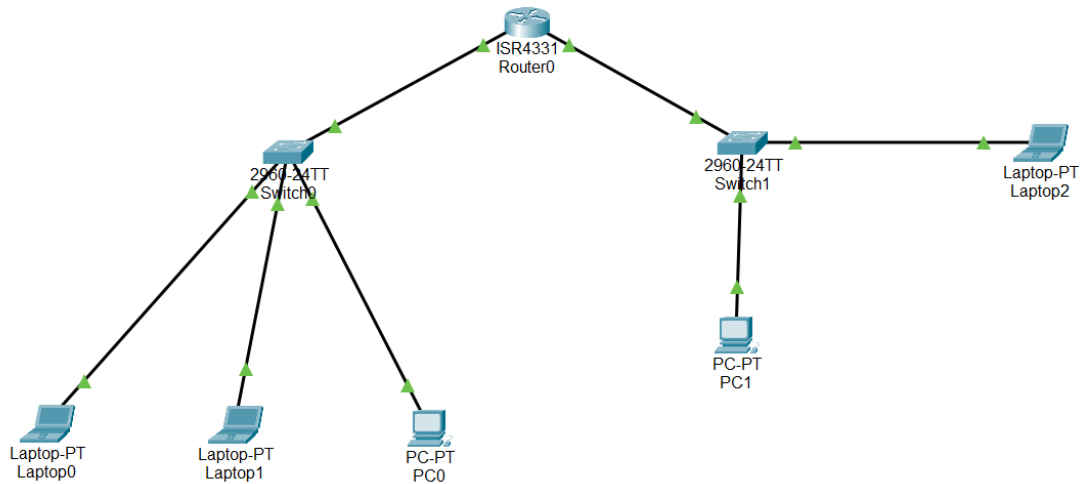


ESERCITAZIONE W2D1 – Pratica (2)

Su Packet Tracer è stata configurata la seguente architettura target:



Come da traccia sono state eseguite le configurazioni di:

1. Laptop 0: IP address 192.168.100.100, default gateway 192.168.100.1;
2. PC 0: 192.168.100.103, default gateway 192.168.100.1;
3. Laptop 2: 192.168.200.100, default gateway 192.168.200.1;

La default gateway di ogni rete coincide con l'IP address stabilito per ciascuna interfaccia configurata nel router.

È stata verificata la corretta comunicazione reciproca tra Laptop 0 e PC 0:

```
Pinging 192.168.100.103 with 32 bytes of data:

Reply from 192.168.100.103: bytes=32 time<1ms TTL=128
Reply from 192.168.100.103: bytes=32 time<1ms TTL=128
Reply from 192.168.100.103: bytes=32 time<1ms TTL=128
Reply from 192.168.100.103: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.100.103:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
Pinging 192.168.100.100 with 32 bytes of data:

Reply from 192.168.100.100: bytes=32 time=12ms TTL=128
Reply from 192.168.100.100: bytes=32 time<1ms TTL=128
Reply from 192.168.100.100: bytes=32 time<1ms TTL=128
Reply from 192.168.100.100: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.100.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 12ms, Average = 3ms
```

È stata verificata la corretta comunicazione reciproca tra Laptop 0 e Laptop2:

```
Pinging 192.168.200.100 with 32 bytes of data:

Reply from 192.168.200.100: bytes=32 time<1ms TTL=127
Reply from 192.168.200.100: bytes=32 time<1ms TTL=127
Reply from 192.168.200.100: bytes=32 time<1ms TTL=127
Reply from 192.168.200.100: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.200.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
Pinging 192.168.100.100 with 32 bytes of data:

Reply from 192.168.100.100: bytes=32 time<1ms TTL=127
Reply from 192.168.100.100: bytes=32 time<1ms TTL=127
Reply from 192.168.100.100: bytes=32 time<1ms TTL=127
Reply from 192.168.100.100: bytes=32 time=7ms TTL=127

Ping statistics for 192.168.100.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 7ms, Average = 1ms
```

Si mostra qualitativamente il cambio di IP address tra source e destination in base alla direzione di invio di un pacchetto.

Invio di pacchetto da Laptop 0 a Laptop 2:

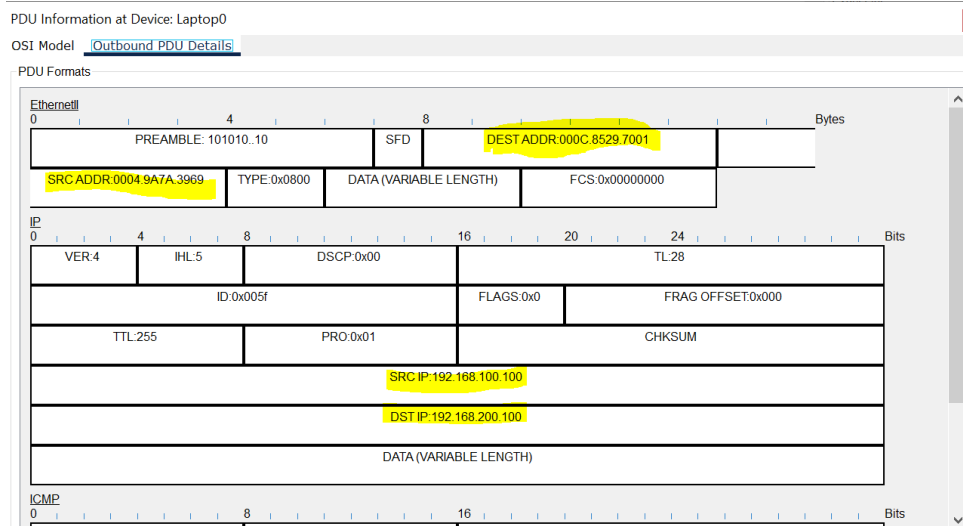
PDU Information at Device: Laptop0

OSI Model Outbound PDU Details

At Device: Laptop0
Source: Laptop0
Destination: Laptop2

| In Layers | Out Layers |
|-----------|--|
| Layer7 | Layer7 |
| Layer6 | Layer6 |
| Layer5 | Layer5 |
| Layer4 | Layer4 |
| Layer3 | Layer 3: IP Header Src. IP: 192.168.100.100, Dest. IP: 192.168.200.100 ICMP Message Type: 8 |
| Layer2 | Layer 2: Ethernet II Header 0004.9A7A.3969 >> 000C.8529.7001 |
| Layer1 | Layer 1: Port(s): FastEthernet0 |

1. The Ping process starts the next ping request.
2. The Ping process creates an ICMP Echo Request message and sends it to the lower process.
3. The source IP address is not specified. The device sets it to the port's IP address.
4. The device sets TTL in the packet header.
5. The destination IP address: 192.168.200.100 is not in the same subnet and is not the broadcast address.
6. The default gateway is set. The device sets the next-hop to default gateway.



Il Source IP è quello del Laptop 0 mentre il Destination IP è quello del ricevente Laptop 2. Il Source MAC Address è quello del Laptop 0, il Destination MAC Address è quello assegnato alla prima interfaccia del Router 0.

Invio di pacchetto da Laptop 2 a Laptop 0:

PDU Information at Device: Laptop2

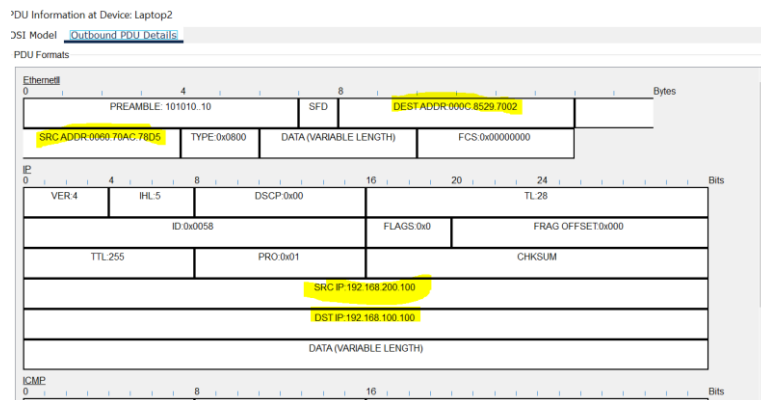
[OSI Model](#) [Outbound PDU Details](#)

At Device: Laptop2
Source: Laptop2
Destination: Laptop0

| In Layers | Out Layers |
|-----------|---|
| Layer7 | Layer7 |
| Layer6 | Layer6 |
| Layer5 | Layer5 |
| Layer4 | Layer4 |
| Layer3 | Layer 3: IP Header Src. IP: 192.168.200.100, Dest. IP: 192.168.100.100 ICMP Message Type: 8 |
| Layer2 | Layer 2: Ethernet II Header 0060.70AC.78D5 >> 000C.8529.7002 |
| Layer1 | Layer 1: Port(s): FastEthernet0 |

1. The Ping process starts the next ping request.
2. The Ping process creates an ICMP Echo Request message and sends it to the lower process.
3. The source IP address is not specified. The device sets it to the port's IP address.
4. The device sets TTL in the packet header.
5. The destination IP address 192.168.100.100 is not in the same subnet and is not the broadcast address.
6. The default gateway is set. The device sets the next-hop to default gateway.

[Challenge Me](#) [<< Previous Layer](#) [Next Layer >>](#)



Il Source IP è quello del Laptop 2 mentre il Destination IP è quello del ricevente Laptop 0. Il Source MAC Address è quello del Laptop 2, il Destination MAC Address è quello assegnato alla seconda interfaccia del Router 0.