



Everything is labeled on the graph we made.

Host 1 send the SYN to Host 2, with Host 2's mac address. Host 2 then transfer the packet to the controller, Host 4, with PACKET\_IN wrapper without modification. Host 4 grab the packet, changing the source mac address of packet to the one of the switch and the destination mac address to the one of Host 3. Then the controller send back the packet to the switch, with PACKET\_OUT wrapper. The switch, Host 2, received the packet, and directly transfer the packet to Host 3.

After Host 3 received the SYN, the Http server send SYN and ACK to the switch. The switch then repeat the same packet processing process as it did to the initial SYN, modifying mac addresses. Then, the switch send the modified SYN and ACK packet to Host 1.