

## Lab 0

### 1.IP 地址

```
en0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    options=400<CHANNEL_IO>
    ether f8:ff:c2:00:d4:c2
    inet6 fe80::5:3e9d:c83c:5a77%en0 prefixlen 64 secured scopeid 0x6
    inet 192.168.101.10 netmask 0xffffffff00 broadcast 192.168.101.255
    nd6 options=201<PERFORMNUD,DAD>
    media: autoselect
    status: active

en5: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    ether ac:de:48:00:11:22
    inet6 fe80::aede:48ff:fe00:1122%en5 prefixlen 64 scopeid 0x4
    nd6 options=201<PERFORMNUD,DAD>
    media: autoselect (100baseTX <full-duplex>)
    status: active

awdl0: flags=8943<UP,BROADCAST,RUNNING,PROMISC,SIMPLEX,MULTICAST> mtu 1484
    options=400<CHANNEL_IO>
    ether a6:1c:54:f9:7c:ec
    inet6 fe80::a41c:54ff:fe09:7cec%awdl0 prefixlen 64 scopeid 0x8
    nd6 options=201<PERFORMNUD,DAD>
    media: autoselect
    status: active

llw0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    options=400<CHANNEL_IO>
    ether a6:1c:54:f9:7c:ec
    inet6 fe80::a41c:54ff:fe09:7cec%llw0 prefixlen 64 scopeid 0x9
    nd6 options=201<PERFORMNUD,DAD>
    media: autoselect
    status: active
```

### 2.分析一个网页的组成部分

Docs/写给新手的 GitHub 指南... x | GitHub x | Hello World · GitHub Guides x | Ip Address demo x +

examples.funwebdev.com/ipaddress.php

应用 Gmail YouTube 地图 资讯 翻译 Docs/写给新手的 G...

## Your Public IP address is:116.232.18.224

Your public IP address was determined by examining the `$_SERVER['REMOTE_ADDR']` superglobal.

Elements Console Sources Network Performance >> X

Filter Hide data URLs

XHR JS CSS Img Media Font Doc WS Manifest Other

Only show requests with SameSite issues

	50 ms	100 ms	150 ms	200 ms	250 ms	300 ms	350 ms	400 ms

Name	Sta...	Type	Initiator	Size	Time	Waterfall
ipaddress.php	200	do...	Other	44...	38...	

1 requests | 445 B transferred | 177 B resources | Finish: 381 ms | DOMContentLoaded: 396 ms

Docs/写给新手的 GitHub 指南... x | GitHub x | Hello World · GitHub Guides x | Ip Address demo x +

examples.funwebdev.com/ipaddress.php

应用 Gmail YouTube 地图 资讯 翻译 Docs/写给新手的 G...

## Your Public IP address is:116.232.18.224

Your public IP address was determined by examining the `$_SERVER['REMOTE_ADDR']` superglobal.

Elements Console Sources Network Performance >> X

```
<html>
  <head>
    <title>Ip Address demo</title>
  </head>
  <body>
    <h1>Your Public IP address is:116.232.18.224</h1>
    <p>Your public IP address was determined by examining the
    $_SERVER['REMOTE_ADDR'] superglobal.</p>
  </body>
</html>
```

html body p

Styles Event Listeners DOM Breakpoints Properties Accessibility

Filter :hov .cls +

element.style { }

```
p {
  display: block;
  margin-block-start: 1em;
  margin-block-end: 1em;
  margin-inline-start: 0px;
  margin-inline-end: 0px;
}
```

Inherited from html

```
html {
  color: -internal-root-color;
}
```

margin 16 border padding 629 x 44

Filter Show all

color: rgb(0, 0, 0)

display: block

### 3.域名服务器

(1)

```
Last login: Wed Feb 26 09:18:48 on ttys000
[jingjing@jingjingdeMacBook-Pro ~ % nslookup baidu.com
Server:      192.168.101.1
Address:     192.168.101.1#53
```

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

(2)

```
[jingjing@jingjingdeMacBook-Pro ~ % nslookup -type=ns google.com
Server:      192.168.101.1
Address:     192.168.101.1#53
```

```
Non-authoritative answer:
google.com      nameserver = ns2.google.com.
google.com      nameserver = ns3.google.com.
google.com      nameserver = ns4.google.com.
google.com      nameserver = ns1.google.com.
```

(3)

```
[jingjing@jingjingdeMacBook-Pro ~ % nslookup baidu.com ns2.baidu.com
Server:      ns2.baidu.com
Address:     220.181.33.31#53
```

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

(4)

```
[jingjing@jingjingdeMacBook-Pro ~ % nslookup 114.114.114.114
Server:      192.168.101.1
Address:     192.168.101.1#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

Chrome DevTools Network tab showing the request for `www.baidu.com`. The page content includes the Baidu logo, a search bar, and a QR code for downloading the Baidu app.

**Request Details:**

- Request URL: `https://www.baidu.com/`
- Request Method: `GET`
- Status Code: `200 OK`
- Remote Address: `180.161.49.12:443`
- Referrer Policy: `unsafe-url`

**Response Headers:**

- `Bdpagetype`: 1
- `Bdqid`: `0xce428e49004a5140`
- `Cache-Control`: private
- `Connection`: keep-alive
- `Content-Encoding`: gzip
- `Content-Type`: text/html
- `Cxy_all`: `baidu+ea87809bef8c28e050298951dbf62914`
- `Date`: Wed, 26 Feb 2020 02:02:32 GMT
- `Expires`: Wed, 26 Feb 2020 02:01:52 GMT
- `Server`: BWS/1.1
- `Set-Cookie`: `delPer=0; path=/; domain=.baidu.com`
- `Set-Cookie`: `BDSVRTM=0; path=/`
- `Set-Cookie`: `BD_HOME=0; path=/`
- `Set-Cookie`: `H_PS_PSSID=1447_21126_30840_30823_26350; path=/; domain=.baidu.com`
- `Strict-Transport-Security`: `max-age=172800`
- `Traceid`: `1582682552045617562614862598164464685376`
- `Transfer-Encoding`: chunked
- `Vary`: Accept-Encoding
- `X-UA-Compatible`: `IE=Edge,chrome=1`

**Performance Metrics:**

- 5.272 ms
- 2.971 ms
- 2.608 ms

## 5.追踪数据包

(1)

```
jingjing — traceroute microsoft.com — 80x71
Last login: Wed Feb 26 09:21:17 on ttys000
jingjing@jingjingdeMacBook-Pro ~ % 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  192.168.101.1 (192.168.101.1)  3.528 ms  4.320 ms  4.016 ms
 2  192.168.1.1 (192.168.1.1)  8.034 ms  5.249 ms  4.421 ms
 3  61.152.2.106 (61.152.2.106)  7.567 ms
   61.152.51.206 (61.152.51.206)  35.781 ms
   61.152.2.106 (61.152.2.106)  9.585 ms
 4  61.152.3.21 (61.152.3.21)  8.330 ms
   61.152.2.105 (61.152.2.105)  11.706 ms
   61.152.2.109 (61.152.2.109)  8.039 ms
 5  101.95.120.150 (101.95.120.150)  10.302 ms
   101.95.120.206 (101.95.120.206)  8.189 ms
   101.95.88.14 (101.95.88.14)  8.891 ms
 6  202.97.94.237 (202.97.94.237)  25.356 ms
   202.97.57.229 (202.97.57.229)  6.854 ms
   202.97.24.190 (202.97.24.190)  25.056 ms
 7  202.97.33.134 (202.97.33.134)  7.387 ms  14.526 ms  9.365 ms
 8  202.97.91.110 (202.97.91.110)  37.996 ms
   202.97.63.114 (202.97.63.114)  36.838 ms
   202.97.6.6 (202.97.6.6)  53.681 ms
 9  203.215.232.174 (203.215.232.174)  48.754 ms  46.674 ms  45.940 ms
10  ae20-0.icr02.hkg20.ntwk.msn.net (104.44.237.203)  47.722 ms  46.767 ms  50.5
76 ms
11  be-122-0.ibr02.hkg20.ntwk.msn.net (104.44.11.147)  263.474 ms
   be-122-0.ibr02.hkg31.ntwk.msn.net (104.44.11.137)  297.347 ms
   be-102-0.ibr01.hkg31.ntwk.msn.net (104.44.11.121)  262.453 ms
12  be-10-0.ibr02.tyo79.ntwk.msn.net (104.44.17.192)  259.915 ms
   be-11-0.ibr01.tyo79.ntwk.msn.net (104.44.17.134)  302.592 ms  297.613 ms
13  be-10-0.ibr02.tyo79.ntwk.msn.net (104.44.17.192)  420.411 ms
   be-6-0.ibr02.tyo30.ntwk.msn.net (104.44.17.183)  293.116 ms
   be-10-0.ibr02.tyo79.ntwk.msn.net (104.44.17.192)  299.700 ms
14  be-6-0.ibr02.tyo30.ntwk.msn.net (104.44.17.183)  225.740 ms
   be-5-0.ibr01.tyo30.ntwk.msn.net (104.44.17.191)  282.347 ms  296.943 ms
15  be-4-0.ibr01.sn1.ntwk.msn.net (104.44.17.72)  306.734 ms
   be-8-0.ibr02.sn1.ntwk.msn.net (104.44.17.74)  225.425 ms *
16  be-3-0.ibr02.atl30.ntwk.msn.net (104.44.19.114)  216.163 ms
   be-10-0.ibr01.atl30.ntwk.msn.net (104.44.18.220)  230.636 ms
   be-3-0.ibr02.atl30.ntwk.msn.net (104.44.19.114)  215.388 ms
17  * be-6-0.ibr01.bn6.ntwk.msn.net (104.44.17.230)  245.146 ms
   be-6-0.ibr02.bn6.ntwk.msn.net (104.44.17.232)  271.480 ms
18  be-6-0.ibr01.bn6.ntwk.msn.net (104.44.17.230)  297.484 ms
   be-6-0.ibr02.bn6.ntwk.msn.net (104.44.17.232)  307.058 ms
   be-2-0.ibr03.bl20.ntwk.msn.net (104.44.19.5)  221.512 ms
19  be-2-0.ibr04.bl20.ntwk.msn.net (104.44.19.153)  277.177 ms
   ae160-0.icr01.bl20.ntwk.msn.net (104.44.22.210)  299.582 ms  215.131 ms
20  * * *
21  * * *
22  * * *
23  * * *
24  * * *
25  * * *
26  * * *
27  * * *
28  * * *
29  * * *
30  * * *
31  * * *
32  * * *
33  * * *
34  * * *
35  * * *
36  * * *
37  * * *
38  * * *
39  * * *
40  * * *
41  * * *
42  * * *
43  * * *
```

(2)



```
jingjing — -zsh — 80x71
Last login: Wed Feb 26 09:50:09 on ttys000
[jingjing@jingjingdeMacBook-Pro ~ %] 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
changed:     2017-10-05
source:      IANA

# whois.verisign-grs.com

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: 2019-08-12T09:11:43Z
Creation Date: 1998-09-14T04:00:00Z
Registry Expiry Date: 2021-09-13T04:00:00Z
Registrar: MarkMonitor Inc.
Registrar IANA ID: 292
```

```
jingjing — -zsh — 80x71

Registrar Abuse Contact Email: abusecomplaints@markmonitor.com
Registrar Abuse Contact Phone: +1.2083895740
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: 2020-02-26T01:58:23Z <<<

# whois.markmonitor.com

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: 2019-08-12T02:11:43-0700
Creation Date: 1998-09-13T21:00:00-0700
Registrar Registration Expiration Date: 2021-09-12T00:00:00-0700
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.
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: ns1.qq.com
Name Server: ns3.qq.com
Name Server: ns4.qq.com
Name Server: ns2.qq.com
DNSSEC: unsigned
URL of the ICANN WHOIS Data Problem Reporting System: http://wdprs.internic.net/
>>> Last update of WHOIS database: 2020-02-25T17:59:11-0800 <<<

jingjing@jingjingdeMacBook-Pro ~ %
```