

Internet and following questions

[Technology](#), [Internet](#)



Internet and Following Questions BY ttya91 Complete each of the hands-on activities listed below. All of these activities are from the book, but I have asked for you to answer additional questions and provide attachments showcasing your work. Your answers and attachments (referred to as the "deliverable") can be embedded within this document or attached as a separate document, but please make it readable. Submit your deliverable on Blackboard by the beginning of class on November 02, 2013. 1 . Work through the hands-on activity in Chapter 2 titled " Looking Inside Your HTTP Packets" (pp. 67-69 of the textbook). using the HTTP viewer, do the following: a. Select two websites, one In the U. S. and one In another country. These websites can belong to universities, companies, or even individuals (but you should be fairly confident about where they are located). Enter each of those two websites into the HTTP viewer. b. Copy the HTTP request and response headers for each website and paste them in your deliverable. c. For each website, answer the following questions: i. What version of HTTP is the client using and where did you find that in the request (i. , request line, header, or body)? n. What web browser (including version) Is being used on the client and where did you find that In the request? III. If Included In the response, what application software is the server running? iv. What was the status code and reason phrase in the HTTP response? v. Add "qwerty. html" to the host listed in the HTTP request and enter that address into the HTTP viewer. For example, if the host is " www. somedomain. com", then enter " http://www. somedomain. com/ qwerty. html". What is the status code and reason phrase in the HTTP response now? 2.

For this activity, you will be using Wireshark to capture data packets sent and received by your computer. The hands-on activity in Chapter 4 titled "Capturing Packets on Your Network" (pp. 144-146 of the textbook) shows you how to download and install Wireshark and provides an overview of how to use the software. Work through this activity, and then do the following: a. Begin capturing packets on one of your Interfaces (wired or wireless), open up a web browser, go to one of the websites you selected in Activity 1, and then stop capturing packets. b. Sort the packets you have captured by protocol.

You can do this by clicking on the title of the "Protocol" column in the packet list window (see below). Each line represents a different layer of the Internet model (e. g. , "Ethernet II", "Internet Protocol", "Transmission Control Protocol", and "Hypertext Transfer Protocol"). The contents of each layer's PDU can be examined by clicking on the "+" sign next to each line (see below). d. Select a packet using the ARP protocol. If there are none listed, continue capturing packets until one shows up. Take a screenshot of the Wireshark window by pressing the Alt+Print Screen keys, and then paste the screenshot in your deliverable.

Answer the following questions: i. What does ARP stand for and what does it do? ii. What is the destination MAC address? iii. What IP address is the client trying to reach? e. Select a packet using the DNS protocol. Take a screenshot of the Wireshark window and paste it in your deliverable. Answer the following questions: i. There should be a line in the middle window labeled "Domain Name System (query)" or "Domain Name System (response)".

Expand it by clicking on the "+" sign. What is the host name that the client is trying to look up? i'. What transport layer protocol is being used for the

DNS? iii. What are the source and destination ports listed for the transport layer PDU? f. Find the HTTP request packet for the website you selected in

Activity 1. The protocol will be " HTTP", and the " Info" column will contain something like " GET / HTTP/I . 1". Take a screenshot of the Wireshark

window and paste it in your deliverable. Answer the following questions: i.

Expand the HTTP request by clicking the "+" sign next to the appropriate line in the middle window. Is the HTTP request the same as what you saw using the HTTP viewer in Activity 1? If not, what is different? it.

What are the ource and destination ports? iii. What are the source and

destination IP addresses? 'v. What are the source and destination MAC

addresses? v. What is the maximum hop count (also called " time to live")?

3. Work through the hands-on activity in Chapter 5 titled " Using TCP/IP" (pp.

187-193 of the textbook), and then do the following: a. Run the " ipconfig

[all" command on your computer. Take a screenshot of the command prompt output and paste it in your deliverable. Answer the following questions: i.

What is your IP address, subnet mask, default gateway IP address, and DNS

server IP address(es)? . If using DHCP, what is the IP address of the DHCP

server? How long is the IP address of your computer being leased? b. " Ping"

both of the websites you selected in Activity 1 . Take a screenshot of the

command prompt output and paste it in your deliverable. Answer the

following questions: i. If the ping timed out for one or both of the servers,

why do you think that happened? it. How long (in milliseconds) did it take to

receive the ping replies? Was there a noticeable difference between the U. S. -based website versus the non-U. S. -based website? iii. command on your computer.

Take a screenshot of the command prompt output and paste it in your deliverable. How many addresses are listed in your ARP table? What is the physical (MAC) address for your default gateway (refer to activity 3. a. i. for the IP address of your default gateway)? d. Run the " nslookup" command for both of the websites you selected in Activity 1 . Take a screenshot of the command prompt output and paste it in your deliverable. Answer the following questions: i. What is the name and IP address of the DNS server used to resolve each website address? it. How many IP addresses are associated with each website, and what are they? Run the " tracert" command for both of the websites you selected in Activity 1 . Take a screenshot of the command prompt output and paste it in your deliverable. Answer the following questions: i. How many hops were required to reach each website? it. What was the longest hop and how long did it take (in milliseconds)? iii. What was the shortest hop and how long did it take (in milliseconds)? 'v. Because traceroute sends three packets for each hop, there are three measurements of delay on each line of the output. Were these measurements consistent across all three packets for ach hop, or was there variability in the delay?