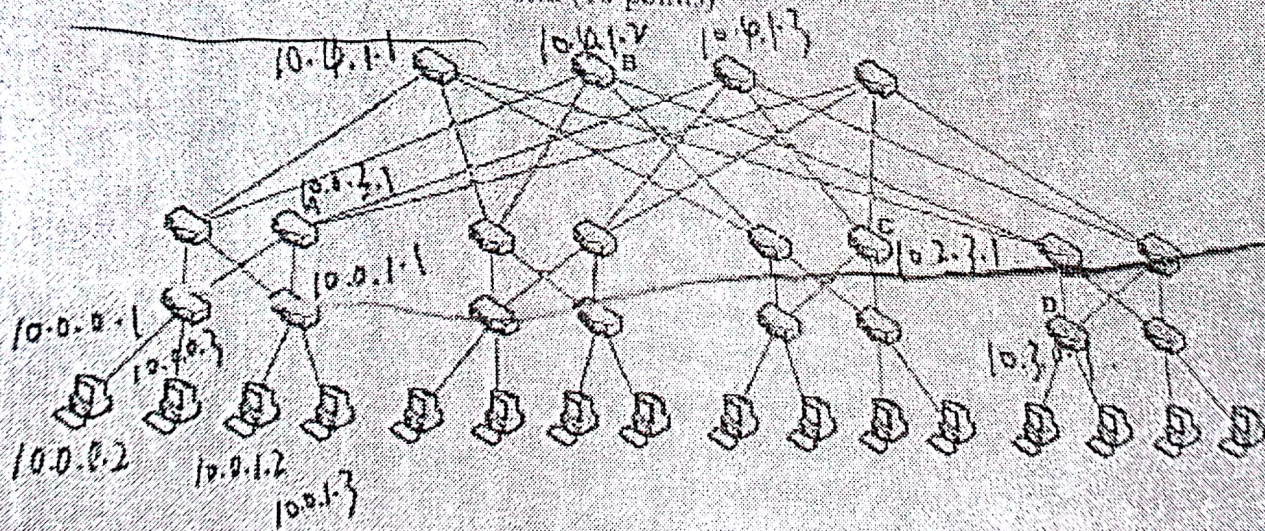


1. Which one is NOT the desired property of the datacenter network? (5 points)

- (1) Scalable interconnection bandwidth;
- (2) ~~Revolutionary clean-slate architecture;~~
- (3) Economies of scale;
- (4) Backward compatibility

2. According to the addressing scheme of FatTree, give the IP addresses for the switches of A, B, C, and D as shown on the network. (10 points)



3. Draw a DCell network structure with $n=3$, $k=1$, and name each node. (10 points)

4. How many layers are there in a software defined network? Where is the OpenFlow located? List at least three OpenFlow flow entry actions, and for each action, explain how the OpenFlow switch will handle a packet that matches the entry? (15 points)



5. Fill the blanks in the script written in the Ethane policy language, so that:
- Rule 1: Members in "students" cannot communicate with each other; (5 points)
 - Rule 2: Members in "students" can communicate with members in "tutors" using protocol of SSH; (5 points)
 - Rule 3: Members in "tutors" can communicate with each other; (5 points)
 - Rule 4: Members in "students" can use HTTP through the "http-proxy" device. (5 points)

[Lapstr = in ("students") / http proxy



How CCN names a content Data? On CCN network, when you receive a Data with a name of "cn/edu/ustc/cs/tian/exampaper.doc/v2/page1/line10", how can you validate the data? (15 points)

