

Assignment 6 ICMP wireshark

Q1. What is the IP address of your host? What is the IP address of the destination host?

Ans- Src. Host IP = 192.168.1.15, Dst. Host IP = 8.8.8.8

```
37 6.528516 192.168.1.15 8.8.8.8 ICMP 74 Echo (ping) request id=0x0001, seq=5/1280, ttl=128 (reply in 38)
```

Q2. Why is it that an ICMP packet does not have source and destination port numbers?

Ans- ICMP is a protocol designed to check connectivity with other networked devices also ICMP tells whether a host is alive or not, if a host is alive then it sends ICMP response other sends unreachable destination message so ICMP is used to assist in network issues, diagnostics and error reporting.

Also, ICMP is encapsulated under IP layer but ICMP itself works at Layer 3 (Network Layer), whereas the port number addressing form itself is used Layer 4 (i.e., Transport layer), that's why ICMP packet does not have source and destination port numbers.

Q3. Examine one of the ping request packets sent by your host. What are the ICMP type and code numbers? What other fields does this ICMP packet have? How many bytes are the checksum, sequence number, and identifier fields?

Ans- One of the ping request packets sent by our host contains ICMP `Type = 8 and Code = 0`. Other fields that this ICMP packet contains are Checksum = 2 bytes, Identifier (BE/LE) = 2 bytes, Sequence Number (BE/LE) = 2 bytes and Data = 32 bytes.

```
▼ Internet Control Message Protocol
  Type: 8 (Echo (ping) request)
  Code: 0
  Checksum: 0x4d56 [correct]
  [Checksum Status: Good]
  Identifier (BE): 1 (0x0001)
  Identifier (LE): 256 (0x0100)
  Sequence Number (BE): 5 (0x0005)
  Sequence Number (LE): 1280 (0x0500)
  [Response frame: 38]
  ▼ Data (32 bytes)
    Data: 6162636465666768696a6b6c6d6e6f7071727374757677616263646566676869
    [Length: 32]
```

Q4. Examine the corresponding ping reply packet. What are the ICMP type and code numbers? What other fields does this ICMP packet have? How many bytes are the checksum, sequence number, and identifier fields?

Ans- `Type = 0 and code = 0`, Other fields that this ICMP packet contains are Checksum = 2 bytes,

Identifier (BE/LE) = 2 bytes, Sequence Number (BE/LE) = 2 bytes and Data = 32 bytes.

▼ Internet Control Message Protocol

Type: 0 (Echo (ping) reply)

Code: 0

Checksum: 0x5556 [correct]

[Checksum Status: Good]

Identifier (BE): 1 (0x0001)

Identifier (LE): 256 (0x0100)

Sequence Number (BE): 5 (0x0005)

Sequence Number (LE): 1280 (0x0500)

[\[Request frame: 37\]](#)

[Response time: 32.951 ms]

▼ Data (32 bytes)

Data: 6162636465666768696a6b6c6d6e6f7071727374757677616263646566676869

[Length: 32]