

lab1

- *Пажитных Иван Павлович*
- *3 курс, 1 группа, МСС*
- *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 m
s
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 lo
ss
round-trip min/avg/max/stddev = 7.325/29.300/101.383/36.1
03 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 m
s
64 bytes from 10.150.1.1: icmp_seq=2 ttl=126 time=3.135 m
s
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 m
s

--- 10.150.1.1 ping statistics ---
5 packets transmitted, 5 packets received, 0.0% packet lo
ss
round-trip min/avg/max/stddev = 3.135/17.311/40.251/14.49
1 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 m
s
64 bytes from 10.0.0.20: icmp_seq=4 ttl=127 time=12.888 m
s

--- 10.0.0.20 ping statistics ---
5 packets transmitted, 5 packets received, 0.0% packet lo
```

ss

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 lo

ss

round-trip min/avg/max/stddev = 1.847/2.987/5.058/1.356 m

s

- `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 = 78.066/78.790/79.358/0.45
0 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 = 62.885/65.180/67.250/1.45

6 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=18.42

1 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=1
1.908 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 m
s 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 ifs
cope [ethernet]
? (10.160.127.255) at (incomplete) on en0 ifscope [ethern
et]
? (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 per
manent [ethernet]

```

6. netstat

- `netstat -p TCP`

Active Internet connections

Proto	Recv-Q	Send-Q	Local Address	Foreign Address
ss	(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	ec2-52-203-21
8-1.https	ESTABLISHED			
tcp4	0	0	10.160.56.63.54518	waw02s06-in-f
10..https	ESTABLISHED			
tcp4	0	0	10.160.56.63.54517	waw02s06-in-f
78..https	ESTABLISHED			
tcp4	0	0	10.160.56.63.54512	waw02s07-in-f
3.1.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	149.154.167.5
1.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-f
5.1.https	ESTABLISHED			
tcp4	0	0	10.160.56.63.54486	waw02s06-in-f
78..https	ESTABLISHED			
tcp4	0	0	10.160.56.63.54485	waw02s06-in-f
78..https	ESTABLISHED			
tcp4	0	0	10.160.56.63.54477	waw02s06-in-f
78..https	ESTABLISHED			
tcp4	0	0	10.160.56.63.54474	li-in-f188.1e
100.https	ESTABLISHED			
tcp4	0	0	10.160.56.63.54471	17.188.165.20
4.5223	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-f189.1e
100.https	ESTABLISHED			
tcp4	0	0	10.160.56.63.54464	157.55.235.15
4.40023	ESTABLISHED			

tcp4	0	0	10.160.56.63.54463	waw02s06-in-f
4.1.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	192.30.253.12
4.https	ESTABLISHED			
tcp4	0	0	cmm-server.54044	192.30.253.12
5.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 -n -p TCP`

--

- `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
ss	(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	ec2-52-203-21

8-1.https ESTABLISHED				
tcp4	0	0	10.160.56.63.54518	waw02s06-in-f
10..https ESTABLISHED				
tcp4	0	0	10.160.56.63.54517	waw02s06-in-f
78..https ESTABLISHED				
tcp4	0	0	10.160.56.63.54512	waw02s07-in-f
3.1.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	149.154.167.5
1.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-f
5.1.https ESTABLISHED				
tcp4	0	0	10.160.56.63.54486	waw02s06-in-f
78..https ESTABLISHED				
tcp4	0	0	10.160.56.63.54485	waw02s06-in-f
78..https ESTABLISHED				
tcp4	0	0	10.160.56.63.54477	waw02s06-in-f
78..https ESTABLISHED				
tcp4	0	0	10.160.56.63.54474	li-in-f188.1e
100.https ESTABLISHED				
tcp4	0	0	10.160.56.63.54471	17.188.165.20

4.5223	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-f189.1e	
100.https	ESTABLISHED				
tcp4	0	0	10.160.56.63.54464	157.55.235.15	
4.40023	ESTABLISHED				
tcp4	0	0	10.160.56.63.54463	waw02s06-in-f	
4.1.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	192.30.253.12	
4.https	ESTABLISHED				
tcp4	0	0	cmm-server.54044	192.30.253.12	
5.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				
udp4	0	0	10.160.56.63.ntp	*.*	
udp4	0	0	10.160.56.63.21767	*.*	
udp6	0	0	*.50972	*.*	
udp4	0	0	*.50972	*.*	
udp6	0	0	*.52404	*.*	
udp4	0	0	*.52404	*.*	
udp6	0	0	fe80::47f:d7bc:8.ntp	*.*	
udp4	0	0	*.*	*.*	
udp4	0	0	*.*	*.*	
udp4	0	0	*.*	*.*	

[illegible]

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	*.*	*.*
udp6	0	0	fe80::1%lo0.ntp	*.*
udp6	0	0	localhost.ntp	*.*

[illegible]

udp4	0	0	*.*	*.*
udp4	0	0	*.*	*.*
udp4	0	0	*.*	*.*
udp46	0	0	*.*	*.*
udp6	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
ss	(state)			
icm6	0	0	*.*	*.*

Active LOCAL (UNIX) domain sockets

Address	Type	Recv-Q	Send-Q	Inode
Conn		Refs	Nextref	Addr
f744bf24a76caff7	stream	0	0	0 f7
44bf24a76caf2f		0	0	/var/run
/mDNSResponder				
f744bf24a76caf2f	stream	0	0	0 f7
44bf24a76caff7		0	0	
f744bf24a76cb3df	stream	0	0	0 f7
44bf24a76cbc77		0	0	/var/run
/mDNSResponder				
f744bf24a76cbc77	stream	0	0	0 f7
44bf24a76cb3df		0	0	
f744bf24b7596c77	stream	0	0	0 f7
44bf24b75951e7		0	0	/var/run
/mDNSResponder				
f744bf24b75951e7	stream	0	0	0 f7
44bf24b7596c77		0	0	
f744bf249c135dff	stream	0	0	0 f7
44bf249c135a17		0	0	/var/run
/mDNSResponder				
f744bf249c135a17	stream	0	0	0 f7
44bf249c135dff		0	0	
f744bf24acb764a7	stream	0	0	0 f7
44bf24acb74d37		0	0	
f744bf24acb74d37	stream	0	0	0 f7
44bf24acb764a7		0	0	
f744bf24acb759b7	stream	0	0	0 f7

44bf24acb75cd7	0	0	
f744bf24acb75cd7 stream	0	0	0 f7
44bf24acb759b7	0	0	
f744bf24acb7575f stream	0	0	0 f7
44bf24acb74adf	0	0	
f744bf24acb74adf stream	0	0	0 f7
44bf24acb7575f	0	0	
f744bf24acb763df stream	0	0	0 f7
44bf24acb760bf	0	0	
f744bf24acb760bf stream	0	0	0 f7
44bf24acb763df	0	0	
f744bf24acb76957 stream	0	0	f744bf24a869194f
0	0	0	/var/fol
ders/cf/nxb9sgrs3tjbhlp3f0m333r80000gn/T/qtsingleapp-Vibe			
r-0-1f5			
f744bf24acb75697 stream	0	0	f744bf24aa2088d7
0	0	0	/var/run
/.sim_diagnosticd_socket			
f744bf24acb76187 stream	0	0	0 f7
44bf24acb75f2f	0	0	
f744bf24acb75f2f stream	0	0	0 f7
44bf24acb76187	0	0	
f744bf24acb7430f stream	0	0	0 f7
44bf24acb767c7	0	0	
f744bf24acb767c7 stream	0	0	0 f7
44bf24acb7430f	0	0	
f744bf24a76cb6ff stream	0	0	0 f7
44bf24a76cad9f	0	0	

f744bf24a76cad9f stream	0	0	0 f7
44bf24a76cb6ff	0	0	
f744bf24a76cb4a7 stream	0	0	0 f7
44bf24a76cbae7	0	0	
f744bf24a76cbae7 stream	0	0	0 f7
44bf24a76cb4a7	0	0	
f744bf249c1369b7 stream	0	0	0 f7
44bf249c136cd7	0	0	
f744bf249c1368ef stream	0	0	0 f7
44bf249c136a7f	0	0	
f744bf249c136a7f stream	0	0	0 f7
44bf249c1368ef	0	0	
f744bf249c13562f stream	0	0	0 f7
44bf249c135c6f	0	0	
f744bf249c135c6f stream	0	0	0 f7
44bf249c13562f	0	0	
f744bf249c1377c7 stream	0	0	0 f7
44bf249c136377	0	0	
f744bf249c136377 stream	0	0	0 f7
44bf249c1377c7	0	0	
f744bf249c135adf stream	0	0	0 f7
44bf249c137d3f	0	0	
f744bf249c137d3f stream	0	0	0 f7
44bf249c135adf	0	0	
f744bf24acb746f7 stream	0	0	0 f7
44bf24acb74dff	0	0	
f744bf24acb74dff stream	0	0	0 f7
44bf24acb746f7	0	0	

f744bf24acb7494f stream	0	0	0 f7
44bf24acb76c77	0	0	
f744bf24acb76c77 stream	0	0	0 f7
44bf24acb7494f	0	0	
f744bf24acb74887 stream	0	0	0 f7
44bf24acb75827	0	0	
f744bf24acb75827 stream	0	0	0 f7
44bf24acb74887	0	0	
f744bf24acb766ff stream	0	0	0 f7
44bf24acb740b7	0	0	
f744bf24acb740b7 stream	0	0	0 f7
44bf24acb766ff	0	0	
f744bf24acb75d9f stream	0	0	0 f7
44bf24acb7656f	0	0	
f744bf24acb7656f stream	4	0	0 f7
44bf24acb75d9f	0	0	
f744bf24acb747bf stream	0	0	0 f7
44bf24acb74567	0	0	
f744bf24acb74567 stream	0	0	0 f7
44bf24acb747bf	0	0	
f744bf24acb751e7 stream	0	0	0 f7
44bf24acb73fef	0	0	
f744bf24acb73fef stream	0	0	0 f7
44bf24acb751e7	0	0	
f744bf249ec900b7 stream	0	0	0 f7
44bf249ec906f7	0	0	
f744bf249ec906f7 stream	0	0	0 f7
44bf249ec900b7	0	0	

f744bf249ec9062f stream	0	0	0 f7
44bf249ec927c7	0	0	
f744bf249ec927c7 stream	0	0	0 f7
44bf249ec9062f	0	0	
f744bf24a76cb187 stream	0	0	0 f7
44bf24a76c9a17	0	0	/var/run
/mDNSResponder			
f744bf24a76c9a17 stream	0	0	0 f7
44bf24a76cb187	0	0	
f744bf24a76caa7f stream	0	0 f744bf24aaab44f7	
0	0	0	/tmp/a2a
c07b0b2310170e7fe4178b954e9cd-{87A94AB0-E370-4cde-98D3-AC			
C110C5967D}			
f744bf24a76cb637 stream	0	0	0 f7
44bf24a76ca8ef	0	0	
f744bf24a76ca8ef stream	0	0	0 f7
44bf24a76cb637	0	0	
f744bf24a66a962f stream	0	0	0 f7
44bf24a66ab56f	0	0	
f744bf24a66ab56f stream	0	0	0 f7
44bf24a66a962f	0	0	
f744bf24a66a949f stream	0	0	0 f7
44bf24a66a9a17	0	0	
f744bf24a66a9a17 stream	0	0	0 f7
44bf24a66a949f	0	0	
f744bf24a66ab3df stream	0	0	0 f7
44bf24a66a9f8f	0	0	
f744bf24a66a9f8f stream	0	0	0 f7

44bf24a66ab3df		0		0	
f744bf249c134f27	stream	0	0		0 f7
44bf249c13530f		0		0	
Registered kernel control modules					
id	flags	pcbcount	rcvbuf	sndbuf	name
1	9	0	131072	131072	com.apple.fl
ow-divert					
2	1	0	16384	2048	com.apple.nk
e.sockwall					
3	9	0	524288	524288	com.apple.co
ntent-filter					
4	9	0	8192	2048	com.apple.pa
cket-mangler					
5	1	3	65536	65536	com.apple.ne
t.necp_control					
6	1	10	65536	65536	com.apple.ne
t.netagent					
7	9	1	524288	524288	com.apple.ne
t.utun_control					
8	1	0	65536	65536	com.apple.ne
t.ipsec_control					
9	0	20	8192	2048	com.apple.ne
tsrc					
a	18	5	8192	2048	com.apple.ne
twork.statistics					
b	5	0	8192	2048	com.apple.ne
twork.tcp_ccdebug					
c	1	1	8192	2048	com.apple.ne

twork.advisory					
d	1	1	8192	2048	com.checkpoi
nt.cpfw.ctl					
e	1	0	8192	2048	com.checkpoi
nt.cpfw.fwnotify					
f	1	0	1048576	2048	com.checkpoi
nt.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	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	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

stics					
kctl	0	0	5	10	com.apple.network.stat
stics					
kctl	0	0	1	12	com.apple.network.advis
ory					
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:4
6c4:7416%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:4
6c4:7416%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:4
6c4:7416%utun0	UmCI	utun0	