

## Esercitazione S1/L5

Fig1

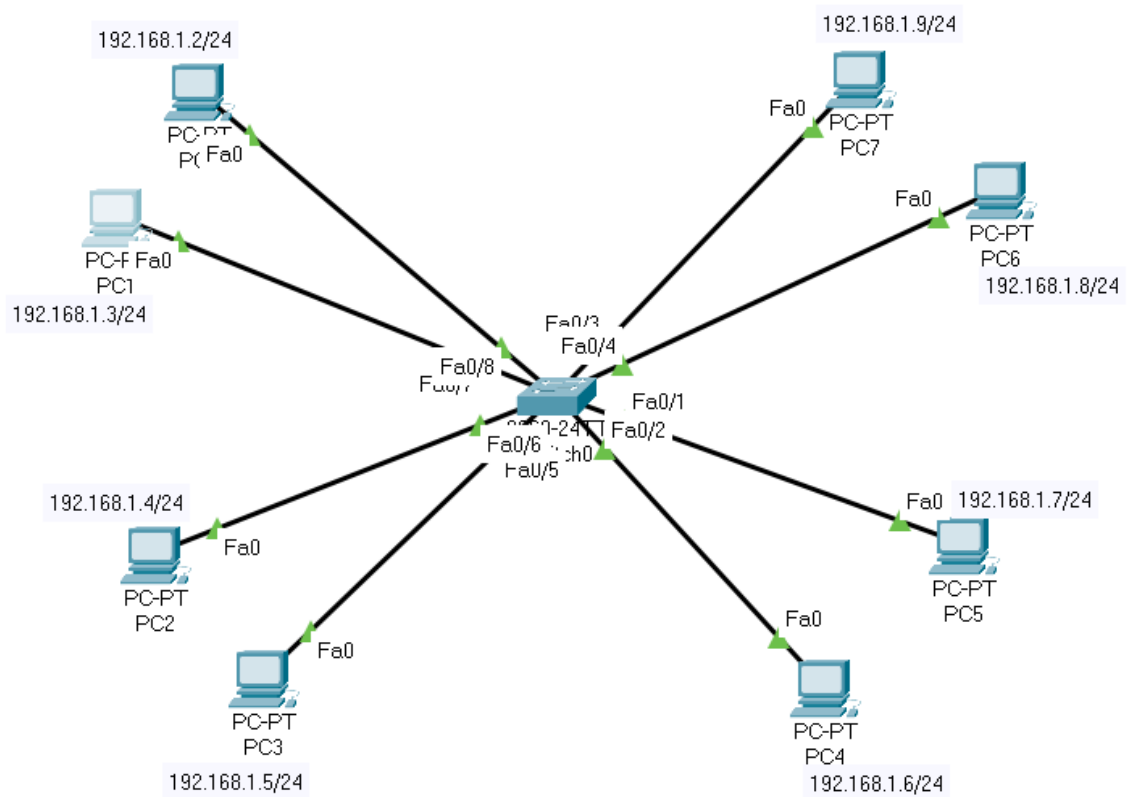
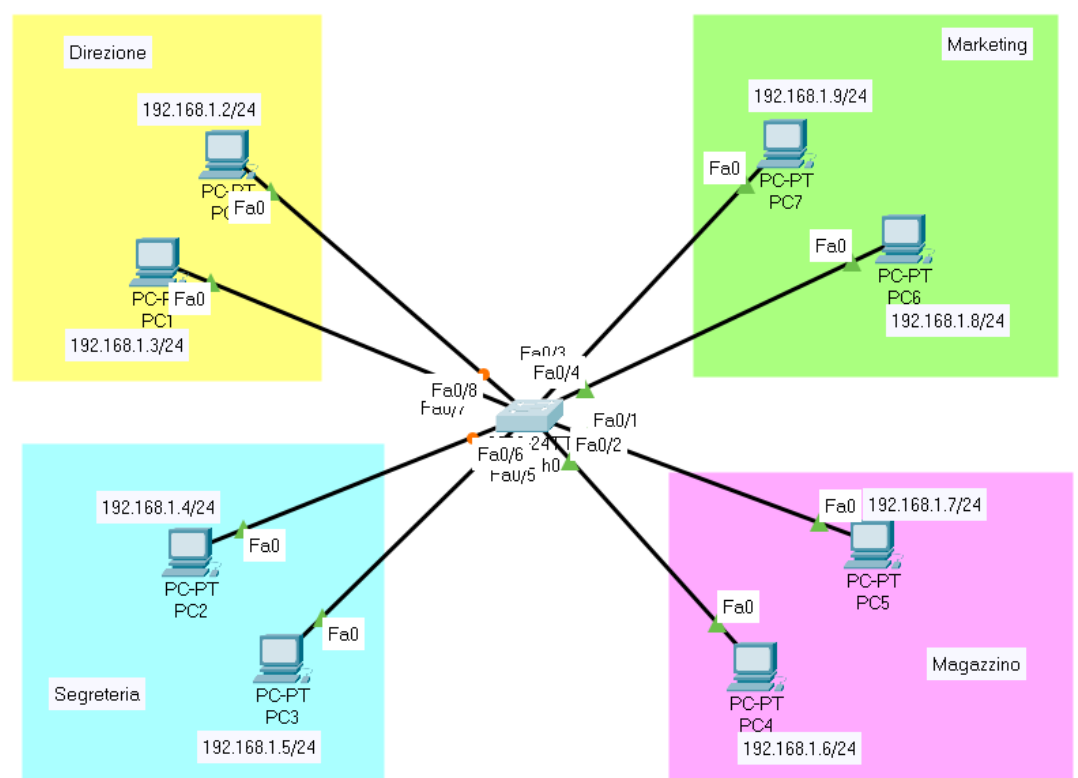
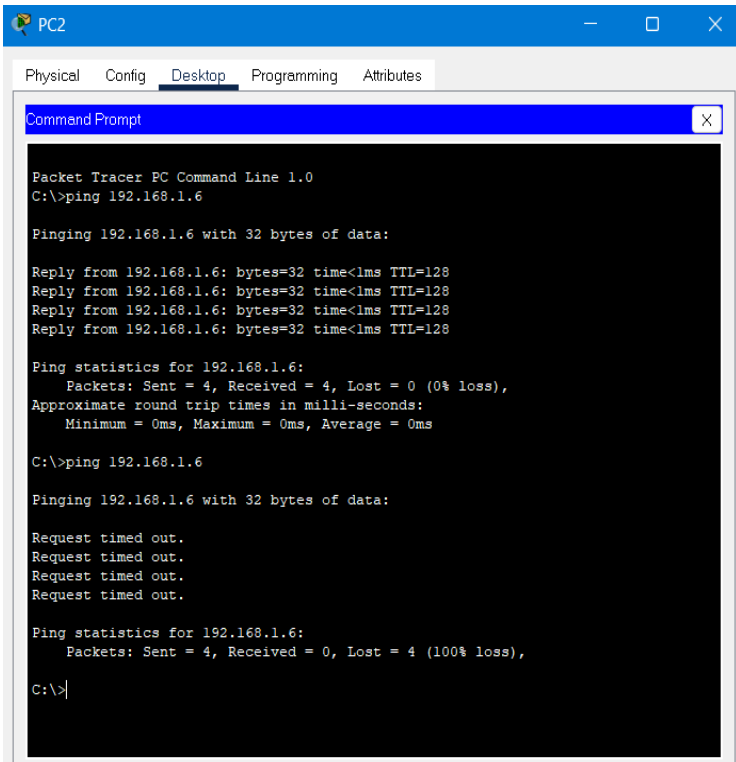


Fig2





PC2

Physical Config Desktop Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.6

Pinging 192.168.1.6 with 32 bytes of data:

Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.1.6

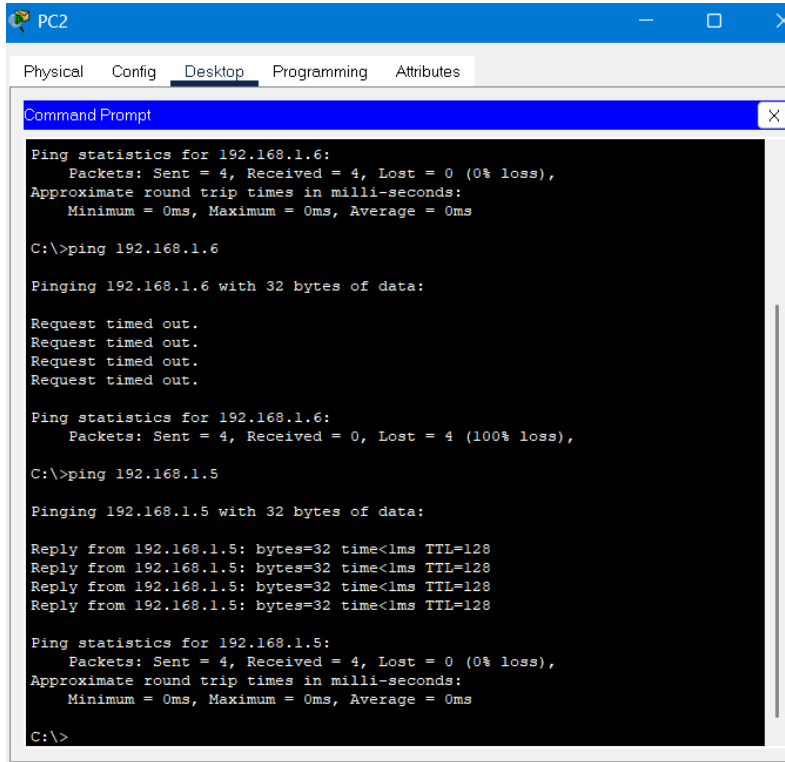
Pinging 192.168.1.6 with 32 bytes of data:

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

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

Fig3



PC2

Physical Config Desktop Programming Attributes

Command Prompt

```
Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.1.6

Pinging 192.168.1.6 with 32 bytes of data:

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

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 192.168.1.5

Pinging 192.168.1.5 with 32 bytes of data:

Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Fig4

In questa esercitazione ho simulato una rete aziendale con più host e 1 switch. Inizialmente gli host erano tutti in comunicazione tra loro senza limitazioni (Fig1), ho effettuato anche un test per verificare la corretta connessione tra PC2 192.168.1.4/24 e PC4 192.168.1.6/24 (primo ping della Fig3). Poi ho creato 4 VLAN (Virtual local area network) dividendo gli host nei vari reparti (Fig2). Si usa questa tecnica informatica per rendere più sicura la rete, visto che l'IP network è uno solo in questo modo si può evitare la connessione diretta tra host diversi. Ciò ci permette di garantire maggiore sicurezza, ad esempio un eventuale malware non si trasferisce in tutta la rete ma solo negli host collegati al dispositivo "infettato". Ho verificato la corretta creazione della VLAN riprendendo come esempio PC2 e PC4 sempre eseguendo il comando "ping" (secondo ping della Fig3) e concluso poi il test verificando la connessione all'interno della stessa VLAN tra PC2 e PC3 192.168.1.5/24 (Fig 4). Le operazioni hanno avuto tutte esito positivo, ritengo conclusa quindi l'esercitazione.