UNIVERSIDAD POLITÉCNICA DE QUINTANA ROO

Formando Triunfadores

SISTEMAS OPERATIVOS

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TAREA #987 Realizar el siguiente laboratorio, documentar con screenshots los resultados de sus comandos y las respuestas a sus preguntas.

GRUPO. 27AV SOFTWARE

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APARTADO A)

1.

```
      2         The transmission was successful but no responses were received.

      any other value
                An error occurred.  These values are defined in <sysexits.h>.

SEE ALSO
      netstat(1), ifconfig(8), routed(8), traceroute(8), ping6(8)

HISTORY
      The ping utility appeared in 4.3BSD.

AUTHORS
      The original ping utility was written by Mike Muuss while at the US Army
      Ballistics Research Laboratory.

BUGS
      Flood pinging is not recommended in general, and flood pinging the
      broadcast address should only be done under very controlled conditions.

      The -v option is not worth much on busy hosts.

macOS 14.0                      March 29, 2013                      macOS 14.0
(END)
```

2.

```
Unknown locale, assuming C
imac__invitado10@iMac-10 ~ % ping 127.0.0.1
PING 127.0.0.1 (127.0.0.1): 56 data bytes
64 bytes from 127.0.0.1: icmp_seq=0 ttl=64 time=0.084 ms
64 bytes from 127.0.0.1: icmp_seq=1 ttl=64 time=0.124 ms
64 bytes from 127.0.0.1: icmp_seq=2 ttl=64 time=0.127 ms
64 bytes from 127.0.0.1: icmp_seq=3 ttl=64 time=0.129 ms
64 bytes from 127.0.0.1: icmp_seq=4 ttl=64 time=0.133 ms
64 bytes from 127.0.0.1: icmp_seq=5 ttl=64 time=0.117 ms
64 bytes from 127.0.0.1: icmp_seq=6 ttl=64 time=0.118 ms
64 bytes from 127.0.0.1: icmp_seq=7 ttl=64 time=0.122 ms
64 bytes from 127.0.0.1: icmp_seq=8 ttl=64 time=0.147 ms
64 bytes from 127.0.0.1: icmp_seq=9 ttl=64 time=0.114 ms
64 bytes from 127.0.0.1: icmp_seq=10 ttl=64 time=0.148 ms
64 bytes from 127.0.0.1: icmp_seq=11 ttl=64 time=0.117 ms
64 bytes from 127.0.0.1: icmp_seq=12 ttl=64 time=0.121 ms
64 bytes from 127.0.0.1: icmp_seq=13 ttl=64 time=0.142 ms
64 bytes from 127.0.0.1: icmp_seq=14 ttl=64 time=0.125 ms
64 bytes from 127.0.0.1: icmp_seq=15 ttl=64 time=0.129 ms
^C
--- 127.0.0.1 ping statistics ---
16 packets transmitted, 16 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 0.084/0.125/0.148/0.015 ms
imac__invitado10@iMac-10 ~ %
```

3.

```
           -b boundif             # bind the socket to the interface
           -k traffic_class       # set traffic class socket option
           -K net_service_type    # set traffic class socket options
           --apple-connect        # call connect(2) in the socket
           --apple-time           # display current time
[imac__invitado10@iMac-10 ~ % ping www.google.com
PING www.google.com (142.250.189.132): 56 data bytes
64 bytes from 142.250.189.132: icmp_seq=0 ttl=118 time=23.339 ms
64 bytes from 142.250.189.132: icmp_seq=1 ttl=118 time=30.370 ms
64 bytes from 142.250.189.132: icmp_seq=2 ttl=118 time=30.850 ms
64 bytes from 142.250.189.132: icmp_seq=3 ttl=118 time=26.061 ms
64 bytes from 142.250.189.132: icmp_seq=4 ttl=118 time=22.696 ms
64 bytes from 142.250.189.132: icmp_seq=5 ttl=118 time=24.253 ms
64 bytes from 142.250.189.132: icmp_seq=6 ttl=118 time=29.825 ms
64 bytes from 142.250.189.132: icmp_seq=7 ttl=118 time=32.199 ms
64 bytes from 142.250.189.132: icmp_seq=8 ttl=118 time=27.406 ms
64 bytes from 142.250.189.132: icmp_seq=9 ttl=118 time=26.394 ms
64 bytes from 142.250.189.132: icmp_seq=10 ttl=118 time=24.399 ms
64 bytes from 142.250.189.132: icmp_seq=11 ttl=118 time=23.521 ms
64 bytes from 142.250.189.132: icmp_seq=12 ttl=118 time=31.187 ms
64 bytes from 142.250.189.132: icmp_seq=13 ttl=118 time=27.780 ms
64 bytes from 142.250.189.132: icmp_seq=14 ttl=118 time=27.240 ms
64 bytes from 142.250.189.132: icmp_seq=15 ttl=118 time=25.661 ms
64 bytes from 142.250.189.132: icmp_seq=16 ttl=118 time=27.298 ms
64 bytes from 142.250.189.132: icmp_seq=17 ttl=118 time=28.721 ms
64 bytes from 142.250.189.132: icmp_seq=18 ttl=118 time=28.892 ms
64 bytes from 142.250.189.132: icmp_seq=19 ttl=118 time=32.361 ms
^C
--- www.google.com ping statistics ---
20 packets transmitted, 20 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 22.696/27.523/32.361/2.923 ms
imac__invitado10@iMac-10 ~ %
```

4.

```
NSLOOKUP(1)                          BIND9                          NSLOOKUP(1)

NAME
       nslookup - query Internet name servers interactively

SYNOPSIS
       nslookup [-option] [name | -] [server]

DESCRIPTION
       Nslookup is a program to query Internet domain name servers.  Nslookup has two modes:
       interactive and non-interactive. Interactive mode allows the user to query name
       servers for information about various hosts and domains or to print a list of hosts in
       a domain. Non-interactive mode is used to print just the name and requested
       information for a host or domain.

ARGUMENTS
       Interactive mode is entered in the following cases:

       1. when no arguments are given (the default name server will be used)

       2. when the first argument is a hyphen (-) and the second argument is the host name
          or Internet address of a name server.

       Non-interactive mode is used when the name or Internet address of the host to be
       looked up is given as the first argument. The optional second argument specifies the
       host name or address of a name server.

       Options can also be specified on the command line if they precede the arguments and
       are prefixed with a hyphen. For example, to change the default query type to host
       information, and the initial timeout to 10 seconds, type:

:
```

5.

```
imac__invitado10@iMac-10 ~ % man nslookup
Unknown locale, assuming C
imac__invitado10@iMac-10 ~ %
imac__invitado10@iMac-10 ~ % nslookup https://upqroo.edu.mx/
Server:         8.8.8.8
Address:        8.8.8.8#53

** server can't find https://upqroo.edu.mx/: NXDOMAIN

imac__invitado10@iMac-10 ~ % man nslookup
Unknown locale, assuming C
imac__invitado10@iMac-10 ~ % nslookup -type=a https://upqroo.edu.mx/
Server:         8.8.8.8
Address:        8.8.8.8#53

** server can't find https://upqroo.edu.mx/: NXDOMAIN

imac__invitado10@iMac-10 ~ % nslookup https://upqroo.edu.mx/
Server:         8.8.8.8
Address:        8.8.8.8#53

** server can't find https://upqroo.edu.mx/: NXDOMAIN

imac__invitado10@iMac-10 ~ % nslookup upqroo.edu.mx
Server:         8.8.8.8
Address:        8.8.8.8#53

Non-authoritative answer:
Name:   upqroo.edu.mx
Address: 77.68.126.20

imac__invitado10@iMac-10 ~ %
```

6.

```
** server can't find https://upqroo.edu.mx/: NXDOMAIN

imac__invitado10@iMac-10 ~ % nslookup https://upqroo.edu.mx/
Server:         8.8.8.8
Address:        8.8.8.8#53

** server can't find https://upqroo.edu.mx/: NXDOMAIN

imac__invitado10@iMac-10 ~ % nslookup upqroo.edu.mx
Server:         8.8.8.8
Address:        8.8.8.8#53

Non-authoritative answer:
Name:   upqroo.edu.mx
Address: 77.68.126.20

imac__invitado10@iMac-10 ~ % ping 77.68.126.20
PING 77.68.126.20 (77.68.126.20): 56 data bytes
64 bytes from 77.68.126.20: icmp_seq=0 ttl=50 time=131.632 ms
64 bytes from 77.68.126.20: icmp_seq=1 ttl=50 time=127.554 ms
64 bytes from 77.68.126.20: icmp_seq=2 ttl=50 time=128.525 ms
64 bytes from 77.68.126.20: icmp_seq=3 ttl=50 time=128.408 ms
64 bytes from 77.68.126.20: icmp_seq=4 ttl=50 time=128.401 ms
64 bytes from 77.68.126.20: icmp_seq=5 ttl=50 time=146.299 ms
64 bytes from 77.68.126.20: icmp_seq=6 ttl=50 time=128.438 ms
64 bytes from 77.68.126.20: icmp_seq=7 ttl=50 time=127.977 ms
64 bytes from 77.68.126.20: icmp_seq=8 ttl=50 time=130.091 ms
^C
--- 77.68.126.20 ping statistics ---
9 packets transmitted, 9 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 127.554/130.814/146.299/5.599 ms
imac__invitado10@iMac-10 ~ %
```

7.

NAME
    netstat — show network status

SYNOPSIS
    netstat [**-AaLlnW**] [**-f** address_family | **-p** protocol]
    netstat [**-gilns**] [**-v**] [**-f** address_family] [**-I** interface]
    netstat **-i** | **-I** interface [**-w** wait] [**-c** queue] [**-abdgqRtS**]
    netstat **-s** [**-s**] [**-f** address_family | **-p** protocol] [**-w** wait]
    netstat **-i** | **-I** interface **-s** [**-f** address_family | **-p** protocol]
    netstat **-m** [**-m**]
    netstat **-r** [**-Aaln**] [**-f** address_family]
    netstat **-rs** [**-s**]
    netstat **-B** [**-I** interface]

DESCRIPTION
    The **netstat** command symbolically displays the contents of various network-related data
    structures. There are a number of output formats, depending on the options for the
    information presented. The first form of the command displays a list of active sockets
    for each protocol. The second form presents the contents of one of the other network
    data structures according to the option selected. Using the third form, with a wait
    interval specified, **netstat** will continuously display the information regarding packet
    traffic on the configured network interfaces. The fourth form displays statistics for
    the specified protocol or address family. If a wait interval is specified, the protocol
    information over the last interval seconds will be displayed. The fifth form displays
    per-interface statistics for the specified protocol or address family. The sixth form
    displays mbuf(9) statistics. The seventh form displays routing table for the specified
    address family. The eighth form displays routing statistics.

    The options have the following meaning:

8.

```
[imac__invitado10@iMac-10 ~ % netstat
Active Internet connections
Proto Recv-Q Send-Q  Local Address          Foreign Address         (state)
tcp4       0      0  172.16.128.29.51939    a96-7-172-24.dep.443    ESTABLISHED
tcp4       0      0  172.16.128.29.51938    mia07s54-in-f3.1.443    ESTABLISHED
tcp4       0      0  172.16.128.29.51937    ec2-13-59-193-13.443    ESTABLISHED
tcp4       0      0  172.16.128.29.51929    mia07s60-in-f10..443    ESTABLISHED
tcp4       0      0  172.16.128.29.51614    lcmiaa-aa-in-f14.443    ESTABLISHED
tcp4       0      0  172.16.128.29.51613    tzmiaa-ad-in-f14.443    ESTABLISHED
tcp4       0      0  172.16.128.29.51579    17.57.144.25.5223       ESTABLISHED
tcp4       0      0  172.16.128.29.51575    dns.google.443          ESTABLISHED
udp4       0      0  *.*                    *.*
udp4       0      0  *.61365                *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp46      0      0  *.60033                *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.kerberos             *.*
udp6       0      0  *.kerberos             *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp4       0      0  *.*                    *.*
udp6       0      0  *.mdns                 *.*
udp4       0      0  *.mdns                 *.*
udp46      0      0  *.*                    *.*
udp4       0      0  *.netbios-ns           *.*
udp4       0      0  *.netbios-dgm          *.*
Active Multipath Internet connections
Proto/ID  Flags     Local Address          Foreign Address         (state)
icm6       0      0  *.*                    *.*
Active LOCAL (UNIX) domain sockets
Address           Type   Recv-Q Send-Q         Inode        Conn            Refs
    Nextref Addr
```

9.

```
[imac__invitado10@iMac-10 ~ % netstat -n
Active Internet connections
Proto Recv-Q Send-Q  Local Address        Foreign Address         (state)
tcp4       0      0  172.16.128.29.52504  96.7.172.24.443         ESTABLISHED
tcp4       0      0  172.16.128.29.52503  23.201.195.137.80       TIME_WAIT
tcp4       0      0  172.16.128.29.52500  74.119.119.129.443      ESTABLISHED
tcp4       0      0  172.16.128.29.52498  23.201.195.135.80       TIME_WAIT
tcp4       0      0  172.16.128.29.52490  51.222.39.186.443       ESTABLISHED
tcp4       0      0  172.16.128.29.52489  142.250.217.194.443     ESTABLISHED
tcp4       0      0  172.16.128.29.52473  99.84.250.58.80         TIME_WAIT
tcp4       0      0  172.16.128.29.52412  93.184.216.16.443       ESTABLISHED
tcp4       0      0  172.16.128.29.52391  142.250.217.166.443     ESTABLISHED
tcp4       0      0  172.16.128.29.52380  104.18.25.18.443        ESTABLISHED
tcp4       0      0  172.16.128.29.52373  185.167.164.43.443      ESTABLISHED
tcp4       0      0  172.16.128.29.52358  162.248.18.34.443       ESTABLISHED
tcp4       0      0  172.16.128.29.52349  8.28.7.81.443           ESTABLISHED
tcp4       0      0  172.16.128.29.52258  142.250.217.226.443     ESTABLISHED
tcp4       0      0  172.16.128.29.52207  18.64.174.108.443       ESTABLISHED
tcp4       0      0  172.16.128.29.52206  65.8.178.90.443         ESTABLISHED
tcp4       0      0  172.16.128.29.52187  3.232.51.191.443        ESTABLISHED
tcp4       0      0  172.16.128.29.52165  192.178.50.78.443       ESTABLISHED
tcp4       0      0  172.16.128.29.52141  173.194.210.155.443     ESTABLISHED
tcp4       0      0  172.16.128.29.52139  142.250.189.130.443     ESTABLISHED
tcp4       0      0  172.16.128.29.52130  142.250.68.67.443       ESTABLISHED
tcp4       0      0  172.16.128.29.52124  192.178.50.74.443       ESTABLISHED
tcp4       0      0  172.16.128.29.52091  18.67.10.212.443        ESTABLISHED
tcp4       0      0  172.16.128.29.52086  151.101.2.49.443        ESTABLISHED
tcp4       0      0  172.16.128.29.52084  216.239.38.178.443      ESTABLISHED
tcp4       0      0  172.16.128.29.52075  192.178.50.34.443       ESTABLISHED
tcp4       0      0  172.16.128.29.52064  104.18.27.193.443       ESTABLISHED
tcp4       0      0  172.16.128.29.52044  104.18.2.114.443        ESTABLISHED
tcp4       0      0  172.16.128.29.52025  104.18.10.248.443       ESTABLISHED
tcp4       0      0  172.16.128.29.51938  172.217.3.67.443        ESTABLISHED
tcp4       0      0  172.16.128.29.51614  192.178.50.46.443       ESTABLISHED
tcp4       0      0  172.16.128.29.51613  192.178.50.78.443       ESTABLISHED
tcp4       0      0  172.16.128.29.51579  17.57.144.25.5223       ESTABLISHED
tcp4       0      0  172.16.128.29.51575  8.8.4.4.443             ESTABLISHED
udp4       0      0  *.*                  *.*
udp4       0      0  *.61365              *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp46      0      0  *.60033              *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
udp4       0      0  *.*                  *.*
```

10.

```
kctl        0       0      15      10 com.apple.netsrc
kctl        0       0      16      10 com.apple.netsrc
kctl        0       0      17      10 com.apple.netsrc
kctl        0       0      18      10 com.apple.netsrc
kctl        0       0      19      10 com.apple.netsrc
kctl        0       0      20      10 com.apple.netsrc
kctl        0       0      21      10 com.apple.netsrc
kctl        0       0      22      10 com.apple.netsrc
kctl        0       0       1      11 com.apple.network.statistics
kctl        0       0       2      11 com.apple.network.statistics
kctl        0       0       3      11 com.apple.network.statistics
imac__invitado10@iMac-10 ~ % netstat -help
netstat: illegal option -- h
Usage:  netstat [-AaLlnW] [-f address_family | -p protocol]
        netstat [-gilns] [-f address_family]
        netstat -i | -I interface [-w wait] [-abdgRtS]
        netstat -s [-s] [-f address_family | -p protocol] [-w wait]
        netstat -i | -I interface -s [-f address_family | -p protocol]
        netstat -m [-m]
        netstat -r [-Aaln] [-f address_family]
        netstat -rs [-s]


imac__invitado10@iMac-10 ~ % netstat -p TCP
Active Internet connections
Proto Recv-Q Send-Q  Local Address           Foreign Address         (state)
tcp4       0      0  172.16.128.29.52772     a23-201-195-135..80     TIME_WAIT
tcp4       0      0  172.16.128.29.52770     a23-201-195-135..80     TIME_WAIT
tcp4       0      0  172.16.128.29.52769     a23-201-195-135..80     TIME_WAIT
tcp4       0      0  172.16.128.29.52767     a23-201-195-137..80     TIME_WAIT
tcp4       0      0  172.16.128.29.52766     bidder.va1.vip.p.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52764     mia07s62-in-f3.1.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52763     tzmiaa-ad-in-f10.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52762     mia09s26-in-f3.1.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52755     ip186.ip-51-222-.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52754     a23-201-195-137..80     TIME_WAIT
tcp4       0      0  172.16.128.29.52746     a23-201-195-137..80     TIME_WAIT
tcp4       0      0  172.16.128.29.52744     ec2-3-225-85-142.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52737     a96-7-168-50.dep.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52735     a96-7-168-50.dep.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52733     a96-7-168-50.dep.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52726     a23-204-161-157..443    ESTABLISHED
tcp4       0      0  172.16.128.29.52711     ec2-18-214-20-20.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52704     a23-47-52-116.de.80     TIME_WAIT
tcp4       0      0  172.16.128.29.52684     a96-7-172-24.dep.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52673     185.167.164.39.443      ESTABLISHED
tcp4       0      0  172.16.128.29.52631     bc-in-f120.1e100.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52630     mia09s26-in-f10..443    ESTABLISHED
tcp4       0      0  172.16.128.29.52603     a6370ebea231e0c9.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52592     server-18-64-174.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52591     server-65-8-178-.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52580     mia09s26-in-f1.1.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52555     ec2-52-35-118-14.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52552     server-108-157-1.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52489     mia07s61-in-f2.1.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52391     mia07s60-in-f6.1.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52349     8.28.7.81.443           ESTABLISHED
tcp4       0      0  172.16.128.29.52258     mia07s62-in-f2.1.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52187     ec2-3-232-51-191.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52139     mia09s26-in-f2.1.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52091     server-18-67-10-.443    ESTABLISHED
tcp4       0      0  172.16.128.29.52086     151.101.2.49.443        ESTABLISHED
tcp4       0      0  172.16.128.29.52084     216.239.38.178.443      ESTABLISHED
tcp4       0      0  172.16.128.29.52075     lcmiaa-aa-in-f2..443    ESTABLISHED
tcp4       0      0  172.16.128.29.52064     104.18.27.193.443       ESTABLISHED
tcp4       0      0  172.16.128.29.52044     104.18.2.114.443        ESTABLISHED
tcp4       0      0  172.16.128.29.52025     104.18.10.248.443       ESTABLISHED
tcp4       0      0  172.16.128.29.51938     mia07s54-in-f3.1.443    ESTABLISHED
tcp4       0      0  172.16.128.29.51614     lcmiaa-aa-in-f14.443    ESTABLISHED
tcp4       0      0  172.16.128.29.51613     tzmiaa-ad-in-f14.443    ESTABLISHED
tcp4       0      0  172.16.128.29.51579     17.57.144.25.5223       ESTABLISHED
tcp4       0      0  172.16.128.29.51575     dns.google.443          ESTABLISHED
imac__invitado10@iMac-10 ~ % []
```

11.

```
tcp4       0       0  172.16.128.29.52139    mia09s26-in-f2.1.443    ESTABLISHED
tcp4       0       0  172.16.128.29.52091    server-18-67-10-.443    ESTABLISHED
tcp4       0       0  172.16.128.29.52086    151.101.2.49.443        ESTABLISHED
tcp4       0       0  172.16.128.29.52084    216.239.38.178.443      ESTABLISHED
tcp4       0       0  172.16.128.29.52075    lcmiaa-aa-in-f2..443    ESTABLISHED
tcp4       0       0  172.16.128.29.52064    104.18.27.193.443       ESTABLISHED
tcp4       0       0  172.16.128.29.52044    104.18.2.114.443        ESTABLISHED
tcp4       0       0  172.16.128.29.52025    104.18.10.248.443       ESTABLISHED
tcp4       0       0  172.16.128.29.51938    mia07s54-in-f3.1.443    ESTABLISHED
tcp4       0       0  172.16.128.29.51614    lcmiaa-aa-in-f14.443    ESTABLISHED
tcp4       0       0  172.16.128.29.51613    tzmiaa-ad-in-f14.443    ESTABLISHED
tcp4       0       0  172.16.128.29.51579    17.57.144.25.5223       ESTABLISHED
tcp4       0       0  172.16.128.29.51575    dns.google.443          ESTABLISHED
[imac__invitado10@iMac-10 ~ % netstat -p UDP
Active Internet connections
Proto Recv-Q Send-Q  Local Address          Foreign Address         (state)
udp4       0       0  *.*                    *.*
udp4       0       0  *.61365                *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp46      0       0  *.60033                *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.kerberos             *.*
udp6       0       0  *.kerberos             *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp4       0       0  *.*                    *.*
udp6       0       0  *.mdns                 *.*
udp4       0       0  *.mdns                 *.*
udp46      0       0  *.*                    *.*
udp4       0       0  *.netbios-ns           *.*
udp4       0       0  *.netbios-dgm          *.*
imac__invitado10@iMac-10 ~ %
```

12.

```
Processes: 451 total, 2 running, 449 sleeping, 1815 threads                          17:31:18
Load Avg: 1.62, 1.53, 1.51  CPU usage: 10.35% user, 4.35% sys, 85.29% idle
SharedLibs: 1024M resident, 145M data, 77M linkedit.
MemRegions: 46435 total, 3144M resident, 653M private, 2133M shared.
PhysMem: 13G used (1483M wired, 0B compressor), 2710M unused.
VM: 171T vsize, 4723M framework vsize, 0(0) swapins, 0(0) swapouts.
Networks: packets: 73876/43M in, 46517/34M out. Disks: 151601/3315M read, 53010/790M written.

PID   COMMAND       %CPU  TIME      #TH    #WQ  #PORT  MEM     PURG    CMPR  PGRP  PPID  STATE
551   Spotlight     40.3  00:17.27  22     16   720+   98M-    4944K+  0B    551   1     sleeping
160   WindowServer  16.7  03:45.17  17     5    1862+  266M-   334M-   0B    160   1     sleeping
613   com.apple.We  7.6   01:37.50  8      3    264    640M+   310M+   0B    613   1     sleeping
0     kernel_task   5.7   02:05.90  480/8  0    0      2896K   0B      0B    0     0     running
948   top           5.4   00:07.37  1/1    0    31+    5681K   0B      0B    948   656   running
498   com.apple.qu  4.6   00:00.75  10     8    98+    5825K+  160K    0B    498   1     sleeping
162   tccd          2.2   00:02.04  4      3    49+    4209K+  32K     0B    162   1     sleeping
427   WindowManage  1.7   00:05.20  5      2    240+   12M+    0B      0B    427   1     sleeping
429   Safari        1.6   01:15.07  12     4    829-   81M-    419M-   0B    429   1     sleeping
178   runningboard  1.6   00:05.58  7      6    501+   5617K   0B      0B    178   1     sleeping
163   loginwindow   1.4   00:01.03  3      2    360+   14M+    0B      0B    163   1     sleeping
134   launchservic  1.3   00:02.53  7      6    401+   4513K+  0B      0B    134   1     sleeping
211   trustd        1.3   00:02.50  2      1    90     4913K   544K    0B    211   1     sleeping
154   bluetoothd    1.2   00:31.79  11     5    327    8609K   208K    0B    154   1     sleeping
1     launchd       1.0   00:13.42  4      3    2744+  17M+    0B      0B    1     0     sleeping
92    logd          0.9   00:10.42  4      3    1435+  10M+    0B      0B    92    1     sleeping
560   com.apple.We  0.9   00:37.42  18     8    609    66M+    447M-   0B    560   1     sleeping
485   parsecd       0.8   00:02.94  4      3    92+    7490K+  32K     0B    485   1     sleeping
309   mds_stores    0.8   00:15.31  5      3    103    18M+    0B      0B    309   1     sleeping
458   iconservices  0.8   00:00.69  7      6    92+    8946K+  15M-    0B    458   1     sleeping
653   Terminal      0.5   00:48.19  10     3    381    82M+    22M-    0B    653   1     sleeping
121   mds           0.5   00:06.51  7      4    290-   21M+    0B      0B    121   1     sleeping
399   cfprefsd      0.4   00:02.82  3      2    444+   2945K+  448K    0B    399   1     sleeping
155   notifyd       0.3   00:01.72  2      1    578+   2433K   0B      0B    155   1     sleeping
132   opendirector  0.3   00:03.56  6      5    1141+  6881K+  128K    0B    132   1     sleeping
406   knowledge-ag  0.3   00:01.15  5      4    175+   7329K   384K    0B    406   1     sleeping
398   distnoted     0.3   00:01.56  2      1    321+   2113K   0B      0B    398   1     sleeping
442   siriactionsd  0.3   00:00.32  3      2    96+    6433K+  64K     0B    442   1     sleeping
97    fseventsd     0.3   00:02.53  10     1    142    4721K   0B      0B    97    1     sleeping
131   thermalmonit  0.3   00:02.06  2      1    46     2097K   0B      0B    131   1     sleeping
441   filecoordina  0.2   00:00.17  3      2    90+    3345K+  0B      0B    441   1     sleeping
738   QuickLookSat  0.2   00:00.42  4      3    56+    6321K+  3616K   0B    738   1     sleeping
830   com.apple.We  0.2   00:25.69  7      2    121-   271M-   1744K   0B    830   1     sleeping
465   gamepolicyd   0.2   00:01.09  4      3    59+    3969K+  0B      0B    465   1     sleeping
161   cfprefsd      0.2   00:01.77  3      2    678+   2785K   48K     0B    161   1     sleeping
472   com.apple.We  0.1   00:17.90  3      1    202    353M    16K     0B    472   1     sleeping
621   ThemeWidgetC  0.1   00:06.85  4      2    195    8689K   0B      0B    621   1     sleeping
147   PerfPowerSer  0.1   00:08.96  5      2    455    7505K+  256K    0B    147   1     sleeping
409   lsd           0.1   00:00.34  3      2    400+   4673K   0B      0B    409   1     sleeping
157   corebrightne  0.1   00:07.53  6      5    107    3841K   0B      0B    157   1     sleeping
570   PAH_Extensio  0.1   00:00.27  5      3    196+   6097K+  0B      0B    570   1     sleeping
299   audioclocksy  0.1   00:03.75  3      2    46     6273K   0B      0B    299   1     sleeping
431   Dock          0.1   00:01.65  4      2    337+   57M+    112K    0B    431   1     sleeping
402   UserEventAge  0.0   00:09.20  3      2    336    6161K   0B      0B    402   1     sleeping
127   coreduetd     0.0   00:00.63  3      2    80+    5297K+  496K    0B    127   1     sleeping
209   airportd      0.0   00:08.73  9      7    280+   8049K+  0B      0B    209   1     sleeping
433   SystemUIServ  0.0   00:00.11  4      2    187+   8818K+  0B      0B    433   1     sleeping
542   TextInputMen  0.0   00:00.22  3      1    176    12M     0B      0B    542   1     sleeping
516   sharingd      0.0   00:04.14  5      1    297    10M     0B      0B    516   1     sleeping
540   diagnostics_  0.0   00:00.13  3      2    57+    3201K+  0B      0B    540   1     sleeping
420   ContextStore  0.0   00:01.44  6      5    93-    5169K-  256K    0B    420   1     sleeping
478   callservices  0.0   00:00.38  5      2    319    9121K+  0B      0B    478   1     sleeping
467   fontd         0.0   00:00.36  2      1    84+    5377K+  128K    0B    467   1     sleeping
193   analyticsd    0.0   00:00.44  2      1    467+   3841K   2096K   0B    193   1     sleeping
210   mDNSResponde  0.0   00:15.90  3      1    100    6817K   0B      0B    210   1     sleeping
145   distnoted     0.0   00:00.85  2      1    143    1601K   0B      0B    145   1     sleeping
426   pboard        0.0   00:00.20  4      3    100+   3521K+  0B      0B    426   1     sleeping
287   appleeventsd  0.0   00:00.10  4      3    139+   3185K+  0B      0B    287   1     sleeping
280   com.apple.Co  0.0   00:00.13  3      2    21+    2433K+  0B      0B    280   1     sleeping
486   networkservi  0.0   00:20.82  3      2    106    7105K   0B      0B    486   1     sleeping
477   suggestd      0.0   00:01.08  4      3    222+   9778K+  448K    0B    477   1     sleeping
585   contentlinki  0.0   00:00.24  3      2    62     4241K   0B      0B    585   1     sleeping
203   coreaudiod    0.0   00:02.70  13     6    560    11M     0B      0B    203   1     sleeping
```

13.

```
[imac__invitado10@iMac-10 ~ % top
[imac__invitado10@iMac-10 ~ % kill 967
imac__invitado10@iMac-10 ~ % ☐
```

14.

```
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.kerberos           *.*
udp6        0       0  *.kerberos           *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp4        0       0  *.*                  *.*
udp6        0       0  *.mdns               *.*
udp4        0       0  *.mdns               *.*
udp46       0       0  *.*                  *.*
udp4        0       0  *.netbios-ns         *.*
udp4        0       0  *.netbios-dgm        *.*
[imac__invitado10@iMac-10 ~ %
[imac__invitado10@iMac-10 ~ % tasklist
zsh: command not found: tasklist
[imac__invitado10@iMac-10 ~ % ps
  PID TTY           TIME CMD
  656 ttys000    0:00.13 -zsh
[imac__invitado10@iMac-10 ~ % top
[imac__invitado10@iMac-10 ~ % top
[imac__invitado10@iMac-10 ~ % kill 967
[imac__invitado10@iMac-10 ~ % tracert
zsh: command not found: tracert
[imac__invitado10@iMac-10 ~ % traceriute
zsh: command not found: traceriute
[imac__invitado10@iMac-10 ~ % traceroute
Version 1.4a12+Darwin
Usage: traceroute [-adDeFInrSvx] [-A as_server] [-f first_ttl] [-g gateway] [-i iface]
        [-M first_ttl] [-m max_ttl] [-p port] [-P proto] [-q nqueries] [-s src_addr]
        [-t tos] [-w waittime] [-z pausemsecs] host [packetlen]
[imac__invitado10@iMac-10 ~ % traceroute -p
Version 1.4a12+Darwin
Usage: traceroute [-adDeFInrSvx] [-A as_server] [-f first_ttl] [-g gateway] [-i iface]
        [-M first_ttl] [-m max_ttl] [-p port] [-P proto] [-q nqueries] [-s src_addr]
        [-t tos] [-w waittime] [-z pausemsecs] host [packetlen]
[imac__invitado10@iMac-10 ~ % traceroute www.google.com
traceroute to www.google.com (142.250.189.132), 64 hops max, 52 byte packets
 1  172.16.128.1 (172.16.128.1)  6.765 ms  4.202 ms  3.300 ms
 2  192.168.109.1 (192.168.109.1)  6.549 ms  4.047 ms  3.297 ms
 3  fixed-187-188-58-130.totalplay.net (187.188.58.130)  6.958 ms  7.358 ms  6.856 ms
 4  10.180.58.1 (10.180.58.1)  10.083 ms  6.831 ms  7.602 ms
 5  72.14.242.148 (72.14.242.148)  20.338 ms  24.992 ms  21.551 ms
 6  * * *
 7  142.250.60.158 (142.250.60.158)  30.428 ms
    142.250.224.250 (142.250.224.250)  22.624 ms
    216.239.62.0 (216.239.62.0)  23.844 ms
 8  108.170.249.2 (108.170.249.2)  23.022 ms  20.614 ms
    142.251.68.237 (142.251.68.237)  19.986 ms
 9  142.250.214.117 (142.250.214.117)  25.485 ms  23.634 ms  24.303 ms
10  142.250.211.239 (142.250.211.239)  23.044 ms  25.148 ms
    mia09s26-in-f4.1e100.net (142.250.189.132)  25.110 ms
```

15.

```
udp4      0      0  *.*                    *.*
udp4      0      0  *.*                    *.*
udp4      0      0  *.*                    *.*
udp4      0      0  *.*                    *.*
udp4      0      0  *.*                    *.*
udp4      0      0  *.*                    *.*
udp4      0      0  *.*                    *.*
udp6      0      0  *.mdns                 *.*
udp4      0      0  *.mdns                 *.*
udp46     0      0  *.*                    *.*
udp4      0      0  *.netbios-ns           *.*
udp4      0      0  *.netbios-dgm          *.*
[imac__invitado10@iMac-10 ~ %
[imac__invitado10@iMac-10 ~ % tasklist
zsh: command not found: tasklist
[imac__invitado10@iMac-10 ~ % ps
  PID TTY          TIME CMD
  656 ttys000    0:00.13 -zsh
[imac__invitado10@iMac-10 ~ % top
[imac__invitado10@iMac-10 ~ % top
[imac__invitado10@iMac-10 ~ % kill 967
[imac__invitado10@iMac-10 ~ % tracert
zsh: command not found: tracert
[imac__invitado10@iMac-10 ~ % traceriute
zsh: command not found: traceriute
[imac__invitado10@iMac-10 ~ % traceroute
Version 1.4a12+Darwin
Usage: traceroute [-adDeFInrSvx] [-A as_server] [-f first_ttl] [-g gateway] [-i iface]
       [-M first_ttl] [-m max_ttl] [-p port] [-P proto] [-q nqueries] [-s src_addr]
       [-t tos] [-w waittime] [-z pausemsecs] host [packetlen]
[imac__invitado10@iMac-10 ~ % traceroute -p
Version 1.4a12+Darwin
Usage: traceroute [-adDeFInrSvx] [-A as_server] [-f first_ttl] [-g gateway] [-i iface]
       [-M first_ttl] [-m max_ttl] [-p port] [-P proto] [-q nqueries] [-s src_addr]
       [-t tos] [-w waittime] [-z pausemsecs] host [packetlen]
[imac__invitado10@iMac-10 ~ % traceroute www.google.com
traceroute to www.google.com (142.250.189.132), 64 hops max, 52 byte packets
 1  172.16.128.1 (172.16.128.1)  6.765 ms  4.202 ms  3.300 ms
 2  192.168.109.1 (192.168.109.1)  6.549 ms  4.047 ms  3.297 ms
 3  fixed-187-188-58-130.totalplay.net (187.188.58.130)  6.958 ms  7.358 ms  6.856 ms
 4  10.180.58.1 (10.180.58.1)  10.083 ms  6.831 ms  7.602 ms
 5  72.14.242.148 (72.14.242.148)  20.338 ms  24.992 ms  21.551 ms
 6  * * *
 7  142.250.60.158 (142.250.60.158)  30.428 ms
    142.250.224.250 (142.250.224.250)  22.624 ms
    216.239.62.0 (216.239.62.0)  23.844 ms
 8  108.170.249.2 (108.170.249.2)  23.022 ms  20.614 ms
    142.251.68.237 (142.251.68.237)  19.986 ms
 9  142.250.214.117 (142.250.214.117)  25.485 ms  23.634 ms  24.303 ms
10  142.250.211.239 (142.250.211.239)  23.044 ms  25.148 ms
    mia09s26-in-f4.1e100.net (142.250.189.132)  25.110 ms
[imac__invitado10@iMac-10 ~ % ARP
usage: arp [-n] [-i interface] hostname
       arp [-n] [-i interface] [-l] -a
       arp -d hostname [pub] [ifscope interface]
       arp -d [-i interface] -a
       arp -s hostname ether_addr [temp] [reject] [blackhole] [pub [only]] [ifscope interface]
       arp -S hostname ether_addr [temp] [reject] [blackhole] [pub [only]] [ifscope interface]
       arp -f filename
[imac__invitado10@iMac-10 ~ % arp -a
? (169.254.91.153) at 1c:bf:c0:e1:92:7 on en1 [ethernet]
? (169.254.130.60) at ee:d2:ad:60:e4:e5 on en1 [ethernet]
? (169.254.194.96) at 7e:f3:92:4a:2b:9c on en1 [ethernet]
? (172.16.128.1) at e0:23:ff:b4:2e:9a on en1 ifscope [ethernet]
? (172.16.128.11) at 3c:a6:f6:a0:86:ed on en1 ifscope [ethernet]
? (172.16.128.12) at fc:e2:6c:1d:c0:2f on en1 ifscope [ethernet]
? (172.16.128.13) at 3c:a6:f6:a5:3:59 on en1 ifscope [ethernet]
? (172.16.128.24) at 7e:f3:92:4a:2b:9c on en1 ifscope [ethernet]
? (172.16.128.27) at 12:9b:33:ce:61:70 on en1 ifscope [ethernet]
? (172.16.143.255) at ff:ff:ff:ff:ff:ff on en1 ifscope [ethernet]
mdns.mcast.net (224.0.0.251) at 1:0:5e:0:0:fb on en1 ifscope permanent [ethernet]
```

APARTADO B)

1. El comando `ping` se utiliza para determinar si un host específico está accesible. Es una herramienta de diagnóstico que envía paquetes de solicitud ICMP Echo a un destino para verificar su disponibilidad y medir el tiempo de respuesta.

2. `nslookup` es una herramienta de línea de comandos utilizada para obtener información sobre registros de servidores DNS. Es útil para encontrar la dirección IP asociada a un dominio y viceversa.

3. `netstat` muestra las conexiones de red activas, las estadísticas de la interfaz y la tabla de enrutamiento. Es útil para ver qué servicios y hosts están comunicándose con la máquina.

4. `tasklist` muestra todas las tareas o procesos en ejecución en un sistema.

5. `taskkill` se utiliza para terminar uno o más procesos en ejecución. Se puede especificar el proceso a buscar por su ID o por su nombre.

6. La combinación de `ping`, `nslookup`, y `tracert` puede ser útil para diagnosticar problemas de red, `ping` verifica la conectividad, `nslookup` resuelve nombres de dominio a direcciones IP y viceversa, y `tracert` rastrea la ruta que toman los paquetes a través de la red para llegar a un destino.

APARTADO C)

`atmadm`: Este comando se utilizaba para mostrar conexiones ATM. No es comúnmente utilizado en versiones modernas de Windows.

`bitsadmin`: Es una herramienta de línea de comandos para administrar trabajos de transferencia creados con Background Intelligent Transfer Service (BITS). Ejemplo: `bitsadmin /list`

`cmstp`: Es una herramienta para instalar o desinstalar perfiles de administrador de conexión. Ejemplo: `cmstp /s`

`ftp`: Es el cliente FTP de línea de comandos. Ejemplo para conectarse a un servidor FTP: `ftp servername`

`hostname`: Muestra el nombre del host de la computadora. Simplemente ejecuta `hostname`.

`nbtstat`: Muestra estadísticas y configuración actual para un protocolo NetBIOS sobre TCP/IP. Ejemplo: `nbtstat -n`

`net`: Es una herramienta para administrar usuarios, grupos, y recursos compartidos en la red. Ejemplo para ver todos los usuarios: `net user`

`pathping`: Combina funciones de `ping` y `tracert`. Muestra la ruta hacia un destino y la latencia y pérdida de paquetes para cada salto. Ejemplo: `pathping upgro.edu.mx`

`tftp`: Cliente de Protocolo de Transferencia de Archivos Trivial. Ejemplo para conectarse a un servidor TFTP: `tftp servername`

Estos comandos varían en su utilidad y aplicabilidad, dependiendo de las necesidades y del sistema operativo en uso.