

No.	Time	Source	Destination	Protocol	Length	Info
3	0.001656	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, .
4	0.415098	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, .
5	1.006279	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, .
6	1.431684	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, .
7	2.006328	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, .
8	2.324479	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, .
9	3.006356	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, .
10	3.321121	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, .
11	4.006398	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, .
12	4.343301	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, .
13	5.006454	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, .
14	5.365480	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, .
15	6.022116	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, .
16	6.403470	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, .
17	7.022312	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, .

▶ Frame 3: 74 bytes on wire (592 bits), 74 bytes captured (592 bits)
 ▶ Ethernet II, Src: Dell_4f:36:23 (00:08:74:4f:36:23), Dst: LinksysG_da:af:73 (00:06:25:da:af:73)
 ▶ Internet Protocol Version 4, Src: 192.168.1.101, Dst: 143.89.14.34
 ▶ Internet Control Message Protocol

0000	00 06 25 da af 73 00 08	74 4f 36 23 08 00 45 00	..%.s..t06#..E.
0010	00 3c d1 fd 00 00 80 01	09 3b c0 a8 01 65 8f 59	<.....;...e.Y
0020	0e 22 08 00 e4 5a 02 00	67 01 61 62 63 64 65 66	..."Z...g.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

Internet Control Message Protocol: Protocol 分组: 22 · 已显示: 20 (90.9%) Profile: Default

1. IP address of my host: 192.168.1.101

IP address of destination host: 143.89.14.34

2. Because they communicate in network-layer instead of application layer. No need to use port numbers.

No.	Time	Source	Destination	Protocol	Length	Info
3	0.001656	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, ..%..s.. t06#..E.
4	0.415098	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, ..<..c@... ..Y"...
5	1.006279	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, ..e...Z... g abcdef
6	1.431684	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, ..g h i j k l m n o p q r s t u v
7	2.006328	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, ..w a b c d e f g h i
8	2.324479	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, ..

Frame 3: 74 bytes on wire (592 bits), 74 bytes captured (592 bits)

Ethernet II, Src: Dell_4f:36:23 (00:08:74:4f:36:23), Dst: LinksysG_da:af:73 (00:06:25:da:af:73)

Internet Protocol Version 4, Src: 192.168.1.101, Dst: 143.89.14.34

Internet Control Message Protocol

Type: 8 (Echo (ping) request)

Code: 0

Checksum: 0xe45a [correct]
[Checksum Status: Good]

Identifier (BE): 512 (0x0200)

Identifier (LE): 2 (0x0002)

Sequence number (BE): 26369 (0x6701)

Sequence number (LE): 359 (0x0167)

[Response frame: 4\]](#)

Data (32 bytes)

0000 00 06 25 da af 73 00 08 74 4f 36 23 08 00 45 00 ..%..s.. t06#..E.
 0010 00 3c d1 fd 00 00 80 01 09 3b c0 a8 01 65 8f 59 ..<..c@... ..Y"..
 0020 0e 22 08 00 e4 5a 02 00 67 01 61 62 63 64 65 66 ..e...Z... g abcdef
 0030 67 68 69 6a 6b 6c 6d 6e 6f 70 71 72 73 74 75 76 g h i j k l m n o p q r s t u v
 0040 77 61 62 63 64 65 66 67 68 69 w a b c d e f g h i

3. ICMP type: 8 code: 0

other fields: Checksum, Identifier, Sequence number, Data

2 bytes.

No.	Time	Source	Destination	Protocol	Length	Info
3	0.001656	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, ..%..s.. t06#..E.
4	0.415098	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, ..<..c@... ..Y"...
5	1.006279	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, ..e...Z... g abcdef
6	1.431684	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, ..g h i j k l m n o p q r s t u v
7	2.006328	192.168.1.101	143.89.14.34	ICMP	74	Echo (ping) request id=0x0200, ..w a b c d e f g h i
8	2.324479	143.89.14.34	192.168.1.101	ICMP	74	Echo (ping) reply id=0x0200, ..

Frame 4: 74 bytes on wire (592 bits), 74 bytes captured (592 bits)

Ethernet II, Src: LinksysG_da:af:73 (00:06:25:da:af:73), Dst: Dell_4f:36:23 (00:08:74:4f:36:23)

Internet Protocol Version 4, Src: 143.89.14.34, Dst: 192.168.1.101

Internet Control Message Protocol

Type: 0 (Echo (ping) reply)

Code: 0

Checksum: 0xec5a [correct]
[Checksum Status: Good]

Identifier (BE): 512 (0x0200)

Identifier (LE): 2 (0x0002)

Sequence number (BE): 26369 (0x6701)

Sequence number (LE): 359 (0x0167)

[Request frame: 3\]](#)

[Response time: 413.442 ms]

Data (32 bytes)

0000 00 08 74 4f 36 23 00 06 25 da af 73 08 00 45 00 ..t06#.. %..s..E.
 0010 00 3c b3 63 40 00 e7 01 80 d4 8f 59 0e 22 c0 a8 ..<..c@... ..Y"..
 0020 01 65 00 00 ec 5a 02 00 67 01 61 62 63 64 65 66 ..e...Z... g abcdef
 0030 67 68 69 6a 6b 6c 6d 6e 6f 70 71 72 73 74 75 76 g h i j k l m n o p q r s t u v
 0040 77 61 62 63 64 65 66 67 68 69 w a b c d e f g h i

4. ICMP type: 0 code: 0

other fields: Checksum, Identifier, Sequence number, Request frame, Response time, Data

2 bytes.

The image shows a Wireshark packet capture window titled 'icmp-ethereal-trace-2'. The packet list shows six packets. Packet 1 is an ICMP Echo (ping) request from 192.168.1.101 to 138.96.146.2. The packet details pane shows the following information:

- Type: 8 (Echo (ping) request)
- Code: 0
- Checksum: 0x51fe [correct]
- [Checksum Status: Good]
- Identifier (BE): 512 (0x0200)
- Identifier (LE): 2 (0x0002)
- Sequence number (BE): 41985 (0xa401)
- Sequence number (LE): 420 (0x01a4)
- [No response seen]
- Data (64 bytes)

The packet bytes pane shows the raw data of the packet, including the Ethernet II header, Internet Protocol Version 4 header, and the ICMP Echo request data.

5. IP address of my host: 192.168.1.101

IP address of target destination host: 138.96.146.2

6. No. It would be 0x11.

The image shows a Wireshark packet capture window titled 'icmp-ethereal-trace-2'. The packet list shows six packets. Packet 1 is an ICMP Echo (ping) request from 192.168.1.101 to 138.96.146.2. The packet details pane shows the following information:

- Type: 8 (Echo (ping) request)
- Code: 0
- Checksum: 0x51fe [correct]
- [Checksum Status: Good]
- Identifier (BE): 512 (0x0200)
- Identifier (LE): 2 (0x0002)
- Sequence number (BE): 41985 (0xa401)
- Sequence number (LE): 420 (0x01a4)
- [No response seen]
- Data (64 bytes)

A red circle highlights the Identifier (BE) field, which is 512 (0x0200). The packet bytes pane shows the raw data of the packet, including the Ethernet II header, Internet Protocol Version 4 header, and the ICMP Echo request data.

7. It's the same with the ICMP ping query packets.

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.1.101	138.96.146.2	ICMP	106	Echo (ping) request id=0x0200, seq=41985/420, ttl=1 (no response fou
2	0.013151	10.216.228.1	192.168.1.101	ICMP	70	Time-to-live exceeded (Time to live exceeded in transit)
3	0.013258	192.168.1.101	138.96.146.2	ICMP	106	Echo (ping) request id=0x0200, seq=42241/421, ttl=1 (no response fou
4	0.025551	10.216.228.1	192.168.1.101	ICMP	70	Time-to-live exceeded (Time to live exceeded in transit)
5	0.025634	192.168.1.101	138.96.146.2	ICMP	106	Echo (ping) request id=0x0200, seq=42497/422, ttl=1 (no response fou
6	0.039171	10.216.228.1	192.168.1.101	ICMP	70	Time-to-live exceeded (Time to live exceeded in transit)

Internet Protocol Version 4, Src: 10.216.228.1, Dst: 192.168.1.101	
Internet Control Message Protocol	
Type: 11 (Time-to-live exceeded)	
Code: 0 (Time to live exceeded in transit)	
Checksum: 0x2c16 [correct]	
[Checksum Status: Good]	
Internet Protocol Version 4, Src: 192.168.1.101, Dst: 138.96.146.2	
Internet Control Message Protocol	
Type: 8 (Echo (ping) request)	
Code: 0	
Checksum: 0x51fe [unverified] [in ICMP error packet]	
[Checksum Status: Unverified]	
Identifier (BE): 512 (0x0200)	
Identifier (LE): 2 (0x0002)	
Sequence number (BE): 41985 (0xa401)	
Sequence number (LE): 420 (0x01a4)	

8. Yes, there are more fields.

Both the IP header and the first 8 bytes of the original ICMP packet contain.

No.	Time	Source	Destination	Protocol	Length	Info
97	17.8937...	192.168.1.101	138.96.146.2	ICMP	106	Echo (ping) request id=0x0200, seq=54273/468, ttl=17 (reply in 98)
98	18.0072...	138.96.146.2	192.168.1.101	ICMP	106	Echo (ping) reply id=0x0200, seq=54273/468, ttl=238 (request in 97)
99	18.0073...	192.168.1.101	138.96.146.2	ICMP	106	Echo (ping) request id=0x0200, seq=54529/469, ttl=17 (reply in 100)
100	18.1217...	138.96.146.2	192.168.1.101	ICMP	106	Echo (ping) reply id=0x0200, seq=54529/469, ttl=238 (request in 99)
101	18.1218...	192.168.1.101	138.96.146.2	ICMP	106	Echo (ping) request id=0x0200, seq=54785/470, ttl=17 (reply in 102)
102	18.2345...	138.96.146.2	192.168.1.101	ICMP	106	Echo (ping) reply id=0x0200, seq=54785/470, ttl=238 (request in 101)

Frame 98: 106 bytes on wire (848 bits), 106 bytes captured (848 bits)	
Ethernet II, Src: LinksysG_da:af:73 (00:06:25:da:af:73), Dst: Dell_4f:36:23 (00:08:74:4f:36:23)	
Internet Protocol Version 4, Src: 138.96.146.2, Dst: 192.168.1.101	
Internet Control Message Protocol	
Type: 0 (Echo (ping) reply)	
Code: 0	
Checksum: 0x29fe [correct]	
[Checksum Status: Good]	
Identifier (BE): 512 (0x0200)	
Identifier (LE): 2 (0x0002)	
Sequence number (BE): 54273 (0xd401)	
Sequence number (LE): 468 (0x01d4)	
[Request frame: 97]	
[Response time: 113.456 ms]	
Data (64 bytes)	

9. The type of last three ICMP packets is 0, which is different from the ICMP error packets. They are different because the datagrams have reached the destination before the TTL gets expired.

