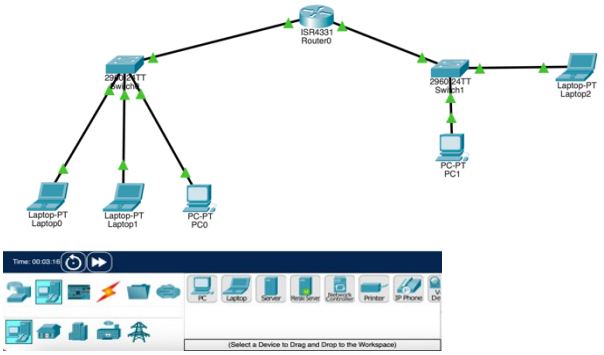
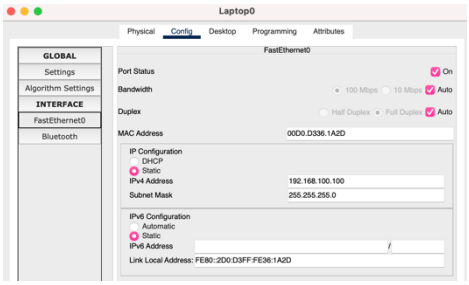
PACKET TRACER W2D1

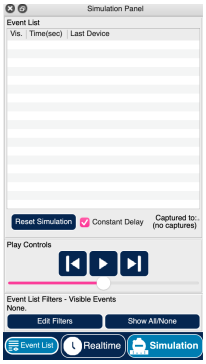
1. Metto in comunicazione Laptop0, Laptop1, PC0 con Switch0, che è collegato al Router0, che è collegato con Switch1, che a sua volta è messo in comunicazione con Laptop2 e PC1.
   Clicco sulle icone corrette e poi sul pannello principale.

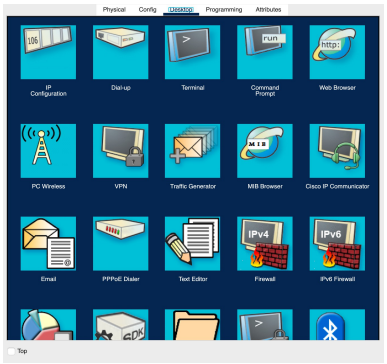


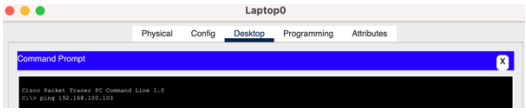
2. Configuro gli indirizzi IP cliccando su ogni computer, andando sul pannello "Config", su "FastEthernet0" e inserendoli nell'apposito spazio "IPv4":
   - Laptop0 → 192.168.100.100
   - PC0 → 192.168.100.103
   - Laptop2 → 192.168.200.100



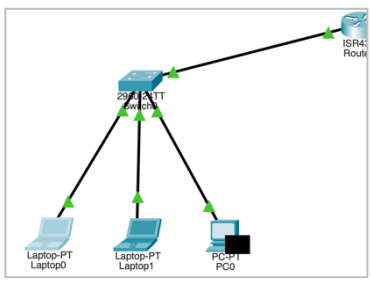
3. Entro in modalità simulazione, andando sul pannello "Desktop" apro "Command Prompt" sul Laptop0 e do il comando: "ping 192.168.100.103"

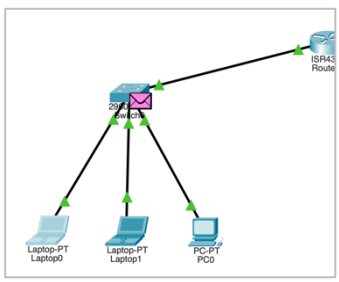


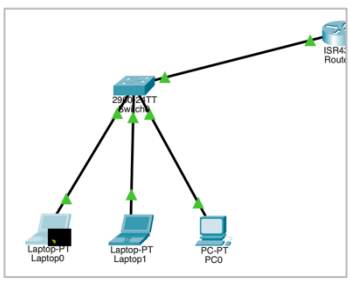




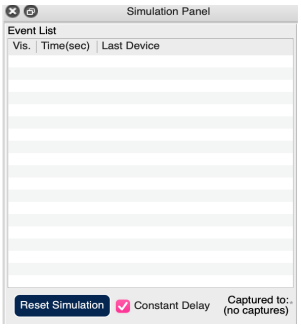
4. Il pacchetto esce da Laptop0, va nel PC0 e torna indietro

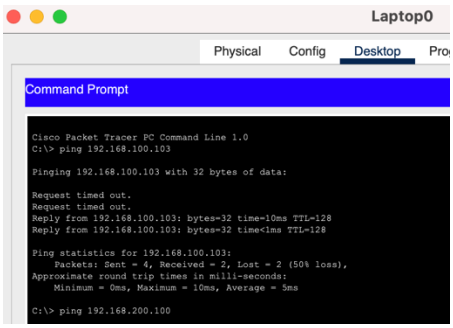




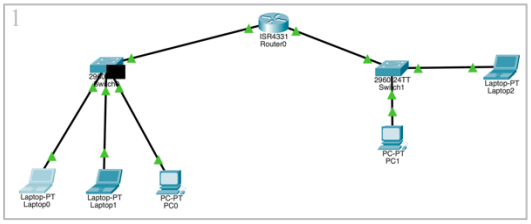


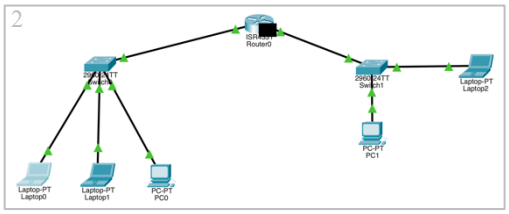
5. Resetto la simulazione, riapro “Command Prompt” sul Laptop0 e do il comando: “ping 192.168.200.100”

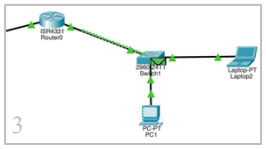


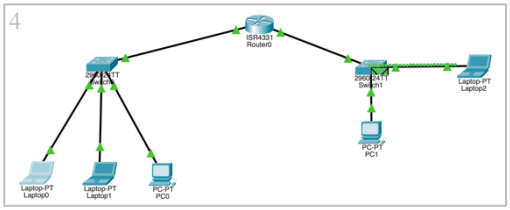


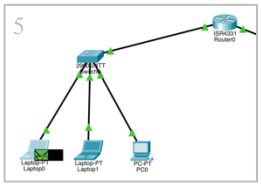
6. Il pacchetto esce da Laptop0, passa per Switch0, per Router0, per Switch1 e arriva a Laptop2



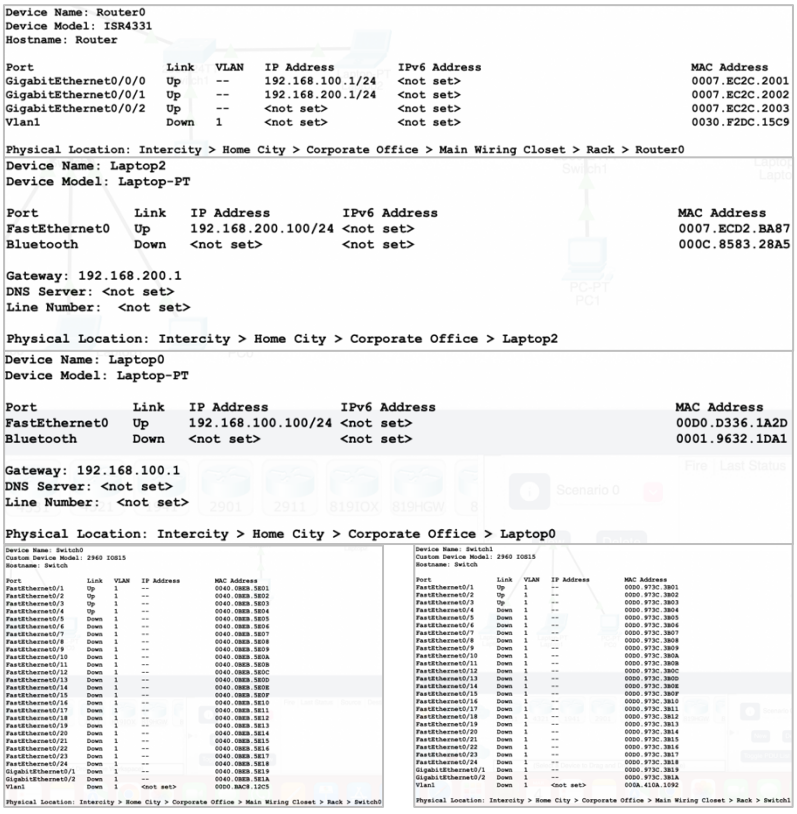








7. Evidenzio come cambiano MAC e IP quando un pacchetto viene inviato



```
Device Name: Router0
Device Model: ISR4331
Hostname: Router

Port                  Link   VLAN   IP Address        IPv6 Address                MAC Address
GigabitEthernet0/0/0  Up     --     192.168.100.1/24  <not set>                   0007.EC2C.2001
GigabitEthernet0/0/1  Up     --     192.168.200.1/24  <not set>                   0007.EC2C.2002
GigabitEthernet0/0/2  Up     --     <not set>         <not set>                   0007.EC2C.2003
Vlan1                 Down   1      <not set>         <not set>                   0030.F2DC.15C9

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router0
```

```
Device Name: Laptop2
Device Model: Laptop-PT

Port            Link   IP Address          IPv6 Address                MAC Address
FastEthernet0   Up     192.168.200.100/24  <not set>                   0007.ECD2.BA87
Bluetooth       Down   <not set>           <not set>                   000C.8583.28A5

Gateway: 192.168.200.1
DNS Server: <not set>
Line Number:  <not set>

Physical Location: Intercity > Home City > Corporate Office > Laptop2
```

```
Device Name: Laptop0
Device Model: Laptop-PT

Port            Link   IP Address          IPv6 Address                MAC Address
FastEthernet0   Up     192.168.100.100/24  <not set>                   00D0.D336.1A2D
Bluetooth       Down   <not set>           <not set>                   0001.9632.1DA1

Gateway: 192.168.100.1
DNS Server: <not set>
Line Number:  <not set>

Physical Location: Intercity > Home City > Corporate Office > Laptop0
```

```
Device Name: Switch0
Custom Device Model: 2960 IOS15
Hostname: Switch

Port            Link   VLAN   IP Address        MAC Address
FastEthernet0/1 Up     1      --                0040.0BE8.5E01
FastEthernet0/2 Up     1      --                0040.0BE8.5E02
FastEthernet0/3 Up     1      --                0040.0BE8.5E03
FastEthernet0/4 Up     1      --                0040.0BE8.5E04
FastEthernet0/5 Down   1      --                0040.0BE8.5E05
FastEthernet0/6 Down   1      --                0040.0BE8.5E06
FastEthernet0/7 Down   1      --                0040.0BE8.5E07
FastEthernet0/8 Down   1      --                0040.0BE8.5E08
FastEthernet0/9 Down   1      --                0040.0BE8.5E09
FastEthernet0/10 Down  1      --                0040.0BE8.5E0A
FastEthernet0/11 Down  1      --                0040.0BE8.5E0B
FastEthernet0/12 Down  1      --                0040.0BE8.5E0C
FastEthernet0/13 Down  1      --                0040.0BE8.5E0D
FastEthernet0/14 Down  1      --                0040.0BE8.5E0E
FastEthernet0/15 Down  1      --                0040.0BE8.5E0F
FastEthernet0/16 Down  1      --                0040.0BE8.5E10
FastEthernet0/17 Down  1      --                0040.0BE8.5E11
FastEthernet0/18 Down  1      --                0040.0BE8.5E12
FastEthernet0/19 Down  1      --                0040.0BE8.5E13
FastEthernet0/20 Down  1      --                0040.0BE8.5E14
FastEthernet0/21 Down  1      --                0040.0BE8.5E15
FastEthernet0/22 Down  1      --                0040.0BE8.5E16
FastEthernet0/23 Down  1      --                0040.0BE8.5E17
FastEthernet0/24 Down  1      --                0040.0BE8.5E18
GigabitEthernet0/1 Down  1    --                0040.0BE8.5E19
GigabitEthernet0/2 Down  1    --                0040.0BE8.5E1A
Vlan1           Down   1      <not set>         0000.0AC9.12C5

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Switch0
```

```
Device Name: Switch1
Custom Device Model: 2960 IOS15
Hostname: Switch

Port            Link   VLAN   IP Address        MAC Address
FastEthernet0/1 Up     1      --                00D0.973C.3B01
FastEthernet0/2 Up     1      --                00D0.973C.3B02
FastEthernet0/3 Up     1      --                00D0.973C.3B03
FastEthernet0/4 Down   1      --                00D0.973C.3B04
FastEthernet0/5 Down   1      --                00D0.973C.3B05
FastEthernet0/6 Down   1      --                00D0.973C.3B06
FastEthernet0/7 Down   1      --                00D0.973C.3B07
FastEthernet0/8 Down   1      --                00D0.973C.3B08
FastEthernet0/9 Down   1      --                00D0.973C.3B09
FastEthernet0/10 Down  1      --                00D0.973C.3B0A
FastEthernet0/11 Down  1      --                00D0.973C.3B0B
FastEthernet0/12 Down  1      --                00D0.973C.3B0C
FastEthernet0/13 Down  1      --                00D0.973C.3B0D
FastEthernet0/14 Down  1      --                00D0.973C.3B0E
FastEthernet0/15 Down  1      --                00D0.973C.3B0F
FastEthernet0/16 Down  1      --                00D0.973C.3B10
FastEthernet0/17 Down  1      --                00D0.973C.3B11
FastEthernet0/18 Down  1      --                00D0.973C.3B12
FastEthernet0/19 Down  1      --                00D0.973C.3B13
FastEthernet0/20 Down  1      --                00D0.973C.3B14
FastEthernet0/21 Down  1      --                00D0.973C.3B15
FastEthernet0/22 Down  1      --                00D0.973C.3B16
FastEthernet0/23 Down  1      --                00D0.973C.3B17
FastEthernet0/24 Down  1      --                00D0.973C.3B18
GigabitEthernet0/1 Down  1    --                00D0.973C.3B19
GigabitEthernet0/2 Down  1    --                00D0.973C.3B1A
Vlan1           Down   1      <not set>         000A.410A.1092

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Switch1
```

ESERCIZIO FACOLTATIVO

Troviamo diversi protocolli durante la simulazione, quelli utilizzati nel livello Rete del modello ISO/OSI sono:

- IP (Internet Protocol): indirizza e permette di inviare dati da un dispositivo a un altro su Internet;
- ICMP (Internet Control Message Protocol): segnala e diagnostica errori e problemi di rete.

Troviamo diversi protocolli durante la simulazione, quelli utilizzati nel livello Trasporto del modello ISO/OSI sono:

- TCP (Transmission Control Protocol): rende la comunicazione affidabile con connessione orientata;
- UDP (User Datagram Protocol): rende la comunicazione non affidabile senza connessione;
- SCTP (Stream Control Transmission Protocol): fornisce uno strumento efficace per trasportare informazioni di segnalazione su reti IP;
- RSVP (Resource Reservation Protocol): mantiene viva la robustezza delle reti prive di connessione.