

IS8055556: Data and Computer Communications
Semester 2 5786
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Tel Hai College

Learning Switches and Datagram Switching

1 Learning Switches with Datagram Switching

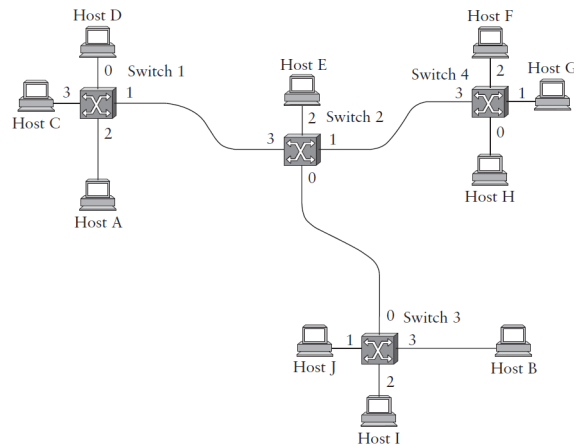


Figure 1: Example Network

Using the example network given above, show how the switches will learn about the locations of the hosts in the network using datagram routing. Assume that the sequence of connections is cumulative; that is, that is the switches learn about each sending in the order shown below and don't lose any information between steps.

- Host D sends a packet to host H. Host H responds with an ACK.
- Host B sends a packet to host G. Host G responds with an ACK.
- Host F sends a packet to host A. Host A responds with an ACK.
- Host H sends a packet to host C. Host C responds with an ACK.
- Host I sends a packet to host E. Host E responds with an ACK.
- Host H sends a packet to host J. Host J responds with an ACK.

2 Unweighted Datagram Routing

Consider the example network given in the figure below. Write down the full forwarding tables for Switches 1–4.

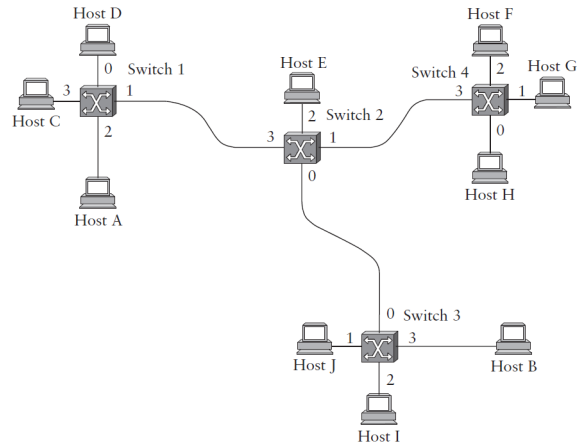


Figure 2: Example Network