

Lab 04_NAT

1.What is the IP address of the client that sends the HTTP GET request in the *nat-inside-wireshark-trace1-1.pcapng* trace?

The IP address of the client that sends the HTTP GET (Source Address):
192.168.10.11

What is the source port number of the TCP segment in this datagram containing the HTTP GET request?

Source port : 53924

What is the destination IP address of this HTTP GET request?

the destination IP address: 138.76.29.8

What is the destination port number of the TCP segment in this datagram containing the HTTP GET request?

Destination port: 80

2. At what time[4] is the corresponding HTTP 200 OK message from the web server forwarded by the NAT router to the client on the router's LAN side?

nat-inside-wireshark-trace1-1.pcapng

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No.	Time	Source	Destination	Protocol	Length	Info
1	10:50:27.744811276	192.168.10.11	138.76.29.8	TCP	74	53924 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=322727249 TSecr=0 WS=128
2	10:50:27.746102976	138.76.29.8	192.168.10.11	TCP	74	80 → 53924 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 SACK_PERM TSval=802266926 TSecr=322727249 WS=128
3	10:50:27.746882193	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=322727252 TSecr=802266926
4	10:50:27.771373521	192.168.10.11	138.76.29.8	HTTP	396	GET / HTTP/1.1
5	10:50:27.773401475	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [ACK] Seq=1 Ack=331 Win=64896 Len=0 TSval=802266954 TSecr=322727277
6	10:50:27.774683377	138.76.29.8	192.168.10.11	HTTP	613	HTTP/1.1 200 OK (text/html)
7	10:50:27.775476121	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=331 Ack=548 Win=64128 Len=0 TSval=322727281 TSecr=802266955
8	10:50:27.975418697	192.168.10.11	138.76.29.8	HTTP	317	GET /favicon.ico HTTP/1.1
9	10:50:27.976907865	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [ACK] Seq=548 Ack=582 Win=64768 Len=0 TSval=802267157 TSecr=322727481
10	10:50:27.977085738	138.76.29.8	192.168.10.11	HTTP	555	HTTP/1.1 404 Not Found (text/html)
11	10:50:27.977714442	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322727483 TSecr=802267158
12	10:50:32.933783603	PcsCompu_82:c7:7c	PcsCompu_89:c7:7c	ARP	42	Who has 192.168.10.11? Tell 192.168.10.254
13	10:50:32.935810777	PcsCompu_89:c7:7c	PcsCompu_82:c7:7c	ARP	60	192.168.10.11 is at 08:00:27:89:c7:7c
14	10:50:32.978556529	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [FIN, ACK] Seq=1037 Ack=582 Win=64768 Len=0 TSval=802272158 TSecr=322727483
15	10:50:32.978720865	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [FIN, ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322732484 TSecr=802267158
16	10:50:32.980154437	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=583 Ack=1038 Win=64128 Len=0 TSval=322732485 TSecr=802272158
17	10:50:32.982059804	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [ACK] Seq=1038 Ack=583 Win=64768 Len=0 TSval=802272161 TSecr=322732484
18	10:50:32.985732861	PcsCompu_89:c7:7c	PcsCompu_82:c7:7c	ARP	60	Who has 192.168.10.254? Tell 192.168.10.11
19	10:50:32.985758874	PcsCompu_82:c7:7c	PcsCompu_89:c7:7c	ARP	42	192.168.10.254 is at 08:00:27:82:36:d7

Vary: Accept-Encoding\r\nContent-Encoding: gzip\r\nContent-Length: 210\r\nKeep-Alive: timeout=5, max=100\r\nConnection: Keep-Alive\r\nContent-Type: text/html\r\n\r\n[HTTP response 1/2]
[Time since request: 0.003309856 seconds]
[Request in frame: 4]
[Next request in frame: 8]
[Next response in frame: 10]
[Request URI: http://138.76.29.8/]
Content-encoded entity body (gzip): 210 bytes -> 311 bytes
File Data: 311 bytes

Line-based text data: text/html (12 lines)

```
<html>\n<head>\n<title>Beneluxcent for Apache</title>\n
```

Frame (613 bytes) | Uncompressed entity body (311 bytes)

3. What are the source and destination IP addresses and TCP source and destination ports on the IP datagram carrying this HTTP 200 OK message?

Source IP Address: 138.76.29.8

Source port : 80

Destination IP address: 192.168.10.11

Destination port: 53924

The image shows a Wireshark packet capture titled "nat-inside-wireshark-trace1-1.pcapng". The packet list on the left shows a series of packets. Packet 6 is highlighted, showing an HTTP 200 OK message from 138.76.29.8 to 192.168.10.11. The packet details pane on the right shows the Ethernet II, Internet Protocol Version 4, and Transmission Control Protocol layers. The TCP layer shows the source port as 80 and the destination port as 53924. The packet bytes pane on the right shows the raw data of the packet.

No.	Time	Source	Destination	Protocol	Length	Info
1	10:50:27.7440..	192.168.10.11	138.76.29.8	TCP	74	53924 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=322727249 TSecr=0 WS=128
2	10:50:27.7461..	138.76.29.8	192.168.10.11	TCP	74	80 → 53924 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 SACK_PERM TSval=802266926 TSecr=322727249 WS=128
3	10:50:27.7468..	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=322727252 TSecr=802266926
4	10:50:27.7713..	192.168.10.11	138.76.29.8	HTTP	396	GET / HTTP/1.1
5	10:50:27.7734..	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [ACK] Seq=1 Ack=331 Win=64896 Len=0 TSval=802266954 TSecr=322727277
6	10:50:27.7746..	138.76.29.8	192.168.10.11	HTTP	613	HTTP/1.1 200 OK (text/html)
7	10:50:27.7754..	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=331 Ack=548 Win=64128 Len=0 TSval=322727281 TSecr=802266955
8	10:50:27.9754..	192.168.10.11	138.76.29.8	HTTP	317	GET /favicon.ico HTTP/1.1
9	10:50:27.9769..	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [ACK] Seq=548 Ack=582 Win=64768 Len=0 TSval=802267157 TSecr=322727481
10	10:50:27.9770..	138.76.29.8	192.168.10.11	HTTP	555	HTTP/1.1 404 Not Found (text/html)
11	10:50:27.9777..	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322727483 TSecr=802267158
12	10:50:32.9337..	PcsCompu_82:36:d7	PcsCompu_89:c7:7c	ARP	42	Who has 192.168.10.11? Tell 192.168.10.254
13	10:50:32.9358..	PcsCompu_89:c7:7c	PcsCompu_82:36:d7	ARP	60	192.168.10.11 is at 08:00:27:89:c7:7c
14	10:50:32.9785..	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [FIN, ACK] Seq=1037 Ack=582 Win=64768 Len=0 TSval=802272158 TSecr=322727483
15	10:50:32.9787..	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [FIN, ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322732484 TSecr=802267158
16	10:50:32.9801..	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=583 Ack=1038 Win=64128 Len=0 TSval=322732485 TSecr=802272158
17	10:50:32.9820..	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [ACK] Seq=1038 Ack=583 Win=64768 Len=0 TSval=802272161 TSecr=322732484
18	10:50:32.9857..	PcsCompu_89:c7:7c	PcsCompu_82:36:d7	ARP	60	Who has 192.168.10.254? Tell 192.168.10.11
19	10:50:32.9857..	PcsCompu_82:36:d7	PcsCompu_89:c7:7c	ARP	42	192.168.10.254 is at 08:00:27:82:36:d7

> Frame 6: 613 bytes on wire (4904 bits), 613 bytes captured (4904 bits) on interface eth1, id 0
> Ethernet II, Src: PcsCompu_82:36:d7 (08:00:27:82:36:d7), Dst: PcsCompu_89:c7:7c (08:00:27:89:c7:7c)
> Internet Protocol Version 4, Src: 138.76.29.8, Dst: 192.168.10.11
✚ Transmission Control Protocol, Src Port: 80, Dst Port: 53924, Seq: 1, Ack: 331, Len: 547
Source Port: 80
Destination Port: 53924
[Stream index: 0]
[Conversation completeness: Complete, WITH_DATA (31)]
[TCP Segment Len: 547]

The image shows a Wireshark packet capture titled "nat-inside-wireshark-trace1-1.pcapng". The packet list on the left shows a series of packets. Packet 6 is highlighted, showing an HTTP GET message from 138.76.29.8 to 192.168.10.11. The packet details pane on the right shows the Ethernet II, Internet Protocol Version 4, and Transmission Control Protocol layers. The TCP layer shows the source port as 80 and the destination port as 53924. The packet bytes pane on the right shows the raw data of the packet.

No.	Time	Source	Destination	Protocol	Length	Info
1	10:50:27.7440..	192.168.10.11	138.76.29.8	TCP	74	53924 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=322727249 TSecr=0 WS=128
2	10:50:27.7461..	138.76.29.8	192.168.10.11	TCP	74	80 → 53924 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 SACK_PERM TSval=802266926 TSecr=322727249 WS=128
3	10:50:27.7468..	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=322727252 TSecr=802266926
4	10:50:27.7713..	192.168.10.11	138.76.29.8	HTTP	396	GET / HTTP/1.1
5	10:50:27.7734..	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [ACK] Seq=1 Ack=331 Win=64896 Len=0 TSval=802266954 TSecr=322727277
6	10:50:27.7746..	138.76.29.8	192.168.10.11	HTTP	613	HTTP/1.1 200 OK (text/html)
7	10:50:27.7754..	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=331 Ack=548 Win=64128 Len=0 TSval=322727281 TSecr=802266955
8	10:50:27.9754..	192.168.10.11	138.76.29.8	HTTP	317	GET /favicon.ico HTTP/1.1
9	10:50:27.9769..	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [ACK] Seq=548 Ack=582 Win=64768 Len=0 TSval=802267157 TSecr=322727481
10	10:50:27.9770..	138.76.29.8	192.168.10.11	HTTP	555	HTTP/1.1 404 Not Found (text/html)
11	10:50:27.9777..	192.168.10.11	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322727483 TSecr=802267158
12	10:50:32.9337..	PcsCompu_82:36:d7	PcsCompu_89:c7:7c	ARP	42	Who has 192.168.10.11? Tell 192.168.10.254
13	10:50:32.9358..	PcsCompu_89:c7:7c	PcsCompu_82:36:d7	ARP	60	192.168.10.11 is at 08:00:27:89:c7:7c
14	10:50:32.9785..	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [FIN, ACK] Seq=1037 Ack=582 Win=64768 Len=0 TSval=802272158 TSecr=322727483
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17	10:50:32.9820..	138.76.29.8	192.168.10.11	TCP	66	80 → 53924 [ACK] Seq=1038 Ack=583 Win=64768 Len=0 TSval=802272161 TSecr=322732484
18	10:50:32.9857..	PcsCompu_89:c7:7c	PcsCompu_82:36:d7	ARP	60	Who has 192.168.10.254? Tell 192.168.10.11
19	10:50:32.9857..	PcsCompu_82:36:d7	PcsCompu_89:c7:7c	ARP	42	192.168.10.254 is at 08:00:27:82:36:d7

> Frame 6: 613 bytes on wire (4904 bits), 613 bytes captured (4904 bits) on interface eth1, id 0
> Ethernet II, Src: PcsCompu_82:36:d7 (08:00:27:82:36:d7), Dst: PcsCompu_89:c7:7c (08:00:27:89:c7:7c)
> Internet Protocol Version 4, Src: 138.76.29.8, Dst: 192.168.10.11
✚ Transmission Control Protocol, Src Port: 80, Dst Port: 53924, Seq: 1, Ack: 331, Len: 547
Source Port: 80
Destination Port: 53924
[Stream index: 0]
[Conversation completeness: Complete, WITH_DATA (31)]
[TCP Segment Len: 547]
Sequence Number: 1 (relative sequence number)
Sequence Number (raw): 2574368014
[Next Sequence Number: 548 (relative sequence number)]
Acknowledgment Number: 331 (relative ack number)
Acknowledgment number (raw): 2729790325
1000 = Header Length: 32 bytes (0)
> Flags: 0x018 (PSH, ACK)
Window: 607

4. At what time does this HTTP GET message appear in the *nat-outside-wireshark-trace1-1.pcapng* trace file?

nat-outside-wireshark-trace1-1.pcapng

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No.	Time	Source	Destination	Protocol	Length	Info
1	10:50:27.744	10.0.1.254	138.76.29.8	TCP	74	53924 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=322727249 TSecr=0 WS=
2	10:50:27.746	138.76.29.8	10.0.1.254	TCP	74	80 → 53924 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 SACK_PERM TSval=802266926
3	10:50:27.746	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=322727252 TSecr=802266926
4	10:50:27.771	10.0.1.254	138.76.29.8	HTTP	396	GET / HTTP/1.1
5	10:50:27.773	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1 Ack=331 Win=64896 Len=0 TSval=802266954 TSecr=322727277
6	10:50:27.774	138.76.29.8	10.0.1.254	HTTP	613	HTTP/1.1 200 OK (text/html)
7	10:50:27.775	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=331 Ack=548 Win=64128 Len=0 TSval=322727281 TSecr=802266955
8	10:50:27.975	10.0.1.254	138.76.29.8	HTTP	317	GET /favicon.ico HTTP/1.1
9	10:50:27.976	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=548 Ack=582 Win=64768 Len=0 TSval=802267157 TSecr=322727481
10	10:50:27.977	138.76.29.8	10.0.1.254	HTTP	555	HTTP/1.1 404 Not Found (text/html)
11	10:50:27.977	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322727483 TSecr=802267158
12	10:50:32.933	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	Who has 10.0.1.253? Tell 10.0.1.254
13	10:50:32.935	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	10.0.1.253 is at 08:00:27:22:fd:74
14	10:50:32.975	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	Who has 10.0.1.254? Tell 10.0.1.253
15	10:50:32.975	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	10.0.1.254 is at 08:00:27:43:65:cd
16	10:50:32.978	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [FIN, ACK] Seq=1037 Ack=582 Win=64768 Len=0 TSval=802272158 TSecr=32272748
17	10:50:32.978	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [FIN, ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322732484 TSecr=80226715
18	10:50:32.980	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=583 Ack=1038 Win=64128 Len=0 TSval=322732485 TSecr=802272158
19	10:50:32.982	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1038 Ack=583 Win=64768 Len=0 TSval=802272161 TSecr=322732484

Acknowledgment number (raw): 2574368014
 1000 = Header Length: 32 bytes (8)
 > Flags: 0x018 (PSH, ACK)
 Window: 502
 [Calculated window size: 64256]
 [Window size scaling factor: 128]
 Checksum: 0xda9f [unverified]
 [Checksum Status: Unverified]
 Urgent Pointer: 0
 > Options: (12 bytes), No-Operation (NOP), No-Operation (NOP), Timestamps
 > TCP Option - No-Operation (NOP)
 > TCP Option - No-Operation (NOP)
 > TCP Option - Timestamps
 > [Timestamps]
 [Time since first frame in this TCP stream: 0.027356291 seconds]
 [Time since previous frame in this TCP stream: 0.024502351 seconds]
 > [SEQ/ACK analysis]
 TCP payload (330 bytes)
 > Hypertext Transfer Protocol

0020 1d 08 d2 a4 00 50 a2
 0030 01 f6 da 9f 00 00 01
 0040 9f 2e 47 45 54 20 2f
 0050 0d 0a 48 6f 73 74 3a
 0060 39 2e 38 0d 0a 55 73
 0070 20 4d 6f 7a 69 6c 6c
 0080 31 3b 20 55 62 75 6e
 0090 20 78 38 36 5f 36 34
 00a0 29 20 47 65 63 6b 6f
 00b0 20 46 69 72 65 66 6f
 00c0 63 63 65 70 74 3a 20
 00d0 2c 61 70 70 6c 69 63
 00e0 6d 6c 2b 78 6d 6c 2c
 00f0 6f 6e 2f 78 6d 6c 3b
 0100 67 65 2f 77 65 62 70
 0110 38 0d 0a 41 63 63 65
 0120 67 65 3a 20 65 6e 2d
 0130 2e 35 0d 0a 41 63 63
 0140 69 6e 67 3a 20 67 7a
 0150 74 65 0d 0a 43 6f 6e

5. What are the source and destination IP addresses and TCP source and destination port numbers on the IP datagram carrying this HTTP GET (as recorded in the *nat-outside-wireshark-trace1-1.pcapng* trace file)?

Source IP Address: 10.0.1.254

Source port : 53924

Destination IP address: 138.76.29.8

Destination port: 80

nat-outside-wireshark-trace1-1.pcapng									
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No.	Time	Source	Destination	Protocol	Length	Info			
1	10:50:27.744	10.0.1.254	138.76.29.8	TCP	74	53924 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=322727249 TSecr=0 WS=128			
2	10:50:27.746	138.76.29.8	10.0.1.254	TCP	74	80 → 53924 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 SACK_PERM TSval=802266926 TSecr=322727249 WS=128			
3	10:50:27.746	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=322727252 TSecr=802266926			
4	10:50:27.771	10.0.1.254	138.76.29.8	HTTP	396	GET / HTTP/1.1			
5	10:50:27.773	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1 Ack=331 Win=64896 Len=0 TSval=802266954 TSecr=322727277			
6	10:50:27.774	138.76.29.8	10.0.1.254	HTTP	613	HTTP/1.1 200 OK (text/html)			
7	10:50:27.775	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=331 Ack=548 Win=64128 Len=0 TSval=322727281 TSecr=802266955			
8	10:50:27.975	10.0.1.254	138.76.29.8	HTTP	317	GET /favicon.ico HTTP/1.1			
9	10:50:27.976	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=548 Ack=582 Win=64768 Len=0 TSval=802267157 TSecr=322727481			
10	10:50:27.977	138.76.29.8	10.0.1.254	HTTP	555	HTTP/1.1 404 Not Found (text/html)			
11	10:50:27.977	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322727483 TSecr=802267158			
12	10:50:32.933	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	Who has 10.0.1.253? Tell 10.0.1.254			
13	10:50:32.935	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	10.0.1.253 is at 08:00:27:22:fd:74			
14	10:50:32.975	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	Who has 10.0.1.254? Tell 10.0.1.253			
15	10:50:32.975	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	10.0.1.254 is at 08:00:27:43:65:cd			
16	10:50:32.978	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [FIN, ACK] Seq=1037 Ack=582 Win=64768 Len=0 TSval=802272158 TSecr=322727483			
17	10:50:32.978	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [FIN, ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322732484 TSecr=802267158			
18	10:50:32.980	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=583 Ack=1038 Win=64128 Len=0 TSval=322732485 TSecr=802272158			
19	10:50:32.982	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1038 Ack=583 Win=64768 Len=0 TSval=802272161 TSecr=322732484			
> Frame 4: 396 bytes on wire (3168 bits), 396 bytes captured (3168 bits) on interface eth0, id 0									
> Ethernet II, Src: PcsCompu_43:65:cd (08:00:27:43:65:cd), Dst: PcsCompu_22:fd:74 (08:00:27:22:fd:74)									
> Internet Protocol Version 4, Src: 10.0.1.254, Dst: 138.76.29.8									
✖ Transmission Control Protocol, Src Port: 53924, Dst Port: 80, Seq: 1, Ack: 1, Len: 330									
Source Port: 53924						0030	01 f6 da 9f 00 00 01 01	08 0a 13 3c 6d 6d 2	
Destination Port: 80						0040	9f 2e 47 45 54 20 2f 20	48 54 54 50 2f 31 2	
[Stream index: 0]						0050	0d 0a 48 6f 73 74 3a 20	31 33 38 2e 37 36 2	
[Conversation completeness: Complete, WITH_DATA (31)]						0060	39 2e 38 0d 0a 55 73 65	72 2d 41 67 65 6e 7	
[TCP Segment Len: 330]						0070	20 4d 6f 7a 69 6c 6c 61	2f 35 2e 30 20 28 5	
Sequence Number: 1 (relative sequence number)						0080	31 3b 20 55 62 75 6e 74	75 3b 20 4c 69 6e 7	
						0090	20 78 38 36 5f 36 3a 3b	20 72 76 3a 37 35 2	
						00a0	29 20 47 65 63 6b 6f 2f	32 30 31 30 30 31 3	
						00b0	20 46 69 72 65 66 6f 78	2f 37 35 2e 30 0d 0	
						00c0	63 63 65 70 74 3a 20 74	65 78 74 2f 68 74 6	
						00d0	7c 61 70 70 6c 60 63 61	74 60 6f 6a 7f 78 6	

6. Which of these four fields are different than in your answer to question 1 above?

Source IP address

7. Are any fields in the HTTP GET message changed?

None.

8. Which of the following fields in the IP datagram carrying the HTTP GET are changed from the datagram received on the local area network (inside) to the corresponding datagram forwarded on the Internet side (outside) of the NAT router: Version, Header Length, Flags, Checksum?

Version: NO

Header Length: No

Flags: No

Checksum: Yes

nat-outside-wireshark-trace1-1.pcapng

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No.	Time	Source	Destination	Protocol	Length	Info
1	10:50:27.744	10.0.1.254	138.76.29.8	TCP	74	53924 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=322727249 TSecr=0 WS=128
2	10:50:27.746	138.76.29.8	10.0.1.254	TCP	74	80 → 53924 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 SACK_PERM TSval=802266926 TSecr=322727249
3	10:50:27.746	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=322727252 TSecr=802266926
4	10:50:27.771	10.0.1.254	138.76.29.8	HTTP	396	GET / HTTP/1.1
5	10:50:27.773	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1 Ack=331 Win=64896 Len=0 TSval=802266954 TSecr=322727277
6	10:50:27.774	138.76.29.8	10.0.1.254	HTTP	613	HTTP/1.1 200 OK (text/html)
7	10:50:27.775	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=331 Ack=548 Win=64128 Len=0 TSval=322727281 TSecr=802266955
8	10:50:27.975	10.0.1.254	138.76.29.8	HTTP	317	GET /favicon.ico HTTP/1.1
9	10:50:27.976	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=548 Ack=582 Win=64768 Len=0 TSval=802267157 TSecr=322727481
10	10:50:27.977	138.76.29.8	10.0.1.254	HTTP	555	HTTP/1.1 404 Not Found (text/html)
11	10:50:27.977	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322727483 TSecr=802267158
12	10:50:32.933	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	Who has 10.0.1.253? Tell 10.0.1.254
13	10:50:32.935	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	10.0.1.253 is at 08:00:27:22:fd:74
14	10:50:32.975	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	Who has 10.0.1.254? Tell 10.0.1.253
15	10:50:32.975	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	10.0.1.254 is at 08:00:27:43:65:cd
16	10:50:32.978	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [FIN, ACK] Seq=1037 Ack=582 Win=64768 Len=0 TSval=802272158 TSecr=322727483
17	10:50:32.978	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [FIN, ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322732484 TSecr=802267158
18	10:50:32.980	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=583 Ack=1038 Win=64128 Len=0 TSval=322732485 TSecr=802272158
19	10:50:32.982	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1038 Ack=583 Win=64768 Len=0 TSval=802272161 TSecr=322732484

> Frame 4: 396 bytes on wire (3168 bits), 396 bytes captured (3168 bits) on interface eth0, id 0

> Ethernet II, Src: PcsCompu_43:65:cd (08:00:27:43:65:cd), Dst: PcsCompu_22:fd:74 (08:00:27:22:fd:74)

> Internet Protocol Version 4, Src: 10.0.1.254, Dst: 138.76.29.8

0100 = Version: 4

.... 0101 = Header Length: 20 bytes (5)

> Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)

Total Length: 382

Identification: 0x6296 (25238)

> 010. = Flags: 0x2, Don't fragment

...0 0000 0000 0000 = Fragment Offset: 0

Time to Live: 63

Protocol: TCP (6)

Header Checksum: 0x2492 [validation disabled]

[Header checksum status: Unverified]

Source Address: 10.0.1.254

Destination Address: 138.76.29.8

> Transmission Control Protocol, Src Port: 53924, Dst Port: 80, Seq: 1, Ack: 1, Len: 330

Source Port: 53924

Destination Port: 80

0000 08 00 27 22 fd 74 08 00 27 4

0010 01 7e 62 96 40 00 3f 06 24 9

0020 1d 08 d2 a4 00 50 a2 b5 4a 2

0030 01 f6 da 9f 00 00 01 01 08 0

0040 9f 2e 47 45 54 20 2f 20 48 5

0050 0d 0a 48 6f 73 74 3a 20 31 3

0060 39 2e 38 0d 0a 55 73 65 72 2

0070 20 4d 6f 7a 69 6c 6c 61 2f 3

0080 31 3b 20 55 62 75 6e 74 75 3

0090 20 78 38 36 5f 36 34 3b 20 7

00a0 29 20 47 65 63 6b 6f 2f 32 3

00b0 20 46 69 72 65 66 6f 78 2f 3

00c0 63 63 65 70 74 3a 20 74 65 7

00d0 2c 61 70 70 6c 69 63 61 74 6

00e0 6d 6c 2b 78 6d 6c 2c 61 70 7

00f0 6f 6e 2f 78 6d 6c 3b 71 3d 3

0100 67 65 2f 7f 65 62 70 2c 2a 2

0110 38 0d 0a 41 63 63 65 70 74 2

0120 67 65 3a 20 65 6e 2d 55 53 2

0130 2e 35 0d 0a 41 63 63 65 70 7

nat-outside-wireshark-trace1-1.pcapng

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No.	Time	Source	Destination	Protocol	Length	Info
1	10:50:27.744	10.0.1.254	138.76.29.8	TCP	74	53924 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=322727249 TSecr=0 WS=128
2	10:50:27.746	138.76.29.8	10.0.1.254	TCP	74	80 → 53924 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 SACK_PERM TSval=802266926 TSecr=322727249
3	10:50:27.746	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=322727252 TSecr=802266926
4	10:50:27.771	10.0.1.254	138.76.29.8	HTTP	396	GET / HTTP/1.1
5	10:50:27.773	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1 Ack=331 Win=64896 Len=0 TSval=802266954 TSecr=322727277
6	10:50:27.774	138.76.29.8	10.0.1.254	HTTP	613	HTTP/1.1 200 OK (text/html)
7	10:50:27.775	10.0.1.254	138.76.29.8	TCP	66	80 → 53924 [ACK] Seq=331 Ack=548 Win=64128 Len=0 TSval=322727281 TSecr=802266955
8	10:50:27.975	10.0.1.254	138.76.29.8	HTTP	317	GET /favicon.ico HTTP/1.1
9	10:50:27.976	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=548 Ack=582 Win=64768 Len=0 TSval=802267157 TSecr=322727481
10	10:50:27.977	138.76.29.8	10.0.1.254	HTTP	555	HTTP/1.1 404 Not Found (text/html)
11	10:50:27.977	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322727483 TSecr=802267158
12	10:50:32.933	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	Who has 10.0.1.253? Tell 10.0.1.254
13	10:50:32.935	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	10.0.1.253 is at 08:00:27:22:fd:74
14	10:50:32.975	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	Who has 10.0.1.254? Tell 10.0.1.253
15	10:50:32.975	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	10.0.1.254 is at 08:00:27:43:65:cd
16	10:50:32.978	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [FIN, ACK] Seq=1037 Ack=582 Win=64768 Len=0 TSval=802272158 TSecr=322727483
17	10:50:32.978	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [FIN, ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322732484 TSecr=802267158
18	10:50:32.980	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=583 Ack=1038 Win=64128 Len=0 TSval=322732485 TSecr=802272158
19	10:50:32.982	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1038 Ack=583 Win=64768 Len=0 TSval=802272161 TSecr=322732484

> Frame 6: 613 bytes on wire (4904 bits), 613 bytes captured (4904 bits) on interface eth0, id 0

> Ethernet II, Src: PcsCompu_22:fd:74 (08:00:27:22:fd:74), Dst: PcsCompu_43:65:cd (08:00:27:43:65:cd)

> Internet Protocol Version 4, Src: 138.76.29.8, Dst: 10.0.1.254

0100 = Version: 4

.... 0101 = Header Length: 20 bytes (5)

> Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)

Total Length: 599

Identification: 0x6c7c (27772)

> 010. = Flags: 0x2, Don't fragment

...0 0000 0000 0000 = Fragment Offset: 0

Time to Live: 63

Protocol: TCP (6)

Header Checksum: 0x19d3 [validation disabled]

[Header checksum status: Unverified]

Source Address: 138.76.29.8

Destination Address: 10.0.1.254

> Transmission Control Protocol, Src Port: 80, Dst Port: 53924, Seq: 1, Ack: 331, Len: 547

Source Port: 80

Destination Port: 53924

0000 08 00 27 43 65 cd 08 00 27 22 fd

0010 97 57 6c 7c 40 00 3f 06 19 d3 8a

0020 01 fa 00 50 d2 a4 99 71 bd 0e a2

0030 01 fb eb 0d 00 00 01 01 08 0a 2f

0040 6d 6d 48 54 50 2f 31 2e 31 20

0050 4b 0d 0a 41 61 74 65 3a 20 4d 6f

0060 20 4d 61 72 20 32 30 32 31 20 30

0070 32 37 20 47 4d 54 0d 0a 53 65 72

0080 41 70 61 63 68 65 2f 32 2e 34 2e

0090 62 75 6e 74 75 29 0d 0a 4c 61 73

00a0 69 66 69 65 64 3a 20 54 75 65 2c

00b0 61 6e 20 32 30 32 31 20 31 38 3a

00c0 20 47 4d 54 0d 0a 45 54 61 67 3a

00d0 2d 35 62 38 62 38 66 38 34 35

00e0 7a 69 70 22 0d 0a 41 63 63 65 70

00f0 67 65 73 3a 20 62 79 74 65 73 0d

0100 3a 20 41 63 63 65 70 74 2d 45 6e

0110 67 0d 0a 43 6f 6e 74 65 6e 74 2d

0120 60 6a 67 3a 20 67 7a 60 70 0d 0a

Frame (613 bytes) Uncompressed entity body (311 bytes)

9. At what time does this message appear in the *nat-outside-wireshark-trace1-1.pcapng* trace file?

nat-outside-wireshark-trace1-1.pcapng

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No.	Time	Source	Destination	Protocol	Length	Info
1	10:50:27.744	10.0.1.254	138.76.29.8	TCP	74	53924 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=322727249 TSecr=0 WS=128
2	10:50:27.746	138.76.29.8	10.0.1.254	TCP	74	80 → 53924 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 SACK_PERM TSval=802266926 TSecr=
3	10:50:27.746	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=322727252 TSecr=802266926
4	10:50:27.771	10.0.1.254	138.76.29.8	HTTP	396	GET / HTTP/1.1
5	10:50:27.773	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1 Ack=331 Win=64896 Len=0 TSval=802266954 TSecr=322727277
6	10:50:27.774	138.76.29.8	10.0.1.254	HTTP	613	HTTP/1.1 200 OK (text/html)
7	10:50:27.775	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=331 Ack=548 Win=64128 Len=0 TSval=322727281 TSecr=802266955
8	10:50:27.975	10.0.1.254	138.76.29.8	HTTP	317	GET /favicon.ico HTTP/1.1
9	10:50:27.976	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=548 Ack=582 Win=64768 Len=0 TSval=802267157 TSecr=322727481
10	10:50:27.977	138.76.29.8	10.0.1.254	HTTP	555	HTTP/1.1 404 Not Found (text/html)
11	10:50:27.977	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322727483 TSecr=802267158
12	10:50:32.933	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	Who has 10.0.1.253? Tell 10.0.1.254
13	10:50:32.935	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	10.0.1.253 is at 08:00:27:22:fd:74
14	10:50:32.975	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	Who has 10.0.1.254? Tell 10.0.1.253
15	10:50:32.975	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	10.0.1.254 is at 08:00:27:43:65:cd
16	10:50:32.978	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [FIN, ACK] Seq=1037 Ack=582 Win=64768 Len=0 TSval=802272158 TSecr=322727483
17	10:50:32.978	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [FIN, ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322732484 TSecr=802267158
18	10:50:32.980	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=583 Ack=1038 Win=64128 Len=0 TSval=322732485 TSecr=802272158
19	10:50:32.982	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1038 Ack=583 Win=64768 Len=0 TSval=802272161 TSecr=322732484

Acknowledgment number (raw): 2729790325
 1000 ... = Header Length: 32 bytes (8)
 > Flags: 0x018 (PSH, ACK)
 Window: 507
 [Calculated window size: 64896]
 [Window size scaling factor: 128]
 Checksum: 0xeb0d [unverified]
 [Checksum Status: Unverified]
 Urgent Pointer: 0
 > Options: (12 bytes), No-Operation (NOP), No-Operation (NOP), Timestamps
 > TCP Option - No-Operation (NOP)
 > TCP Option - No-Operation (NOP)
 > TCP Option - Timestamps
 > [Timestamps]
 [Time since first frame in this TCP stream: 0.030625966 seconds]
 [Time since previous frame in this TCP stream: 0.001287055 seconds]
 > [SEQ/ACK analysis]
 TCP payload (547 bytes)
 > Hypertext Transfer Protocol

0020 01 fe 00 50 d2 a4 99 71 br
 0030 01 fb eb 0d 00 00 01 01 0
 0040 6d 6d 48 54 54 50 2f 31 2
 0050 4b 0d 0a 44 61 74 65 3a 2
 0060 20 4d 61 72 20 32 30 32 3
 0070 32 37 20 47 4d 54 0d 0a 5
 0080 41 70 61 63 68 65 2f 32 2
 0090 62 75 6e 74 75 29 0d 0a 4
 00a0 69 66 69 65 64 3a 20 54 7
 00b0 61 6e 20 32 30 32 31 20 3
 00c0 20 47 4d 54 0d 0a 45 54 6
 00d0 2d 35 62 38 62 38 38 66 3
 00e0 7a 69 70 22 0d 0a 41 63 6
 00f0 67 65 73 3a 20 62 79 74 6
 0100 3a 20 41 63 63 65 70 74 2
 0110 67 0d 0a 43 6f 6e 74 65 6
 0120 69 6e 67 3a 20 67 74 69 7
 0130 6e 74 2d 4c 65 6e 67 74 6
 0140 4b 65 65 7a 2a 41 6e 6a 7
 Frame (613 bytes) Uncompressed entity body

10. What are the source and destination IP addresses and TCP source and destination port numbers on the IP datagram carrying this HTTP reply (“200 OK”) message (as recorded in the *nat-outside-wireshark-trace1-1.pcapng* trace file)?

Source IP Address: 138.76.29.8

Source port : 80

Destination IP address: 10.0.1.254

Destination port: 53924

nat-outside-wireshark-trace1-1.pcapng									
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help									
Apply a display filter ... <Ctrl>/									
No.	Time	Source	Destination	Protocol	Length	Info			
1	10:50:27.744	10.0.1.254	138.76.29.8	TCP	74	53924 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_PERM TSval=322727249 TSecr=0 WS=128			
2	10:50:27.746	138.76.29.8	10.0.1.254	TCP	74	80 → 53924 [SYN, ACK] Seq=0 Ack=1 Win=65160 Len=0 MSS=1460 SACK_PERM TSval=802266926 TSecr=322727249 WS=1			
3	10:50:27.746	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=322727252 TSecr=802266926			
4	10:50:27.771	10.0.1.254	138.76.29.8	HTTP	396	GET / HTTP/1.1			
5	10:50:27.773	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1 Ack=331 Win=64896 Len=0 TSval=802266954 TSecr=322727277			
6	10:50:27.774	138.76.29.8	10.0.1.254	HTTP	613	HTTP/1.1 200 OK (text/html)			
7	10:50:27.775	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=331 Ack=548 Win=64128 Len=0 TSval=322727281 TSecr=802266955			
8	10:50:27.975	10.0.1.254	138.76.29.8	HTTP	317	GET /favicon.ico HTTP/1.1			
9	10:50:27.976	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=548 Ack=582 Win=64768 Len=0 TSval=802267157 TSecr=322727481			
10	10:50:27.977	138.76.29.8	10.0.1.254	HTTP	555	HTTP/1.1 404 Not Found (text/html)			
11	10:50:27.977	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322727483 TSecr=802267158			
12	10:50:32.933	PcsCompu_22:fd:74	PcsCompu_22:fd:74	ARP	42	Who has 10.0.1.253? Tell 10.0.1.254			
13	10:50:32.935	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	10.0.1.253 is at 08:00:27:22:fd:74			
14	10:50:32.975	PcsCompu_22:fd:74	PcsCompu_43:65:cd	ARP	60	Who has 10.0.1.254? Tell 10.0.1.253			
15	10:50:32.975	PcsCompu_43:65:cd	PcsCompu_22:fd:74	ARP	42	10.0.1.254 is at 08:00:27:43:65:cd			
16	10:50:32.978	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [FIN, ACK] Seq=1037 Ack=582 Win=64768 Len=0 TSval=802272158 TSecr=322727483			
17	10:50:32.978	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [FIN, ACK] Seq=582 Ack=1037 Win=64128 Len=0 TSval=322732484 TSecr=802267158			
18	10:50:32.980	10.0.1.254	138.76.29.8	TCP	66	53924 → 80 [ACK] Seq=583 Ack=1038 Win=64128 Len=0 TSval=322732485 TSecr=802272158			
19	10:50:32.982	138.76.29.8	10.0.1.254	TCP	66	80 → 53924 [ACK] Seq=1038 Ack=583 Win=64768 Len=0 TSval=802272161 TSecr=322732484			

> Frame 6: 613 bytes on wire (4904 bits), 613 bytes captured (4904 bits) on interface eth0, id 0 > Ethernet II, Src: PcsCompu_22:fd:74 (08:00:27:22:fd:74), Dst: PcsCompu_43:65:cd (08:00:27:43:65:cd) > Internet Protocol Version 4, Src: 138.76.29.8, Dst: 10.0.1.254 > Transmission Control Protocol, Src Port: 80, Dst Port: 53924, Seq: 1, Ack: 331, Len: 547 > Hypertext Transfer Protocol > HTTP/1.1 200 OK\r\n Date: Mon, 29 Mar 2021 03:50:27 GMT\r\n Server: Apache/2.4.41 (Ubuntu)\r\n Last-Modified: Tue, 12 Jan 2021 18:55:04 GMT\r\n ETag: "137-5b0b88f8452aa-gzip"\r\n Accept-Ranges: bytes\r\n Vary: Accept-Encoding\r\n Content-Encoding: gzip\r\n Content-Length: 210\r\n Keep-Alive: timeout=5, max=100\r\n Connection: Keep-Alive\r\n Content-Type: text/html\r\n \r\n [HTTP response 1/2]	<pre> 0000 08 00 27 43 65 cd 08 00 27 22 fd 74 08 0 0010 02 57 6c 7c 40 00 3f 06 19 d3 8a 4c 1d 0 0020 01 fe 00 50 d2 a4 99 71 bd 0e a2 b5 4b 7 0030 01 fb eb 0d 00 00 01 01 08 0a 2f d1 9f 4 0040 6d 6d 48 54 54 50 2f 31 2e 31 20 32 30 3 0050 4b 0d 0a 44 61 74 65 3a 20 4d 6f 6e 2c 2 0060 20 4d 61 72 20 32 30 32 31 20 30 33 3a 3 0070 32 37 20 47 4d 54 0d 0a 53 65 72 76 65 7 0080 41 70 61 63 68 65 2f 32 2e 34 2e 34 31 2 0090 62 75 6e 74 75 29 0d 0a 4c 61 73 74 2d 4 00a0 69 66 69 65 64 3a 20 54 75 65 2c 20 31 3 00b0 61 6e 20 32 30 32 31 20 31 38 3a 35 35 3 00c0 20 47 4d 54 0d 0a 45 54 61 67 3a 20 22 3 00d0 2d 35 62 38 62 38 38 66 38 34 35 32 61 6 00e0 7a 69 70 22 0d 0a 41 63 63 65 70 74 2d 3 00f0 67 65 73 3a 20 62 79 74 65 73 0d 0a 56 6 0100 3a 20 41 63 63 65 70 74 2d 45 6e 63 6f 6 0110 67 0d 0a 43 6f 6e 74 65 6e 74 2d 45 6e 6 0120 6a 6a 67 7a 7a 67 7a 6a 7a 0a a3 6f 6 </pre>
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11. What are the source and destination IP addresses and TCP source and destination port numbers on the IP datagram carrying the HTTP reply (“200 OK”) that is forwarded from the router to the destination host in the right of Figure 1?

Source IP Address: 138.76.29.8
 Source port : 80
 Destination IP address: 192.168.10.11
 Destination port: 53924

