NS Lab 1 - Answer Sheet
Network Tools

Student Name: **Abe**
Student Surname: **Wiersma**
Student Number: **10433120**

Chariklis Pittaras (c.pittaras@uva.nl)

Karel van der Veldt (karel.vd.veldt@uva.nl)

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Hand-in time (submit to blackboard) by Sep 9, 2013 13:00CEST

Total points: 20 pts

Please provide your answer in the appropriate space for each question

Task 1 – Application Layer**a) Do you ge**

Task 1a – Wireshark – HTTP

1. (a) 128.30.52.37
   (b) 145.100.135.221
   (c) http://www.w3.org/Protocols/rfc2616/rfc2616.html

2. (a) 1 to the w3 server, 5 in total.
   (b) http.request

Task 1b – Wireshark – Security

3. (a) 128.119.245.12
   (b) letsTry, network, network
   (c) wireshark-students
   (d) http
   (e) network

Task 1c – Command Line Tools: nmap, nc, curl, wget

4. (a) Nope
   (b) Host is up (0.092s latency)
   (c) 80,443
   (d) http, https

5. (a) nc amazon.com 80 -z
   (b) Connection to amazon.com 80 port [tcp/http] succeeded!

6. (a) nmap 192.16.191.0/24 -sn
   (b) 8

7. (a) nc -l -p 1234
   (b nc 127.0.0.1 1234
   (c) communication between server and client

8. (a/b) Apache-Coyote/1.1
   (c) gws (no version number)

Task 2 – Network Layer

Task 2a – Wireshark - Investigate Traceroute

9. (a) 145.100.135.221
   (b) 192.16.191.44
   (c) 5

10. (a) 2
    (b) counting

11. (a) ping request
    (b) Time-to-live exceeded (Time to live exceeded in transit)
    (c) ping reply is returned

Task 2b – Ping and Traceroute - Find availability and RTT

12. (a) mit, nikhef, uoa, twitter
    (b) blockage of ping requests

13. (a) *twitter*: 162ms ,*uoa*: 117ms ,*nikhef*: 75.5ms
    (b) nope
    (c) the hosts have different connectionspeeds and distances to my requests
    (d) Propagation delay, the distances to the servers will be the main reason for differences.

14. (a) Berkeley: 16, 4.69.135.185 Stanford: 13, stanford-university.10gigabitethernet1-4.core1.pao1.he.net
    (b) busy nodes with high queuing delays

15. (a) *24bytes packet size:* ping -c 10 -s 24 www.nikhef.nl
        800bytes packet size: ping -c 10 -s 800 www.nikhef.nl
    (b) 0%, 0%
    (c) 0.823ms, 0.957ms
    (d) yes
    (e) queuing favors smaller packages

Task 2c – Traceroute - Find the network path

16. (a) 3
    (b) 62.40.98.114, 62.40.124.158, 145.145.19.170
    (c) from ams to surfnet, 62.40.98.114 to 62.40.124.158

17. (a) None
    (b) Because the ip lookup in australia is different from the one in suisse

Task 3 – Transport Layer

Task 3a – Iperf

18. (a) iperf -c rembrandt0.uva.netherlight.nl -p 5001 -m
    (b) 161 Mbits/s
    (c) 1368 bytes
    (d)
    (e) 0.562ms

19. (a) iperf -c rembrandt0.uva.netherlight.nl -p 5001 -w {tcp_window}
    (b)
    (c)

Task 3b – Netstat

20. (a) netstat -at
    (b) 52676, 60912, 60397
    (c) http, https

Submission

You have to submit:

- Your answers to all the questions. Use this **answer sheet** for you answers and provide your answers in the appropriate answer field for each question.

- Answer only what each question ask, with out any superfluous details.

Attention: You have to submit one PDF file that contains all the answers; the name of the file should be lab1-<lastname_firstletter>.pdf (example: lab1-vanderveldt_k.pdf, or lab1-pittaras_c.pdf).

Any other kind of submission will not be taken into account. You must also put your full name and your student number at the top of the file