

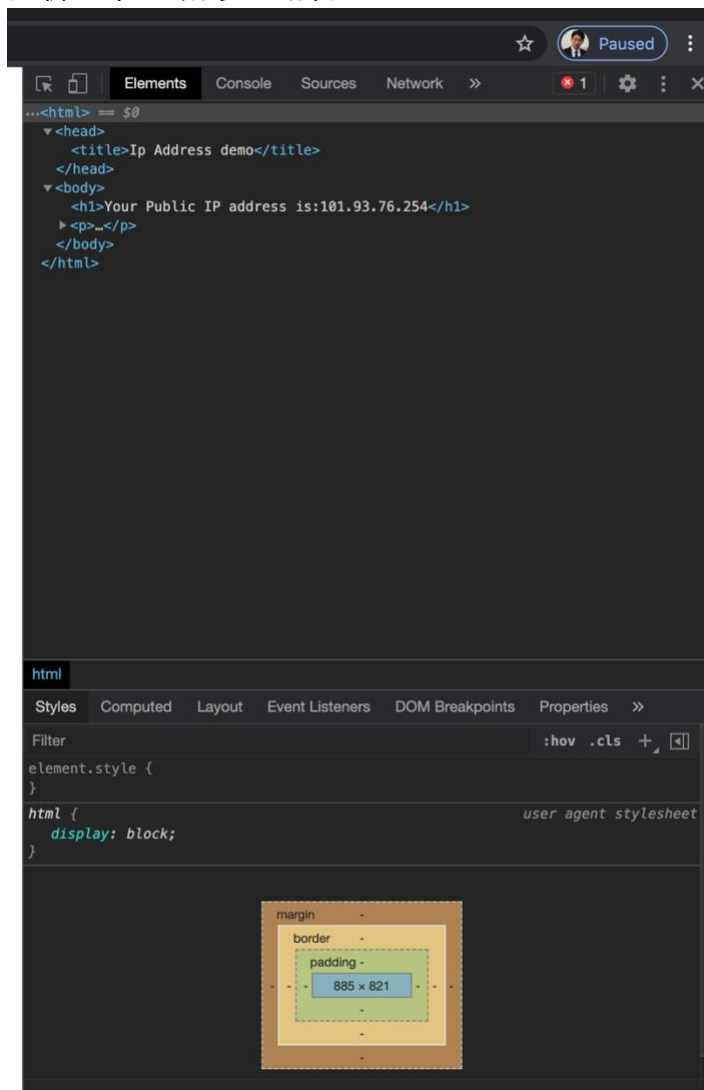
Lab0-1

潘彦成 18342016003

1. IP Address

```
status: inactive
en0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
ether f0:18:98:07:e2:2b
inet6 fe80::c4b:a58d:d4c:415e%en0 prefixlen 64 secured scopeid 0xa
inet 192.168.3.47 netmask 0xffffffff broadcast 192.168.3.255
nd6 options=201<PERFORMNUD,DAD>
media: autoselect
status: active
```

2. 分析一个网络的组成部分



3. Name Server

- A 地址

```
[Yanchengs-MacBook-Pro:~ clint.yc$ nslookup baidu.com
Server:      8.8.8.8
Address:     8.8.8.8#53

Non-authoritative answer:
Name:   baidu.com
Address: 220.181.38.148
Name:   baidu.com
Address: 39.156.69.79
```

- 域名服务器

```
[Yanchengs-MacBook-Pro:~ clint.yc$ nslookup -type=ns baidu.com
Server:      8.8.8.8
Address:     8.8.8.8#53

Non-authoritative answer:
baidu.com    nameserver = ns3.baidu.com.
baidu.com    nameserver = ns2.baidu.com.
baidu.com    nameserver = ns4.baidu.com.
baidu.com    nameserver = ns7.baidu.com.
baidu.com    nameserver = dns.baidu.com.

Authoritative answers can be found from:
```

- IP 地址

```
[Yanchengs-MacBook-Pro:~ clint.yc$ nslookup baidu.com ns2.baidu.com
Server:      ns2.baidu.com
Address:     220.181.33.31#53

Name:   baidu.com
Address: 39.156.69.79
Name:   baidu.com
Address: 220.181.38.148
```

- 主机名

```
Yanchengs-MacBook-Pro:~ clint.yc$ nslookup 114.114.114.114
Server:      8.8.8.8
Address:     8.8.8.8#53

Non-authoritative answer:
114.114.114.114.in-addr.arpa    name = public1.114dns.com.

Authoritative answers can be found from:
```

4. 观察 HTTP 标头

```
User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_14_6) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.192 Safari/537.36
```

5. Tracing a packet

- 跟踪数据包

```
Yanchengs-MacBook-Pro:~ clint.yc$ traceroute microsoft.com
traceroute: Warning: microsoft.com has multiple addresses; using 104.215.148.63
traceroute to microsoft.com (104.215.148.63), 64 hops max, 52 byte packets
 1 192.168.3.1 (192.168.3.1) 4.290 ms 3.312 ms 5.453 ms
 2 192.168.1.1 (192.168.1.1) 5.443 ms 21.578 ms 3.962 ms
 3 100.65.0.1 (100.65.0.1) 6.539 ms 18.448 ms 8.973 ms
 4 61.152.4.89 (61.152.4.89) 19.878 ms 20.219 ms
   61.152.4.93 (61.152.4.93) 16.704 ms
 5 61.152.24.14 (61.152.24.14) 11.107 ms
   61.152.24.6 (61.152.24.6) 18.755 ms 8.940 ms
 6 202.97.24.218 (202.97.24.218) 8.988 ms 10.847 ms *
 7 * 202.97.12.206 (202.97.12.206) 10.396 ms
   202.97.35.86 (202.97.35.86) 7.146 ms
 8 202.97.91.106 (202.97.91.106) 57.519 ms
   202.97.61.138 (202.97.61.138) 49.850 ms
   202.97.61.130 (202.97.61.130) 45.821 ms
 9 203.215.232.210 (203.215.232.210) 48.960 ms 51.220 ms 62.579 ms
10 ae20-0.icr02.hkg20.ntwk.msn.net (104.44.237.203) 51.133 ms 46.838 ms 47.1
24 ms
11 * be-122-0.ibr02.hkg20.ntwk.msn.net (104.44.11.147) 70.424 ms
   be-102-0.ibr01.hkg20.ntwk.msn.net (104.44.11.131) 198.082 ms
12 be-6-0.ibr02.sg3.ntwk.msn.net (104.44.16.238) 86.265 ms
   be-10-0.ibr01.sg3.ntwk.msn.net (104.44.18.234) 157.604 ms 71.960 ms
13 ae100-0.icr01.sg3.ntwk.msn.net (104.44.20.6) 132.921 ms 80.241 ms
   ae122-0.icr02.sg3.ntwk.msn.net (104.44.20.18) 225.340 ms
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```

- whois 查询

```
Yanchengs-MacBook-Pro:~ clint.yc$ whois tencent.com
% IANA WHOIS server
% for more information on IANA, visit http://www.iana.org
% This query returned 1 object

refer:      whois.verisign-grs.com

domain:     COM

organisation: VeriSign Global Registry Services
address:    12061 Bluemont Way
address:    Reston Virginia 20190
address:    United States

contact:    administrative
name:       Registry Customer Service
organisation: VeriSign Global Registry Services
address:    12061 Bluemont Way
address:    Reston Virginia 20190
address:    United States
phone:      +1 703 925-6999
fax-no:     +1 703 948 3978
e-mail:     info@verisign-grs.com

contact:    technical
name:       Registry Customer Service
organisation: VeriSign Global Registry Services
address:    12061 Bluemont Way
address:    Reston Virginia 20190
address:    United States
phone:      +1 703 925-6999
fax-no:     +1 703 948 3978
e-mail:     info@verisign-grs.com

nserver:    A.GTLD-SERVERS.NET 192.5.6.30 2001:503:a83e:0:0:0:2:30
nserver:    B.GTLD-SERVERS.NET 192.33.14.30 2001:503:231d:0:0:0:2:30
nserver:    C.GTLD-SERVERS.NET 192.26.92.30 2001:503:83eb:0:0:0:0:30
nserver:    D.GTLD-SERVERS.NET 192.31.80.30 2001:500:856e:0:0:0:0:30
nserver:    E.GTLD-SERVERS.NET 192.12.94.30 2001:502:1ca1:0:0:0:0:30
nserver:    F.GTLD-SERVERS.NET 192.35.51.30 2001:503:d414:0:0:0:0:30
nserver:    G.GTLD-SERVERS.NET 192.42.93.30 2001:503:aaa3:0:0:0:0:30
nserver:    H.GTLD-SERVERS.NET 192.54.112.30 2001:502:8cc:0:0:0:0:30
nserver:    I.GTLD-SERVERS.NET 192.43.172.30 2001:503:39c1:0:0:0:0:30
nserver:    J.GTLD-SERVERS.NET 192.48.79.30 2001:502:7094:0:0:0:0:30
nserver:    K.GTLD-SERVERS.NET 192.52.178.30 2001:503:d2d:0:0:0:0:30
nserver:    L.GTLD-SERVERS.NET 192.41.162.30 2001:500:d937:0:0:0:0:30
nserver:    M.GTLD-SERVERS.NET 192.55.83.30 2001:501:b1f9:0:0:0:0:30
ds-rdata:   30909 8 2 E2D3C916F6DEEAC73294E8268F85885044A833FC5459588F4A9184CFC41A5766

whois:      whois.verisign-grs.com

status:     ACTIVE
remarks:    Registration information: http://www.verisigninc.com

created:    1985-01-01
```

```
whois:      whois.verisign-grs.com

status:     ACTIVE
remarks:    Registration information: http://www.verisigninc.com

created:    1985-01-01
changed:    2017-10-05
source:     IANA

Domain Name: TENCENT.COM
Registry Domain ID: 3216596_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.markmonitor.com
Registrar URL: http://www.markmonitor.com
Updated Date: 2021-03-03T02:22:47Z
Creation Date: 1998-09-14T04:00:00Z
Registry Expiry Date: 2030-09-13T04:00:00Z
Registrar: MarkMonitor Inc.
Registrar IANA ID: 292
Registrar Abuse Contact Email: abusecomplaints@markmonitor.com
Registrar Abuse Contact Phone: +1.2083895770
Domain Status: clientDeleteProhibited https://icann.org/epp#clientDeleteProhibited
Domain Status: clientTransferProhibited https://icann.org/epp#clientTransferProhibited
Domain Status: clientUpdateProhibited https://icann.org/epp#clientUpdateProhibited
Domain Status: serverDeleteProhibited https://icann.org/epp#serverDeleteProhibited
Domain Status: serverTransferProhibited https://icann.org/epp#serverTransferProhibited
Domain Status: serverUpdateProhibited https://icann.org/epp#serverUpdateProhibited
Name Server: NS1.QQ.COM
Name Server: NS2.QQ.COM
Name Server: NS3.QQ.COM
Name Server: NS4.QQ.COM
DNSSEC: unsigned
URL of the ICANN Whois Inaccuracy Complaint Form: https://www.icann.org/wicf/
>>> Last update of whois database: 2021-03-10T15:49:40Z <<<
```

```
Domain Name: tencent.com
Registry Domain ID: 3216596_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.markmonitor.com
Registrar URL: http://www.markmonitor.com
Updated Date: 2021-03-02T19:06:11-0800
Creation Date: 1998-09-13T21:00:00-0700
Registrar Registration Expiration Date: 2030-09-12T21:00:00-0700
Registrar: MarkMonitor, Inc.
Registrar IANA ID: 292
Registrar Abuse Contact Email: abusecomplaints@markmonitor.com
Registrar Abuse Contact Phone: +1.2083895770
Domain Status: clientUpdateProhibited (https://www.icann.org/epp#clientUpdateProhibited)
Domain Status: clientTransferProhibited (https://www.icann.org/epp#clientTransferProhibited)
Domain Status: clientDeleteProhibited (https://www.icann.org/epp#clientDeleteProhibited)
Domain Status: serverUpdateProhibited (https://www.icann.org/epp#serverUpdateProhibited)
Domain Status: serverTransferProhibited (https://www.icann.org/epp#serverTransferProhibited)
Domain Status: serverDeleteProhibited (https://www.icann.org/epp#serverDeleteProhibited)
Registrant Organization: Tencent Technology (shenzhen) Co.Ltd.
```

```
URL of the ICANN Whois Inaccuracy Complaint Form: https://www.icann.org/wicf/
>>> Last update of whois database: 2021-03-10T15:49:40Z <<<

Domain Name: tencent.com
Registry Domain ID: 3216596_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.markmonitor.com
Registrar URL: http://www.markmonitor.com
Updated Date: 2021-03-02T19:06:11-0800
Creation Date: 1998-09-13T21:00:00-0700
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Domain Status: serverTransferProhibited (https://www.icann.org/epp#serverTransferProhibited)
Domain Status: serverDeleteProhibited (https://www.icann.org/epp#serverDeleteProhibited)
Registrant Organization: Tencent Technology (shenzhen) Co.Ltd.
Registrant State/Province: Guang Dong
Registrant Country: CN
Registrant Email: Select Request Email Form at https://domains.markmonitor.com/whois/tencent.com
Admin Organization: Tencent Technology (shenzhen) Co.Ltd.
Admin State/Province: Guang Dong
Admin Country: CN
Admin Email: Select Request Email Form at https://domains.markmonitor.com/whois/tencent.com
Tech Organization: Tencent Technology (shenzhen) Co.Ltd.
Tech State/Province: Guang Dong
Tech Country: CN
Tech Email: Select Request Email Form at https://domains.markmonitor.com/whois/tencent.com
Name Server: ns2.qq.com
Name Server: ns3.qq.com
Name Server: ns1.qq.com
Name Server: ns4.qq.com
DNSSEC: unsigned
URL of the ICANN WHOIS Data Problem Reporting System: http://wdprs.internic.net/
>>> Last update of WHOIS database: 2021-03-10T07:49:59-0800 <<<
```



```
Yanchengs-MacBook-Pro:~ clint.yc$ traceroute microsoft.com
traceroute: Warning: microsoft.com has multiple addresses; using 104.215.148.63
traceroute to microsoft.com (104.215.148.63), 64 hops max, 52 byte packets
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   ae122-0.icr02.sg3.ntwk.msn.net (104.44.20.18) 225.340 ms
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