```
ubuntu@ip-172-31-0-153: ~
                                                                            0
Archivo Editar Ver Buscar Terminal Ayuda
It is required that your private key files are NOT accessible by others.
This private key will be ignored.
Load key "uvg-2020.pem": bad permissions
ubuntu@quetzaluno.space: Permission denied (publickey).
cristopher@cristopher-Latitude-E6420:~/Documentos/Universidad/Semestre-5/Web$ ss
h -i uvg-2020.pem ubuntu@quetzaluno.space
ssh: Could not resolve hostname quetzaluno.space: Name or service not known
cristopher@cristopher-Latitude-E6420:~/Documentos/Universidad/Semestre-5/Web$ ch
mod 500 uvg-2020.pem
cristopher@cristopher-Latitude-E6420:~/Documentos/Universidad/Semestre-5/Web$ ss
h -i uvg-2020.pem ubuntu@quetzaluno.space
ssh: Could not resolve hostname quetzaluno.space: Name or service not known
cristopher@cristopher-Latitude-E6420:~/Documentos/Universidad/Semestre-5/Web$ ss
h -i uvg-2020.pem ubuntu@quetzaluno.space
ssh: Could not resolve hostname quetzaluno.space: Name or service not known
cristopher@cristopher-Latitude-E6420:~/Documentos/Universidad/Semestre-5/Web$ pi
ng 8.8.8.8
connect: La red es inaccesible
cristopher@cristopher-Latitude-E6420:~/Documentos/Universidad/Semestre-5/Web$ ss
h -i uvg-2020.pem ubuntu@quetzaluno.space
Welcome to Ubuntu 18.04.3 LTS (GNU/Linux 4.15.0-1051-aws x86_64)
                   https://help.ubuntu.com
 * Documentation:
  Management:
                   https://landscape.canonical.com
```

(10 puntos) Cuanta memoria RAM, total usada y libre, tiene el servidor?
 (su respuesta debe estar en MB)

```
ubuntu@ip-172-31-0-153: ~/CristopherB
                                                                           ×
Archivo Editar Ver Buscar Terminal Ayuda
   - Reduce system reboots and improve kernel security. Activate at:
     https://ubuntu.com/livepatch
41 packages can be updated.
0 updates are security updates.
*** System restart required ***
Last login: Sat Jan 25 03:10:51 2020 from 200.35.167.67
ubuntu@ip-172-31-0-153:~$ ls
Abril JavierR Martin
                        RenatoX files_python
              Nexthor Ricardo simple_server_python2.py
Cris Mario
ubuntu@ip-172-31-0-153:~$ mk dir CristopherB
mk: command not found
ubuntu@ip-172-31-0-153:~$ mkdir CristopherB
ubuntu@ip-172-31-0-153:~$ ls
Abril CristopherB Mario
                           Nexthor Ricardo
                                                   simple_server_python2.py
                   Martin RenatoX files_python
      JavierR
ubuntu@ip-172-31-0-153:~$ cd CristopherB
ubuntu@ip-172-31-0-153:~/CristopherB$ free -h
              total
                           used
                                       free
                                                 shared
                                                         buff/cache
                                                                      available
Mem:
               479M
                           164M
                                        44M
                                                   892K
                                                               270M
                                                                           301M
Swap:
                 0B
                             0B
                                         0B
ubuntu@ip-172-31-0-153:~/CristopherB$
```

• (10 puntos) Cuanta espacio de disco, total usado y disponible, tiene el servidor? (su respuesta debe estar en MB)

```
ubuntu@ip-172-31-0-153: ~/CristopherB
                                                                        0
                                                                            ×
Archivo Editar Ver Buscar Terminal Ayuda
ubuntu@ip-172-31-0-153:~$ mk dir CristopherB
mk: command not found
ubuntu@ip-172-31-0-153:~$ mkdir CristopherB
ubuntu@ip-172-31-0-153:~$ ls
                          Nexthor Ricardo
Abril CristopherB Mario
                                                 simple_server_python2.py
     JavierR Martin RenatoX files_python
Cris
ubuntu@ip-172-31-0-153:~$ cd CristopherB
ubuntu@ip-172-31-0-153:~/CristopherB$ free -h
             total
                         used
                                     free
                                               shared
                                                      buff/cache
                                                                   available
Mem:
              479M
                          164M
                                      44M
                                                 892K
                                                            270M
                                                                        301M
Swap:
                0B
                           0B
                                       0B
ubuntu@ip-172-31-0-153:~/CristopherB$ df -h
Filesystem
            Size Used Avail Use% Mounted on
udev
               229M 0 229M 0% /dev
               48M 888K 48M
                                2% /run
tmpfs
               7.7G 1.6G 6.2G 21% /
/dev/xvda1
               240M
                     0 240M 0% /dev/shm
tmpfs
tmpfs
               5.0M
                      0 5.0M 0% /run/lock
               240M
                      0 240M
                                 0% /sys/fs/cgroup
tmpfs
/dev/loop0
               18M 18M
                           0 100% /snap/amazon-ssm-agent/1480
/dev/loop1
                90M 90M
                             0 100% /snap/core/7713
                48M
tmpfs
                      0
                           48M 0% /run/user/1000
/dev/loop2
                90M
                      90M
                             0 100% <u>/</u>snap/core/8268
ubuntu@ip-172-31-0-153:~/CristopherB$
```

(10 puntos) Utilizando el comando ip obtengan la ip del servidor

```
ubuntu@ip-172-31-0-153: ~/CristopherB
                                                                            Archivo Editar Ver Buscar Terminal Ayuda
/dev/loop0
                 18M
                       18M
                               0 100% /snap/amazon-ssm-agent/1480
/dev/loop1
                 90M
                       90M
                               0 100% /snap/core/7713
tmpfs
                 48M
                       0
                             48M 0% /run/user/1000
/dev/loop2
                 90M
                       90M
                               0 100% /snap/core/8268
ubuntu@ip-172-31-0-153:~/CristopherB$ ip route show
default via 172.31.0.1 dev eth0 proto dhcp src 172.31.0.153 metric 100
172.31.0.0/24 dev eth0 proto kernel scope link src 172.31.0.153
172.31.0.1 dev eth0 proto dhcp scope link src 172.31.0.153 metric 100
ubuntu@ip-172-31-0-153:~/CristopherB$ ip addr

    lo: <LOOPBACK,UP,LOWER UP> mtu 65536 qdisc noqueue state UNKNOWN group defaul

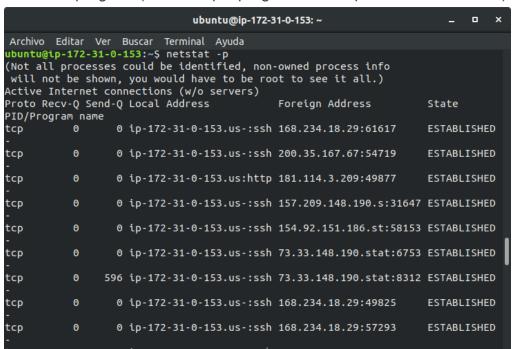
t glen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid lft forever preferred lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 9001 qdisc fq_codel state UP grou
p default glen 1000
    link/ether 0a:7c:a5:99:bd:76 brd ff:ff:ff:ff:ff
    inet 172.31.0.153/24 brd 172.31.0.255 scope global dynamic eth0
       valid_lft 2546sec preferred_lft 2546sec
    inet6 fe80::87c:a5ff:fe99:bd76/64 scope link
       valid_lft forever preferred_lft_forever
ubuntu@ip-172-31-0-153:~/CristopherB$
```

 (10 puntos) Isof lista los archivos abiertos. Identifiquen los archivos abiertos por el protocolo TCP en el puerto 80

```
ubuntu@ip-172-31-0-153: ~
                                                                            0
Archivo Editar Ver Buscar Terminal Ayuda
kthrotld
                                  root rtd
             79
                                               unknown
             /proc/79/root (readlink: Permission denied)
kthrotld
                                  root txt unknown
             /proc/79/exe (readlink: Permission denied)
kthrotld
                                  root NOFD
             /proc/79/fd (opendir: Permission denied)
             80
nvme-wq
                                  root cwd
                                              unknown
             /proc/80/cwd (readlink: Permission denied)
                                  root rtd
nvme-wq
             80
                                             unknown
             /proc/80/root (readlink: Permission denied)
nvme-wq
                                  root txt unknown
             /proc/80/exe (readlink: Permission denied)
nvme-wq
                                  root NOFD
             /proc/80/fd (opendir: Permission denied)
scsi_eh_0
                                  root cwd
                                              unknown
             /proc/81/cwd (readlink: Permission denied)
scsi_eh_0
                                  root rtd
             /proc/81/root (readlink: Permission denied)
scsi_eh_0
             81
                                  root txt
             /proc/81/exe (readlink: Permission denied)
scsi_eh_0
             81
                                  root NOFD
             /proc/81/fd (opendir: Permission denied)
scsi_tmf_
                                  root cwd
                                              unknown
             /proc/82/cwd (readlink: Permission denied)
```

20 puntos) Utilizando **netstat**, listen los puertos por los que está escuchando el servidor. Deben filtrar usando las siguientes opciones de netstat (esto es un solo comando con estas opciones):

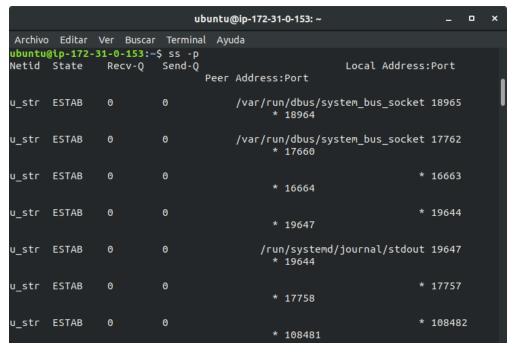
- tcp
- udp
- numeric (muestra los puertos por número)
- program (muestra qué programa es el que está escuchando)

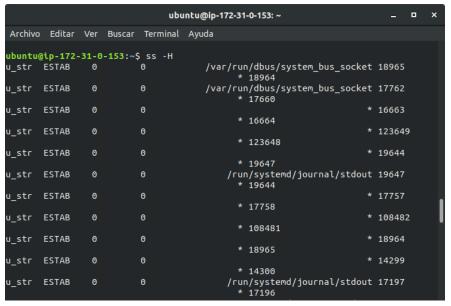


ubuntu@ip-172-31-0-153: ~										×
Archivo Ed	itar Ver	Buscar Ter	minal	Ayuda						
unix 3	[]	DGR	AM		13568					
unix 3	[]	STR	EAM	CONNECTED	19029					
/var/run/d	bus/syste	m_bus_soc	ket							
unix 2	[]	DGR	AM		109964					
unix 3	[]	STR	EAM	CONNECTED	16664					
/run/syste	md/journa	l/stdout								
unix 3	[]	STR	EAM	CONNECTED	86706					
unix 3	[]	STR	EAM	CONNECTED	105643					
unix 3	[]	DGR	AM		14214					
unix 3	[]	STR	EAM	CONNECTED	16426					
unix 3	[]	STR	EAM	CONNECTED	108481					
unix 3	[]	STR	EAM	CONNECTED	16427					
unix 3	[]	STR		CONNECTED	18979					
/var/run/d	bus/syste	m_bus_soc	ket							
unix 2	[]	DGR	AM		13564					
unix 2	[]	DGR	AM		17684					
unix 3	[]	STR	EAM	CONNECTED	17661					
/run/systemd/journal/stdout										
unix 2	[]	DGR	AM		15793					
unix 3	[]	STR	EAM	CONNECTED	14300					
/run/systemd/journal/stdout									U	
unix 3	[]	STR	EAM	CONNECTED	118350					
unix 3	[]	DGR	AM		14429					
unix 3	[]	STR	EAM	CONNECTED	17196	-				

(30 puntos) Utilizando **ss**, listen los puertos por los que está escuchando el servidor. Deben filtrar usando las siguientes opciones de ss (esto es un solo comando con estas opciones):

				ub	untu@	pip-172-31-0-153: ~	-	0	×
Archivo	Editar	Ver B	uscar	Terminal	Ayu	da			
ubuntu@	ip-172-	31-0-1	.53:~\$	ss					
	State	Recv		Send-Q		Local Address	::Port		- 1
					Peer	Address:Port			
u_str	ESTAB	0		0		* 120188	12018	7	
u_str	ESTAB	0		0		/var/run/dbus/system_bus_socket * 18964	18965		'
u_str	ESTAB	0		0		/var/run/dbus/system_bus_socket * 17660	17762		
u_str	ESTAB	0		0		•	16663		
						* 16664			
u_str	ESTAB	0		0			19644		
u_str	ESTAB	0		0		<pre>* 19647 /run/systemd/journal/stdout</pre>	19647		
u_str	ESTAB	0		0		,	17757		
						* 17758			- 1
u_str	ESTAB	0		0			10848	2	
u ete	ECTAB	0		0		* 108481	86070		
u_str	ESTAB	0				* 86071	80070		
u str	ESTAB	0		0			18964		
						* 18965			
u str	ESTAB	0		0		,	14299		





$\overline{}$								
				ubuntu@ip-172-31-0-153: ~	× 1			
Archivo	Editar	Ver	Buscar	Terminal Ayuda				
				190.148.209.157:57325				
tcp	ESTAB	0		0 172.31.0.153:ssh 168.234.18.29:49822				
tcp	ESTAB	0		1080 172.31.0.153:ssh 222.186.30.35:57903				
tcp	ESTAB	0		0 172.31.0.153:ssh 190.148.33.73:8318				
ubuntu@ip-172-31-0-153:~\$ ss -s Total: 235 (kernel 0) TCP: 16 (estab 11, closed 0, orphaned 0, synrecv 0, timewait 0/0), ports 0								
Transpo * RAW UDP TCP INET FRAG	rt Tota 0 1 2 16 19 0	ι	IP - 0 2 14 16	IPv6 - 1 0 2 3				
ubuntu@	ip-172-	31-0	-153:~	\$ I	_			

• (20 puntos) Utilizando **dig** dentro del servidor, obtengan la ip que resuelve al hacer un dns lookup *uvg.edu.gt*

