

ESERCIZIO N°2

Creare una rete composta dalle seguenti postazioni

PC_Andrea 10.0.1.20

PC_Claudia 10.0.1.22

PC_Marina 10.0.1.24

connesse attraverso uno switch01.

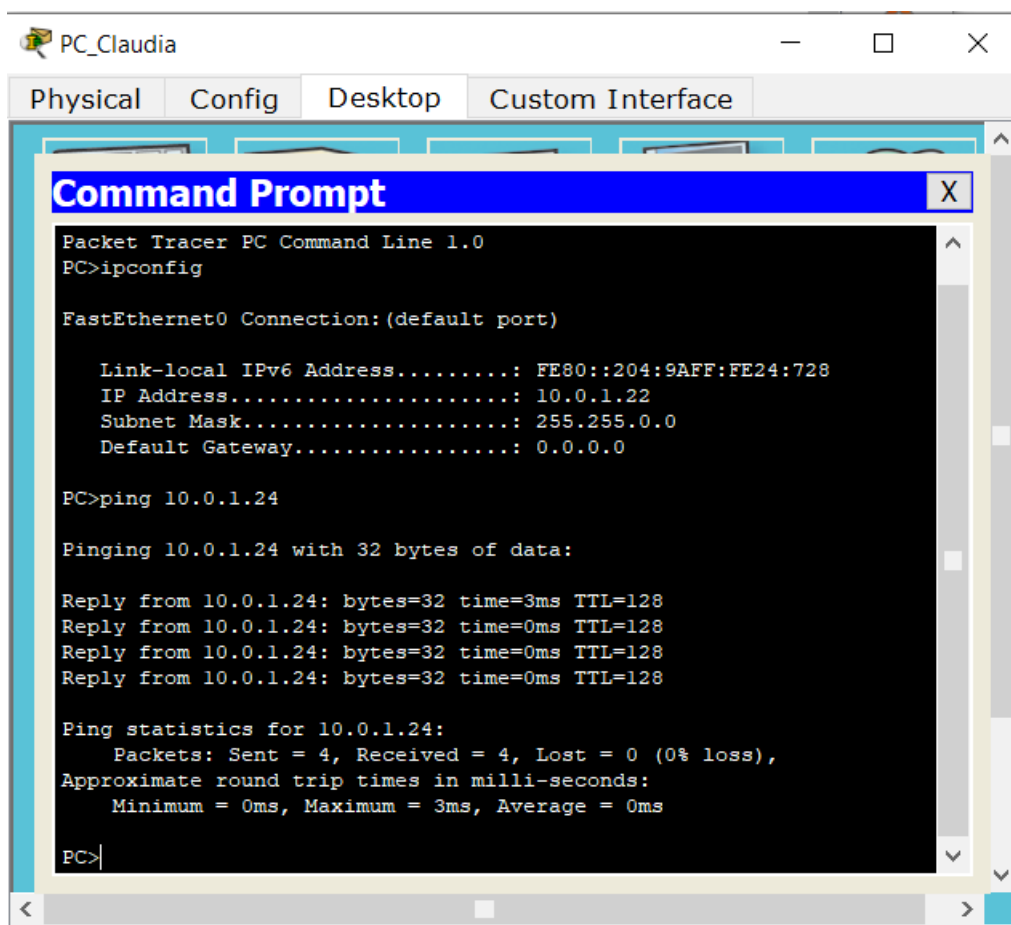
La SubnetMask è 255.255.0.0

1. Effettuare ping/invio pacchetto tra PC_Claudia e PC_Marina, segnalare il risultato nel documento
2. Effettuare ping/invio pacchetto tra PC_Andrea e PC_Claudia, segnalare il risultato nel documento.
3. Scrivere sul progetto quante sono le sottoreti e di host che si possono rappresentare con questa configurazione.

PUNTO 1

Ping tra PC_Claudia e PC_Marina

Risultato sul prompt dei comandi



```
PC_Claudia
Physical Config Desktop Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ipconfig

FastEthernet0 Connection:(default port)

    Link-local IPv6 Address.....: FE80::204:9AFF:FE24:728
    IP Address.....: 10.0.1.22
    Subnet Mask.....: 255.255.0.0
    Default Gateway.....: 0.0.0.0

PC>ping 10.0.1.24

Pinging 10.0.1.24 with 32 bytes of data:

Reply from 10.0.1.24: bytes=32 time=3ms TTL=128
Reply from 10.0.1.24: bytes=32 time=0ms TTL=128
Reply from 10.0.1.24: bytes=32 time=0ms TTL=128
Reply from 10.0.1.24: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.1.24:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 0ms

PC>
```

Risultato mostrato per ogni passaggio

Il pacchetto parte dal PC_Claudia come richiesto

The image displays a network simulation interface. On the left, a network diagram shows three PC-PT nodes (PC_Andrea, PC_Claudia, PC_Marina) connected to a central Switch01. PC_Claudia is highlighted with a green checkmark. On the right, the 'Simulation Panel' is open, showing an 'Event List' with one entry: a packet captured at 0.000 seconds from PC_Claudia to PC_Marina via ICMP. The panel also includes 'Reset Simulation', 'Constant Delay' checkbox, 'Captured to: 0.000 s', 'Play Controls' (Back, Auto Capture / Play, Capture / Forward), and 'Event List Filters - Visible Events' (ICMP, Edit Filters, Show All/None). At the bottom, a toolbar contains various simulation controls, and a table shows the current event details.

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	In Progress	PC_Cl...	PC_Marina	ICMP		0.000	N	0	(edit)	(delete)

Dopodiché il pacchetto arriva allo switch01

The network diagram shows a central switch labeled 'Switch01' connected to three PCs: 'PC-PT PC_Andrea', 'PC-PT PC_Claudia', and 'PC-PT PC_Marina'. A red dashed line indicates the path of a packet arriving at Switch01 from PC_Claudia.

The Simulation Panel on the right displays the Event List with the following data:

Vis.	Time(sec)	Last Devi	At Devi	Type	Info
	150.070	--	PC_Cl...	ICMP	
	150.071	PC_Cla...	Switch...	ICMP	

Below the Event List, the 'Reset Simulation' button is visible, and the 'Constant Delay' checkbox is checked. The 'Captured to:' field shows '150.071 s'.

The Play Controls section includes buttons for 'Back', 'Auto Capture / Play', and 'Capture / Forward'.

The Event List Filters - Visible Events section shows 'ICMP' selected, with buttons for 'Edit Filters' and 'Show All/None'.

The bottom status bar shows 'Scenario 0' and a table of events:

Fire	Last Status	Source	Destination	Type	Color	Time(se	Periodic	Num	Edit	Delete
	Successful	PC_Cl...	PC_Marina	ICMP		300.289	N	0	(edit)	(delete)
	In Progress	PC_Cl...	PC_Marina	ICMP		150.070	N	1	(edit)	(delete)

Poi dallo switch01 viene distribuito agli altri computer tranne a quello da cui è partito

The network diagram shows the same setup as before, but now red dashed lines indicate the packet being distributed from Switch01 to PC_Andrea and PC_Marina. PC_Claudia is no longer the source of the packet.

The Simulation Panel on the right displays the Event List with the following data:

Vis.	Time(sec)	Last Devi	At Devi	Type	Info
	0.000	--	PC_Cl...	ICMP	
	0.001	PC_Cla...	Switch...	ICMP	
	0.002	Switch01	PC_An...	ICMP	
	0.002	Switch01	PC_M...	ICMP	

Below the Event List, the 'Reset Simulation' button is visible, and the 'Constant Delay' checkbox is checked. The 'Captured to:' field shows '0.002 s'.

The Play Controls section includes buttons for 'Back', 'Auto Capture / Play', and 'Capture / Forward'.

The Event List Filters - Visible Events section shows 'ICMP' selected, with buttons for 'Edit Filters' and 'Show All/None'.

The bottom status bar shows 'Scenario 0' and a table of events:

Fire	Last Status	Source	Destination	Type	Color	Time(se	Periodic	Num	Edit	Delete
	In Progress	PC_Cl...	PC_Marina	ICMP		0.000	N	0	(edit)	(delete)

Viene poi ritrasmesso dal PC_Marina allo switch01

The network diagram shows a central switch labeled 'Switch01' connected to three PCs: 'PC-PT PC_Andrea', 'PC-PT PC_Claudia', and 'PC-PT PC_Marina'. The simulation panel on the right displays the 'Event List' with the following data:

Vis.	Time(sec)	Last Devi	At Devi	Type	Info
	0.000	--	PC_Cl...	ICMP	
	0.001	PC_Cla...	Switch...	ICMP	
	0.002	Switch01	PC_An...	ICMP	
	0.002	Switch01	PC_M...	ICMP	
✓	0.003	PC_Mar...	Switch...	ICMP	

Below the event list, the 'Play Controls' section shows 'Auto Capture / Play' selected. The 'Event List Filters - Visible Events' section shows 'ICMP' selected. The bottom status bar indicates 'Simulation' is running.

Infine giunge di nuovo a destinazione al PC_Claudia

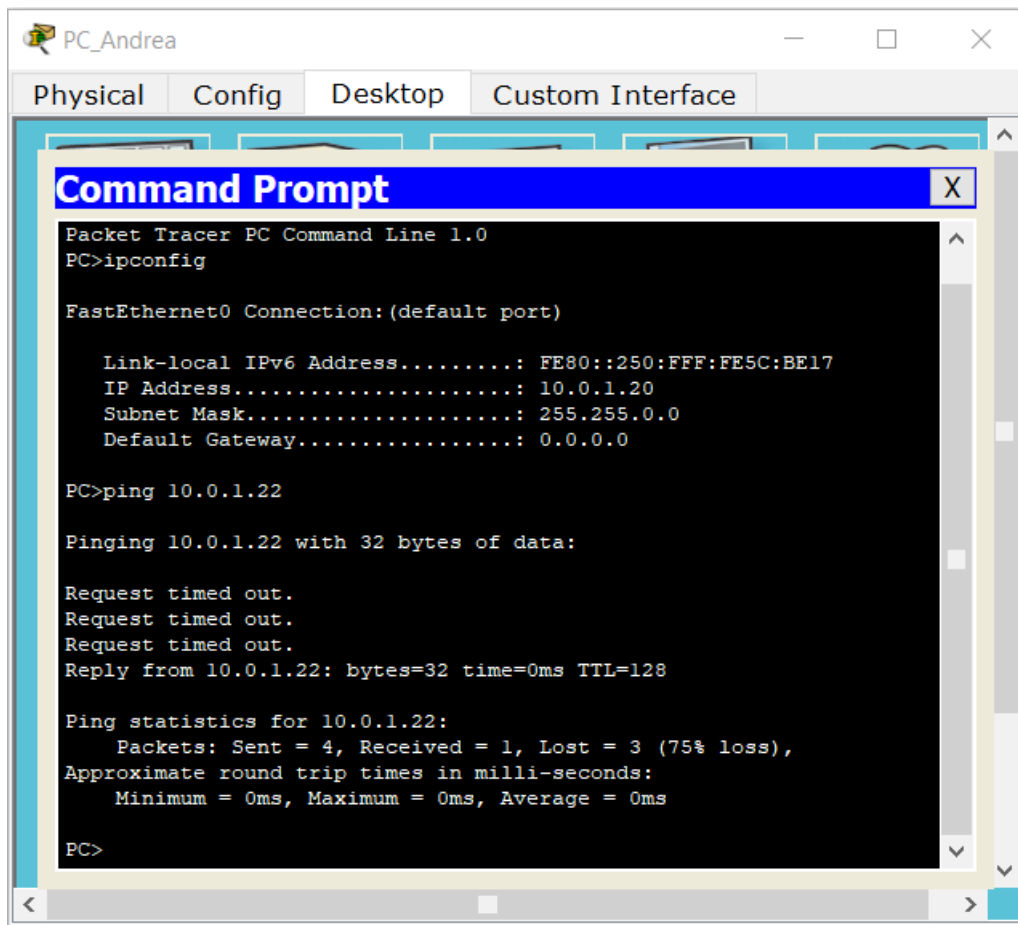
The network diagram is identical to the previous one. The simulation panel on the right shows the 'Event List' with an additional entry:

Vis.	Time(sec)	Last Devi	At Devi	Type	Info
	0.000	--	PC_Cl...	ICMP	
	0.001	PC_Cla...	Switch...	ICMP	
	0.002	Switch01	PC_An...	ICMP	
	0.002	Switch01	PC_M...	ICMP	
	0.003	PC_Mar...	Switch...	ICMP	
✓	0.004	Switch01	PC_Cl...	ICMP	

The 'Play Controls' section remains the same. The 'Event List Filters - Visible Events' section shows 'ICMP' selected. The bottom status bar indicates 'Simulation' is running.

PUNTO 2

Ping tra PC_Andrea e PC_Claudia
Risultato sul prompt dei comandi



```
PC_Andrea
Physical Config Desktop Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ipconfig

FastEthernet0 Connection:(default port)

    Link-local IPv6 Address.....: FE80::250:FFF:FE5C:BE17
    IP Address.....: 10.0.1.20
    Subnet Mask.....: 255.255.0.0
    Default Gateway.....: 0.0.0.0

PC>ping 10.0.1.22

Pinging 10.0.1.22 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Reply from 10.0.1.22: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.1.22:
    Packets: Sent = 4, Received = 1, Lost = 3 (75% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>
```

Risultato mostrato per ogni passaggio

Il pacchetto parte dal PC_Andrea come richiesto

The screenshot shows a network simulation environment. A central switch, labeled 'Switch01', is connected to three PCs: 'PC-PT PC_Andrea', 'PC-PT PC_Claudia', and 'PC-PT PC_Marina'. The 'Simulation Panel' on the right displays the 'Event List' with the following data:

Vis.	Time(sec)	Last Devi	At Devi	Type	Info
	0.000	--	PC_An...	ICMP	
	0.001	PC_And...	Switch...	ICMP	

Below the event list, the 'Play Controls' section includes buttons for 'Back', 'Auto Capture / Play', and 'Capture / Forward'. The 'Event List Filters - Visible Events' section shows 'ICMP' as the selected filter. The bottom status bar indicates the simulation time as 0:07:18.890 and shows the 'PLAY CONTROLS' section with buttons for 'Back', 'Auto Capture / Play', and 'Capture / Forward'.

il pacchetto passa allo switch che a sua volta lo invia a tutti i componenti a lui collegati

This screenshot shows the same network simulation environment as the previous one, but at a later point in time. The 'Simulation Panel' on the right displays the 'Event List' with the following data:

Vis.	Time(sec)	Last Devi	At Devi	Type	Info
	0.000	--	PC_An...	ICMP	
	0.001	PC_And...	Switch...	ICMP	
	0.002	Switch01	PC_Cl...	ICMP	
	0.002	Switch01	PC_M...	ICMP	
	0.003	PC_Cla...	Switch...	ICMP	
	0.004	Switch01	PC_An...	ICMP	

The 'Play Controls' section remains the same. The 'Event List Filters - Visible Events' section shows 'ICMP' as the selected filter. The bottom status bar indicates the simulation time as 0:48.896 and shows the 'PLAY CONTROLS' section with buttons for 'Back', 'Auto Capture / Play', and 'Capture / Forward'.

