Web应用基础—lab0

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一、IP地址

```
en0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
        ether 38:f9:d3:a5:ea:44
        inet6 fe80::80a:f070:6881:326%en0 prefixlen 64 secured scopeid 0xa
        inet 192.168.5.13 netmask 0xffffff00 broadcast 192.168.5.255
        nd6 options=201<PERFORMNUD,DAD>
        media: autoselect
        status: active
```
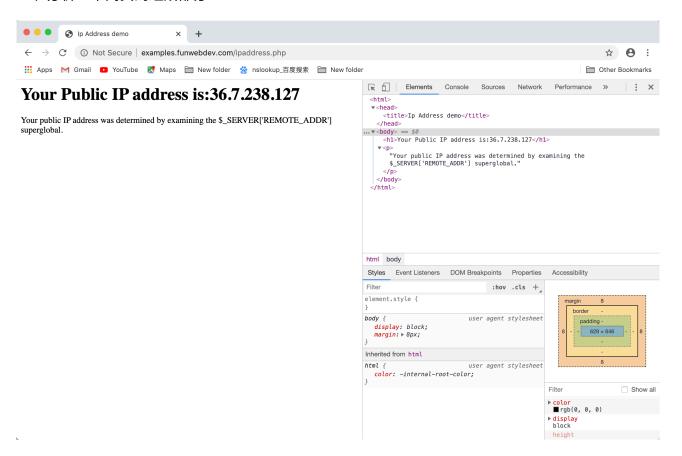
二、分析一个网页的组成部分

三、域名服务器

a、查询baidu.com的A地址记录

```
[jiangeringdembp:lab jiangerling$ nslookup -type=A baidu.com
Server:         192.168.5.1
Address:        192.168.5.1#53

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

b、查询baidu.com的域名服务器

```
[jiangeringdembp:lab jiangerling$ nslookup -type=ns baidu.com
Server:          192.168.5.1
Address:         192.168.5.1#53

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

Authoritative answers can be found from:
ns7.baidu.com    internet address = 180.76.76.92
dns.baidu.com    internet address = 202.108.22.220
ns2.baidu.com    internet address = 220.181.33.31
ns3.baidu.com    internet address = 112.80.248.64
ns4.baidu.com    internet address = 14.215.178.80
```

c、使用授权服务器查询baidu.com的IP地址

```
[jiangeringdembp:lab jiangerling$ nslookup baidu.com ns3.baidu.com
Server:          ns3.baidu.com
Address:         112.80.248.64#53

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

d、查询114.114.114.114匹配的主机名

```
[jiangeringdembp:lab jiangerling$ nslookup 114.114.114.114
Server:          192.168.5.1
Address:         192.168.5.1#53

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

Authoritative answers can be found from:
114.114.114.in-addr.arpa        nameserver = ns100.114dns.net.
114.114.114.in-addr.arpa        nameserver = ns100.114dns.com.
ns100.114dns.net        internet address = 114.114.119.119
ns100.114dns.net        internet address = 58.217.249.158
ns100.114dns.com        internet address = 60.215.138.254
ns100.114dns.com        internet address = 114.114.118.118
```

四、观察HTTP标头

截下user-agent的完整信息

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_14_6) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.100 Safari/537.36

五、追踪数据包

```
● ● ●                 📁 lab — traceroute microsoft.com — 80×56
[jiangeringdembp:lab jiangerling$ traceroute microsoft.com                        ]
traceroute: Warning: microsoft.com has multiple addresses; using 40.76.4.15
traceroute to microsoft.com (40.76.4.15), 64 hops max, 52 byte packets
 1  zte.home (192.168.5.1)  2.673 ms  3.428 ms  2.964 ms
 2  100.69.0.1 (100.69.0.1)  7.434 ms  5.003 ms  7.679 ms
 3  61.191.240.169 (61.191.240.169)  10.216 ms  8.738 ms  8.586 ms
 4  202.102.218.49 (202.102.218.49)  18.718 ms
    61.132.191.53 (61.132.191.53)  11.235 ms
    202.102.217.49 (202.102.217.49)  12.240 ms
 5  202.97.82.161 (202.97.82.161)  23.967 ms
    202.97.82.137 (202.97.82.137)  18.352 ms  18.580 ms
 6  202.97.24.130 (202.97.24.130)  32.689 ms
    202.97.24.210 (202.97.24.210)  16.850 ms  23.043 ms
 7  202.97.12.206 (202.97.12.206)  21.974 ms
    202.97.35.86 (202.97.35.86)  21.449 ms
    202.97.12.197 (202.97.12.197)  66.736 ms
 8  202.97.63.114 (202.97.63.114)  52.600 ms
    202.97.25.230 (202.97.25.230)  50.959 ms
    202.97.61.138 (202.97.61.138)  50.896 ms
 9  203.215.232.174 (203.215.232.174)  50.457 ms  50.518 ms  50.339 ms
10  ae24-0.icr02.hkg31.ntwk.msn.net (104.44.237.198)  54.104 ms
    ae20-0.icr02.hkg20.ntwk.msn.net (104.44.237.203)  50.331 ms
    ae24-0.icr02.hkg31.ntwk.msn.net (104.44.237.198)  48.059 ms
11  be-122-0.ibr02.hkg20.ntwk.msn.net (104.44.11.147)  255.371 ms  254.901 ms  2
49.684 ms
12  be-11-0.ibr01.tyo79.ntwk.msn.net (104.44.17.134)  235.597 ms
    be-1-0.ibr02.hkg31.ntwk.msn.net (104.44.7.3)  252.817 ms
    be-1-0.ibr01.hkg31.ntwk.msn.net (104.44.7.253)  237.523 ms
13  be-5-0.ibr01.tyo30.ntwk.msn.net (104.44.17.191)  246.317 ms  245.165 ms
    be-6-0.ibr02.tyo30.ntwk.msn.net (104.44.17.183)  252.203 ms
14  be-6-0.ibr02.tyo30.ntwk.msn.net (104.44.17.183)  251.101 ms
    be-9-0.ibr02.lax30.ntwk.msn.net (104.44.18.43)  250.792 ms  260.940 ms
15  be-8-0.ibr02.sn1.ntwk.msn.net (104.44.17.74)  235.123 ms  232.647 ms  236.09
6 ms
16  be-3-0.ibr02.atl30.ntwk.msn.net (104.44.19.114)  240.069 ms
    be-8-0.ibr02.sn1.ntwk.msn.net (104.44.17.74)  237.539 ms *
17  * be-3-0.ibr02.atl30.ntwk.msn.net (104.44.19.114)  438.442 ms  240.028 ms
18  be-6-0.ibr02.bn6.ntwk.msn.net (104.44.17.232)  241.846 ms
    be-2-0.ibr03.bl20.ntwk.msn.net (104.44.19.5)  258.986 ms
    be-6-0.ibr02.bn6.ntwk.msn.net (104.44.17.232)  237.579 ms
19  be-2-0.ibr04.bl20.ntwk.msn.net (104.44.19.153)  239.303 ms
    be-2-0.ibr03.bl20.ntwk.msn.net (104.44.19.5)  256.717 ms
    ae142-0.icr02.bl20.ntwk.msn.net (104.44.21.224)  282.237 ms
20  * ae160-0.icr01.bl20.ntwk.msn.net (104.44.22.210)  237.475 ms *
21  * * *
22  * * *
23  * * *
24  * * *
25  * * *
26  * * *
27  * * *
28  * * *
29  * * *
30  * * *
31  * * *
32  * * *
```

b、利用whois查询tencent.com的相关信息

```
                              lab — -bash — 80×56
[jiangeringdembp:lab jiangerling$ 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:eea3:0:0:0:0:30
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 E2D3C916F6DEEAC73294E8268FB5885044A833FC5459588F4A9184CF
C41A5766

whois:        whois.verisign-grs.com

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

created:      1985-01-01
```