LV2: Osnovna analiza mrežnog prometa (wireshark, hvatanje paketa, arp, sample captures)

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PRIPREMA ZA VJEŽBU

1. Što je i čemu služi protokol ARP?

ARP (Address Resolution Protocol) je protokol koji služi za dobivanje fizičkih adresa iz poznate logičke IPv4 adrese.

2. Što je i čemu služi protokol ICMP?

ICMP (Internet Control Message Protocol) komunikacijski je protokol ugrađen u svaki IP modul kako bi usmjernicima/računalima omogućio slanje kontrolnih poruka o greškama.

3. Što znaš o naredbi ping?

Ping je naredba koja se koristi kao osnovni mrežni alat koji služi za provjeru dostupnosti određenog hosta povezanog u IP mrežu.
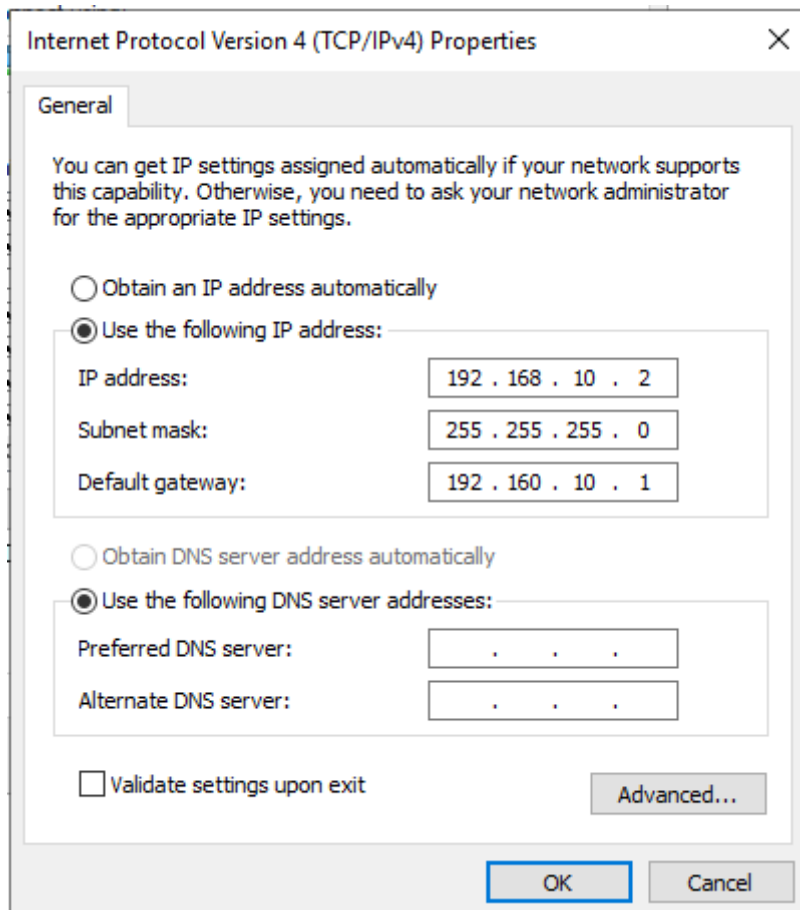
IZVOĐENJE VJEŽBE

1. **zadatak**
   Povezati dva susjedna računala odgovarajućim kabelom te uspostaviti P2P spoj.
   Topologija:

2. **zadatak**
   Konfiguriramo sa Control Panelom:

3. zadatak

a) 58 okvira

b) ARP, ICMP, SSDP i MDMS

c) SSDP-Simple Service Discovery Protocol (SSDP) mrežni je protokol temeljen na paketu internetskih protokola za oglašavanje i otkrivanje mrežnih usluga i informacija o prisutnosti.

d)request-

```
> Frame 1: 42 bytes on wire (336 bits), 42 bytes captured (336 bits) on interface 0
> Ethernet II, Src: AsrockIn_ce:9a:f7 (70:85:c2:ce:9a:f7), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
∨ Address Resolution Protocol (request)
    Hardware type: Ethernet (1)
    Protocol type: IPv4 (0x0800)
    Hardware size: 6
    Protocol size: 4
    Opcode: request (1)
    Sender MAC address: AsrockIn_ce:9a:f7 (70:85:c2:ce:9a:f7)
    Sender IP address: 192.168.10.2
    Target MAC address: 00:00:00_00:00:00 (00:00:00:00:00:00)
    Target IP address: 192.160.10.1
```

reply-

```
> Frame 15: 42 bytes on wire (336 bits), 42 bytes captured (336 bits) on interface 0
> Ethernet II, Src: AsrockIn_ce:9a:f7 (70:85:c2:ce:9a:f7), Dst: AsrockIn_ce:9a:f0 (70:85:c2:ce:9a:f0)
v Address Resolution Protocol (reply)
    Hardware type: Ethernet (1)
    Protocol type: IPv4 (0x0800)
    Hardware size: 6
    Protocol size: 4
    Opcode: reply (2)
    Sender MAC address: AsrockIn_ce:9a:f7 (70:85:c2:ce:9a:f7)
    Sender IP address: 192.168.10.2
    Target MAC address: AsrockIn_ce:9a:f0 (70:85:c2:ce:9a:f0)
    Target IP address: 192.168.10.3
```

e)

```
> Frame 1: 42 bytes on wire (336 bits), 42 bytes captured (336 bits) on interface 0
> Ethernet II, Src: AsrockIn_ce:9a:f7 (70:85:c2:ce:9a:f7), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
v Address Resolution Protocol (request)
    Hardware type: Ethernet (1)
    Protocol type: IPv4 (0x0800)
    Hardware size: 6
    Protocol size: 4
    Opcode: request (1)
    Sender MAC address: AsrockIn_ce:9a:f7 (70:85:c2:ce:9a:f7)
    Sender IP address: 192.168.10.2
    Target MAC address: 00:00:00_00:00:00 (00:00:00:00:00:00)
    Target IP address: 192.160.10.1
```

4. zadatak

a) Ima ih 4
b) Pokreće protokol ICMP
c) Sastavni dio IPv4
d) Ethernet 1
e) 192.168.10.2
f) 192.168.10.3
g) (70:85:c2:ce:9a:f7)
h) (70:85:c2:ce:9a:f0)
i) Type: IPv4 (0x0800)
j) Veličina IP adrese je 4, a MAC adrese je 6 bytes
k) Total length: 60
l) Total length – Header length= 60-20=40