

XXX 大学

《计算机网路》实验报告

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实验三 HTTP 长文件/嵌入网页的对象/加密的网站

抓包和分析

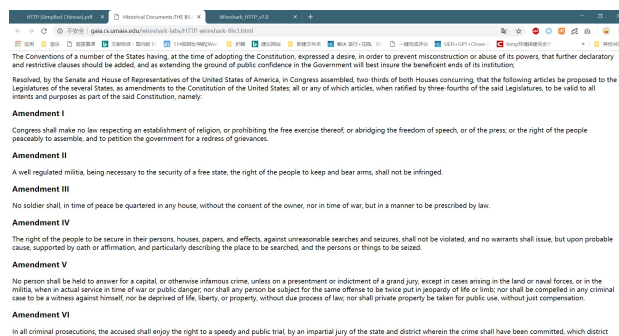
实验时间： 2018.9

【实验目的】

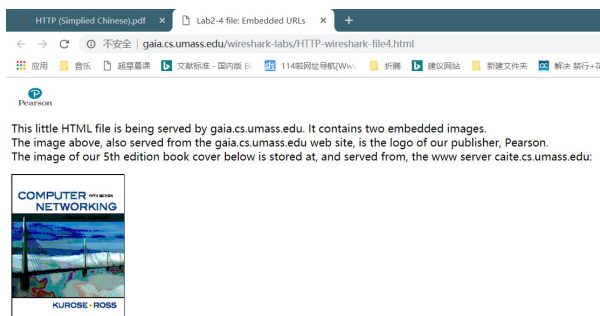
1. 能够对 HTTP 长文件进行抓包和分析
2. 能够对嵌入网页的对象进行抓包和分析
3. 能够对加密的网页的进行抓包和分析
4. 加强对 Wireshark 使用理解
5. 了解 HTTP 协议的内容

【实验步骤】

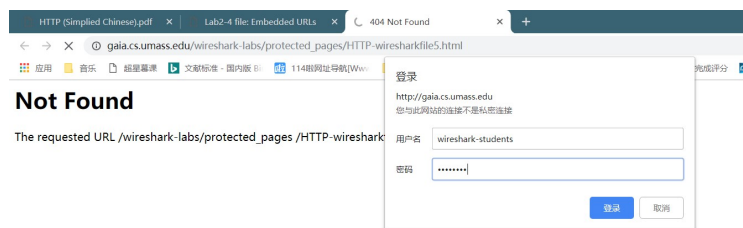
1. HTTP 长文件实验：除了打开地址不同外，其他同实验 1。



2. 嵌入对象的网页实验：除了打开地址不同外，其他同实验 1。



3. 加密的 HTTP 网页实验：除了打开地址不同外，且要求登陆输入，其他同实验 1。

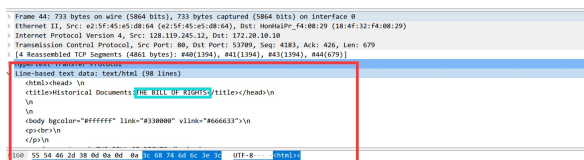
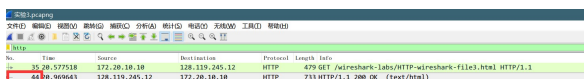


因为我之前地址复制错了，所以是 404，检查地址后重新打开。

【实验结果】

1. 您的浏览器发送了多少 HTTP GET 请求消息？在追踪中哪个 packet number 包含 GET message 的 Bill 或 Rights？

ANS:我的浏览器仅仅发送了一个 HTTP GET 请求信息，在追踪的数据包中，第 44 个包含请求 GET message 的 Bill 或 Rights。



2. 跟踪中的哪个 packet number 包含与 HTTP GET 请求响应相关联的状态代码(status code)和短语(phrase)

ANS:同样的，第 44 个包包括相关联的状态代码和短语，状态代码是 200 OK。

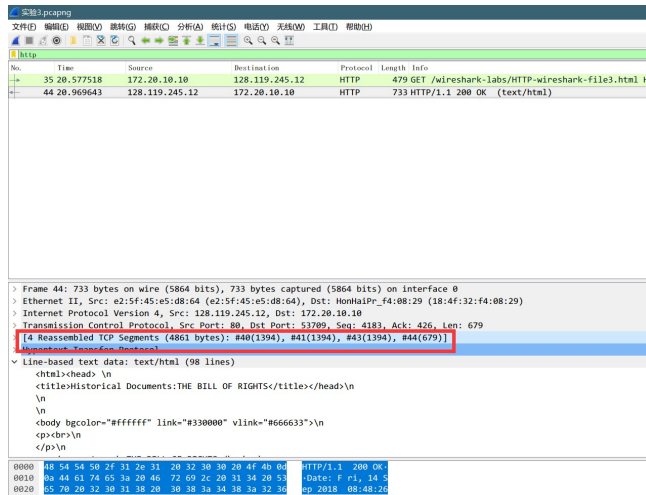


3. 响应(response)中的状态代码(status code)和短语(phrase)是什么？

ANS:同第 2 题。

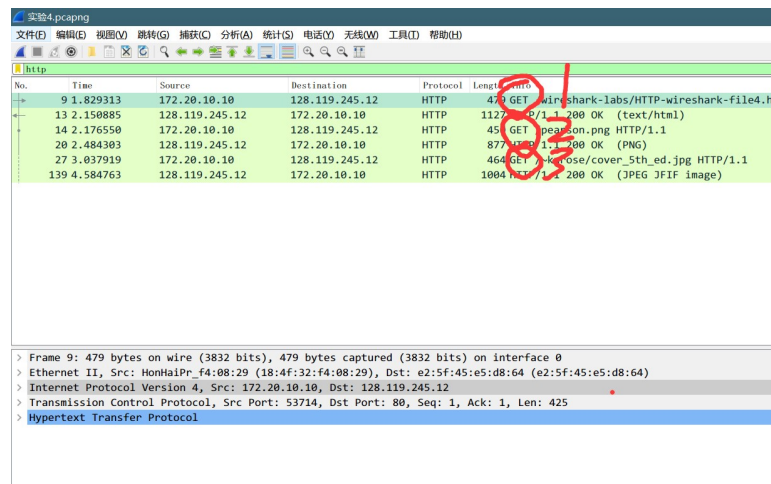
4. 需要多少个包含数据的 TCP 段来承载单个 HTTP 响应和权利法案的文本？

ANS:从图中看出我们有 4 个 TCP 协议承载单个 HTTP 响应和权利法案的文本。



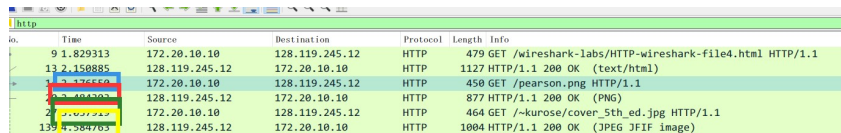
5. 您的浏览器发送了多少 HTTP GET 请求消息？ 这些 GET 请求发送到哪些 Internet 地址？

ANS:我的浏览器发送了 3 个 HTTP GET 请求消息，这些 GET 请求发送到了一个 Internet 地址： 128.119.245.12



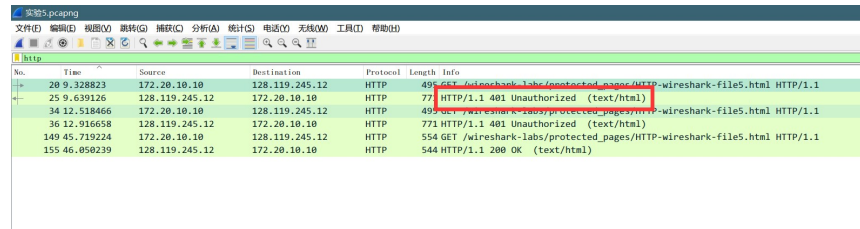
6. 您能否判断一下您的浏览器是否按顺序下载了这两个图像，或者它们是否是从这两个网站并行下载的？

ANS:由于这些包都是先后发出的，有时间差，所以我可以判断不是并行下载的而是顺序请求。



7. 浏览器的初始 HTTP GET 消息，来自服务器的响应（状态代码 status code 和短语 phrase）是什么？

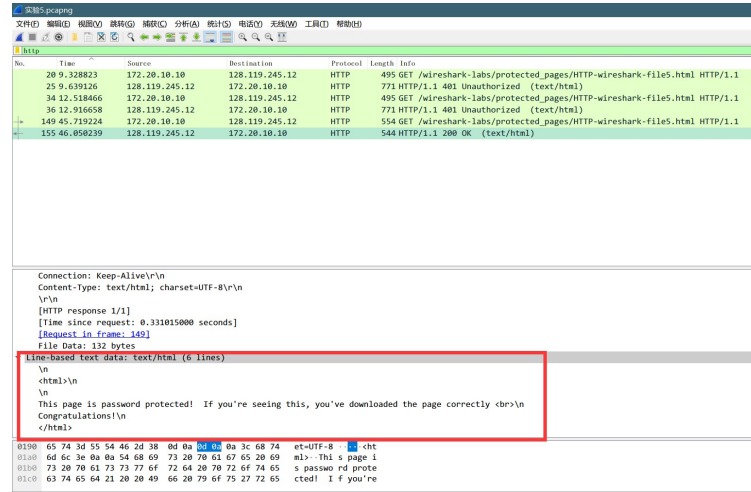
ANS:服务器先返回 401 Unauthorized，即未授权，要求登陆才能访问。



The screenshot shows a Wireshark packet capture of an HTTP 401 Unauthorized response. The packet list on the left shows several packets, with the selected packet being a GET request for /protected_pages/HTTP-wireshark-file5.html. The packet details pane on the right shows the response status as 401 Unauthorized (text/html).

No.	Time	Source	Destination	Protocol	Length	Info
20	9.328823	172.20.10.10	128.119.245.12	HTTP	495	GET /protected_pages/HTTP-wireshark-file5.html HTTP/1.1
25	9.639126	128.119.245.12	172.20.10.10	HTTP	771	HTTP/1.1 401 Unauthorized (text/html)
34	12.518466	172.20.10.10	128.119.245.12	HTTP	495	GET /protected_pages/HTTP-wireshark-file5.html HTTP/1.1
36	12.916658	128.119.245.12	172.20.10.10	HTTP	771	HTTP/1.1 401 Unauthorized (text/html)
149	45.719224	172.20.10.10	128.119.245.12	HTTP	554	GET /wireshark-labs/protected_pages/HTTP-wireshark-file5.html HTTP/1.1
155	46.058239	128.119.245.12	172.20.10.10	HTTP	544	HTTP/1.1 200 OK (text/html)

8. 当您的浏览器第二次发送 HTTP GET 消息时，HTTP GET 消息中包含哪些新字段？

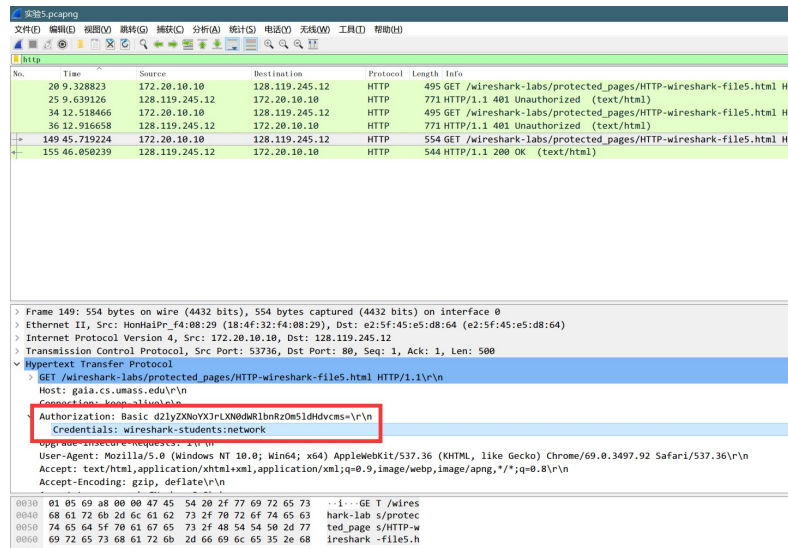


The screenshot shows a Wireshark packet capture of an HTTP 401 Unauthorized response. The packet list on the left shows several packets, with the selected packet being a GET request for /protected_pages/HTTP-wireshark-file5.html. The packet details pane on the right shows the response status as 401 Unauthorized (text/html). A red box highlights the response body, which contains the text: "This page is password protected! If you're seeing this, you've downloaded the page correctly".

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20	9.328823	172.20.10.10	128.119.245.12	HTTP	495	GET /protected_pages/HTTP-wireshark-file5.html HTTP/1.1
25	9.639126	128.119.245.12	172.20.10.10	HTTP	771	HTTP/1.1 401 Unauthorized (text/html)
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155	46.058239	128.119.245.12	172.20.10.10	HTTP	544	HTTP/1.1 200 OK (text/html)

ANS:当然是访问的内容啊。

PS:新版 Wireshark 自带给 base64 加密的用户名和密码解码，因此就不用网站工具了。



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No.	Time	Source	Destination	Protocol	Length	Info
20	9.328823	172.20.10.10	128.119.245.12	HTTP	495	GET /wireshark-labs/protected_pages/HTTP-wireshark-file5.html HTTP/1.1
25	9.639126	128.119.245.12	172.20.10.10	HTTP	771	HTTP/1.1 401 Unauthorized (text/html)
34	12.518466	172.20.10.10	128.119.245.12	HTTP	495	GET /wireshark-labs/protected_pages/HTTP-wireshark-file5.html HTTP/1.1
36	12.916658	128.119.245.12	172.20.10.10	HTTP	771	HTTP/1.1 401 Unauthorized (text/html)
149	45.719224	172.20.10.10	128.119.245.12	HTTP	554	GET /wireshark-labs/protected_pages/HTTP-wireshark-file5.html HTTP/1.1
155	46.058239	128.119.245.12	172.20.10.10	HTTP	544	HTTP/1.1 200 OK (text/html)

【实验体会】

没什么难度啦，继续加油啦！