

## LAB-10

### Action at Network Layer

Questions: Answer the following questions in your report.

1. Specify the exact commands used to conduct the experiment.

The following Interface Configuration command enables the router to

send ICMP unreachable errors:

Router(config-if)# **ip unreachable**.

The MTU of a host interface can be modified using the following command:

**ifconfig** *interface\_name* **mtu** *new\_MTU\_value*.

To set the MTU of a router interface, use the following Interface Configuration command:

Router(config-if)# **ip mtu** *new\_MTU\_value*.

2. For the case when no fragmentation happened, note down the values corresponding to the following fields: Total length, Identifier, flags and fragment offset. Why is the total length field so?

Total Length: 60

Identification: 0xed99 (60825)

Flags: 0x02 (Don't Fragment)

0... .... = Reserved bit: Not set

.1.. .... = Don't fragment: Set

..0. .... = More fragments: Not set

Fragment offset: 0

Time to live: 64

Total Length : After fragmentation, this changes to the size of the fragment in the IP datagram, there is no fragmentation in this case.

3. For the case when fragmentation happened, for each fragment, note down the values corresponding to the following fields: Total length, Identifier, flags and fragment offset. Do the values make sense based on what was covered in theory?

Total Length: 24

Identification: 0x00f2 (242)

Flags: 0x00

0... .... = Reserved bit: Not set

.0.. .... = Don't fragment: Not set

..0. .... = More fragments: Not set

Fragment offset: 24

Time to live: 64