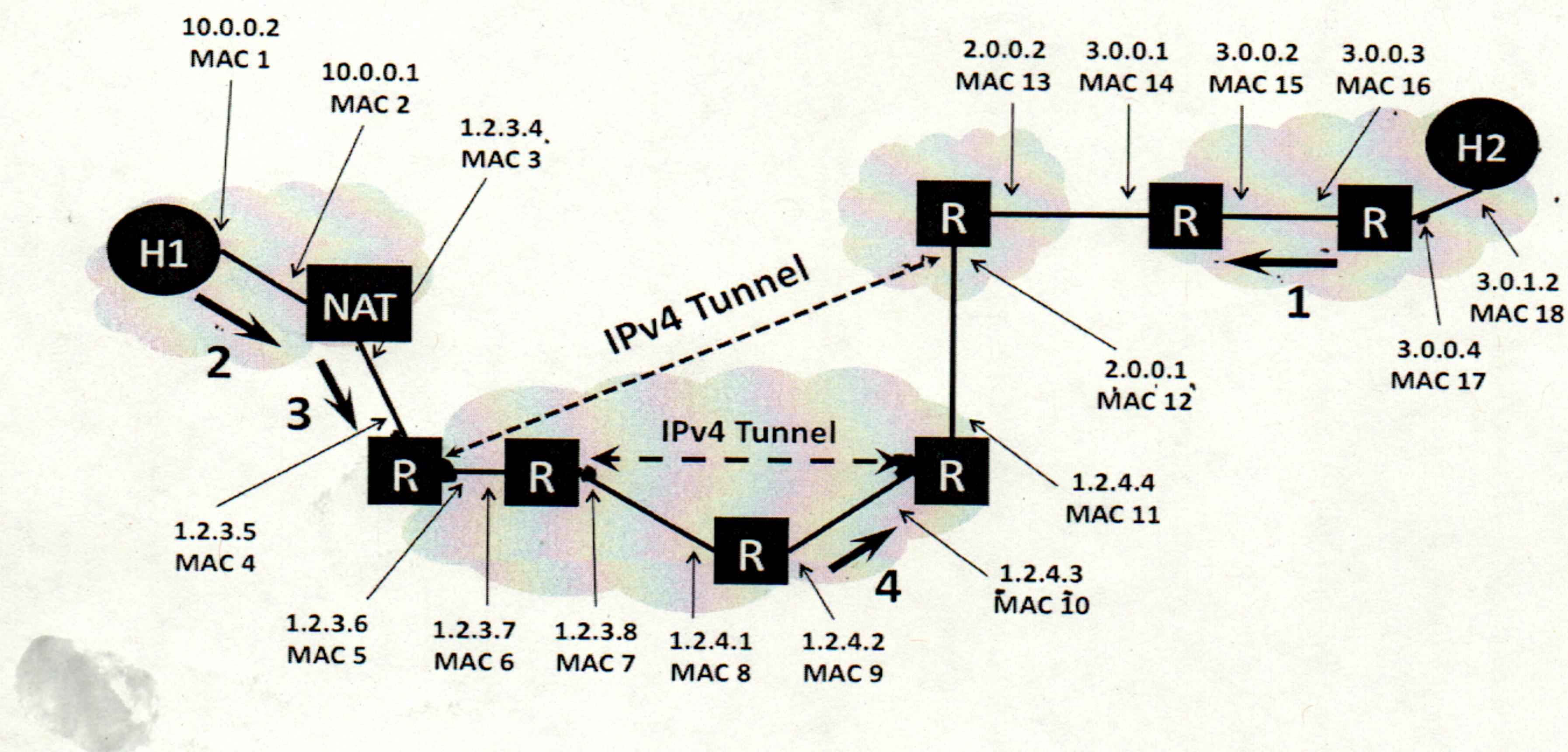


Part 6: Tunneling/Addressing (Parts are unrelated. Weights 4, 3, 1, 1, 1)

- a. Consider the following network topology connecting two LANs. The LAN on the left uses a NAT to connect to the Internet and includes a client host H_1 . The LAN on the right includes a web server H_2 . Packets between the two LANs are routed along the path shown by heavy dark lines, which includes Two IP v.4 tunnels. All packets which traverse the path use both tunnels. The various network interfaces have IP and MAC addresses as shown. H_1 has established an HTTP session with web server H_2 and data packets are flowing between the two machines.



You have to fill in the header type and the source and destination address for the network and data-link layer headers for packets 1, 2, 3 and 4. Note that you should order your headers from “outermost” in, as shown: Ethernet should be listed before IP, because the Ethernet exists first on the wire.

Note: You might not need to use all the rows supplied

- Header for packet 1:

<i>Header Type</i>	<i>Source</i>	<i>Destination</i>
Ethernet		
IP		

- Header for packet 2:

<i>Header Type</i>	<i>Source</i>	<i>Destination</i>

- Header for packet 3:

<i>Header Type</i>	<i>Source</i>	<i>Destination</i>

- Header for packet 4:

<i>Header Type</i>	<i>Source</i>	<i>Destination</i>

a. Header for packet 1:

<i>Header Type</i>	<i>Source</i>	<i>Destination</i>
Ethernet	MAC 16	MAC 15
IP	3.0.1.2	1.2.3.4

b. Header for packet 2:

<i>Header Type</i>	<i>Source</i>	<i>Destination</i>
Ethernet	MAC 1	MAC 2
IP	10.0.0.2	3.0.1.2

c. Header for packet 3:

<i>Header Type</i>	<i>Source</i>	<i>Destination</i>
Ethernet	MAC 3	MAC 4
IP	1.2.3.4	3.0.1.2

d. Header for packet 4:

<i>Header Type</i>	<i>Source</i>	<i>Destination</i>
Ethernet	MAC 9	MAC 10
IP	1.2.3.8	1.2.4.3
IP	1.2.3.6	2.0.0.1
IP	1.2.3.4	3.0.1.2