Southern University of Science and Technology

Computer Networking Lab Report

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Major:

Time: 2018/9/25

Introduction:

- Using cURL make GET request to http://httpbin.org/get
- Using cURL make POST request to http://httpbin.org/post
  - Using curl -v to inspect the interaction
  - Using wireshark to capture the packet cURL sent.
- Write your report.
  - What did you get via cURL?
  - What are the meaning of fields in your request and response headers?
  - Did wireshark capture correspond to the cURL request?

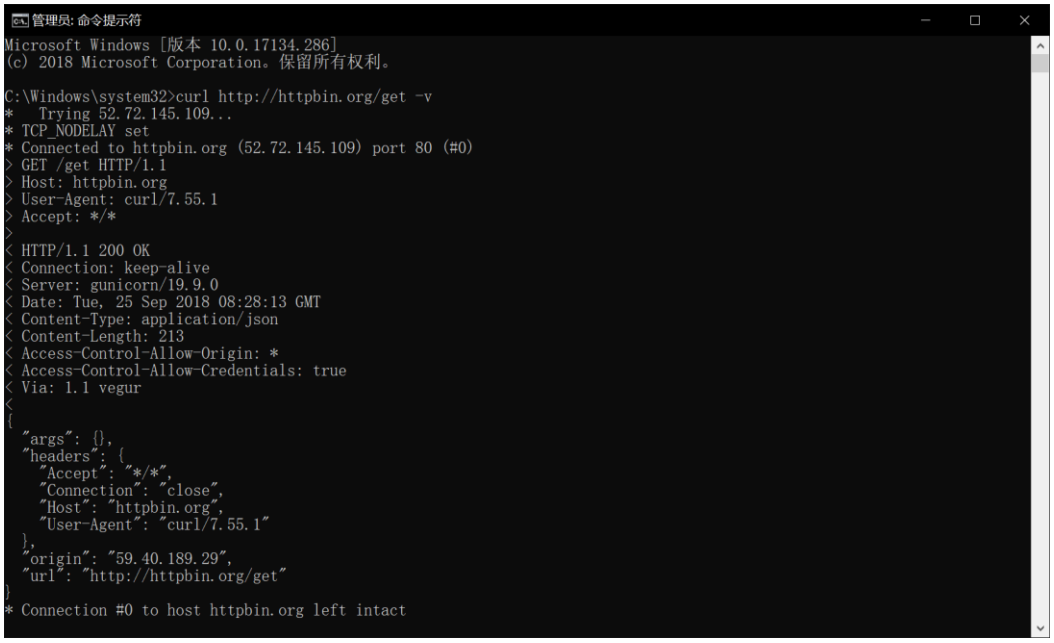
Procedure:

1.Open Wireshark, then open commander processor, input: curl http://httpbin.org/get -v, and we can get reply from curl (fig.1) and Wireshark (fig.2).

2.Open Wireshark, then open commander processor, input: curl -d "" http://httpbin.org/post -v, and we can get reply from curl (fig.3) and Wireshark (fig.4).

Result:

1.



(fig.1) Send GET request to http://httpbin.org/get

(1) We get information from curl below:

```
*     Trying 52.72.145.109...
* TCP_NODELAY set
* Connected to httpbin.org (52.72.145.109) port 80 (#0)
> GET /get HTTP/1.1
> Host: httpbin.org
> User-Agent: curl/7.55.1
> Accept: */*
>
< HTTP/1.1 200 OK
< Connection: keep-alive
< Server: gunicorn/19.9.0
< Date: Tue, 25 Sep 2018 08:28:13 GMT
< Content-Type: application/json
< Content-Length: 213
< Access-Control-Allow-Origin: *
< Access-Control-Allow-Credentials: true
< Via: 1.1 vegur
<
{
   "args": {},
   "headers": {
      "Accept": "*/*",
```

```
        "Connection": "close",
        "Host": "httpbin.org",
        "User-Agent": "curl/7.55.1"
    },
    "origin": "59.40.189.29",
    "url": "http://httpbin.org/get"
}
* Connection #0 to host httpbin.org left intact
```


(2) Request header:

```
> GET /get HTTP/1.1
> Host: httpbin.org
> User-Agent: curl/7.55.1
> Accept: */*
```

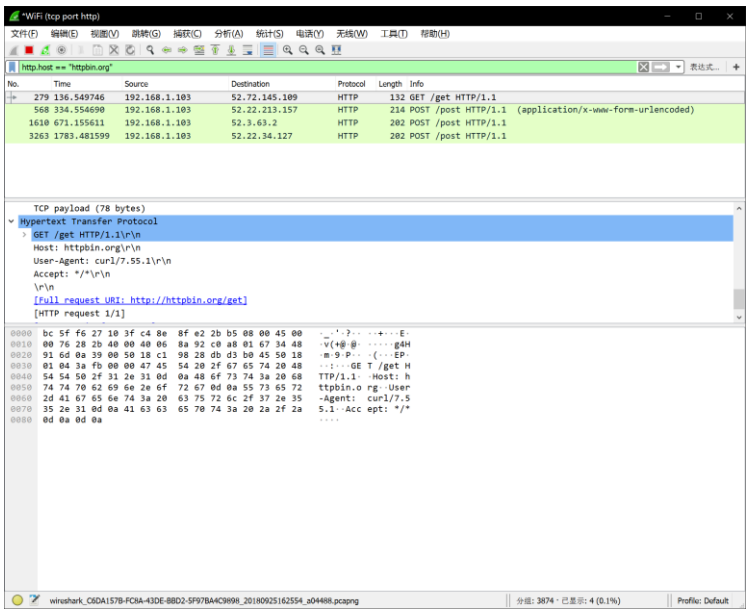
It give us the information about our ending system. First line means we use GET to send a request. Second line means we send request to the requested URL:httpbin.org. Third line means our computer use curl/7.55.1 to send request.

Rsesponse header:

```
< HTTP/1.1 200 OK
< Connection: keep-alive
< Server: gunicorn/19.9.0
< Date: Tue, 25 Sep 2018 08:28:13 GMT
< Content-Type: application/json
< Content-Length: 213
< Access-Control-Allow-Origin: *
< Access-Control-Allow-Credentials: true
< Via: 1.1 vegur
```

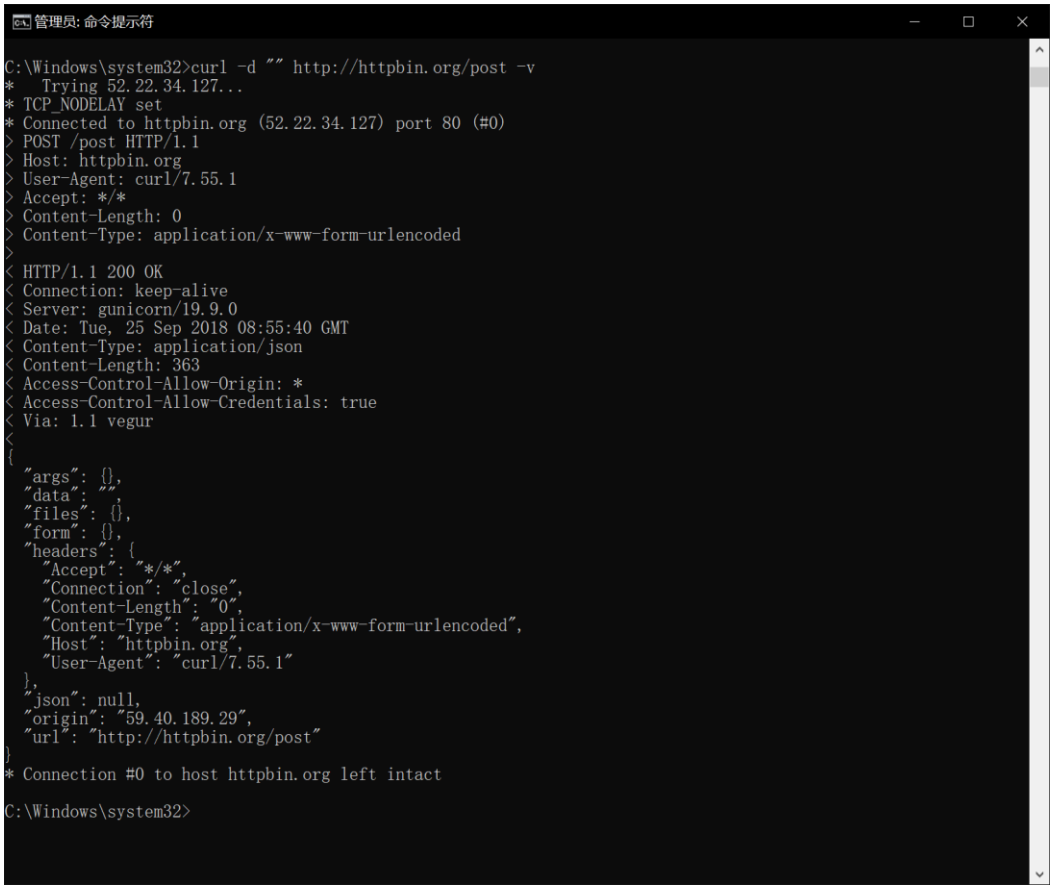
It give us the information about the state of HTTP request, server's type, data, content-type, content-length and so on.

(3)



(fig.2) Wireshark's user interface after send a GET request
We can see the figure above, Wireshark capture correspond to the cURL request.

2.



(fig.3) Send POST request to http://httpbin.org/post
(1) We can get information below:
* Trying 52.22.34.127...
* TCP_NODELAY set
* Connected to httpbin.org (52.22.34.127) port 80 (#0)
> POST /post HTTP/1.1
> Host: httpbin.org
> User-Agent: curl/7.55.1
> Accept: */*
> Content-Length: 0
> Content-Type: application/x-www-form-urlencoded
>
< HTTP/1.1 200 OK
< Connection: keep-alive
< Server: gunicorn/19.9.0
< Date: Tue, 25 Sep 2018 08:55:40 GMT
< Content-Type: application/json
< Content-Length: 363

```
< Access-Control-Allow-Origin: *
< Access-Control-Allow-Credentials: true
< Via: 1.1 vegur
<
{
   "args": {},
   "data": "",
   "files": {},
   "form": {},
   "headers": {
      "Accept": "*/*",
      "Connection": "close",
      "Content-Length": "0",
      "Content-Type": "application/x-www-form-urlencoded",
      "Host": "httpbin.org",
      "User-Agent": "curl/7.55.1"
   },
   "json": null,
   "origin": "59.40.189.29",
   "url": "http://httpbin.org/post"
}
* Connection #0 to host httpbin.org left intact
```

(2) Request header:

```
> POST /post HTTP/1.1
> Host: httpbin.org
> User-Agent: curl/7.55.1
> Accept: */*
> Content-Length: 0
> Content-Type: application/x-www-form-urlencoded
```

It tells us that the method POST we use to send request, the requested URL is httpbin.org, our computer use curl/7.55.1 to send request and the information about post request.

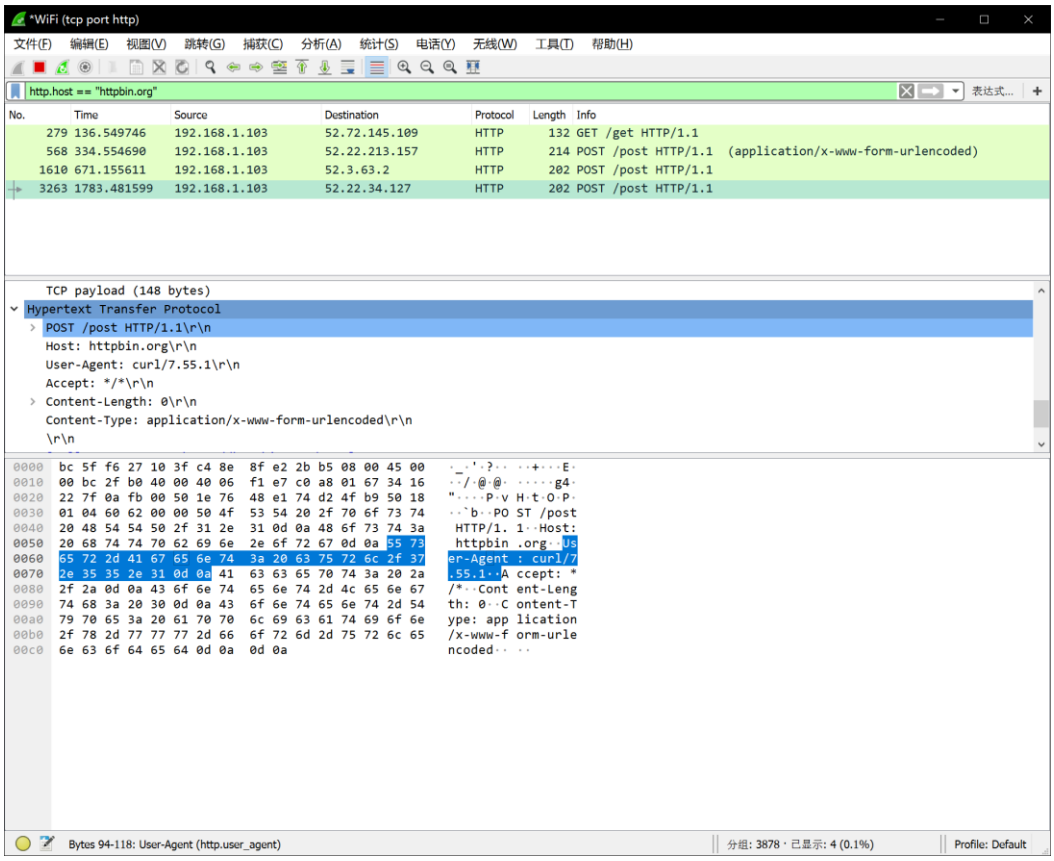
Response header:

```
< HTTP/1.1 200 OK
< Connection: keep-alive
< Server: gunicorn/19.9.0
< Date: Tue, 25 Sep 2018 08:55:40 GMT
< Content-Type: application/json
< Content-Length: 363
< Access-Control-Allow-Origin: *
< Access-Control-Allow-Credentials: true
< Via: 1.1 vegur
<
{
```

```
  "args": {},
  "data": "",
  "files": {},
  "form": {},
  "headers": {
    "Accept": "*/*",
    "Connection": "close",
    "Content-Length": "0",
    "Content-Type": "application/x-www-form-urlencoded",
    "Host": "httpbin.org",
    "User-Agent": "curl/7.55.1"
  },
  "json": null,
  "origin": "59.40.189.29",
  "url": "http://httpbin.org/post"
}
```


It tells us the information about the state about the connection.The information about server is also included.

(3)



(fig.4) The info Wireshark gives after send a POST request.

We can get information from fig.4, it correspond to the cURL.

Analysis(including answer of question)：

The answer is above.

Conclusion and Experience：

The cURL and Wireshark are quite useful, they give us convenience to test the server we create or test Internet state. We also can use Wireshark to capture some package to do some research.

Tips：