

COMPUTER NETWORKS LAB

Understanding Persistent and Non-persistent HTTP Connections and Understand working of HTTP Headers

WEEK 4

NAME: VISHWA MEHUL MEHTA

SRN: PES2UG20CS389

SECTION: F

DATE: 12/02/2022

Task 1:

Objectives:

To understand persistent and non-persistent HTTP connections and corresponding performance impact.

Create a web page with N (e.g. 10) embedded images. Each image should be of minimum 2MB size. Configure your browser (Firefox) with following settings (each setting requires repeat of experiment):

- Non persistent connection
- 2 persistent connections
- 4 persistent connections
- 6 persistent connections
- 8 persistent connections
- 10 persistent connections

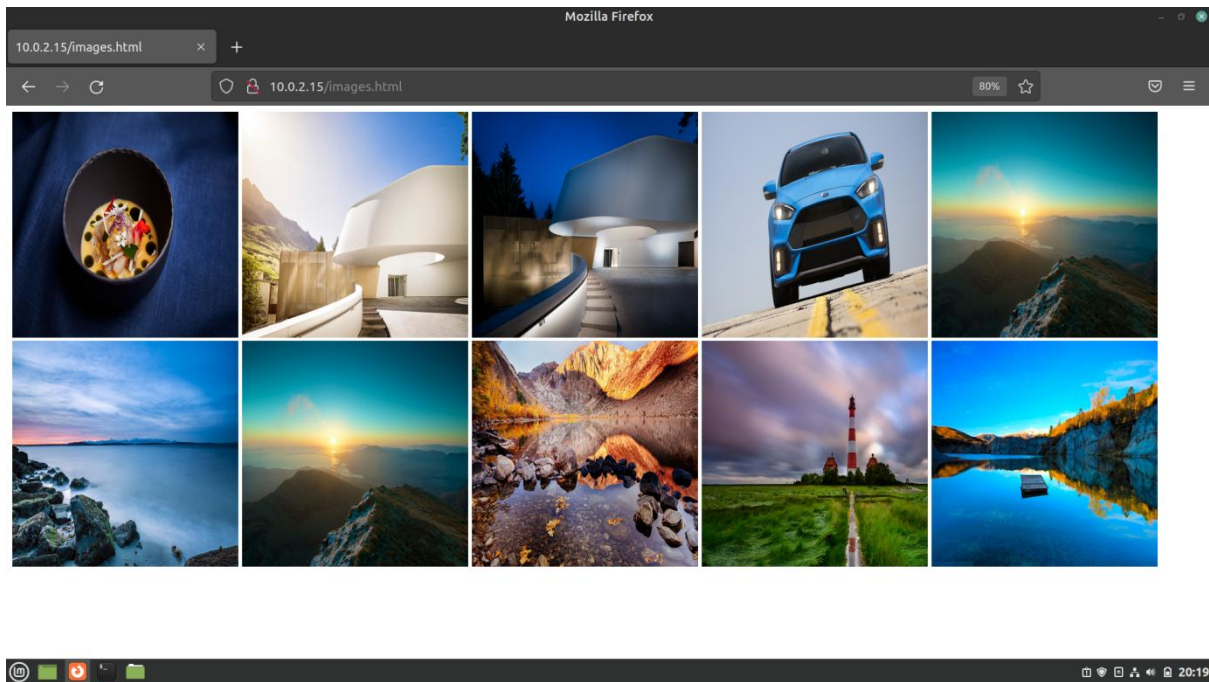
Server:

```
vishwa@vishwa-VirtualBox: ~
File Edit View Search Terminal Help
vishwa@vishwa-VirtualBox:~$ ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:83:72:38 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
        valid_lft 523sec preferred_lft 523sec
    inet6 fe80::a137:835f:9deb:80b7/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
vishwa@vishwa-VirtualBox:~$
```

```
vishwa@vishwa-VirtualBox:~$ sudo service apache2 status
[sudo] password for vishwa:
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Active: active (running) since Sat 2022-02-12 18:28:55 IST; 2min 3s ago
     Docs: https://httpd.apache.org/docs/2.4/
   Process: 618 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
  Main PID: 656 (apache2)
    Tasks: 55 (limit: 3476)
   Memory: 8.1M
    CGroup: /system.slice/apache2.service
            └─656 /usr/sbin/apache2 -k start
              └─660 /usr/sbin/apache2 -k start
                └─661 /usr/sbin/apache2 -k start

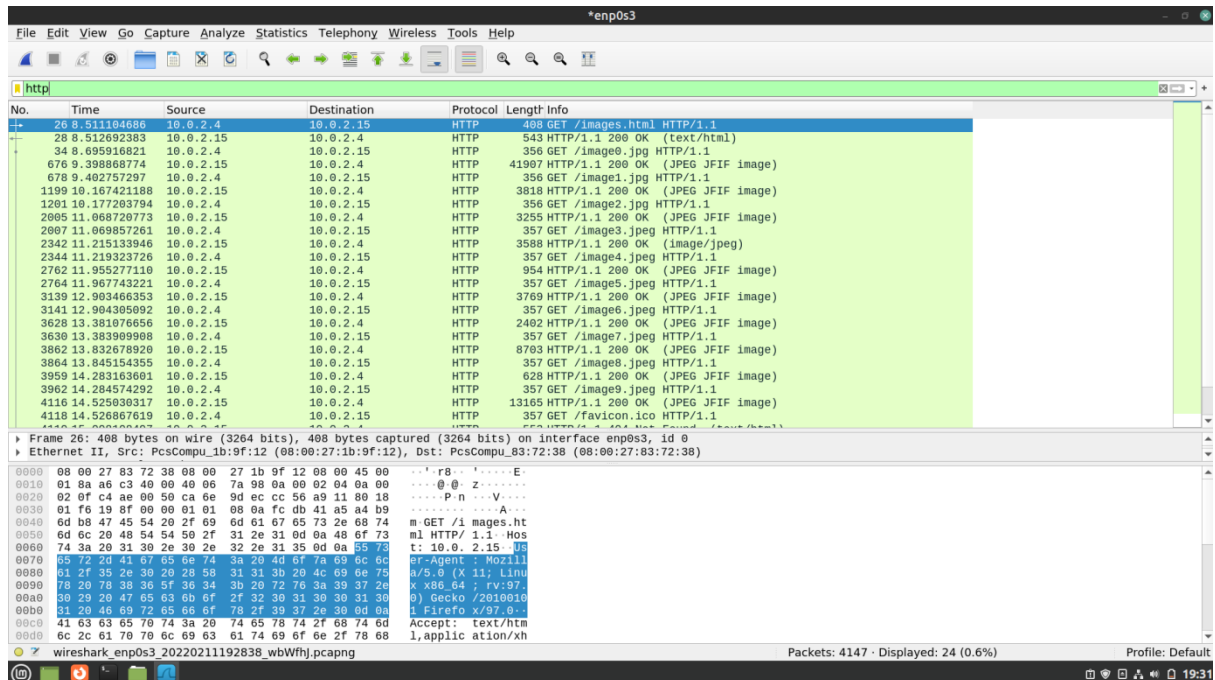
Feb 12 18:28:54 vishwa-VirtualBox systemd[1]: Starting The Apache HTTP Server...
Feb 12 18:28:55 vishwa-VirtualBox apachectl[638]: AH00558: apache2: Could not reliably determine the server's fully qualified domain name, please see the /etc/httpd/conf/httpd.conf file for details.
Feb 12 18:28:55 vishwa-VirtualBox systemd[1]: Started The Apache HTTP Server.
lines 1-16/16 (END)
```

```
vishwa@vishwa-VirtualBox: ~
File Edit View Search Terminal Help
#
# PidFile: The file in which the server should record its process
# identification number when it starts.
# This needs to be set in /etc/apache2/envvars
#
PidFile ${APACHE_PID_FILE}
#
# Timeout: The number of seconds before receives and sends time out.
#
Timeout 300
#
# KeepAlive: Whether or not to allow persistent connections (more than
# one request per connection). Set to "Off" to deactivate.
#
KeepAlive On
#
# MaxKeepAliveRequests: The maximum number of requests to allow
# during a persistent connection. Set to 0 to allow an unlimited amount.
# We recommend you leave this number high, for maximum performance.
#
MaxKeepAliveRequests 2
#
# KeepAliveTimeout: Number of seconds to wait for the next request from the
# same client on the same connection.
87,1 40%
```

OBSERVATIONS:

a) Non-persistent connection:



b) 2 persistent connections:

*enp0s3

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Current filter: http

No.	Time	Source	Destination	Protocol	Length	Info
66	6.778493750	10.0.2.4	10.0.2.15	HTTP	408	GET /images.html HTTP/1.1
68	6.947986690	10.0.2.15	10.0.2.4	HTTP	543	HTTP/1.1 200 OK (text/html)
76	7.075968509	10.0.2.4	10.0.2.15	HTTP	356	GET /image0.jpg HTTP/1.1
116	7.082993769	10.0.2.4	10.0.2.15	HTTP	356	GET /image1.jpg HTTP/1.1
1162	7.686520124	10.0.2.15	10.0.2.4	HTTP	10779	HTTP/1.1 200 OK (JPEG JFIF image)
1216	7.702627007	10.0.2.4	10.0.2.15	HTTP	356	GET /image2.jpg HTTP/1.1
1607	7.845662125	10.0.2.15	10.0.2.4	HTTP	7155	HTTP/1.1 200 OK (JPEG JFIF image)
1609	7.852336774	10.0.2.4	10.0.2.15	HTTP	357	GET /image3.jpeg HTTP/1.1
2009	8.097067606	10.0.2.4	10.0.2.15	HTTP	357	GET /image4.jpeg HTTP/1.1
2011	8.139366617	10.0.2.15	10.0.2.4	HTTP	29652	HTTP/1.1 200 OK (image/jpeg)
2034	8.140729588	10.0.2.4	10.0.2.15	HTTP	357	GET /image5.jpeg HTTP/1.1
2297	8.321490129	10.0.2.15	10.0.2.4	HTTP	12457	HTTP/1.1 200 OK (JPEG JFIF image)
2376	8.358680082	10.0.2.4	10.0.2.15	HTTP	357	GET /image6.jpeg HTTP/1.1
2397	8.957857515	10.0.2.15	10.0.2.4	HTTP	6746	HTTP/1.1 200 OK (JPEG JFIF image)
2542	8.989534173	10.0.2.4	10.0.2.15	HTTP	357	GET /image7.jpeg HTTP/1.1
3631	9.948631049	10.0.2.4	10.0.2.15	HTTP	357	GET /image8.jpeg HTTP/1.1
4092	10.157057133	10.0.2.4	10.0.2.15	HTTP	357	GET /image9.jpeg HTTP/1.1
4421	10.413480894	10.0.2.15	10.0.2.4	HTTP	3524	HTTP/1.1 200 OK (JPEG JFIF image)
4423	10.436958085	10.0.2.4	10.0.2.15	HTTP	357	GET /favicon.ico HTTP/1.1
4427	10.438294925	10.0.2.15	10.0.2.4	HTTP	553	HTTP/1.1 404 Not Found (text/html)
4553	10.595629993	10.0.2.15	10.0.2.4	HTTP	5925	HTTP/1.1 200 OK (JPEG JFIF image)

c) 4 persistent connections:

*enp0s3

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Current filter: http

No.	Time	Source	Destination	Protocol	Length	Info
174	50.123384654	10.0.2.4	10.0.2.15	HTTP	408	GET /images.html HTTP/1.1
176	50.124755416	10.0.2.15	10.0.2.4	HTTP	543	HTTP/1.1 200 OK (text/html)
185	50.279842768	10.0.2.4	10.0.2.15	HTTP	356	GET /image0.jpg HTTP/1.1
226	50.285992922	10.0.2.4	10.0.2.15	HTTP	356	GET /image1.jpg HTTP/1.1
400	50.311224250	10.0.2.4	10.0.2.15	HTTP	356	GET /image2.jpg HTTP/1.1
922	50.444637597	10.0.2.4	10.0.2.15	HTTP	357	GET /image3.jpeg HTTP/1.1
1896	50.757569697	10.0.2.4	10.0.2.15	HTTP	357	GET /image4.jpeg HTTP/1.1
2129	50.845735760	10.0.2.15	10.0.2.4	HTTP	5037	HTTP/1.1 200 OK (image/jpeg)
2132	50.855199848	10.0.2.4	10.0.2.15	HTTP	357	GET /image5.jpeg HTTP/1.1
2133	50.855598275	10.0.2.4	10.0.2.15	HTTP	357	GET /image6.jpeg HTTP/1.1
2941	51.162763061	10.0.2.4	10.0.2.15	HTTP	357	GET /image7.jpeg HTTP/1.1
3033	51.194410299	10.0.2.15	10.0.2.4	HTTP	8113	HTTP/1.1 200 OK (JPEG JFIF image)
3248	51.278778322	10.0.2.4	10.0.2.15	HTTP	357	GET /image8.jpeg HTTP/1.1
3349	51.293595593	10.0.2.15	10.0.2.4	HTTP	5807	HTTP/1.1 200 OK (JPEG JFIF image)
3457	51.346533893	10.0.2.4	10.0.2.15	HTTP	357	GET /image9.jpeg HTTP/1.1
3761	51.449549195	10.0.2.15	10.0.2.4	HTTP	6420	HTTP/1.1 200 OK (JPEG JFIF image)
3875	51.454647528	10.0.2.15	10.0.2.4	HTTP	5925	HTTP/1.1 200 OK (JPEG JFIF image)

d) 6 persistent connections:

*enp0s3

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Current filter: http

No.	Time	Source	Destination	Protocol	Length	Info
94	14.169158058	10.0.2.4	10.0.2.15	HTTP	408	GET /images.html HTTP/1.1
96	14.170558283	10.0.2.15	10.0.2.4	HTTP	543	HTTP/1.1 200 OK (text/html)
101	14.283477020	10.0.2.4	10.0.2.15	HTTP	356	GET /image0.jpg HTTP/1.1
148	14.296941522	10.0.2.4	10.0.2.15	HTTP	356	GET /image1.jpg HTTP/1.1
292	14.342369224	10.0.2.4	10.0.2.15	HTTP	357	GET /image4.jpeg HTTP/1.1
293	14.345277412	10.0.2.4	10.0.2.15	HTTP	357	GET /image3.jpeg HTTP/1.1
294	14.345744539	10.0.2.4	10.0.2.15	HTTP	356	GET /image2.jpg HTTP/1.1
589	14.381814509	10.0.2.4	10.0.2.15	HTTP	357	GET /image5.jpeg HTTP/1.1
2944	14.825976174	10.0.2.4	10.0.2.15	HTTP	357	GET /image6.jpeg HTTP/1.1
2955	14.835923143	10.0.2.15	10.0.2.4	HTTP	9048	HTTP/1.1 200 OK (JPEG JFIF image)
3103	14.854146998	10.0.2.15	10.0.2.4	HTTP	5218	HTTP/1.1 200 OK (JPEG JFIF image)
3105	14.866963276	10.0.2.4	10.0.2.15	HTTP	357	GET /image7.jpeg HTTP/1.1
3179	14.921647248	10.0.2.4	10.0.2.15	HTTP	357	GET /image8.jpeg HTTP/1.1
3406	14.949758315	10.0.2.15	10.0.2.4	HTTP	2811	HTTP/1.1 200 OK (JPEG JFIF image)
3468	14.978157316	10.0.2.4	10.0.2.15	HTTP	357	GET /image9.jpeg HTTP/1.1
3599	14.992745492	10.0.2.15	10.0.2.4	HTTP	17939	HTTP/1.1 200 OK (JPEG JFIF image)
3757	15.025961603	10.0.2.15	10.0.2.4	HTTP	3029	HTTP/1.1 200 OK (JPEG JFIF image)
4219	15.316479228	10.0.2.15	10.0.2.4	HTTP	8703	HTTP/1.1 200 OK (JPEG JFIF image)
4244	15.316624175	10.0.2.15	10.0.2.4	HTTP	2076	HTTP/1.1 200 OK (JPEG JFIF image)
4438	15.449292191	10.0.2.4	10.0.2.15	HTTP	357	GET /favicon.ico HTTP/1.1
4467	15.450522744	10.0.2.15	10.0.2.4	HTTP	553	HTTP/1.1 404 Not Found (text/html)
4524	15.462866068	10.0.2.15	10.0.2.4	HTTP	18330	HTTP/1.1 200 OK (JPEG JFIF image)

e) 8 persistent connections:

*enp0s3						
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help						
Current filter: http						
No.	Time	Source	Destination	Protocol	Length	Info
8	3.208902698	10.0.2.4	10.0.2.15	HTTP	408	GET /images.html HTTP/1.1
10	3.210160701	10.0.2.15	10.0.2.4	HTTP	543	HTTP/1.1 200 OK (text/html)
15	3.289870674	10.0.2.4	10.0.2.15	HTTP	356	GET /image0.jpg HTTP/1.1
44	3.317943279	10.0.2.4	10.0.2.15	HTTP	356	GET /image1.jpg HTTP/1.1
386	3.373453747	10.0.2.4	10.0.2.15	HTTP	356	GET /image2.jpg HTTP/1.1
413	3.383853982	10.0.2.4	10.0.2.15	HTTP	357	GET /image3.jpeg HTTP/1.1
414	3.384583699	10.0.2.4	10.0.2.15	HTTP	357	GET /image4.jpeg HTTP/1.1
429	3.387550719	10.0.2.4	10.0.2.15	HTTP	357	GET /image5.jpeg HTTP/1.1
680	3.438157454	10.0.2.4	10.0.2.15	HTTP	357	GET /image6.jpeg HTTP/1.1
681	3.441402608	10.0.2.4	10.0.2.15	HTTP	357	GET /image7.jpeg HTTP/1.1
2817	3.815017997	10.0.2.15	10.0.2.4	HTTP	693	HTTP/1.1 200 OK (image/jpeg)
3823	3.988336380	10.0.2.4	10.0.2.15	HTTP	357	GET /image8.jpeg HTTP/1.1
4458	4.104988163	10.0.2.15	10.0.2.4	HTTP	8114	HTTP/1.1 200 OK (JPEG JFIF image)
4694	4.154945470	10.0.2.15	10.0.2.4	HTTP	6747	HTTP/1.1 200 OK (JPEG JFIF image)
4796	4.168985796	10.0.2.15	10.0.2.4	HTTP	3524	HTTP/1.1 200 OK (JPEG JFIF image)
4945	4.215386018	10.0.2.15	10.0.2.4	HTTP	923	HTTP/1.1 200 OK (JPEG JFIF image)
5069	4.285738254	10.0.2.4	10.0.2.15	HTTP	357	GET /image9.jpeg HTTP/1.1
5178	4.327252705	10.0.2.15	10.0.2.4	HTTP	80	HTTP/1.1 200 OK (JPEG JFIF image)
5237	4.555561771	10.0.2.4	10.0.2.15	HTTP	357	GET /favicon.ico HTTP/1.1
5261	4.556632225	10.0.2.15	10.0.2.4	HTTP	553	HTTP/1.1 404 Not Found (text/html)
5307	4.564978953	10.0.2.15	10.0.2.4	HTTP	1581	HTTP/1.1 200 OK (JPEG JFIF image)

f) 10 persistent connections:

*enp0s3						
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help						
Current filter: http						
No.	Time	Source	Destination	Protocol	Length	Info
138	9.879745047	10.0.2.4	10.0.2.15	HTTP	408	GET /images.html HTTP/1.1
140	9.880835400	10.0.2.15	10.0.2.4	HTTP	543	HTTP/1.1 200 OK (text/html)
145	9.995729752	10.0.2.4	10.0.2.15	HTTP	356	GET /image0.jpg HTTP/1.1
238	10.019321768	10.0.2.4	10.0.2.15	HTTP	356	GET /image1.jpg HTTP/1.1
459	10.080089672	10.0.2.4	10.0.2.15	HTTP	357	GET /image5.jpeg HTTP/1.1
523	10.103604504	10.0.2.4	10.0.2.15	HTTP	357	GET /image4.jpeg HTTP/1.1
524	10.115107780	10.0.2.4	10.0.2.15	HTTP	357	GET /image3.jpeg HTTP/1.1
525	10.115441507	10.0.2.4	10.0.2.15	HTTP	356	GET /image2.jpg HTTP/1.1
529	10.116668751	10.0.2.4	10.0.2.15	HTTP	357	GET /image6.jpeg HTTP/1.1
703	10.213752027	10.0.2.4	10.0.2.15	HTTP	357	GET /image9.jpeg HTTP/1.1
704	10.213839581	10.0.2.4	10.0.2.15	HTTP	357	GET /image8.jpeg HTTP/1.1
705	10.213908982	10.0.2.4	10.0.2.15	HTTP	357	GET /image7.jpeg HTTP/1.1
5835	11.043064539	10.0.2.15	10.0.2.4	HTTP	4478	HTTP/1.1 200 OK (JPEG JFIF image)
6198	11.102767813	10.0.2.15	10.0.2.4	HTTP	2077	HTTP/1.1 200 OK (JPEG JFIF image)
8523	12.328430500	10.0.2.4	10.0.2.15	HTTP	357	GET /favicon.ico HTTP/1.1
8525	12.628889504	10.0.2.15	10.0.2.4	HTTP	553	HTTP/1.1 404 Not Found (text/html)

Table:

Connection Type	Time
Non-persistent connection	14.525030317 – 8.511104686 = 6.013925631
2 persistent connections	10.413480894 – 6.77849375 = 3.634987144
4 persistent connections	51.454647528 – 50.123384654 = 1.331262874
6 persistent connections	15.316624175 – 14.169158058 = 1.147466117
8 persistent connections	4.327252705 – 3.208902698 = 1.118350007
10 persistent connections	11.102767813 – 9.879745047 = 1.223022766

- The best number of persistent connections is 6 or 8.

Task 2:

Objectives:

Understand working of HTTP headers:

Conditional Get: If-Modified-Since

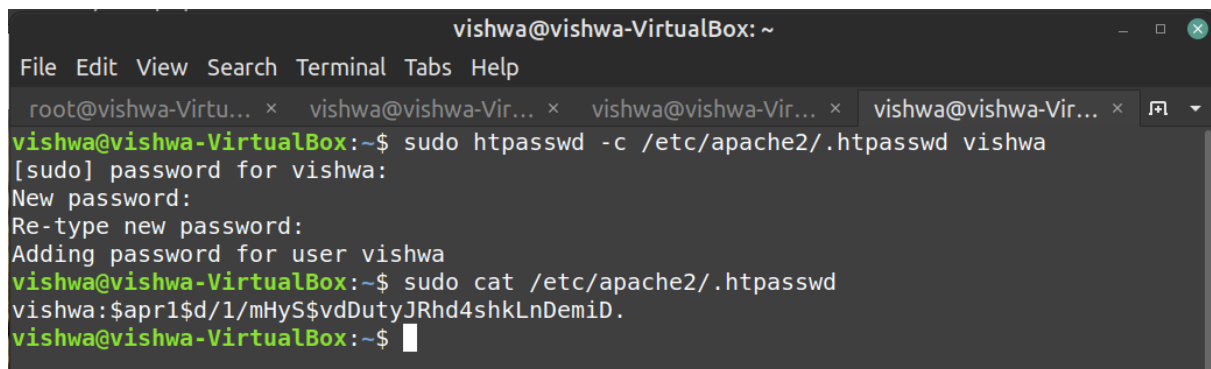
HTTP Cookies: Cookie and Set-Cookie

Authentication: Auth-Basic

Design a web page that has one embedded page (e.g. image) and sets a cookie and enables authentication. You are required to configure the web server (e.g. apache) with authentication mechanism.

Show the behaviour of conditional get when embedded objects is modified and when it is not (you can just change the create date of the embedded object). Decode the Basic-Auth header using Base64 mechanism as per the password setup.

1. Password Authentication:



```
vishwa@vishwa-VirtualBox: ~  
File Edit View Search Terminal Tabs Help  
root@vishwa-Virtu... x vishwa@vishwa-Vir... x vishwa@vishwa-Vir... x vishwa@vishwa-Vir... x  
vishwa@vishwa-VirtualBox:~$ sudo htpasswd -c /etc/apache2/.htpasswd vishwa  
[sudo] password for vishwa:  
New password:  
Re-type new password:  
Adding password for user vishwa  
vishwa@vishwa-VirtualBox:~$ sudo cat /etc/apache2/.htpasswd  
vishwa:$apr1$d/1/mHyS$vdDutyJRhd4shkLnDemiD.  
vishwa@vishwa-VirtualBox:~$
```

```
vishwa@vishwa-VirtualBox: ~
File Edit View Search Terminal Tabs Help
root@vishwa-Virtu... x vishwa@vishwa-Vir... x vishwa@vishwa-Vir... x vishwa@vishwa-Vir... x
<VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
#ServerName www.example.com

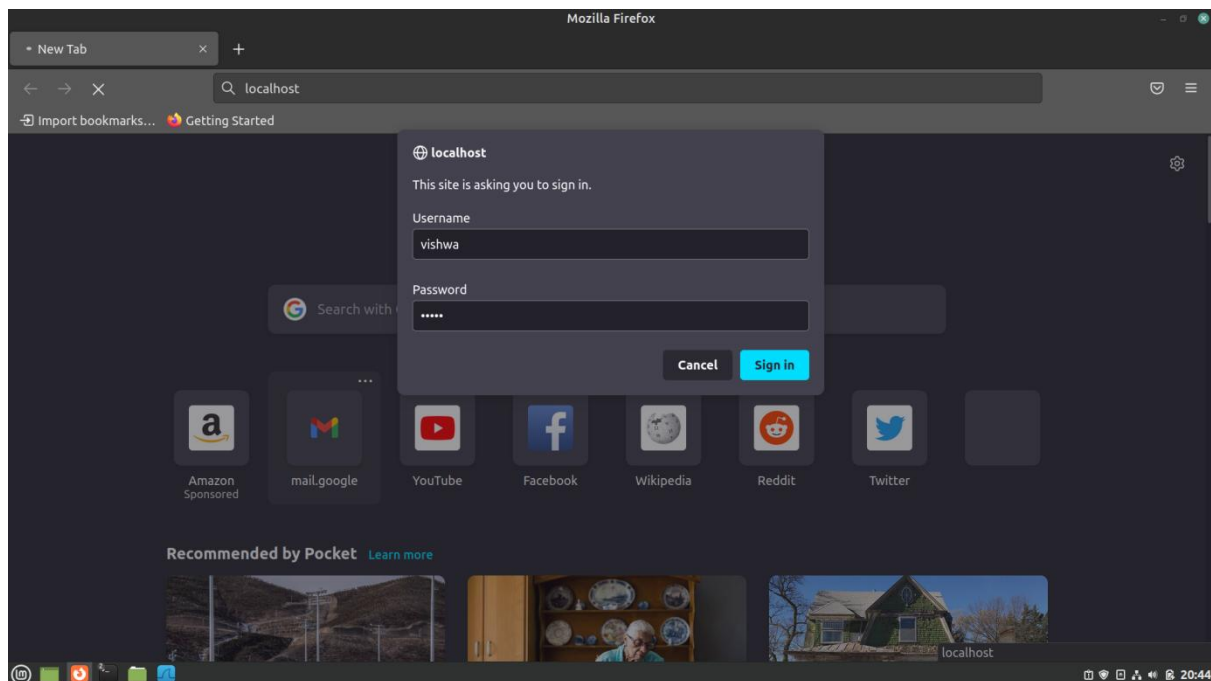
ServerAdmin webmaster@localhost
DocumentRoot /var/www/html

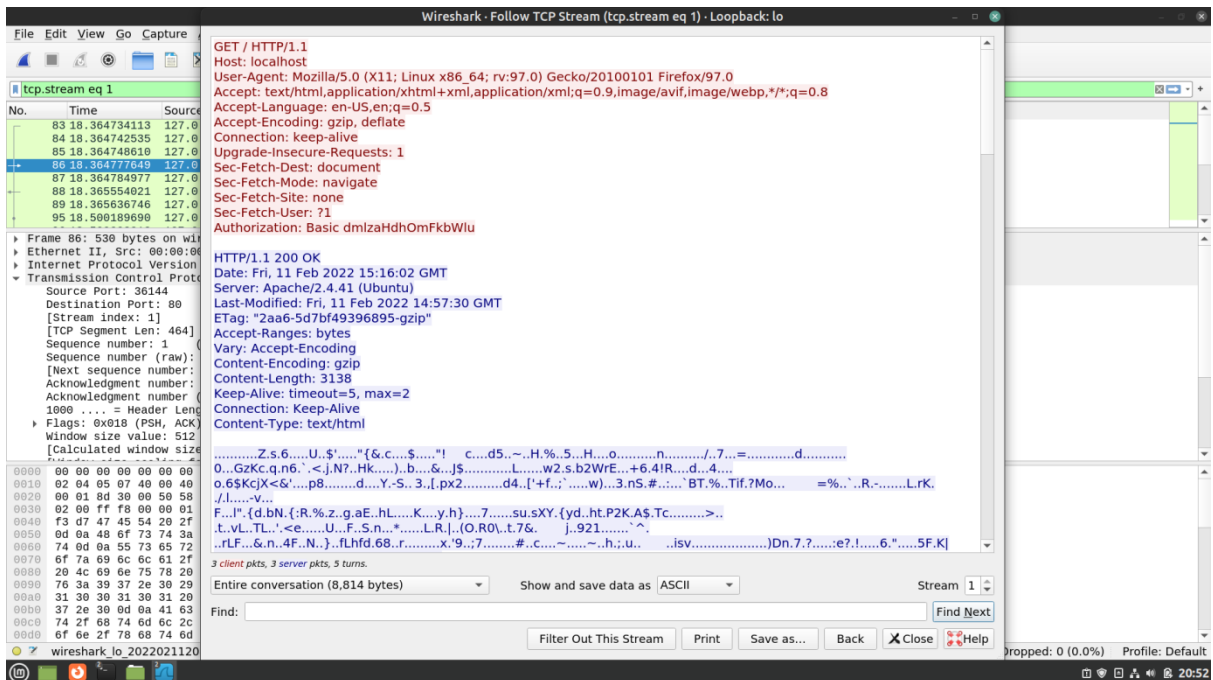
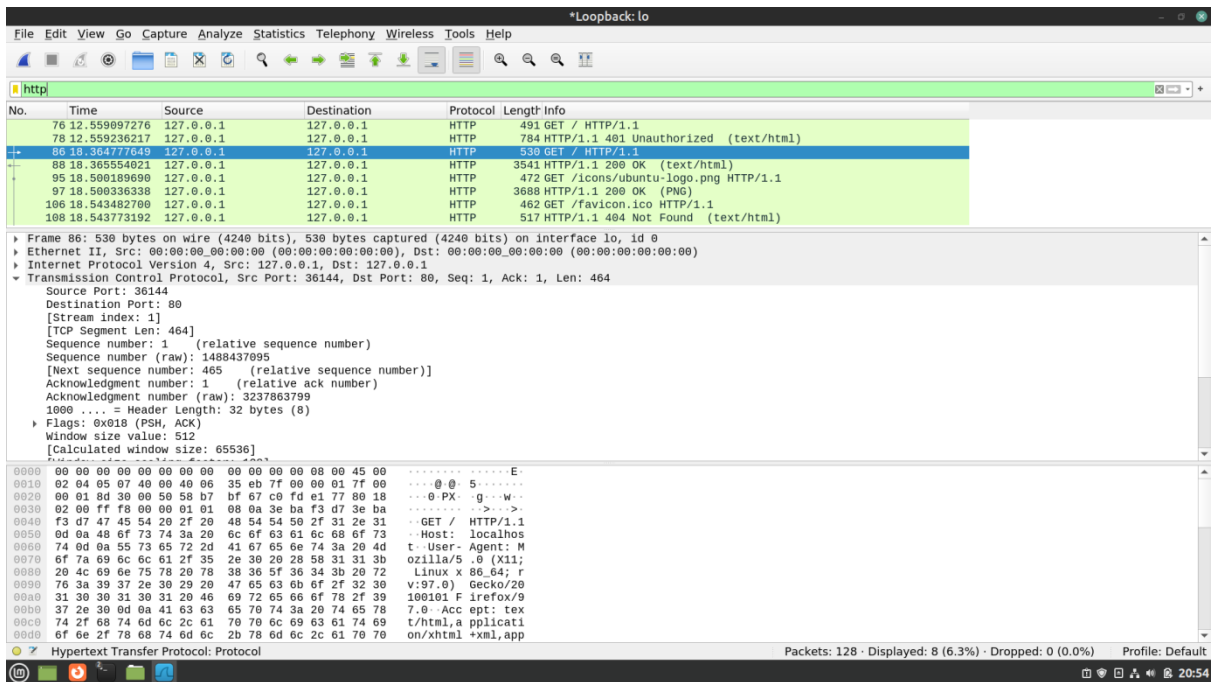
# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined
<Directory "/var/www/html">
    AuthType Basic
    AuthName "RESTRICTED"
    AuthUserFile /etc/apache2/.htpasswd
    Require valid-user
</Directory>

# For most configuration files from conf-available/, which are
<tc/apache2/sites-available/000-default.conf" 37L, 1475C 1,16 Top
```

OBSERVATIONS:





Decoding the username and password:

“dmlzaHdhOmFkbWlu” to Binary 6-bit blocks:

```
011101 100110 100101 110011 011010 000111 011101 100001
001110 100110 000101 100100 011011 010110 100101 101110
```

“dmlzaHdhOmFkbWlu” to Binary with 8-bit blocks:

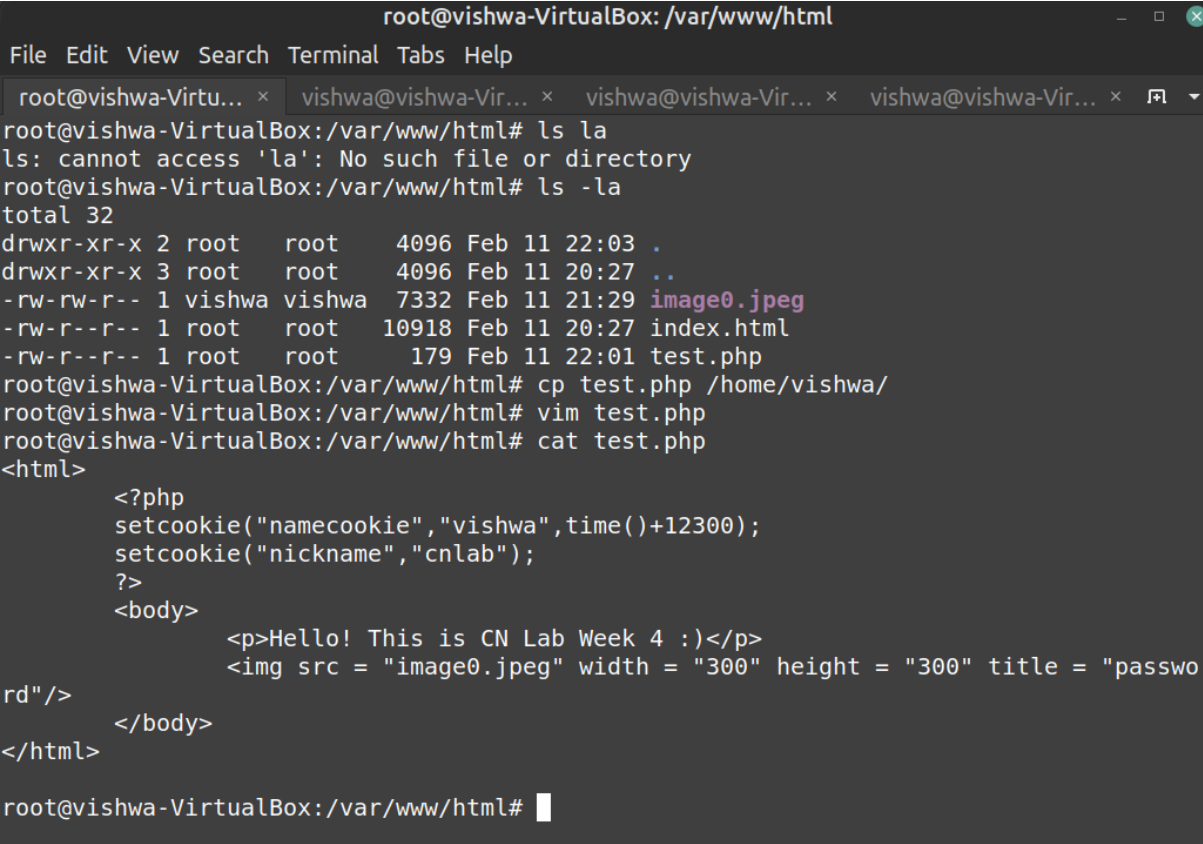
```
01110110 01101001 01110011 01101000 01110111 01100001
00111010 01100001 01100100 01101101 01101001 01101110
```

8-bit blocks converted to ASCII:

vishwa:admin

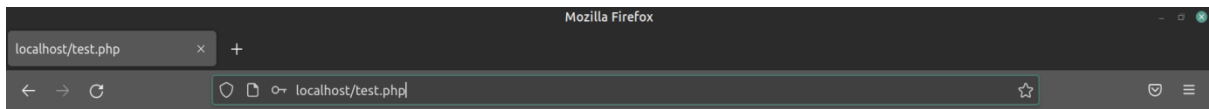
Here, **vishwa** is the username and **admin** is the password.

2. Cookie Setting:



```
root@vishwa-VirtualBox: /var/www/html
File Edit View Search Terminal Tabs Help
root@vishwa-Virtu... x vishwa@vishwa-Vir... x vishwa@vishwa-Vir... x vishwa@vishwa-Vir... x
root@vishwa-VirtualBox:/var/www/html# ls la
ls: cannot access 'la': No such file or directory
root@vishwa-VirtualBox:/var/www/html# ls -la
total 32
drwxr-xr-x 2 root  root   4096 Feb 11 22:03 .
drwxr-xr-x 3 root  root   4096 Feb 11 20:27 ..
-rw-rw-r-- 1 vishwa vishwa 7332 Feb 11 21:29 image0.jpeg
-rw-r--r-- 1 root   root  10918 Feb 11 20:27 index.html
-rw-r--r-- 1 root   root    179 Feb 11 22:01 test.php
root@vishwa-VirtualBox:/var/www/html# cp test.php /home/vishwa/
root@vishwa-VirtualBox:/var/www/html# vim test.php
root@vishwa-VirtualBox:/var/www/html# cat test.php
<html>
    <?php
        setcookie("namecookie","vishwa",time()+12300);
        setcookie("nickname","cnlab");
    ?>
    <body>
        <p>Hello! This is CN Lab Week 4 :)</p>
        <img src = "image0.jpeg" width = "300" height = "300" title = "passwo
rd"/>
    </body>
</html>

root@vishwa-VirtualBox:/var/www/html#
```



Hello! This is CN Lab Week 4 :)



OBSERVATIONS:

Wireshark - Follow TCP Stream (tcp.stream eq 0) - Loopback: lo

File Edit View Go Capture

<address>Apache/2.4.41 (Ubuntu) Server at localhost Port 80</address>
</body></html>
GET /test.php HTTP/1.1
Host: localhost
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:97.0) Gecko/20100101 Firefox/97.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
DNT: 1
Connection: keep-alive
Cookie: namecookie=vishwa; nickname=cnlab
Upgrade-Insecure-Requests: 1
Sec-Fetch-Dest: document
Sec-Fetch-Mode: navigate
Sec-Fetch-Site: none
Sec-Fetch-User: ?1
Authorization: Basic dmlzaHdhbmFkbWlu

HTTP/1.1 200 OK
Date: Sat, 12 Feb 2022 11:58:04 GMT
Server: Apache/2.4.41 (Ubuntu)
Set-Cookie: namecookie=vishwa; expires=Sat, 12-Feb-2022 15:23:04 GMT; Max-Age=12300
Set-Cookie: nickname=cnlab
Vary: Accept-Encoding
Content-Encoding: gzip
Content-Length: 143
Keep-Alive: timeout=5, max=99
Connection: Keep-Alive
Content-Type: text/html; charset=UTF-8

.....=N.
.i....^vs.....r..8
rt{.....39..m..{TJ...f
..ll..h.....7L.....GET /image0.jpeg HTTP/1.1
Host: localhost
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:97.0) Gecko/20100101 Firefox/97.0
Accept: image/avif,image/webp,*/*
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate

4 client pkts, 4 server pkts, 7 turns.

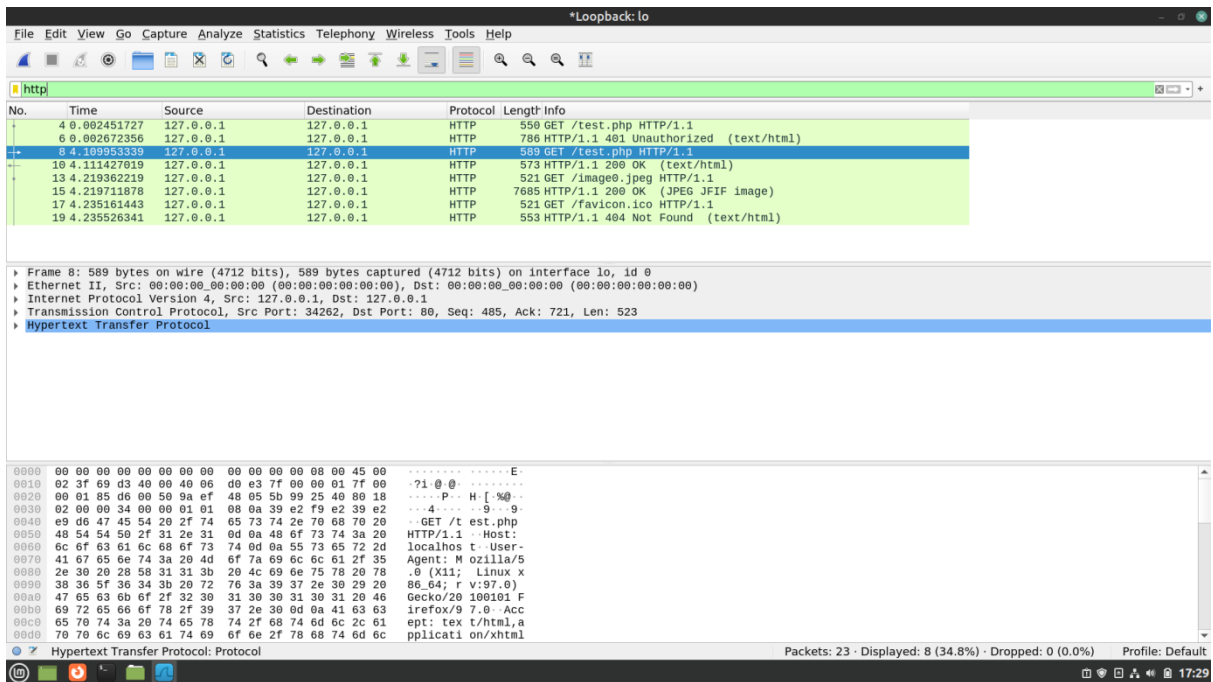
Entire conversation (11 kB) Show and save data as ASCII Stream 0

Find: Find Next

Filter Out This Stream Print Save as... Back Close Help

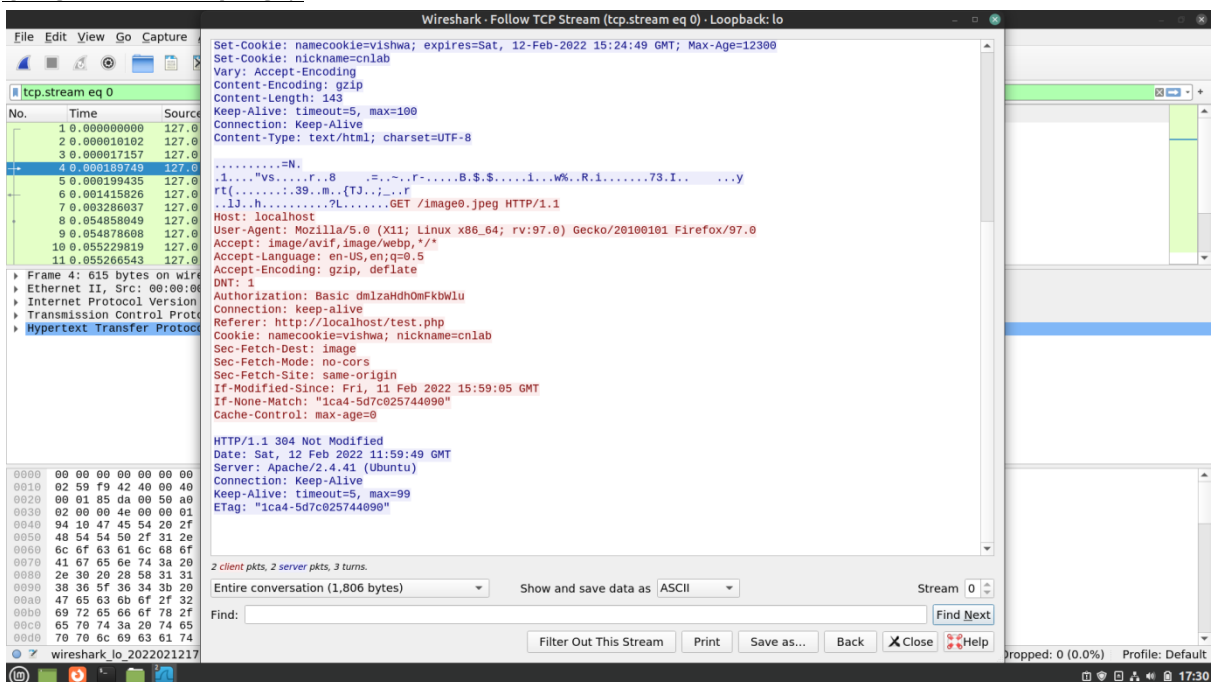
ropped: 0 (0.0%) Profile: Default

17:28



3. Conditional get:

OBSERVATIONS:



*Loopback: lo

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http

No.	Time	Source	Destination	Protocol	Length	Info
4	0.000189748	127.0.0.1	127.0.0.1	HTTP	615	GET /test.php HTTP/1.1
6	0.001415826	127.0.0.1	127.0.0.1	HTTP	574	HTTP/1.1 200 OK (text/html)
8	0.054858049	127.0.0.1	127.0.0.1	HTTP	634	GET /image0.jpeg HTTP/1.1
10	0.055229819	127.0.0.1	127.0.0.1	HTTP	247	HTTP/1.1 304 Not Modified

Frame 4: 615 bytes on wire (4920 bits), 615 bytes captured (4920 bits) on interface lo, id 0

Ethernet II, Src: 00:00:00:00:00:00 (00:00:00:00:00:00), Dst: 00:00:00:00:00:00 (00:00:00:00:00:00)

Internet Protocol Version 4, Src: 127.0.0.1, Dst: 127.0.0.1

Transmission Control Protocol, Src Port: 34266, Dst Port: 80, Seq: 1, Ack: 1, Len: 549

Hypertext Transfer Protocol

```

0000  00 00 00 00 00 00 00 00 00 00 00 00 08 00 45 00  .....E
0010  02 59 f9 42 40 00 40 06 41 5a 7f 00 00 01 7f 00  -Y-B@ @ AZ....
0020  00 01 85 da 00 50 a0 85 b2 51 3b 99 52 4b 80 18  -...P...-Q: RK..
0030  02 00 00 4e 00 00 01 01 08 0a 39 e4 10 39 e4  -N...-9...9-
0040  94 10 47 45 54 20 2f 74 65 73 74 2e 70 68 70 20  -GET /t est.php
0050  48 54 54 50 2f 31 2e 31 00 0a 48 6f 73 74 3a 20  HTTP/1.1 -Host:
0060  6c 6f 63 61 6c 68 6f 73 74 0d 0a 55 73 65 72 2d  localhos t-User-
0070  41 67 65 6e 74 3a 20 4d 6f 7a 69 6c 6c 61 2f 35  Agent: M ozilla/5
0080  2e 30 20 28 58 31 31 3b 20 4c 69 6e 75 78 20 78  .0 (X11; Linux x
0090  38 36 5f 36 34 3b 20 72 76 3a 39 37 2e 30 29 20  86;64; r v:97.0)
00a0  47 65 63 6b 6f 2f 32 30 31 30 30 31 30 31 20 46  Gecko/20 100101 F
00b0  69 72 65 66 6f 78 2f 39 37 2e 30 0d 0a 41 63 63  irefox/9 7.0 -Acc
00c0  65 78 74 3a 20 74 65 78 74 2f 68 74 6d 6c 2c 61  ept: tex t/html,a
00d0  70 70 6c 69 63 61 74 69 6f 6e 2f 78 68 74 6d 6c  pplicati on/xhtml

```

Packets: 14 - Displayed: 4 (28.6%) - Dropped: 0 (0.0%) Profile: Default

17:31

- IF-MODIFIED-SINCE line is not seen in the first HTTP Get request but seen in the second request followed by the day, date and time of modification in the server.
- The HTTP Status Code is 304 Not Modified.