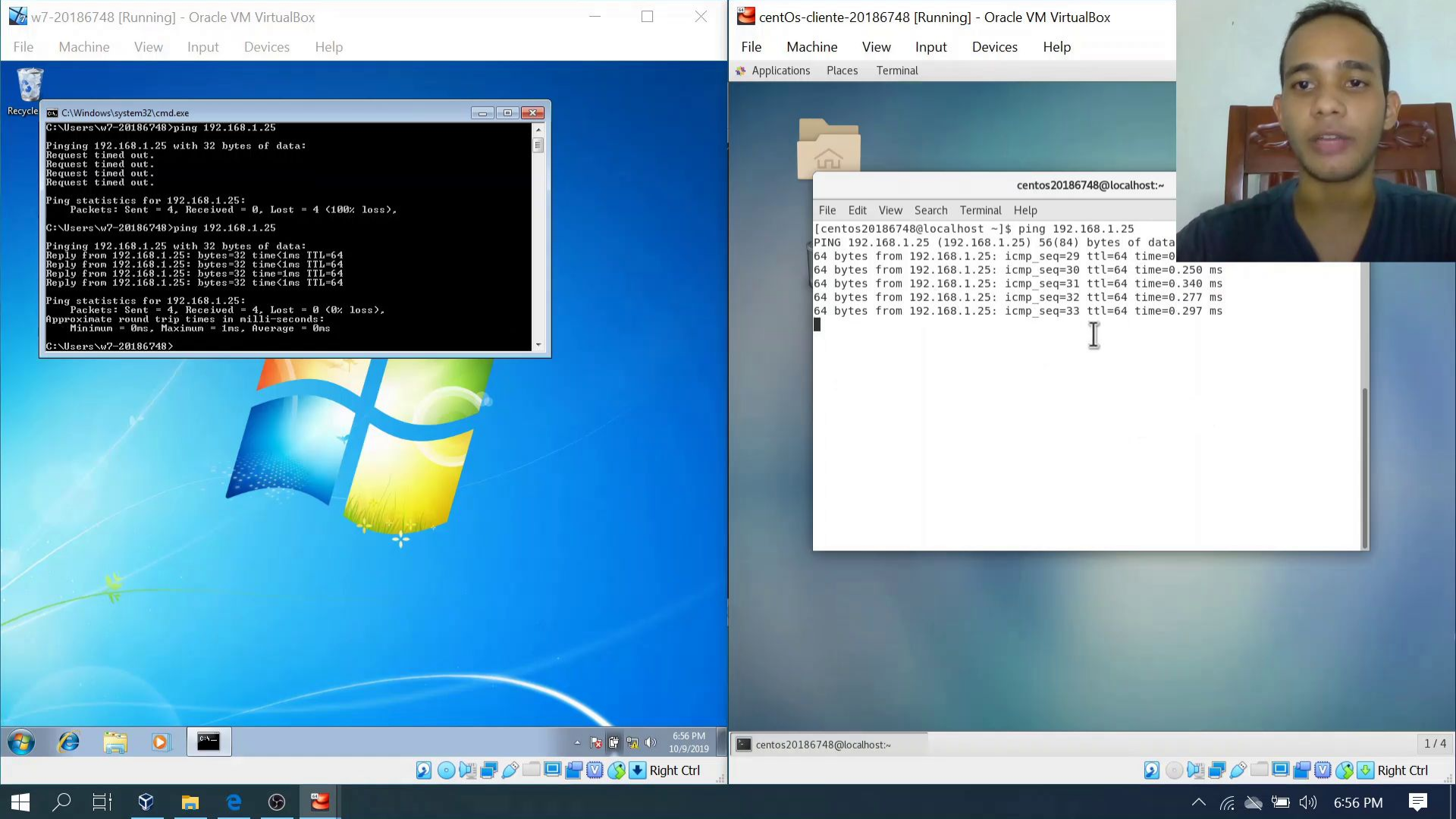
Para bloquear una red con iptables, simplemente colocamos el comando **iptables -I INPUT -s [Red] -j DROP**. Luego para probar podemos intentar hacer ping a nuestro servidor.


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>_
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# iptables -I INPUT -s 192.168.1.0/24 -j DROP
[root@localhost ~]# _
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Help
6:55 PM
10/9/2019
centos20186748@localhost:~
1 / 4
Right Ctrl
6:55 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle
C:\Windows\system32\cmd.exe - ping 192.168.1.25
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Request timed out.
6:55 PM
10/9/2019
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
File Edit View Search Terminal Help
[centos20186748@localhost ~]$ ping 192.168.1.25
PING 192.168.1.25 (192.168.1.25) 56(84) bytes of data
centos20186748@localhost:~
1 / 4
Right Ctrl
6:55 PM

Para permitir nuevamente el acceso, simplemente colocamos el comando **iptables -D INPUT -s [Red] -j DROP.**Luego probamos dando ping nuevamente.

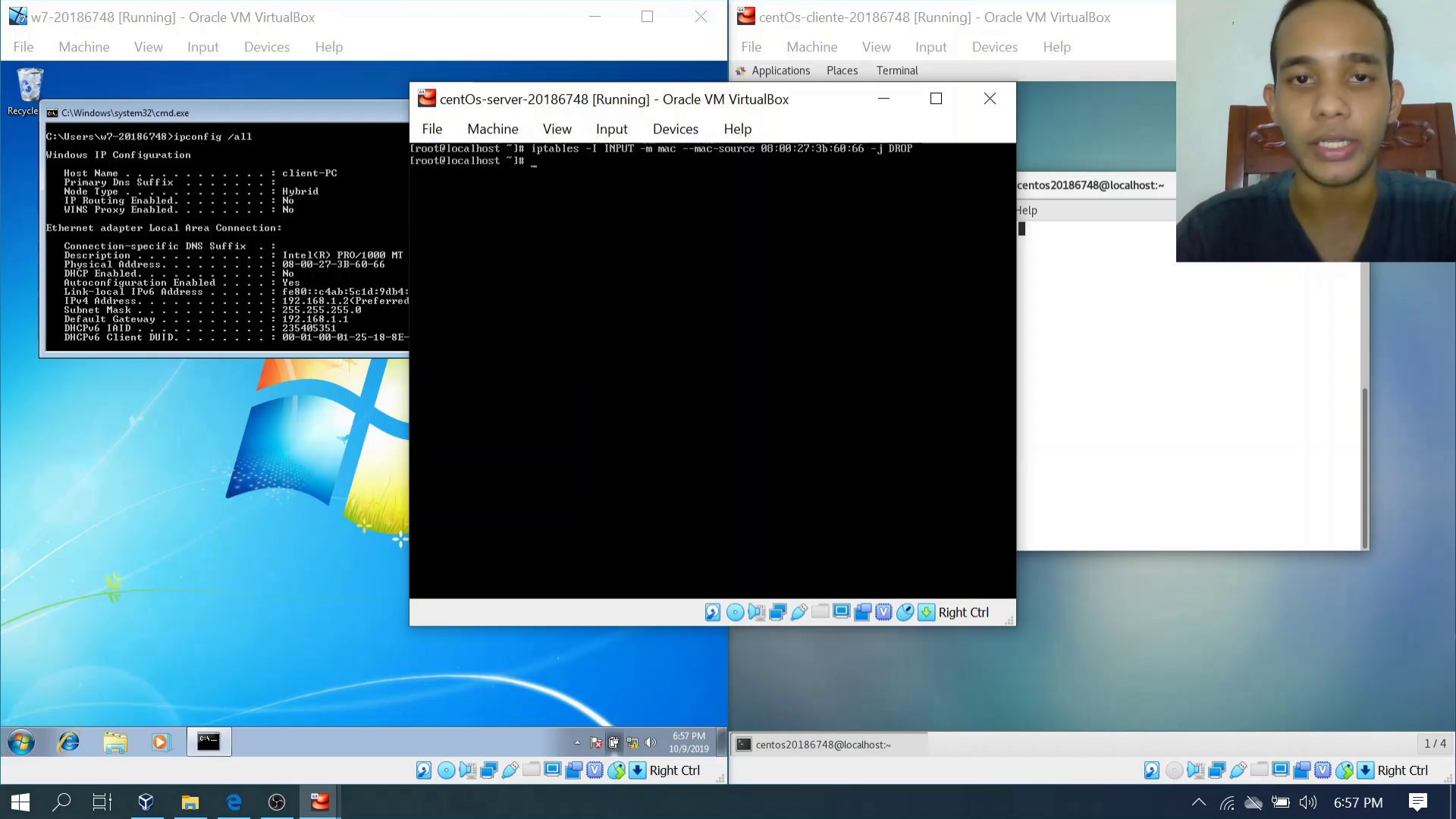

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle
C:\Windows\system32\cmd.exe - ping 192.168.1.25
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Request timed out.
Request timed out.
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# iptables -I INPUT -s 192.168.1.0/24 -j DROP
[root@localhost ~]# iptables -D INPUT -s 192.168.1.0/24 -j DROP
[root@localhost ~]#
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Help
ping 192.168.1.25
56(84) bytes of data
centos20186748@localhost:~
1 / 4
Right Ctrl
6:55 PM
10/9/2019
Right Ctrl
6:55 PM

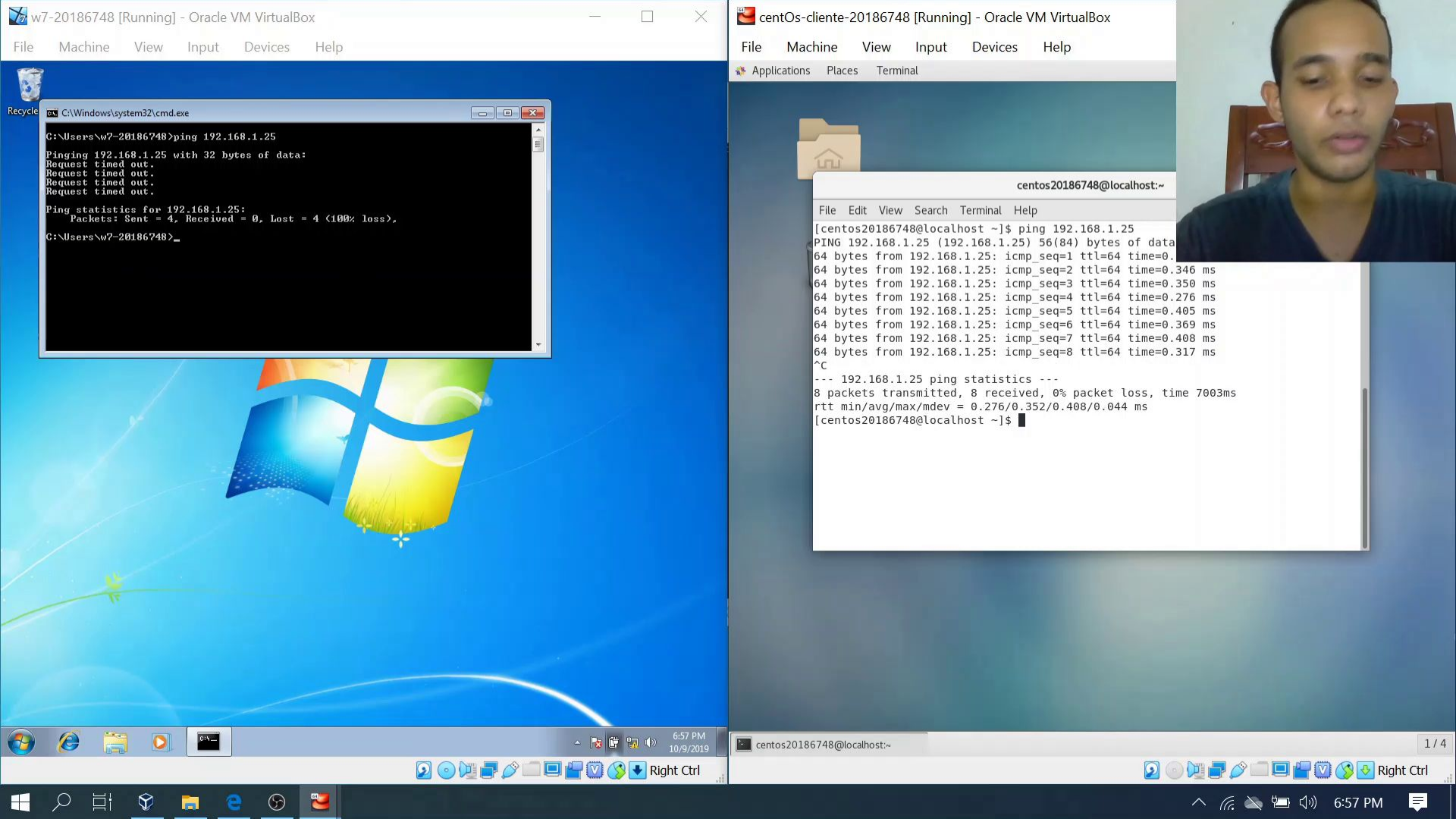

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time=1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
C:\Users\w7-20186748>
6:56 PM
10/9/2019
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
File Edit View Search Terminal Help
[centos20186748@localhost ~]$ ping 192.168.1.25
PING 192.168.1.25 (192.168.1.25) 56(84) bytes of data
64 bytes from 192.168.1.25: icmp_seq=29 ttl=64 time=0
64 bytes from 192.168.1.25: icmp_seq=30 ttl=64 time=0.250 ms
64 bytes from 192.168.1.25: icmp_seq=31 ttl=64 time=0.340 ms
64 bytes from 192.168.1.25: icmp_seq=32 ttl=64 time=0.277 ms
64 bytes from 192.168.1.25: icmp_seq=33 ttl=64 time=0.297 ms
centos20186748@localhost:~
1 / 4
Right Ctrl
6:56 PM

Bloqueando y permitiendo dispositivos con iptables

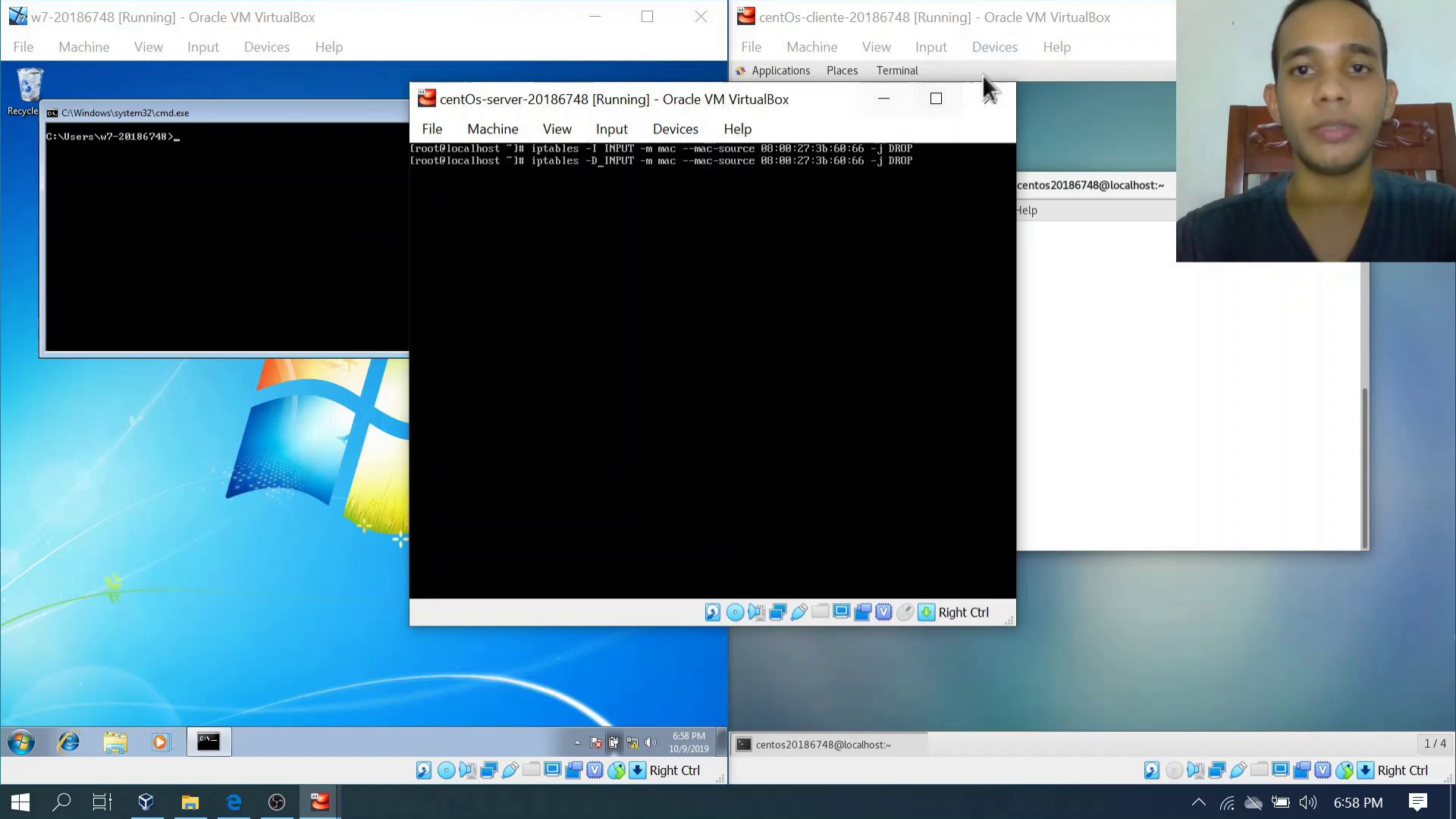
Paso 1

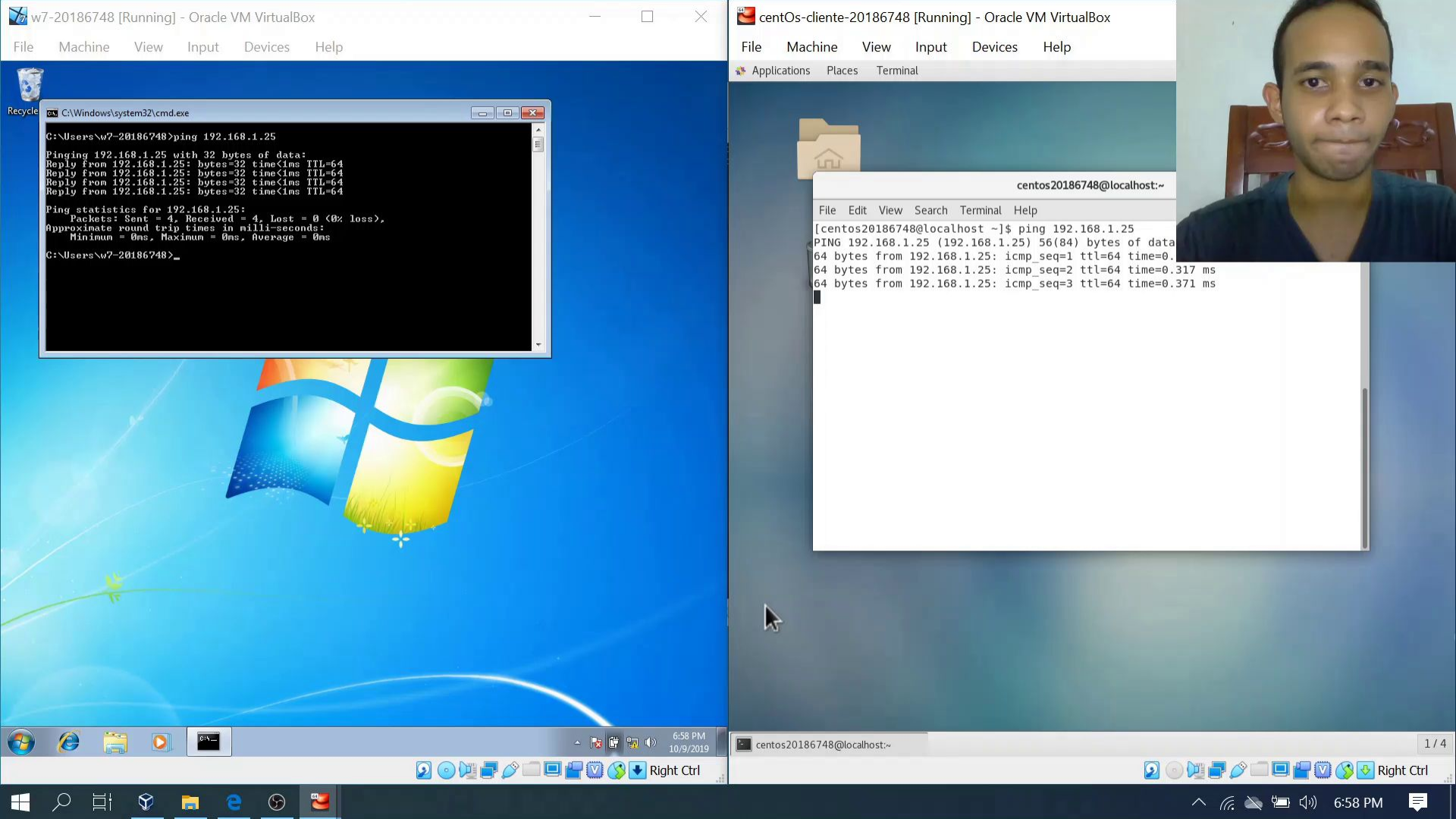
Primero buscamos la dirección mac del dispositivo que queremos bloquear. Para bloquear el cliente windows buscamos su mac con **ipconfig /all**. Luego utilizamos el comando **iptables -I INPUT -m --mac-source [mac] -j DROP.** Luego verificamos si solo el dispositivo que definimos se ha bloqueado


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>ipconfig /all
Windows IP Configuration
Host Name . . . . . : client-PC
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
Description . . . . . : Intel(R) PRO/1000 MT
Physical Address. . . . . : 08-00-27-3B-60-66
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::c4ab:5c1d:9db4:
IPv4 Address. . . . . : 192.168.1.2(Preferred
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.1
DHCPv6 IAID . . . . . : 235405351
DHCPv6 Client DUID. . . . . : 00-01-00-01-25-18-8E-
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# iptables -I INPUT -m mac --mac-source 08:00:27:3b:60:66 -j DROP
[root@localhost ~]#
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Help
Right Ctrl
6:57 PM
10/9/2019
centos20186748@localhost:~
1 / 4
Right Ctrl
6:57 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\Users\w7-20186748>
6:57 PM
10/9/2019
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
File Edit View Search Terminal Help
[centos20186748@localhost ~]$ ping 192.168.1.25
PING 192.168.1.25 (192.168.1.25) 56(84) bytes of data
64 bytes from 192.168.1.25: icmp_seq=1 ttl=64 time=0.
64 bytes from 192.168.1.25: icmp_seq=2 ttl=64 time=0.346 ms
64 bytes from 192.168.1.25: icmp_seq=3 ttl=64 time=0.350 ms
64 bytes from 192.168.1.25: icmp_seq=4 ttl=64 time=0.276 ms
64 bytes from 192.168.1.25: icmp_seq=5 ttl=64 time=0.405 ms
64 bytes from 192.168.1.25: icmp_seq=6 ttl=64 time=0.369 ms
64 bytes from 192.168.1.25: icmp_seq=7 ttl=64 time=0.408 ms
64 bytes from 192.168.1.25: icmp_seq=8 ttl=64 time=0.317 ms
^C
--- 192.168.1.25 ping statistics ---
8 packets transmitted, 8 received, 0% packet loss, time 7003ms
rtt min/avg/max/mdev = 0.276/0.352/0.408/0.044 ms
[centos20186748@localhost ~]$
centos20186748@localhost:~
1 / 4
Right Ctrl
6:57 PM

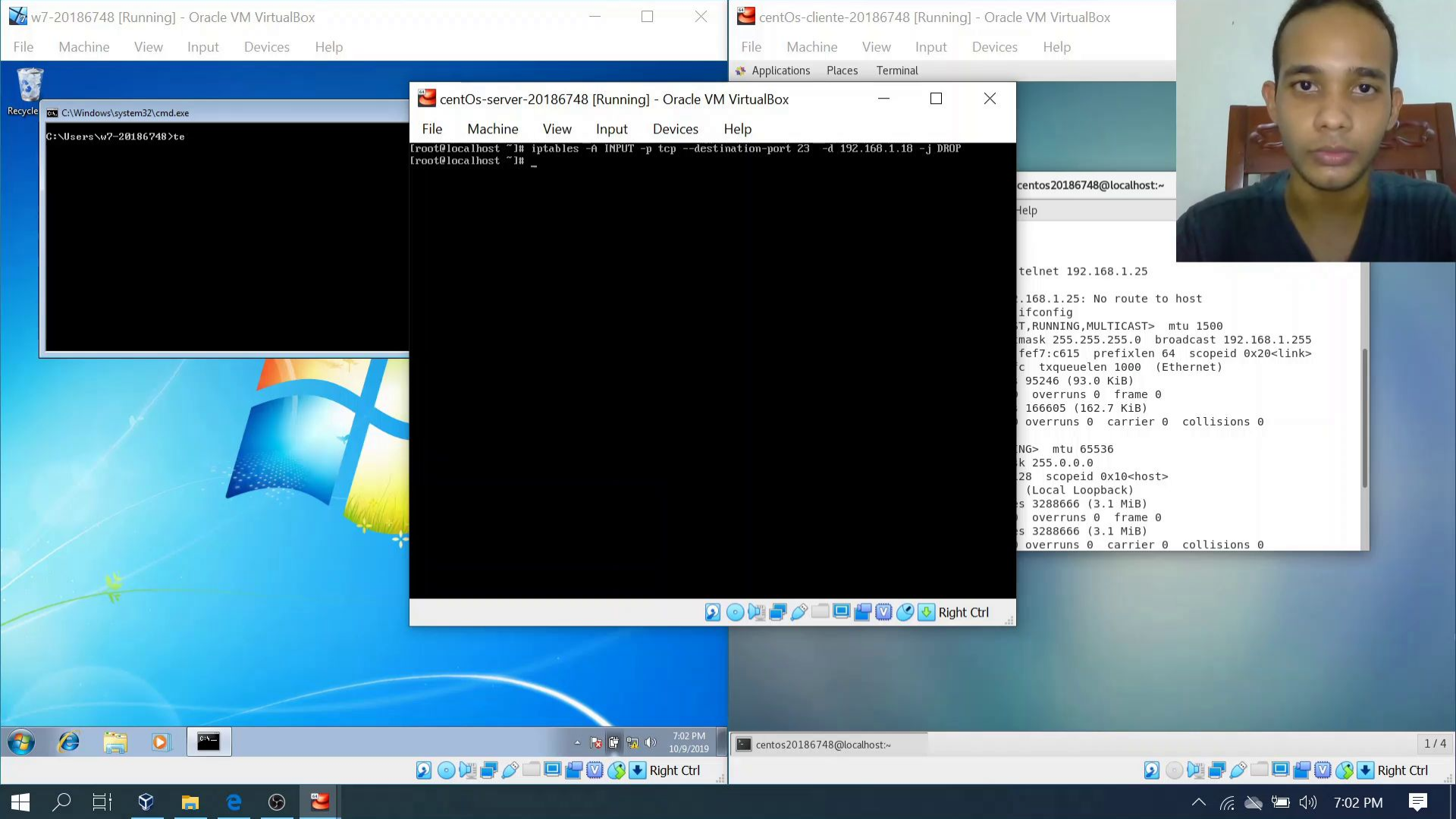
Para permitir el acceso nuevamente a la red, colocamos el comando **iptables -D INPUT -m --mac-source [mac] -j DROP.**


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>_
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# iptables -I INPUT -m mac --mac-source 08:00:27:3b:60:66 -j DROP
[root@localhost ~]# iptables -D_INPUT -m mac --mac-source 08:00:27:3b:60:66 -j DROP
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Help
6:58 PM
10/9/2019
Right Ctrl
centos20186748@localhost:~
1 / 4
Right Ctrl
6:58 PM

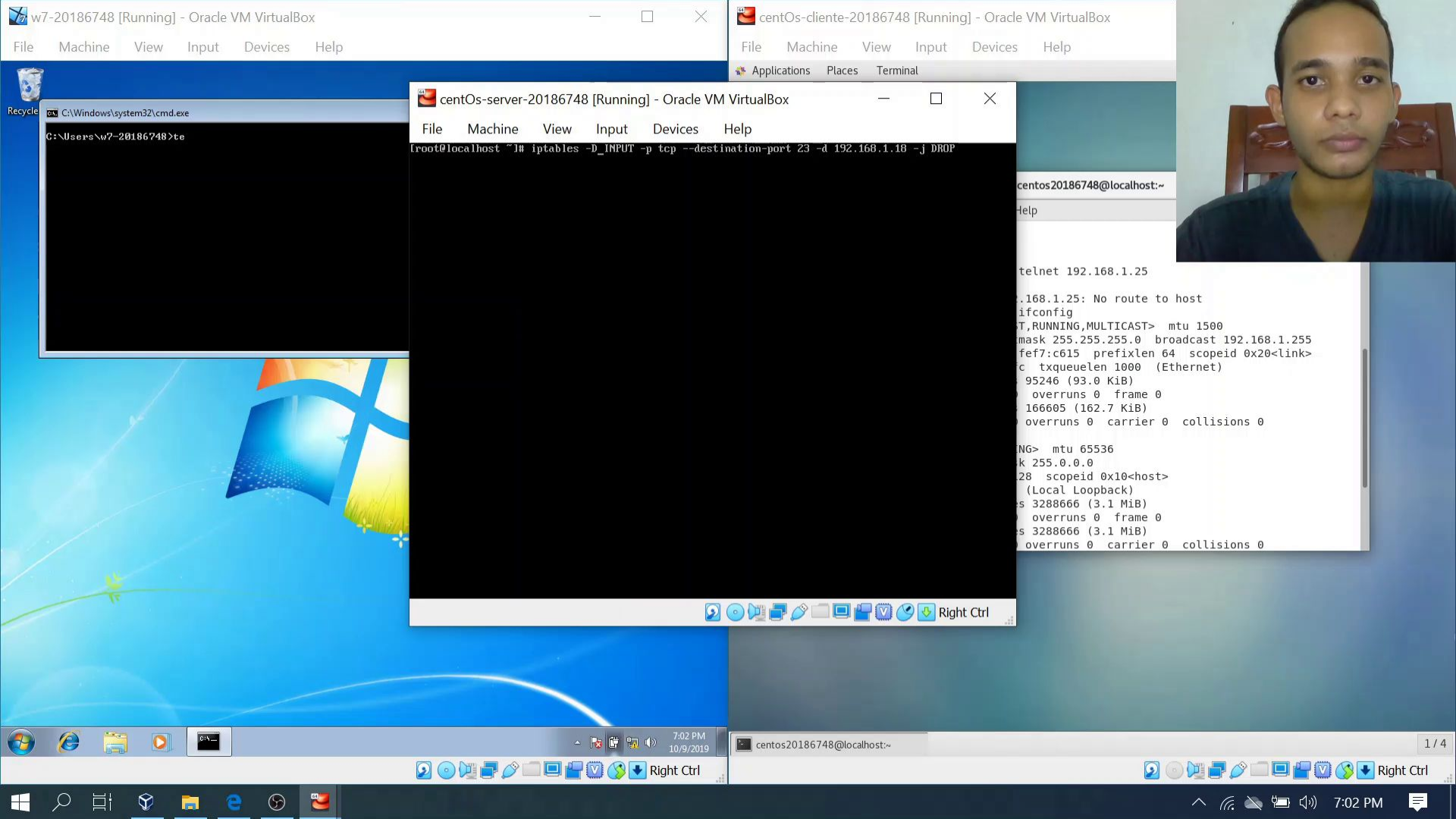

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>ping 192.168.1.25
Pinging 192.168.1.25 with 32 bytes of data:
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Reply from 192.168.1.25: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.1.25:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Users\w7-20186748>
6:58 PM
10/9/2019
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
File Edit View Search Terminal Help
[centos20186748@localhost ~]$ ping 192.168.1.25
PING 192.168.1.25 (192.168.1.25) 56(84) bytes of data
64 bytes from 192.168.1.25: icmp_seq=1 ttl=64 time=0.
64 bytes from 192.168.1.25: icmp_seq=2 ttl=64 time=0.317 ms
64 bytes from 192.168.1.25: icmp_seq=3 ttl=64 time=0.371 ms
centos20186748@localhost:~
1 / 4
Right Ctrl
6:58 PM

Bloqueando y permitiendo puertos con iptables

Para bloquear un puerto con iptables utilizamos el comando **iptables -I INPUT -p [protocolo] --destination-port 23 -d [ip a la que queremos restringir el uso de puerto] -j DROP.**


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>te
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# iptables -A INPUT -p tcp --destination-port 23 -d 192.168.1.18 -j DROP
[root@localhost ~]#
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Help
telnet 192.168.1.25
.168.1.25: No route to host
ifconfig
T,RUNNING,MULTICAST> mtu 1500
mask 255.255.255.0 broadcast 192.168.1.255
fef7:c615 prefixlen 64 scopeid 0x20<link>
c txqueuelen 1000 (Ethernet)
95246 (93.0 KiB)
overruns 0 frame 0
166605 (162.7 KiB)
overruns 0 carrier 0 collisions 0
NG> mtu 65536
k 255.0.0.0
28 scopeid 0x10<host>
(Local Loopback)
s 3288666 (3.1 MiB)
overruns 0 frame 0
s 3288666 (3.1 MiB)
overruns 0 carrier 0 collisions 0
7:02 PM
10/9/2019
Right Ctrl
centos20186748@localhost:~
1 / 4
Right Ctrl
7:02 PM

Para permitir el acceso de una pc a través de un puerto con iptables utilizamos el comando **iptables -D INPUT -p [protocolo] --destination-port 23 -d [ip a la que queremos conceder el uso de puerto] -j DROP.** O al final podemos reemplazar drop con accept, si la pc no se encontraba bloqueada


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>te
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost ~]# iptables -D_INPUT -p tcp --destination-port 23 -d 192.168.1.18 -j DROP
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
Help
telnet 192.168.1.25
.168.1.25: No route to host
ifconfig
T,RUNNING,MULTICAST> mtu 1500
mask 255.255.255.0 broadcast 192.168.1.255
fef7:c615 prefixlen 64 scopeid 0x20<link>
c txqueuelen 1000 (Ethernet)
95246 (93.0 KiB)
overruns 0 frame 0
166605 (162.7 KiB)
overruns 0 carrier 0 collisions 0
NG> mtu 65536
k 255.0.0.0
28 scopeid 0x10<host>
(Local Loopback)
s 3288666 (3.1 MiB)
overruns 0 frame 0
s 3288666 (3.1 MiB)
overruns 0 carrier 0 collisions 0
7:02 PM
10/9/2019
Right Ctrl
centos20186748@localhost:~
1 / 4
Right Ctrl
7:02 PM

Configuraciones generales para el NAT

Nos aseguramos de tener configurada una red con dirección pública y acceso a internet. Para esto vamos a preferencias de VirtualBox y luego vamos a redes. Luego colocamos la interfaz que tendrá acceso a internet en esa red.

Oracle VM VirtualBox Manager

File Machine Help

Tools

Server-lab

server
Powered Off

win10-20186740
Powered Off

centOs-server
Powered Off

w7
Powered Off

Centos

centOs-server-20186748
Running

centOs-cliente-20186748
Running

w7-20186748
Running

VirtualBox - Preferences

General
Input
Update
Language
Display
Network
Extensions
Proxy

Network

NAT Network

Active

OK Cancel

NAT Network Details

Enable Network

Network Name: Internet

Network CIDR: 12.0.0.0/24

Network Options: Supports DHCP

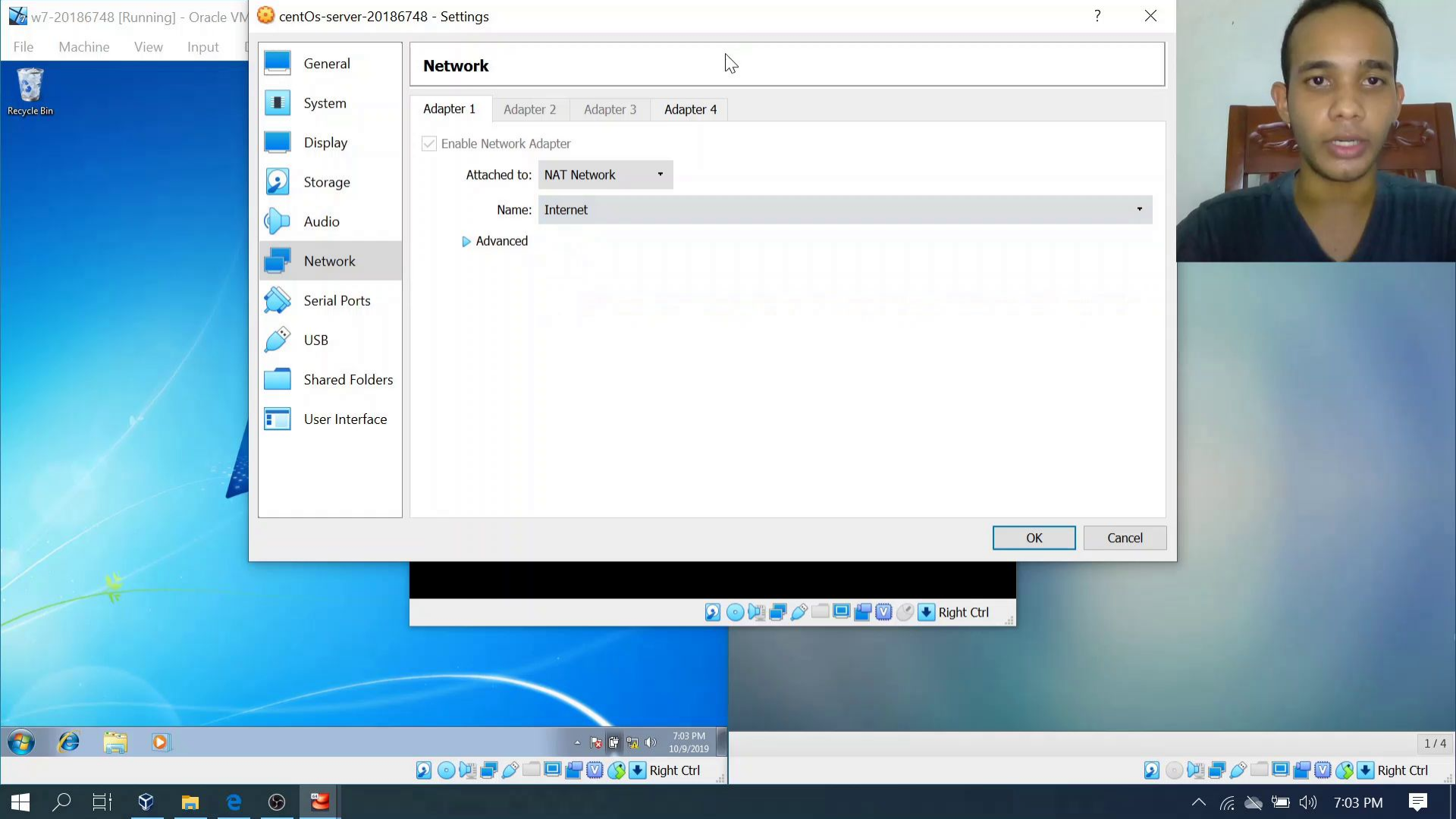
Supports IPv6

Advertise Default IPv6 Route

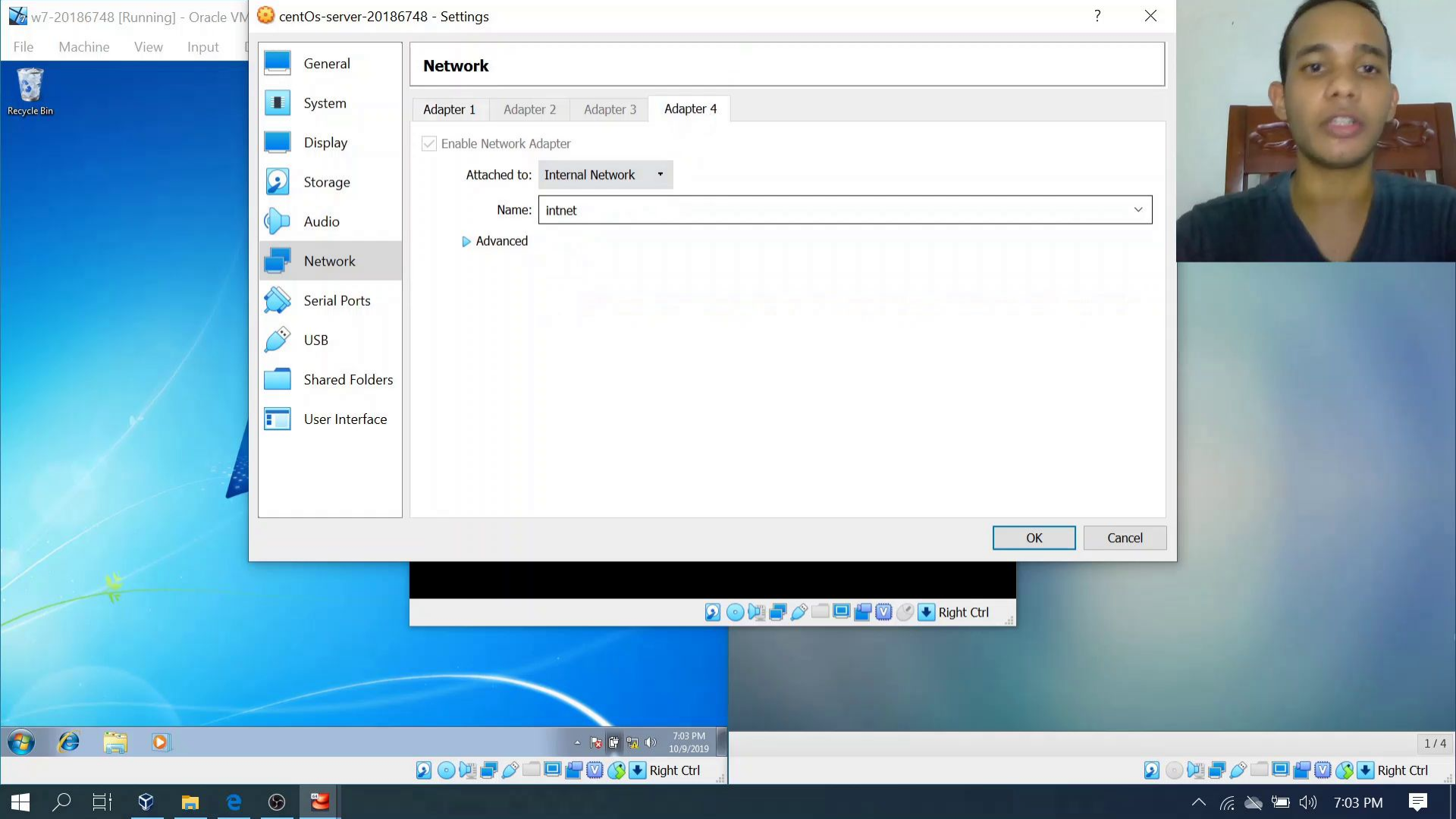
Port Forwarding

OK Cancel

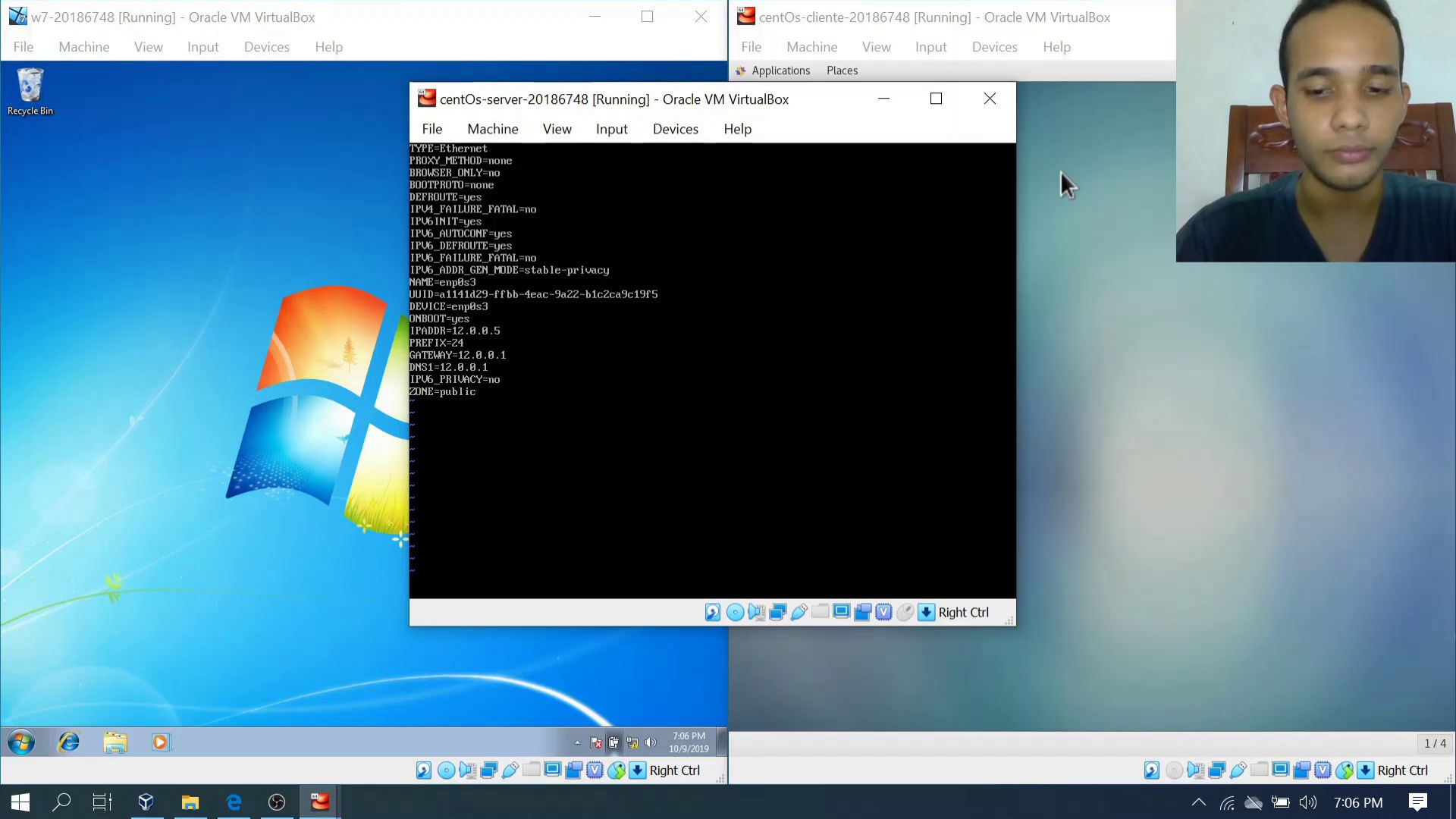
7:03 PM


w7-20186748 [Running] - Oracle VM
File
Machine
View
Input
Recycle Bin
centOs-server-20186748 - Settings
General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface
Network
Adapter 1
Adapter 2
Adapter 3
Adapter 4
Enable Network Adapter
Attached to:
NAT Network
Name:
Internet
Advanced
OK
Cancel
Right Ctrl
7:03 PM
10/9/2019
1 / 4
Right Ctrl
Right Ctrl
7:03 PM

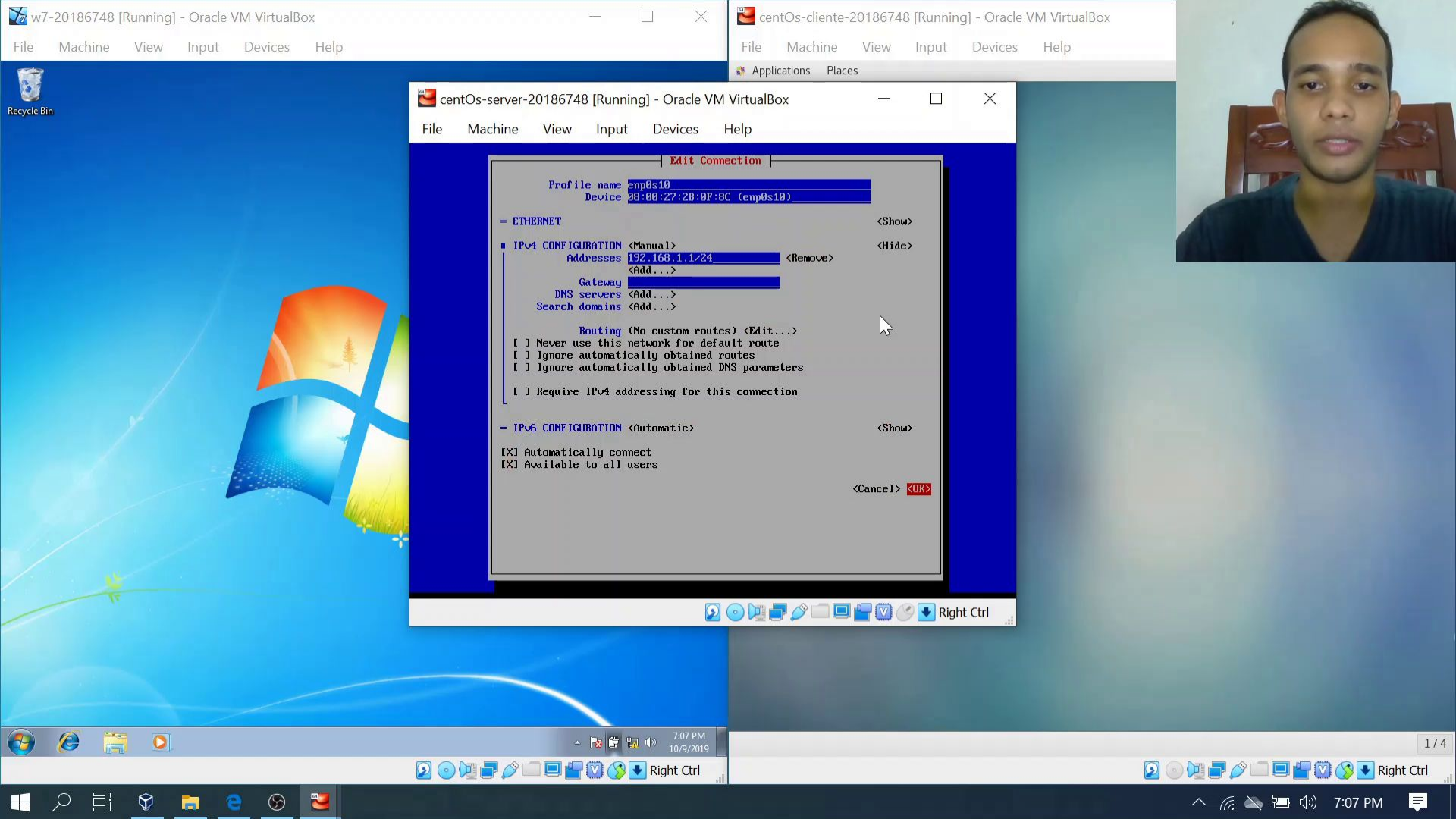
Nos aseguramos que nuestro adaptador local se encuentre en dicha red


w7-20186748 [Running] - Oracle VM
File
Machine
View
Input
Recycle Bin
centOs-server-20186748 - Settings
General
System
Display
Storage
Audio
Network
Serial Ports
USB
Shared Folders
User Interface
Network
Adapter 1
Adapter 2
Adapter 3
Adapter 4
Enable Network Adapter
Attached to:
Internal Network
Name:
intnet
Advanced
OK
Cancel
Right Ctrl
7:03 PM
10/9/2019
1 / 4

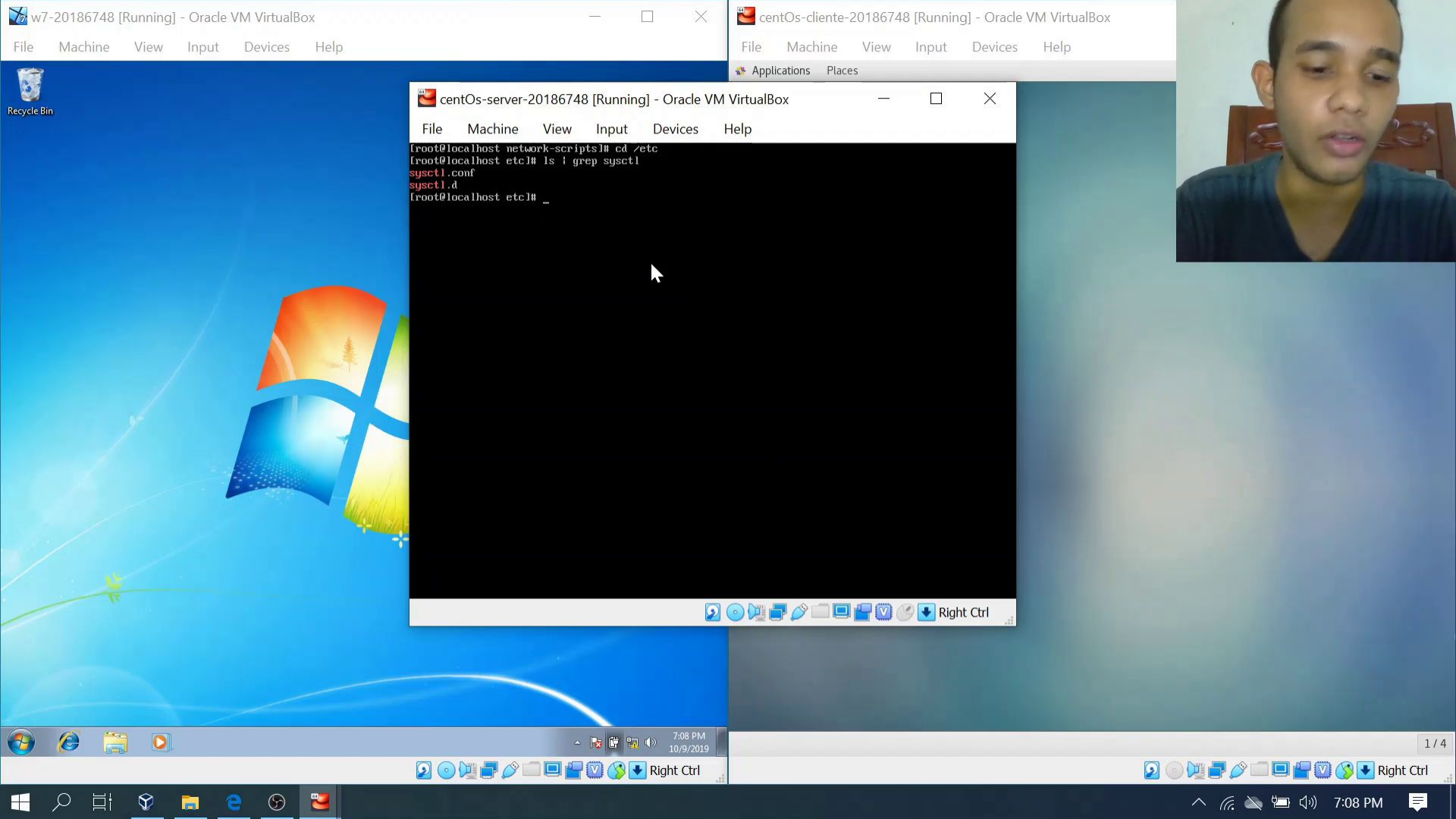
Configuramos el adaptador que tendrá acceso a internet con la informaciones de red de la red en que este se encuentra.

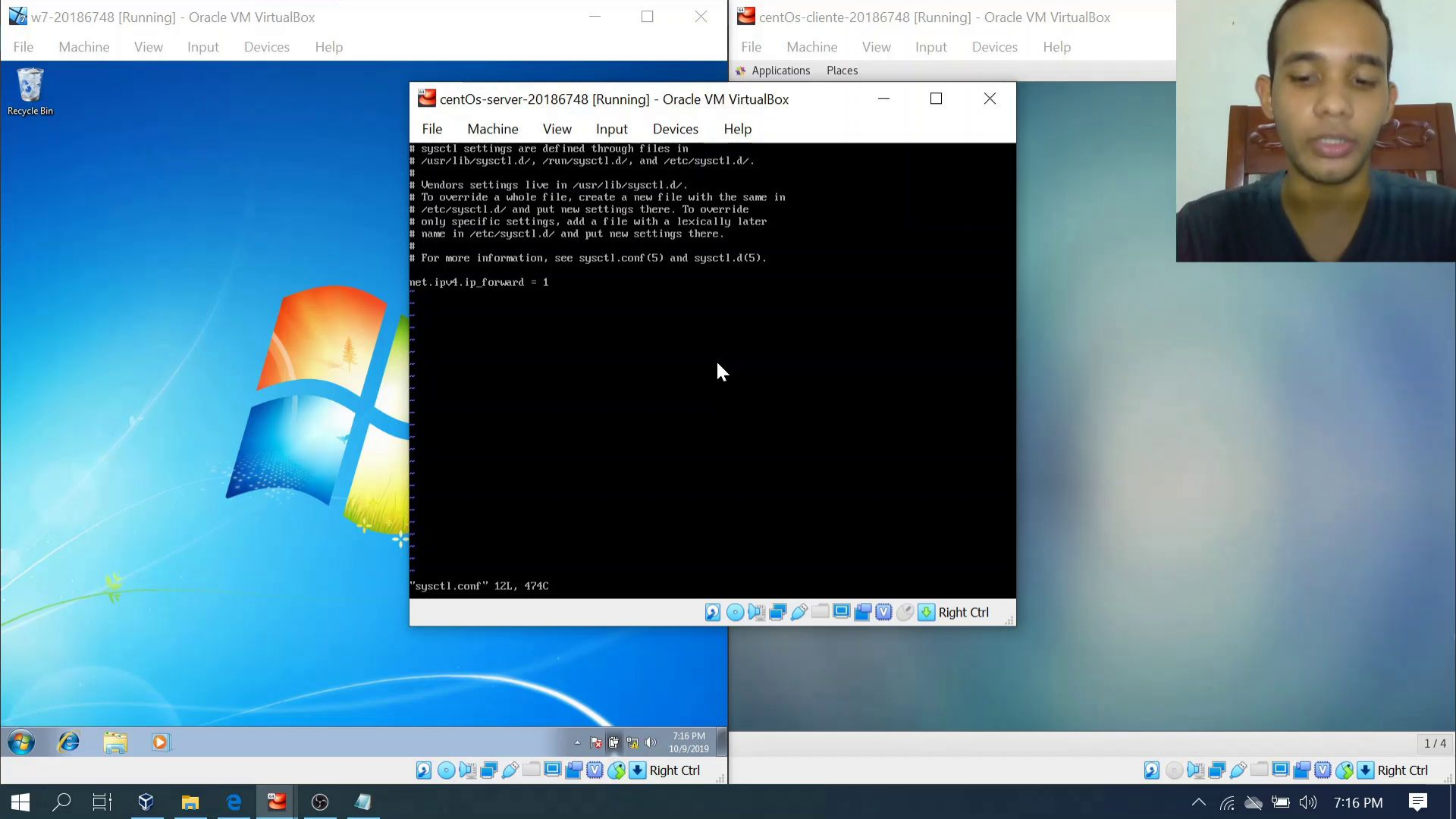

w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
TYPE=Ethernet
PROXY_METHOD=none
BROWSER_ONLY=no
BOOTPROTO=none
DEFROUTE=yes
IPV4_FAILURE_FATAL=no
IPV6INIT=yes
IPV6_AUTOCONF=yes
IPV6_DEFROUTE=yes
IPV6_FAILURE_FATAL=no
IPV6_ADDR_GEN_MODE=stable-privacy
NAME=enp0s3
UUID=a1141d29-ffbb-4eac-9a22-b1c2ca9c19f5
DEVICE=enp0s3
ONBOOT=yes
IPADDR=12.0.0.5
PREFIX=24
GATEWAY=12.0.0.1
DNS1=12.0.0.1
IPV6_PRIVACY=no
ZONE=public
Right Ctrl
7:06 PM
10/9/2019
Right Ctrl
1 / 4
Right Ctrl
7:06 PM

Configuramos el adaptador local solo con la dirección ip y la máscara de red, de tal manera que más adelante podremos utilizarlo para transferir la información a la otra interfaz.


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Edit Connection
Profile name enp0s10
Device 08:00:27:2B:0F:8C (enp0s10)
= ETHERNET <Show>
IPv4 CONFIGURATION <Manual> <Hide>
Addresses 192.168.1.1/24 <Remove>
<Add...>
Gateway
DNS servers <Add...>
Search domains <Add...>
Routing (No custom routes) <Edit...>
[ ] Never use this network for default route
[ ] Ignore automatically obtained routes
[ ] Ignore automatically obtained DNS parameters
[ ] Require IPv4 addressing for this connection
= IPv6 CONFIGURATION <Automatic> <Show>
[X] Automatically connect
[X] Available to all users
<Cancel> <OK>
Right Ctrl
7:07 PM
10/9/2019
Right Ctrl
1 / 4
Right Ctrl
7:07 PM

Habilitamos el ip forwarding en el archivo **sysctl.conf**, ubicado dentro del directorio **etc**, colocando **net.ipv4.ip_forward = 1**, luego hacemos los cambios permanentes con el comando **sysctl -p**


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost network-scripts]# cd /etc
[root@localhost etc]# ls | grep sysctl
sysctl.conf
sysctl.d
[root@localhost etc]#
Right Ctrl
7:08 PM
10/9/2019
Right Ctrl
1 / 4
Right Ctrl
7:08 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
sysctl settings are defined through files in
/usr/lib/sysctl.d/, /run/sysctl.d/, and /etc/sysctl.d/.
#
Vendors settings live in /usr/lib/sysctl.d/.
To override a whole file, create a new file with the same in
/etc/sysctl.d/ and put new settings there. To override
only specific settings, add a file with a lexically later
name in /etc/sysctl.d/ and put new settings there.
#
# For more information, see sysctl.conf(5) and sysctl.d(5).
net.ipv4.ip_forward = 1
"sysctl.conf" 12L, 474C
Right Ctrl
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10/9/2019
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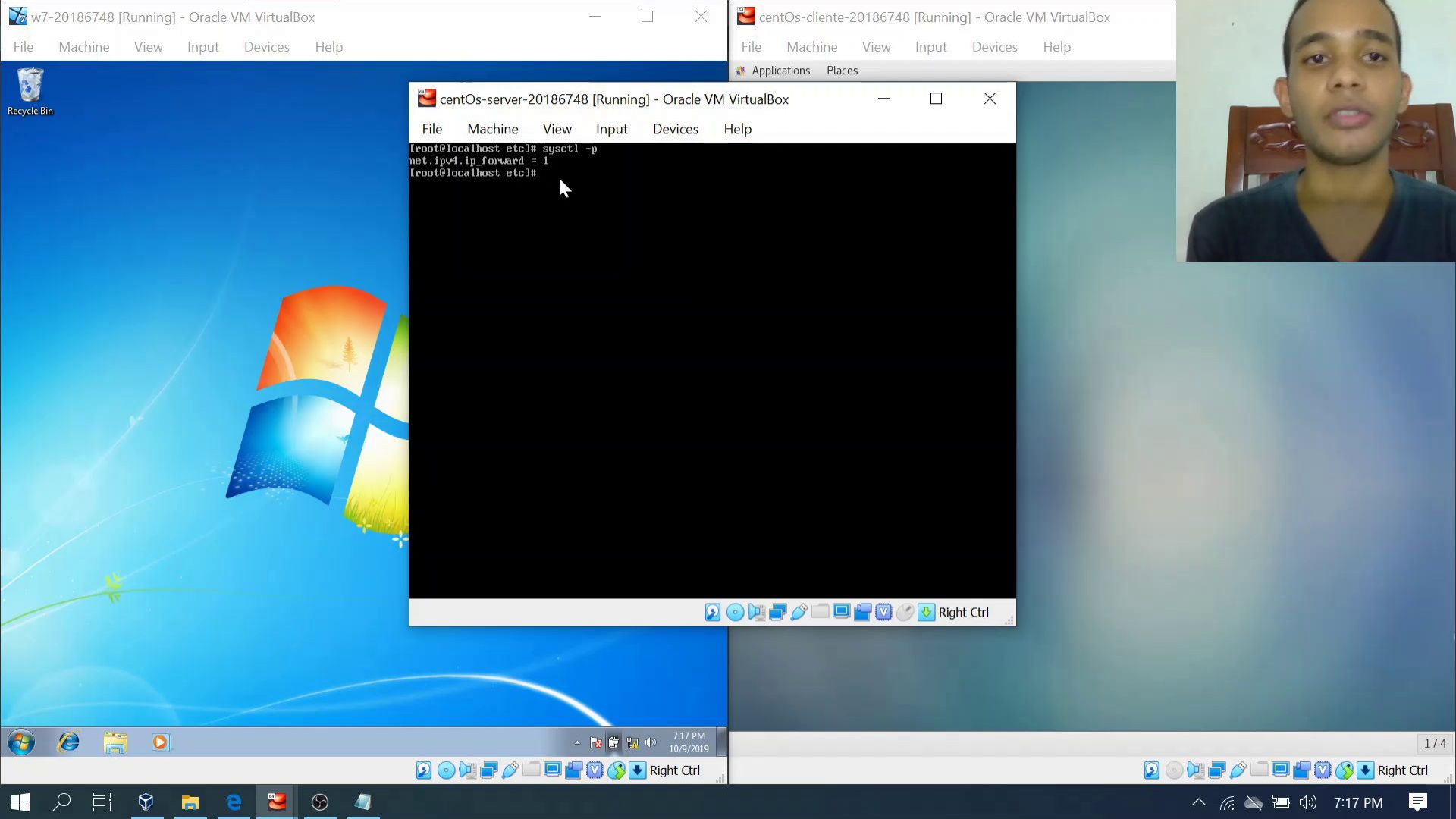
1 / 4
Right Ctrl
7:16 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# sysctl -p
net.ipv4.ip_forward = 1
[root@localhost etc]#
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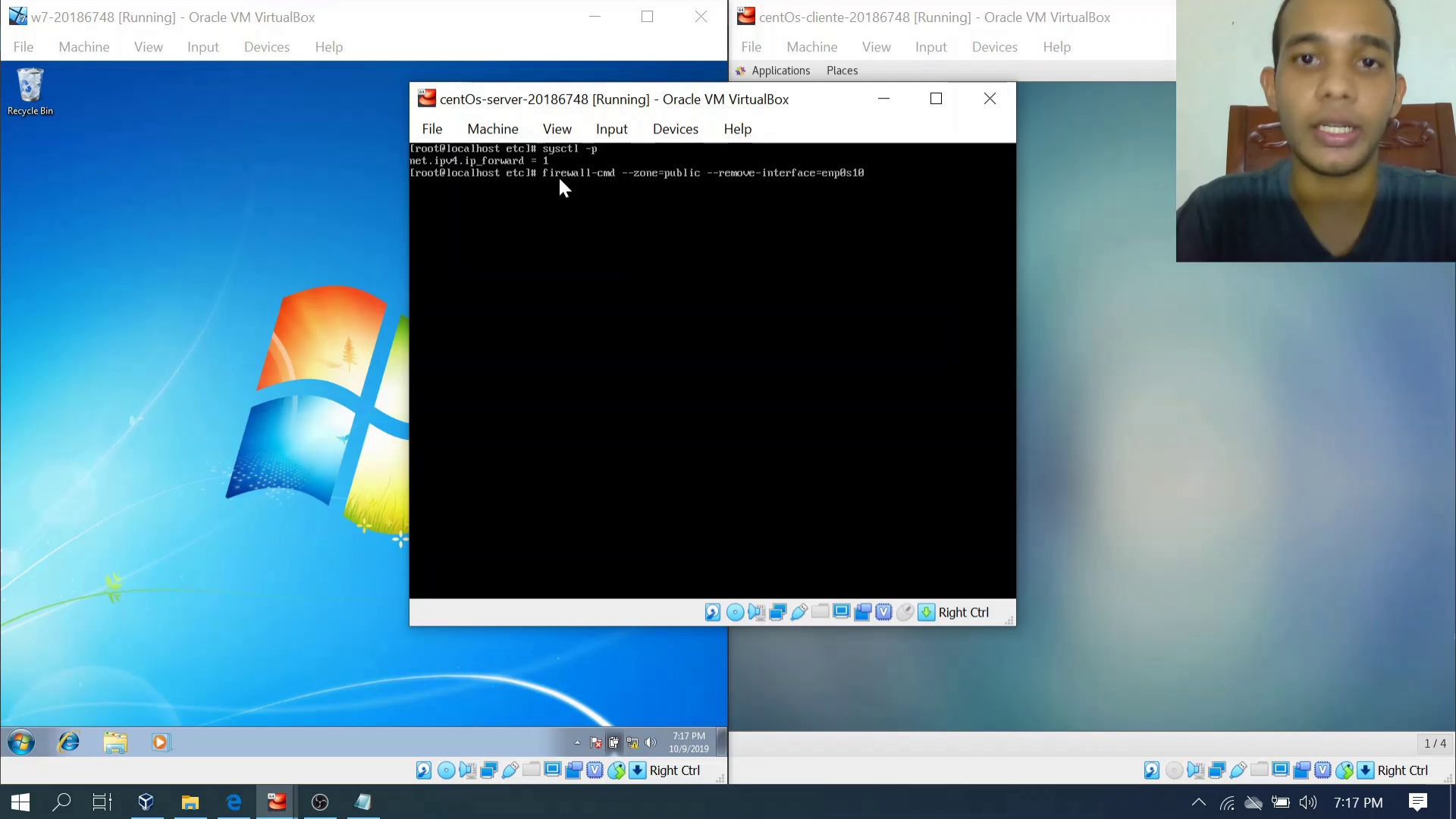
1 / 4
Right Ctrl
7:17 PM

NAT con la aplicación Firewalld

Cambiamos la interfaz que se encuentra en la red local de la zona pública a la interna con los comandos **firewall-cmd --zone=public --remove-interface=[interface]** para removerla de la zona pública. Luego la agregamos a la zona interna con **firewall-cmd --zone=internal --add-interface=[interface]**


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# sysctl -p
net.ipv4.ip_forward = 1
[root@localhost etc]# firewall-cmd --zone=public --remove-interface=enp0s10
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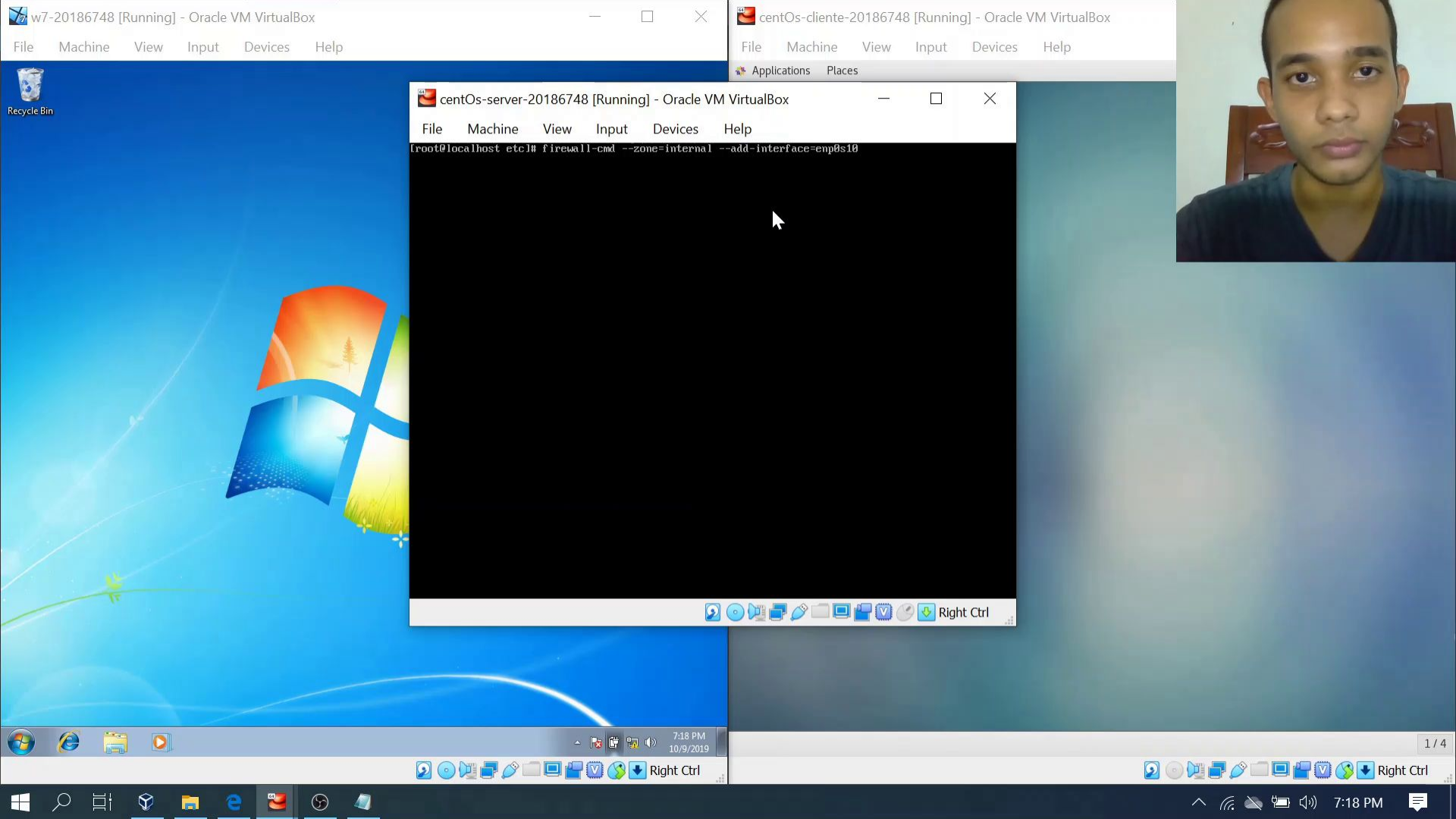
Right Ctrl
1 / 4
Right Ctrl
7:17 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# firewall-cmd --zone=internal --add-interface=enp0s10
Right Ctrl
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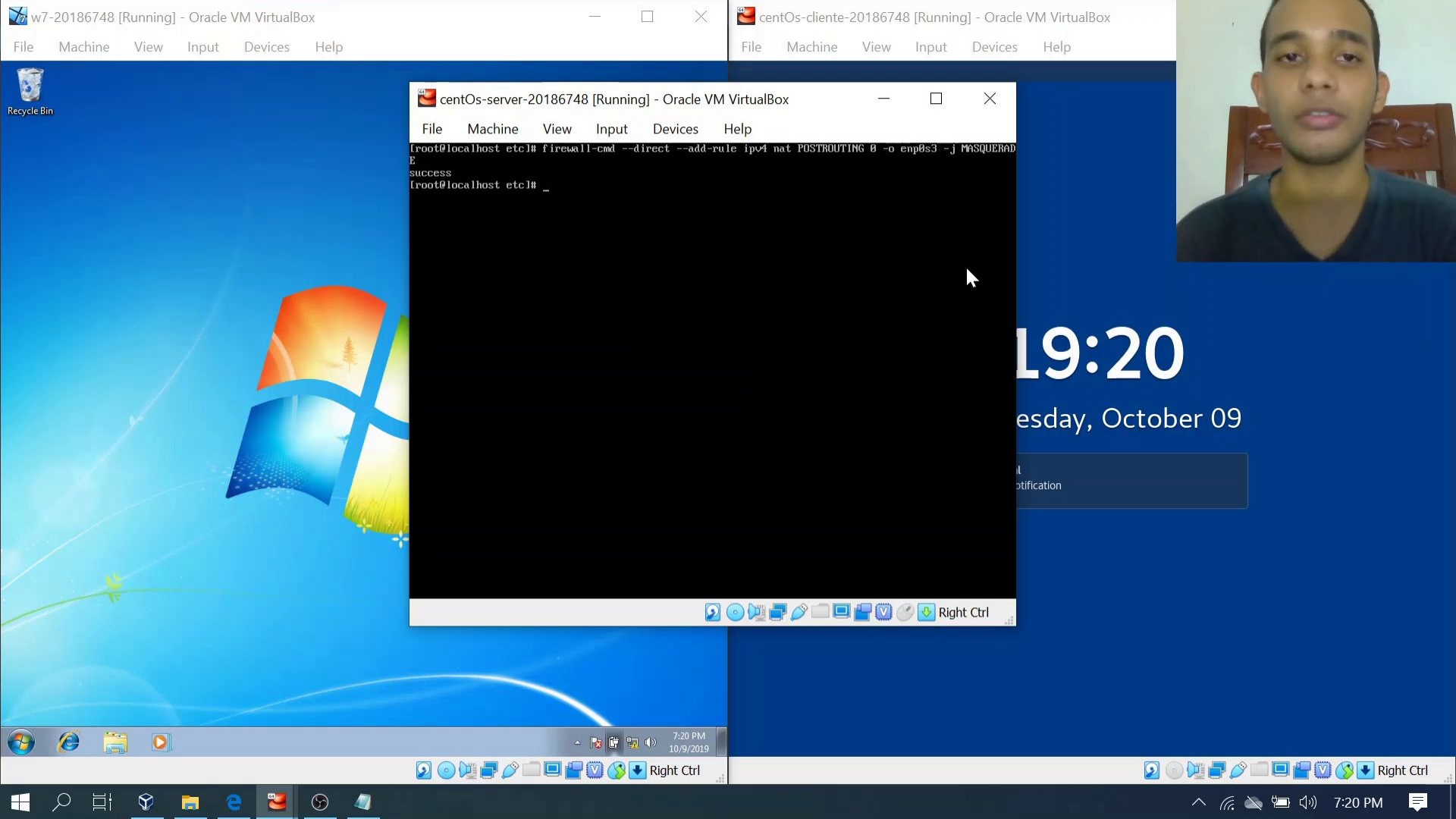
Right Ctrl
1 / 4
Right Ctrl
7:18 PM

Agregamos una regla de POSTROUTING con el comando **firewall-cmd --direct --add-rule ipv4 nat POSTROUTING 0 -o [interface externa] -j MASQUERADE**


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# firewall-cmd --direct --add-rule ipv4 nat POSTROUTING 0 -o enp0s3 -j MASQUERADE
success
[root@localhost etc]#
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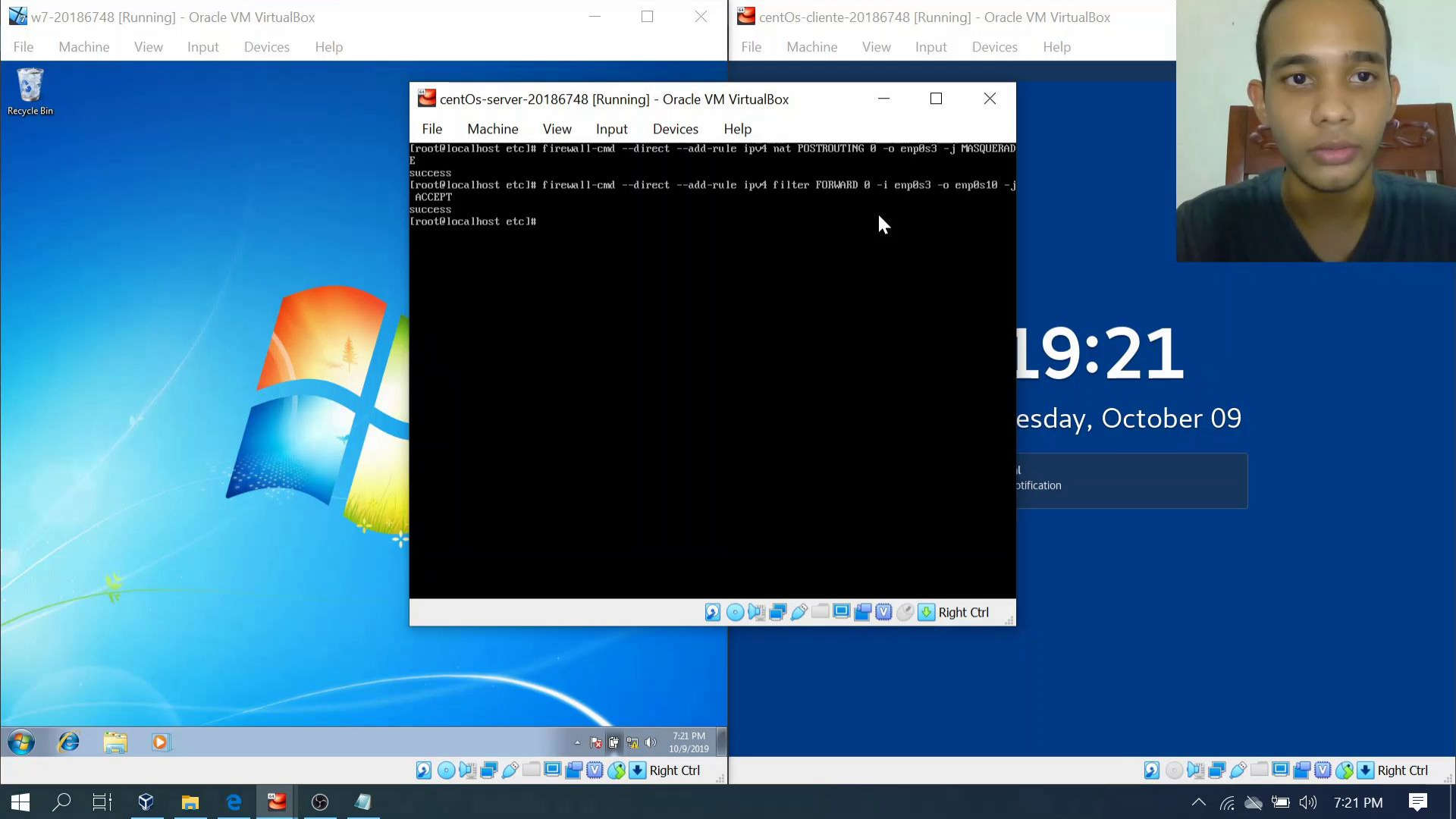
esday, October 09
tification
7:20 PM
10/9/2019
Right Ctrl
Right Ctrl
7:20 PM

Agregamos una regla de FORWARD con el comando **firewall-cmd --direct --add-rule ipv4 filter FORWARD 0 -i [interfaz externa] -o [interfaz interna] -j ACCEPT**


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# firewall-cmd --direct --add-rule ipv4 nat POSTROUTING 0 -o enp0s3 -j MASQUERADE
success
[root@localhost etc]# firewall-cmd --direct --add-rule ipv4 filter FORWARD 0 -i enp0s3 -o enp0s10 -j ACCEPT
success
[root@localhost etc]#
Right Ctrl
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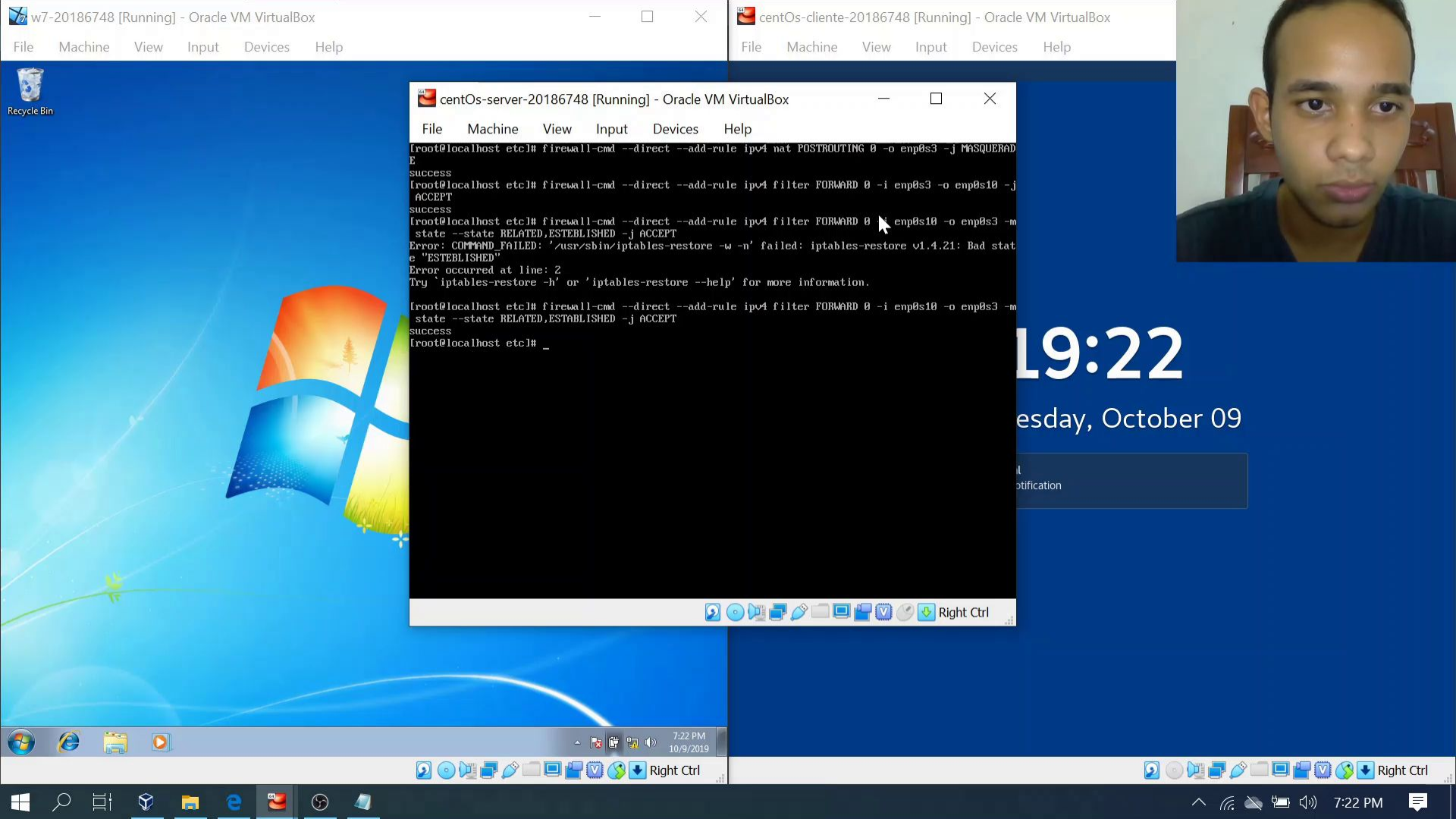
esday, October 09
otification
7:21 PM
10/9/2019
Right Ctrl
Right Ctrl
7:21 PM

Agregamos otra regla de FORWARD pero esta vez establecemos el estado **firewall-cmd --direct --add-rule ipv4 filter FORWARD 0 -i [interfaz interna] -o [interfaz externa] -m state --state RELATED,ESTABLISHED -j ACCEPT**


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# firewall-cmd --direct --add-rule ipv4 nat POSTROUTING 0 -o enp0s3 -j MASQUERADE
success
[root@localhost etc]# firewall-cmd --direct --add-rule ipv4 filter FORWARD 0 -i enp0s3 -o enp0s10 -j ACCEPT
success
[root@localhost etc]# firewall-cmd --direct --add-rule ipv4 filter FORWARD 0 -i enp0s10 -o enp0s3 -m state --state RELATED,ESTEBLISHED -j ACCEPT
Error: COMMAND_FAILED: '/usr/sbin/iptables-restore -w -n' failed: iptables-restore v1.4.21: Bad state "ESTEBLISHED"
Error occurred at line: 2
Try `iptables-restore -h' or 'iptables-restore --help' for more information.
[root@localhost etc]# firewall-cmd --direct --add-rule ipv4 filter FORWARD 0 -i enp0s10 -o enp0s3 -m state --state RELATED,ESTABLISHED -j ACCEPT
success
[root@localhost etc]#
Right Ctrl
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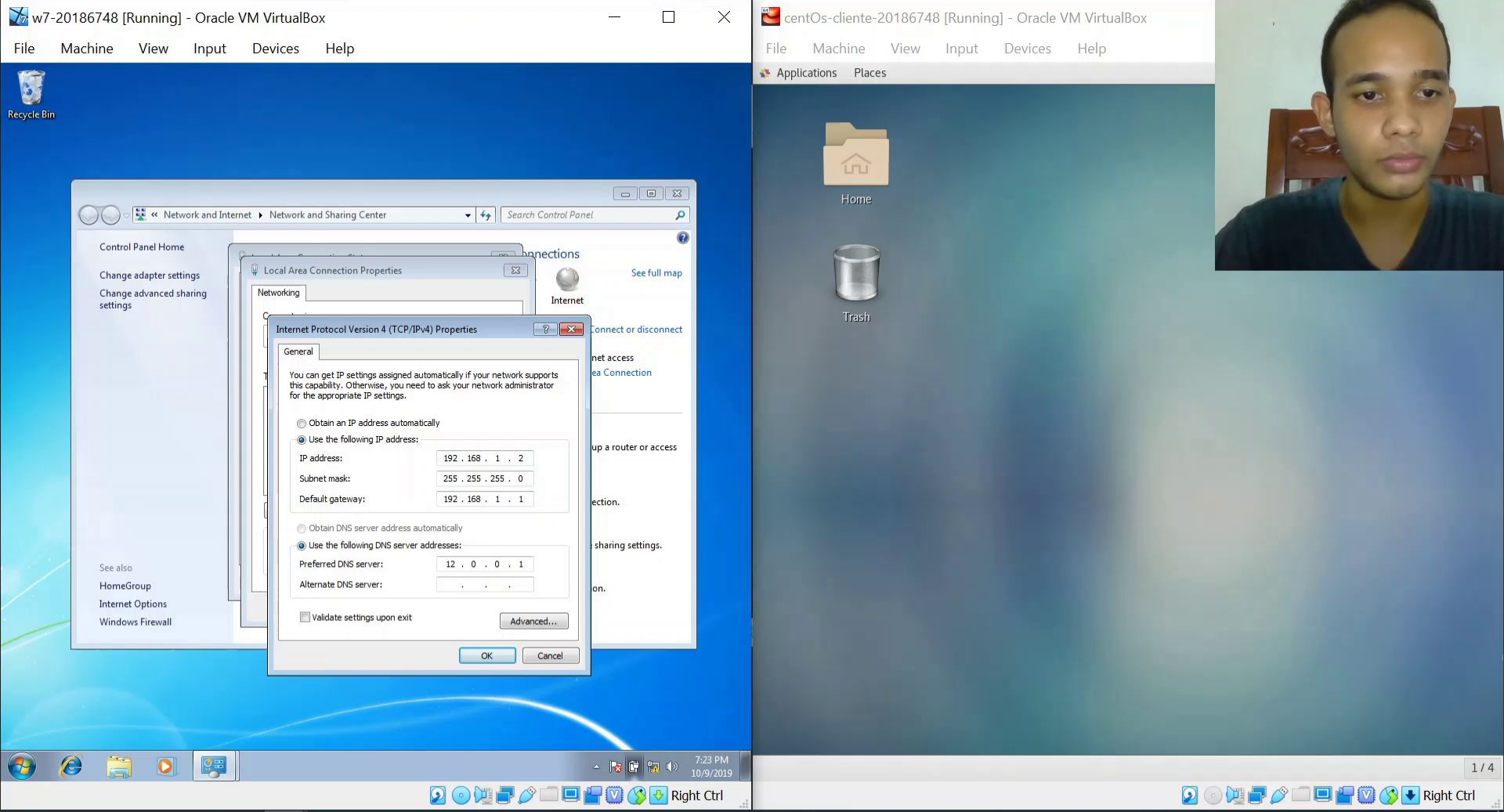
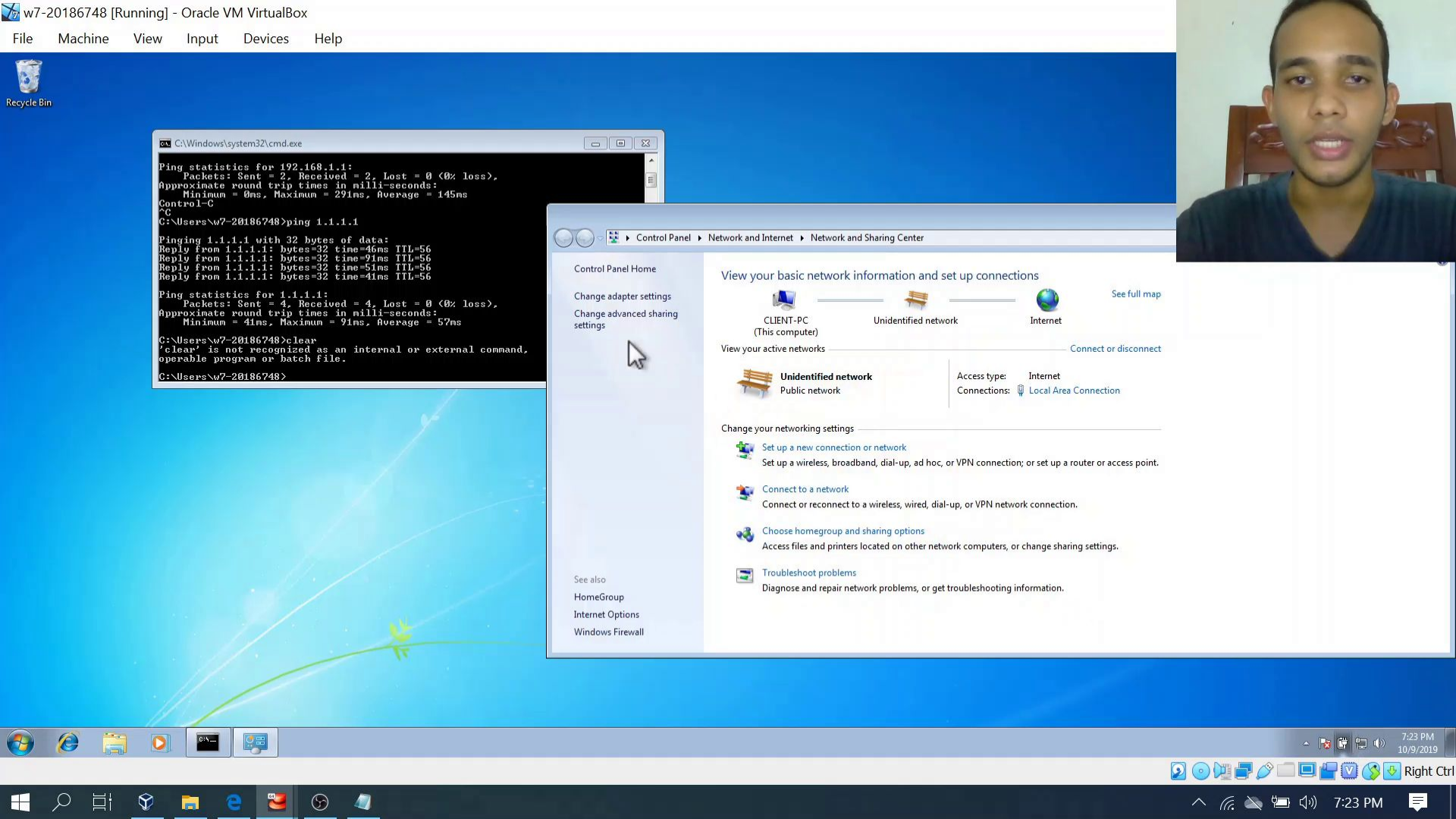
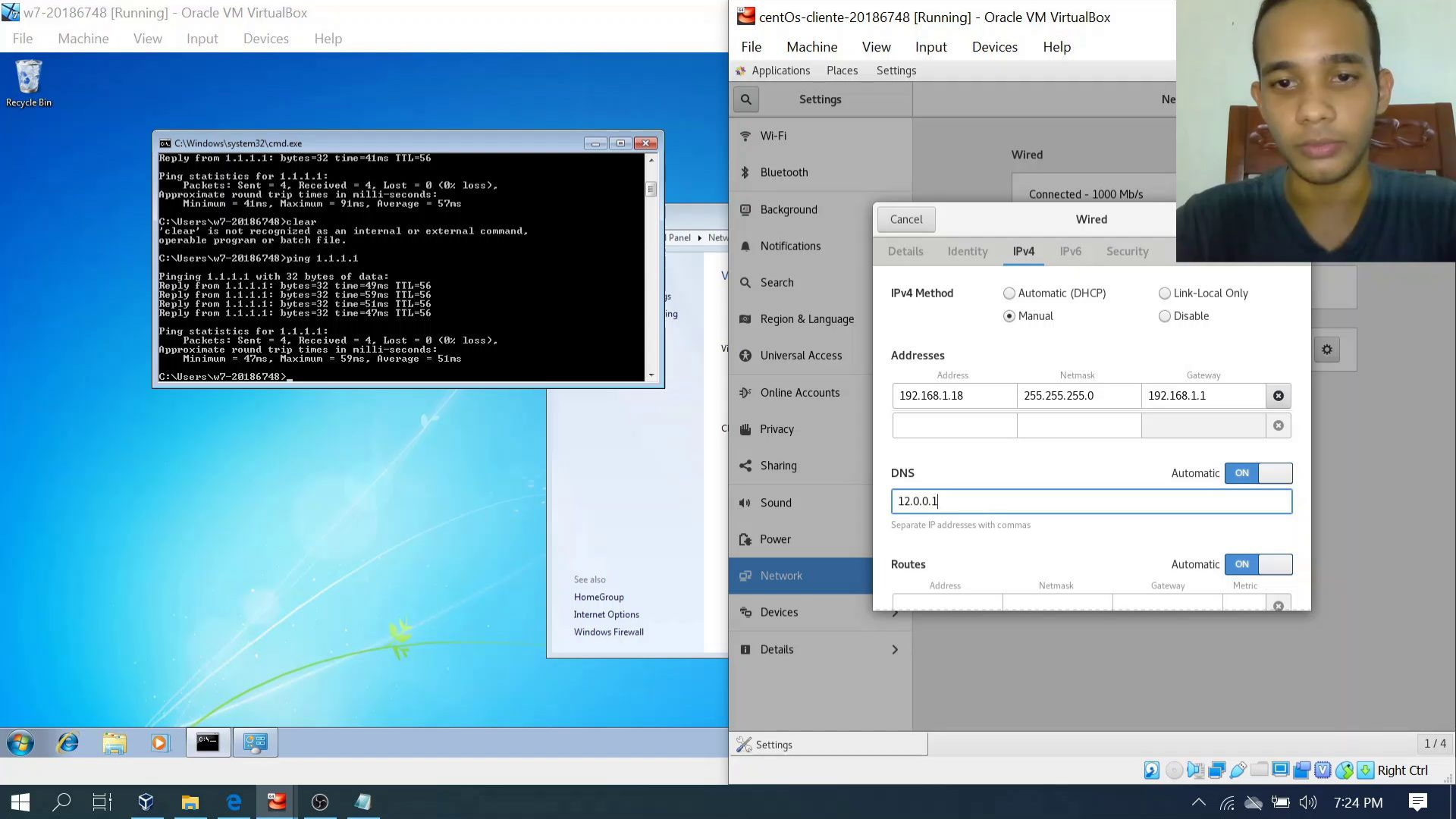
esday, October 09
tification
7:22 PM
10/9/2019
Right Ctrl
Right Ctrl
7:22 PM

Le asignamos a nuestro primer cliente el gateway de la red externa como dns y probamos que este tenga acceso a internet haciendo ping a la direccion externa 1.1.1.1


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
Network and Internet ▸ Network and Sharing Center
Search Control Panel
Control Panel Home
Change adapter settings
Change advanced sharing settings
See full map
Internet
Local Area Connection Properties
Networking
Internet Protocol Version 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 1 . 2
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 1 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 12 . 0 . 0 . 1
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel
See also
HomeGroup
Internet Options
Windows Firewall
7:23 PM
10/9/2019
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
Home
Trash
1 / 4
Right Ctrl
7:23 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
Ping statistics for 192.168.1.1:
Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 291ms, Average = 145ms
Control-C
^C
C:\Users\w7-20186748>ping 1.1.1.1
Pinging 1.1.1.1 with 32 bytes of data:
Reply from 1.1.1.1: bytes=32 time=46ms TTL=56
Reply from 1.1.1.1: bytes=32 time=91ms TTL=56
Reply from 1.1.1.1: bytes=32 time=51ms TTL=56
Reply from 1.1.1.1: bytes=32 time=41ms TTL=56
Ping statistics for 1.1.1.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 41ms, Maximum = 91ms, Average = 57ms
C:\Users\w7-20186748>clear
'clear' is not recognized as an internal or external command,
operable program or batch file.
C:\Users\w7-20186748>
Control Panel ▸ Network and Internet ▸ Network and Sharing Center
Control Panel Home
Change adapter settings
Change advanced sharing settings
View your basic network information and set up connections
See full map
CLIENT-PC (This computer)
Unidentified network
Internet
View your active networks
Connect or disconnect
Unidentified network
Public network
Access type: Internet
Connections: Local Area Connection
Change your networking settings
Set up a new connection or network
Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or set up a router or access point.
Connect to a network
Connect or reconnect to a wireless, wired, dial-up, or VPN network connection.
Choose homegroup and sharing options
Access files and printers located on other network computers, or change sharing settings.
Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.
See also
HomeGroup
Internet Options
Windows Firewall
7:23 PM
10/9/2019
Right Ctrl
7:23 PM

Le asignamos a nuestro cliente Linux el gateway de la red externa como dns y probamos que este tenga acceso a internet haciendo ping a la direccion externa 1.1.1.1


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
Reply from 1.1.1.1: bytes=32 time=41ms TTL=56
Ping statistics for 1.1.1.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 41ms, Maximum = 91ms, Average = 57ms
C:\Users\w7-20186748>clear
'clear' is not recognized as an internal or external command,
operable program or batch file.
C:\Users\w7-20186748>ping 1.1.1.1
Pinging 1.1.1.1 with 32 bytes of data:
Reply from 1.1.1.1: bytes=32 time=49ms TTL=56
Reply from 1.1.1.1: bytes=32 time=59ms TTL=56
Reply from 1.1.1.1: bytes=32 time=51ms TTL=56
Reply from 1.1.1.1: bytes=32 time=47ms TTL=56
Ping statistics for 1.1.1.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 47ms, Maximum = 59ms, Average = 51ms
C:\Users\w7-20186748>
See also
HomeGroup
Internet Options
Windows Firewall
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Settings
Settings
Wi-Fi
Bluetooth
Background
Notifications
Search
Region & Language
Universal Access
Online Accounts
Privacy
Sharing
Sound
Power
Network
Devices
Details
Wired
Connected - 1000 Mb/s
Cancel
Wired
Details Identity IPv4 IPv6 Security
IPv4 Method
Automatic (DHCP)
Link-Local Only
Manual
Disable
Addresses
Address Netmask Gateway
192.168.1.18 255.255.255.0 192.168.1.1
DNS
Automatic ON
12.0.0.1
Separate IP addresses with commas
Routes
Automatic ON
Address Netmask Gateway Metric
Settings
1 / 4
Right Ctrl
7:24 PM

centOs-cliente-20186748 [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Applications Places Terminal

centos20186748@localhost:~

File Edit View Search Terminal Help

```
[centos20186748@localhost ~]$ ping 192.168.1.1
PING 192.168.1.1 (192.168.1.1) 56(84) bytes of data.
64 bytes from 192.168.1.1: icmp_seq=1 ttl=64 time=0.434 ms
64 bytes from 192.168.1.1: icmp_seq=2 ttl=64 time=0.351 ms
64 bytes from 192.168.1.1: icmp_seq=3 ttl=64 time=0.282 ms
^C
--- 192.168.1.1 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2000ms
rtt min/avg/max/mdev = 0.282/0.355/0.434/0.065 ms
[centos20186748@localhost ~]$ ping 1.1.1.1
PING 1.1.1.1 (1.1.1.1) 56(84) bytes of data.
64 bytes from 1.1.1.1: icmp_seq=1 ttl=56 time=46.9 ms
64 bytes from 1.1.1.1: icmp_seq=2 ttl=56 time=47.0 ms
64 bytes from 1.1.1.1: icmp_seq=3 ttl=56 time=49.6 ms
64 bytes from 1.1.1.1: icmp_seq=4 ttl=56 time=46.3 ms
```

CENTOS 7

centos20186748@localhost:~

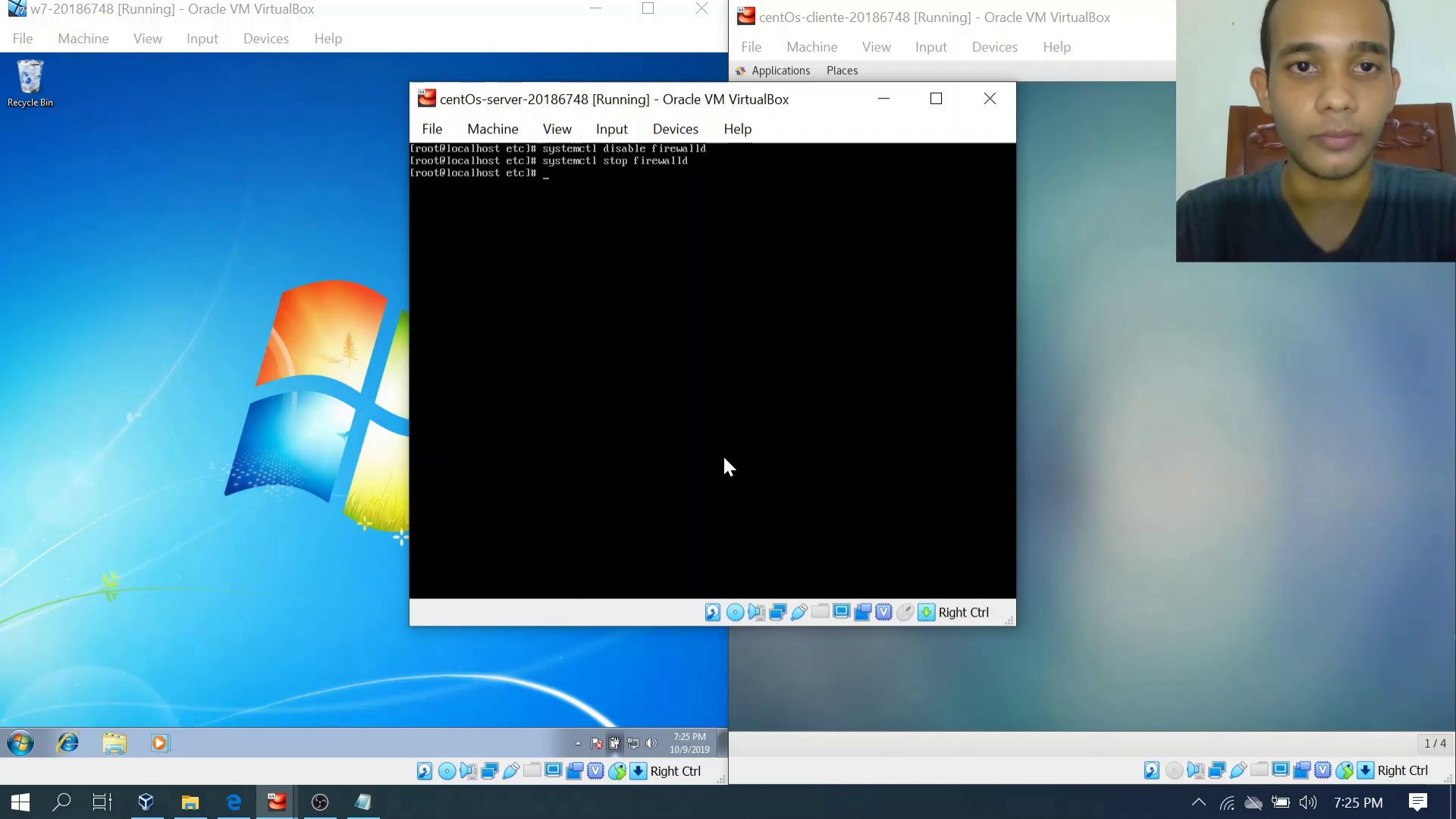
1 / 4

Right Ctrl

7:24 PM

NAT con iptables

Primero detenemos y deshabilitamos la aplicación **firewalld**, con **systemctl stop firewalld**, y **systemctl disable firewalld**


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# systemctl disable firewalld
[root@localhost etc]# systemctl stop firewalld
[root@localhost etc]#
Right Ctrl
7:25 PM
10/9/2019
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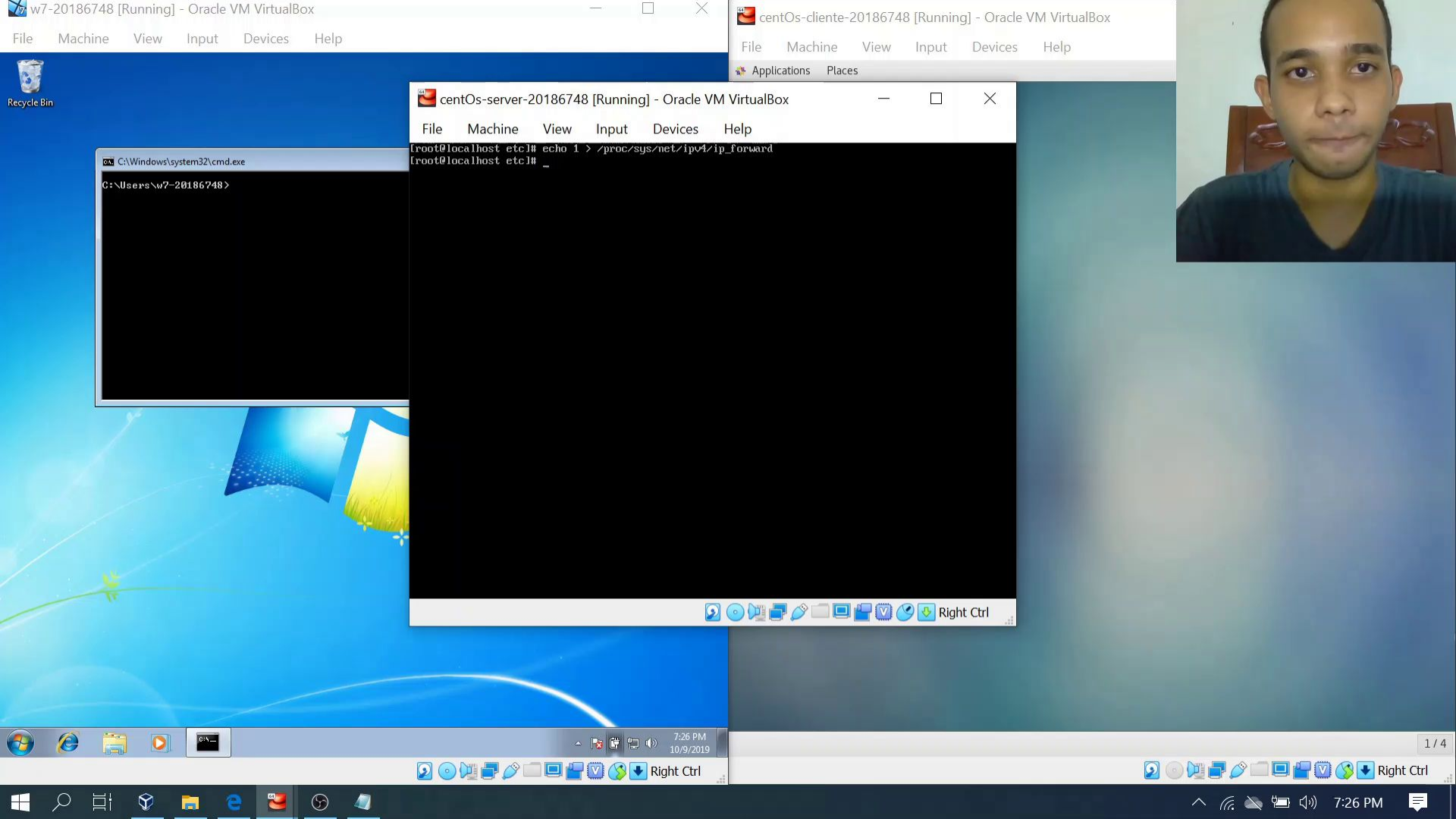
Right Ctrl
7:25 PM

Nos aseguramos de habilitar el redireccionamiento colocando **1** en **/proc/sys/net/ipv4/ip_forward**


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# echo 1 > /proc/sys/net/ipv4/ip_forward
[root@localhost etc]#
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
7:26 PM
10/9/2019
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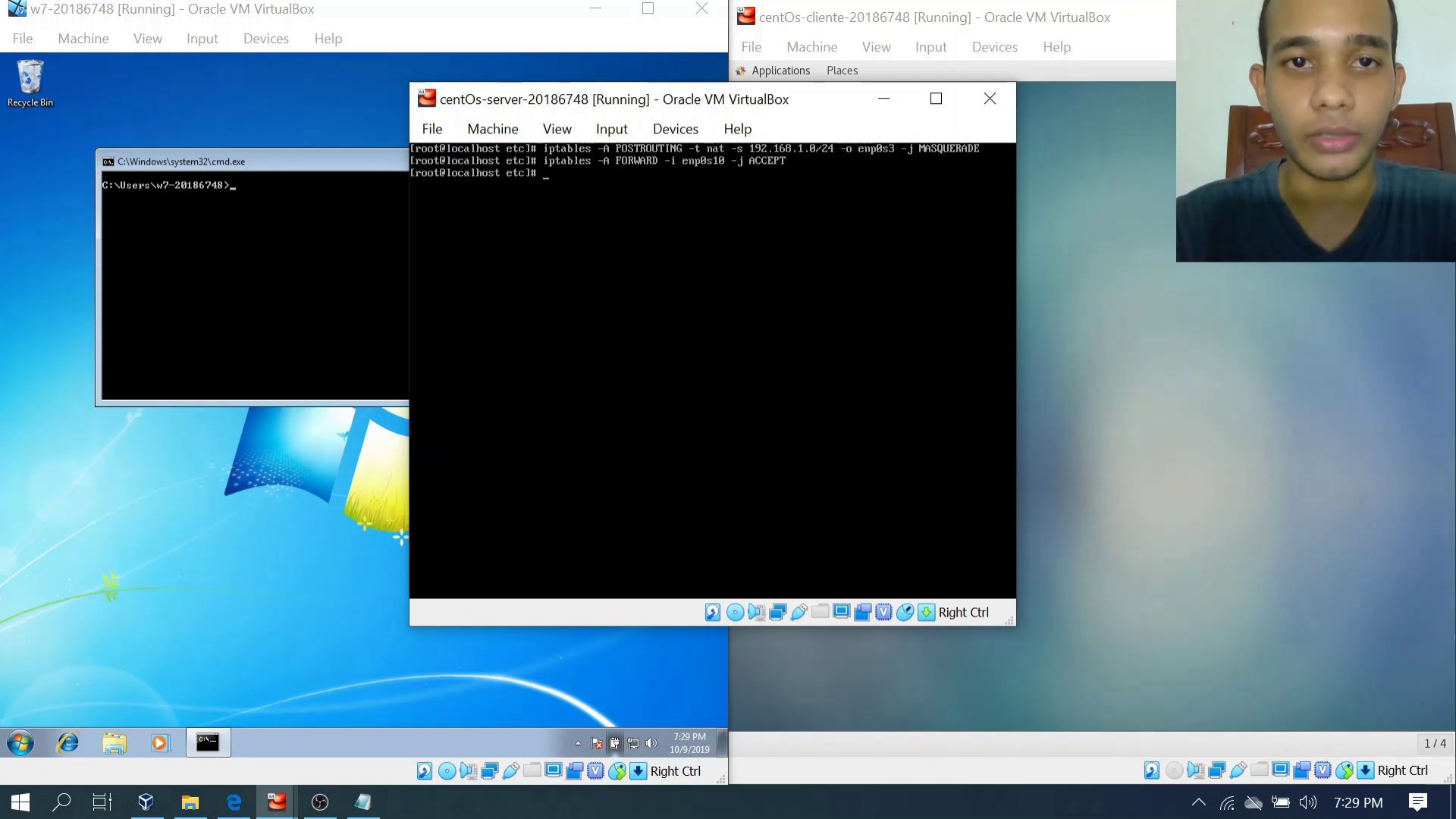
1 / 4
Right Ctrl
7:26 PM

Habilitamos el postrouting y el forward con los comandos **iptables -A POSTROUTING -t nat -s [red interna] -o [interfaz conectada a internet] -j MASQUERADE** ,e ,**iptables -A FORWARD -i [red interna] -j ACCEPT** respectivamente


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>_
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# iptables -A POSTROUTING -t nat -s 192.168.1.0/24 -o enp0s3 -j MASQUERADE
[root@localhost etc]# iptables -A FORWARD -i enp0s10 -j ACCEPT
[root@localhost etc]# _
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places
Right Ctrl
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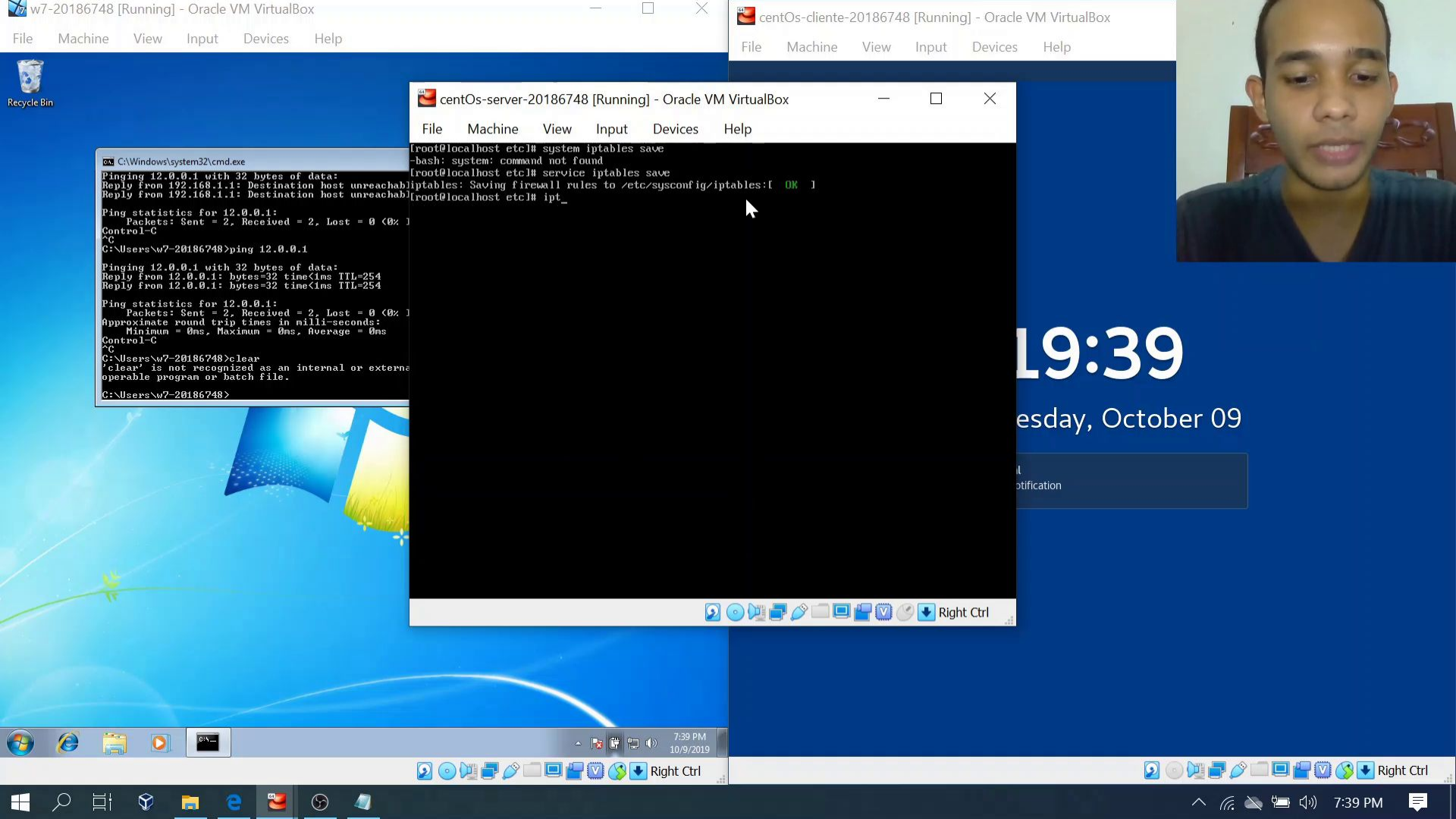
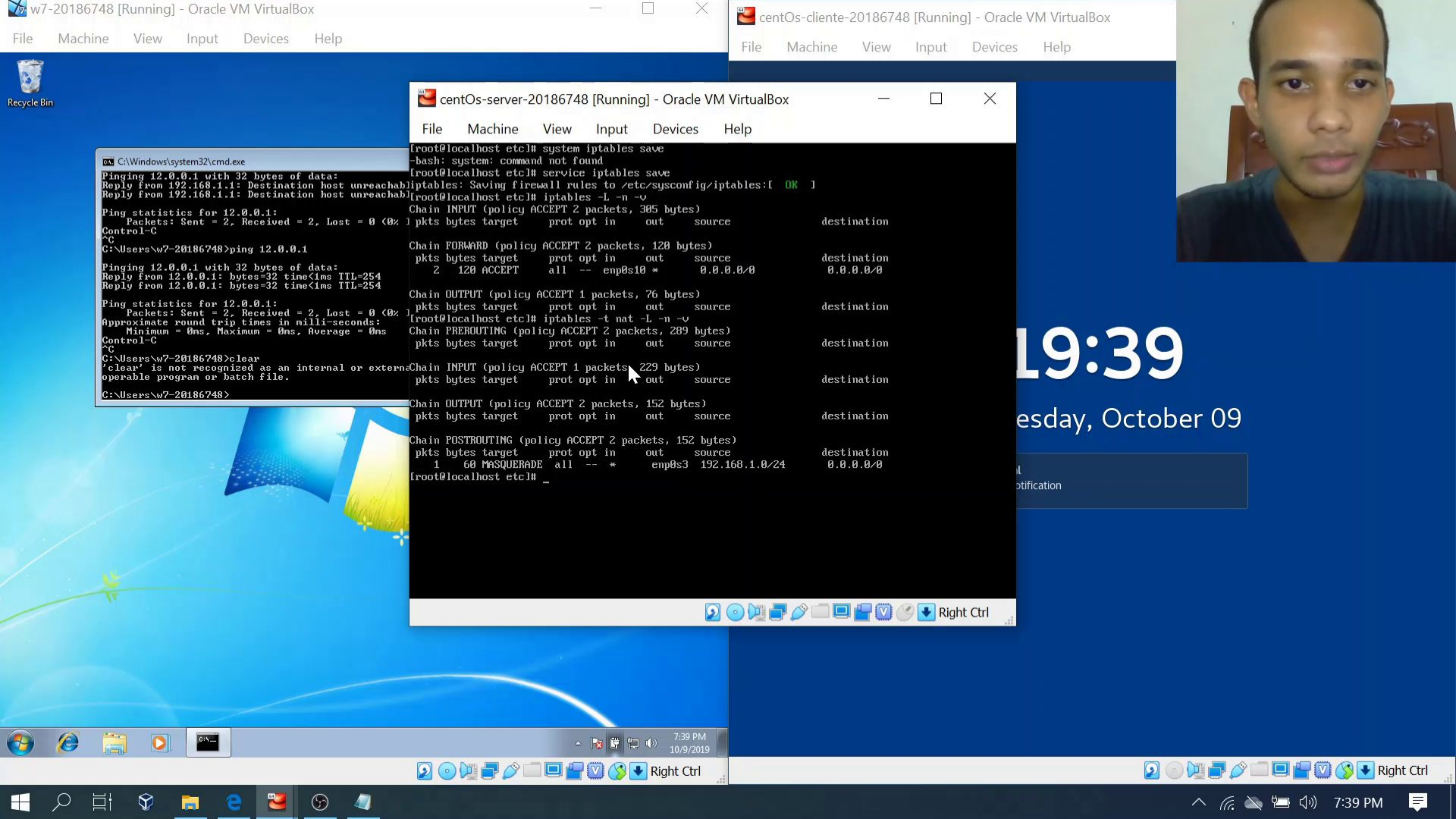
10/9/2019
1 / 4
Right Ctrl
7:29 PM

Guardamos las reglas que habíamos configurado de tal manera que estas se apliquen con el comando **service iptables save** , luego con **iptables -L -n -v** podemos visualizar las reglas que tenemos configuradas


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
Pinging 12.0.0.1 with 32 bytes of data:
Reply from 192.168.1.1: Destination host unreachable.
Reply from 192.168.1.1: Destination host unreachable.
Ping statistics for 12.0.0.1:
Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Control-C
^C
C:\Users\w7-20186748>ping 12.0.0.1
Pinging 12.0.0.1 with 32 bytes of data:
Reply from 12.0.0.1: bytes=32 time<1ms TTL=254
Reply from 12.0.0.1: bytes=32 time<1ms TTL=254
Ping statistics for 12.0.0.1:
Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
Control-C
^C
C:\Users\w7-20186748>clear
'clear' is not recognized as an internal or external command,
operable program or batch file.
C:\Users\w7-20186748>
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# system iptables save
-bash: system: command not found
[root@localhost etc]# service iptables save
iptables: Saving firewall rules to /etc/sysconfig/iptables:[OK]
[root@localhost etc]# ipt
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
19:39
esday, October 09
otification
Right Ctrl
7:39 PM
10/9/2019
Right Ctrl
7:39 PM


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
Pinging 12.0.0.1 with 32 bytes of data:
Reply from 192.168.1.1: Destination host unreachable.
Reply from 192.168.1.1: Destination host unreachable.
Ping statistics for 12.0.0.1:
Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Control-C
^C
C:\Users\w7-20186748>ping 12.0.0.1
Pinging 12.0.0.1 with 32 bytes of data:
Reply from 12.0.0.1: bytes=32 time<1ms TTL=254
Reply from 12.0.0.1: bytes=32 time<1ms TTL=254
Ping statistics for 12.0.0.1:
Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
Control-C
^C
C:\Users\w7-20186748>clear
'clear' is not recognized as an internal or external command,
operable program or batch file.
C:\Users\w7-20186748>
centOs-server-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@localhost etc]# system iptables save
-bash: system: command not found
[root@localhost etc]# service iptables save
iptables: Saving firewall rules to /etc/sysconfig/iptables:[OK]
[root@localhost etc]# iptables -L -n -v
Chain INPUT (policy ACCEPT 2 packets, 305 bytes)
pkts bytes target prot opt in out source destination
Chain FORWARD (policy ACCEPT 2 packets, 120 bytes)
pkts bytes target prot opt in out source destination
2 120 ACCEPT all -- enp0s10 * 0.0.0.0/0 0.0.0.0/0
Chain OUTPUT (policy ACCEPT 1 packets, 76 bytes)
pkts bytes target prot opt in out source destination
[root@localhost etc]# iptables -t nat -L -n -v
Chain PREROUTING (policy ACCEPT 2 packets, 289 bytes)
pkts bytes target prot opt in out source destination
Chain INPUT (policy ACCEPT 1 packets, 229 bytes)
pkts bytes target prot opt in out source destination
Chain OUTPUT (policy ACCEPT 2 packets, 152 bytes)
pkts bytes target prot opt in out source destination
Chain POSTROUTING (policy ACCEPT 2 packets, 152 bytes)
pkts bytes target prot opt in out source destination
1 60 MASQUERADE all -- * enp0s3 192.168.1.0/24 0.0.0.0/0
[root@localhost etc]#
Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
19:39
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Right Ctrl
7:39 PM
10/9/2019
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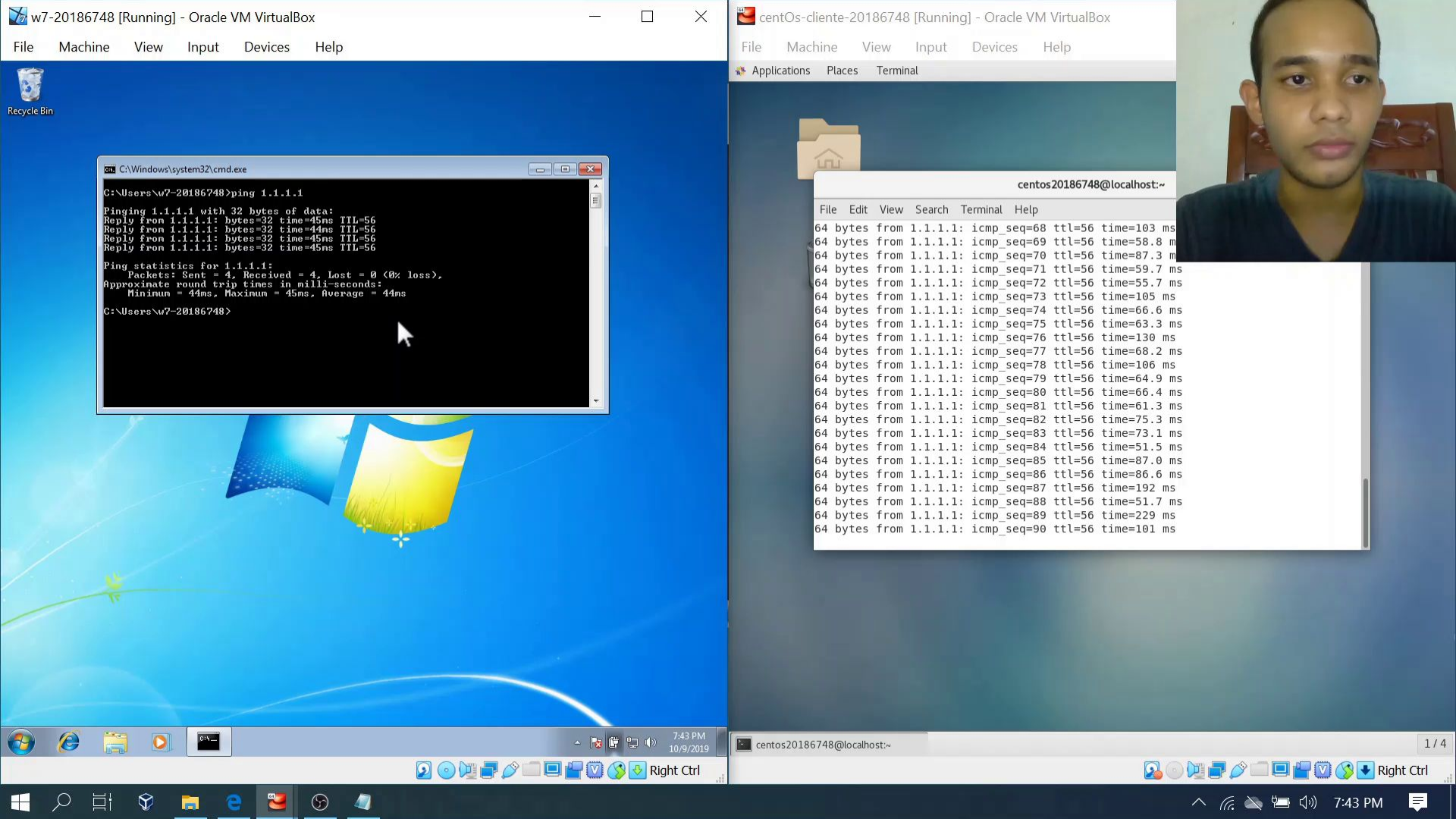
7:39 PM

Nuevamente probamos que ambas maquinas tengan acceso a internet haciendo ping a la direccion externa 1.1.1.1


w7-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Recycle Bin
C:\Windows\system32\cmd.exe
C:\Users\w7-20186748>ping 1.1.1.1
Pinging 1.1.1.1 with 32 bytes of data:
Reply from 1.1.1.1: bytes=32 time=45ms TTL=56
Reply from 1.1.1.1: bytes=32 time=44ms TTL=56
Reply from 1.1.1.1: bytes=32 time=45ms TTL=56
Reply from 1.1.1.1: bytes=32 time=45ms TTL=56
Ping statistics for 1.1.1.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 44ms, Maximum = 45ms, Average = 44ms
C:\Users\w7-20186748>
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Right Ctrl
centOs-cliente-20186748 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
centos20186748@localhost:~
File Edit View Search Terminal Help
64 bytes from 1.1.1.1: icmp_seq=68 ttl=56 time=103 ms
64 bytes from 1.1.1.1: icmp_seq=69 ttl=56 time=58.8 ms
64 bytes from 1.1.1.1: icmp_seq=70 ttl=56 time=87.3 ms
64 bytes from 1.1.1.1: icmp_seq=71 ttl=56 time=59.7 ms
64 bytes from 1.1.1.1: icmp_seq=72 ttl=56 time=55.7 ms
64 bytes from 1.1.1.1: icmp_seq=73 ttl=56 time=105 ms
64 bytes from 1.1.1.1: icmp_seq=74 ttl=56 time=66.6 ms
64 bytes from 1.1.1.1: icmp_seq=75 ttl=56 time=63.3 ms
64 bytes from 1.1.1.1: icmp_seq=76 ttl=56 time=130 ms
64 bytes from 1.1.1.1: icmp_seq=77 ttl=56 time=68.2 ms
64 bytes from 1.1.1.1: icmp_seq=78 ttl=56 time=106 ms
64 bytes from 1.1.1.1: icmp_seq=79 ttl=56 time=64.9 ms
64 bytes from 1.1.1.1: icmp_seq=80 ttl=56 time=66.4 ms
64 bytes from 1.1.1.1: icmp_seq=81 ttl=56 time=61.3 ms
64 bytes from 1.1.1.1: icmp_seq=82 ttl=56 time=75.3 ms
64 bytes from 1.1.1.1: icmp_seq=83 ttl=56 time=73.1 ms
64 bytes from 1.1.1.1: icmp_seq=84 ttl=56 time=51.5 ms
64 bytes from 1.1.1.1: icmp_seq=85 ttl=56 time=87.0 ms
64 bytes from 1.1.1.1: icmp_seq=86 ttl=56 time=86.6 ms
64 bytes from 1.1.1.1: icmp_seq=87 ttl=56 time=192 ms
64 bytes from 1.1.1.1: icmp_seq=88 ttl=56 time=51.7 ms
64 bytes from 1.1.1.1: icmp_seq=89 ttl=56 time=229 ms
64 bytes from 1.1.1.1: icmp_seq=90 ttl=56 time=101 ms
centos20186748@localhost:~
1 / 4
Right Ctrl
7:43 PM