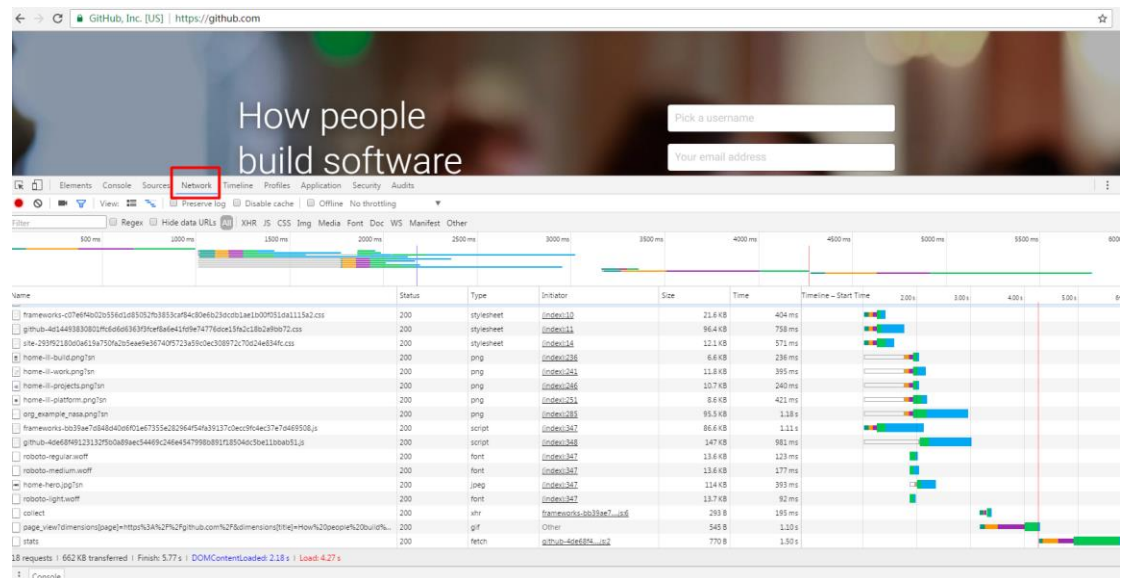


Several approaches to capture clear text of HTTPS packets

- Chrome DevTools
- Firefox Web Developer
- Fiddler Web Debugger

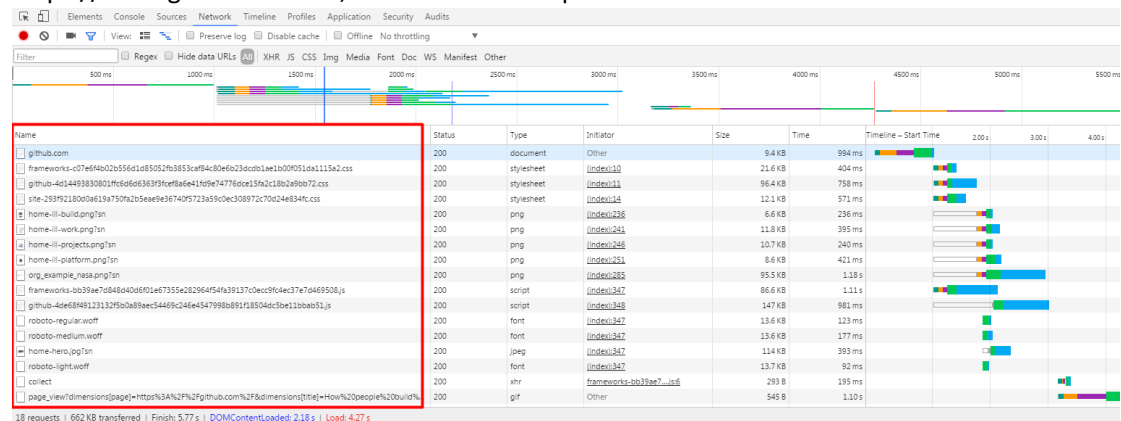
1. Chrome DevTools

If you are using Chrome browser, please **press 'F12'** to open DevTools. see below:



click 'Network' label to open 'Network' panel. Here we can get insights into requests and response traffic of the web pages.

We can get the clear text information even if the packet is encrypted. For example, open the 'https://www.github.com' url, we can see all the packets interacted with the server.



click one item in the panel. We can see the details in the right panel. See below, it's a GET request example.

Name

- github.com
- frameworks-c07e64b02b556d1d85052f3853ca84c80e6b23dcb1ae1b00f051da1115a2.css
- github-4d14493830801ffc6d6d6363f3fcef8a6e41fd9e74776dce15fa2c18b2a9bb72.css
- site-293f92180d0a619a750fa2b5eae9e36740f5723a59c0ec308972c70d24e834fc.css
- home-ill-build.png?sn
- home-ill-work.png?sn
- home-ill-projects.png?sn
- home-ill-platform.png?sn
- org_example_nasa.png?sn
- frameworks-bb39ae7d848d40d6f01e67355e282964f54fa39137c0ecc9fc4ec37e7d469508.js
- github-4de68f49123132f5b0a89aec54469c246e4547998b891f18504dc5be11bbab51.js
- roboto-regular.woff
- roboto-medium.woff
- home-hero.jpg?sn
- roboto-light.woff
- collect
- page_view?dimensions[page]=https%3A%2F%2Fgithub.com%2F%2Fdimensions[title]=How%20people%20build%20software...

18 requests | 662 KB transferred | Finish: 5.77 s | DOMContentLoaded: 2.18 s | Load: 4.27 s

Headers Preview Response Cookies Timing

General

Request URL: https://github.com/
Request Method: GET
Status Code: 200 OK
Remote Address: 192.30.253.112:443

Response Headers (20)

Request Headers view parsed

GET / HTTP/1.1
Host: github.com
Connection: keep-alive
Pragma: no-cache
Cache-Control: no-cache
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Windows NT 6.1; Win64; x64) AppleWebKit/537.36 (KHTML, like G
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Accept-Encoding: gzip, deflate, sdch, br
Accept-Language: en-US,en;q=0.8
Cookie: logged_in=no; _gh_sess=eyJzZXNzaW9uX2lkIjo1NTUyOTVjYjUwYmZmMWE1MjIyZjRlYmJlNDY
nU0RzdYb0hvc0cwUTAvUG89In0%3D--61f7ad293d1f877a74b3acebfd29e5fd77d45ce5; _ga=GA1.2.884
sia%2FShanghai

A POST request example:

Headers Preview Response Cookies Timing

General

Request URL: https://github.com/join
Request Method: POST
Status Code: 200 OK
Remote Address: 192.30.253.112:443

Response Headers (21)

Request Headers view parsed

POST /join HTTP/1.1
Host: github.com
Connection: keep-alive
Content-Length: 210
Cache-Control: max-age=0
Origin: https://github.com
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Windows NT 6.1; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/54.0.2840.99 Safari/537.36
Content-Type: application/x-www-form-urlencoded
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Referer: https://github.com/
Accept-Encoding: gzip, deflate, br
Accept-Language: en-US,en;q=0.8
Cookie: logged_in=no; _octo=GH1.1.1228578324.1484276100; _ga=GA1.2.884395312.1484276100; tz=Asia%2FShanghai; _gat=1; _gh_sess=eyJzZXNzaW9uX2lkIjo1NTUyOTVjYjUwYmZmMWE1MjIyZjRlYmJlNDY0OGYxZmQlLCJfY3NyZl90b2t1biI6ImZiQ2pwXkdKQTlob1BFwFdCZnFrU0h5Q21jWnU0RzdYb0hvc0cwUTAvUG89IiwicmVmZmVjYmZmY29kZSI6Imh0dHLCjYsYXN0X3dvaXR1IjoxNDg0Mjc4NDMSNTU1f0%3D%3D--1c543800662b3cdeb63ff99b8e94fc8d3d6d95f1

Form Data view parsed

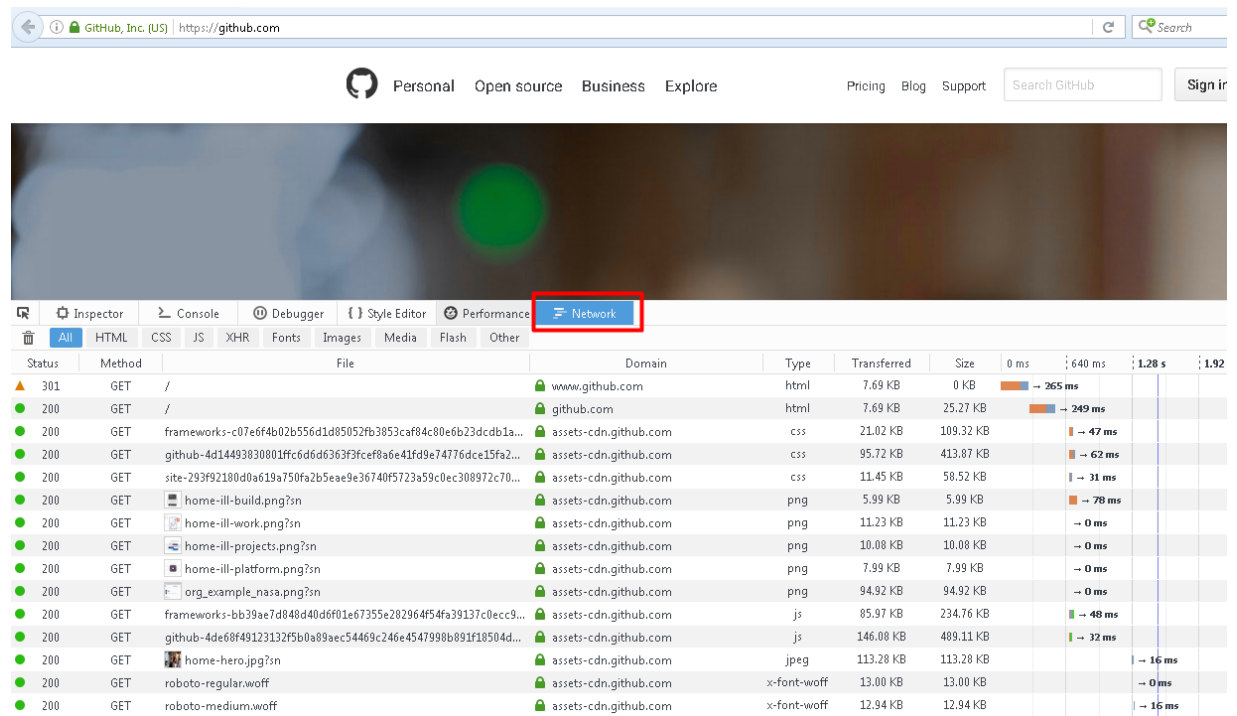
utf8=%E2%9C%93&authenticity_token=TqNbj4WeTn1ZJYK0NPYBjmvjMvJIWFLsXQ4MeWxPoIEY97oFn1t0rkDmBjD6vnxFYp5b8cEbiSamBrzZzJFFg%3D%3D&user%5Blogin%5D=test1234&user%5Bpassword%5D=&source=form-home

We can also get the post body 'Form Data' in the panel.

Please reproduce the issue, and check **the packet which triggered signature 030000138** and record the whole packet information.

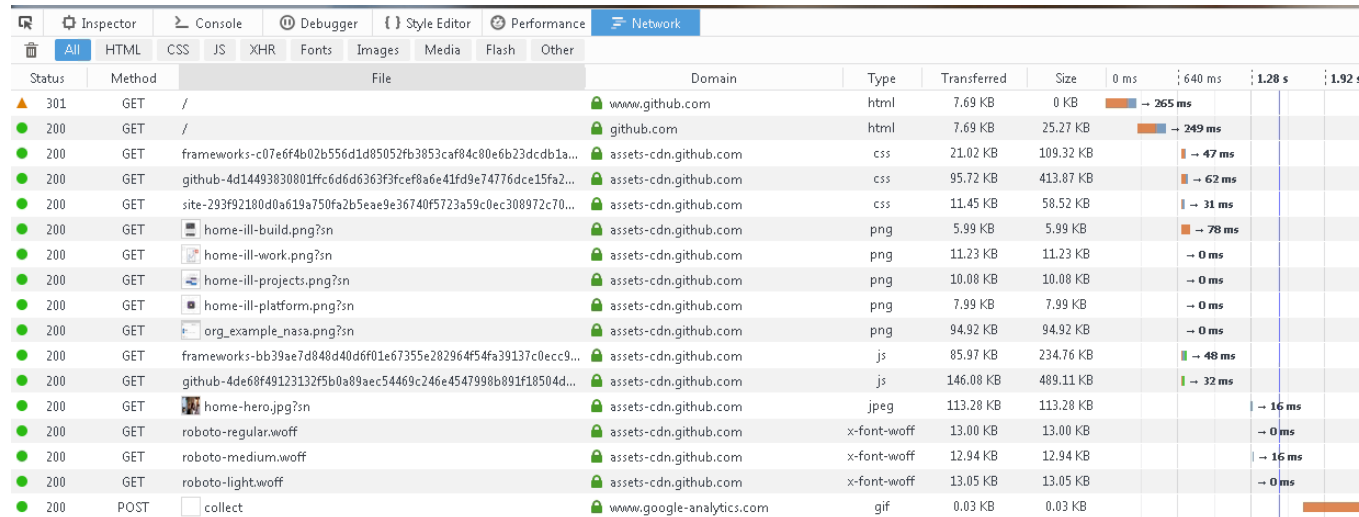
2. Firefox Web Developer

If you are using Firefox browser, please **press 'F12'** to open Web Developer. see below:



click 'Network' label to open 'Network' panel. Here we can get insights into requests and response traffic of the web pages.

We can get the clear text information even if the packet is encrypted. For example, open the 'https://www.github.com' url, we can see all the packets interacted with the server.



click one item in the panel. We can see the details in the right panel. See below, it's a GET request example.

The screenshot shows the Chrome DevTools Network tab. The top toolbar includes Inspector, Console, Debugger, Style Editor, Performance, and Network. Below the toolbar, there are tabs for All, HTML, CSS, JS, XHR, Fonts, Images, Media, Flash, and Other. The main area displays a list of network requests. The selected request is a GET request to 'github.com'. The Headers panel on the right shows the following information:

- Request URL: https://github.com/
- Request method: GET
- Remote address: 192.30.253.113:443
- Status code: 200 OK
- Version: HTTP/1.1
- Host: "github.com"
- User-Agent: "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:47.0) Gecko/20100101 Firefox/47.0"
- Accept: "text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8"
- Accept-Language: "en-US,en;q=0.5"
- Accept-Encoding: "gzip, deflate, br"
- Connection: "keep-alive"

A POST request example:

The screenshot shows the Chrome DevTools Network tab with a POST request selected. The Headers panel displays the following information:

- Request URL: https://github.com/foia
- Request method: POST
- Remote address: 192.30.253.112:443
- Status code: 200 OK
- Version: HTTP/1.1
- Host: "github.com"
- User-Agent: "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:47.0) Gecko/20100101 Firefox/47.0"
- Accept: "text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8"
- Accept-Language: "en-US,en;q=0.5"
- Accept-Encoding: "gzip, deflate, br"
- Referer: "https://github.com/"
- Cookie: "logged_in=no;_gh_sess=eylzZkNzaW9uZ2lkjoiYQxM2FiNWFMNDM1NDgzYzA3ZGVyE5OT...4279606;_octo=GH1.1.1499986203.1484279606;tz=America%2FLos_Angeles;_gat=1"
- Connection: "keep-alive"
- Content-Type: "application/x-www-form-urlencoded"
- Content-Length: "205"

we can get the post body in 'Params' label.

The screenshot shows the Chrome DevTools Network tab with the Params panel selected. The Params panel displays the following form data:

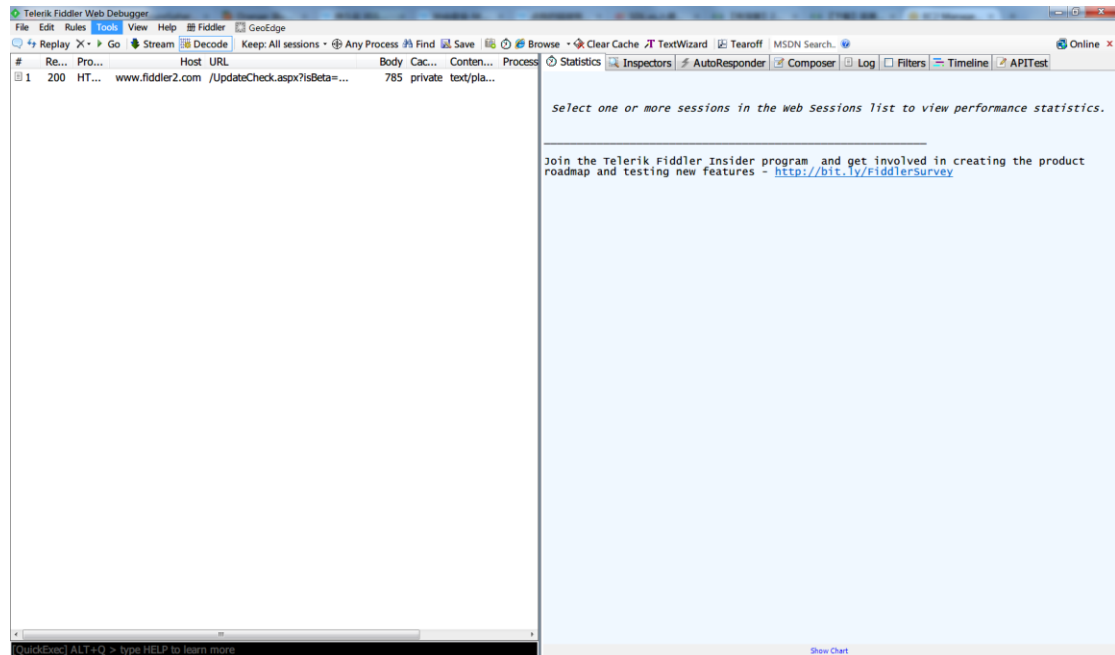
- utf8: "✓"
- authenticity_token: "11Fyb9n7/5l+j6CWbb2LRytBmWKQcAFpSykFsrj1EOKHr4SFfptltn402TRaJpHoU+WTdrSdFeCZKWOagDUYQ=="
- user[login]: "a"
- user[email]: "a"
- user[password]: ""
- source: "form-home"

Please reproduce the issue, and check the packet which triggered signature 030000138 and record the whole packet information.

3. Fiddler Web Debugger

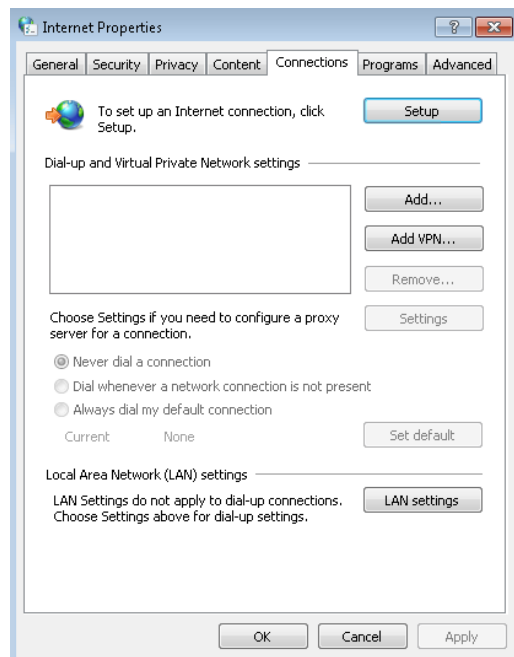
1) Download link: <https://www.telerik.com/download/fiddler>

Install the software and run it, see below

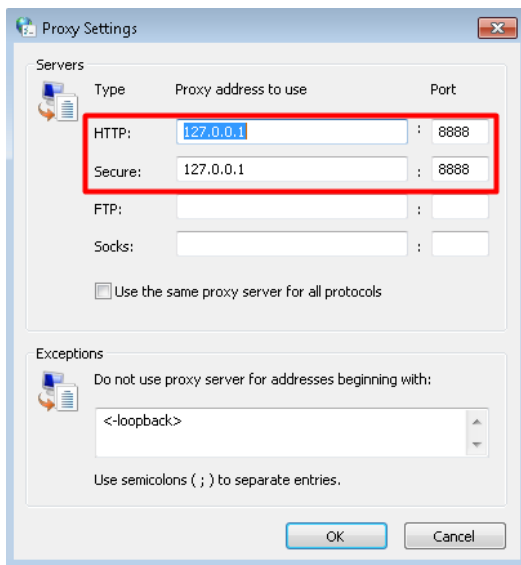
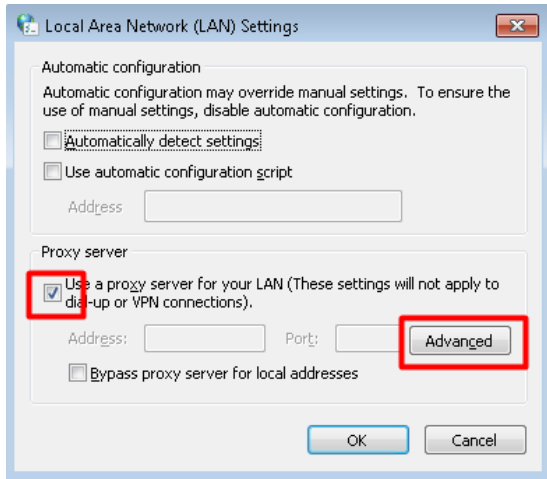


2) Config Fiddler to capture packet

click [Tools] -> [WinINET Options], 'Internet Properties' is opened:

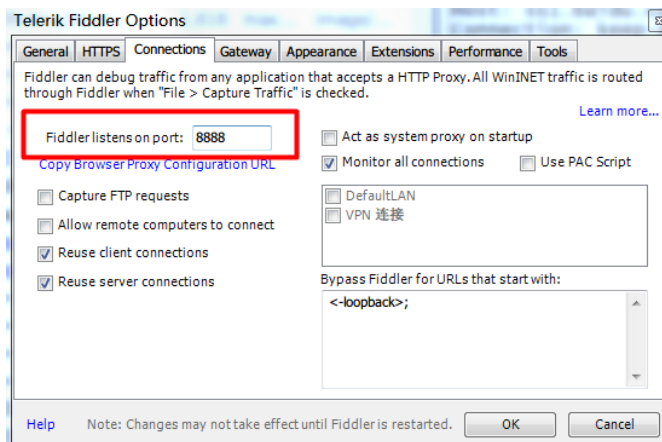


click 'LAN settings' and config as follows:



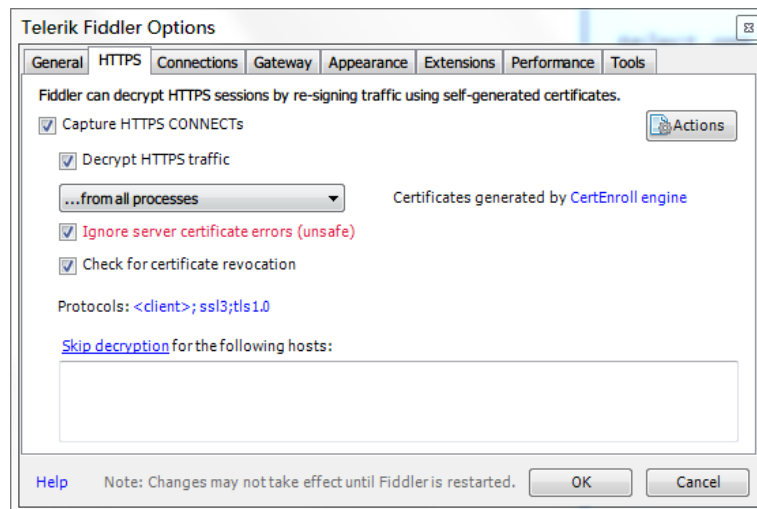
click 'OK'.

click [Tools] -> [Telrik Fiddler Options] -> [Connections], set the Fiddler listens on port 8888. It is according to the Internet LAN setting listening port.



3) Config Fiddler to capture HTTPS traffic

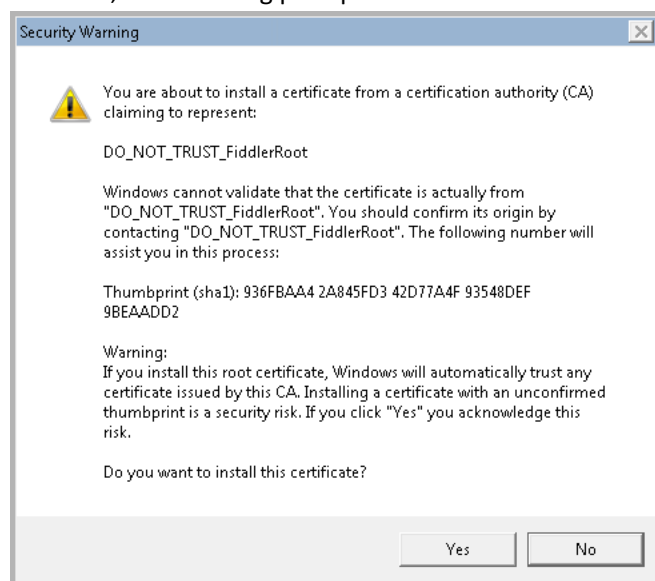
click [Tools] -> [Telerik Fiddler Options] -> [HTTPS], configurations as follows:



When you tick the "Decrypt HTTPS Traffic" checkbox, we will see a prompt:



click 'Yes', the following prompt is:

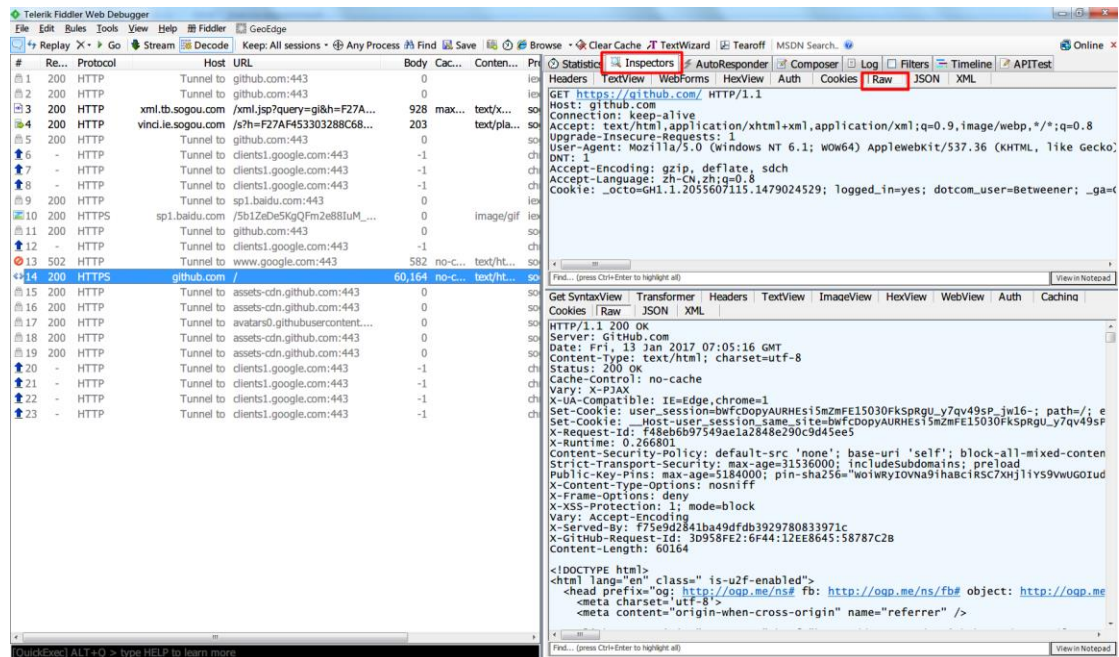


click 'Yes' to install Fiddler certificate.

4) Open the Web site using Internet Explorer browser, now we can get all the traffic captured by

fiddler. Click the packet in the left panel, and the detail is in the right.

Take 'https://github.com/' as an example, the HTTPS packet is decrypted.



Please reproduce the issue, and check the packet which triggered signature 03000138 and record the whole packet information.