ADVANCED COMPUTER NETWORKS
Assignment 2: Fundamentals and principles

Assigned on: 26 Feb 2015
Due by: 5 March 2015

Question 1:


a) What was the top level goal for the DARPA Internet Architecture? Please describe the fundamental structure of the Internet this goal leads to.

b) “Internet communication must continue despite loss of networks or gateways” is also a very important goal and this goal leads to the reliability fate-sharing approach. What alternative design could there be? what are the advantages of fate-sharing?

c) Why the use of datagrams is an important architectural feature of the Internet? What is its drawback? What alternative building block could there be.

Question 2:


a) Please summarize the end-to-end argument.

b) Please list some commonly used examples where the argument can be applied.

c) Please list three examples where the end-to-end argument is diluted.

Question 3:

Paper reading: “Cross-layer visibility as a service” [3].

a) Can you think of few cases where sharing information between layers will be beneficial?

b) As per this paper, How would you go about sharing the information between layers in clean and systematic way?
Question 4:

Paper reading: “Resilient Overlay Networks” [1].

a) Why RON is more resilient than the Internet, even when it runs on the Internet?

Hand In Instructions

This is a paper exercise. Please hand it in during the exercise session on the due date.

References


