

Practical Exercises in Computer Networks and Distributed Systems

Questionnaire on the Conceptual Basis chapter of CN

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The following questions are meant for you to review the concepts and structures we introduced in the first lecture and lab. I recommend that you have at hand the relevant presentation and lab script so you can readily consult the materials as you work each question. Soon, I will publish the solutions so you can assess your progress.

Context

- Lectures of 15-Feb through 8th-March
 - Lecture presentation: paloalto.unileon.es/cn under the heading “*Chapter 1: Conceptual Basis, Section 1*”
 - paloalto.unileon.es/cn under the heading “*Chapter 1: Brief notes on basic network performance and solved exercises*” which points to <http://paloalto.unileon.es/cn/CompNotesCN.Ch1.pdf>
1. Name the types of networking equipment you can recall from the lectures and the lab sessions
 2. Regarding the concept of value of a network (Metcalfe's Law), what role do you think scalability plays in this context?
 3. The network architectures relevant to this course (CN), are they organized into layers or otherwise?
 4. What do you think is the most significant difference between the OSI and the Internet (TCP/IP) architectures?
 5. Consult the lecture presentation mentioned above to determine what the network layer does
 6. Which of the Internet applications mentioned in the lecture presentation you think is the most challenging for the network?
 7. In which units is the bandwidth of your internet access specified: bits, bytes, bits per sec or bytes per sec?
 8. Calculate the maximum potential connectivity of a network comprised of 10 IP routers.