

lab1

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- *вариант #19*
- [github lab link](#)

1. hostname

MacBook-Pro-Ivan.local

2. ipconfig

- ip-address: 10.160.56.63
- subnet mask: 255.255.128.0
- gateway: open.wifi.bsu
- dhcp address: 10.0.0.20
- mac-address: 72:00:06:67:22:40
- dns-address: 10.0.0.20

3. ping

address	ttl	time
10.150.1.5	254	13ms
10.150.1.1	126	28ms
10.0.0.20	127	9ms
10.150.6.29	126	2ms
10.150.3.30	126	2ms

- ping 10.150.1.5:

```
PING 10.150.1.5 (10.150.1.5): 56 data bytes
64 bytes from 10.150.1.5: icmp_seq=0 ttl=254 time=12.983 ms
64 bytes from 10.150.1.5: icmp_seq=1 ttl=254 time=7.325 ms
64 bytes from 10.150.1.5: icmp_seq=2 ttl=254 time=11.669 ms
64 bytes from 10.150.1.5: icmp_seq=3 ttl=254 time=13.142 ms
64 bytes from 10.150.1.5: icmp_seq=4 ttl=254 time=101.383 ms

--- 10.150.1.5 ping statistics ---
5 packets transmitted, 5 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 7.325/29.300/101.383/36.103 ms
```

- ping 10.150.1.1:

```
PING 10.150.1.1 (10.150.1.1): 56 data bytes
64 bytes from 10.150.1.1: icmp_seq=0 ttl=126 time=40.251 ms
64 bytes from 10.150.1.1: icmp_seq=1 ttl=126 time=9.657 ms
```

```
64 bytes from 10.150.1.1: icmp_seq=2 ttl=126 time=3.135 ms
64 bytes from 10.150.1.1: icmp_seq=3 ttl=126 time=28.235 ms
64 bytes from 10.150.1.1: icmp_seq=4 ttl=126 time=5.278 ms

--- 10.150.1.1 ping statistics ---
5 packets transmitted, 5 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 3.135/17.311/40.251/14.491 ms
```

- ping 10.0.0.20:

```
PING 10.0.0.20 (10.0.0.20): 56 data bytes
64 bytes from 10.0.0.20: icmp_seq=0 ttl=127 time=3.809 ms
64 bytes from 10.0.0.20: icmp_seq=1 ttl=127 time=3.546 ms
64 bytes from 10.0.0.20: icmp_seq=2 ttl=127 time=9.281 ms
64 bytes from 10.0.0.20: icmp_seq=3 ttl=127 time=17.810 ms
64 bytes from 10.0.0.20: icmp_seq=4 ttl=127 time=12.888 ms

--- 10.0.0.20 ping statistics ---
5 packets transmitted, 5 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 3.546/9.467/17.810/5.448 ms
```

- ping 10.150.6.29:

```
PING 10.150.6.29 (10.150.6.29): 56 data bytes
64 bytes from 10.150.6.29: icmp_seq=0 ttl=126 time=5.058 ms
64 bytes from 10.150.6.29: icmp_seq=1 ttl=126 time=4.163 ms
64 bytes from 10.150.6.29: icmp_seq=2 ttl=126 time=1.922 ms
64 bytes from 10.150.6.29: icmp_seq=3 ttl=126 time=1.946 ms
64 bytes from 10.150.6.29: icmp_seq=4 ttl=126 time=1.847 ms

--- 10.150.6.29 ping statistics ---
5 packets transmitted, 5 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 1.847/2.987/5.058/1.356 ms
```

- ping 10.150.3.30:

```
PING 10.150.3.30 (10.150.3.30): 56 data bytes
64 bytes from 10.150.3.30: icmp_seq=0 ttl=126 time=1.469 ms
64 bytes from 10.150.3.30: icmp_seq=1 ttl=126 time=28.628 ms
64 bytes from 10.150.3.30: icmp_seq=2 ttl=126 time=2.202 ms
64 bytes from 10.150.3.30: icmp_seq=3 ttl=126 time=2.161 ms
64 bytes from 10.150.3.30: icmp_seq=4 ttl=126 time=2.090 ms

--- 10.150.3.30 ping statistics ---
5 packets transmitted, 5 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 1.469/7.310/28.628/10.662 ms
```

address	ip	time

ya.ru	93.158.134.3	78ms
yandex.ru	5.255.255.55	64ms
tut.by	178.172.160.2	7ms
onliner.by	178.124.129.14	9ms

- `ping ya.ru:`

```
PING ya.ru (93.158.134.3): 56 data bytes
64 bytes from 93.158.134.3: icmp_seq=0 ttl=51 time=78.590 ms
64 bytes from 93.158.134.3: icmp_seq=1 ttl=51 time=78.794 ms
64 bytes from 93.158.134.3: icmp_seq=2 ttl=51 time=79.144 ms
64 bytes from 93.158.134.3: icmp_seq=3 ttl=51 time=79.358 ms
64 bytes from 93.158.134.3: icmp_seq=4 ttl=51 time=78.066 ms

--- ya.ru ping statistics ---
5 packets transmitted, 5 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 78.066/78.790/79.358/0.450 ms
```

- `ping yandex.ru:`

```
PING yandex.ru (5.255.255.55): 56 data bytes
64 bytes from 5.255.255.55: icmp_seq=0 ttl=52 time=62.885 ms
64 bytes from 5.255.255.55: icmp_seq=1 ttl=52 time=66.083 ms
64 bytes from 5.255.255.55: icmp_seq=2 ttl=52 time=64.771 ms
64 bytes from 5.255.255.55: icmp_seq=3 ttl=52 time=64.913 ms
64 bytes from 5.255.255.55: icmp_seq=4 ttl=52 time=67.250 ms

--- yandex.ru ping statistics ---
5 packets transmitted, 5 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 62.885/65.180/67.250/1.456 ms
```

- `ping tut.by:`

```
PING tut.by (178.172.160.2): 56 data bytes
64 bytes from 178.172.160.2: icmp_seq=0 ttl=57 time=3.890 ms
64 bytes from 178.172.160.2: icmp_seq=1 ttl=57 time=6.985 ms
64 bytes from 178.172.160.2: icmp_seq=2 ttl=57 time=5.929 ms
64 bytes from 178.172.160.2: icmp_seq=3 ttl=57 time=18.421 ms
64 bytes from 178.172.160.2: icmp_seq=4 ttl=57 time=3.704 ms

--- tut.by ping statistics ---
5 packets transmitted, 5 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 3.704/7.786/18.421/5.460 ms
```

- `ping -c 19 -s 1000 onliner.by:`

```
PING onliner.by (178.124.129.14): 1000 data bytes
1008 bytes from 178.124.129.14: icmp_seq=0 ttl=57 time=3.881 ms
```

```
1008 bytes from 178.124.129.14: icmp_seq=1 ttl=57 time=27.734 ms
1008 bytes from 178.124.129.14: icmp_seq=2 ttl=57 time=4.349 ms
1008 bytes from 178.124.129.14: icmp_seq=3 ttl=57 time=6.633 ms
1008 bytes from 178.124.129.14: icmp_seq=4 ttl=57 time=15.975 ms
1008 bytes from 178.124.129.14: icmp_seq=5 ttl=57 time=7.877 ms
1008 bytes from 178.124.129.14: icmp_seq=6 ttl=57 time=3.745 ms
1008 bytes from 178.124.129.14: icmp_seq=7 ttl=57 time=8.865 ms
1008 bytes from 178.124.129.14: icmp_seq=8 ttl=57 time=10.251 ms
1008 bytes from 178.124.129.14: icmp_seq=9 ttl=57 time=4.258 ms
1008 bytes from 178.124.129.14: icmp_seq=10 ttl=57 time=3.463 ms
1008 bytes from 178.124.129.14: icmp_seq=11 ttl=57 time=3.971 ms
1008 bytes from 178.124.129.14: icmp_seq=12 ttl=57 time=3.804 ms
1008 bytes from 178.124.129.14: icmp_seq=13 ttl=57 time=3.085 ms
1008 bytes from 178.124.129.14: icmp_seq=14 ttl=57 time=11.908 ms
1008 bytes from 178.124.129.14: icmp_seq=15 ttl=57 time=3.868 ms
1008 bytes from 178.124.129.14: icmp_seq=16 ttl=57 time=4.033 ms
1008 bytes from 178.124.129.14: icmp_seq=17 ttl=57 time=4.006 ms
1008 bytes from 178.124.129.14: icmp_seq=18 ttl=57 time=5.871 ms
```

--- onliner.by ping statistics ---

19 packets transmitted, 19 packets received, 0.0% packet loss

round-trip min/avg/max/stddev = 3.085/7.241/27.734/5.891 ms

- `ping localhost`:

```
PING localhost (127.0.0.1): 56 data bytes
```

```
64 bytes from 127.0.0.1: icmp_seq=0 ttl=64 time=0.042 ms
```

```
64 bytes from 127.0.0.1: icmp_seq=1 ttl=64 time=0.152 ms
```

```
64 bytes from 127.0.0.1: icmp_seq=2 ttl=64 time=0.144 ms
```

```
64 bytes from 127.0.0.1: icmp_seq=3 ttl=64 time=0.128 ms
```

```
64 bytes from 127.0.0.1: icmp_seq=4 ttl=64 time=0.121 ms
```

--- localhost ping statistics ---

5 packets transmitted, 5 packets received, 0.0% packet loss

round-trip min/avg/max/stddev = 0.042/0.117/0.152/0.039 ms

4. `traceroute`

- `traceroute -d tut.by`:

```
1  open.wifi.bsu (10.160.0.1)  2.691 ms  1.205 ms  1.151 ms
2  border-gw.net.bsu (10.149.8.252)  1.170 ms  3.122 ms  1.241 ms
3  * * *
4  * * *
5  * 195.137.180.124 (195.137.180.124)  22.113 ms  2.973 ms
6  * 93.84.125.193 (93.84.125.193)  17.016 ms  10.495 ms
7  * 178.124.134.214 (178.124.134.214)  34.262 ms  2.414 ms
8  * * *
```

```
9 178-172-160-2.hosterby.com (178.172.160.2) 2.664 ms 2.034 ms 1.870 ms
```

- `traceroute -m 8 onliner.by`

```
1 open.wifi.bsu (10.160.0.1) 3.157 ms 3.358 ms 3.689 ms
2 border-gw.net.bsu (10.149.8.252) 2.687 ms 3.225 ms 3.351 ms
3 * * *
4 * * *
5 195.137.180.124 (195.137.180.124) 7.355 ms 11.189 ms 6.307 ms
6 * 93.84.125.189 (93.84.125.189) 12.684 ms 12.394 ms
7 178.124.134.214 (178.124.134.214) 2.132 ms 3.416 ms 2.957 ms
8 * onliner.by (178.124.129.14) 5.241 ms 3.162 ms
```

5. arp

- `arp -a`

```
open.wifi.bsu (10.160.0.1) at 0:21:a0:c1:19:40 on en0 ifscope [ethernet]
? (10.160.127.255) at (incomplete) on en0 ifscope [ethernet]
? (224.0.0.251) at 1:0:5e:0:0:fb on en0 ifscope permanent [ethernet]
? (239.255.255.250) at 1:0:5e:7f:ff:fa on en0 ifscope permanent [ethernet]
```

6. netstat

- `netstat -p TCP`

Active Internet connections

Proto	Recv-Q	Send-Q	Local Address	Foreign Address	(state)
tcp4	0	0	10.160.56.63.54536	23.99.116.116.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54535	23.99.116.116.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54534	23.99.116.116.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54530	janus2.intuit.ru.http	ESTABLISHED
tcp4	0	0	10.160.56.63.54525	17.110.232.46.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54523	17.154.66.159.http	ESTABLISHED
tcp4	0	0	10.160.56.63.54519	ec2-52-203-218-1.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54518	waw02s06-in-f10..https	ESTABLISHED
tcp4	0	0	10.160.56.63.54517	waw02s06-in-f78..https	ESTABLISHED
tcp4	0	0	10.160.56.63.54512	waw02s07-in-f3.1.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54511	95.213.11.180.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54508	srv82-165-240-87.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54500	149.154.167.51.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54498	95.213.4.194.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54497	ec2-52-0-252-241.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54487	waw02s06-in-f5.1.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54486	waw02s06-in-f78..https	ESTABLISHED
tcp4	0	0	10.160.56.63.54485	waw02s06-in-f78..https	ESTABLISHED
tcp4	0	0	10.160.56.63.54477	waw02s06-in-f78..https	ESTABLISHED
tcp4	0	0	10.160.56.63.54474	li-in-f188.1e100.https	ESTABLISHED

tcp4	0	0	10.160.56.63.54471	17.188.165.204.5223	ESTABLISHED
tcp4	0	0	10.160.56.63.54469	17.188.139.40.5223	ESTABLISHED
tcp4	0	0	10.160.56.63.54466	lt-in-f189.1e100.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54464	157.55.235.154.40023	ESTABLISHED
tcp4	0	0	10.160.56.63.54463	waw02s06-in-f4.1.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54462	137.116.172.9.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54460	91.190.217.44.12350	ESTABLISHED
tcp4	0	0	10.160.56.63.54459	40.77.226.192.https	ESTABLISHED
tcp4	0	0	cmm-server.54422	192.30.253.124.https	ESTABLISHED
tcp4	0	0	cmm-server.54044	192.30.253.125.https	ESTABLISHED
tcp4	0	0	10.160.56.63.54521	23.97.178.173.https	TIME_WAIT
tcp4	0	0	10.160.56.63.54524	23.97.178.173.https	TIME_WAIT
tcp4	0	0	10.160.56.63.54527	janus2.intuit.ru.http	TIME_WAIT
tcp4	0	0	10.160.56.63.54528	janus2.intuit.ru.http	TIME_WAIT
tcp4	0	0	10.160.56.63.54529	janus2.intuit.ru.http	TIME_WAIT
tcp4	0	0	10.160.56.63.54531	janus2.intuit.ru.http	TIME_WAIT
tcp4	0	0	10.160.56.63.54532	janus2.intuit.ru.http	TIME_WAIT
tcp4	0	0	10.160.56.63.54533	janus2.intuit.ru.http	TIME_WAIT
tcp4	0	0	10.160.56.63.54526	104.40.208.40.https	TIME_WAIT

- `netstat -np TCP`

Active Internet connections					
Proto	Recv-Q	Send-Q	Local Address	Foreign Address	(state)
tcp4	0	0	10.160.56.63.55750	52.72.183.95.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55748	216.58.209.46.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55746	216.58.209.46.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55744	216.58.209.78.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55740	216.58.209.78.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55739	216.58.209.67.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55729	192.30.253.125.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55718	151.101.36.133.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55716	17.188.165.202.5223	ESTABLISHED
tcp4	0	0	10.160.56.63.55699	52.0.252.241.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55606	95.213.4.194.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55603	87.240.165.82.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55579	64.233.165.188.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55575	17.188.147.48.5223	ESTABLISHED
tcp4	0	0	10.160.56.63.55573	209.85.233.189.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55571	111.221.77.143.40004	ESTABLISHED
tcp4	0	0	10.160.56.63.55541	149.154.167.51.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55531	207.46.151.217.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55530	40.77.226.192.443	ESTABLISHED
tcp4	0	0	10.160.56.63.55529	91.190.216.53.12350	ESTABLISHED
tcp4	0	0	10.160.56.63.54662	192.30.253.125.443	ESTABLISHED

- `netstat -a -s -r`

`netstat -r` - Show the routing tables. Use with `-a` to show protocol-cloned routes. When `-s` is also present, show routing statistics instead

Active Internet connections

Proto	Recv-Q	Send-Q	Local Address	Foreign Address	(state)
tcp4	0	0	10.160.56.63.55750	ec2-52-72-183-95.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55748	waw02s05-in-f14..https	ESTABLISHED
tcp4	0	0	10.160.56.63.55746	waw02s05-in-f14..https	ESTABLISHED
tcp4	0	0	10.160.56.63.55744	waw02s06-in-f14..https	ESTABLISHED
tcp4	0	0	10.160.56.63.55740	waw02s06-in-f14..https	ESTABLISHED
tcp4	0	0	10.160.56.63.55739	waw02s06-in-f3.1.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55729	192.30.253.125.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55718	151.101.36.133.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55716	17.188.165.202.5223	ESTABLISHED
tcp4	0	0	10.160.56.63.55699	ec2-52-0-252-241.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55606	95.213.4.194.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55603	srv82-165-240-87.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55579	lg-in-f188.1e100.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55575	17.188.147.48.5223	ESTABLISHED
tcp4	0	0	10.160.56.63.55573	lr-in-f189.1e100.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55571	111.221.77.143.40004	ESTABLISHED
tcp4	0	0	10.160.56.63.55541	149.154.167.51.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55531	207.46.151.217.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55530	40.77.226.192.https	ESTABLISHED
tcp4	0	0	10.160.56.63.55529	91.190.216.53.12350	ESTABLISHED
tcp4	0	0	10.160.56.63.54662	192.30.253.125.https	ESTABLISHED
udp4	0	0	10.160.56.63.59972	waw02s05-in-f14..https	
udp4	0	0	10.160.56.63.58351	lt-in-f189.1e100.https	
udp6	0	0	*.65482	*.*	
udp4	0	0	*.65482	*.*	
udp6	0	0	*.55840	*.*	
udp4	0	0	*.55840	*.*	
udp6	0	0	*.49809	*.*	
udp4	0	0	*.49809	*.*	
udp6	0	0	*.50470	*.*	
udp4	0	0	*.50470	*.*	
udp4	0	0	10.160.56.63.21767	*.*	
udp4	0	0	*.*	*.*	
udp4	0	0	10.160.56.63.ntp	*.*	
udp6	0	0	fe80::47f:d7bc:8.ntp	*.*	
udp6	0	0	fe80::4479:65ff:.ntp	*.*	
udp4	0	0	*.*	*.*	
udp4	0	0	*.*	*.*	
udp46	0	0	*.53117	*.*	
udp4	0	0	*.*	*.*	
udp4	0	0	localhost.53116	*.*	
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 *.58403                  *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp6      0      0 fe80::e41a:ed2d:.ntp    *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp6      0      0 fe80::1%lo0.ntp        *.*
udp6      0      0 localhost.ntp           *.*
udp4      0      0 localhost.ntp           *.*
udp4      0      0 *.ntp                    *.*
udp6      0      0 *.ntp                    *.*
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 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.mdns                   *.*
udp4      0      0 *.mdns                   *.*
udp4      0      0 *.*                      *.*
udp4      0      0 *.*                      *.*
udp4      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
f744bf24a76c949f	stream	0	0	0	f744bf24a76cbe07	0	0	
f744bf24a76c962f	stream	0	0	0	f744bf24a76c97bf	0	0	
f744bf24a76c97bf	stream	0	0	0	f744bf24a76c962f	0	0	
f744bf24a76c930f	stream	0	0	0	f744bf24a76c9adf	0	0	
f744bf24a76c9adf	stream	0	0	0	f744bf24a76c930f	0	0	
f744bf249c135a17	stream	0	0	0	f744bf249c135dff	0	0	
f744bf24acb764a7	stream	0	0	0	f744bf24acb74d37	0	0	
f744bf24acb74d37	stream	0	0	0	f744bf24acb764a7	0	0	
f744bf24acb759b7	stream	0	0	0	f744bf24acb75cd7	0	0	
f744bf24acb75cd7	stream	0	0	0	f744bf24acb759b7	0	0	
f744bf24acb7575f	stream	0	0	0	f744bf24acb74adf	0	0	
f744bf24acb74adf	stream	0	0	0	f744bf24acb7575f	0	0	
f744bf24acb763df	stream	0	0	0	f744bf24acb760bf	0	0	
f744bf24a76cad9f	stream	0	0	0	f744bf24a76cb6ff	0	0	
f744bf24a76cb4a7	stream	0	0	0	f744bf24a76cbae7	0	0	
f744bf24a76cbae7	stream	0	0	0	f744bf24a76cb4a7	0	0	
f744bf24a76c9247	stream	0	0	0	0	0	0	
f744bf249ec92c77	stream	0	0	0	f744bf249ec923df	0	0	
f744bf249ec923df	stream	0	0	0	f744bf249ec92c77	0	0	
f744bf249ec92ae7	stream	0	0	0	f744bf24b75955cf	0	0	
f744bf24acb76c77	stream	0	0	0	f744bf24acb7494f	0	0	
f744bf24acb74887	stream	0	0	0	f744bf24acb75827	0	0	
f744bf24acb75827	stream	0	0	0	f744bf24acb74887	0	0	
f744bf24acb766ff	stream	0	0	0	f744bf24acb740b7	0	0	
f744bf24acb740b7	stream	0	0	0	f744bf24acb766ff	0	0	
f744bf24acb75d9f	stream	0	0	0	f744bf24acb7656f	0	0	
f744bf24acb7656f	stream	4	0	0	f744bf24acb75d9f	0	0	
f744bf24acb747bf	stream	0	0	0	f744bf24acb74567	0	0	
f744bf24acb74567	stream	0	0	0	f744bf24acb747bf	0	0	
f744bf24acb751e7	stream	0	0	0	f744bf24acb73fef	0	0	
f744bf249c13530f	stream	0	0	0	f744bf249c134f27	0	0	
f744bf249c137187	stream	0	0	0	f744bf249c13788f	0	0	
f744bf249c13788f	stream	0	0	0	f744bf249c137187	0	0	
f744bf249c1376ff	stream	0	0	0	f744bf249c136507	0	0	
f744bf249c136507	stream	0	0	0	f744bf249c1376ff	0	0	
f744bf249c137637	stream	0	0	0	f744bf249c1370bf	0	0	
f744bf249c1370bf	stream	0	0	0	f744bf249c137637	0	0	
f744bf249c1350b7	stream	0	0	0	f744bf249c13756f	0	0	
f744bf249c13756f	stream	0	0	0	f744bf249c1350b7	0	0	
f744bf249c1361e7	stream	0	0	0	f744bf249c135567	0	0	
f744bf249c135567	stream	0	0	0	f744bf249c1361e7	0	0	
f744bf249ec926ff	stream	0	0	0	f744bf249ec90a17	0	0	
f744bf249ec90a17	stream	0	0	0	f744bf249ec926ff	0	0	

Registered kernel control modules

id	flags	pcbcount	rcvbuf	sndbuf	name
1	9	0	131072	131072	com.apple.flow-divert
2	1	0	16384	2048	com.apple.nke.sockwall
3	9	0	524288	524288	com.apple.content-filter

4	9	0	8192	2048	com.apple.packet-mangler
5	1	3	65536	65536	com.apple.net.necp_control
6	1	10	65536	65536	com.apple.net.netagent
7	9	1	524288	524288	com.apple.net.utun_control
8	1	0	65536	65536	com.apple.net.ipsec_control
9	0	21	8192	2048	com.apple.netsrc
a	18	5	8192	2048	com.apple.network.statistics
b	5	0	8192	2048	com.apple.network.tcp_ccdebug
c	1	1	8192	2048	com.apple.network.advisory
d	1	1	8192	2048	com.checkpoint.cpfwctl
e	1	0	8192	2048	com.checkpoint.cpfw.fwnotify
f	1	0	1048576	2048	com.checkpoint.cpfw.debug

Active kernel event sockets

Proto	Recv-Q	Send-Q	vendor	class	subcla
kevt	0	0	1	1	11
kevt	0	0	1	6	1
kevt	0	0	1	6	1
kevt	0	0	1	1	2
kevt	0	0	1	6	1
kevt	0	0	1	6	1
kevt	0	0	1	1	2
kevt	0	0	1	6	1
kevt	0	0	1	1	7
kevt	0	0	1	1	1
kevt	0	0	1	6	1
kevt	0	0	1	6	1
kevt	0	0	1	6	1
kevt	0	0	1	6	1
kevt	0	0	1	6	1
kevt	0	0	1	6	1
kevt	0	0	1	1	2
kevt	0	0	1	1	2
kevt	0	0	1	6	1
kevt	0	0	1	1	0

Active kernel control sockets

Proto	Recv-Q	Send-Q	unit	id	name
kctl	0	0	1	5	com.apple.net.necp_control
kctl	0	0	2	5	com.apple.net.necp_control
kctl	0	0	3	5	com.apple.net.necp_control
kctl	0	0	1	6	com.apple.net.netagent
kctl	0	0	2	6	com.apple.net.netagent
kctl	0	0	3	6	com.apple.net.netagent
kctl	0	0	4	6	com.apple.net.netagent
kctl	0	0	5	6	com.apple.net.netagent
kctl	0	0	6	6	com.apple.net.netagent
kctl	0	0	7	6	com.apple.net.netagent
kctl	0	0	8	6	com.apple.net.netagent
kctl	0	0	9	6	com.apple.net.netagent

kctl	0	0	10	6	com.apple.net.netagent
kctl	0	0	1	7	com.apple.net.utun_control
kctl	0	0	1	9	com.apple.netsrc
kctl	0	0	2	9	com.apple.netsrc
kctl	0	0	3	9	com.apple.netsrc
kctl	0	0	4	9	com.apple.netsrc
kctl	0	0	5	9	com.apple.netsrc
kctl	0	0	6	9	com.apple.netsrc
kctl	0	0	7	9	com.apple.netsrc
kctl	0	0	8	9	com.apple.netsrc
kctl	0	0	9	9	com.apple.netsrc
kctl	0	0	10	9	com.apple.netsrc
kctl	0	0	11	9	com.apple.netsrc
kctl	0	0	12	9	com.apple.netsrc
kctl	0	0	13	9	com.apple.netsrc
kctl	0	0	15	9	com.apple.netsrc
kctl	0	0	16	9	com.apple.netsrc
kctl	0	0	17	9	com.apple.netsrc
kctl	0	0	18	9	com.apple.netsrc
kctl	0	0	22	9	com.apple.netsrc
kctl	0	0	24	9	com.apple.netsrc
kctl	0	0	25	9	com.apple.netsrc
kctl	0	0	26	9	com.apple.netsrc
kctl	0	0	1	10	com.apple.network.statistics
kctl	0	0	2	10	com.apple.network.statistics
kctl	0	0	3	10	com.apple.network.statistics
kctl	0	0	4	10	com.apple.network.statistics
kctl	0	0	5	10	com.apple.network.statistics
kctl	0	0	1	12	com.apple.network.advisory
kctl	0	0	1	13	com.checkpoint.cpfwctl

7. nslookup

- `nslookup 10.150.5.44`

```
Server:      10.0.0.20
Address:     10.0.0.20#53
```

```
44.5.150.10.in-addr.arpa    name = fpmi506st14.bsu.
```

8. route

- `netstat -rn`

```
Routing tables
```

```
Internet:
```

Destination	Gateway	Flags	Refs	Use	Netif	Expire
default	10.160.0.1	UGSc	224	105	en0	
10.160/17	link#4	UCS	2	0	en0	
10.160.0.1/32	link#4	UCS	2	0	en0	
10.160.0.1	0:21:a0:c1:19:40	UHLWIir	225	28	en0	969
10.160.56.63/32	link#4	UCS	1	0	en0	
10.160.127.255	link#4	UHLWbI	1	18	en0	
127	127.0.0.1	UCS	1	0	lo0	
127.0.0.1	127.0.0.1	UH	3	31728	lo0	
224.0.0/4	link#4	UmCS	3	0	en0	
224.0.0.251	1:0:5e:0:0:fb	UHmLWI	1	0	en0	
239.255.255.250	1:0:5e:7f:ff:fa	UHmLWI	1	20	en0	
255.255.255.255/32	link#4	UCS	1	0	en0	
Internet6:						
Destination	Gateway	Flags	Netif	Expire		
default	fe80::%utun0	UGcI	utun0			
::1	::1	UHL	lo0			
fe80::%lo0/64	fe80::1%lo0	UcI	lo0			
fe80::1%lo0	link#1	UHLI	lo0			
fe80::%en0/64	link#4	UCI	en0			
fe80::47f:d7bc:8963:5392%en0	6c:40:8:a8:e3:e0	UHLI	lo0			
fe80::%awdl0/64	link#8	UCI	awdl0			
fe80::4479:65ff:feeb:a9dd%awdl0	46:79:65:eb:a9:dd	UHLI	lo0			
fe80::%utun0/64	fe80::e41a:ed2d:46c4:7416%utun0	UcI	utun0			
fe80::e41a:ed2d:46c4:7416%utun0	link#10	UHLI	lo0			
ff01::%lo0/32	::1	UmCI	lo0			
ff01::%en0/32	link#4	UmCI	en0			
ff01::%awdl0/32	link#8	UmCI	awdl0			
ff01::%utun0/32	fe80::e41a:ed2d:46c4:7416%utun0	UmCI	utun0			
ff02::%lo0/32	::1	UmCI	lo0			
ff02::%en0/32	link#4	UmCI	en0			
ff02::%awdl0/32	link#8	UmCI	awdl0			
ff02::%utun0/32	fe80::e41a:ed2d:46c4:7416%utun0	UmCI	utun0			