



**VILNIUS UNIVERSITY
ŠIAULIAI ACADEMY**

BACHELOR PROGRAMME SOFTWARE ENGINEERING

Computer networks laboratory work No. 7

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1. My 48 bit ethernet address:

Intel_ff:07:03 (bc:09:1b:ff:07:03)

2. The destination address is the address of my router:

Dst: TPLink_20:8f:54 (9c:a2:f4:20:8f:54)

3. Hex value is 0x0800, which corresponds to IPv4

Type: IPv4 (0x0800)

4. The “G” in “GET” is the 54-th byte

5. Source address is Src: TPLink_20:8f:54 (9c:a2:f4:20:8f:54),

this is an address of my router.

6. Destination address is Dst: Intel_ff:07:03 (bc:09:1b:ff:07:03), this is an address of my computer.

7. Hex value is 0x0800, which corresponds to IPv4

8. The “O” have the 67 bytes before it.

```
Interface: 192.168.0.131 --- 0x10
  Internet Address      Physical Address      Type
  192.168.0.1           9c-a2-f4-20-8f-54    dynamic
  192.168.0.19          04-7c-16-00-27-c2    dynamic
  192.168.0.255         ff-ff-ff-ff-ff-ff    static
  224.0.0.2             01-00-5e-00-00-02    static
  224.0.0.22           01-00-5e-00-00-16    static
  224.0.0.113          01-00-5e-00-00-71    static
  224.0.0.251          01-00-5e-00-00-fb    static
  224.0.0.252          01-00-5e-00-00-fc    static
  224.0.1.60           01-00-5e-00-01-3c    static
  239.255.255.250      01-00-5e-7f-ff-fa    static
  255.255.255.255      ff-ff-ff-ff-ff-ff    static
```

9. Those are all available broadcasting addresses

```
Sender MAC address: TPLink_20:8f:54 (9c:a2:f4:20:8f:54)
Sender IP address: 192.168.0.1
Target MAC address: 00:00:00_00:00:00 (00:00:00:00:00:00)
```

10. Type: ARP (0x0806)

- 11.

- a. The ARP opcode starts after 20 bytes

Opcode: request (1)

- b. Value is 0x0001, for request
- c. Yes `Sender IP address: 192.168.0.1`

13.

- a. The ARP opcode starts after 20 bytes from the beginning

`Opcode: reply (2)`

- b. Value is 2, for response.

- c. `Src: Intel_ff:07:03 (bc:09:1b:ff:07:03)`
`Address: 192.168.0.131`

14.

`Target MAC address: TPLink_20:8f:54 (9c:a2:f4:20:8f:54)`
`Target IP address: 192.168.0.1`

15. We cannot see the reply, because we are not the device that sent the original request.