

Mudrak Patel; 300878960; CNET 124 Lab 3

Step 1

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Ethernet adapter Local Area Connection 2:
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . . : 
    Description . . . . . : Intel(R) Gigabit CT Desktop Adapter
    Physical Address. . . . . : 00-1B-21-6F-38-31
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes

Ethernet adapter Local Area Connection:
    Connection-specific DNS Suffix . . : centennialcollege.ca
    Description . . . . . : Intel(R) 82578DM Gigabit Network Connecti
on
    Physical Address. . . . . : D8-D3-85-7B-05-33
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    Link-local IPv6 Address . . . . . : fe80::e531:ef32:222f:4e6c%14(Preferred)
    IPv4 Address. . . . . : 10.28.44.22(Preferred)
    Subnet Mask . . . . . : 255.255.255.0
    Lease Obtained. . . . . : Thursday, January 26, 2017 6:49:23 PM
    Lease Expires . . . . . : Friday, January 27, 2017 6:49:24 PM
    Default Gateway . . . . . : 10.28.44.1
    DHCP Server . . . . . : 10.100.1.8
```

Step 2

```
Ping statistics for 172.217.0.163:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\300878960>ping www.yahoo.com

Pinging fd-fp3.wg1.b.yahoo.com [98.139.180.149] with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 98.139.180.149:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\300878960>ping www.yahoo.com

Pinging fd-fp3.wg1.b.yahoo.com [98.139.183.24] with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 98.139.183.24:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\300878960>
```

Step 3

5770	421.848465	10.28.44.22	10.100.1.65	ICMP	74 Echo (ping) request id=0x0001, seq=39/9984, ttl=32 (no response found!)
5782	421.515553	10.28.44.22	10.100.1.65	ICMP	74 Echo (ping) request id=0x0001, seq=40/10240, ttl=32 (no response found!)
6699	649.374507	10.28.44.22	98.139.183.24	ICMP	74 Echo (ping) request id=0x0001, seq=41/10496, ttl=128 (no response found!)
6729	654.039386	10.28.44.22	98.139.183.24	ICMP	74 Echo (ping) request id=0x0001, seq=42/10752, ttl=128 (no response found!)
6755	659.035295	10.28.44.22	98.139.183.24	ICMP	74 Echo (ping) request id=0x0001, seq=43/11008, ttl=128 (no response found!)
6788	664.027237	10.28.44.22	98.139.183.24	ICMP	74 Echo (ping) request id=0x0001, seq=44/11264, ttl=128 (no response found!)
7160	712.619486	199.212.38.5	10.28.44.22	ICMP	120 Destination unreachable (Port unreachable)

▶ Frame 6699: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface 0

▲ Ethernet II, Src: HewlettP_7b:05:33 (d8:d3:85:7b:05:33), Dst: All-HSRP-routers_00 (00:00:0c:07:ac:00)

▲ Destination: All-HSRP-routers_00 (00:00:0c:07:ac:00)

Address: All-HSRP-routers_00 (00:00:0c:07:ac:00)

.....0. = LG bit: Globally unique address (factory default)

.....0. = IG bit: Individual address (unicast)

▲ Source: HewlettP_7b:05:33 (d8:d3:85:7b:05:33)

Address: HewlettP_7b:05:33 (d8:d3:85:7b:05:33)

.....0. = LG bit: Globally unique address (factory default)

.....0. = IG bit: Individual address (unicast)

Type: IPv4 (0x0800)

▶ Internet Protocol Version 4, Src: 10.28.44.22, Dst: 98.139.183.24

▶ Internet Control Message Protocol

0000	00 00 0c 07 ac 00 d8 d3 85 7b 05 33 08 00 45 00{.3..E.
0010	00 3c 39 35 00 00 80 01 00 00 0a 1c 2c 16 62 8b	..<95....,b.
0020	b7 18 08 00 4d 32 00 01 00 29 61 62 63 64 65 66	...M2...)abcdef
0030	67 68 69 6a 6b 6c 6d 6e 6f 70 71 72 73 74 75 76	ghijklmn opqrstuv
0040	77 61 62 63 64 65 66 67 68 69	wabcdefg hi

Step 4

```
C:\Users\300878960>ping www.cisco.com

Pinging e144.dscl.akamaiedge.net [172.226.76.251] with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.226.76.251:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\300878960>
```

Step 5

7843	861.432831	10.28.44.22	172.226.76.251	ICMP	74 Echo (ping) request id=0x0001, seq=47/12032, ttl=128 (no response found!)
7876	866.026600	10.28.44.22	172.226.76.251	ICMP	74 Echo (ping) request id=0x0001, seq=48/12288, ttl=128 (no response found!)
7895	871.035134	10.28.44.22	172.226.76.251	ICMP	74 Echo (ping) request id=0x0001, seq=49/12544, ttl=128 (no response found!)
7941	876.029076	10.28.44.22	172.226.76.251	ICMP	74 Echo (ping) request id=0x0001, seq=50/12800, ttl=128 (no response found!)
8315	953.643966	10.28.44.22	172.217.3.132	ICMP	74 Echo (ping) request id=0x0001, seq=51/13056, ttl=128 (no response found!)
8338	958.537242	10.28.44.22	172.217.3.132	ICMP	74 Echo (ping) request id=0x0001, seq=52/13312, ttl=128 (no response found!)
8355	963.528989	10.28.44.22	172.217.3.132	ICMP	74 Echo (ping) request id=0x0001, seq=53/13568, ttl=128 (no response found!)
8378	968.523075	10.28.44.22	172.217.3.132	ICMP	74 Echo (ping) request id=0x0001, seq=54/13824, ttl=128 (no response found!)
8634	1012.623950	199.212.38.5	10.28.44.22	ICMP	120 Destination unreachable (Port unreachable)
8645	1014.132226	199.212.38.5	10.28.44.22	ICMP	120 Destination unreachable (Port unreachable)
8662	1014.673735	10.28.44.22	10.100.1.38	ICMP	401 Destination unreachable (Port unreachable)
8675	1014.676743	199.212.38.5	10.28.44.22	ICMP	120 Destination unreachable (Port unreachable)

▶ Frame 7843: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface 0

▲ Ethernet II, Src: HewlettP_7b:05:33 (d8:d3:85:7b:05:33), Dst: All-HSRP-routers_00 (00:00:0c:07:ac:00)

▲ Destination: All-HSRP-routers_00 (00:00:0c:07:ac:00)

Address: All-HSRP-routers_00 (00:00:0c:07:ac:00)

.....0. = LG bit: Globally unique address (factory default)

.....0. = IG bit: Individual address (unicast)

▲ Source: HewlettP_7b:05:33 (d8:d3:85:7b:05:33)

Address: HewlettP_7b:05:33 (d8:d3:85:7b:05:33)

.....0. = LG bit: Globally unique address (factory default)

.....0. = IG bit: Individual address (unicast)

Type: IPv4 (0x0800)

▶ Internet Protocol Version 4, Src: 10.28.44.22, Dst: 172.226.76.251

▶ Internet Control Message Protocol

0000	00 00 0c 07 ac 00 d8 d3 85 7b 05 33 08 00 45 00{.3..E.
0010	00 3c 39 da 00 00 80 01 00 00 0a 1c 2c 16 ac e2	..<9.....
0020	4c fb 08 00 4d 2c 00 01 00 2f 61 62 63 64 65 66	L...M...)abcdef
0030	67 68 69 6a 6b 6c 6d 6e 6f 70 71 72 73 74 75 76	ghijklmn opqrstuv
0040	77 61 62 63 64 65 66 67 68 69	wabcdefg hi

Step 6

```
C:\Users\300878960>ping www.google.com

Pinging www.google.com [172.217.3.132] with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.217.3.132:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\300878960>
```

Step 7

10074	1319.465726	10.28.44.22	10.100.1.65	ICMP	74 Echo (ping) request	id=0x0001, seq=57/14592, ttl=32 (no response found!)
10079	1321.006632	10.28.44.22	10.100.1.65	ICMP	74 Echo (ping) request	id=0x0001, seq=58/14848, ttl=32 (no response found!)
10275	1364.810462	10.28.44.22	172.217.3.132	ICMP	74 Echo (ping) request	id=0x0001, seq=59/15104, ttl=128 (no response found!)
10292	1369.530686	10.28.44.22	172.217.3.132	ICMP	74 Echo (ping) request	id=0x0001, seq=60/15360, ttl=128 (no response found!)
10317	1374.522743	10.28.44.22	172.217.3.132	ICMP	74 Echo (ping) request	id=0x0001, seq=61/15616, ttl=128 (no response found!)
10345	1379.532191	10.28.44.22	172.217.3.132	ICMP	74 Echo (ping) request	id=0x0001, seq=62/15872, ttl=128 (no response found!)

▶ Frame 7843: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface 0	
▲ Ethernet II, Src: HewlettP_7b:05:33 (d8:d3:85:7b:05:33), Dst: All-MSRP-routers_00 (00:00:0c:07:ac:00)	
Destination: All-MSRP-routers_00 (00:00:0c:07:ac:00)	
Address: All-MSRP-routers_00 (00:00:0c:07:ac:00)	
..... = LG bit: Globally unique address (factory default)	
..... = IG bit: Individual address (unicast)	
Source: HewlettP_7b:05:33 (d8:d3:85:7b:05:33)	
Address: HewlettP_7b:05:33 (d8:d3:85:7b:05:33)	
..... = LG bit: Globally unique address (factory default)	
..... = IG bit: Individual address (unicast)	
Type: IPv4 (0x0800)	
▶ Internet Protocol Version 4, Src: 10.28.44.22, Dst: 172.226.76.251	
▶ Internet Control Message Protocol	

0000	00 00 0c 07 ac 00 d8 d3	85 7b 05 33 08 00 45 00{.3..E.
0010	00 3c 39 da 00 00 80 01	00 00 0a 1c 2c 16 ac e2	.<9..... ,.,.,.,.
0020	4c fb 08 00 4d 2c 00 01	00 2f 61 62 63 64 65 66	L...M... ./abcdef
0030	67 68 69 6a 6b 6c 6d 6e	6f 70 71 72 73 74 75 76	ghijklmn opqrstuv
0040	77 61 62 63 64 65 66 67	68 69	wabcdefg hi

Q1) Does the source MAC Address match your PC's interface?

➔ Yes

Q2) How does this information differ from the local ping information you received in the part 2?

➔ MAC Address of destination was local but for other 3 servers it was same.

Q3)

Reflection: Why does Wireshark show the actual MAC address to the local hosts, but not the actual MAC address for the remote hosts?

Answer: MAC address is received of last hop of network so we get the same MAC of the hop which is last in the network through which frame travelled. While Local host is connect in wired network using only one router we get the original data by direct communication between two PC's.