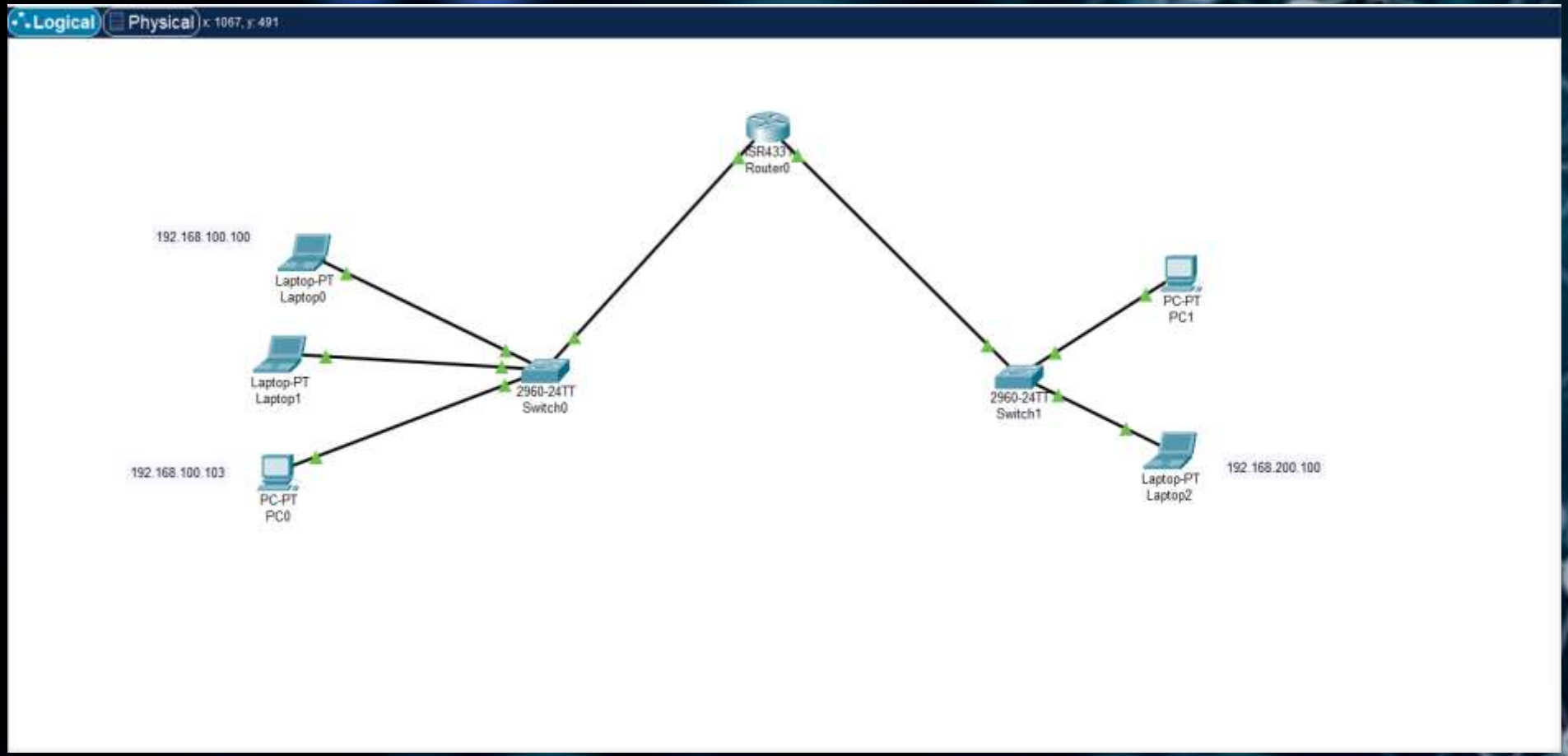
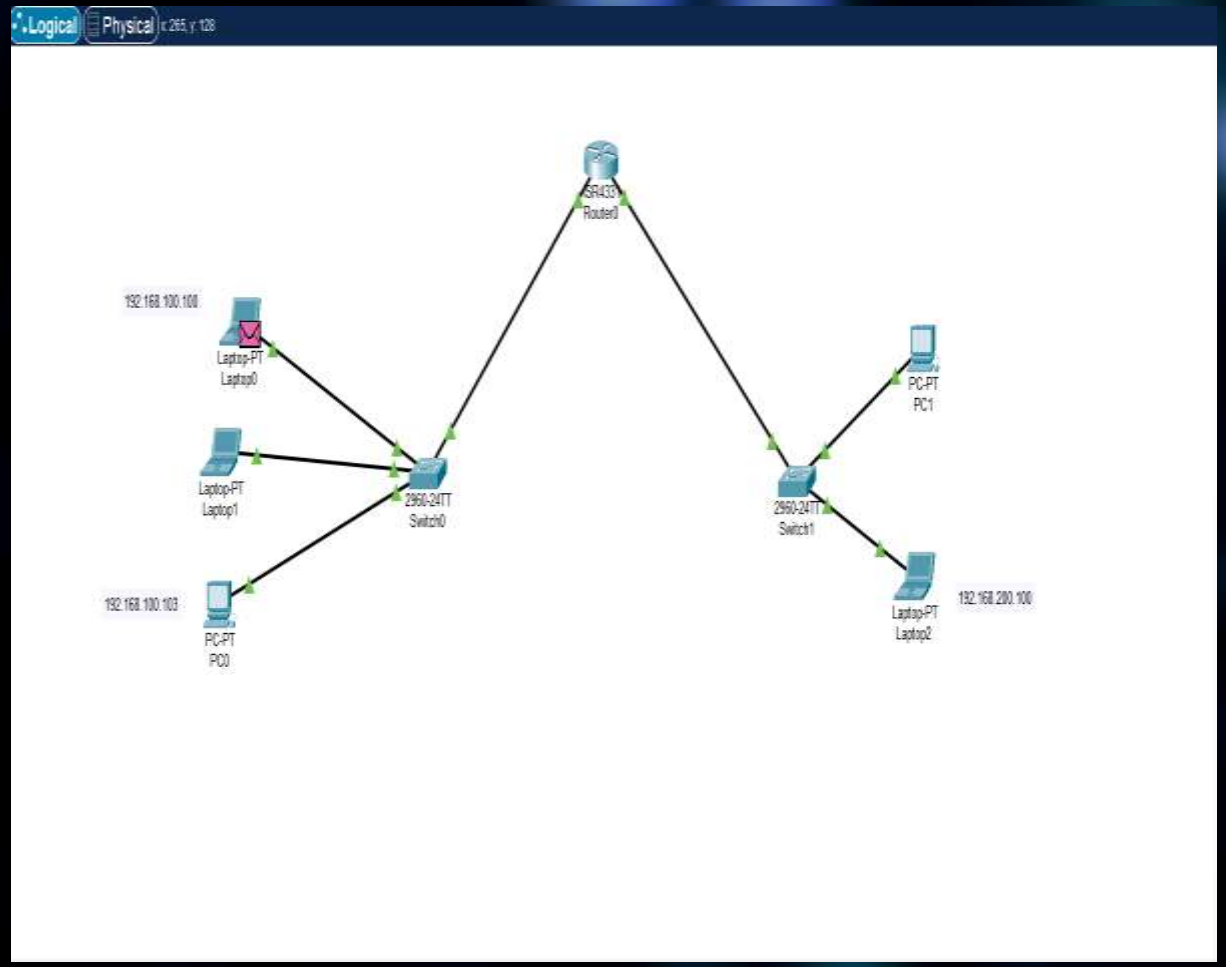
Creazione ed analisi di una rete di calcolatori

Funzionamento livello 2 e 3 del modello ISO/OSI

ARCHITETTURA



INVIO DEL PACCHETTO DA LAPTOP – PT0



PDU Information at Device: Laptop0

OSI Model | Outbound PDU Details

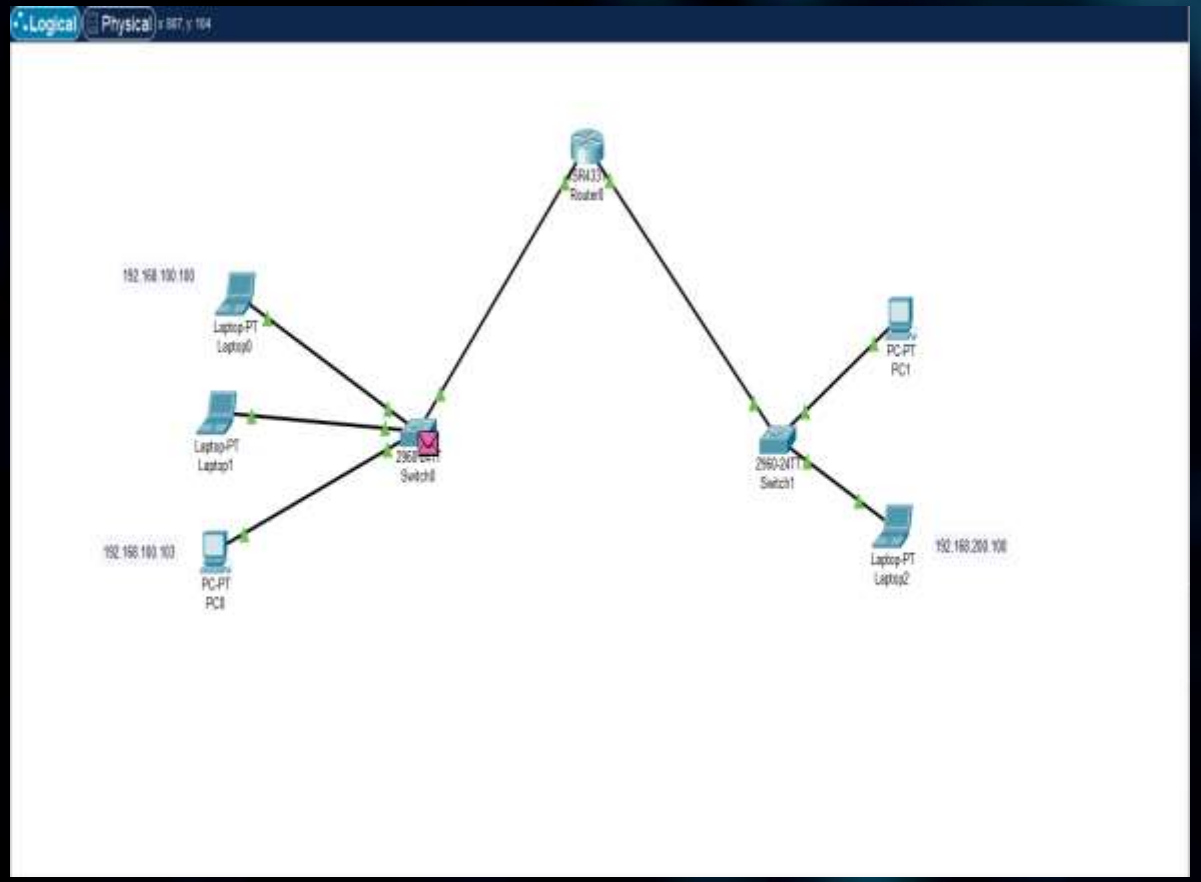
At Device: Laptop0
Source: Laptop0
Destination: Laptop2

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 0001.C7A2.34EC >> 0009.7CC0.E401
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.

Challenge Me | << Previous Layer | Next Layer >>

INVIO DEL PACCHETTO DA LAPTOP – PT0 A SWITCH LAN 1



PDU Information at Device: Switch0

OSI Model | Inbound PDU Details | Outbound PDU Details

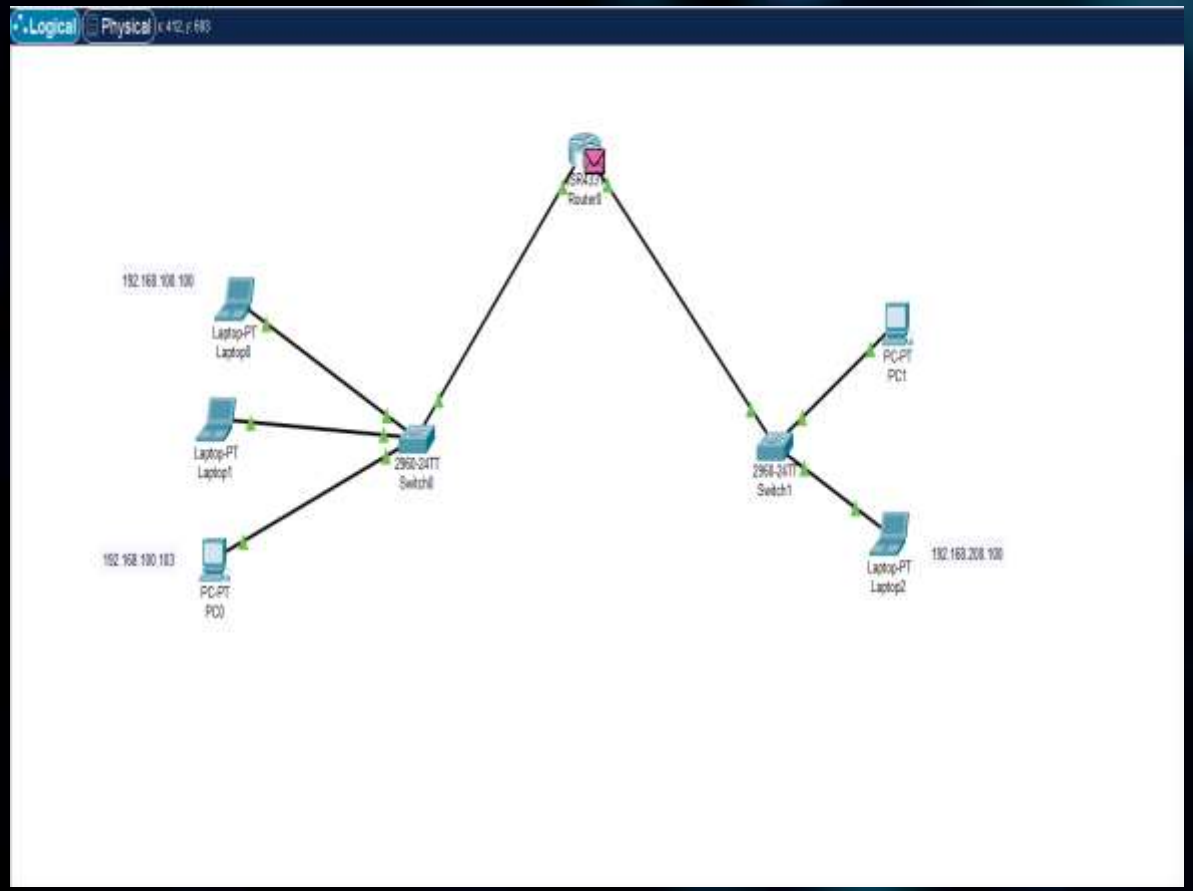
At Device: Switch0
Source: Laptop0
Destination: Laptop2

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer3	Layer3
Layer 2: Ethernet II Header 0001.C7A2.34EC >> 0009.7CC0.E401	Layer 2: Ethernet II Header 0001.C7A2.34EC >> 0009.7CC0.E401
Layer 1: Port FastEthernet0/2	Layer 1: Port(s): FastEthernet0/1

1. FastEthernet0/2 receives the frame.

Challenge Me | << Previous Layer | Next Layer >>

INVIO DEL PACCHETTO DA SWITCH LAN 1 A ROUTER



PDU Information at Device: Router0

OSI Model | Inbound PDU Details | Outbound PDU Details

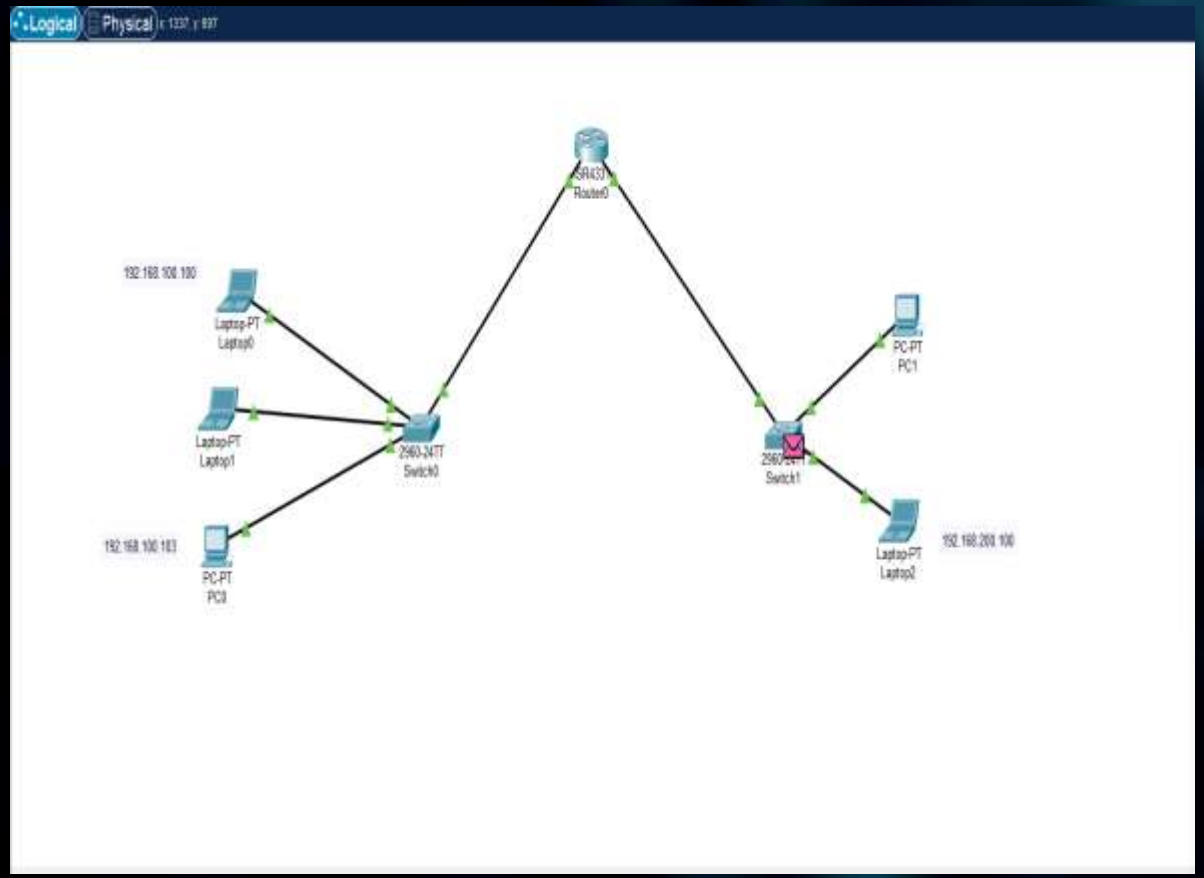
At Device: Router0
Source: Laptop0
Destination: Laptop2

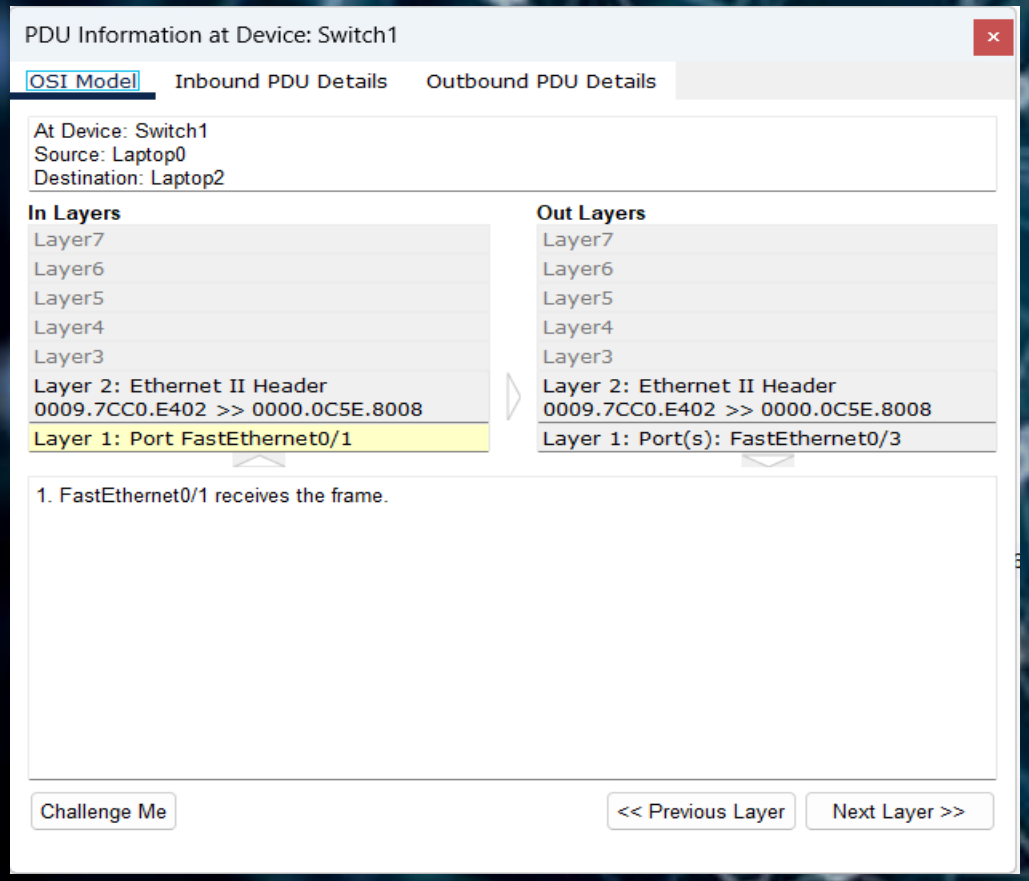
In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer 3: IP Header Src. IP: 192.168.100.100, Dest. IP: 192.168.200.100 ICMP Message Type: 8	Layer 3: IP Header Src. IP: 192.168.100.100, Dest. IP: 192.168.200.100 ICMP Message Type: 8
Layer 2: Ethernet II Header 0001.C7A2.34EC >> 0009.7CC0.E401	Layer 2: Ethernet II Header 0009.7CC0.E402 >> 0000.0C5E.8008
Layer 1: Port GigabitEthernet0/0/0	Layer 1: Port(s): GigabitEthernet0/0/1

1. GigabitEthernet0/0/0 receives the frame.

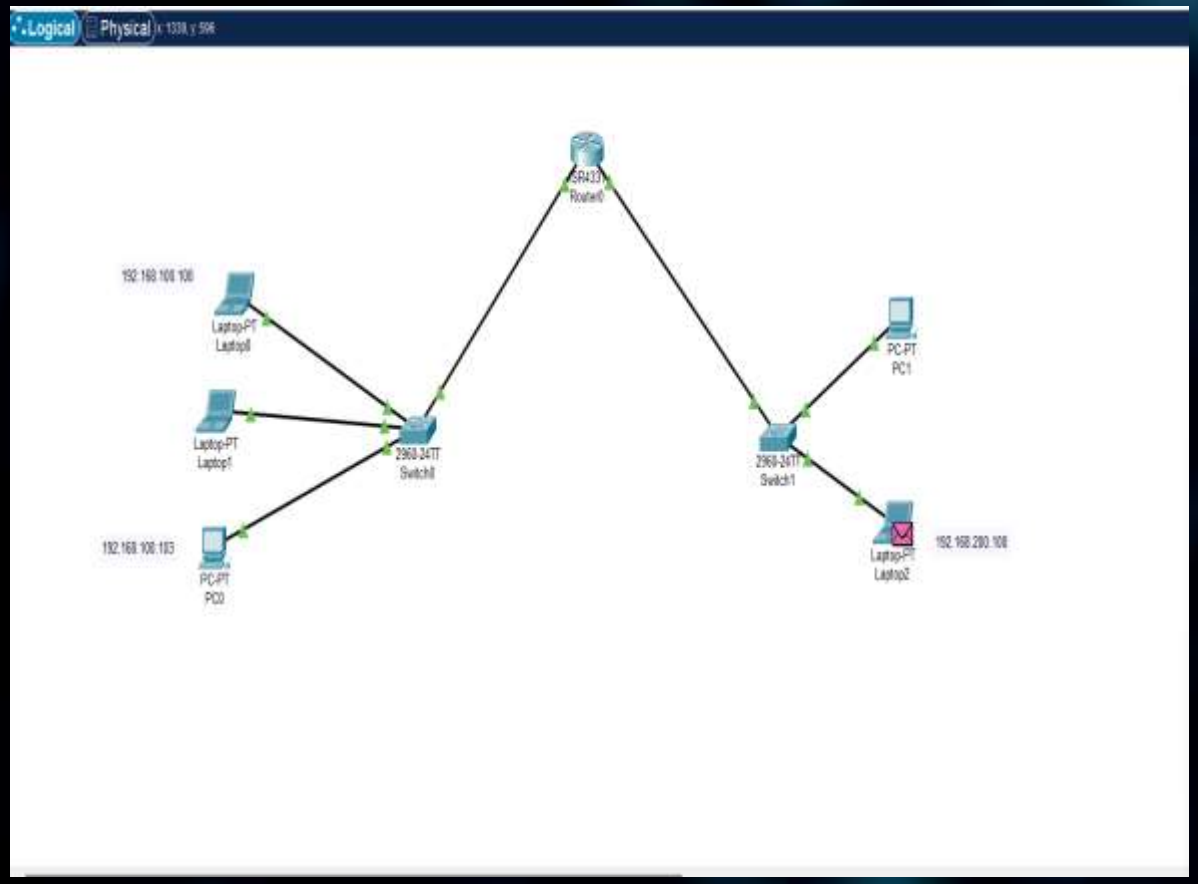
Challenge Me | << Previous Layer | Next Layer >>

INVIO DEL PACCHETTO DA ROUTER A SWITCH LAN 2





INVIO DEL PACCHETTO DA SWITCH LAN 2 A LAPTOP – PT2



PDU Information at Device: Laptop2

OSI Model | Inbound PDU Details | Outbound PDU Details

At Device: Laptop2
Source: Laptop0
Destination: Laptop2

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer 3: IP Header Src. IP: 192.168.100.100, Dest. IP: 192.168.200.100 ICMP Message Type: 8	Layer 3: IP Header Src. IP: 192.168.200.100, Dest. IP: 192.168.100.100 ICMP Message Type: 0
Layer 2: Ethernet II Header 0009.7CC0.E402 >> 0000.0C5E.8008	Layer 2: Ethernet II Header 0000.0C5E. 8008 >> 0009.7CC0.E402
Layer 1: Port FastEthernet0	Layer 1: Port(s): FastEthernet0

1. The frame's destination MAC address matches the receiving port's MAC address, the broadcast address, or a multicast address.
2. The device decapsulates the PDU from the Ethernet frame.

Challenge Me | << Previous Layer | Next Layer >>

ESITO INVIO PACCHETTO

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	Laptop0	Laptop2	ICMP		0.000	N	0	(edit)	(delete)