A computer router connected to a computer

AI-generated content may be incorrect.

Each switch will have their own MAC address tables

A->B

C->B

C->D

When aaaa sends frame to bbbb, aaaa goes through port 1 so blue MAC table will be updated with 1->aaaa. Then it will do flood so host C will get it and discard, then it will flood through the other switch so port 4 on green MAC table will have 4->aaaa. Then host D and B will get the frame but D will discard. Then B will send response by going through port 6. So on green MAC table, 6->bbbb will be added and it will go through port 3 so on blue MAC table, 3->bbbb will be added. Then the frame will go to host A because blue MAC table knows that aaaa is on port 1.

Now for host C to send frame to host B, frame goes through port 2 so on blue MAC, 2->cccc will be added. Then the DST is bbbb and on blue MAC bbbb is port 3 so it will go to the green MAC through port 4 so now on green MAC, 4->cccc will be added. Then since DST is bbbb, on green MAC bbbb is on port 6 so frame goes to port 6.

Now for host C to send frame to host D, frame goes through port 2 (its also on the MAC table), the DST is dddd and we can see on blue MAC that dddd is port 3 so frame goes through port 3 into port 4 but green switch doesn’t know which port dddd is on so it does flood and sends to port 5 (host D) and port 6 (host B), host B discards and host D accepts, then host D sends response to host C and when dddd goes through port 5, that mapping is added to the MAC address table

Blue switch MAC address table:

1---> aaaa.aaaa.aaaa

3--> bbbb.bbbb.bbbb

2--> cccc.cccc.cccc

3---> dddd.dddd.dddd

Green switch MAC address table:

4---> aaaa.aaaa.aaaa

6---> bbbb.bbbb.bbbb

4---> cccc.cccc.cccc

5---> dddd.dddd.dddd