Assignment For Computer Networks
Assignment 1

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Chapter 1

Part 1

1.1 Problem 1

Problem Consider sending real-time voice from Host A to Host B over a packet-switched network (VoIP). Host A converts analog voice to a digital 64kbps bit stream on the fly. Host A then groups the bits into 56-byte packets. There is only one link between Host A and B; its transmission rate is 500 kbps and its propagation delay is 2 msec. As soon as Host A gather a packet, it sends it to Host B. As soon as Host B receives an entire packet, it converts the packet's bits into an analog signal. How much time elapses from the time a bit is created (from the original analog signal at Host A) until the bit is decoded (as part of the analog signal at Host B)?

Analysis The time used to encode:

$$\frac{56 \times 8}{64 \times 10^3} = 0.007s$$

The transmission delay on the fly:

$$\frac{56 \times 8}{500 \times 10^3} = 0.000896s$$

And here's a propagation delay of 2ms. So the result here should be:

$$7ms + 0.896ms + 2ms = 9.896ms$$

1.2 Problem 2

Problem Suppose users share a 1 Mbps link. Also suppose each user requires 100 kbps when transmitting, but each user transmits only 10 percent of the time (statistical multiplexiing)

1. When circuit switching is used, how many users can be supported?
2. For the remainder of this problem, suppose packet switching is used. Find the probability that a given user is transmitting.

3. Suppose there are 40 users. Find the probability that at any given time, exactly n users are transmitting simultaneously. (Hint: use the binomial distribution.)

4. Find the probability that there are 11 or more users transmitting simultaneously.

Analysis

1. For the link is 1 Mbps and each user requires 100kbps, the number of users being supported should be:

$$\frac{1Mbps}{100kbps} = 10$$

2. This problem is more than easy:

$$P = 10\%$$

3. According to the binomial distribution, the probability of exactly n users are transmitting simultaneously should be:

$$\binom{n}{40} \times 0.1^n \times (1 - 0.1)^{40-n}$$

4. We can calculate the probability of up to 10 users transmitting simultaneously:

$$\sum_{i=0}^{10} \binom{i}{40} \times 0.1^i \times (1 - 0.1)^{40-i}$$

The result calculated by LibreOffice Calc is about 99.85%. So the answer to this question should be:

$$1 - 99.85\% = 0.15\%$$

1.3 Problem 3

Problem Perform a Traceroute between source and destination on the same continent at three different hours of the day.

1. Find the average and standard deviation of the round-trip delays at each of the three hours (e.g., 10 repeated experiments).

2. Find the number of routers in the path at each of the three hours. Did the paths change during any of the hours?

3. Try to identify the number of ISP networks that the Traceroute packets pass through from source to destination. Routers with similare names and/or similar IP addresses should be considered as part of the same ISP. In your experiments, do the largest delays occur at the peering interfaces between adjacent ISPs?

4. Repeat the above for a source and destination on different continents. Compare the intra-continent and inter-continent results.

Analysis I wrote a shell script(see Appendix A.1) to do this traceroute and print the results into files(see Appendix B), then used a simple Ruby program(see Appendix A.2) to the math.

1. The three different hours are 1am, 7am, and 1pm, all these are in the same day of Oct. 4th in 2011. The results is given below:

   01:44 Average time: 26.4726 ms

   07:46 Average time: 26.4328 ms

   13:49 Average time: 26.8198 ms

   The full results file could be found in Appendix B.

2. The number of routers in each hour is:

   01:44:19 23

   07:46:22 23

   13:48:29 23

   It seems no changes happened during these experiments.

3. Take the first traceroute printout in each hour as the example. The analysis is given below:

   01:44:19 The printout of 01:44:19 is:

```
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  2.016 ms  2.516 ms  3.065 ms
 2  10.21.18.253 (10.21.18.253)  0.852 ms  1.136 ms  1.317 ms
 3  10.3.2.118 (10.3.2.118)  0.249 ms  0.240 ms  0.253 ms
 4  10.3.2.9 (10.3.2.9)  0.307 ms  0.286 ms  0.250 ms
 5  10.3.2.13 (10.3.2.13)  0.466 ms  0.412 ms  0.523 ms
 6  10.3.0.10 (10.3.0.10)  0.757 ms  0.775 ms  0.786 ms
 7  10.3.0.253 (10.3.0.253)  1.056 ms  1.059 ms  1.019 ms
 8  202.120.201.198 (202.120.201.198)  1.867 ms  1.609 ms  1.834 ms
 9  202.112.6.69 (202.112.6.69)  1.224 ms  1.215 ms  1.210 ms
10  sh0.cernet.net (202.112.53.89)  7.286 ms  8.016 ms  8.368 ms
11  202.112.36.37 (202.112.36.37)  6.805 ms  6.799 ms  6.815 ms
12  202.112.36.249 (202.112.36.249)  17.362 ms  17.280 ms  17.233 ms
13  202.112.53.157 (202.112.53.157)  16.882 ms  16.882 ms  16.867 ms
14  bjwh4.cernet.net (202.112.46.65)  24.535 ms  24.502 ms  24.631 ms
15  202.112.61.50 (202.112.61.50)  24.742 ms  24.814 ms  24.802 ms
16  202.112.53.218 (202.112.53.218)  25.216 ms  25.380 ms  25.491 ms
17  210.43.146.45 (210.43.146.45)  24.719 ms  24.621 ms  24.753 ms
18  210.43.146.14 (210.43.146.14)  25.832 ms  58.495 ms  58.416 ms
19  210.43.146.206 (210.43.146.206)  26.058 ms  26.066 ms  26.030 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  311.185 ms  322.206 ms  322.466 ms
22  202.196.109.165 (202.196.109.165)  26.316 ms  26.400 ms  26.586 ms
23  202.196.96.4 (202.196.96.4)  26.601 ms  26.740 ms  26.760 ms
```

The time cost between 210.43.146.206 in the 19th row and 202.196.109.169 in the 21st row (they seems to be in different ISPs) is quite big in this case. However, the 20th row may be even bigger.

07:46:22 The printout of 07:46:22 is:

```
 1  59.78.23.254 (59.78.23.254)  1.645 ms  2.146 ms  2.648 ms
 2  10.21.18.253 (10.21.18.253)  0.857 ms  1.019 ms  1.161 ms
 3  10.3.2.118 (10.3.2.118)  0.246 ms  0.254 ms  0.177 ms
 4  10.3.2.9 (10.3.2.9)  0.373 ms  0.222 ms  0.466 ms
 5  10.3.2.13 (10.3.2.13)  0.402 ms  0.454 ms  0.564 ms
 6  10.3.0.10 (10.3.0.10)  0.697 ms  0.730 ms  0.838 ms
 7  10.3.0.253 (10.3.0.253)  1.015 ms  1.008 ms  1.017 ms
 8  202.120.201.198 (202.120.201.198)  1.778 ms  2.056 ms  1.844 ms
 9  202.112.6.69 (202.112.6.69)  1.304 ms * *
10  sh0.cernet.net (202.112.53.89)  7.658 ms  7.637 ms  7.593 ms
11  202.112.36.37 (202.112.36.37)  6.635 ms  6.647 ms  6.806 ms
12  202.112.36.249 (202.112.36.249)  17.476 ms  17.395 ms  17.390 ms
13  202.112.53.157 (202.112.53.157)  16.867 ms  16.643 ms  16.780 ms
14  bjwh4.cernet.net (202.112.46.65)  24.704 ms  24.514 ms  24.552 ms
15  202.112.61.50 (202.112.61.50)  24.735 ms * *
16  202.112.53.218 (202.112.53.218)  25.321 ms  25.043 ms  25.263 ms
17  210.43.146.45 (210.43.146.45)  24.947 ms  24.788 ms  24.733 ms
18  210.43.146.14 (210.43.146.14)  25.746 ms  25.687 ms  25.836 ms
19  210.43.146.206 (210.43.146.206)  26.057 ms * *
20  * * *
21  202.196.109.169 (202.196.109.169)  582.704 ms  583.107 ms  602.709 ms
22  202.196.109.165 (202.196.109.165)  26.180 ms  26.183 ms  26.306 ms
23  202.196.96.4 (202.196.96.4)  26.223 ms  26.534 ms  26.521 ms
```

The biggest cost still happens in the 202.196.109.169 if the ignorance of the unknown 20th row is allowed.

13:48:29
```
 1  59.78.23.254 (59.78.23.254)  2.057 ms  3.039 ms  3.414 ms
 2  10.21.18.253 (10.21.18.253)  1.081 ms  1.129 ms  1.128 ms
 3  10.3.2.118 (10.3.2.118)  0.394 ms  0.270 ms  0.216 ms
 4  10.3.2.9 (10.3.2.9)  0.354 ms  0.357 ms  0.249 ms
 5  10.3.2.13 (10.3.2.13)  0.490 ms  0.346 ms  0.497 ms
 6  10.3.0.10 (10.3.0.10)  0.799 ms  0.702 ms  0.775 ms
 7  10.3.0.253 (10.3.0.253)  1.102 ms  1.045 ms  1.007 ms
 8  202.120.201.198 (202.120.201.198)  2.149 ms  1.937 ms  1.707 ms
 9  202.112.6.69 (202.112.6.69)  1.332 ms  1.267 ms  1.265 ms
10  sh0.cernet.net (202.112.53.89)  7.625 ms  7.720 ms  7.291 ms
11  202.112.36.37 (202.112.36.37)  6.767 ms  6.707 ms  6.744 ms
12  202.112.36.249 (202.112.36.249)  17.248 ms  17.186 ms  17.232 ms
13  202.112.53.157 (202.112.53.157)  120.300 ms  120.278 ms  120.342 ms
14  bjwh4.cernet.net (202.112.46.65)  24.683 ms  24.625 ms  24.563 ms
15  202.112.61.50 (202.112.61.50)  24.893 ms  24.906 ms  24.843 ms
16  202.112.53.218 (202.112.53.218)  25.332 ms  25.435 ms  25.642 ms
17  210.43.146.45 (210.43.146.45)  24.784 ms  24.826 ms  24.847 ms
18  210.43.146.14 (210.43.146.14)  26.129 ms  25.975 ms  25.970 ms
19  210.43.146.206 (210.43.146.206)  26.225 ms  26.129 ms  26.059 ms
```

```
20  * * *
21  * * *
22  * * *
23  202.196.96.4 (202.196.96.4)  26.646 ms  26.627 ms  26.647 ms
```

It seems the former 21st row is getting more cost.

In my experiments, it seems that the largest delays did occur at the peering interfaces between adjacent ISPs.

4. The results of tracerouting Yale University is:

   01:44:19 Average time: 461.5495 ms.

   07:46:22 Average time: 459.2873 ms.

   13:48:29 Average time: 466.1550 ms.

   And the routers could be 29 or 30 in some cases, but no big differences between different hours.
   The largest delays did occur at the peering interfaces between adjacent ISPs, which is much more obvius than the intra-continent experiments.

1.4 Problem 4

Problem Compare and contrast WiFi wireless Internet access and 3G wireless Internet access. What are the bit rates of the two services? What are the costs? Discuss roaming and access ubiquity.

Analysis The WiFi wireless Internet access and 3G wireless Internet access can both be accessed just via a wireless netcard. However, they are quite different. Let's just start from the bit rates. The bit rates of 3G could be about 300kbps-2Mbps in different circumstances, while those of WiFi are always above 1Mbps. And then the costs of them are quite different for 3G is suitable for the use of covering quite large ranges but it is always cheaper to deploy a WiFi hotspot if you just need to use this connection in a particular area.
However, if we just leave the differences or debates between WiFi and 3G alone and look at the big picture, we would all agree that the wireless connections would be, or maybe already is, the one that running the world. Most people uses the wireless connections on a cellphone to surf on the Internet on a bus or subway. Some people works in the company where you can connect to the Internet anywhere. Things are getting even more fantastic now since you can connect to the Amazon bookstore through the 3G network on something like Amazon Kindle and get the wireless auto-delivered books within minutes. The wireless networks are, and they will always be making our everyday life more wonderful.

1.5 Problem 5

Problem Try to identify at least 3 applications that use plaint text password/identification method. Use Wireshark to capture the plaint text password and write a report to describe how and where you found the passwords. You need to turnin packet dumps for this problem.

Analysis I used the wireshark-gnome on Linux to do this job. First, I start the capture of eth0 and set the filter to "http", then open http://renren.com in my browser, and use a fake password to log in. After seeing the login error page I stop the capture. The login action is supposed to use the POST method of http protocol, which makes me located in the only POST packet in wireshark's captures. I read the packet and see "password=test", a plaint text password. There it is.
And the adventures of capturing the other two plaint passwords of http://liyaos.com and http://xiami.com are quite similar. So I can save some words here.

Chapter 2

Part 2

2.1 ifconfig

Problem Run "ifconfig -a" on the machine you will be using. Capture the output, and identify and explain as much of what is printed as you can. NOTE: You should be able to understand almost all of it.

Analysis Here's what I got using the "ifconfig -a" on my laptop:

```
eth0      Link encap:Ethernet  HWaddr 00:26:9E:94:39:6E
          inet addr:59.78.23.11  Bcast:59.78.23.255  Mask:255.255.255.0
          inet6 addr: 2001:da8:8000:e0b2:226:9eff:fe94:396e/64 Scope:Global
          inet6 addr: fe80::226:9eff:fe94:396e/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2064407 errors:0 dropped:855 overruns:0 frame:0
          TX packets:198336 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:308266327 (293.9 MiB)  TX bytes:28568402 (27.2 MiB)
          Interrupt:17

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:611 errors:0 dropped:0 overruns:0 frame:0
          TX packets:611 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:57587 (56.2 KiB)  TX bytes:57587 (56.2 KiB)

wlan0     Link encap:Ethernet  HWaddr 00:26:82:49:17:5A
          inet addr:192.168.33.113  Bcast:192.168.33.255  Mask:255.255.255.0
          inet6 addr: fe80::226:82ff:fe49:175a/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2986 errors:0 dropped:0 overruns:0 frame:275523
          TX packets:263 errors:7 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
```

```
RX bytes:375445 (366.6 KiB)  TX bytes:19386 (18.9 KiB)
Interrupt:19
```

Let's start from the eth0 part.

eth0 This is the interface of my /dev/eth0 device, which is used to connect to the SJTU networks.

Link encap:Ethernet This means the link encapsulation of this interface is Ethernet.

HWaddr:00:26:9E:94:39:6E This is the hardware address of the /dev/eth0 device, which is 00:26:9E:94:39:6E in my case.

inet addr:59.78.23.11 My eth0 ipv4 address is 59.78.23.11.

Bcast:59.78.23.255 My broadcast is 59.78.23.255.

Mask:255.255.255.0 The mask is 255.255.255.0.

inet6 addr: 2001:da8:8000:e0b2:226:9eff:fe94:396e/64 Scope:Global The ipv6 address of my machine with a global scope.

inet6 addr: fe80::226:9eff:fe94:396e/64 Scope:Link The ipv6 address of my machine with a link scope.

UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 The maximum transmission unit is 1500 bytes, which is the value of a standard ethernet definition. The metric value is somehow funny, for it's said that this has never been used in the Linux system.

RX packets:2064407 errors:0 dropped:855 overruns:0 frame:0 This shows the condition of packets received since the networks start. In this case, 2064407 packets have been received and 855 dropped; no packets have ever been proved error, or lost because of an overrun.

TX packets:198336 errors:0 dropped:0 overruns:0 carrier:0 This shows the condition of packets transmitted since the networks start. 198336 packets have been transmitted while none of these have ever been proved error or dropped or lost because of an overrun.

collisions:0 No packets have ever run into a collision.

txqueuelen:1000 The length of queue used for packets transmission.

RX bytes:308266327 (293.9 MiB) Size of 308266327 bytes or 293.9 MiB of packets have been received so far.

TX bytes:28568402 (27.2 MiB) Size of 28568402 bytes or 27.2 MiB of packets have been transmitted so far.

Interrupt:17 This maybe means 17 interrupt transfers have ever occured. I'm not sure about this.

lo This is the loopback interface. It's always here no matter I connected the the Internet or not. The entries are quite similar to those of eth0, so I'd like to save some words here. Let's just look at something special.

Link encap:Local Loopback The link encapsulation is local loopback, which means we will get back to ourselves using this interface.

inet addr:127.0.0.1 We are know that 127.0.0.1 means a machine itself.

inet6 addr: ::1/128 The ipv6 address means a machine itself. I didn't know it until now.

wlan0 The wireless local area networks interface, which can be used to connect to some WIFI hotspots or something else.

inet addr:192.168.33.113 This an Intranet ipv4 address. All addresses from 192.168.0.0 to 192.168.255.255 are Intranet addresses.

2.2 ARP

Problem

1. How do you show the full ARP table for your machine? Capture a printout of what it is. Explain each column of what is printed.

2. If you try and use the arp command to add or delete an entry to the ARP table what happens? Why do you suppose this is the case?

3. You still have the ability to modify the ARP table, just not directly. How can you affect (either add, delete, or change) entries in the ARP table? Use this mechanism to add at least two new hosts to the ARP table and include a printout.

4. How long do entries stay cached in the ARP table? Describe a trial-and-error method to discover the timeout value.

5. What will happen if two IP addresses map to the same Ethernet address? Be specific on how all hosts on the subnet operate.

Analysis

1. The "arp -e" command would display all hosts in Linux style and "arp -a" in BSD style. I'll take the BSD style as the example:

   ```
   ? (59.78.23.254) at 00:12:cf:5f:c0:c0 [ether] on eth0
   ? (192.168.33.1) at c0:c1:c0:98:5b:80 [ether] on wlan0
   ```

   The first question mark of each line maybe a sign or seperator or something. Let's just leave it alone.
   The following string in parentheses is an IP address. 59.78.23.254 is actually the gateway of my SJTU network connections. And 192.168.33.1 of some wireless connections.
   The following string after the word "at" is the hardware address of the machine of this row. 00:12:cf:5f:c0:c0 is the hardware address of my SJTU network connections gateway and c0:c1:c0:98:5b:80 of the wireless connections mentioned before.
   The word in the following brackets is the hardware type of this machine. Both of them are ethers. The final word of each line after the word "on" is the network interface. Of course eth0 for the gateway of a wire connection and wlan0 for that of a wireless one.

2. An entry is added after the "arp -s 59.78.23.42 00:23:54:44:8d:37" command. So the arp table has been manually updated here. The arp table after that is:

```
? (59.78.23.254) at 00:12:cf:5f:c0:c0 [ether] on eth0
? (59.78.23.42) at 00:23:54:44:8d:37 [ether] PERM on eth0
? (192.168.33.1) at c0:c1:c0:98:5b:80 [ether] on wlan0
```

   But the entry would not be removed from the arp table after the "arp -d 59.78.23.42" command. This changes its hardware address to a sign of **<incompelete>** instead. Here's the result:

```
? (59.78.23.254) at 00:12:cf:5f:c0:c0 [ether] on eth0
? (59.78.23.42) at <incomplete> on eth0
? (192.168.33.1) at c0:c1:c0:98:5b:80 [ether] on wlan0
```

3. This could be done by just traceroute another IP address in the same Intranet. The most interesting part of this story is that I got these IP addresses by typing *who* command on the testbed. Here's the printout of the arp table after two *traceroute* journeys happened in the Intranet.

```
? (59.78.23.35) at 00:24:1d:74:21:4d [ether] on eth0
? (59.78.23.254) at 00:12:cf:5f:c0:c0 [ether] on eth0
? (59.78.23.42) at <incomplete> on eth0
? (192.168.33.1) at c0:c1:c0:98:5b:80 [ether] on wlan0
? (59.78.23.72) at 00:26:b9:0c:6c:9a [ether] on eth0
```

4. Maybe it's possible to use the bisection method and try by error. For example, we guess the timeout value of 60 mins and then make the system clock 60 mins faster and see what happens. Try 30 mins if the arp cache has been cleared or some value bigger if it hasn't.
   Another possible way may be to check the files in the /proc/sys/net/ipv4/neigh/ directory and see what exactly happens to the arp table after reaching the time value in those files.

5. I use the "arp -s" command to set a new entry and bind another Intranet IP address 59.78.23.81 with the hardware address of 59.78.23.72. So the arp table looks this way:

```
? (59.78.23.81) at 00:26:b9:0c:6c:9a [ether] PERM on eth0
? (59.78.23.35) at 00:24:1d:74:21:4d [ether] on eth0
? (59.78.23.254) at 00:12:cf:5f:c0:c0 [ether] on eth0
? (59.78.23.42) at <incomplete> on eth0
? (192.168.33.1) at c0:c1:c0:98:5b:80 [ether] on wlan0
? (59.78.23.72) at 00:26:b9:0c:6c:9a [ether] on eth0
```

   The first and last entries share a same hardware address. Then I ping 59.78.23.81 and got this:

```
PING 59.78.23.81 (59.78.23.81) 56(84) bytes of data.
From 59.78.23.72: icmp_seq=1 Redirect Network(New nexthop: 59.78.23.81)
From 59.78.23.72: icmp_seq=2 Redirect Network(New nexthop: 59.78.23.81)
From 59.78.23.72: icmp_seq=3 Redirect Network(New nexthop: 59.78.23.81)
From 59.78.23.72: icmp_seq=4 Redirect Network(New nexthop: 59.78.23.81)
From 59.78.23.72: icmp_seq=5 Redirect Network(New nexthop: 59.78.23.81)
```

Obviusly the packets sent to 59.78.23.81 are actually sent to 59.78.23.72 and responded by the latter one. Packets are all lost actually. We couldn't find the real 59.78.23.81 somehow.

2.3 traceroute

Problem

1. Perform a traceroute from your machine to tourism.at.ru. Include a copy of the output and explain what happened including a description of what each of the fields means.
2. Here's the challenge for this question: we want to traceroute to a non-existant machine outside SJTU. The first problem is how do we KNOW that a particular machine does not exist? If we just pick an IP address and ping it, why is that not sufficient?
3. Determine an IP address for a machine that you know definitely does not exist. Do a traceroute to that machine. Include a copy of the result.
4. Identify a completely different (in all octets) IP address for a non-existant machine. Do a traceroute to this machine. Include a copy of this result.
5. Repeat the above exercise (but you don't have to include traceroutes to more than two machines in your writeup) enough times so you can detect a pattern about what is happening. What pattern exists and why?

Analysis

1. The output is:

```
traceroute to tourism.at.ru (188.138.50.13), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.994 ms  2.488 ms  2.982 ms
 2  10.21.18.253 (10.21.18.253)  0.860 ms  1.035 ms  1.206 ms
 3  10.3.2.118 (10.3.2.118)  0.293 ms  0.289 ms  0.279 ms
 4  10.3.2.9 (10.3.2.9)  0.314 ms  0.333 ms  0.363 ms
 5  10.3.2.13 (10.3.2.13)  0.448 ms  0.474 ms  0.522 ms
 6  10.3.0.10 (10.3.0.10)  0.846 ms  0.850 ms  0.897 ms
 7  10.3.0.50 (10.3.0.50)  146.086 ms * *
 8  202.120.201.198 (202.120.201.198)  49.638 ms  49.903 ms  49.691 ms
 9  202.112.6.89 (202.112.6.89)  83.008 ms  49.326 ms  49.268 ms
10  sh0.cernet.net (202.112.53.89)  49.383 ms  49.277 ms  45.480 ms
11  202.112.36.37 (202.112.36.37)  50.406 ms  58.634 ms  58.613 ms
12  202.112.36.249 (202.112.36.249)  68.262 ms  55.109 ms  54.970 ms
```

```
13  202.112.36.69 (202.112.36.69)  72.792 ms  72.701 ms  72.596 ms
14  202.112.61.158 (202.112.61.158)  72.105 ms  77.810 ms  77.591 ms
15  202.112.61.10 (202.112.61.10)  116.254 ms  79.923 ms  79.691 ms
16  so-0-0-0.gw4.hkg3.asianetcom.net (203.192.137.197)  188.494 ms
    230.881 ms  253.402 ms
17  ge-2-0-0-0.cr4.hkg3.asianetcom.net (203.192.134.69)  192.090 ms
    175.100 ms  174.700 ms
18  te0-0-2-0.wr2.hkg0.asianetcom.net (61.14.157.105)  200.706 ms
    149.201 ms  230.222 ms
19  te0-2-0-0.wr2.osa0.asianetcom.net (61.14.157.78)  271.949 ms
    307.689 ms  381.049 ms
20  * * *
21  gi14-0-0.gw3.lax1.asianetcom.net (61.14.157.94)  377.271 ms * *
22  te0-0-0-0.gw1.lax3.asianetcom.net (202.147.61.154)  377.030 ms * *
23  te9-2.ccr02.lax05.atlas.cogentco.com (38.104.84.41)  481.445 ms
    481.208 ms  439.532 ms
24  te0-2-0-2.ccr22.lax01.atlas.cogentco.com (154.54.29.201)  456.173 ms
    te0-0-0-2.ccr22.lax01.atlas.cogentco.com (154.54.30.193)  495.458 ms  537.653 ms
25  te0-1-0-6.ccr22.iah01.atlas.cogentco.com (66.28.4.237)  534.429 ms  488.635 ms
    te0-2-0-5.ccr22.iah01.atlas.cogentco.com (154.54.27.18)  502.183 ms
26  te0-0-0-7.ccr22.atl01.atlas.cogentco.com (154.54.24.21)  494.188 ms
    te0-2-0-2.ccr22.atl01.atlas.cogentco.com (154.54.42.214)  499.508 ms  527.670 ms
27  te0-4-0-7.ccr22.dca01.atlas.cogentco.com (154.54.42.197)  524.527 ms
    te0-0-0-3.ccr22.dca01.atlas.cogentco.com (154.54.28.217)  518.534 ms *
28  te0-2-0-4.ccr22.fra03.atlas.cogentco.com (154.54.31.242)  497.440 ms
    te0-3-0-6.ccr22.fra03.atlas.cogentco.com (154.54.42.114)  522.767 ms  526.473 ms
29  te1-1.ccr01.sxb01.atlas.cogentco.com (130.117.51.238)  647.200 ms *  649.492 ms
30  149.11.26.10 (149.11.26.10)  468.506 ms  435.582 ms  466.749 ms
```

The traceroute program sends UDP packets to all nodes between the machine of mine and that of tourism.at.ru. Three times for every node.
So what happened here is many packets are sent to the nodes my connections to the tourism.at.ru machine, or that with the IP address of 149.11.26.10, passed by and then something come back to my machine. The three time values of each node are the time costs.

2. The *ping* command is never sufficient because some machines just don't respond to it. And the *traceroute* command is neither useless because you cannot just consider the word "unreachable" the same as "not existed". So it seems that there's no such 100% way to prove an IP address doesn't exist. It might just hide in a deepness.

3. The IP address is 59.78.23.211. The result is:

```
traceroute to 59.78.23.211 (59.78.23.211), 30 hops max, 60 byte packets
 1  59.78.23.11 (59.78.23.11)  3005.718 ms !H  3005.672 ms !H  3005.621 ms !H
```

4. The IP address is 202.120.30.25. The result is:

```
traceroute to 202.120.30.25 (202.120.30.25), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.616 ms  2.096 ms  2.576 ms
```

```
2  10.21.18.253 (10.21.18.253)  1.053 ms  1.225 ms  1.400 ms
3  10.3.2.118 (10.3.2.118)  0.246 ms  0.254 ms  0.254 ms
4  10.3.2.9 (10.3.2.9)  0.309 ms  0.279 ms  0.352 ms
5  10.3.2.13 (10.3.2.13)  0.359 ms  0.369 ms  0.462 ms
6  10.3.0.10 (10.3.0.10)  0.798 ms  0.801 ms  0.790 ms
7  10.3.0.2 (10.3.0.2)  0.787 ms  0.878 ms  0.950 ms
8  10.10.10.254 (10.10.10.254)  2.911 ms  3.437 ms  4.005 ms
9  10.10.10.254 (10.10.10.254)  1670.326 ms !H  2030.867 ms !H  2032.645 ms !H
```

5. They all got a sign of **!H** at last, which means unreachable according to the manual.

2.4 netstat

Problem

1. What is netstat and what is it used for?
2. What parameters for netstat should you use to show all the TCP connections established? Include a printout of this list for your machine. Be sure to explain what all fields are.
3. What does netstat -r show? What are each of the fields in this output?
4. netstat can be used to display network interface status. What option of netstat does this? By using netstat, figure out the number of interfaces on your machine. In the output you will find an interface named lo0 as a loopback interface. Can you say anything about this interface, about its function?

Analysis

1. It is used for finding problems in the network and to determine the amount of traffic on the network as a performance measurement.
2. The only parameter should be "-t". Here's the printout:

```
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address               Foreign Address             State
tcp        0      0 59.78.23.11:55507           a61-200-81-137.deploy.:http ESTABLISH
tcp        0      0 59.78.23.11:36976           180.149.134.44:http         ESTABLISH
tcp        0      0 2001:da8:8000:e0b2:22:52066 www.google.com.hk:http      ESTABLISH
tcp        0      0 2001:da8:8000:e0b2:22:43888 mail.google.com:https       ESTABLISH
tcp        0      0 2001:da8:8000:e0b2:22:52065 www.google.com.hk:http      ESTABLISH
```

   The fields are:

   Proto Short for protocol. All rows are in tcp protocol because we type "-t" as the parameter.

   Recv-Q The count of bytes not copied by the user program connected to this socket.

Send-Q The count of bytes not acknowledged by the remote host.

Local Address Address and port number of the local end of the socket.

Foreign Address Address and port number of the remote end of the socket. Analogous to "Local Address."

State The state of the socket. ESTABLISHED means that the socket has an established connection.

3. Displaying the routing table. Here's the output of "netstat -r":

```
Kernel IP routing table
Destination     Gateway         Genmask         Flags   MSS Window  irtt Iface
default         59.78.23.254    0.0.0.0         UG        0 0          0 eth0
59.78.23.0      *               255.255.255.0   U         0 0          0 eth0
192.168.33.0    *               255.255.255.0   U         0 0          0 wlan0
```

The fields are:

Destination The reachable destinations.

Gateway The gateway to which the routing entry points.

Genmask The mask.

Flags U for "the interface to be used is up", G for "the route uses a gateway.".

MSS Maximum segment size, the size of the largest datagram the kernel will construct for transmission via this route.

Window Maximum amount of data the system will accept in a single burst from a remote host.

irtt Initial round trip time.

Iface This is of course the interface.

4. The option to display network interface status is "-i". Here's what I got via this option:

```
Iface       MTU Met    RX-OK RX-ERR RX-DRP RX-OVR    TX-OK TX-ERR TX-DRP TX-OVR Flg
eth0       1500   0  2832472      0   1904      0   353560      0      0      0 BMRU
lo        16436   0      712      0      0      0      712      0      0      0 LRU
wlan0      1500   0     3918      0      0      0      283     13      0      0 BMRU
```

The loopback interface is used to loop back to the machine itself just like what its name says. This is primarily a means of testing the transmission or transportation infrastructure.

2.5 nslookup

Problem

1. What is the IP address for the machine kubi.cs.berkeley.edu?
2. What local machine is this information coming from? Why is it coming from this machine?

3. Here is the problem: I want to find the IP address of where my email to somebody@hotmail.com goes. What you really need to do is find the "mail exchanger" for hotmail.com. There is an option in nslookup that tells you what the mail exchanger is for hotmail.com. Figure out the exact syntax of the format of this command, and execute it. Now what is the IP address of where my email to hotmail goes?

Analysis

1. 128.32.37.213.
2. 202.120.2.101. This information comes from this machine because I set it as the primary DNS server of my computer.
3. The option is "-q". To be specified, "-q=mx" to find the "mail exchanger". Here's what I got via "nslookup -qt=mx hotmail.com".

```
Server: 202.120.2.101
Address: 202.120.2.101#53

Non-authoritative answer:
hotmail.com mail exchanger = 5 mx4.hotmail.com.
hotmail.com mail exchanger = 5 mx1.hotmail.com.
hotmail.com mail exchanger = 5 mx2.hotmail.com.
hotmail.com mail exchanger = 5 mx3.hotmail.com.

Authoritative answers can be found from:
hotmail.com nameserver = ns1.msft.net.
hotmail.com nameserver = ns4.msft.net.
hotmail.com nameserver = ns2.msft.net.
hotmail.com nameserver = ns5.msft.net.
hotmail.com nameserver = ns3.msft.net.
mx1.hotmail.com internet address = 65.54.188.94
mx1.hotmail.com internet address = 65.54.188.110
mx1.hotmail.com internet address = 65.54.188.126
mx1.hotmail.com internet address = 65.55.37.72
mx1.hotmail.com internet address = 65.55.37.88
mx1.hotmail.com internet address = 65.55.37.104
mx1.hotmail.com internet address = 65.55.37.120
mx1.hotmail.com internet address = 65.55.92.136
mx1.hotmail.com internet address = 65.55.92.152
mx1.hotmail.com internet address = 65.55.92.168
mx1.hotmail.com internet address = 65.55.92.184
mx1.hotmail.com internet address = 65.54.188.72
```

It seems that hotmail has many mail exchangers here. The email could go to any of these addresses above.

2.6 whois

Problem

1. Who is the "coordinator" for the network on which www.sjtu.edu.cn resides?

2. Who is the coordinator for the network that kubi.cs.berkeley.edu is on?

3. Like the hotmail example, I have another friend I send email to at AOL. Her email address is something@aol.com. What can you say about the coordinator for the AOL email network, i.e. contact info, etc? Include information about the steps you took and the results of the queries you made to figure out this information.

4. What machine has IP address 198.182.196.56? What machines act as the DNS nameserver for the domain that 198.182.196.56 is in?

Analysis

1. First, use "nslookup www.sjtu.edu.cn" to get the IP address of it, which is 202.120.2.102. Then run "whois –host=whois.arin.net 202.120.2.102". Here's the result:

```
inetnum:      202.120.0.0 - 202.120.63.255
netname:      SJTU-CN
descr:        Shanghai Jiaotong University
country:      CN
admin-c:      SW1-CN
tech-c:       ZG1-CN
tech-c:       CER-AP
remarks:      origin AS4538
changed:      hm-changed@net.edu.cn 19950222
mnt-by:       MAINT-CERNET-AP
status:       ASSIGNED NON-PORTABLE
source:       APNIC

role:         CERNET Helpdesk
address:      Room 224, Main Building
address:      Tsinghua University
address:      Beijing 100084, China
country:      CN
phone:        +86-10-6278-4049
fax-no:       +86-10-6278-5933
e-mail:       cernet-helpdesk-ip@net.edu.cn
trouble:      abuse@net.edu.cn
admin-c:      XL1-CN
tech-c:       SZ2-AP
nic-hdl:      CER-AP
remarks:      Point of Contact for admin-c
mnt-by:       MAINT-CERNET-AP
changed:      cernet-helpdesk-ip@net.edu.cn 20010903
source:       APNIC

person:         Shilie Weng
```

```
address:        1954 Huashan Rd.
address:        Shanghai Jiaotong University
address:        Shanghai, 200030, CN
country:        CN
phone:          +86-21-4310310 ext 2236
e-mail:         slweng@sjtu.edu.cn
mnt-by:         MAINT-NULL
nic-hdl:        SW1-CN
notify:         helpdesk@apnic.net
changed:        hostmaster@apnic.net 20110812
source:         APNIC

person:       Zonggui Guo
address:      1954 Huashan Rd.
address:      Shanghai Jiaotong University
address:      Shanghai, 200030, CN
phone:        +86-21-62828027
phone:        +86-21-62820820 ext.2980
e-mail:       zgguo@sjtu.edu.cn
nic-hdl:      ZG1-CN
notify:       dbmon@apnic.net
mnt-by:       MAINT-NULL
changed:      hostmaster@apnic.net 19960208
source:       APNIC
```

So the result seems to be Shilie Weng and Zonggui Guo.

2. Run the *nslookup* and *whois* commands like what we did in the question above, we got:

```
NetRange:       128.32.0.0 - 128.32.255.255
CIDR:           128.32.0.0/16
OriginAS:
NetName:        UCB-ETHER
NetHandle:      NET-128-32-0-0-1
Parent:         NET-128-0-0-0-0
NetType:        Direct Assignment
Comment:        DMCA Designated Agent is policy@uclink.berkeley.edu
RegDate:        1983-05-27
Updated:        2011-02-04
Ref:            http://whois.arin.net/rest/net/NET-128-32-0-0-1

OrgName:        University of California
OrgId:          UNIVER-22
Address:        IST - Communication and Network Services
Address:        ATTN Network Services Group
Address:        2484 Shattuck Ave, #1640
Address:        NOTE See Comment for DMCA INFO
City:           Berkeley
StateProv:      CA
```

```
PostalCode:     94720-1640
Country:        US
RegDate:
Updated:        2011-09-24
Comment:        DMCA Designated Agent is policy@uclink.berkeley.edu
Ref:            http://whois.arin.net/rest/org/UNIVER-22

OrgAbuseHandle: UCB-NOC-ARIN
OrgAbuseName:   IST Communication and Network Services
OrgAbusePhone:  +1-510-643-3267
OrgAbuseEmail:  noc@nak.berkeley.edu
OrgAbuseRef:    http://whois.arin.net/rest/poc/UCB-NOC-ARIN

OrgTechHandle: UCB-NOC-ARIN
OrgTechName:   IST Communication and Network Services
OrgTechPhone:  +1-510-643-3267
OrgTechEmail:  noc@nak.berkeley.edu
OrgTechRef:    http://whois.arin.net/rest/poc/UCB-NOC-ARIN

RTechHandle: UCB-NOC-ARIN
RTechName:   IST Communication and Network Services
RTechPhone:  +1-510-643-3267
RTechEmail:  noc@nak.berkeley.edu
RTechRef:    http://whois.arin.net/rest/poc/UCB-NOC-ARIN
```

It seems that there's no individual coordinator but the University of California at Berkeley.

3. Use the *nslookup -q=mx* and *whois* commands, we got:

```
NetRange:       64.12.0.0 - 64.12.255.255
CIDR:           64.12.0.0/16
OriginAS:
NetName:        AOL-MTC
NetHandle:      NET-64-12-0-0-1
Parent:         NET-64-0-0-0-0
NetType:        Direct Assignment
RegDate:        1999-12-13
Updated:        1999-12-16
Ref:            http://whois.arin.net/rest/net/NET-64-12-0-0-1


OrgName:        America Online, Inc.
OrgId:          AMERIC-158
Address:        10600 Infantry Ridge Road
City:           Manassas
StateProv:      VA
PostalCode:     20109
Country:        US
RegDate:        1999-12-13
```

```
Updated:        2011-09-24
Ref:            http://whois.arin.net/rest/org/AMERIC-158

OrgTechHandle: CKN23-ARIN
OrgTechName:   No, Contact Known
OrgTechPhone:  +1-800-555-1234
OrgTechEmail:  nobody@example.com
OrgTechRef:    http://whois.arin.net/rest/poc/CKN23-ARIN

OrgAbuseHandle: AOL-NOC-ARIN
OrgAbuseName:   America Online Inc
OrgAbusePhone:  +1-703-265-4462
OrgAbuseEmail:  domains@aol.net
OrgAbuseRef:    http://whois.arin.net/rest/poc/AOL-NOC-ARIN
```

The OrgTech stuff seems to be a dead end. Luckily we got the OrgAbuse entries here.
So the contact info includes the phone number of +1-703-265-4462 and E-mail adress of domains@aol.net.

4. Run "whois –host=whois.arin.net 198.182.196.56" we got:

```
NetRange:       198.182.196.0 - 198.182.196.255
CIDR:           198.182.196.0/24
OriginAS:
NetName:        INVLOGICCORP
NetHandle:      NET-198-182-196-0-1
Parent:         NET-198-0-0-0-0
NetType:        Direct Assignment
RegDate:        1993-08-25
Updated:        1998-12-14
Ref:            http://whois.arin.net/rest/net/NET-198-182-196-0-1

OrgName:        Innovative Logic Corp
OrgId:          ILC-4
Address:        P.O. Box 1068
City:           Laurel
StateProv:      MD
PostalCode:     20725-1068
Country:        US
RegDate:        1993-08-25
Updated:        2011-09-24
Ref:            http://whois.arin.net/rest/org/ILC-4

OrgAbuseHandle: MM141-ARIN
OrgAbuseName:   McLagan, Michael
OrgAbusePhone:  +1-315-393-1202
OrgAbuseEmail:  mmclagan@invlogic.com
OrgAbuseRef:    http://whois.arin.net/rest/poc/MM141-ARIN
```

```
OrgTechHandle: CKN23-ARIN
OrgTechName:   No, Contact Known
OrgTechPhone:  +1-800-555-1234
OrgTechEmail:  nobody@example.com
OrgTechRef:    http://whois.arin.net/rest/poc/CKN23-ARIN
```

So the machine got 198.182.196.56 is supposed to be a machine of Innovative Logic Corp.
The DNS nameserver can be got from the command "whois –host=whois.arin.net 196.182.198.in-addr.arpa". Here's what I got:

```
Name:           196.182.198.in-addr.arpa.
Updated:        1998-12-14
NameServer:     NS.INVLOGIC.COM
NameServer:     NS0.AITCOM.NET
Ref:            http://whois.arin.net/rest/rdns/196.182.198.in-addr.arpa.
```

So the DNS nameservers for the domain are NS.INVLOGIC.COM and NS0.AITCOM.NET.

Appendix A

Programs

A.1 trace.sh

I wrote this script to do the job of Problem 3 in Part 1. It would do the traceroute to two websites, www.henu.edu.cn which is the homepage of Henan University in Kaifeng, Henan, China and www.yale.edu which belongs to the Yale University in the United States. Each website would be tracerouted for 10 times in 3 different hours. The duration between the 2 adjacent hours is about 6 hours.

```
#!/bin/bash
# Program:
#       This program traceroute two websites, www.henu.edu.cn in
#       Henan, China, and www.yale.edu in the United States for
#       10 times in 3 different hours.
# History:
# 2011/10/03    Li Yao  Create
PATH=/bin:/sbin:/usr/bin:/usr/sbin:/usr/local/bin:/usr/local/sbin:~/bin
export PATH
DES1=www.henu.edu.cn
FILE1=henu
DES2=www.yale.edu
FILE2=yale
times=10
for (( t=0; t<3; t=t+1 ))
do
        echo "==========" >> $FILE1
        echo $(date +%Y/%m/%d-%H:%M:%S) >> $FILE1
        echo "==========" >> $FILE1
        echo "==========" >> $FILE2
        echo $(date +%Y/%m/%d-%H:%M:%S) >> $FILE2
        echo "==========" >> $FILE2
        for (( i=0; i<$times; i=i+1 ))
        do
                echo "----------" >> $FILE1
                echo $(date +%Y/%m/%d-%H:%M:%S) >> $FILE1
```

```
                echo "----------------" >> $FILE1
                traceroute $DES1 >> $FILE1
                echo "----------------" >> $FILE2
                echo $(date +%Y/%m/%d-%H:%M:%S) >> $FILE2
                echo "----------------" >> $FILE2
                traceroute $DES2 >> $FILE2
        done
        sleep $((60 * 60 * 6))
done
exit 0
```

A.2 statistic.rb

This is very simple (and silly) program written in Ruby to get do statistics in the results from trace.sh and give the average delay.

```
#!/usr/bin/ruby
input = File.open("henu", "r")
output = File.open("henu-statis", "w")
status = 0
preline = nil
results = Array.new(4, 0.0)
counter = Array.new(4, 0)
input.each_line do |line|
        if line.match(/[-=]{14,}/)
                if status % 2 == 0 and status != 0
                        i = 0
                        if preline != nil
                                tmp = preline.split
                                for some in tmp do
                                        if some.match(/^\d+.\d+$/)
                                                results[i] += some.to_f
                                                counter[i] += 1
                                                i += 1
                                        end
                                end
                        end
                end
                status += 1
        elsif status % 22 == 1
                if (status != 1)
                        count = ans = 0
                        for i in 0..2:
                                ans += results[i]
                                count += counter[i]
                                results[i] /= counter[i]
                                output.print results[i].to_s + " "
                        end
                        ans /= count
```

```
                        output.puts ans.to_s
                end
                output.puts line
                results = Array.new(4, 0.0)
                counter = Array.new(4, 0)
        else
                preline = line
        end
end
count = ans = 0
for i in 0..2:
        ans += results[i]
        results[i] /= counter[i]
        count += counter[i]
        output.print results[i].to_s + " "
end
ans /= count
output.puts ans.to_s
```

Appendix B

Results of the Traceroute Experiments

These are the result files generated by the trace.sh script.

B.1 www.henu.edu.cn

```
================
2011/10/04-01:44:19
================
--------------
2011/10/04-01:44:19
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  2.016 ms  2.516 ms  3.065 ms
 2  10.21.18.253 (10.21.18.253)  0.852 ms  1.136 ms  1.317 ms
 3  10.3.2.118 (10.3.2.118)  0.249 ms  0.240 ms  0.253 ms
 4  10.3.2.9 (10.3.2.9)  0.307 ms  0.286 ms  0.250 ms
 5  10.3.2.13 (10.3.2.13)  0.466 ms  0.412 ms  0.523 ms
 6  10.3.0.10 (10.3.0.10)  0.757 ms  0.775 ms  0.786 ms
 7  10.3.0.253 (10.3.0.253)  1.056 ms  1.059 ms  1.019 ms
 8  202.120.201.198 (202.120.201.198)  1.867 ms  1.609 ms  1.834 ms
 9  202.112.6.69 (202.112.6.69)  1.224 ms  1.215 ms  1.210 ms
10  sh0.cernet.net (202.112.53.89)  7.286 ms  8.016 ms  8.368 ms
11  202.112.36.37 (202.112.36.37)  6.805 ms  6.799 ms  6.815 ms
12  202.112.36.249 (202.112.36.249)  17.362 ms  17.280 ms  17.233 ms
13  202.112.53.157 (202.112.53.157)  16.882 ms  16.882 ms  16.867 ms
14  bjwh4.cernet.net (202.112.46.65)  24.535 ms  24.502 ms  24.631 ms
15  202.112.61.50 (202.112.61.50)  24.742 ms  24.814 ms  24.802 ms
16  202.112.53.218 (202.112.53.218)  25.216 ms  25.380 ms  25.491 ms
17  210.43.146.45 (210.43.146.45)  24.719 ms  24.621 ms  24.753 ms
18  210.43.146.14 (210.43.146.14)  25.832 ms  58.495 ms  58.416 ms
19  210.43.146.206 (210.43.146.206)  26.058 ms  26.066 ms  26.030 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  311.185 ms  322.206 ms  322.466 ms
```

```
22  202.196.109.165 (202.196.109.165)  26.316 ms  26.400 ms  26.586 ms
23  202.196.96.4 (202.196.96.4)  26.601 ms  26.740 ms  26.760 ms
--------------
2011/10/04-01:44:37
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.513 ms  2.001 ms  2.496 ms
 2  10.21.18.253 (10.21.18.253)  0.924 ms  1.228 ms  1.383 ms
 3  10.3.2.118 (10.3.2.118)  0.232 ms  0.244 ms  0.244 ms
 4  10.3.2.9 (10.3.2.9)  0.385 ms  0.307 ms  0.271 ms
 5  10.3.2.13 (10.3.2.13)  0.520 ms  0.445 ms  0.450 ms
 6  10.3.0.10 (10.3.0.10)  0.844 ms  0.809 ms  0.868 ms
 7  10.3.0.253 (10.3.0.253)  0.880 ms  0.857 ms  1.173 ms
 8  202.120.201.198 (202.120.201.198)  61.374 ms  61.266 ms  58.266 ms
 9  202.112.6.69 (202.112.6.69)  58.208 ms  58.157 ms  58.116 ms
10  sh0.cernet.net (202.112.53.89)  60.048 ms  59.991 ms  40.220 ms
11  202.112.36.37 (202.112.36.37)  39.947 ms  39.856 ms  39.777 ms
12  202.112.36.249 (202.112.36.249)  42.817 ms  42.738 ms  42.748 ms
13  202.112.53.157 (202.112.53.157)  42.334 ms  19.567 ms  19.558 ms
14  bjwh4.cernet.net (202.112.46.65)  24.611 ms  24.545 ms  24.477 ms
15  202.112.61.50 (202.112.61.50)  24.749 ms  24.826 ms  24.796 ms
16  202.112.53.218 (202.112.53.218)  25.327 ms  25.553 ms  25.743 ms
17  210.43.146.45 (210.43.146.45)  24.763 ms  24.751 ms  24.676 ms
18  210.43.146.14 (210.43.146.14)  25.837 ms  25.839 ms  25.724 ms
19  210.43.146.206 (210.43.146.206)  26.095 ms  26.348 ms  26.325 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  270.946 ms  290.125 ms  282.316 ms
22  202.196.109.165 (202.196.109.165)  27.007 ms  26.963 ms  26.217 ms
23  202.196.96.4 (202.196.96.4)  26.419 ms  26.450 ms  26.667 ms
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2011/10/04-01:44:49
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.543 ms  2.018 ms  2.510 ms
 2  10.21.18.253 (10.21.18.253)  0.793 ms  0.996 ms  1.169 ms
 3  10.3.2.118 (10.3.2.118)  0.276 ms  0.280 ms  0.279 ms
 4  10.3.2.9 (10.3.2.9)  0.305 ms  0.325 ms  0.294 ms
 5  10.3.2.13 (10.3.2.13)  0.466 ms  0.455 ms  0.549 ms
 6  10.3.0.10 (10.3.0.10)  0.762 ms  0.827 ms  0.825 ms
 7  10.3.0.253 (10.3.0.253)  0.918 ms  0.905 ms  1.035 ms
 8  202.120.201.198 (202.120.201.198)  1.679 ms  1.717 ms  1.802 ms
 9  202.112.6.69 (202.112.6.69)  1.195 ms  1.199 ms  1.261 ms
10  sh0.cernet.net (202.112.53.89)  7.788 ms  7.695 ms  7.539 ms
11  202.112.36.37 (202.112.36.37)  6.695 ms  6.651 ms  6.845 ms
12  202.112.36.249 (202.112.36.249)  17.065 ms  17.455 ms  17.379 ms
13  202.112.53.157 (202.112.53.157)  16.715 ms  16.782 ms  16.845 ms
14  bjwh4.cernet.net (202.112.46.65)  24.566 ms  24.572 ms  24.515 ms
15  202.112.61.50 (202.112.61.50)  24.810 ms  24.788 ms  24.876 ms
16  202.112.53.218 (202.112.53.218)  25.183 ms  25.363 ms  25.585 ms
17  210.43.146.45 (210.43.146.45)  24.851 ms  24.709 ms  24.808 ms
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18  210.43.146.14 (210.43.146.14)  25.837 ms  25.922 ms  25.874 ms
19  210.43.146.206 (210.43.146.206)  25.978 ms  26.016 ms  25.995 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  350.772 ms  365.142 ms  365.576 ms
22  202.196.109.165 (202.196.109.165)  26.565 ms  26.594 ms  26.515 ms
23  202.196.96.4 (202.196.96.4)  26.689 ms  26.694 ms  26.401 ms
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2011/10/04-01:45:00
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.060 ms  1.201 ms  1.553 ms
 2  10.21.18.253 (10.21.18.253)  1.051 ms  1.019 ms  0.933 ms
 3  10.3.2.118 (10.3.2.118)  0.338 ms  0.228 ms  0.212 ms
 4  10.3.2.9 (10.3.2.9)  0.389 ms  0.348 ms  0.347 ms
 5  10.3.2.13 (10.3.2.13)  0.507 ms  0.435 ms  0.386 ms
 6  10.3.0.10 (10.3.0.10)  0.845 ms  0.791 ms  0.754 ms
 7  10.3.0.253 (10.3.0.253)  1.002 ms  0.936 ms  0.959 ms
 8  202.120.201.198 (202.120.201.198)  1.908 ms  1.650 ms  1.910 ms
 9  202.112.6.69 (202.112.6.69)  1.484 ms  1.611 ms  1.328 ms
10  sh0.cernet.net (202.112.53.89)  7.628 ms  7.798 ms  7.706 ms
11  202.112.36.37 (202.112.36.37)  6.696 ms  6.733 ms  6.830 ms
12  202.112.36.249 (202.112.36.249)  17.539 ms  17.674 ms  17.600 ms
13  202.112.53.157 (202.112.53.157)  16.823 ms  16.775 ms  16.724 ms
14  bjwh4.cernet.net (202.112.46.65)  24.688 ms  24.623 ms  24.592 ms
15  202.112.61.50 (202.112.61.50)  24.573 ms  24.819 ms  24.806 ms
16  202.112.53.218 (202.112.53.218)  25.127 ms  25.050 ms  25.213 ms
17  210.43.146.45 (210.43.146.45)  24.725 ms  24.712 ms  24.794 ms
18  210.43.146.14 (210.43.146.14)  25.892 ms  25.762 ms  25.751 ms
19  210.43.146.206 (210.43.146.206)  26.080 ms  26.139 ms  26.331 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  414.469 ms  434.997 ms  482.519 ms
22  202.196.109.165 (202.196.109.165)  26.285 ms  26.443 ms  26.492 ms
23  202.196.96.4 (202.196.96.4)  26.575 ms  26.558 ms  26.492 ms
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2011/10/04-01:45:12
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.595 ms  1.903 ms  2.254 ms
 2  10.21.18.253 (10.21.18.253)  0.989 ms  0.983 ms  1.023 ms
 3  10.3.2.118 (10.3.2.118)  0.293 ms  0.205 ms  0.184 ms
 4  10.3.2.9 (10.3.2.9)  0.349 ms  0.351 ms  0.277 ms
 5  10.3.2.13 (10.3.2.13)  0.424 ms  0.467 ms  0.454 ms
 6  10.3.0.10 (10.3.0.10)  0.770 ms  0.974 ms  0.900 ms
 7  10.3.0.253 (10.3.0.253)  0.985 ms  0.970 ms  1.049 ms
 8  202.120.201.198 (202.120.201.198)  1.830 ms  1.951 ms  2.004 ms
 9  202.112.6.69 (202.112.6.69)  1.387 ms  1.590 ms  1.719 ms
10  sh0.cernet.net (202.112.53.89)  7.732 ms  7.655 ms  7.820 ms
11  202.112.36.37 (202.112.36.37)  6.954 ms  6.899 ms  6.834 ms
12  202.112.36.249 (202.112.36.249)  16.802 ms  17.132 ms  17.053 ms
13  202.112.53.157 (202.112.53.157)  16.796 ms  16.796 ms  16.793 ms
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14  bjwh4.cernet.net (202.112.46.65)  24.773 ms  24.706 ms  24.629 ms
15  202.112.61.50 (202.112.61.50)  24.686 ms  24.774 ms  24.857 ms
16  202.112.53.218 (202.112.53.218)  25.263 ms  25.373 ms  25.641 ms
17  210.43.146.45 (210.43.146.45)  24.893 ms  24.818 ms  24.968 ms
18  210.43.146.14 (210.43.146.14)  25.944 ms  25.824 ms  25.816 ms
19  210.43.146.206 (210.43.146.206)  25.962 ms  26.155 ms  26.310 ms
20  * * *
21  * * *
22  202.196.109.165 (202.196.109.165)  26.812 ms  26.361 ms  26.469 ms
23  202.196.96.4 (202.196.96.4)  26.466 ms  26.422 ms  26.463 ms
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2011/10/04-01:45:24
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.744 ms  2.053 ms  2.401 ms
 2  10.21.18.253 (10.21.18.253)  1.061 ms  1.047 ms  1.059 ms
 3  10.3.2.118 (10.3.2.118)  0.271 ms  0.224 ms  0.215 ms
 4  10.3.2.9 (10.3.2.9)  0.299 ms  0.299 ms  0.341 ms
 5  10.3.2.13 (10.3.2.13)  0.439 ms  0.414 ms  0.432 ms
 6  10.3.0.10 (10.3.0.10)  0.818 ms  0.823 ms  0.778 ms
 7  10.3.0.253 (10.3.0.253)  0.910 ms  0.993 ms  0.970 ms
 8  202.120.201.198 (202.120.201.198)  1.931 ms  1.737 ms  1.955 ms
 9  * * *
10  sh0.cernet.net (202.112.53.89)  7.605 ms  7.727 ms  7.593 ms
11  202.112.36.37 (202.112.36.37)  6.814 ms  6.807 ms  6.993 ms
12  202.112.36.249 (202.112.36.249)  16.849 ms  17.125 ms  17.194 ms
13  202.112.53.157 (202.112.53.157)  16.798 ms  16.905 ms  16.882 ms
14  bjwh4.cernet.net (202.112.46.65)  24.566 ms  24.583 ms  24.547 ms
15  202.112.61.50 (202.112.61.50)  24.849 ms  24.869 ms *
16  202.112.53.218 (202.112.53.218)  25.134 ms  25.291 ms  25.190 ms
17  210.43.146.45 (210.43.146.45)  24.813 ms  24.714 ms  24.689 ms
18  210.43.146.14 (210.43.146.14)  25.902 ms  25.853 ms  25.742 ms
19  210.43.146.206 (210.43.146.206)  26.032 ms  25.922 ms  25.955 ms
20  * * *
21  * * *
22  202.196.109.165 (202.196.109.165)  26.277 ms  26.276 ms  26.375 ms
23  202.196.96.4 (202.196.96.4)  26.322 ms  26.441 ms  26.361 ms
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2011/10/04-01:45:36
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.578 ms  2.062 ms  2.560 ms
 2  10.21.18.253 (10.21.18.253)  0.859 ms  1.036 ms  1.180 ms
 3  10.3.2.118 (10.3.2.118)  0.237 ms  0.223 ms  0.196 ms
 4  10.3.2.9 (10.3.2.9)  0.296 ms  0.306 ms  0.363 ms
 5  10.3.2.13 (10.3.2.13)  0.392 ms  0.437 ms  0.472 ms
 6  10.3.0.10 (10.3.0.10)  0.782 ms  0.828 ms  0.936 ms
 7  10.3.0.253 (10.3.0.253)  1.025 ms  0.944 ms  1.001 ms
 8  202.120.201.198 (202.120.201.198)  1.555 ms  1.482 ms  1.553 ms
 9  202.112.6.69 (202.112.6.69)  1.307 ms  1.336 ms  1.405 ms
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10  sh0.cernet.net (202.112.53.89)  8.242 ms  8.180 ms  7.126 ms
11  202.112.36.37 (202.112.36.37)  6.755 ms  6.807 ms  6.649 ms
12  202.112.36.249 (202.112.36.249)  17.296 ms  17.391 ms  17.310 ms
13  202.112.53.157 (202.112.53.157)  16.825 ms  16.812 ms  16.679 ms
14  bjwh4.cernet.net (202.112.46.65)  24.672 ms  24.649 ms  24.529 ms
15  202.112.61.50 (202.112.61.50)  24.812 ms  24.872 ms  24.970 ms
16  202.112.53.218 (202.112.53.218)  25.327 ms  25.434 ms  25.676 ms
17  210.43.146.45 (210.43.146.45)  24.821 ms  24.788 ms  24.908 ms
18  210.43.146.14 (210.43.146.14)  25.858 ms  25.811 ms  25.834 ms
19  210.43.146.206 (210.43.146.206)  26.133 ms  26.005 ms  26.074 ms
20  * * *
21  * * *
22  202.196.109.165 (202.196.109.165)  26.310 ms  26.702 ms  26.353 ms
23  202.196.96.4 (202.196.96.4)  26.335 ms  26.552 ms  26.392 ms
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2011/10/04-01:45:47
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.493 ms  1.992 ms  2.518 ms
 2  10.21.18.253 (10.21.18.253)  0.878 ms  1.038 ms  1.201 ms
 3  10.3.2.118 (10.3.2.118)  0.231 ms  0.241 ms  0.233 ms
 4  10.3.2.9 (10.3.2.9)  0.374 ms  0.380 ms  0.313 ms
 5  10.3.2.13 (10.3.2.13)  0.567 ms  0.352 ms  0.317 ms
 6  10.3.0.10 (10.3.0.10)  0.839 ms  0.838 ms  0.844 ms
 7  10.3.0.253 (10.3.0.253)  0.931 ms  0.952 ms  0.954 ms
 8  202.120.201.198 (202.120.201.198)  9.716 ms  9.481 ms  9.726 ms
 9  202.112.6.69 (202.112.6.69)  1.185 ms  1.175 ms  1.181 ms
10  sh0.cernet.net (202.112.53.89)  7.654 ms  7.666 ms  7.500 ms
11  202.112.36.37 (202.112.36.37)  6.776 ms  6.765 ms  6.765 ms
12  202.112.36.249 (202.112.36.249)  16.878 ms  17.035 ms  17.096 ms
13  202.112.53.157 (202.112.53.157)  16.844 ms  16.854 ms  16.866 ms
14  bjwh4.cernet.net (202.112.46.65)  24.517 ms  24.656 ms  24.591 ms
15  * * *
16  202.112.53.218 (202.112.53.218)  25.133 ms  25.132 ms  25.301 ms
17  210.43.146.45 (210.43.146.45)  24.694 ms  24.846 ms  32.288 ms
18  210.43.146.14 (210.43.146.14)  25.937 ms  25.970 ms  25.985 ms
19  210.43.146.206 (210.43.146.206)  26.049 ms  26.040 ms  26.092 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  420.772 ms  421.117 ms  437.847 ms
22  202.196.109.165 (202.196.109.165)  26.440 ms  26.566 ms  26.383 ms
23  202.196.96.4 (202.196.96.4)  26.416 ms  26.258 ms  26.410 ms
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2011/10/04-01:45:59
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.595 ms  1.918 ms  2.236 ms
 2  10.21.18.253 (10.21.18.253)  1.054 ms  1.090 ms  1.118 ms
 3  10.3.2.118 (10.3.2.118)  0.238 ms  0.229 ms  0.229 ms
 4  10.3.2.9 (10.3.2.9)  0.466 ms  0.363 ms  0.384 ms
 5  10.3.2.13 (10.3.2.13)  0.524 ms  0.457 ms  0.338 ms
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 6  10.3.0.10 (10.3.0.10)  0.887 ms  0.797 ms  0.824 ms
 7  10.3.0.253 (10.3.0.253)  0.892 ms  1.017 ms  1.030 ms
 8  202.120.201.198 (202.120.201.198)  1.816 ms  1.605 ms  1.898 ms
 9  202.112.6.69 (202.112.6.69)  1.304 ms  1.308 ms  1.561 ms
10  sh0.cernet.net (202.112.53.89)  8.005 ms  7.935 ms  7.866 ms
11  202.112.36.37 (202.112.36.37)  6.754 ms  6.700 ms  6.725 ms
12  202.112.36.249 (202.112.36.249)  16.873 ms  17.058 ms  16.992 ms
13  202.112.53.157 (202.112.53.157)  16.766 ms  16.863 ms  16.776 ms
14  bjwh4.cernet.net (202.112.46.65)  24.631 ms  24.643 ms  24.582 ms
15  202.112.61.50 (202.112.61.50)  24.820 ms  24.742 ms *
16  202.112.53.218 (202.112.53.218)  25.224 ms  25.414 ms  25.606 ms
17  210.43.146.45 (210.43.146.45)  24.709 ms  24.809 ms  24.740 ms
18  210.43.146.14 (210.43.146.14)  25.966 ms  25.873 ms  25.883 ms
19  210.43.146.206 (210.43.146.206)  26.062 ms  26.071 ms  25.925 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  271.367 ms  271.864 ms  291.933 ms
22  202.196.109.165 (202.196.109.165)  26.338 ms  26.387 ms  26.278 ms
23  202.196.96.4 (202.196.96.4)  26.473 ms  26.299 ms  26.328 ms
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2011/10/04-01:46:10
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.920 ms  2.280 ms  3.248 ms
 2  10.21.18.253 (10.21.18.253)  0.931 ms  0.949 ms  0.960 ms
 3  10.3.2.118 (10.3.2.118)  0.260 ms  0.212 ms  0.207 ms
 4  10.3.2.9 (10.3.2.9)  0.311 ms  0.279 ms  0.307 ms
 5  10.3.2.13 (10.3.2.13)  0.486 ms  0.491 ms  0.469 ms
 6  10.3.0.10 (10.3.0.10)  0.788 ms  0.729 ms  0.784 ms
 7  10.3.0.253 (10.3.0.253)  0.927 ms  0.869 ms  0.969 ms
 8  202.120.201.198 (202.120.201.198)  1.603 ms  1.759 ms  1.800 ms
 9  202.112.6.69 (202.112.6.69)  1.319 ms  1.263 ms  1.286 ms
10  sh0.cernet.net (202.112.53.89)  7.667 ms  7.603 ms  7.540 ms
11  202.112.36.37 (202.112.36.37)  6.718 ms  6.749 ms  6.723 ms
12  202.112.36.249 (202.112.36.249)  17.158 ms  17.315 ms  17.244 ms
13  202.112.53.157 (202.112.53.157)  16.835 ms  16.817 ms  16.807 ms
14  bjwh4.cernet.net (202.112.46.65)  24.751 ms  24.677 ms  24.625 ms
15  202.112.61.50 (202.112.61.50)  24.650 ms * *
16  202.112.53.218 (202.112.53.218)  25.147 ms  25.349 ms  25.458 ms
17  210.43.146.45 (210.43.146.45)  24.621 ms  24.751 ms  24.747 ms
18  210.43.146.14 (210.43.146.14)  25.822 ms  25.809 ms  25.757 ms
19  210.43.146.206 (210.43.146.206)  26.024 ms  26.147 ms  26.070 ms
20  * * *
21  * * *
22  202.196.109.165 (202.196.109.165)  31.236 ms  26.209 ms  26.260 ms
23  202.196.96.4 (202.196.96.4)  26.495 ms  26.417 ms  26.282 ms
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2011/10/04-07:46:22
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2011/10/04-07:46:22
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.645 ms  2.146 ms  2.648 ms
 2  10.21.18.253 (10.21.18.253)  0.857 ms  1.019 ms  1.161 ms
 3  10.3.2.118 (10.3.2.118)  0.246 ms  0.254 ms  0.177 ms
 4  10.3.2.9 (10.3.2.9)  0.373 ms  0.222 ms  0.466 ms
 5  10.3.2.13 (10.3.2.13)  0.402 ms  0.454 ms  0.564 ms
 6  10.3.0.10 (10.3.0.10)  0.697 ms  0.730 ms  0.838 ms
 7  10.3.0.253 (10.3.0.253)  1.015 ms  1.008 ms  1.017 ms
 8  202.120.201.198 (202.120.201.198)  1.778 ms  2.056 ms  1.844 ms
 9  202.112.6.69 (202.112.6.69)  1.304 ms * *
10  sh0.cernet.net (202.112.53.89)  7.658 ms  7.637 ms  7.593 ms
11  202.112.36.37 (202.112.36.37)  6.635 ms  6.647 ms  6.806 ms
12  202.112.36.249 (202.112.36.249)  17.476 ms  17.395 ms  17.390 ms
13  202.112.53.157 (202.112.53.157)  16.867 ms  16.643 ms  16.780 ms
14  bjwh4.cernet.net (202.112.46.65)  24.704 ms  24.514 ms  24.552 ms
15  202.112.61.50 (202.112.61.50)  24.735 ms * *
16  202.112.53.218 (202.112.53.218)  25.321 ms  25.043 ms  25.263 ms
17  210.43.146.45 (210.43.146.45)  24.947 ms  24.788 ms  24.733 ms
18  210.43.146.14 (210.43.146.14)  25.746 ms  25.687 ms  25.836 ms
19  210.43.146.206 (210.43.146.206)  26.057 ms * *
20  * * *
21  202.196.109.169 (202.196.109.169)  582.704 ms  583.107 ms  602.709 ms
22  202.196.109.165 (202.196.109.165)  26.180 ms  26.183 ms  26.306 ms
23  202.196.96.4 (202.196.96.4)  26.223 ms  26.534 ms  26.521 ms
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2011/10/04-07:46:41
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.899 ms  2.251 ms  3.019 ms
 2  10.21.18.253 (10.21.18.253)  0.981 ms  0.979 ms  1.008 ms
 3  10.3.2.118 (10.3.2.118)  0.303 ms  0.214 ms  0.218 ms
 4  10.3.2.9 (10.3.2.9)  0.288 ms  0.218 ms  0.226 ms
 5  10.3.2.13 (10.3.2.13)  0.396 ms  0.378 ms  0.333 ms
 6  10.3.0.10 (10.3.0.10)  0.755 ms  0.688 ms  0.717 ms
 7  10.3.0.253 (10.3.0.253)  0.821 ms  0.891 ms  0.875 ms
 8  202.120.201.198 (202.120.201.198)  2.035 ms  2.157 ms  2.274 ms
 9  202.112.6.69 (202.112.6.69)  1.327 ms  1.252 ms  1.280 ms
10  sh0.cernet.net (202.112.53.89)  7.870 ms  7.803 ms  7.930 ms
11  202.112.36.37 (202.112.36.37)  6.683 ms  6.764 ms  6.702 ms
12  202.112.36.249 (202.112.36.249)  16.923 ms  16.995 ms  16.932 ms
13  202.112.53.157 (202.112.53.157)  16.740 ms  16.891 ms  16.660 ms
14  bjwh4.cernet.net (202.112.46.65)  24.547 ms  24.495 ms  24.435 ms
15  202.112.61.50 (202.112.61.50)  24.707 ms * *
16  202.112.53.218 (202.112.53.218)  25.194 ms  25.430 ms  25.544 ms
17  210.43.146.45 (210.43.146.45)  24.795 ms  24.740 ms  24.836 ms
18  210.43.146.14 (210.43.146.14)  25.737 ms  25.658 ms  25.812 ms
19  210.43.146.206 (210.43.146.206)  26.122 ms  26.161 ms  26.071 ms
20  * * *
21  * * *
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22  202.196.109.165 (202.196.109.165)  26.312 ms  28.590 ms  26.164 ms
23  202.196.96.4 (202.196.96.4)  26.266 ms  26.308 ms  26.247 ms
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2011/10/04-07:46:53
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.541 ms  1.997 ms  3.608 ms
 2  10.21.18.253 (10.21.18.253)  0.941 ms  0.985 ms  1.010 ms
 3  10.3.2.118 (10.3.2.118)  0.255 ms  0.186 ms  0.200 ms
 4  10.3.2.9 (10.3.2.9)  0.319 ms  0.242 ms  0.228 ms
 5  10.3.2.13 (10.3.2.13)  0.333 ms  0.336 ms  0.705 ms
 6  10.3.0.10 (10.3.0.10)  0.829 ms  0.693 ms  0.699 ms
 7  10.3.0.253 (10.3.0.253)  0.883 ms  0.919 ms  0.913 ms
 8  202.120.201.198 (202.120.201.198)  1.865 ms  1.930 ms  2.028 ms
 9  202.112.6.69 (202.112.6.69)  3.979 ms  4.008 ms  4.291 ms
10  sh0.cernet.net (202.112.53.89)  7.359 ms  7.285 ms  7.106 ms
11  202.112.36.37 (202.112.36.37)  6.754 ms  6.761 ms  6.818 ms
12  202.112.36.249 (202.112.36.249)  16.856 ms  17.029 ms  16.966 ms
13  202.112.53.157 (202.112.53.157)  16.742 ms  16.768 ms  16.764 ms
14  bjwh4.cernet.net (202.112.46.65)  24.613 ms  24.568 ms  24.508 ms
15  202.112.61.50 (202.112.61.50)  24.814 ms  24.632 ms *
16  202.112.53.218 (202.112.53.218)  25.142 ms  25.398 ms  26.113 ms
17  210.43.146.45 (210.43.146.45)  24.648 ms  24.705 ms  24.917 ms
18  210.43.146.14 (210.43.146.14)  25.717 ms  25.932 ms  25.836 ms
19  210.43.146.206 (210.43.146.206)  26.013 ms  26.136 ms  26.048 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  670.893 ms  671.242 ms  691.186 ms
22  202.196.109.165 (202.196.109.165)  26.399 ms  26.351 ms  26.147 ms
23  202.196.96.4 (202.196.96.4)  26.107 ms  26.411 ms  26.277 ms
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2011/10/04-07:47:04
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.529 ms  2.020 ms  2.530 ms
 2  10.21.18.253 (10.21.18.253)  0.769 ms  0.951 ms  1.126 ms
 3  10.3.2.118 (10.3.2.118)  0.250 ms  0.268 ms  0.271 ms
 4  10.3.2.9 (10.3.2.9)  0.342 ms  0.290 ms  0.238 ms
 5  10.3.2.13 (10.3.2.13)  0.512 ms  0.383 ms  0.369 ms
 6  10.3.0.10 (10.3.0.10)  0.844 ms  0.716 ms  0.783 ms
 7  10.3.0.253 (10.3.0.253)  0.859 ms  0.895 ms  0.921 ms
 8  202.120.201.198 (202.120.201.198)  2.003 ms  1.745 ms  2.027 ms
 9  202.112.6.69 (202.112.6.69)  1.336 ms  1.274 ms  1.389 ms
10  sh0.cernet.net (202.112.53.89)  7.306 ms  7.266 ms  7.204 ms
11  202.112.36.37 (202.112.36.37)  6.618 ms  6.662 ms  6.685 ms
12  202.112.36.249 (202.112.36.249)  17.177 ms  17.147 ms  17.085 ms
13  202.112.53.157 (202.112.53.157)  16.912 ms  16.897 ms  16.909 ms
14  bjwh4.cernet.net (202.112.46.65)  24.539 ms  24.480 ms  24.420 ms
15  202.112.61.50 (202.112.61.50)  24.715 ms  24.812 ms *
16  202.112.53.218 (202.112.53.218)  25.105 ms  25.638 ms  25.244 ms
17  210.43.146.45 (210.43.146.45)  24.732 ms  24.732 ms  24.828 ms
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18  210.43.146.14 (210.43.146.14)  26.329 ms  26.284 ms  26.230 ms
19  210.43.146.206 (210.43.146.206)  26.176 ms  25.979 ms  26.085 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  253.133 ms  272.046 ms  272.375 ms
22  202.196.109.165 (202.196.109.165)  26.246 ms  26.192 ms  26.134 ms
23  202.196.96.4 (202.196.96.4)  26.231 ms  26.230 ms  26.475 ms
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2011/10/04-07:47:15
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.542 ms  2.045 ms  2.533 ms
 2  10.21.18.253 (10.21.18.253)  0.851 ms  1.025 ms  1.164 ms
 3  10.3.2.118 (10.3.2.118)  0.224 ms  0.253 ms  0.247 ms
 4  10.3.2.9 (10.3.2.9)  0.265 ms  0.289 ms  0.224 ms
 5  10.3.2.13 (10.3.2.13)  0.385 ms  0.434 ms  0.471 ms
 6  10.3.0.10 (10.3.0.10)  0.892 ms  0.892 ms  0.996 ms
 7  10.3.0.253 (10.3.0.253)  0.867 ms  0.918 ms  0.968 ms
 8  202.120.201.198 (202.120.201.198)  2.076 ms  2.125 ms  2.200 ms
 9  202.112.6.69 (202.112.6.69)  1.310 ms  1.294 ms  1.309 ms
10  sh0.cernet.net (202.112.53.89)  7.827 ms  7.770 ms  7.182 ms
11  202.112.36.37 (202.112.36.37)  6.833 ms  6.778 ms  6.747 ms
12  202.112.36.249 (202.112.36.249)  17.056 ms  17.260 ms  17.162 ms
13  202.112.53.157 (202.112.53.157)  16.724 ms  16.752 ms  16.691 ms
14  bjwh4.cernet.net (202.112.46.65)  24.626 ms  24.555 ms  24.489 ms
15  202.112.61.50 (202.112.61.50)  24.694 ms  24.714 ms *
16  202.112.53.218 (202.112.53.218)  25.059 ms  25.623 ms  25.270 ms
17  210.43.146.45 (210.43.146.45)  24.704 ms  24.554 ms  24.718 ms
18  210.43.146.14 (210.43.146.14)  25.782 ms  25.885 ms  25.793 ms
19  * * *
20  * * *
21  202.196.109.169 (202.196.109.169)  141.986 ms  162.997 ms  163.580 ms
22  202.196.109.165 (202.196.109.165)  28.357 ms  27.796 ms  27.598 ms
23  202.196.96.4 (202.196.96.4)  26.458 ms  26.446 ms  26.365 ms
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2011/10/04-07:47:27
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.462 ms  1.972 ms  2.475 ms
 2  10.21.18.253 (10.21.18.253)  5.285 ms  5.472 ms  5.646 ms
 3  10.3.2.118 (10.3.2.118)  0.281 ms  0.312 ms  0.305 ms
 4  10.3.2.9 (10.3.2.9)  0.279 ms  0.261 ms  0.244 ms
 5  10.3.2.13 (10.3.2.13)  0.404 ms  0.443 ms  0.431 ms
 6  10.3.0.10 (10.3.0.10)  0.815 ms  0.839 ms  0.854 ms
 7  10.3.0.253 (10.3.0.253)  0.937 ms  0.920 ms  0.936 ms
 8  202.120.201.198 (202.120.201.198)  1.726 ms  1.798 ms  1.905 ms
 9  202.112.6.69 (202.112.6.69)  1.092 ms  1.144 ms  1.112 ms
10  sh0.cernet.net (202.112.53.89)  7.674 ms  7.612 ms  7.748 ms
11  202.112.36.37 (202.112.36.37)  6.715 ms  6.748 ms  6.683 ms
12  202.112.36.249 (202.112.36.249)  17.196 ms  17.133 ms  17.068 ms
13  202.112.53.157 (202.112.53.157)  16.741 ms  16.817 ms  16.577 ms
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14  bjwh4.cernet.net (202.112.46.65)  24.472 ms  24.455 ms  24.577 ms
15  202.112.61.50 (202.112.61.50)  24.761 ms  24.875 ms  24.669 ms
16  202.112.53.218 (202.112.53.218)  25.143 ms  25.581 ms  25.218 ms
17  210.43.146.45 (210.43.146.45)  24.574 ms  24.718 ms  24.668 ms
18  210.43.146.14 (210.43.146.14)  25.841 ms  25.683 ms  25.850 ms
19  * * *
20  * * *
21  202.196.109.169 (202.196.109.169)  995.384 ms  1013.684 ms  1014.051 ms
22  202.196.109.165 (202.196.109.165)  26.432 ms  26.442 ms  26.903 ms
23  202.196.96.4 (202.196.96.4)  26.466 ms  26.757 ms  26.770 ms
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2011/10/04-07:47:38
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.553 ms  1.820 ms  2.167 ms
 2  10.21.18.253 (10.21.18.253)  1.108 ms  1.132 ms  1.139 ms
 3  10.3.2.118 (10.3.2.118)  0.262 ms  0.226 ms  0.205 ms
 4  10.3.2.9 (10.3.2.9)  0.300 ms  0.254 ms  0.287 ms
 5  10.3.2.13 (10.3.2.13)  0.381 ms  0.311 ms  0.323 ms
 6  10.3.0.10 (10.3.0.10)  0.949 ms  0.728 ms  0.821 ms
 7  10.3.0.253 (10.3.0.253)  0.819 ms  0.860 ms  0.949 ms
 8  202.120.201.198 (202.120.201.198)  1.716 ms  1.886 ms  1.932 ms
 9  202.112.6.69 (202.112.6.69)  1.292 ms  1.270 ms  1.291 ms
10  sh0.cernet.net (202.112.53.89)  7.765 ms  7.701 ms  7.641 ms
11  202.112.36.37 (202.112.36.37)  6.723 ms  6.728 ms  6.720 ms
12  202.112.36.249 (202.112.36.249)  17.166 ms  17.303 ms  17.240 ms
13  202.112.53.157 (202.112.53.157)  16.766 ms  16.747 ms  16.791 ms
14  bjwh4.cernet.net (202.112.46.65)  24.505 ms  24.497 ms  24.496 ms
15  202.112.61.50 (202.112.61.50)  24.596 ms  24.678 ms  24.619 ms
16  202.112.53.218 (202.112.53.218)  25.161 ms  25.397 ms  25.590 ms
17  210.43.146.45 (210.43.146.45)  24.693 ms  24.693 ms  24.580 ms
18  210.43.146.14 (210.43.146.14)  25.961 ms  25.863 ms  25.762 ms
19  210.43.146.206 (210.43.146.206)  36.155 ms  26.063 ms  26.167 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  483.662 ms  483.692 ms  500.484 ms
22  202.196.109.165 (202.196.109.165)  26.323 ms  26.344 ms  26.471 ms
23  202.196.96.4 (202.196.96.4)  26.406 ms  26.368 ms  26.741 ms
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2011/10/04-07:47:49
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.512 ms  2.360 ms  2.859 ms
 2  10.21.18.253 (10.21.18.253)  0.743 ms  0.920 ms  1.130 ms
 3  10.3.2.118 (10.3.2.118)  0.290 ms  0.205 ms  0.180 ms
 4  10.3.2.9 (10.3.2.9)  0.342 ms  0.259 ms  0.283 ms
 5  10.3.2.13 (10.3.2.13)  0.413 ms  0.315 ms  0.316 ms
 6  10.3.0.10 (10.3.0.10)  0.752 ms  0.714 ms  0.736 ms
 7  10.3.0.253 (10.3.0.253)  0.915 ms  0.887 ms  0.946 ms
 8  202.120.201.198 (202.120.201.198)  1.880 ms  1.978 ms  2.071 ms
 9  202.112.6.69 (202.112.6.69)  1.343 ms  1.430 ms  1.661 ms
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10  sh0.cernet.net (202.112.53.89)  7.761 ms  7.759 ms  7.103 ms
11  202.112.36.37 (202.112.36.37)  6.670 ms  6.649 ms  6.760 ms
12  202.112.36.249 (202.112.36.249)  17.053 ms  17.093 ms  17.172 ms
13  202.112.53.157 (202.112.53.157)  16.923 ms  16.892 ms  16.837 ms
14  bjwh4.cernet.net (202.112.46.65)  24.663 ms  24.608 ms  24.548 ms
15  202.112.61.50 (202.112.61.50)  24.681 ms * *
16  202.112.53.218 (202.112.53.218)  25.116 ms  25.337 ms  25.510 ms
17  210.43.146.45 (210.43.146.45)  24.632 ms  24.851 ms  24.704 ms
18  210.43.146.14 (210.43.146.14)  25.752 ms  25.880 ms  25.876 ms
19  210.43.146.206 (210.43.146.206)  26.183 ms  26.080 ms  25.955 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  440.348 ms  439.790 ms  460.257 ms
22  202.196.109.165 (202.196.109.165)  26.181 ms  26.455 ms  26.036 ms
23  202.196.96.4 (202.196.96.4)  26.645 ms  26.584 ms  26.360 ms
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2011/10/04-07:48:00
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.638 ms  1.982 ms  2.280 ms
 2  10.21.18.253 (10.21.18.253)  0.762 ms  0.890 ms  1.049 ms
 3  10.3.2.118 (10.3.2.118)  0.267 ms  0.279 ms  0.289 ms
 4  10.3.2.9 (10.3.2.9)  0.308 ms  0.279 ms  0.259 ms
 5  10.3.2.13 (10.3.2.13)  0.442 ms  0.512 ms  0.474 ms
 6  10.3.0.10 (10.3.0.10)  0.819 ms  0.834 ms  0.892 ms
 7  10.3.0.253 (10.3.0.253)  0.825 ms  0.858 ms  0.894 ms
 8  202.120.201.198 (202.120.201.198)  1.583 ms  1.623 ms  1.252 ms
 9  202.112.6.69 (202.112.6.69)  1.275 ms  1.292 ms  1.321 ms
10  sh0.cernet.net (202.112.53.89)  7.858 ms  7.863 ms  7.140 ms
11  202.112.36.37 (202.112.36.37)  6.682 ms  6.647 ms  6.689 ms
12  202.112.36.249 (202.112.36.249)  17.264 ms  17.392 ms  17.441 ms
13  202.112.53.157 (202.112.53.157)  16.861 ms  16.870 ms  16.917 ms
14  bjwh4.cernet.net (202.112.46.65)  24.616 ms  24.564 ms  24.521 ms
15  202.112.61.50 (202.112.61.50)  24.695 ms  24.754 ms  24.791 ms
16  202.112.53.218 (202.112.53.218)  25.246 ms  25.403 ms  25.589 ms
17  210.43.146.45 (210.43.146.45)  24.698 ms  24.693 ms  24.784 ms
18  210.43.146.14 (210.43.146.14)  25.740 ms  25.637 ms  25.762 ms
19  210.43.146.206 (210.43.146.206)  25.825 ms  26.058 ms  26.027 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  312.254 ms  311.725 ms  332.188 ms
22  202.196.109.165 (202.196.109.165)  26.347 ms  26.425 ms  26.077 ms
23  202.196.96.4 (202.196.96.4)  26.519 ms  26.585 ms  26.612 ms
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2011/10/04-07:48:18
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.474 ms  1.985 ms  2.482 ms
 2  10.21.18.253 (10.21.18.253)  0.858 ms  1.016 ms  1.197 ms
 3  10.3.2.118 (10.3.2.118)  0.234 ms  0.249 ms  0.254 ms
 4  10.3.2.9 (10.3.2.9)  0.300 ms  0.319 ms  0.310 ms
 5  10.3.2.13 (10.3.2.13)  0.381 ms  0.421 ms  0.443 ms
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 6  10.3.0.10 (10.3.0.10)  0.754 ms  0.791 ms  0.844 ms
 7  10.3.0.253 (10.3.0.253)  0.805 ms  0.862 ms  0.839 ms
 8  202.120.201.198 (202.120.201.198)  7.858 ms  8.063 ms  7.838 ms
 9  202.112.6.69 (202.112.6.69)  1.174 ms  1.193 ms  1.216 ms
10  sh0.cernet.net (202.112.53.89)  7.807 ms  7.811 ms  7.669 ms
11  202.112.36.37 (202.112.36.37)  6.768 ms  6.749 ms  6.825 ms
12  202.112.36.249 (202.112.36.249)  17.478 ms  17.422 ms  17.519 ms
13  202.112.53.157 (202.112.53.157)  16.728 ms  16.833 ms  16.779 ms
14  bjwh4.cernet.net (202.112.46.65)  24.667 ms  24.540 ms  24.486 ms
15  202.112.61.50 (202.112.61.50)  24.641 ms  24.716 ms  24.682 ms
16  202.112.53.218 (202.112.53.218)  25.087 ms  25.275 ms  25.368 ms
17  210.43.146.45 (210.43.146.45)  24.812 ms  24.744 ms  24.641 ms
18  210.43.146.14 (210.43.146.14)  25.736 ms  25.689 ms  25.652 ms
19  210.43.146.206 (210.43.146.206)  25.872 ms  25.889 ms  26.030 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  47.313 ms  47.688 ms  60.247 ms
22  202.196.109.165 (202.196.109.165)  26.278 ms  26.256 ms  26.398 ms
23  202.196.96.4 (202.196.96.4)  26.399 ms  26.474 ms  26.302 ms
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2011/10/04-13:48:29
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2011/10/04-13:48:29
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traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  2.057 ms  3.039 ms  3.414 ms
 2  10.21.18.253 (10.21.18.253)  1.081 ms  1.129 ms  1.128 ms
 3  10.3.2.118 (10.3.2.118)  0.394 ms  0.270 ms  0.216 ms
 4  10.3.2.9 (10.3.2.9)  0.354 ms  0.357 ms  0.249 ms
 5  10.3.2.13 (10.3.2.13)  0.490 ms  0.346 ms  0.497 ms
 6  10.3.0.10 (10.3.0.10)  0.799 ms  0.702 ms  0.775 ms
 7  10.3.0.253 (10.3.0.253)  1.102 ms  1.045 ms  1.007 ms
 8  202.120.201.198 (202.120.201.198)  2.149 ms  1.937 ms  1.707 ms
 9  202.112.6.69 (202.112.6.69)  1.332 ms  1.267 ms  1.265 ms
10  sh0.cernet.net (202.112.53.89)  7.625 ms  7.720 ms  7.291 ms
11  202.112.36.37 (202.112.36.37)  6.767 ms  6.707 ms  6.744 ms
12  202.112.36.249 (202.112.36.249)  17.248 ms  17.186 ms  17.232 ms
13  202.112.53.157 (202.112.53.157)  120.300 ms  120.278 ms  120.342 ms
14  bjwh4.cernet.net (202.112.46.65)  24.683 ms  24.625 ms  24.563 ms
15  202.112.61.50 (202.112.61.50)  24.893 ms  24.906 ms  24.843 ms
16  202.112.53.218 (202.112.53.218)  25.332 ms  25.435 ms  25.642 ms
17  210.43.146.45 (210.43.146.45)  24.784 ms  24.826 ms  24.847 ms
18  210.43.146.14 (210.43.146.14)  26.129 ms  25.975 ms  25.970 ms
19  210.43.146.206 (210.43.146.206)  26.225 ms  26.129 ms  26.059 ms
20  * * *
21  * * *
22  * * *
23  202.196.96.4 (202.196.96.4)  26.646 ms  26.627 ms  26.647 ms
--------------
2011/10/04-13:48:49
```

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--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.618 ms  1.961 ms  2.293 ms
 2  10.21.18.253 (10.21.18.253)  0.866 ms  0.998 ms  1.193 ms
 3  10.3.2.118 (10.3.2.118)  0.222 ms  0.231 ms  0.223 ms
 4  10.3.2.9 (10.3.2.9)  0.366 ms  0.347 ms  0.340 ms
 5  10.3.2.13 (10.3.2.13)  0.447 ms  0.471 ms  0.540 ms
 6  10.3.0.10 (10.3.0.10)  0.868 ms  0.797 ms  0.795 ms
 7  10.3.0.253 (10.3.0.253)  0.950 ms  0.938 ms  1.013 ms
 8  202.120.201.198 (202.120.201.198)  1.763 ms  1.826 ms  1.391 ms
 9  202.112.6.69 (202.112.6.69)  1.261 ms  1.321 ms  1.258 ms
10  sh0.cernet.net (202.112.53.89)  7.788 ms  7.734 ms  7.671 ms
11  202.112.36.37 (202.112.36.37)  6.748 ms  6.748 ms  6.809 ms
12  202.112.36.249 (202.112.36.249)  17.485 ms  17.422 ms  17.445 ms
13  202.112.53.157 (202.112.53.157)  16.907 ms  16.850 ms  16.790 ms
14  bjwh4.cernet.net (202.112.46.65)  24.907 ms  24.870 ms  24.810 ms
15  202.112.61.50 (202.112.61.50)  24.941 ms * *
16  202.112.53.218 (202.112.53.218)  25.173 ms  25.687 ms  25.297 ms
17  210.43.146.45 (210.43.146.45)  24.806 ms  24.837 ms  24.803 ms
18  210.43.146.14 (210.43.146.14)  25.891 ms  25.906 ms  25.804 ms
19  * * *
20  * * *
21  * * *
22  202.196.109.165 (202.196.109.165)  26.595 ms  26.687 ms  26.693 ms
23  202.196.96.4 (202.196.96.4)  26.886 ms  27.027 ms  26.734 ms
--------------
2011/10/04-13:49:07
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  3.398 ms  3.738 ms  4.104 ms
 2  10.21.18.253 (10.21.18.253)  0.976 ms  1.012 ms  1.352 ms
 3  10.3.2.118 (10.3.2.118)  0.245 ms  0.237 ms  0.188 ms
 4  10.3.2.9 (10.3.2.9)  0.340 ms  0.296 ms  0.255 ms
 5  10.3.2.13 (10.3.2.13)  0.499 ms  0.439 ms  0.572 ms
 6  10.3.0.10 (10.3.0.10)  0.917 ms  0.835 ms  0.826 ms
 7  10.3.0.253 (10.3.0.253)  1.073 ms  0.930 ms  0.880 ms
 8  202.120.201.198 (202.120.201.198)  1.847 ms  2.008 ms  1.999 ms
 9  202.112.6.69 (202.112.6.69)  1.172 ms  1.151 ms  1.141 ms
10  sh0.cernet.net (202.112.53.89)  7.547 ms  7.607 ms  7.532 ms
11  202.112.36.37 (202.112.36.37)  6.878 ms  6.819 ms  6.755 ms
12  202.112.36.249 (202.112.36.249)  16.932 ms  17.148 ms  17.084 ms
13  202.112.53.157 (202.112.53.157)  16.812 ms  16.791 ms  16.878 ms
14  bjwh4.cernet.net (202.112.46.65)  24.680 ms  24.672 ms  24.599 ms
15  202.112.61.50 (202.112.61.50)  24.769 ms  24.747 ms  24.782 ms
16  202.112.53.218 (202.112.53.218)  25.098 ms  25.277 ms  25.505 ms
17  210.43.146.45 (210.43.146.45)  24.725 ms  24.822 ms  24.756 ms
18  210.43.146.14 (210.43.146.14)  25.852 ms  26.025 ms  26.150 ms
19  * * *
20  * * *
21  * * *
```

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22  202.196.109.165 (202.196.109.165)  27.555 ms  28.910 ms  30.340 ms
23  202.196.96.4 (202.196.96.4)  26.698 ms  26.765 ms  26.978 ms
--------------
2011/10/04-13:49:24
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.911 ms  2.562 ms  3.086 ms
 2  10.21.18.253 (10.21.18.253)  0.563 ms  0.829 ms  0.813 ms
 3  10.3.2.118 (10.3.2.118)  0.273 ms  0.205 ms  0.206 ms
 4  10.3.2.9 (10.3.2.9)  0.373 ms  0.299 ms  0.334 ms
 5  10.3.2.13 (10.3.2.13)  0.487 ms  0.443 ms  0.499 ms
 6  10.3.0.10 (10.3.0.10)  0.911 ms  0.861 ms  0.847 ms
 7  10.3.0.253 (10.3.0.253)  1.038 ms  1.177 ms  1.118 ms
 8  202.120.201.198 (202.120.201.198)  2.165 ms  1.899 ms  2.140 ms
 9  202.112.6.69 (202.112.6.69)  1.219 ms  1.184 ms  1.219 ms
10  sh0.cernet.net (202.112.53.89)  7.545 ms  7.784 ms  7.715 ms
11  202.112.36.37 (202.112.36.37)  7.023 ms  6.944 ms  7.011 ms
12  202.112.36.249 (202.112.36.249)  17.151 ms  17.388 ms  17.306 ms
13  202.112.53.157 (202.112.53.157)  16.906 ms  17.045 ms  16.988 ms
14  bjwh4.cernet.net (202.112.46.65)  24.606 ms  24.722 ms  24.664 ms
15  202.112.61.50 (202.112.61.50)  24.819 ms  24.762 ms  24.695 ms
16  202.112.53.218 (202.112.53.218)  25.240 ms  25.403 ms  25.508 ms
17  210.43.146.45 (210.43.146.45)  45.449 ms  33.291 ms  33.229 ms
18  210.43.146.14 (210.43.146.14)  26.027 ms  25.956 ms  25.898 ms
19  210.43.146.206 (210.43.146.206)  25.954 ms  26.399 ms  26.404 ms
20  * * *
21  * * *
22  202.196.109.165 (202.196.109.165)  26.352 ms  26.673 ms  26.818 ms
23  202.196.96.4 (202.196.96.4)  27.045 ms  27.091 ms  26.633 ms
--------------
2011/10/04-13:49:41
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.566 ms  2.038 ms  2.528 ms
 2  10.21.18.253 (10.21.18.253)  0.820 ms  0.965 ms  1.099 ms
 3  10.3.2.118 (10.3.2.118)  0.257 ms  0.224 ms  0.186 ms
 4  10.3.2.9 (10.3.2.9)  0.364 ms  0.268 ms  0.272 ms
 5  10.3.2.13 (10.3.2.13)  0.364 ms  0.372 ms  0.352 ms
 6  10.3.0.10 (10.3.0.10)  0.792 ms  0.827 ms  0.907 ms
 7  10.3.0.253 (10.3.0.253)  1.011 ms  1.013 ms  0.996 ms
 8  202.120.201.198 (202.120.201.198)  1.814 ms  1.908 ms  1.995 ms
 9  202.112.6.69 (202.112.6.69)  1.237 ms  1.192 ms  1.234 ms
10  sh0.cernet.net (202.112.53.89)  7.745 ms  7.862 ms  7.798 ms
11  202.112.36.37 (202.112.36.37)  6.789 ms  6.913 ms  6.748 ms
12  202.112.36.249 (202.112.36.249)  17.277 ms  17.206 ms  17.149 ms
13  202.112.53.157 (202.112.53.157)  16.822 ms  16.663 ms  16.823 ms
14  bjwh4.cernet.net (202.112.46.65)  24.715 ms  24.671 ms  24.618 ms
15  202.112.61.50 (202.112.61.50)  24.789 ms  24.728 ms *
16  202.112.53.218 (202.112.53.218)  25.233 ms  25.381 ms  25.609 ms
17  210.43.146.45 (210.43.146.45)  59.340 ms  50.827 ms  50.755 ms
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18  210.43.146.14 (210.43.146.14)  26.042 ms  25.963 ms  25.906 ms
19  210.43.146.206 (210.43.146.206)  26.169 ms  26.031 ms  26.072 ms
20  * * *
21  202.196.109.169 (202.196.109.169)  1712.863 ms  1735.955 ms  1736.390 ms
22  202.196.109.165 (202.196.109.165)  26.662 ms  26.603 ms  26.580 ms
23  202.196.96.4 (202.196.96.4)  26.688 ms  26.683 ms  26.614 ms
--------------
2011/10/04-13:49:54
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.531 ms  2.047 ms  2.556 ms
 2  10.21.18.253 (10.21.18.253)  0.892 ms  1.080 ms  1.258 ms
 3  10.3.2.118 (10.3.2.118)  0.227 ms  0.243 ms  0.248 ms
 4  10.3.2.9 (10.3.2.9)  0.258 ms  0.267 ms  0.302 ms
 5  10.3.2.13 (10.3.2.13)  0.369 ms  0.390 ms  0.484 ms
 6  10.3.0.10 (10.3.0.10)  0.732 ms  0.670 ms  0.710 ms
 7  10.3.0.253 (10.3.0.253)  0.866 ms  0.999 ms  0.933 ms
 8  202.120.201.198 (202.120.201.198)  1.661 ms  1.754 ms  1.845 ms
 9  202.112.6.69 (202.112.6.69)  1.264 ms  1.171 ms  1.239 ms
10  sh0.cernet.net (202.112.53.89)  7.612 ms  7.551 ms  7.484 ms
11  202.112.36.37 (202.112.36.37)  6.928 ms  6.847 ms  6.809 ms
12  202.112.36.249 (202.112.36.249)  17.200 ms  17.302 ms  17.240 ms
13  202.112.53.157 (202.112.53.157)  16.790 ms  16.627 ms  16.743 ms
14  bjwh4.cernet.net (202.112.46.65)  24.530 ms  24.472 ms  24.629 ms
15  202.112.61.50 (202.112.61.50)  25.693 ms  25.693 ms  25.739 ms
16  202.112.53.218 (202.112.53.218)  25.233 ms  25.174 ms  25.374 ms
17  210.43.146.45 (210.43.146.45)  40.743 ms  34.502 ms  34.419 ms
18  210.43.146.14 (210.43.146.14)  25.909 ms  25.941 ms  25.989 ms
19  * * *
20  * * *
21  202.196.109.169 (202.196.109.169)  1542.369 ms  1542.822 ms  1563.038 ms
22  202.196.109.165 (202.196.109.165)  26.335 ms  26.576 ms  26.296 ms
23  202.196.96.4 (202.196.96.4)  26.835 ms  27.090 ms  27.399 ms
--------------
2011/10/04-13:50:11
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.556 ms  1.844 ms  2.183 ms
 2  10.21.18.253 (10.21.18.253)  0.918 ms  0.932 ms  0.955 ms
 3  10.3.2.118 (10.3.2.118)  0.259 ms  0.214 ms  0.209 ms
 4  10.3.2.9 (10.3.2.9)  0.316 ms  0.225 ms  0.276 ms
 5  10.3.2.13 (10.3.2.13)  0.521 ms  0.319 ms  0.445 ms
 6  10.3.0.10 (10.3.0.10)  0.870 ms  0.782 ms  0.764 ms
 7  10.3.0.253 (10.3.0.253)  0.788 ms  0.857 ms  0.867 ms
 8  202.120.201.198 (202.120.201.198)  2.262 ms  2.534 ms  2.402 ms
 9  202.112.6.69 (202.112.6.69)  1.405 ms  1.418 ms  1.447 ms
10  sh0.cernet.net (202.112.53.89)  7.593 ms  7.782 ms  7.679 ms
11  202.112.36.37 (202.112.36.37)  6.857 ms  6.864 ms  6.805 ms
12  202.112.36.249 (202.112.36.249)  16.783 ms  17.007 ms  17.228 ms
13  202.112.53.157 (202.112.53.157)  16.843 ms  16.795 ms  16.797 ms
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14  bjwh4.cernet.net (202.112.46.65)  24.522 ms  24.608 ms  24.551 ms
15  202.112.61.50 (202.112.61.50)  24.814 ms  24.755 ms  24.758 ms
16  202.112.53.218 (202.112.53.218)  25.172 ms  25.385 ms  25.514 ms
17  210.43.146.45 (210.43.146.45)  25.692 ms  24.801 ms  59.752 ms
18  210.43.146.14 (210.43.146.14)  25.956 ms  25.980 ms  25.898 ms
19  * * *
20  * * *
21  * * *
22  202.196.109.165 (202.196.109.165)  35.753 ms  36.314 ms  36.760 ms
23  202.196.96.4 (202.196.96.4)  27.009 ms  27.194 ms  27.296 ms
--------------
2011/10/04-13:50:28
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.498 ms  2.022 ms  2.548 ms
 2  10.21.18.253 (10.21.18.253)  0.872 ms  1.054 ms  1.226 ms
 3  10.3.2.118 (10.3.2.118)  0.234 ms  0.197 ms  0.199 ms
 4  10.3.2.9 (10.3.2.9)  0.412 ms  0.338 ms  0.421 ms
 5  10.3.2.13 (10.3.2.13)  0.415 ms  0.495 ms  0.437 ms
 6  10.3.0.10 (10.3.0.10)  0.802 ms  0.836 ms  0.899 ms
 7  10.3.0.253 (10.3.0.253)  0.968 ms  1.158 ms  1.108 ms
 8  202.120.201.198 (202.120.201.198)  1.512 ms  1.437 ms  1.537 ms
 9  202.112.6.69 (202.112.6.69)  1.131 ms  1.230 ms  1.237 ms
10  sh0.cernet.net (202.112.53.89)  7.436 ms  7.470 ms  7.348 ms
11  202.112.36.37 (202.112.36.37)  6.767 ms  6.947 ms  6.934 ms
12  202.112.36.249 (202.112.36.249)  17.170 ms  17.305 ms  17.244 ms
13  202.112.53.157 (202.112.53.157)  16.849 ms  16.900 ms  16.701 ms
14  bjwh4.cernet.net (202.112.46.65)  24.634 ms  24.555 ms  24.573 ms
15  202.112.61.50 (202.112.61.50)  24.770 ms  24.840 ms *
16  202.112.53.218 (202.112.53.218)  25.260 ms  25.735 ms  25.407 ms
17  210.43.146.45 (210.43.146.45)  25.148 ms  24.721 ms  24.744 ms
18  210.43.146.14 (210.43.146.14)  26.173 ms  26.239 ms  26.183 ms
19  210.43.146.206 (210.43.146.206)  26.407 ms * *
20  * * *
21  202.196.109.169 (202.196.109.169)  565.912 ms  566.271 ms  604.894 ms
22  202.196.109.165 (202.196.109.165)  26.464 ms  26.721 ms  26.363 ms
23  202.196.96.4 (202.196.96.4)  26.571 ms  26.481 ms  26.897 ms
--------------
2011/10/04-13:50:39
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.529 ms  2.035 ms  2.567 ms
 2  10.21.18.253 (10.21.18.253)  0.808 ms  0.998 ms  1.193 ms
 3  10.3.2.118 (10.3.2.118)  0.255 ms  0.280 ms  0.271 ms
 4  10.3.2.9 (10.3.2.9)  0.305 ms  0.332 ms  0.328 ms
 5  10.3.2.13 (10.3.2.13)  0.389 ms  0.408 ms  0.434 ms
 6  10.3.0.10 (10.3.0.10)  0.809 ms  0.851 ms  0.909 ms
 7  10.3.0.253 (10.3.0.253)  0.960 ms  1.069 ms  1.097 ms
 8  202.120.201.198 (202.120.201.198)  1.829 ms  1.901 ms  1.976 ms
 9  202.112.6.69 (202.112.6.69)  1.292 ms  1.254 ms  1.247 ms
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10  sh0.cernet.net (202.112.53.89)  8.059 ms  8.299 ms  8.241 ms
11  202.112.36.37 (202.112.36.37)  6.808 ms  6.904 ms  6.882 ms
12  202.112.36.249 (202.112.36.249)  23.806 ms  23.751 ms  23.688 ms
13  202.112.53.157 (202.112.53.157)  16.888 ms  16.967 ms  16.989 ms
14  bjwh4.cernet.net (202.112.46.65)  24.672 ms  24.641 ms  24.717 ms
15  202.112.61.50 (202.112.61.50)  24.840 ms  24.801 ms  24.750 ms
16  202.112.53.218 (202.112.53.218)  25.345 ms  25.267 ms  25.405 ms
17  210.43.146.45 (210.43.146.45)  24.788 ms  24.820 ms  24.863 ms
18  210.43.146.14 (210.43.146.14)  26.008 ms  25.777 ms  25.896 ms
19  210.43.146.206 (210.43.146.206)  26.117 ms  26.115 ms  26.231 ms
20  * * *
21  * * *
22  202.196.109.165 (202.196.109.165)  37.008 ms  37.083 ms  37.100 ms
23  202.196.96.4 (202.196.96.4)  27.108 ms  27.073 ms  26.704 ms
--------------
2011/10/04-13:50:57
--------------
traceroute to www.henu.edu.cn (202.196.96.4), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.891 ms  2.392 ms  2.913 ms
 2  10.21.18.253 (10.21.18.253)  0.757 ms  0.939 ms  1.135 ms
 3  10.3.2.118 (10.3.2.118)  0.270 ms  0.259 ms  0.262 ms
 4  10.3.2.9 (10.3.2.9)  0.296 ms  0.315 ms  0.323 ms
 5  10.3.2.13 (10.3.2.13)  0.439 ms  0.470 ms  0.480 ms
 6  10.3.0.10 (10.3.0.10)  0.873 ms  0.874 ms  0.891 ms
 7  10.3.0.253 (10.3.0.253)  0.869 ms  0.964 ms  0.915 ms
 8  202.120.201.198 (202.120.201.198)  1.655 ms  1.726 ms  1.833 ms
 9  202.112.6.69 (202.112.6.69)  1.236 ms  1.299 ms  1.313 ms
10  sh0.cernet.net (202.112.53.89)  7.638 ms  7.381 ms  7.322 ms
11  202.112.36.37 (202.112.36.37)  6.978 ms  6.930 ms  6.868 ms
12  202.112.36.249 (202.112.36.249)  17.156 ms  17.242 ms  17.244 ms
13  202.112.53.157 (202.112.53.157)  16.715 ms  16.777 ms  16.768 ms
14  bjwh4.cernet.net (202.112.46.65)  24.439 ms  24.427 ms  24.424 ms
15  * * *
16  202.112.53.218 (202.112.53.218)  25.301 ms  25.292 ms  25.348 ms
17  210.43.146.45 (210.43.146.45)  24.845 ms  24.930 ms  24.806 ms
18  210.43.146.14 (210.43.146.14)  25.805 ms  25.782 ms  25.911 ms
19  210.43.146.206 (210.43.146.206)  26.119 ms  26.095 ms  26.049 ms
20  * * *
21  * * *
22  202.196.109.165 (202.196.109.165)  26.528 ms  26.227 ms  26.302 ms
23  202.196.96.4 (202.196.96.4)  26.500 ms  26.491 ms  26.673 ms
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B.2 www.yale.edu

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2011/10/04-01:44:19
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2011/10/04-01:44:25
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.593 ms  2.062 ms  2.546 ms
 2  10.21.18.253 (10.21.18.253)  0.887 ms  1.019 ms  1.171 ms
 3  10.3.2.118 (10.3.2.118)  0.226 ms  0.231 ms  0.202 ms
 4  10.3.2.9 (10.3.2.9)  0.309 ms  0.235 ms  0.304 ms
 5  10.3.2.13 (10.3.2.13)  0.445 ms  0.511 ms  0.456 ms
 6  10.3.0.10 (10.3.0.10)  0.710 ms  0.778 ms  0.749 ms
 7  10.3.0.50 (10.3.0.50)  128.170 ms  128.104 ms  128.040 ms
 8  * 202.120.201.198 (202.120.201.198)  84.057 ms  84.120 ms
 9  202.112.6.89 (202.112.6.89)  79.295 ms  79.108 ms  79.075 ms
10  sh0.cernet.net (202.112.53.89)  79.458 ms  79.394 ms  79.304 ms
11  202.112.36.253 (202.112.36.253)  84.116 ms  91.185 ms  91.153 ms
12  202.112.36.249 (202.112.36.249)  101.280 ms  80.033 ms  79.806 ms
13  202.112.36.113 (202.112.36.113)  92.200 ms  97.627 ms  97.388 ms
14  202.112.61.158 (202.112.61.158)  101.940 ms  101.680 ms  101.414 ms
15  202.112.53.18 (202.112.53.18)  92.993 ms  107.020 ms  106.843 ms
16  * * *
17  210.25.189.22 (210.25.189.22)  144.712 ms  159.722 ms  159.513 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  300.623 ms  388.969 ms  477.795 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  434.457 ms  515.985 ms *
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  429.606 ms  480.894 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  445.618 ms * *
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  397.494 ms  404.566 ms  413.391 m
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  745.265 ms *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  516.289 ms  487.526 ms *
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  473.636 ms  468.350 ms  413.029 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  522.644 ms  584.544 m
27  bifrost.net.yale.edu (130.132.251.73)  432.765 ms  460.838 ms *
28  * * *
29  * * *
30  vip-wwwprd-01.its.yale.edu (130.132.35.53)  486.730 ms  486.707 ms  486.647 ms
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2011/10/04-01:44:42
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.539 ms  1.993 ms  2.486 ms
 2  10.21.18.253 (10.21.18.253)  0.887 ms  1.050 ms  1.209 ms
 3  10.3.2.118 (10.3.2.118)  0.247 ms  0.246 ms  0.255 ms
 4  10.3.2.9 (10.3.2.9)  0.409 ms  0.372 ms  0.314 ms
 5  10.3.2.13 (10.3.2.13)  0.425 ms  0.432 ms  0.413 ms
 6  10.3.0.10 (10.3.0.10)  0.811 ms  0.746 ms  0.820 ms
 7  10.3.0.50 (10.3.0.50)  142.462 ms  142.405 ms  142.329 ms
 8  202.120.201.198 (202.120.201.198)  99.501 ms  99.076 ms  99.187 ms
 9  202.112.6.89 (202.112.6.89)  94.360 ms  94.138 ms  94.317 ms
10  sh0.cernet.net (202.112.53.89)  94.663 ms  94.523 ms  99.953 ms
11  202.112.36.253 (202.112.36.253)  105.111 ms  25.748 ms  99.581 ms
12  202.112.36.249 (202.112.36.249)  109.552 ms  103.611 ms  89.365 ms
13  202.112.36.113 (202.112.36.113)  102.261 ms  102.254 ms  102.010 ms
14  202.112.61.158 (202.112.61.158)  106.269 ms  72.097 ms  106.176 ms
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15  202.112.53.18 (202.112.53.18)  101.099 ms  103.544 ms  98.529 ms
16  210.25.189.65 (210.25.189.65)  119.531 ms  135.225 ms *
17  * 210.25.189.22 (210.25.189.22)  178.349 ms  178.205 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  279.497 ms  262.588 ms  250.029 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  385.290 ms  384.993 ms  384.866 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  462.047 ms  385.931 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  461.734 ms *  478.437 ms
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  564.865 ms  650.890 ms  612.514 m
23  ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  691.450 ms * *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  479.622 ms  412.515 ms *
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  522.918 ms  486.684 ms  528.514 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  581.745 ms  495.473 m
27  bifrost.net.yale.edu (130.132.251.73)  492.811 ms  476.803 ms  413.790 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  469.880 ms  469.821 ms  469.756 ms
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2011/10/04-01:44:54
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.385 ms  1.998 ms  2.355 ms
 2  10.21.18.253 (10.21.18.253)  0.810 ms  1.030 ms  1.111 ms
 3  10.3.2.118 (10.3.2.118)  0.397 ms  0.314 ms  0.213 ms
 4  10.3.2.9 (10.3.2.9)  0.502 ms  0.422 ms  0.342 ms
 5  10.3.2.13 (10.3.2.13)  0.488 ms  0.289 ms  0.350 ms
 6  10.3.0.10 (10.3.0.10)  0.833 ms  0.858 ms  0.766 ms
 7  10.3.0.50 (10.3.0.50)  154.105 ms * *
 8  202.120.201.198 (202.120.201.198)  91.514 ms  91.315 ms  91.063 ms
 9  202.112.6.89 (202.112.6.89)  90.601 ms  90.429 ms  90.319 ms
10  sh0.cernet.net (202.112.53.89)  90.568 ms  106.413 ms *
11  202.112.36.253 (202.112.36.253)  111.424 ms  111.315 ms  117.034 ms
12  202.112.36.249 (202.112.36.249)  134.745 ms  102.746 ms  102.631 ms
13  202.112.36.113 (202.112.36.113)  114.268 ms  114.222 ms  114.118 ms
14  202.112.61.158 (202.112.61.158)  118.679 ms  118.621 ms  137.493 ms
15  202.112.53.18 (202.112.53.18)  127.782 ms  127.667 ms  135.352 ms
16  210.25.189.65 (210.25.189.65)  135.271 ms  133.947 ms  112.915 ms
17  210.25.189.22 (210.25.189.22)  154.899 ms  151.362 ms  151.316 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  240.345 ms  282.875 ms  319.774 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  351.683 ms  351.646 ms  347.262 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  344.199 ms  328.387 ms
21  * xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  399.911 ms  391.834 ms
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  391.766 ms  418.755 ms  371.737 m
23  * * *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  462.886 ms  491.432 ms  476.216 ms
25  * nox300gw1-vl-803-nox.nox.org (192.5.89.238)  379.440 ms  403.191 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  395.034 ms  403.657 m
27  bifrost.net.yale.edu (130.132.251.73)  445.829 ms  425.777 ms  497.776 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  447.055 ms  464.651 ms  495.780 ms
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2011/10/04-01:45:05
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.372 ms  2.273 ms  2.777 ms
 2  10.21.18.253 (10.21.18.253)  0.825 ms  0.974 ms  1.105 ms
 3  10.3.2.118 (10.3.2.118)  0.239 ms  0.245 ms  0.226 ms
 4  10.3.2.9 (10.3.2.9)  0.289 ms  0.292 ms  0.252 ms
 5  10.3.2.13 (10.3.2.13)  0.500 ms  0.481 ms  0.484 ms
 6  10.3.0.10 (10.3.0.10)  0.779 ms  0.844 ms  0.901 ms
 7  10.3.0.50 (10.3.0.50)  122.884 ms  163.955 ms  209.957 ms
 8  202.120.201.198 (202.120.201.198)  84.777 ms  85.016 ms  79.970 ms
 9  202.112.6.89 (202.112.6.89)  79.317 ms  79.359 ms  79.210 ms
10  sh0.cernet.net (202.112.53.89)  79.315 ms  79.259 ms  86.361 ms
11  202.112.36.253 (202.112.36.253)  91.697 ms  91.589 ms  91.569 ms
12  202.112.36.249 (202.112.36.249)  101.654 ms  56.972 ms  93.682 ms
13  202.112.36.113 (202.112.36.113)  112.099 ms  111.910 ms  111.684 ms
14  202.112.61.158 (202.112.61.158)  115.968 ms *  115.547 ms
15  202.112.53.18 (202.112.53.18)  110.626 ms  129.153 ms  129.002 ms
16  210.25.189.65 (210.25.189.65)  169.901 ms  131.868 ms  130.680 ms
17  210.25.189.22 (210.25.189.22)  169.453 ms *  152.060 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  471.563 ms * *
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  358.151 ms  357.977 ms  395.005 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  410.948 ms  408.238 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  463.563 ms  462.369 ms  439.075 m
22  * * xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  423.271 ms
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  708.643 ms *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  430.913 ms  430.649 ms *
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  405.566 ms  503.513 ms  565.452 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  413.430 ms  507.776 m
27  bifrost.net.yale.edu (130.132.251.73)  491.204 ms  402.581 ms  440.959 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  487.934 ms  396.622 ms  467.589 ms
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2011/10/04-01:45:18
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.394 ms  1.886 ms  2.388 ms
 2  10.21.18.253 (10.21.18.253)  0.805 ms  0.950 ms  1.137 ms
 3  10.3.2.118 (10.3.2.118)  0.236 ms  0.242 ms  0.226 ms
 4  10.3.2.9 (10.3.2.9)  0.387 ms  0.353 ms  0.338 ms
 5  10.3.2.13 (10.3.2.13)  0.394 ms  0.455 ms  0.435 ms
 6  10.3.0.10 (10.3.0.10)  0.933 ms  1.007 ms  0.987 ms
 7  10.3.0.50 (10.3.0.50)  194.499 ms  260.481 ms  316.474 ms
 8  202.120.201.198 (202.120.201.198)  90.199 ms  90.329 ms  86.331 ms
 9  202.112.6.89 (202.112.6.89)  82.463 ms  82.470 ms  82.411 ms
10  * sh0.cernet.net (202.112.53.89)  82.343 ms  80.648 ms
11  202.112.36.253 (202.112.36.253)  85.520 ms  85.449 ms  85.330 ms
12  202.112.36.249 (202.112.36.249)  95.298 ms  82.117 ms  81.915 ms
13  202.112.36.113 (202.112.36.113)  94.240 ms  94.019 ms  91.711 ms
14  202.112.61.158 (202.112.61.158)  95.891 ms  95.684 ms  93.853 ms
15  202.112.53.18 (202.112.53.18)  84.219 ms  83.978 ms  89.712 ms
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16  210.25.189.65 (210.25.189.65)  81.124 ms  81.969 ms  80.908 ms
17  210.25.189.22 (210.25.189.22)  116.400 ms  116.105 ms  115.700 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  238.771 ms  238.544 ms  231.843 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  354.557 ms  383.754 ms  474.391 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  342.235 ms  388.970 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  541.063 ms  481.521 ms *
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  381.602 ms *  495.775 ms
23  * * *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  469.570 ms  469.296 ms  428.680 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  485.510 ms  467.477 ms  563.101 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  428.523 ms  573.445 m
27  bifrost.net.yale.edu (130.132.251.73)  487.652 ms  449.418 ms  449.273 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  455.495 ms  453.537 ms  357.522 ms
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2011/10/04-01:45:29
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  2.154 ms  2.670 ms  3.160 ms
 2  10.21.18.253 (10.21.18.253)  0.800 ms  0.956 ms  1.081 ms
 3  10.3.2.118 (10.3.2.118)  0.236 ms  0.238 ms  0.213 ms
 4  10.3.2.9 (10.3.2.9)  0.410 ms  0.363 ms  0.330 ms
 5  10.3.2.13 (10.3.2.13)  0.536 ms  0.506 ms  0.452 ms
 6  10.3.0.10 (10.3.0.10)  0.943 ms  0.980 ms  0.887 ms
 7  10.3.0.50 (10.3.0.50)  148.166 ms  148.116 ms  148.027 ms
 8  202.120.201.198 (202.120.201.198)  84.863 ms  84.978 ms  85.094 ms
 9  202.112.6.89 (202.112.6.89)  84.830 ms  148.533 ms  12.604 ms
10  sh0.cernet.net (202.112.53.89)  84.801 ms  84.793 ms  85.540 ms
11  202.112.36.253 (202.112.36.253)  90.639 ms  90.565 ms  90.609 ms
12  202.112.36.249 (202.112.36.249)  100.608 ms  100.473 ms  101.036 ms
13  * 202.112.36.113 (202.112.36.113)  113.359 ms  114.902 ms
14  202.112.61.158 (202.112.61.158)  119.647 ms  119.567 ms  119.494 ms
15  202.112.53.18 (202.112.53.18)  109.140 ms  108.947 ms  108.681 ms
16  210.25.189.65 (210.25.189.65)  115.703 ms  116.419 ms  95.980 ms
17  210.25.189.22 (210.25.189.22)  137.728 ms  137.676 ms  131.843 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  275.563 ms  262.955 ms  257.192 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  429.258 ms  523.123 ms  576.071 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  344.027 ms  343.982 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  515.620 ms  405.928 ms  563.871 m
22  * xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  576.785 ms *
23  ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  690.743 ms  690.620 ms  684.513 m
24  * nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  442.753 ms  442.716 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  672.737 ms  662.579 ms *
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  456.831 ms  411.907 m
27  bifrost.net.yale.edu (130.132.251.73)  476.723 ms  471.638 ms  471.607 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  423.644 ms  423.612 ms  419.795 ms
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2011/10/04-01:45:41
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.383 ms  1.888 ms  2.378 ms
 2  10.21.18.253 (10.21.18.253)  0.844 ms  0.994 ms  1.166 ms
 3  10.3.2.118 (10.3.2.118)  0.226 ms  0.239 ms  0.232 ms
 4  10.3.2.9 (10.3.2.9)  0.295 ms  0.298 ms  0.288 ms
 5  10.3.2.13 (10.3.2.13)  0.505 ms  0.455 ms  0.532 ms
 6  10.3.0.10 (10.3.0.10)  0.757 ms  0.762 ms  0.743 ms
 7  10.3.0.50 (10.3.0.50)  91.217 ms  91.165 ms  96.927 ms
 8  202.120.201.198 (202.120.201.198)  85.312 ms  85.166 ms  88.469 ms
 9  202.112.6.89 (202.112.6.89)  88.587 ms  88.387 ms  88.179 ms
10  sh0.cernet.net (202.112.53.89)  88.885 ms  88.822 ms *
11  202.112.36.253 (202.112.36.253)  89.339 ms *  89.180 ms
12  * 202.112.36.249 (202.112.36.249)  88.626 ms  88.280 ms
13  202.112.36.113 (202.112.36.113)  108.741 ms  108.466 ms  87.467 ms
14  202.112.61.158 (202.112.61.158)  107.341 ms  107.279 ms  107.168 ms
15  202.112.53.18 (202.112.53.18)  102.253 ms  102.206 ms  63.054 ms
16  210.25.189.65 (210.25.189.65)  109.567 ms  110.399 ms  140.774 ms
17  * * 210.25.189.22 (210.25.189.22)  168.621 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  216.143 ms  215.972 ms  219.350 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  336.542 ms *  443.661 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  390.454 ms  388.250 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  423.379 ms  367.652 ms  407.938 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  430.924 ms  443.216 ms  356.558 m
23  ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  719.412 ms  719.213 ms  718.966 m
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  434.573 ms  625.538 ms  625.354 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  689.712 ms  666.287 ms *
26  * nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  468.019 ms  415.390
27  bifrost.net.yale.edu (130.132.251.73)  408.144 ms  407.963 ms  376.252 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  491.930 ms  522.650 ms  435.463 ms
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2011/10/04-01:45:53
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.362 ms  1.860 ms  2.387 ms
 2  10.21.18.253 (10.21.18.253)  0.755 ms  0.918 ms  1.126 ms
 3  10.3.2.118 (10.3.2.118)  0.257 ms  0.236 ms  0.230 ms
 4  10.3.2.9 (10.3.2.9)  0.350 ms  0.314 ms  0.295 ms
 5  10.3.2.13 (10.3.2.13)  0.500 ms  0.490 ms  0.410 ms
 6  10.3.0.10 (10.3.0.10)  0.916 ms  0.837 ms  0.936 ms
 7  10.3.0.50 (10.3.0.50)  125.781 ms  125.714 ms  125.656 ms
 8  202.120.201.198 (202.120.201.198)  103.250 ms * *
 9  * * *
10  sh0.cernet.net (202.112.53.89)  113.204 ms  113.108 ms  99.732 ms
11  202.112.36.253 (202.112.36.253)  104.769 ms  104.707 ms  104.599 ms
12  202.112.36.249 (202.112.36.249)  114.561 ms  72.969 ms  83.608 ms
13  202.112.36.113 (202.112.36.113)  96.292 ms  65.344 ms  92.533 ms
14  202.112.61.158 (202.112.61.158)  97.355 ms  97.243 ms  97.156 ms
15  202.112.53.18 (202.112.53.18)  31.028 ms  92.038 ms  91.926 ms
16  210.25.189.65 (210.25.189.65)  114.212 ms  110.813 ms  101.020 ms
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17  210.25.189.22 (210.25.189.22)  121.102 ms  143.046 ms  142.610 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  285.619 ms  285.387 ms  280.998 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  383.796 ms  383.603 ms  337.399 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  329.072 ms  328.178 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  403.723 ms  383.110 ms  388.031 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  388.013 ms  387.924 ms  412.646 m
23  * * *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  436.082 ms  435.886 ms  437.452 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  424.188 ms  401.595 ms  401.494 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  401.194 ms  408.875 m
27  bifrost.net.yale.edu (130.132.251.73)  454.711 ms  466.830 ms *
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  445.678 ms  466.397 ms  397.813 ms
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2011/10/04-01:46:04
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.364 ms  1.882 ms  2.392 ms
 2  10.21.18.253 (10.21.18.253)  0.814 ms  0.988 ms  1.163 ms
 3  10.3.2.118 (10.3.2.118)  0.231 ms  0.239 ms  0.235 ms
 4  10.3.2.9 (10.3.2.9)  0.305 ms  0.276 ms  0.331 ms
 5  10.3.2.13 (10.3.2.13)  0.438 ms  0.567 ms  0.565 ms
 6  10.3.0.10 (10.3.0.10)  0.884 ms  0.925 ms  0.942 ms
 7  10.3.0.50 (10.3.0.50)  44.325 ms  135.252 ms  188.321 ms
 8  202.120.201.198 (202.120.201.198)  68.882 ms  97.025 ms  96.789 ms
 9  202.112.6.89 (202.112.6.89)  96.365 ms  105.288 ms  96.260 ms
10  sh0.cernet.net (202.112.53.89)  96.632 ms  96.579 ms  96.228 ms
11  202.112.36.253 (202.112.36.253)  100.656 ms  100.521 ms  100.464 ms
12  202.112.36.249 (202.112.36.249)  110.545 ms  98.639 ms  93.863 ms
13  202.112.36.113 (202.112.36.113)  92.394 ms  92.214 ms  91.938 ms
14  202.112.61.158 (202.112.61.158)  95.924 ms  95.721 ms  95.486 ms
15  202.112.53.18 (202.112.53.18)  88.841 ms  79.166 ms  74.637 ms
16  210.25.189.65 (210.25.189.65)  81.338 ms  81.891 ms  89.000 ms
17  210.25.189.22 (210.25.189.22)  130.358 ms  134.185 ms  127.049 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  265.027 ms  141.755 ms  249.628 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  525.763 ms  386.498 ms  461.426 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  356.497 ms  356.420 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  398.267 ms  398.165 ms  398.126 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  398.081 ms  444.935 ms  532.952 m
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  744.717 ms *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  563.715 ms  460.404 ms *
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  424.960 ms  395.756 ms  383.356 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  389.241 ms  389.210 m
27  bifrost.net.yale.edu (130.132.251.73)  424.732 ms  437.424 ms  490.399 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  502.103 ms  467.621 ms  473.298 ms
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2011/10/04-01:46:16
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
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 1  59.78.23.254 (59.78.23.254)  1.556 ms  2.081 ms  2.570 ms
 2  10.21.18.253 (10.21.18.253)  0.713 ms  0.883 ms  1.079 ms
 3  10.3.2.118 (10.3.2.118)  0.232 ms  0.249 ms  0.254 ms
 4  10.3.2.9 (10.3.2.9)  0.296 ms  0.307 ms  0.326 ms
 5  10.3.2.13 (10.3.2.13)  0.611 ms  0.549 ms  0.619 ms
 6  10.3.0.10 (10.3.0.10)  0.805 ms  0.795 ms  0.920 ms
 7  10.3.0.50 (10.3.0.50)  112.787 ms  112.751 ms  112.689 ms
 8  202.120.201.198 (202.120.201.198)  86.117 ms  85.836 ms  86.102 ms
 9  202.112.6.89 (202.112.6.89)  85.070 ms  84.936 ms  90.564 ms
10  sh0.cernet.net (202.112.53.89)  87.221 ms  87.121 ms  87.077 ms
11  202.112.36.253 (202.112.36.253)  73.163 ms  73.064 ms  73.011 ms
12  202.112.36.249 (202.112.36.249)  83.351 ms  68.914 ms  77.599 ms
13  202.112.36.113 (202.112.36.113)  90.356 ms  90.035 ms  40.712 ms
14  202.112.61.158 (202.112.61.158)  97.787 ms  97.111 ms  96.904 ms
15  202.112.53.18 (202.112.53.18)  144.925 ms  140.268 ms  93.971 ms
16  210.25.189.65 (210.25.189.65)  95.302 ms  116.611 ms  95.300 ms
17  210.25.189.22 (210.25.189.22)  137.169 ms  137.079 ms  137.028 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  275.692 ms  266.653 ms  248.013 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  350.889 ms  437.720 ms *
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  344.152 ms  343.883 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  440.031 ms  408.657 ms *
22  * xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  378.157 ms  378.037 ms
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  722.610 ms  795.837 ms
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  495.547 ms  485.044 ms  541.763 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  645.686 ms  484.549 ms  454.198 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  595.267 ms  532.202 m
27  bifrost.net.yale.edu (130.132.251.73)  427.627 ms  434.303 ms  431.391 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  508.319 ms  439.112 ms  533.323 ms
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2011/10/04-07:46:22
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2011/10/04-07:46:30
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.686 ms  1.966 ms  2.295 ms
 2  10.21.18.253 (10.21.18.253)  0.988 ms  1.034 ms  1.082 ms
 3  10.3.2.118 (10.3.2.118)  0.325 ms  0.206 ms  0.210 ms
 4  10.3.2.9 (10.3.2.9)  0.277 ms  0.219 ms  0.215 ms
 5  10.3.2.13 (10.3.2.13)  0.408 ms  0.300 ms  0.387 ms
 6  10.3.0.10 (10.3.0.10)  0.888 ms  0.727 ms  0.802 ms
 7  10.3.0.50 (10.3.0.50)  161.625 ms  133.697 ms  190.639 ms
 8  202.120.201.198 (202.120.201.198)  100.520 ms  106.127 ms  100.481 ms
 9  202.112.6.89 (202.112.6.89)  100.398 ms  100.309 ms  100.276 ms
10  sh0.cernet.net (202.112.53.89)  100.219 ms  100.164 ms  100.100 ms
11  * 202.112.36.253 (202.112.36.253)  101.330 ms  101.231 ms
12  202.112.36.249 (202.112.36.249)  117.155 ms  129.949 ms  129.685 ms
13  202.112.36.113 (202.112.36.113)  137.969 ms  137.672 ms  137.489 ms
14  202.112.61.158 (202.112.61.158)  141.593 ms  149.536 ms  149.334 ms
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15  202.112.53.18 (202.112.53.18)  140.962 ms  215.083 ms *
16  210.25.189.65 (210.25.189.65)  139.785 ms  128.706 ms  103.400 ms
17  210.25.189.22 (210.25.189.22)  137.545 ms  137.498 ms  137.446 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  253.742 ms  253.736 ms  253.681 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  338.535 ms  335.435 ms  330.373 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  339.158 ms  329.553 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  384.108 ms  470.735 ms  411.991 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  411.676 ms  411.482 ms  407.533 m
23  ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  782.019 ms *  782.349 ms
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  459.084 ms  417.184 ms  481.662 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  459.186 ms  459.002 ms  445.323 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  486.366 ms  457.417 m
27  bifrost.net.yale.edu (130.132.251.73)  456.923 ms  436.344 ms  437.502 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  458.034 ms  450.581 ms  464.392 ms
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2011/10/04-07:46:47
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.352 ms  1.853 ms  2.358 ms
 2  10.21.18.253 (10.21.18.253)  0.822 ms  0.982 ms  1.149 ms
 3  10.3.2.118 (10.3.2.118)  0.242 ms  0.252 ms  0.249 ms
 4  10.3.2.9 (10.3.2.9)  0.288 ms  0.330 ms  0.293 ms
 5  10.3.2.13 (10.3.2.13)  0.359 ms  0.389 ms  0.409 ms
 6  10.3.0.10 (10.3.0.10)  0.793 ms  0.779 ms  0.826 ms
 7  10.3.0.50 (10.3.0.50)  144.080 ms  166.288 ms  191.014 ms
 8  202.120.201.198 (202.120.201.198)  116.143 ms  115.910 ms  73.258 ms
 9  202.112.6.89 (202.112.6.89)  112.004 ms  111.718 ms  111.747 ms
10  sh0.cernet.net (202.112.53.89)  112.410 ms  112.339 ms  107.161 ms
11  202.112.36.253 (202.112.36.253)  112.066 ms  111.983 ms  111.952 ms
12  202.112.36.249 (202.112.36.249)  121.795 ms  102.717 ms  127.043 ms
13  202.112.36.113 (202.112.36.113)  140.028 ms  139.963 ms  139.904 ms
14  202.112.61.158 (202.112.61.158)  144.162 ms *  143.750 ms
15  202.112.53.18 (202.112.53.18)  148.230 ms  143.344 ms  405.194 ms
16  210.25.189.65 (210.25.189.65)  145.043 ms  137.605 ms  136.897 ms
17  210.25.189.22 (210.25.189.22)  168.647 ms  184.145 ms  171.629 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  268.753 ms  296.181 ms  324.976 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  408.720 ms  404.526 ms  404.472 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  452.283 ms  396.306 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  436.860 ms  413.186 ms  457.577 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  427.981 ms  449.764 ms  391.602 m
23  * * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  823.286 ms
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  388.362 ms  388.182 ms  387.904 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  404.924 ms  404.455 ms  372.993 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  461.871 ms  504.722 m
27  bifrost.net.yale.edu (130.132.251.73)  479.636 ms  492.544 ms  546.531 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  383.489 ms  373.753 ms  395.607 ms
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2011/10/04-07:46:58
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.363 ms  1.859 ms  2.362 ms
 2  10.21.18.253 (10.21.18.253)  0.870 ms  1.037 ms  1.331 ms
 3  10.3.2.118 (10.3.2.118)  0.237 ms  0.249 ms  0.252 ms
 4  10.3.2.9 (10.3.2.9)  0.290 ms  0.274 ms  0.241 ms
 5  10.3.2.13 (10.3.2.13)  0.428 ms  0.428 ms  0.452 ms
 6  10.3.0.10 (10.3.0.10)  0.811 ms  0.817 ms  0.866 ms
 7  10.3.0.50 (10.3.0.50)  118.816 ms  157.829 ms  203.719 ms
 8  202.120.201.198 (202.120.201.198)  93.951 ms  91.645 ms  91.396 ms
 9  202.112.6.89 (202.112.6.89)  91.108 ms  91.069 ms  91.104 ms
10  sh0.cernet.net (202.112.53.89)  91.108 ms  90.897 ms  90.874 ms
11  202.112.36.253 (202.112.36.253)  95.747 ms  95.670 ms  101.496 ms
12  202.112.36.249 (202.112.36.249)  111.576 ms  68.667 ms  67.517 ms
13  202.112.36.113 (202.112.36.113)  80.501 ms  80.231 ms  79.991 ms
14  202.112.61.158 (202.112.61.158)  84.126 ms  83.911 ms  83.055 ms
15  202.112.53.18 (202.112.53.18)  77.686 ms  69.906 ms  69.622 ms
16  210.25.189.65 (210.25.189.65)  71.960 ms  70.934 ms  71.937 ms
17  210.25.189.22 (210.25.189.22)  105.447 ms  108.284 ms  108.080 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  254.360 ms  364.181 ms  294.826 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  346.995 ms  346.742 ms  334.997 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  342.888 ms  431.866 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  357.414 ms  356.634 ms  315.614 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  379.572 ms  384.168 ms  487.999 m
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  775.860 ms *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  427.538 ms  427.350 ms  427.091 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  427.236 ms  427.176 ms  417.775 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  423.839 ms  423.811 m
27  bifrost.net.yale.edu (130.132.251.73)  573.455 ms  456.201 ms  479.706 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  457.125 ms  472.545 ms  426.140 ms
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2011/10/04-07:47:09
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.471 ms  1.954 ms  2.449 ms
 2  10.21.18.253 (10.21.18.253)  0.858 ms  1.022 ms  1.184 ms
 3  10.3.2.118 (10.3.2.118)  0.270 ms  0.279 ms  0.283 ms
 4  10.3.2.9 (10.3.2.9)  0.307 ms  0.300 ms  0.270 ms
 5  10.3.2.13 (10.3.2.13)  0.380 ms  0.403 ms  0.424 ms
 6  10.3.0.10 (10.3.0.10)  0.842 ms  0.832 ms  0.868 ms
 7  10.3.0.50 (10.3.0.50)  198.551 ms  142.215 ms  225.112 ms
 8  202.120.201.198 (202.120.201.198)  106.192 ms  102.488 ms  102.305 ms
 9  202.112.6.89 (202.112.6.89)  132.378 ms  61.624 ms  132.287 ms
10  sh0.cernet.net (202.112.53.89)  78.910 ms  89.693 ms  89.589 ms
11  202.112.36.253 (202.112.36.253)  94.825 ms  94.820 ms  94.745 ms
12  202.112.36.249 (202.112.36.249)  104.574 ms  115.489 ms  115.760 ms
13  * 202.112.36.113 (202.112.36.113)  40.843 ms  134.468 ms
14  202.112.61.158 (202.112.61.158)  141.061 ms  140.809 ms  135.595 ms
15  202.112.53.18 (202.112.53.18)  130.431 ms  130.271 ms  120.822 ms
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16  210.25.189.65 (210.25.189.65)  121.704 ms  225.739 ms  120.913 ms
17  210.25.189.22 (210.25.189.22)  164.463 ms  163.871 ms  190.608 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  304.877 ms  333.241 ms  400.211 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  405.989 ms  405.958 ms  405.882 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  401.344 ms  401.269 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  417.331 ms  445.159 ms  427.918 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  423.063 ms  430.971 ms  439.644 m
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  776.454 ms *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  443.883 ms  443.608 ms  443.340 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  443.196 ms  442.993 ms  442.791 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  580.447 ms  512.882 m
27  bifrost.net.yale.edu (130.132.251.73)  438.521 ms  413.333 ms  427.549 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  499.470 ms  436.131 ms  462.403 ms
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2011/10/04-07:47:20
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.433 ms  1.912 ms  2.410 ms
 2  10.21.18.253 (10.21.18.253)  0.760 ms  0.929 ms  1.138 ms
 3  10.3.2.118 (10.3.2.118)  0.233 ms  0.247 ms  0.271 ms
 4  10.3.2.9 (10.3.2.9)  0.298 ms  0.230 ms  0.241 ms
 5  10.3.2.13 (10.3.2.13)  0.482 ms  0.523 ms  0.547 ms
 6  10.3.0.10 (10.3.0.10)  0.689 ms  0.734 ms  0.717 ms
 7  10.3.0.50 (10.3.0.50)  160.446 ms  191.251 ms  233.109 ms
 8  202.120.201.198 (202.120.201.198)  106.127 ms  105.880 ms  111.339 ms
 9  202.112.6.89 (202.112.6.89)  110.771 ms  110.603 ms  110.705 ms
10  sh0.cernet.net (202.112.53.89)  110.904 ms  110.902 ms  120.520 ms
11  202.112.36.253 (202.112.36.253)  125.619 ms  125.536 ms  54.719 ms
12  202.112.36.249 (202.112.36.249)  135.646 ms  211.754 ms  53.106 ms
13  202.112.36.113 (202.112.36.113)  130.642 ms  123.250 ms  122.907 ms
14  202.112.61.158 (202.112.61.158)  127.033 ms  126.774 ms  126.480 ms
15  202.112.53.18 (202.112.53.18)  121.388 ms  105.171 ms  124.252 ms
16  210.25.189.65 (210.25.189.65)  39.496 ms  132.184 ms  132.986 ms
17  210.25.189.22 (210.25.189.22)  173.326 ms  196.382 ms  195.427 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  258.414 ms  258.344 ms  258.288 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  389.179 ms  389.090 ms  445.990 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  370.141 ms  404.879 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  433.140 ms  386.224 ms  386.071 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  385.992 ms  430.725 ms  522.081 m
23  ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  817.990 ms * *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  523.087 ms  422.567 ms  472.294 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  472.134 ms  461.987 ms  429.819 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  462.142 ms  453.607 m
27  bifrost.net.yale.edu (130.132.251.73)  510.478 ms  447.398 ms  520.365 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  536.735 ms  494.644 ms  488.776 ms
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.449 ms  1.867 ms  2.371 ms
 2  10.21.18.253 (10.21.18.253)  0.755 ms  0.909 ms  1.100 ms
 3  10.3.2.118 (10.3.2.118)  0.231 ms  0.245 ms  0.248 ms
 4  10.3.2.9 (10.3.2.9)  0.219 ms  0.211 ms  0.218 ms
 5  10.3.2.13 (10.3.2.13)  0.379 ms  0.521 ms  0.453 ms
 6  10.3.0.10 (10.3.0.10)  0.824 ms  0.827 ms  0.731 ms
 7  10.3.0.50 (10.3.0.50)  98.924 ms  120.471 ms  120.429 ms
 8  202.120.201.198 (202.120.201.198)  115.249 ms  115.455 ms  111.481 ms
 9  202.112.6.89 (202.112.6.89)  145.806 ms *  110.671 ms
10  sh0.cernet.net (202.112.53.89)  111.078 ms  111.025 ms  106.744 ms
11  202.112.36.253 (202.112.36.253)  112.027 ms  112.032 ms  111.958 ms
12  202.112.36.249 (202.112.36.249)  121.987 ms  127.608 ms  125.365 ms
13  202.112.36.113 (202.112.36.113)  35.611 ms  137.596 ms  137.546 ms
14  202.112.61.158 (202.112.61.158)  142.004 ms  141.825 ms *
15  202.112.53.18 (202.112.53.18)  333.469 ms  333.432 ms  330.804 ms
16  210.25.189.65 (210.25.189.65)  150.770 ms  151.489 ms  142.503 ms
17  210.25.189.22 (210.25.189.22)  182.003 ms  181.794 ms  199.003 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  289.584 ms  276.912 ms  276.622 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  424.233 ms  423.966 ms  396.516 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  409.431 ms  475.657 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  419.450 ms  399.089 ms  396.373 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  409.077 ms  453.840 ms  421.513 m
23  * * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  721.348 ms
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  361.073 ms  360.895 ms  347.349 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  382.735 ms  414.198 ms  407.497 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  417.394 ms  434.430 m
27  bifrost.net.yale.edu (130.132.251.73)  436.407 ms  404.381 ms  482.727 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  449.646 ms  398.282 ms  622.773 ms
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2011/10/04-07:47:43
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.408 ms  1.719 ms  2.200 ms
 2  10.21.18.253 (10.21.18.253)  1.018 ms  1.275 ms  1.456 ms
 3  10.3.2.118 (10.3.2.118)  0.197 ms  0.202 ms  0.207 ms
 4  10.3.2.9 (10.3.2.9)  0.386 ms  0.338 ms  0.316 ms
 5  10.3.2.13 (10.3.2.13)  0.429 ms  0.454 ms  0.477 ms
 6  10.3.0.10 (10.3.0.10)  0.814 ms  0.710 ms  0.798 ms
 7  10.3.0.50 (10.3.0.50)  119.542 ms *  189.362 ms
 8  202.120.201.198 (202.120.201.198)  91.183 ms  90.944 ms  90.758 ms
 9  202.112.6.89 (202.112.6.89)  89.512 ms  89.361 ms  79.758 ms
10  sh0.cernet.net (202.112.53.89)  80.500 ms  80.414 ms  80.383 ms
11  202.112.36.253 (202.112.36.253)  85.233 ms  85.177 ms  85.071 ms
12  202.112.36.249 (202.112.36.249)  95.399 ms  104.226 ms  104.110 ms
13  202.112.36.113 (202.112.36.113)  115.714 ms  115.665 ms  115.523 ms
14  202.112.61.158 (202.112.61.158)  113.101 ms  112.350 ms  112.207 ms
15  202.112.53.18 (202.112.53.18)  106.963 ms  108.094 ms  108.046 ms
16  210.25.189.65 (210.25.189.65)  109.143 ms  111.601 ms  113.039 ms
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17  210.25.189.22 (210.25.189.22)  132.280 ms  132.988 ms  132.794 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  206.126 ms  205.808 ms  205.560 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  305.112 ms  300.716 ms  300.448 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  294.264 ms  321.916 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  328.952 ms  375.129 ms  376.393 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  384.089 ms  375.147 ms  374.925 m
23  ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  822.242 ms  821.983 ms  821.727 m
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  410.536 ms  404.711 ms  404.479 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  420.296 ms  413.583 ms  398.721 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  397.254 ms  451.123 m
27  bifrost.net.yale.edu (130.132.251.73)  411.534 ms  411.267 ms  411.093 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  443.001 ms  439.926 ms  448.642 ms
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2011/10/04-07:47:54
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.354 ms  2.360 ms  2.884 ms
 2  10.21.18.253 (10.21.18.253)  0.758 ms  0.952 ms  1.130 ms
 3  10.3.2.118 (10.3.2.118)  0.255 ms  0.264 ms  0.271 ms
 4  10.3.2.9 (10.3.2.9)  0.378 ms  0.338 ms  0.331 ms
 5  10.3.2.13 (10.3.2.13)  0.403 ms  0.406 ms  0.451 ms
 6  10.3.0.10 (10.3.0.10)  0.710 ms  0.654 ms  0.672 ms
 7  10.3.0.50 (10.3.0.50)  121.949 ms  196.531 ms  249.495 ms
 8  202.120.201.198 (202.120.201.198)  61.771 ms  2.822 ms  58.198 ms
 9  202.112.6.89 (202.112.6.89)  57.300 ms  57.290 ms  57.322 ms
10  sh0.cernet.net (202.112.53.89)  57.296 ms  57.240 ms  53.568 ms
11  202.112.36.253 (202.112.36.253)  58.881 ms  58.808 ms  58.701 ms
12  202.112.36.249 (202.112.36.249)  68.734 ms  68.681 ms  69.130 ms
13  202.112.36.113 (202.112.36.113)  82.333 ms  101.567 ms  82.084 ms
14  202.112.61.158 (202.112.61.158)  86.111 ms  85.992 ms  85.784 ms
15  202.112.53.18 (202.112.53.18)  87.331 ms  81.240 ms  80.936 ms
16  210.25.189.65 (210.25.189.65)  81.574 ms  79.704 ms  78.648 ms
17  210.25.189.22 (210.25.189.22)  140.577 ms  140.493 ms  138.996 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  258.327 ms  210.452 ms  229.335 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  344.184 ms  374.857 ms  289.526 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  374.370 ms  328.130 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  367.229 ms  366.354 ms  341.748 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  406.666 ms  402.774 ms  402.712 m
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  945.994 ms  844.405 ms
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  476.416 ms  435.811 ms  453.461 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  426.398 ms  521.041 ms  462.023 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  462.004 ms  461.952 m
27  bifrost.net.yale.edu (130.132.251.73)  472.050 ms  533.482 ms  468.653 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  477.122 ms  476.826 ms  476.571 ms
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2011/10/04-07:48:06
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
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 1  59.78.23.254 (59.78.23.254)  1.511 ms  2.012 ms  2.502 ms
 2  10.21.18.253 (10.21.18.253)  0.883 ms  1.050 ms  1.203 ms
 3  10.3.2.118 (10.3.2.118)  0.258 ms  0.250 ms  0.257 ms
 4  10.3.2.9 (10.3.2.9)  0.256 ms  0.233 ms  0.214 ms
 5  10.3.2.13 (10.3.2.13)  0.328 ms  0.357 ms  0.383 ms
 6  10.3.0.10 (10.3.0.10)  0.747 ms  0.716 ms  0.723 ms
 7  10.3.0.50 (10.3.0.50)  122.322 ms  157.154 ms  193.880 ms
 8  202.120.201.198 (202.120.201.198)  79.410 ms  79.436 ms  79.080 ms
 9  202.112.6.89 (202.112.6.89)  65.360 ms  65.390 ms  65.169 ms
10  sh0.cernet.net (202.112.53.89)  69.716 ms  188.737 ms  69.591 ms
11  202.112.36.253 (202.112.36.253)  103.335 ms  103.287 ms  103.224 ms
12  202.112.36.249 (202.112.36.249)  113.846 ms  142.314 ms  142.290 ms
13  202.112.36.113 (202.112.36.113)  155.338 ms  147.127 ms  147.109 ms
14  202.112.61.158 (202.112.61.158)  152.174 ms  152.044 ms  151.920 ms
15  202.112.53.18 (202.112.53.18)  111.749 ms  111.776 ms  111.624 ms
16  210.25.189.65 (210.25.189.65)  112.833 ms  118.679 ms  119.924 ms
17  210.25.189.22 (210.25.189.22)  163.242 ms  221.897 ms  221.884 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  352.851 ms  363.043 ms  359.662 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  685.972 ms  698.059 ms  697.961 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  887.270 ms  878.553 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  758.154 ms  758.084 ms  780.708 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  938.429 ms  1102.869 ms  1124.162
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  1340.014 ms *
24  * * *
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  976.748 ms * *
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  879.790 ms * *
27  * * bifrost.net.yale.edu (130.132.251.73)  517.490 ms
28  * * *
29  * * *
30  vip-wwwprd-01.its.yale.edu (130.132.35.53)  466.506 ms  466.504 ms  466.429 ms
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2011/10/04-07:48:23
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.536 ms  2.039 ms  2.554 ms
 2  10.21.18.253 (10.21.18.253)  0.714 ms  0.877 ms  1.055 ms
 3  10.3.2.118 (10.3.2.118)  0.207 ms  0.218 ms  0.224 ms
 4  10.3.2.9 (10.3.2.9)  0.270 ms  0.222 ms  0.262 ms
 5  10.3.2.13 (10.3.2.13)  0.414 ms  0.438 ms  0.452 ms
 6  10.3.0.10 (10.3.0.10)  0.777 ms  0.834 ms  0.800 ms
 7  10.3.0.50 (10.3.0.50)  143.877 ms  156.698 ms  54.892 ms
 8  202.120.201.198 (202.120.201.198)  165.488 ms  134.325 ms  130.650 ms
 9  * 202.112.6.89 (202.112.6.89)  130.054 ms  130.053 ms
10  sh0.cernet.net (202.112.53.89)  130.290 ms  130.235 ms  117.964 ms
11  202.112.36.253 (202.112.36.253)  161.104 ms  123.036 ms  122.960 ms
12  202.112.36.249 (202.112.36.249)  132.865 ms  52.042 ms  86.662 ms
13  202.112.36.113 (202.112.36.113)  86.453 ms  86.120 ms  85.920 ms
14  202.112.61.158 (202.112.61.158)  90.091 ms  89.867 ms  89.648 ms
15  202.112.53.18 (202.112.53.18)  95.601 ms  86.303 ms  86.246 ms
16  210.25.189.65 (210.25.189.65)  87.335 ms  83.112 ms  81.699 ms
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17  210.25.189.22 (210.25.189.22)  125.301 ms  180.743 ms  209.411 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  245.735 ms  245.607 ms  245.588 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  278.205 ms  357.191 ms  348.278 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  346.208 ms  337.307 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  421.169 ms  441.202 ms  456.827 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  417.869 ms  422.787 ms  384.173 m
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  797.476 ms *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  428.562 ms  523.318 ms  434.029 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  434.635 ms  434.431 ms  428.651 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  438.449 ms  417.760 m
27  bifrost.net.yale.edu (130.132.251.73)  460.363 ms  470.575 ms  470.213 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  425.320 ms  425.146 ms  389.907 ms
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2011/10/04-13:48:29
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2011/10/04-13:48:34
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.686 ms  2.207 ms  2.728 ms
 2  10.21.18.253 (10.21.18.253)  0.863 ms  1.042 ms  1.218 ms
 3  10.3.2.118 (10.3.2.118)  0.259 ms  0.278 ms  0.280 ms
 4  10.3.2.9 (10.3.2.9)  0.255 ms  0.280 ms  0.266 ms
 5  10.3.2.13 (10.3.2.13)  0.453 ms  0.466 ms  0.499 ms
 6  10.3.0.10 (10.3.0.10)  0.837 ms  0.844 ms  0.915 ms
 7  10.3.0.50 (10.3.0.50)  81.189 ms  81.147 ms  81.092 ms
 8  202.120.201.198 (202.120.201.198)  63.171 ms  63.025 ms  68.444 ms
 9  202.112.6.89 (202.112.6.89)  68.339 ms  68.193 ms  68.053 ms
10  sh0.cernet.net (202.112.53.89)  64.205 ms  64.178 ms  66.901 ms
11  202.112.36.253 (202.112.36.253)  72.106 ms  72.014 ms  71.958 ms
12  202.112.36.249 (202.112.36.249)  81.956 ms  20.511 ms  73.257 ms
13  202.112.36.113 (202.112.36.113)  99.625 ms  99.341 ms  99.114 ms
14  202.112.61.158 (202.112.61.158)  103.311 ms  103.059 ms  102.854 ms
15  202.112.53.18 (202.112.53.18)  84.786 ms  90.314 ms  90.306 ms
16  210.25.189.65 (210.25.189.65)  96.668 ms  97.591 ms  98.065 ms
17  210.25.189.22 (210.25.189.22)  138.284 ms  138.176 ms  138.160 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  259.727 ms  190.095 ms  189.870 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  346.342 ms * *
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  443.137 ms  443.047 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  353.046 ms  349.184 ms  349.107 m
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  349.058 ms  390.605 ms  390.573 m
23  ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  759.362 ms  858.636 ms  782.393 m
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  386.195 ms * *
25  * nox300gw1-vl-803-nox.nox.org (192.5.89.238)  446.886 ms *
26  * nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  446.284 ms *
27  bifrost.net.yale.edu (130.132.251.73)  439.800 ms * *
28  * * *
29  * * *
30  vip-wwwprd-01.its.yale.edu (130.132.35.53)  441.606 ms * *
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2011/10/04-13:48:55
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.602 ms  2.242 ms  2.793 ms
 2  10.21.18.253 (10.21.18.253)  0.749 ms  0.937 ms  1.107 ms
 3  10.3.2.118 (10.3.2.118)  0.243 ms  0.256 ms  0.259 ms
 4  10.3.2.9 (10.3.2.9)  0.308 ms  0.283 ms  0.250 ms
 5  10.3.2.13 (10.3.2.13)  0.447 ms  0.444 ms  0.478 ms
 6  10.3.0.10 (10.3.0.10)  0.759 ms  0.810 ms  0.794 ms
 7  10.3.0.50 (10.3.0.50)  116.292 ms  158.264 ms  196.047 ms
 8  202.120.201.198 (202.120.201.198)  62.863 ms  62.700 ms  66.422 ms
 9  202.112.6.89 (202.112.6.89)  65.501 ms  65.462 ms  65.449 ms
10  sh0.cernet.net (202.112.53.89)  65.598 ms  65.520 ms  69.333 ms
11  202.112.36.253 (202.112.36.253)  74.698 ms  74.678 ms  74.601 ms
12  202.112.36.249 (202.112.36.249)  90.572 ms  63.007 ms  62.787 ms
13  202.112.36.113 (202.112.36.113)  90.335 ms  89.869 ms  89.762 ms
14  202.112.61.158 (202.112.61.158)  94.056 ms  93.833 ms  93.515 ms
15  202.112.53.18 (202.112.53.18)  93.248 ms  104.509 ms  104.313 ms
16  210.25.189.65 (210.25.189.65)  104.722 ms  103.003 ms  96.662 ms
17  210.25.189.22 (210.25.189.22)  139.677 ms  139.659 ms  115.426 ms
18  * * tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  235.492 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  362.700 ms * *
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  349.025 ms * *
21  * xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  381.355 ms *
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  381.170 ms  348.234 ms  355.111 m
23  * * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  845.479 ms
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  450.377 ms  366.591 ms  366.369 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  413.196 ms  406.812 ms  414.402 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  414.210 ms  414.005 m
27  bifrost.net.yale.edu (130.132.251.73)  440.091 ms  417.406 ms  442.472 ms
28  * * *
29  * * *
30  vip-wwwprd-01.its.yale.edu (130.132.35.53)  426.025 ms  425.992 ms *
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2011/10/04-13:49:12
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.670 ms  2.016 ms  2.384 ms
 2  10.21.18.253 (10.21.18.253)  0.742 ms  1.058 ms  1.050 ms
 3  10.3.2.118 (10.3.2.118)  0.270 ms  0.200 ms  0.206 ms
 4  10.3.2.9 (10.3.2.9)  0.324 ms  0.305 ms  0.236 ms
 5  10.3.2.13 (10.3.2.13)  0.457 ms  0.539 ms  0.413 ms
 6  10.3.0.10 (10.3.0.10)  0.782 ms  0.864 ms  0.886 ms
 7  10.3.0.50 (10.3.0.50)  145.103 ms  145.072 ms  56.048 ms
 8  202.120.201.198 (202.120.201.198)  69.480 ms  69.604 ms  69.227 ms
 9  202.112.6.89 (202.112.6.89)  68.519 ms  68.507 ms  68.429 ms
10  sh0.cernet.net (202.112.53.89)  68.886 ms *  64.924 ms
11  202.112.36.253 (202.112.36.253)  69.770 ms  69.672 ms  75.511 ms
12  202.112.36.249 (202.112.36.249)  85.529 ms  69.790 ms  74.852 ms
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13  202.112.36.113 (202.112.36.113)  87.554 ms  87.337 ms  87.002 ms
14  202.112.61.158 (202.112.61.158)  91.218 ms  91.181 ms  90.973 ms
15  202.112.53.18 (202.112.53.18)  85.810 ms  88.427 ms  88.256 ms
16  210.25.189.65 (210.25.189.65)  89.774 ms  75.513 ms  78.141 ms
17  210.25.189.22 (210.25.189.22)  116.384 ms  141.549 ms  141.503 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  243.749 ms * *
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  394.553 ms * *
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  394.288 ms * *
21  * xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  412.662 ms *
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  442.890 ms *  393.891 ms
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  874.600 ms  874.415 ms
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  439.545 ms  445.508 ms  445.285 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  430.611 ms  446.627 ms  498.281 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  454.334 ms  453.950 m
27  bifrost.net.yale.edu (130.132.251.73)  408.439 ms  390.983 ms  379.170 ms
28  * * *
29  * * *
30  vip-wwwprd-01.its.yale.edu (130.132.35.53)  446.799 ms * *
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2011/10/04-13:49:29
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.484 ms  1.980 ms  2.486 ms
 2  10.21.18.253 (10.21.18.253)  0.736 ms  0.920 ms  1.105 ms
 3  10.3.2.118 (10.3.2.118)  0.245 ms  0.275 ms  0.264 ms
 4  10.3.2.9 (10.3.2.9)  0.322 ms  0.337 ms  0.293 ms
 5  10.3.2.13 (10.3.2.13)  0.601 ms  0.586 ms  0.531 ms
 6  10.3.0.10 (10.3.0.10)  0.761 ms  0.787 ms  0.798 ms
 7  10.3.0.50 (10.3.0.50)  142.812 ms  142.784 ms *
 8  * 202.120.201.198 (202.120.201.198)  55.521 ms  51.416 ms
 9  202.112.6.89 (202.112.6.89)  51.130 ms  51.085 ms  51.103 ms
10  sh0.cernet.net (202.112.53.89)  51.222 ms  51.157 ms  60.004 ms
11  202.112.36.253 (202.112.36.253)  65.169 ms  65.177 ms  65.103 ms
12  202.112.36.249 (202.112.36.249)  75.139 ms  63.609 ms  63.489 ms
13  202.112.36.113 (202.112.36.113)  67.889 ms  75.820 ms  75.793 ms
14  202.112.61.158 (202.112.61.158)  80.361 ms  80.323 ms  72.381 ms
15  202.112.53.18 (202.112.53.18)  61.661 ms  61.441 ms  61.475 ms
16  210.25.189.65 (210.25.189.65)  60.202 ms  48.051 ms  47.103 ms
17  210.25.189.22 (210.25.189.22)  90.450 ms  90.595 ms  90.417 ms
18  * * *
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  308.239 ms  308.183 ms  308.125 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  308.071 ms  304.281 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  334.391 ms  333.847 ms  371.866 m
22  * * xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  405.517 ms
23  * * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  839.747 ms
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  435.515 ms *  395.469 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  425.081 ms *  434.489 ms
26  * nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  432.308 ms *
27  bifrost.net.yale.edu (130.132.251.73)  549.469 ms  473.311 ms *
28  * * *
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29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  421.348 ms  421.338 ms  421.265 ms
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2011/10/04-13:49:46
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  2.104 ms  2.617 ms  3.133 ms
 2  10.21.18.253 (10.21.18.253)  0.913 ms  1.100 ms  1.287 ms
 3  10.3.2.118 (10.3.2.118)  0.270 ms  0.258 ms  0.254 ms
 4  10.3.2.9 (10.3.2.9)  0.324 ms  0.317 ms  0.307 ms
 5  10.3.2.13 (10.3.2.13)  0.467 ms  0.594 ms  0.560 ms
 6  10.3.0.10 (10.3.0.10)  0.829 ms  0.868 ms  0.819 ms
 7  10.3.0.50 (10.3.0.50)  112.369 ms  112.316 ms *
 8  202.120.201.198 (202.120.201.198)  53.407 ms  53.422 ms  53.030 ms
 9  202.112.6.89 (202.112.6.89)  52.375 ms  52.358 ms  52.212 ms
10  sh0.cernet.net (202.112.53.89)  52.669 ms  52.583 ms  48.781 ms
11  202.112.36.253 (202.112.36.253)  53.788 ms  53.690 ms  46.489 ms
12  202.112.36.249 (202.112.36.249)  56.492 ms  44.852 ms  44.729 ms
13  202.112.36.113 (202.112.36.113)  62.772 ms  56.705 ms  56.680 ms
14  202.112.61.158 (202.112.61.158)  61.560 ms  67.175 ms  67.059 ms
15  202.112.53.18 (202.112.53.18)  62.088 ms  57.539 ms  57.473 ms
16  210.25.189.65 (210.25.189.65)  95.907 ms  86.480 ms  85.397 ms
17  210.25.189.22 (210.25.189.22)  127.792 ms  127.489 ms  127.279 ms
18  * tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  229.876 ms *
19  * losa-tokyo-tp2.transpac2.net (192.203.116.145)  379.083 ms  450.767 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  370.704 ms * *
21  * xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  401.667 ms *
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  342.451 ms  330.761 ms  330.457 m
23  ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  813.409 ms  852.469 ms *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  434.839 ms  434.752 ms  434.639 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  434.637 ms  479.950 ms *
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  429.297 ms  447.011 m
27  bifrost.net.yale.edu (130.132.251.73)  377.875 ms  366.746 ms  374.492 ms
28  * * *
29  * * *
30  vip-wwwprd-01.its.yale.edu (130.132.35.53)  601.101 ms  453.082 ms  531.970 ms
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2011/10/04-13:49:59
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.490 ms  2.018 ms  2.542 ms
 2  10.21.18.253 (10.21.18.253)  0.884 ms  1.067 ms  1.255 ms
 3  10.3.2.118 (10.3.2.118)  0.229 ms  0.251 ms  0.233 ms
 4  10.3.2.9 (10.3.2.9)  0.319 ms  0.345 ms  0.308 ms
 5  10.3.2.13 (10.3.2.13)  0.426 ms  0.462 ms  0.548 ms
 6  10.3.0.10 (10.3.0.10)  0.754 ms  0.799 ms  0.875 ms
 7  10.3.0.50 (10.3.0.50)  118.959 ms  118.895 ms *
 8  202.120.201.198 (202.120.201.198)  34.197 ms  33.832 ms  30.258 ms
 9  202.112.6.89 (202.112.6.89)  73.301 ms  29.361 ms  29.284 ms
10  sh0.cernet.net (202.112.53.89)  29.773 ms  29.695 ms  60.977 ms
11  202.112.36.253 (202.112.36.253)  41.713 ms  41.636 ms  41.533 ms
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12  202.112.36.249 (202.112.36.249)  51.418 ms  59.709 ms  59.630 ms
13  202.112.36.113 (202.112.36.113)  71.839 ms  71.817 ms  71.753 ms
14  202.112.61.158 (202.112.61.158)  76.226 ms  76.122 ms  58.139 ms
15  202.112.53.18 (202.112.53.18)  52.890 ms  52.764 ms  43.474 ms
16  210.25.189.65 (210.25.189.65)  42.827 ms  41.952 ms  33.647 ms
17  210.25.189.22 (210.25.189.22)  75.086 ms  72.797 ms  72.563 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  187.204 ms * *
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  310.060 ms  418.911 ms  379.912 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  305.994 ms  414.821 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  362.094 ms * *
22  * * *
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  870.539 ms  870.321 ms
24  * * nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  428.641 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  438.591 ms  477.317 ms  419.519 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  557.530 ms  411.521 m
27  bifrost.net.yale.edu (130.132.251.73)  469.074 ms  421.711 ms  409.436 ms
28  * * *
29  * * *
30  vip-wwwprd-01.its.yale.edu (130.132.35.53)  530.703 ms  452.673 ms *
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2011/10/04-13:50:16
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.512 ms  2.055 ms  2.538 ms
 2  10.21.18.253 (10.21.18.253)  0.963 ms  1.155 ms  1.389 ms
 3  10.3.2.118 (10.3.2.118)  0.244 ms  0.251 ms  0.260 ms
 4  10.3.2.9 (10.3.2.9)  0.324 ms  0.327 ms  0.338 ms
 5  10.3.2.13 (10.3.2.13)  0.477 ms  0.485 ms  0.487 ms
 6  10.3.0.10 (10.3.0.10)  0.834 ms  0.942 ms  0.905 ms
 7  10.3.0.50 (10.3.0.50)  66.510 ms  125.535 ms  162.495 ms
 8  202.120.201.198 (202.120.201.198)  27.529 ms  27.306 ms  27.047 ms
 9  202.112.6.89 (202.112.6.89)  26.607 ms  26.554 ms  26.572 ms
10  sh0.cernet.net (202.112.53.89)  31.160 ms  31.103 ms  31.034 ms
11  202.112.36.253 (202.112.36.253)  17.171 ms  17.060 ms  17.011 ms
12  202.112.36.249 (202.112.36.249)  26.884 ms  30.040 ms  29.999 ms
13  202.112.36.113 (202.112.36.113)  42.462 ms  42.278 ms  42.111 ms
14  202.112.61.158 (202.112.61.158)  46.356 ms  50.477 ms  50.346 ms
15  202.112.53.18 (202.112.53.18)  45.917 ms  40.556 ms  40.347 ms
16  210.25.189.65 (210.25.189.65)  40.931 ms  39.149 ms  33.249 ms
17  210.25.189.22 (210.25.189.22)  74.377 ms  73.458 ms  73.315 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  205.504 ms * *
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  310.765 ms  310.722 ms  310.651 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  310.011 ms * *
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  351.159 ms  350.463 ms *
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  366.853 ms * *
23  ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  792.580 ms * *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  440.123 ms  439.955 ms  439.733 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  873.572 ms  814.414 ms *
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  481.496 ms *  422.117
27  bifrost.net.yale.edu (130.132.251.73)  446.766 ms  431.611 ms  431.561 ms
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28  * * *
29  * * *
30  vip-wwwprd-01.its.yale.edu (130.132.35.53)  557.069 ms  474.935 ms *
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2011/10/04-13:50:33
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.500 ms  2.007 ms  2.511 ms
 2  10.21.18.253 (10.21.18.253)  0.799 ms  0.949 ms  1.112 ms
 3  10.3.2.118 (10.3.2.118)  0.238 ms  0.241 ms  0.237 ms
 4  10.3.2.9 (10.3.2.9)  0.440 ms  0.371 ms  0.324 ms
 5  10.3.2.13 (10.3.2.13)  0.490 ms  0.525 ms  0.565 ms
 6  10.3.0.10 (10.3.0.10)  0.781 ms  0.755 ms  0.797 ms
 7  10.3.0.50 (10.3.0.50)  122.993 ms  122.935 ms  122.806 ms
 8  202.120.201.198 (202.120.201.198)  76.350 ms  72.775 ms  72.552 ms
 9  202.112.6.89 (202.112.6.89)  72.034 ms  112.871 ms  71.868 ms
10  sh0.cernet.net (202.112.53.89)  72.215 ms  72.105 ms  68.097 ms
11  202.112.36.253 (202.112.36.253)  73.280 ms  73.180 ms  33.092 ms
12  202.112.36.249 (202.112.36.249)  83.026 ms *  84.234 ms
13  202.112.36.113 (202.112.36.113)  96.845 ms  103.163 ms  102.981 ms
14  202.112.61.158 (202.112.61.158)  107.485 ms  107.302 ms  107.100 ms
15  202.112.53.18 (202.112.53.18)  103.648 ms  98.570 ms  98.357 ms
16  210.25.189.65 (210.25.189.65)  96.315 ms  90.958 ms  154.328 ms
17  210.25.189.22 (210.25.189.22)  118.489 ms  162.121 ms  156.336 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  251.653 ms  297.705 ms  360.445 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  402.149 ms * *
20  * abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  391.436 ms  391.176 m
21  * xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  401.875 ms *
22  xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  398.011 ms  390.245 ms  389.967 m
23  ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  856.322 ms  870.488 ms *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  399.215 ms  428.956 ms  467.698 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  406.637 ms  424.302 ms  424.084 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  416.781 ms  443.656 m
27  bifrost.net.yale.edu (130.132.251.73)  429.244 ms  418.509 ms  414.291 ms
28  * * *
29  vip-wwwprd-01.its.yale.edu (130.132.35.53)  437.952 ms  409.795 ms  442.715 ms
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2011/10/04-13:50:45
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.548 ms  2.069 ms  2.598 ms
 2  10.21.18.253 (10.21.18.253)  0.870 ms  1.061 ms  1.270 ms
 3  10.3.2.118 (10.3.2.118)  0.265 ms  0.280 ms  0.291 ms
 4  10.3.2.9 (10.3.2.9)  0.255 ms  0.250 ms  0.249 ms
 5  10.3.2.13 (10.3.2.13)  0.589 ms  0.608 ms  0.640 ms
 6  10.3.0.10 (10.3.0.10)  0.754 ms  0.786 ms  0.830 ms
 7  10.3.0.50 (10.3.0.50)  133.903 ms * *
 8  202.120.201.198 (202.120.201.198)  52.554 ms  52.600 ms  52.222 ms
 9  202.112.6.89 (202.112.6.89)  51.844 ms  51.700 ms  47.811 ms
10  sh0.cernet.net (202.112.53.89)  2.966 ms  48.306 ms  53.800 ms
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11  202.112.36.253 (202.112.36.253)  73.453 ms  73.337 ms  73.328 ms
12  202.112.36.249 (202.112.36.249)  83.533 ms  83.511 ms  87.408 ms
13  202.112.36.113 (202.112.36.113)  100.115 ms  105.770 ms  105.467 ms
14  202.112.61.158 (202.112.61.158)  110.053 ms  109.840 ms  109.594 ms
15  202.112.53.18 (202.112.53.18)  99.413 ms  58.042 ms  69.826 ms
16  210.25.189.65 (210.25.189.65)  104.849 ms  96.775 ms  95.511 ms
17  210.25.189.22 (210.25.189.22)  135.202 ms  134.882 ms  127.953 ms
18  * * *
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  370.001 ms  366.181 ms  365.942 ms
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  349.542 ms  420.114 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  463.140 ms  383.143 ms  454.597 m
22  * * xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  486.431 ms
23  * ge-1-2-0.0.rtr.chic.net.internet2.edu (64.57.28.37)  933.059 ms *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  469.515 ms *  576.477 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  443.228 ms *  462.610 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  438.581 ms  471.705 m
27  bifrost.net.yale.edu (130.132.251.73)  549.425 ms  498.345 ms  562.473 ms
28  * * *
29  * * *
30  vip-wwwprd-01.its.yale.edu (130.132.35.53)  570.907 ms  442.924 ms  511.884 ms
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2011/10/04-13:51:02
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traceroute to www.yale.edu (130.132.35.53), 30 hops max, 60 byte packets
 1  59.78.23.254 (59.78.23.254)  1.616 ms  2.132 ms  2.640 ms
 2  10.21.18.253 (10.21.18.253)  0.766 ms  0.946 ms  1.119 ms
 3  10.3.2.118 (10.3.2.118)  0.226 ms  0.235 ms  0.224 ms
 4  10.3.2.9 (10.3.2.9)  0.332 ms  0.314 ms  0.281 ms
 5  10.3.2.13 (10.3.2.13)  0.437 ms  0.532 ms  0.468 ms
 6  10.3.0.10 (10.3.0.10)  0.938 ms  0.945 ms  1.080 ms
 7  10.3.0.50 (10.3.0.50)  132.780 ms * *
 8  202.120.201.198 (202.120.201.198)  61.558 ms  61.270 ms  61.537 ms
 9  202.112.6.89 (202.112.6.89)  61.047 ms  75.721 ms  60.944 ms
10  * sh0.cernet.net (202.112.53.89)  57.157 ms  45.677 ms
11  202.112.36.253 (202.112.36.253)  50.949 ms  50.877 ms  50.783 ms
12  202.112.36.249 (202.112.36.249)  60.727 ms  79.000 ms  84.813 ms
13  202.112.36.113 (202.112.36.113)  97.268 ms  97.021 ms  97.009 ms
14  202.112.61.158 (202.112.61.158)  101.688 ms  101.213 ms  95.913 ms
15  202.112.53.18 (202.112.53.18)  90.224 ms  90.318 ms  89.060 ms
16  210.25.189.65 (210.25.189.65)  94.656 ms  88.618 ms  108.890 ms
17  210.25.189.22 (210.25.189.22)  144.893 ms  144.356 ms  144.070 ms
18  tpr5-ge-1-0-0-137.jp.apan.net (203.181.248.121)  239.065 ms  370.864 ms  287.988 ms
19  losa-tokyo-tp2.transpac2.net (192.203.116.145)  377.833 ms  377.563 ms *
20  abilene-1-lo-jmb-702.lsanca.pacificwave.net (207.231.240.131)  364.442 ms  399.571 ms
21  xe-0-1-0.0.rtr.hous.net.internet2.edu (64.57.28.97)  390.993 ms  405.569 ms  443.809 m
22  * xe-1-0-0.0.rtr.kans.net.internet2.edu (64.57.28.56)  413.587 ms *
23  * * *
24  nox1sumgw1-vl-112-nox-i2.nox.org (192.5.89.17)  447.149 ms *  418.641 ms
25  nox300gw1-vl-803-nox.nox.org (192.5.89.238)  417.565 ms  427.672 ms  415.511 ms
26  nox300gw1-peer-nox-yale-207-210-143-90.nox.org (207.210.143.90)  405.377 ms  399.600 m
```

```
27  bifrost.net.yale.edu (130.132.251.73)  486.398 ms * *
28  * * *
29  * * *
30  vip-wwwprd-01.its.yale.edu (130.132.35.53)  566.912 ms  475.879 ms  414.784 ms
```

Appendix C

Analysis of the Traceroute Experiments

These are the analysis files generated by the statistic.rb program.

C.1 www.henu.edu.cn

```
2011/10/04-01:44:19
26.4791 26.4831 26.4556 26.4726
2011/10/04-07:46:22
26.3831818181818 26.4649090909091 26.4501818181818 26.4327575757576
2011/10/04-13:48:29
26.7885 26.8505 26.8204 26.8198
```

C.2 www.yale.edu

```
2011/10/04-01:44:19
471.8768 459.073 453.6986 461.549466666667
2011/10/04-07:46:22
464.069727272727 443.040909090909 470.451181818182 459.187272727273
2011/10/04-13:48:29
493.249272727273 442.418222222222 452.0875 466.155038461538
```