

# HTTP

## LIBERAL EDUCATION

天外天工作室通识培训 - HTTP 协议





通识培训 - 超文本传输协议

# **HTTP**

## **LIBERAL EDUCATION**

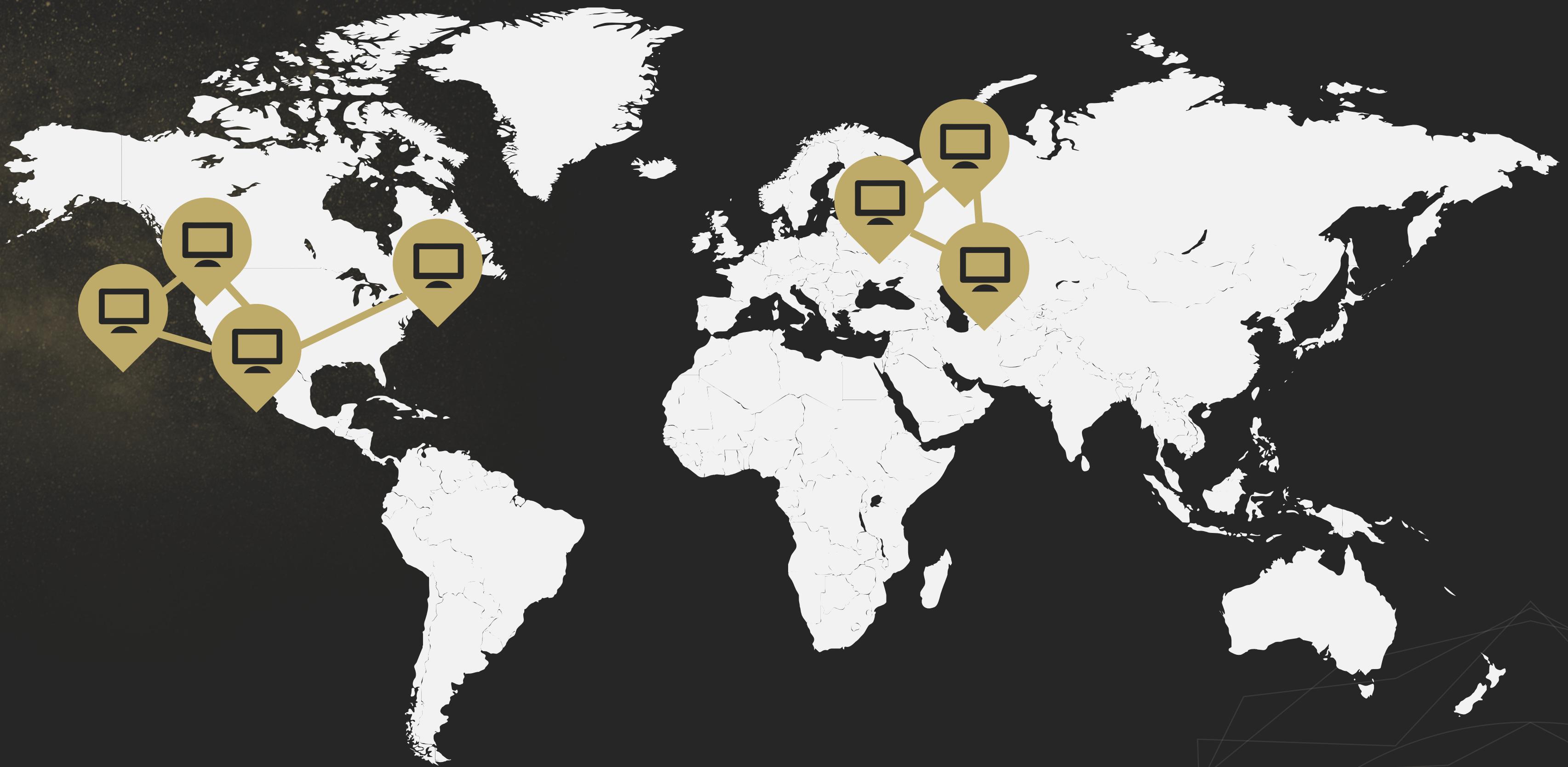
---

TZINGTAO CHOW @ TWTSTUDIO

**我们每天使用互联网。**

你是否想过， 它是如何形成的？





局域网的部落式分布



应用层

传输层

网络层

链接层

物理层



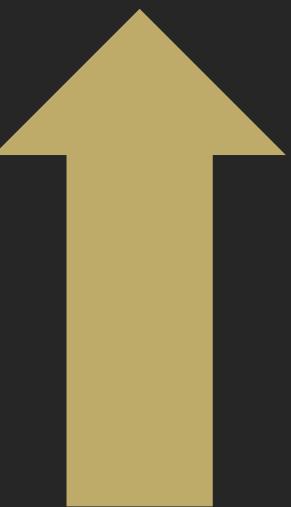


# DNS

(Domain Name System)



**172.217.24.14**



**maps.google.com**





**172.217.24.14**

**+86-18102050115**

DNS

通讯录

**maps.google.com**

**Eric Spiekermann**





# **URI**

**(Uniform Resource Identifier)**

**scheme://  
[user:password@]  
host[:port]  
]/[/path  
[?query]  
[#fragment]**

**HTTP  
URI/URL**



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**scheme:[//[user:password@]host[:port]]**  
**[/]path[?query][#fragment]**

**http://www.twt.edu.cn/**  
**ftp://www.example.com/**  
**steam://rungameid/238460**  
**mqqqwpa://im/chat?type=wpa&uin=58&version=1**  
**chrome://settings/**  
**moz://a**

**HTTP  
URI/URL**



**scheme://[user:password@]host[:port]  
[/]path[?query][#fragment]**

**http://admin:admin@192.168.1.1/  
https://zhoujingtao:fjandi@at.twtstudio.com/  
ftp://ftpuser:password@file.satki.io/**

**HTTP  
URI/URL**



**scheme:[//[user:password@]host[:port]]  
[/]path[?query][#fragment]**

**http://g.co/earth  
http://translate.google.com/  
http://192.168.1.1:80/  
https://localhost:443/  
ftp://www.twt.edu.cn:21/**

**HTTP  
URI/URL**



**scheme:[//[user:password@]host[:port]]  
[/]path[?query][#fragment]**

**http://wenjin.in/account/login/  
http://www.twt.edu.cn/static/event-top-3.png  
http://www.tzingtao.com/file/res.zip  
http://ope.com/api/v1/library/book?id=513999**

**HTTP  
URI/URL**



**scheme:[//[user:password@]host[:port]]  
[/]path[?query][#fragment]**

**http://open.twtstudio.com/api/v1/lib/book  
? title=Cien%20anos%20de%20Soledad  
(Cien anos de Soledad)**

**http://news.twt.edu.cn/  
? mode=default  
& page=secondpage  
& type=2**

**HTTP  
URI/URL**



**scheme:[//[user:password@]host[:port]]  
[/]path[?query][#fragment]**

**http://mail.twimg.edu.cn/#!/item/2110**

**https://wikipedia.org/PHP#.E6.87.89.E7.94.A8**

**https://mega.nz/#!aaaaaaaaa\_bbbbbbbb**

**HTTP  
URI/URL**

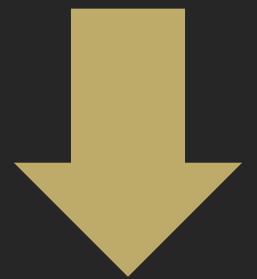




# **HTML**

**(Hypertext Markup Language)**

THE [b]FIRST[/b] PLACE



THE FIRST PLACE

```
<!DOCTYPE html>
<html lang="en">

    <head>
        <meta charset="UTF-8">
        <meta name="description" content="TWT Mobile App Distribution Platform">
        <meta name="theme-color" content="#222">
        <title> TWT Mobile </title>
        <script src="js/distort.js"></script>
        <link rel="stylesheet" type="text/css" href="css/base.css">
    </head>

    <body>
        <div id="outer">
            <div class="item"></div>
            ...
        </div>
    </body>

    <script>
        $.ajax({
            url: 'http://60.205.188.39/api/app/info/',
            type: 'GET',
            complete: function (info) {
                getSingleAppInfo(info, 0);
            }
        });
    </script>

</html>
```

```
<meta name="description" content="<br><br><meta name="theme-color" content="#000000"><br><title> TWT Mobile </title><br><script src="js/distort.js"></script><br><link rel="stylesheet" type="text/css" href="css/style.css" /><br></head><br><body><br><div id="outer"><br><div class="item"></div>
```



# **HTTP**

**(Hypertext Transfer Protocol)**

# **HTTP**

(Hypertext Transfer Protocol)

# **HTML**

(Hypertext Markup Language)

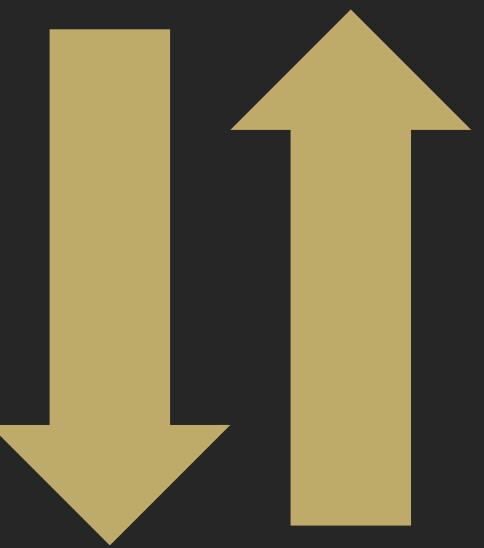


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客户端

GET /index.html HTTP/1.1  
Host: www.twt.edu.cn  
...



服务器

HTTP/1.1 200 OK  
Content-Type: text/html  
Content-Length: 137582

<html>  
...



# HTTP REQUEST METHODS

GET



# HTTP REQUEST METHODS



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**HTTP**  
REQUEST METHODS

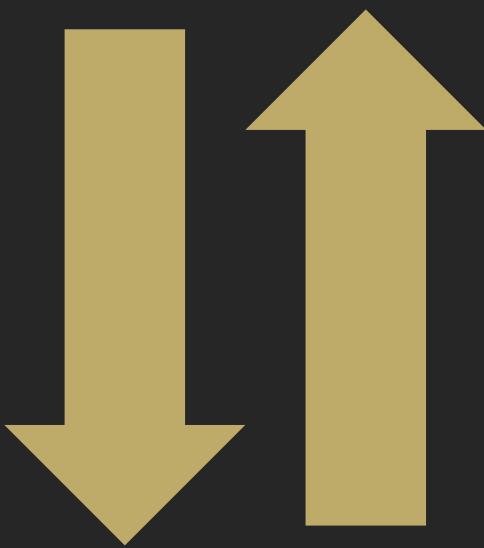


TWTSTUDIO



客户端

```
GET /index.html HTTP/1.1  
Host: www.twt.edu.cn  
...
```



服务器

```
HTTP/1.1 200 OK  
Content-Type: text/html  
Content-Length: 137582
```

```
<html>  
...
```



**GET /index.html HTTP/1.1  
Host: www.twt.edu.cn  
...**

# 请求报文

**HTTP Request**

# **MESSAGE 报文**

**POST /form/entry HTTP/1.1**

**Host: twt.edu.cn**

**Connection: Keep-alive**

**Content-Type: application/x-www-form-urlencoded**

**Content-Length: 16**

**name=Eric&age=20**

**HTTP  
MESSAGE**



**HTTP Request**

# MESSAGE 报文

POST /form/entry HTTP/1.1

**Host:** twt.edu.cn

**Connection:** Keep-alive

**Content-Type:** application/x-www-form-urlencoded

**Content-Length:** 16

**name=Eric&age=20**

**HTTP  
MESSAGE**



HTTP Request

# MESSAGE 报文

POST

/form/entry

HTTP/1.1

Host: twt.edu.cn

Connection: Keep-alive

Content-Type: application/x-www-form-urlencoded

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**HTTP Request**

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**HTTP  
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HTTP Request

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HTTP  
MESSAGE



**HTTP Request**

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**HTTP  
MESSAGE**



**HTTP Request**

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**HTTP  
MESSAGE**

**HTTP Request**

# **MESSAGE 报文**

**POST /form/entry HTTP/1.1**

**Host: twt.edu.cn**

**Connection: Keep-alive**

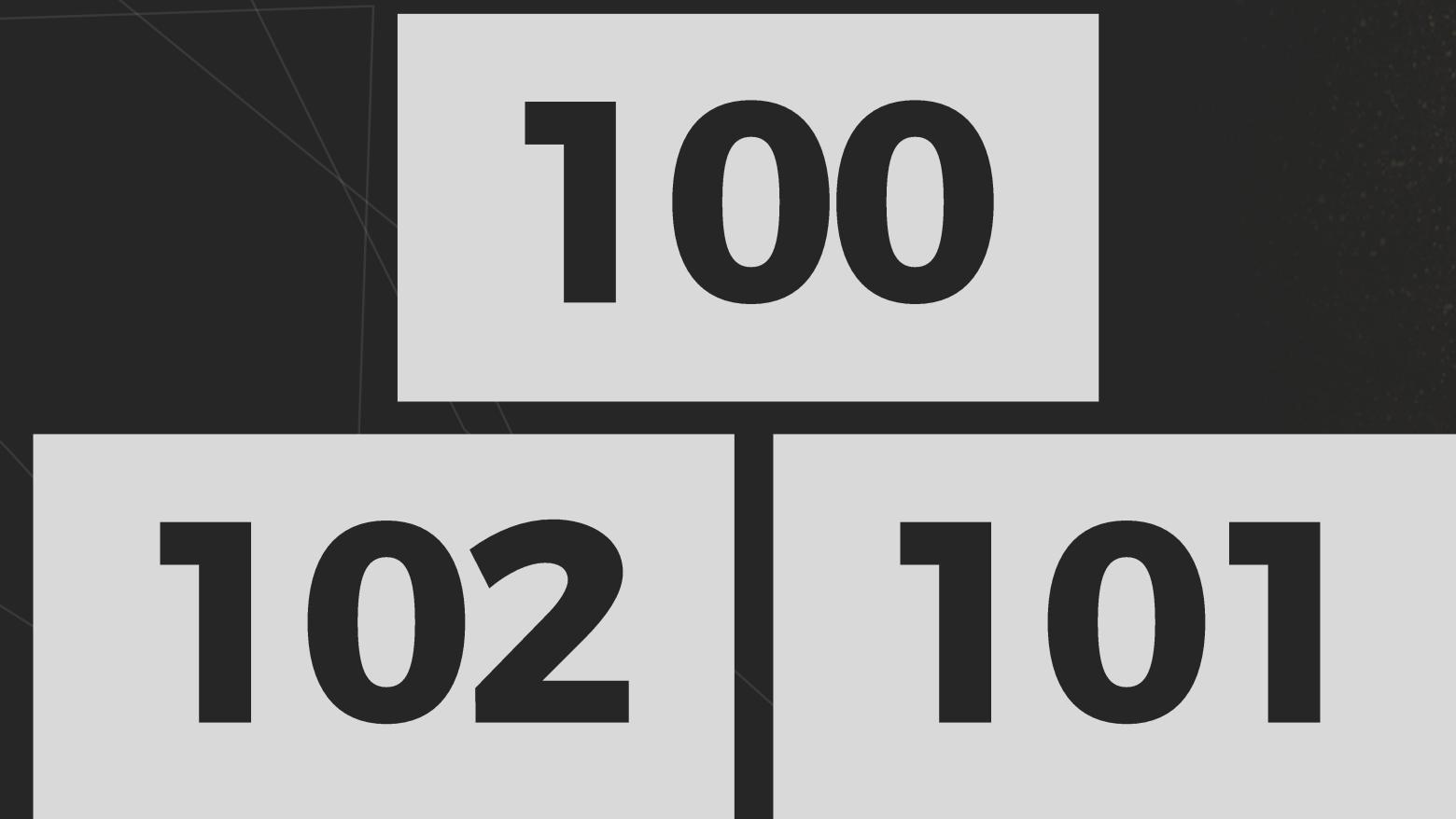
**Content-Type: application/x-www-form-urlencoded**

**Content-Length: 16**

**name=Eric&age=20**

**HTTP  
MESSAGE**

# Information

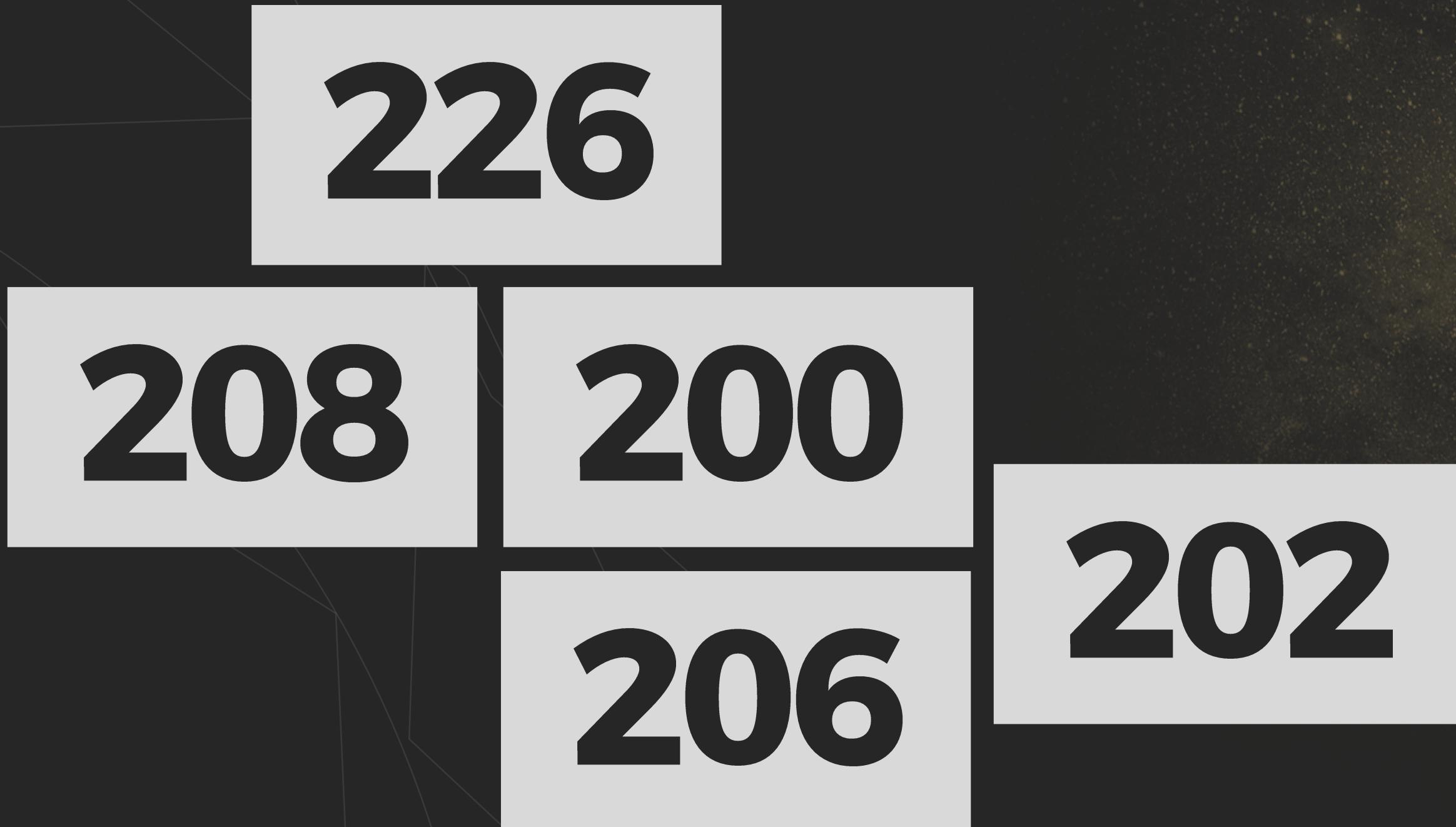


**HTTP**  
**RESPONSE STATUS CODE**



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# Success



**HTTP**  
**RESPONSE STATUS CODE**



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# Redirect



**HTTP**  
**RESPONSE STATUS CODE**



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# Client Error



**HTTP**  
RESPONSE STATUS CODE



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# Server Error

503

501

500

502

506

HTTP  
RESPONSE STATUS CODE



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**200 OK**

**400 Bad Request**

**403 Forbidden**

**404 Not Found**

**413 Request Entity Too Large**

**500 Internal Server Error**

**HTTP  
RESPONSE STATUS CODE**



TWTSTUDIO

**200 OK**

**400 Bad Request**

**403 Forbidden**

**404 Not Found**

**413 Request Entity Too Large**

**418 I'm a Teapot**



**500 Internal Server Error**

**HTTP  
RESPONSE STATUS CODE**

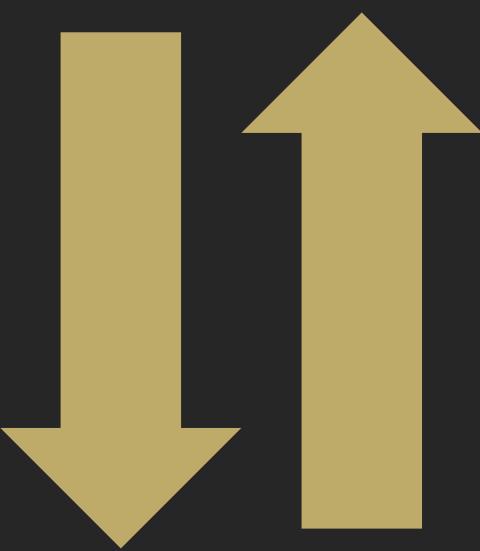


TWTSTUDIO



客户端

GET /index.html HTTP/1.1  
Host: www.twt.edu.cn  
...



服务器

HTTP/1.1 200 OK  
Content-Type: text/html  
Content-Length: 137582

<html>  
...



## HTTP Response

# MESSAGE 报文

HTTP/1.1 200 OK

Date: Tue, 10 Jul 2017 06:50:15 GMT

Content-Length: 362

Content-Type: text/html

<html>

<head>

...

## HTTP MESSAGE



TWTSTUDIO

## HTTP Response

# MESSAGE 报文

HTTP/1.1      200      OK

Date: Tue, 10 Jul 2017 06:50:15 GMT

Content-Length: 362

Content-Type: text/html

<html>

<head>

...

## HTTP MESSAGE



TWTSTUDIO

## HTTP Response

# MESSAGE 报文

HTTP/1.1 200 OK

Date: Tue, 10 Jul 2017 06:50:15 GMT  
Content-Length: 362  
Content-Type: text/html

```
<html>
<head>
...

```

## HTTP MESSAGE

## HTTP Response

# MESSAGE 报文

HTTP/1.1 200 OK

Date: Tue, 10 Jul 2017 06:50:15 GMT

Content-Length: 362

Content-Type: text/html

<html>

<head>

...

## HTTP MESSAGE



TWTSTUDIO

## HTTP Response

# MESSAGE 报文

HTTP/1.1 200 OK

Date: Tue, 10 Jul 2017 06:50:15 GMT

Content-Length: 362

Content-Type: text/html

<html>

<head>

...

# HTTP MESSAGE



TWTSTUDIO

## HTTP Response

# MESSAGE 报文

HTTP/1.1 200 OK

Date: Tue, 10 Jul 2017 06:50:15 GMT

Content-Length: 362

Content-Type: text/html

<html>

<head>

...

## HTTP MESSAGE



TWTSTUDIO

## HTTP Response

# MESSAGE 报文

HTTP/1.1 200 OK

Date: Tue, 10 Jul 2017 06:50:15 GMT

Content-Length: 362

Content-Type: text/html

<html>

<head>

...

## HTTP MESSAGE



TWTSTUDIO

## HTTP Response

# MESSAGE 报文

HTTP/1.1 200 OK

Date: Tue, 10 Jul 2017 06:50:15 GMT

Content-Length: 362

Content-Type: text/html

<html>

<head>

...

## HTTP MESSAGE



TWTSTUDIO



# **HTTPS**

**(Hypertext Transfer Protocol Secure)**

中国移动 E 下午7:49



weibo.cn



小人物-冬天



首页

消息

发现

我



人民日报



1分钟前 来自人民日报微博

【气质民族风 + 说唱R&B，人民日报“猴年  
来了！[带感]】“中国这三年变化大，  
你我也改变了他……”人民日报“猴年  
你听了吗？再不听你就out啦！这旋  
点也不魔性，小编也就听了100多遍  
你们也来感受下↓↓ 秒拍视频



关于

...

更多



秀流量



约套餐



惠享受



猎应用

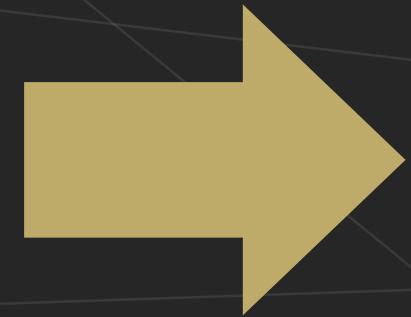


中国移动





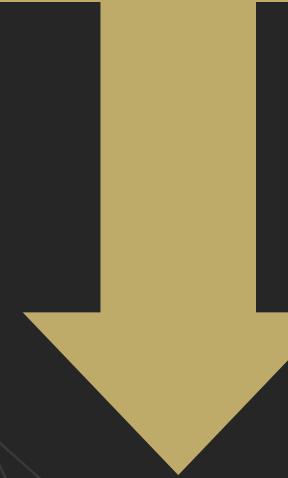
服务器



```
<html>
  <body>
    <div id="content"/>
  </body>
</html>
```



运营商  
骚操作



```
<html>
  <body>
    <div id="content"/>
    <div id="ads"/>
  </body>
</html>
```



用户

**HTTP  
SECURE**

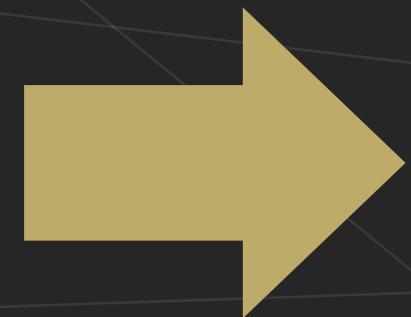


TWTSTUDIO



服务器

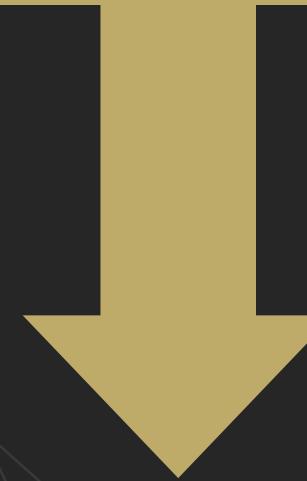
抱歉，有技术  
真的是可以  
为所欲为的



d38b8c2c1093dd0fec383a9  
d9ac942dauiuih8972khad8  
97qwaikojopfsp238khjk11  
h21899rtjk34ihh2ui2icb8  
c1093dd0fec383a9d9ac940



运营商：  
？



d38b8c2c1093dd0fec383a9  
d9ac942dauiuih8972khad8  
97qwaikojopfsp238khjk11  
h21899rtjk34ihh2ui2icb8  
c1093dd0fec383a9d9ac940



用户

HTTP  
SECURE



TWTSTUDIO



# **JSON**

**(JavaScript Object Notation)**

**JSON**

{ }



TWTSTUDIO

# {object}

**JSON**



TWTSTUDIO

{ object }

[ ]

**JSON**



TWTSTUDIO

{ Object }  
[ Array ]

**JSON**



TWTSTUDIO

# { Object }

“ “ : “ ”

# [ Array ]

**JSON**



TWTSTUDIO

{ Object }

"Key": "value"

[ Array ]

JSON



TWTSTUDIO

**JSON**

{ }



TWTSTUDIO

{  
}

**JSON**



TWTSTUDIO

```
{  
  "title": "JaneEyre"  
}
```

**JSON**



TWTSTUDIO

```
{  
  "title": "JaneEyre",  
  "author": "C.Bronte"  
}
```

**JSON**



```
{  
  "title": "JaneEyre",  
  "author": "C.Bronte",  
  "year": 1847  
}
```

**JSON**



```
{  
  "title": "JaneEyre",  
  "author": "C.Bronte",  
  "year": 1847,  
  "locale":  
}
```

**JSON**



```
{  
  "title": "JaneEyre",  
  "author": "C.Bronte",  
  "year": 1847,  
  "locale": []  
}
```

**JSON**



```
{  
  "title": "JaneEyre",  
  "author": "C.Bronte",  
  "year": 1847,  
  "locale": ["zh", "en"]  
}
```

**JSON**



```
{  
  "title": "JaneEyre",  
  "author": "C.Bronte",  
  "year": 1847,  
  "locale": ["zh", "en"]  
}
```

**JSON**



```
{  
  "title": "JaneEyre",  
  "author":  
  "year": 1847,  
  "locale": ["zh", "en"]  
}
```

**JSON**



```
{  
  "title": "JaneEyre",  
  "author": {  
    },  
  "year": 1847,  
  "locale": ["zh", "en"]  
}
```

**JSON**



```
{  
  "title": "JaneEyre",  
  "author": {  
    },  
  "year": 1847,  
  "locale": ["zh", "en"]  
}
```

**JSON**

```
{  
  "title": "JaneEyre",  
  "author": {  
    "name": "C.Bronte",  
    "gender": "female",  
    "married": true  
  },  
  "year": 1847,  
  "locale": ["zh", "en"]  
}
```

**JSON**

# HTTP

## LIBERAL EDUCATION

天外天工作室通识培训 - HTTP 协议



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**THE END**  
Hopefully it helps =)

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