

1.

```
#ip addr add 192.168.217.1/24 broadcast 255.255.255.0 dev eth0
```

```
#ip route add default via 192.168.217.254
```

2.

```
#mtr www.google.com
```

```
nasa@nasa-VirtualBox: ~
My traceroute [v0.86]
linux1 (0.0.0.0) Fri Apr 8 11:11:55 2016
Keys: Help Display mode Restart statistics Order of fields quit
```

Host	Packets		Pings				
	Loss%	Snt	Last	Avg	Best	Wrst	StDev
1. 10.254.254.254	0.0%	53	0.7	1.7	0.6	24.2	4.1
2. 140.112.149.121	0.0%	52	0.4	0.5	0.3	4.0	0.5
3. 140.112.0.174	47.1%	52	0.5	1.2	0.5	4.8	0.7
4. 140.112.0.190	0.0%	52	1.1	1.2	0.6	4.7	0.5
5. 140.112.0.198	0.0%	52	0.8	1.1	0.7	3.9	0.5
6. 140.112.0.70	0.0%	52	1.9	1.4	0.8	6.5	1.1
7. cache38.google.com	0.0%	52	0.7	0.8	0.6	3.1	0.3

3.

Reference:

<http://serverfault.com/questions/249483/shell-command-to-see-the-http-headers>

```
#curl -I www.csie.ntu.edu.tw
```

```
b03902001@linux1:~> curl -I www.csie.ntu.edu.tw
HTTP/1.1 301 Moved Permanently
Date: Fri, 08 Apr 2016 03:12:18 GMT
Server: Apache
Location: https://www.csie.ntu.edu.tw/
Content-Type: text/html; charset=iso-8859-1
```

4.

Reference: <https://www.linux.com/learn/check-your-dns-records-dig>

#dig csie.ntu.edu.tw MX

```
b03902001@linux1:~> dig csie.ntu.edu.tw MX

; <<>> DiG 9.10.3-P4 <<>> csie.ntu.edu.tw MX
;; global options: +cmd
;; Got answer:
;; ->HEADER<<- opcode: QUERY, status: NOERROR, id: 42076
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 3, ADDITIONAL: 4

;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;csie.ntu.edu.tw.                IN      MX

;; ANSWER SECTION:
csie.ntu.edu.tw.                600     IN      MX      2 ms.csie.ntu.edu.tw.
csie.ntu.edu.tw.                600     IN      MX      1 ms.csie.ntu.edu.tw.

;; AUTHORITY SECTION:
csie.ntu.edu.tw.                86400   IN      NS      csman2.csie.ntu.edu.tw.
csie.ntu.edu.tw.                86400   IN      NS      csman.csie.ntu.edu.tw.
csie.ntu.edu.tw.                86400   IN      NS      ntuns.ntu.edu.tw.

;; ADDITIONAL SECTION:
csman.csie.ntu.edu.tw.         600     IN      A       140.112.30.21
ntuns.ntu.edu.tw.              42429   IN      A       140.112.254.6
csman2.csie.ntu.edu.tw.        600     IN      A       140.112.30.12

;; Query time: 0 msec
;; SERVER: 140.112.30.21#53(140.112.30.21)
;; WHEN: 五 4月 08 11:13:11 CST 2016
;; MSG SIZE rcvd: 188
```

5.

Reference:

<http://www.cyberciti.biz/faq/find-linux-what-running-on-port-80-command/>

#netstat -tulpn | grep :80