Computer Networks

John Juele

Week 8

Lab 5

# Q1

IP Address: 192.168.1.102

# Q2

Upper Layer Protocol: ICMP (1)

# Q3

IP header length: 20 bytes

Payload length = Total length (84) – IP header length (20) = 64 bytes

# Q4

IP datagram has not been fragmented as the fragment offset is set to 0.

# Q5

Changes in each ICMP message:

* Time to live
* Identification
* Header checksum

# Q6

Fields that stays the same:

* Header length
* Version
* Source + Destination IP Addresses
* Upper Layer Protocol

Fields that must stay the same:

* Header length
* Version
* Source + Destination IP Addresses
* Upper Layer Protocol

Fields that change: Q5

# Q7

They increment by 1.

# Q8

Identification: 40316

TTL: 255

# Q9

The identification field changes as each one is unique and must be different. When more than one ip datagrams have the same id field, it means that they are a piece of a larger IP Datagram.

The time to live field remains unchanged.

# Q10

Yes, the packet has been fragmented over many IP datagrams

# Q11

* Flags for “more fragments” is set showing that the datagram has been fragmented
* The fragment offset is still set to 0 so it shows that it is the first fragment
* The length is 1500

# Q12

Here we see that the fragment offset is not 0 (it is now 1480). This is the last fragment as other fragments flag is not set.

# Q13