

NS Lab 4 Answer Sheet

NS3 simulator - TCP Performance Monitoring

Student Name: Sander
Student Surname: In 't Veld
Student Number: 10277935

Chariklis Pittaras (c.pittaras@uva.nl)
Karel van der Veldt (karel.vd.veldt@uva.nl)
Koen Koning (koen.koning@gmail.com)

Lab date: Sep 19 & 23 2013

Hand-in time (submit to blackboard) by Sep 30, 2013 13:00CEST

Total points: 20 pts

Please provide your answer in the appropriate space for each question

Task 1 - Throughput of TCP client-server connection

1.

Latency	Measured Throughput	Calculated Throughput	Calculation
64ms			
96ms			
128ms			

2.

3. Optimal RWIN value:
Calculation:

- 4.

Task 2 - Monitoring TCP congestion window

- 1.

Figure 1: Tahoe - droptail queue = 100

- 2.a.

Figure 2: Tahoe, droptail queue = 40

- 2.b

Figure 3: Tahoe, droptail queue = 40 (from 1 until 1.85 secs)

State changes, Tahoe - from 1 until 1.85 secs		
Time (sec, 3 decimal)	cwnd (bytes)	New state
1.000	1	(initial state)

- 2.c

Figure 4: Tahoe, droptail queue = 40 (from 4 until 6 secs)

State changes, Tahoe - from 4 until 6 secs			
Time accuracy decimal)	(sec, 3	cwnd (bytes)	New state
4.000			(initial state)

3.a

Figure 5: Reno, droptail queue = 40

3.b

Figure 6: Reno, droptail queue = 40 (from 4 until 6 secs)

State changes, Reno - from 4 until 6 secs				
Time (sec, accuracy 3 decimal)	Current cwnd (bytes)	New cwnd (bytes)	New state	Event
4.000		---	(initial state)	---

Submission

You have to submit:

- Your answers to all the questions. Use this provided **answer sheet** for you answers and graphs. Provide your answers in the appropriate answer field for each question
- The source codes of the two tasks.
- The graphs and the produced data.

Attention: You have to submit one PDF file that contains all the answers and graphs; the name of the file should be lab4-<lastname_firstletter>.pdf (example: lab1-vanderveldt_k.pdf, or lab1-pittaras_c.pdf). Additionally you have to submit one zip (or rar) file containing the source codes, the graphs and the data. The name of the file should be: lab4-source-<lastname_firstletter>.zip

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 answer sheet.