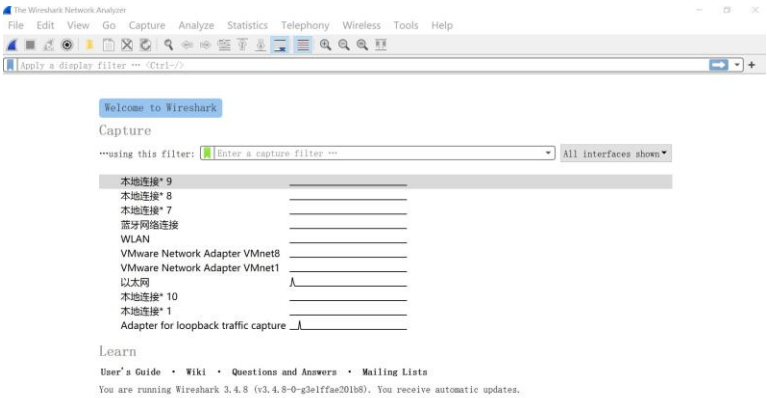
实验一

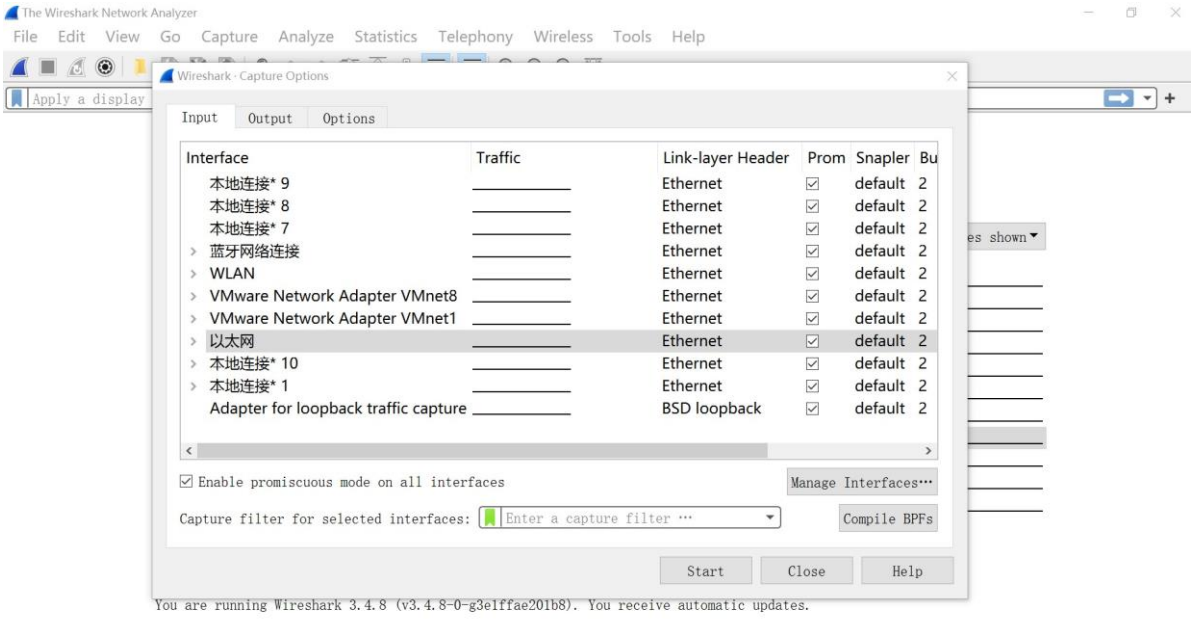
Wireshark Lab: Getting Started

阅读实验文档，按照操作下载安装 wireshark，版本 v3.4.8，打开后界面如图示：



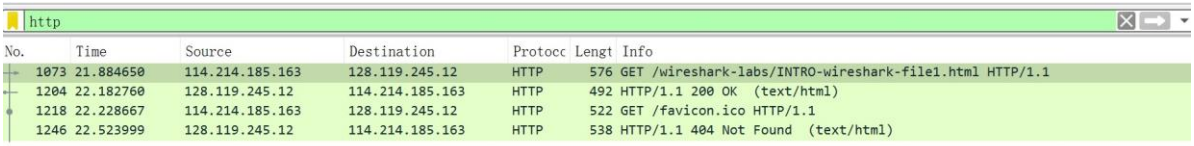
根据实验文档的指导按步骤进行实验。

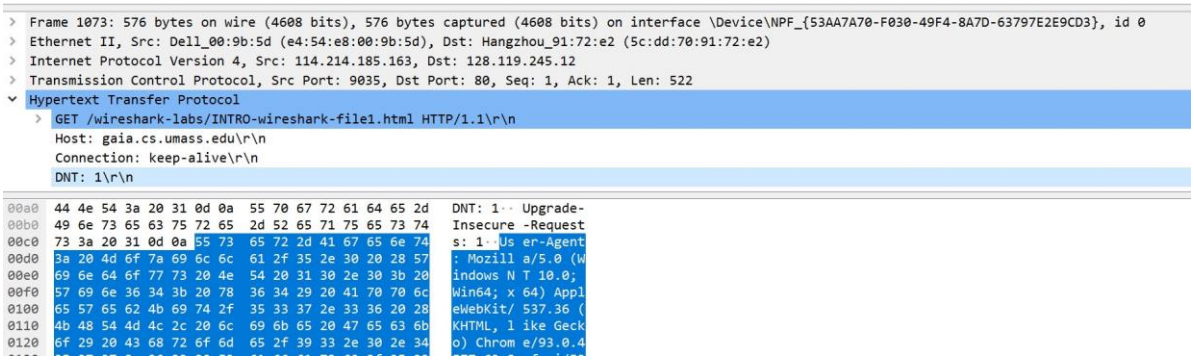
1.打开浏览器，再打开 Wireshark，选择以太网开始捕捉。如图：



2.在浏览器打开网站 http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html，然后在

Wireshark 暂停捕捉，在上方输入 http 筛选。找到对应网站的数据：

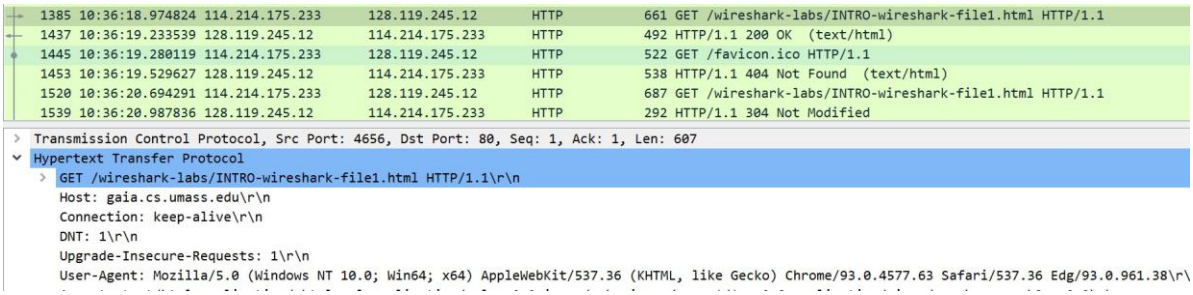




3.观察筛选到的数据并分析，实验完成。

Questions

1、 观察到的协议有：TCP TLSv1.2 SSDP STP；



2、 由上图可知，从发送到回复 OK 的时间差是 19.233539-18.974824=0.258715；

3、 gaia: 128.119.245.12 my address: 114.214.175.233

4、 按照操作输出为 pdf，如下：

```
No.     Time               Source                Destination           Protocol Length Info
   1385 10:36:18.974824    114.214.175.233       128.119.245.12        HTTP     661    GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
Frame 1385: 661 bytes on wire (5288 bits), 661 bytes captured (5288 bits) on interface \Device\NPF_{1536386D-6982-4F84-9A37-9CF9F936F7CD}, id 0
Ethernet II, Src: ASIXElec_4b:e9:b8 (f8:e4:3b:4b:e9:b8), Dst: Hangzhou_91:72:e2 (5c:dd:70:91:72:e2)
Internet Protocol Version 4, Src: 114.214.175.233, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 4656, Dst Port: 80, Seq: 1, Ack: 1, Len: 607
Hypertext Transfer Protocol
    GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1\r\n
    Host: gaia.cs.umass.edu\r\n
    Connection: keep-alive\r\n
    DNT: 1\r\n
    Upgrade-Insecure-Requests: 1\r\n
    User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/93.0.4577.63 Safari/537.36 Edg/93.0.961.38\r\n
    Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9\r\n
    Accept-Encoding: gzip, deflate\r\n
    Accept-Language: zh-CN,zh;q=0.9,en;q=0.8,en-GB;q=0.7,en-US;q=0.6\r\n
    If-None-Match: "51-5cb7594387f39"\r\n
    If-Modified-Since: Wed, 08 Sep 2021 05:59:01 GMT\r\n
    \r\n
    [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html]
    [HTTP request 1/4]
    [Response in frame: 1437]
    [Next request in frame: 1445]
No.     Time               Source                Destination           Protocol Length Info
   1437 10:36:19.233539    128.119.245.12        114.214.175.233       HTTP     492    HTTP/1.1 200 OK  (text/html)
Frame 1437: 492 bytes on wire (3936 bits), 492 bytes captured (3936 bits) on interface \Device\NPF_{1536386D-6982-4F84-9A37-9CF9F936F7CD}, id 0
Ethernet II, Src: Hangzhou_91:72:e2 (5c:dd:70:91:72:e2), Dst: ASIXElec_4b:e9:b8 (f8:e4:3b:4b:e9:b8)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 114.214.175.233
Transmission Control Protocol, Src Port: 80, Dst Port: 4656, Seq: 1, Ack: 608, Len: 438
Hypertext Transfer Protocol
    HTTP/1.1 200 OK\r\n
    Date: Sat, 11 Sep 2021 02:36:18 GMT\r\n
    Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.22 mod_perl/2.0.11 Perl/v5.16.3\r\n
    Last-Modified: Fri, 10 Sep 2021 05:59:01 GMT\r\n
    ETag: "51-5cb9dcfe1017f"\r\n
    Accept-Ranges: bytes\r\n
    Content-Length: 81\r\n
    Keep-Alive: timeout=5, max=100\r\n
    Connection: Keep-Alive\r\n
    Content-Type: text/html; charset=UTF-8\r\n
    \r\n
    [HTTP response 1/4]
    [Time since request: 0.258715000 seconds]
    [Request in frame: 1385]
    [Next request in frame: 1445]
    [Next response in frame: 1453]
    [Request URI: http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html]
    File Data: 81 bytes
Line-based text data: text/html (3 lines)
```