

FIT1005

Networks and Data Communications

Tutorial – Week 9

Objective of this tutorial:

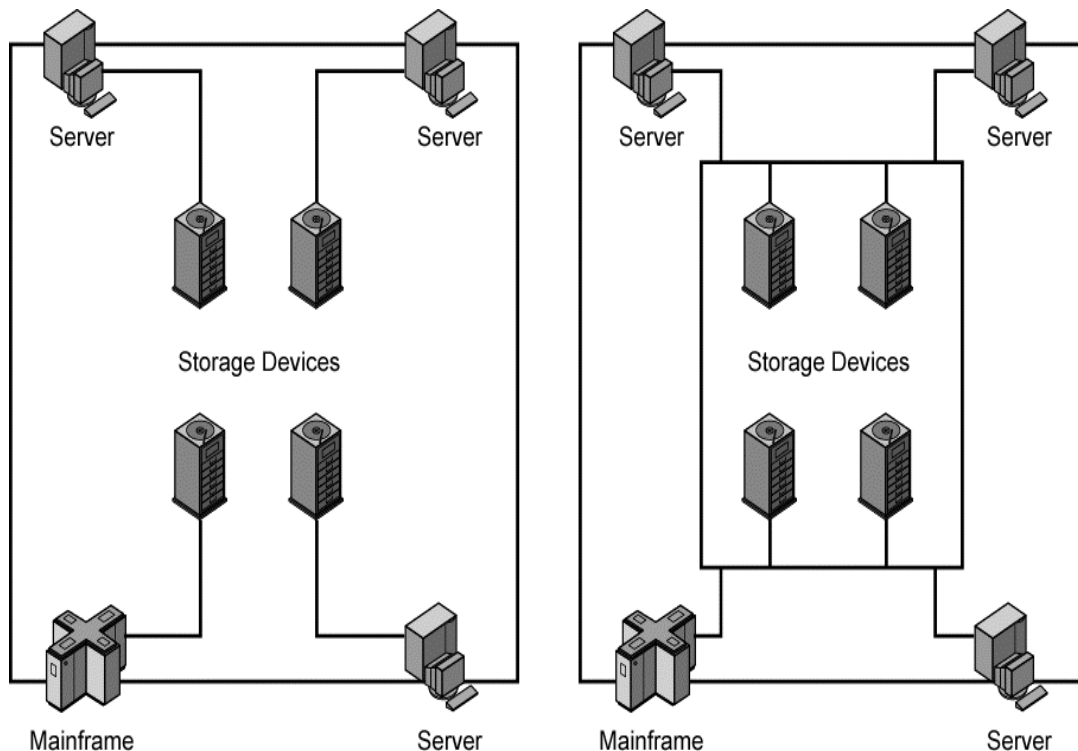
The main purpose of this tutorial is to make students revise some of the points highlighted on the operation of LAN protocols. In the reflective question, students are expected make connections of the gained knowledge in a practical situation of setting up a LAN.

How to participate in the tutorial:

Form groups of four students in each and discuss the answers for the following reflective questions with the group members. After spending about 15 minutes for each question, discussing with group members, discuss your solutions with the tutor and other groups. The tutor will provide feedback on your solutions.

Revision questions:

1. The following diagram shows two approaches used data storage in a LAN environment: traditional server based means and a storage area network (SAN). Compare and contrast the two approaches.



(a) Server-based storage

(b) Storage area network

2.
 - a. When using a bus topology for a LAN network, one station may decide to transmit continuously for a long period of time. What are the implications
 - b. Under the conditions mentioned in part “a” of this question, two stations on the bus may attempt to transmit at the same time. What are the implications?
3. The functions typically associated with OSI layer 2 are grouped into 2 layers in LAN protocols, namely Logic Link Control (LLC) and Medium Access Control (MAC).
 - a. Discuss the functions of each of these layers
 - b. Discuss the reasons for the above separation into 2 layers.
4. Two of the LLC services are unacknowledged connectionless service and acknowledged connectionless service. Differentiate between them.

Reflective questions:

1. The choice of topology for a LAN depends on a variety of factors. Reflect on this
2. The choice of transmission medium is determined by a number of factors. Reflect on this.