

## Settimana 1 Esercizio 5

Petronaci Diego

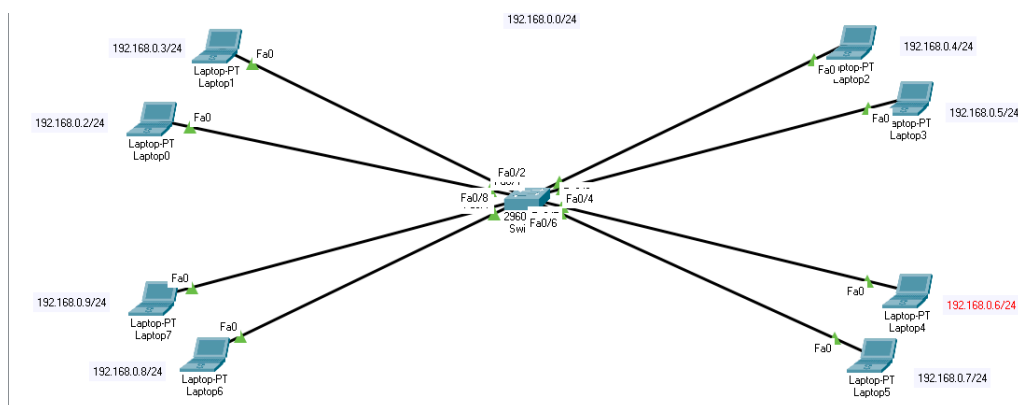
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Inizio questo progetto iniziando a creare una struttura con uno switch al centro e 8 dispositivi intorno, assegno a ogni dispositivo un indirizzo ip seguendo la rete network scelta, in questo caso "192.168.0.0/24".

quindi i dispositivi saranno dei valori all'infuori dell' IP Network (192.168.0.0), IP Broadcast (192.168.0.255) e IP Gateway (192.168.0.1), quindi appartenenti all' IP Host che va da 192.168.0.2 a 192.168.0.254.

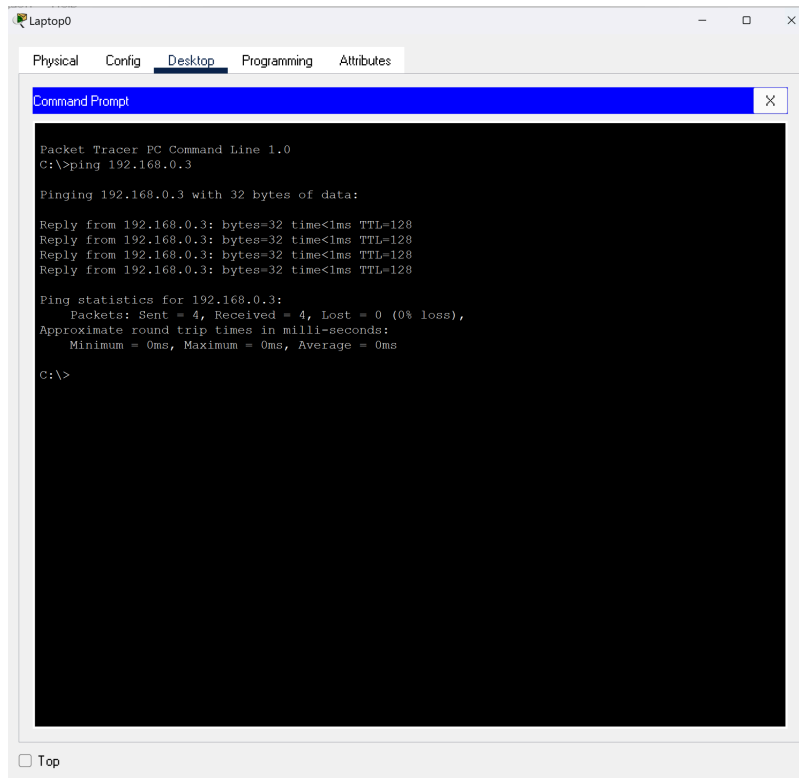
le mie scelte sono state:

- 192.168.0.2
- 192.168.0.3
- 192.168.0.4
- 192.168.0.5
- 192.168.0.6
- 192.168.0.7
- 192.168.0.8
- 192.168.0.9



sono entrato in 192.168.0.2 ed ho usato il comando ping 192.168.0.3 per vedere se intanto riuscivano a comunicare, in questo comando è stato creato il pacchetto ICMP e il protocollo ARP che ha avuto il compito di mandare allo switch, un segnale di richiesta in Broadcast per avere il MAC dei dispositivi mancanti, poi parte una ricerca dello switch (dispositivo livello 2 del modello iso osi ed è un dispositivo intelligente e che serve a mettere in comunicazione diversi dispositivi appartenenti alla stessa IP network) tra i

vari dispositivi che a loro volta manderanno una risposta contenente il MAC del dispositivo ricercato e alla fine mi messaggio può essere mandato con successo.



The screenshot shows a Packet Tracer PC Command Line window for a device named 'Laptop0'. The window has tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes', with 'Desktop' currently selected. Inside the window is a 'Command Prompt' area with a black background and white text. The text shows the execution of the command 'C:\>ping 192.168.0.3'. The output indicates a successful ping to 192.168.0.3 with 32 bytes of data. Four replies are shown, each with a time of less than 1ms and a TTL of 128. Ping statistics for 192.168.0.3 show 4 packets sent, 4 received, and 0% loss. The approximate round trip times are all 0ms. The prompt 'C:\>' is visible at the bottom of the command prompt area.

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.3

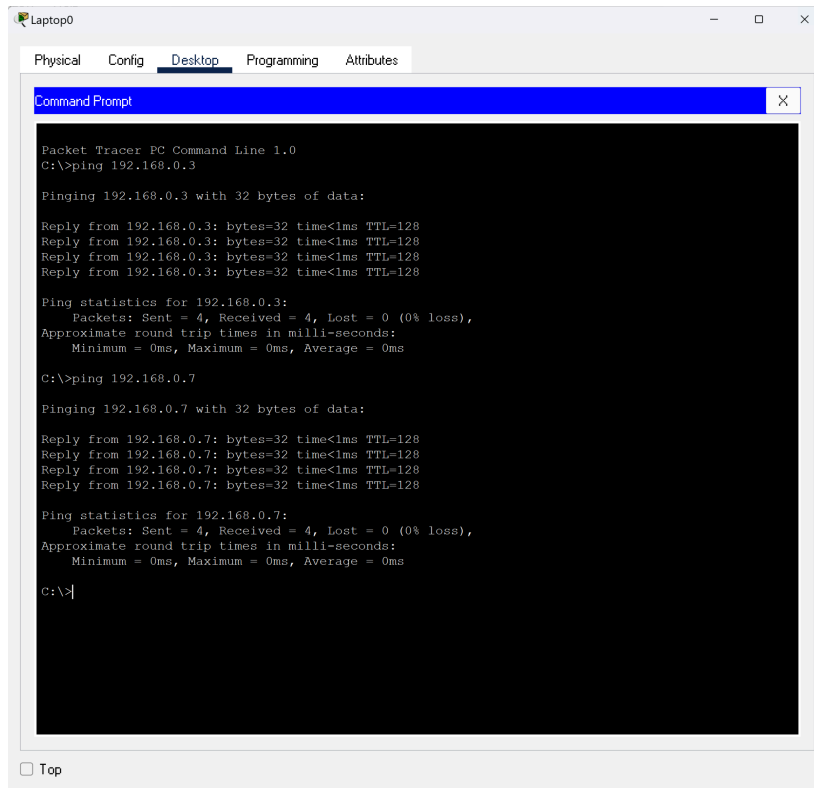
Pinging 192.168.0.3 with 32 bytes of data:

Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

questa volta ho provato a comunicare con 192.168.0.7 che al momento era ancora nella VLAN di default (1) il quale ha risposto positivamente.



The screenshot shows a 'Laptop0' window with tabs for Physical, Config, Desktop, Programming, and Attributes. The 'Desktop' tab is active, displaying a 'Command Prompt' window. The command prompt shows the execution of two ping commands. The first command is 'C:\>ping 192.168.0.3', which results in four successful replies from 192.168.0.3 with 32 bytes of data, a TTL of 128, and 0ms round trip times. The second command is 'C:\>ping 192.168.0.7', which also results in four successful replies from 192.168.0.7 with 32 bytes of data, a TTL of 128, and 0ms round trip times. The command prompt ends with 'C:\>|'.

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.3

Pinging 192.168.0.3 with 32 bytes of data:

Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.0.7

Pinging 192.168.0.7 with 32 bytes of data:

Reply from 192.168.0.7: bytes=32 time<1ms TTL=128
Reply from 192.168.0.7: bytes=32 time<1ms TTL=128
Reply from 192.168.0.7: bytes=32 time<1ms TTL=128
Reply from 192.168.0.7: bytes=32 time<1ms TTL=128

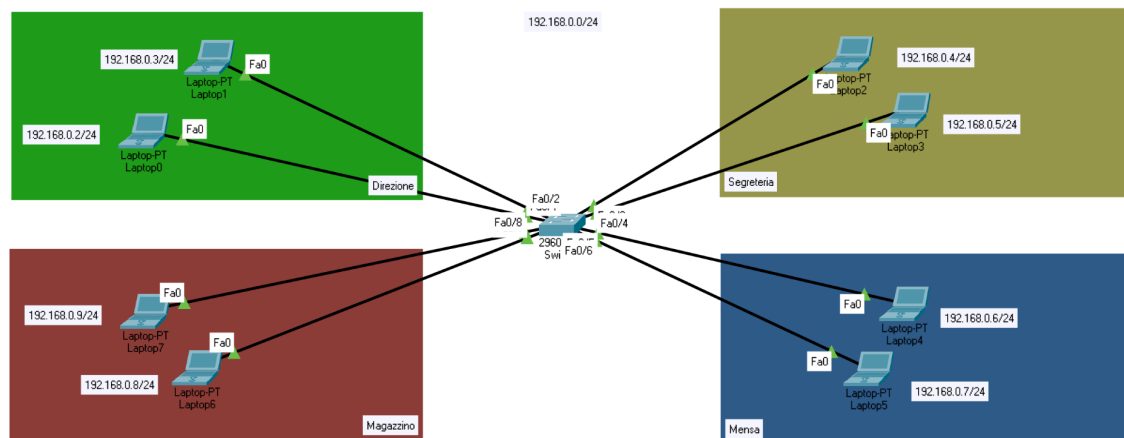
Ping statistics for 192.168.0.7:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```

una volta accertato tutto il funzionamento tra i dispositivi ho creato le 4 VLAN dividendo in:

- 5 Direzione
- 10 Segreteria
- 15 Mensa
- 20 Magazzino

sono entrato nelle impostazioni dello switch e ho configurato le porte collegate ai dispositivi in modo da popolare le 4 VLAN, assegnando a ognuna 2 dispositivi.



Infine ho provato a comunicare di nuovo partendo dal PC0 “192.168.0.2” appartenente alla VLAN 5 Direttore, con il PC5 “192.168.0.7” appartenente alla VLAN 15 Mensa e proprio come richiesto non è avvenuto nessun feedback e non c’è stata alcuna comunicazione perchè bloccata dalle VLAN.

```

Laptop0
Physical Config Desktop Programming Attributes
Command Prompt

Pinging 192.168.0.3 with 32 bytes of data:
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.0.7

Pinging 192.168.0.7 with 32 bytes of data:
Reply from 192.168.0.7: bytes=32 time<1ms TTL=128
Reply from 192.168.0.7: bytes=32 time<1ms TTL=128
Reply from 192.168.0.7: bytes=32 time<1ms TTL=128
Reply from 192.168.0.7: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.7:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.0.7

Pinging 192.168.0.7 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.0.7:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>

```

Ringrazio per l'attenzione.