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[Assignment 0]

**TASK 1 – Explore HTTP**

1. What is the IP address of your computer? Of the *gaia.cs.umass.edu* server?  
   ***the IP Address of my machine is* – 192.168.0.111  
   *the gaia.cs.umass.edu server IP address is* – 128.119.245.12**

Table

Description automatically generated with medium confidence

1. What is the status code and phrase returned from the server to your browser?  
   ***the server responded to the browser with*** - **200 OK *as status code and phrase***

**Graphical user interface, application

Description automatically generated with medium confidence**

1. What languages does your browser indicate to the server that it can accept? Which header line is used to indicate this information?  
   ***my Firefox browser indicates that it will accept* en-US(English-US) *and* en(English) *language from the server***

Graphical user interface, text, application, email

Description automatically generated

1. How many bytes of content (size of file) are returned to your browser? Which header line is used to indicate this information?  
   **128 bytes *of content size are returned to my Firefox browser***

Graphical user interface, text, application

Description automatically generated

1. How long did it take from when the HTTP GET message was sent until the HTTP OK reply was received? (By default, the value of the Time column in the packet listing window is the amount of time, in seconds since Wireshark tracing began. To display the Time field in time-of-day format, select the Wireshark View pull down menu, then select Time Display Format, then select Time-of-day.)  
   **It took 43.983ms from when the HTTP GET message was sent until the HTTP OK reply was received**  
   ***The result was calculated in (Time Display Format hh-mm-ss)   
   09:19:20.139571 - 09:19:20.095588   
   =* 0.043983 seconds (43.983 milliseconds)**  
     
   Graphical user interface, application, table

   Description automatically generated

**TASK 2 – Capture a traceroute**

1. Start a new packet capture in Wireshark.
2. Open a “terminal window” on Mac or Linux, a “Command Prompt” on Windows
3. Use the “tracert” command on Windows to determine path and intermediate devices between your host and yahoo.com. On Linux or Macintosh, the command is “traceroute”. You should see results of the traceroute command in your terminal/command window, as well as in the wireshark packets list. For example:
4. Type “icmp” into the “filter” window and then click the “apply” button to narrow down the types of packets shown in the list.
5. Stop the Wireshark trace. Packets should no longer be collected.
6. Take a screen shot of the wireshark window showing the ICMP packets. Depending on the number of hops between where you are on the Internet and Yahoo, you might not be able to fit all the ICMP packets on the screen. That’s OK, just make the Wireshark window as “tall” as you can, and perhaps uncheck the “packet bytes” and “packet details” sections under the “View” menu. Notice the IP addresses match up to the output from the traceroute command in your terminal window.

***traceroute command on windows terminal -***

C:\windows\system32>tracert yahoo.com

Tracing route to yahoo.com [2001:4998:44:3507::8001]

over a maximum of 30 hops:

1 19 ms 25 ms 20 ms ae-20.2231.cr5.bldc.net.uits.iu.edu [2001:18e8:2:28b7::2]

2 4 ms 3 ms 2 ms ae-15.0.br2.bldc.net.uits.iu.edu [2001:18e8:3:f016::2]

3 7 ms 7 ms 5 ms 2001:18e8:ff00:90::1

4 15 ms 11 ms 14 ms 2001:18e8:ffff:7::4

5 13 ms 13 ms 10 ms 2001:18e8:ffff:11::2

6 13 ms 9 ms 10 ms r-equinix-isp-ae0-2274.wiscnet.net [2001:4e0:0:21c::219]

7 \* \* \* Request timed out.

8 26 ms 38 ms 20 ms ae-0.pat2.nez.yahoo.com [2001:4998:f000:200::]

9 27 ms 24 ms 24 ms et-1-0-0.msr1.ne1.yahoo.com [2001:4998:f000:207::1]

10 22 ms 19 ms 20 ms et-1-1-0.clr2-a-gdc.ne1.yahoo.com [2001:4998:44:fe1d::1]

11 25 ms 21 ms 22 ms 2001:4998:44:f823::1

12 24 ms 23 ms 328 ms et28.usw1-1-lbd.ne1.yahoo.com [2001:4998:44:c226::1]

13 24 ms 24 ms 23 ms media-router-fp74.prod.media.vip.ne1.yahoo.com [2001:4998:44:3507::8001]

Trace complete.

***traceroute command on windows terminal (screenshot) -***

Text

Description automatically generated

***icmpv6 filter for capturing traceroute command using Wireshark -***

