DT052A, DT066A — TCP/IP Internetworking

Lennart Franked

Institutionen för Informationsystem och -teknologi (IST)
Mittuniversitetet

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Teachers

Lennart Franked, Lectures, workshops, exam and laboratory assignment part 1.

Ph.d Aamir Mahmoud, Examiner, lectures, exam

Daniel Rodin, laboratory assignment part 2.

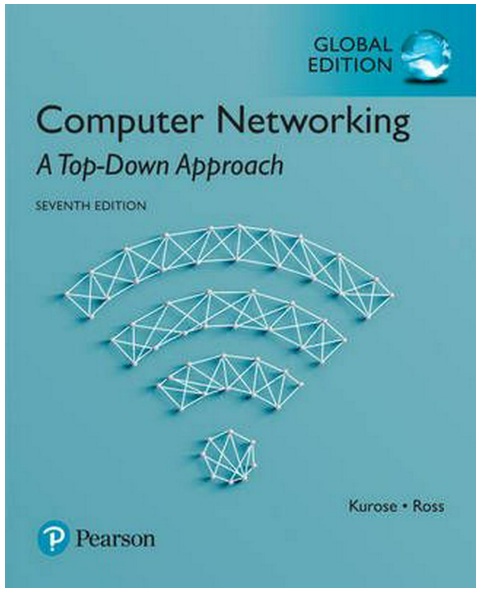
Intended Learning Outcomes

After the completion of the course the student should be able to:

- analyze, apply and evaluate the TCP / IP family protocols
- explain and evaluate routing protocols used for unicast and multicast on the Internet
- describe methods and categorize problems related to reliable transport, time delay, flow control and traffic congestion management
- design and evaluate a simpler network
- explain and apply the principles of queue theory related to QoS and switching
- independently utilize and account for knowledge from research
- calculate and measure performance, such as: throughput, delay and jitter
- evaluate and compare methods for distributing multimedia on the Internet and related protocols
- evaluate and compare security solutions for communication based on the internet model
- describe and reflect on technologies for wireless communication on the Internet

Course Literature

- Computer Networking — A Top-Down Approach
- Buy it!
- Latest version, global edition



Figur: Computer Networking: A Top-Down Approach [1]

Assignments, Labs and Exam

Ladok	Description	Credits	Comments
I101	Homework	1,5 hp	Only for DT066A
L101	Laboratory Assignment (L1, L2)	1.5 hp	
T101	Written Exam	4.5 hp	

Grading

- Final Grade is set based on exam result.

- You will create a set of questions based on the chapters in the book.
- In this course each one of you will construct 7 questions complete with answers. One for each chapter (2 — 8)
- Post your question with answer in the correct thread in the forum. Use plain text. Attach figures if needed.
- The questions should address the topic of the chapter indicated.
- Do not copy questions!
- Comment on other questions.
- *Some of the questions on the exam will be based on these questions.*

- How to formulate your question?
- Avoid simple knowledge based questions.
- Aim for higher levels of learning.
- Example verbs:
  - Judge, Recommend, Critique, Justify, Appraise, Argue, Assess, Attach, Choose,Compare
  - Conclude, Contrast, Defend, Describe, Discriminate, Estimate, Evaluate, Explain, Judge
  - Justify, Interpret, Relate, Predict, Rate, Select, Summarize, Support, Value
- Get inspired by the questions in the book.

- There will be one lab, divided into two parts
- Setup and configure a simple network topology.
- First part covers planning.
- Second part covers building and configuring.
- Class will be split into two groups.
- You need to sign-up for which day you would like to take the lab.
- 9/12, 10/12 (16/12, 17/12)

Exam

- The written exam covers material from the whole course.
- Old Exams are available in the course platform.

Late submissions

- Labs and homework that are submitted late, will be graded in connection to re-exams.

References

[1] James F. Kurose och Keith W. Ross. *Computer networking : a top-down approach*. 7th ed. Boston: Pearson/Addison Wesley, 2017. ISBN: 9781292153599.