

Network simulation interface showing a central switch (Switch0) connected to three servers (Server-PT, Server0, Server1) and two PCs (PC1, PC2). The interface includes configuration windows for each device, a packet capture window, and a status panel.

Configuration Windows:

- PC1 Configuration:**
 - Interface: FastEthernet0
 - IP Configuration: DHCP (selected), Static (disabled). DHCP request successful.
 - IPv4 Address: 192.168.1.3
 - Subnet Mask: 255.255.255.0
 - Default Gateway: 0.0.0.0
 - DNS Server: 0.0.0.0
 - IPv6 Configuration: Automatic (selected), Static (disabled).
 - IPv6 Address: FE80::202:17FF:FE5D:E18D
 - Link Local Address: FE80::202:17FF:FE5D:E18D
 - Default Gateway: FE80::202:17FF:FE5D:E18D
 - DNS Server: FE80::202:17FF:FE5D:E18D
 - 802.1X: Use 802.1X Security (disabled), Authentication: RADIUS, Username: (empty).
- Server0 Configuration:**
 - Interface: FastEthernet0
 - IP Configuration: DHCP (disabled), Static (selected).
 - IPv4 Address: 192.168.1.1
 - Subnet Mask: 255.255.255.0
 - Default Gateway: (empty)
 - DNS Server: (empty)
 - IPv6 Configuration: Automatic (disabled), Static (selected).
 - IPv6 Address: FE80::202:17FF:FE5D:E18D
 - Link Local Address: FE80::202:17FF:FE5D:E18D
 - Default Gateway: FE80::202:17FF:FE5D:E18D
 - DNS Server: FE80::202:17FF:FE5D:E18D
 - 802.1X: Use 802.1X Security (disabled), Authentication: RADIUS, Username: (empty).
- PC2 Configuration:**
 - Interface: FastEthernet0
 - IP Configuration: DHCP (selected), Static (disabled). DHCP request successful.
 - IPv4 Address: 192.168.1.4
 - Subnet Mask: 255.255.255.0
 - Default Gateway: 0.0.0.0
 - DNS Server: 0.0.0.0
 - IPv6 Configuration: Automatic (selected), Static (disabled).
 - IPv6 Address: FE80::202:17FF:FE5D:E18D
 - Link Local Address: FE80::202:17FF:FE5D:E18D
 - Default Gateway: FE80::202:17FF:FE5D:E18D
 - DNS Server: FE80::202:17FF:FE5D:E18D
 - 802.1X: Use 802.1X Security (disabled), Authentication: RADIUS, Username: (empty).

Packet Capture Window:

Packet 1: Ethernet II, Src: Server0 (192.168.1.1), Dst: Switch0 (192.168.1.2), Type: TCP, Length: 60, Encapsulated: 40 (TCP Reset, Seq=1000000000, Win=0, Len=0).

Status Panel:

Time	Source	Destination	Type	Color	Time(s)	Periodic	Run	End	Delete
0.000	Server0	Switch0	TCP	Red	0.000				
0.000	Switch0	Server0	TCP	Green	0.000				
0.000	Switch0	PC1	TCP	Blue	0.000				
0.000	Switch0	PC2	TCP	Yellow	0.000				

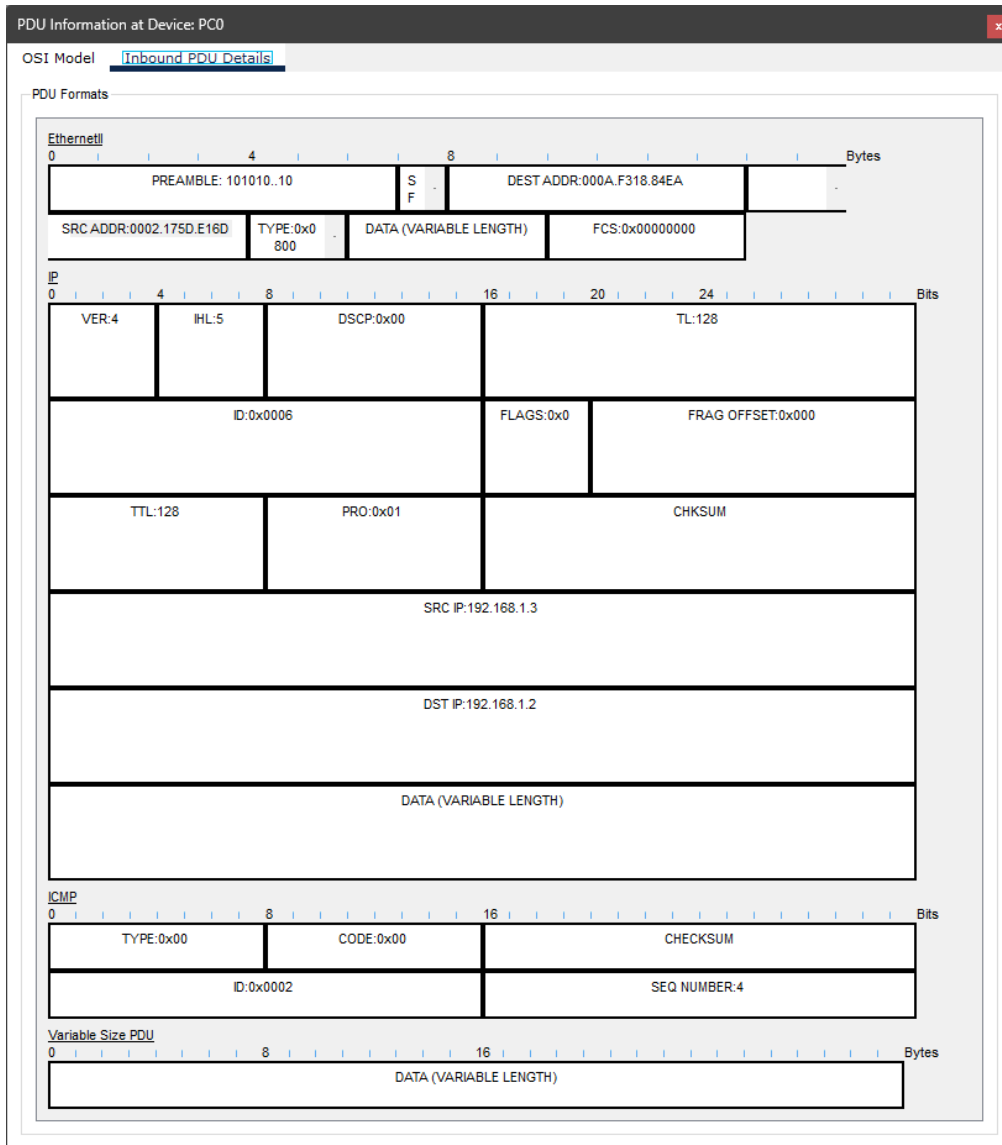
Command Prompt:

```

C:\Users\user>ping 192.168.1.3
Pinging 192.168.1.3 with 32 bytes of data:
Reply from 192.168.1.3: bytes=32 time=1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milliseconds:
        Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\Users\user>ipconfig /all
Interface . . . . . Physical Address . . . . . Type . . . . .
Ethernet0 . . . . . 00:0C:29:15:46:1A . . . . . ethernet
  
```



PC0

Physical Config **Desktop** Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time=9ms TTL=128
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128

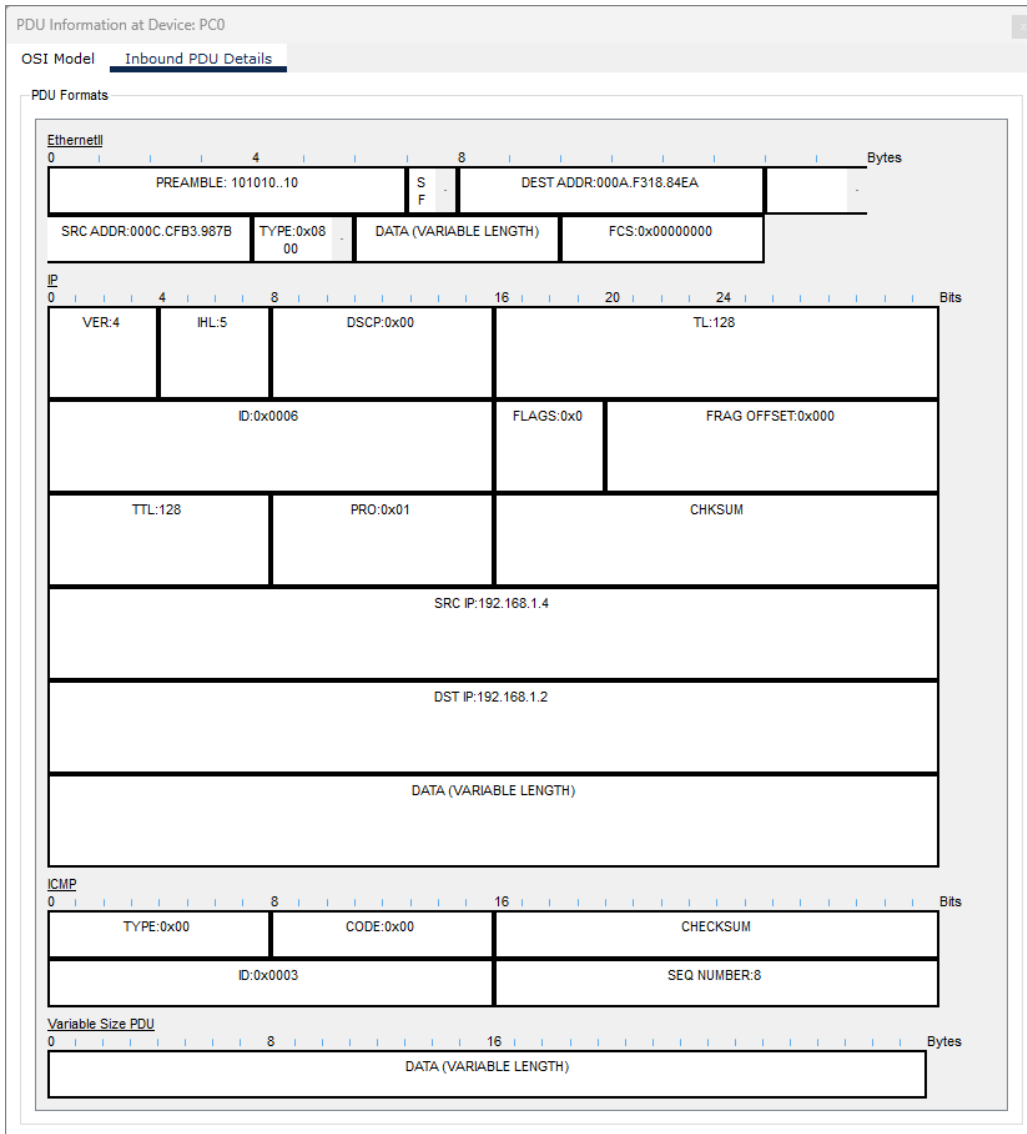
Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 4ms, Maximum = 9ms, Average = 5ms

C:\>arp -a
Internet Address      Physical Address      Type
192.168.1.3           0002.175d.e16d       dynamic

C:\>
```

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Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
Visible	0.000	--	PC0	ARP
Visible	0.000	--	PC0	ICMP
Visible	0.000	--	PC0	ARP
	0.001	PC0	Switch0	ARP
	0.001	--	PC0	ARP
	0.002	PC0	Switch0	ARP
	0.002	Switch0	Server0	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	PC2	ARP
	0.003	Switch0	Server0	ARP
	0.003	Switch0	PC1	ARP
	0.003	Switch0	PC2	ARP
	0.004	PC1	Switch0	ARP
	0.005	Switch0	PC0	ARP
	0.005	--	PC0	ICMP
	0.006	PC0	Switch0	ICMP
	0.007	Switch0	PC1	ICMP
	0.008	PC1	Switch0	ICMP
	0.009	Switch0	PC0	ICMP
	1.012	--	PC0	ICMP
	1.013	PC0	Switch0	ICMP
	1.014	Switch0	PC1	ICMP
	1.015	PC1	Switch0	ICMP
	1.016	Switch0	PC0	ICMP
	2.020	--	PC0	ICMP
	2.021	PC0	Switch0	ICMP
	2.022	Switch0	PC1	ICMP
	2.023	PC1	Switch0	ICMP
	2.024	Switch0	PC0	ICMP
	3.028	--	PC0	ICMP
	3.029	PC0	Switch0	ICMP
	3.030	Switch0	PC1	ICMP
	3.031	PC1	Switch0	ICMP
	3.032	Switch0	PC0	ICMP



PC0

Physical Config **Desktop** Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time=9ms TTL=128
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 4ms, Maximum = 9ms, Average = 5ms

C:\>arp -a
Internet Address      Physical Address      Type
192.168.1.3           0002.175d.e16d        dynamic

C:\>ping 192.168.1.4

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time=8ms TTL=128
Reply from 192.168.1.4: bytes=32 time=4ms TTL=128
Reply from 192.168.1.4: bytes=32 time=4ms TTL=128
Reply from 192.168.1.4: bytes=32 time=4ms TTL=128

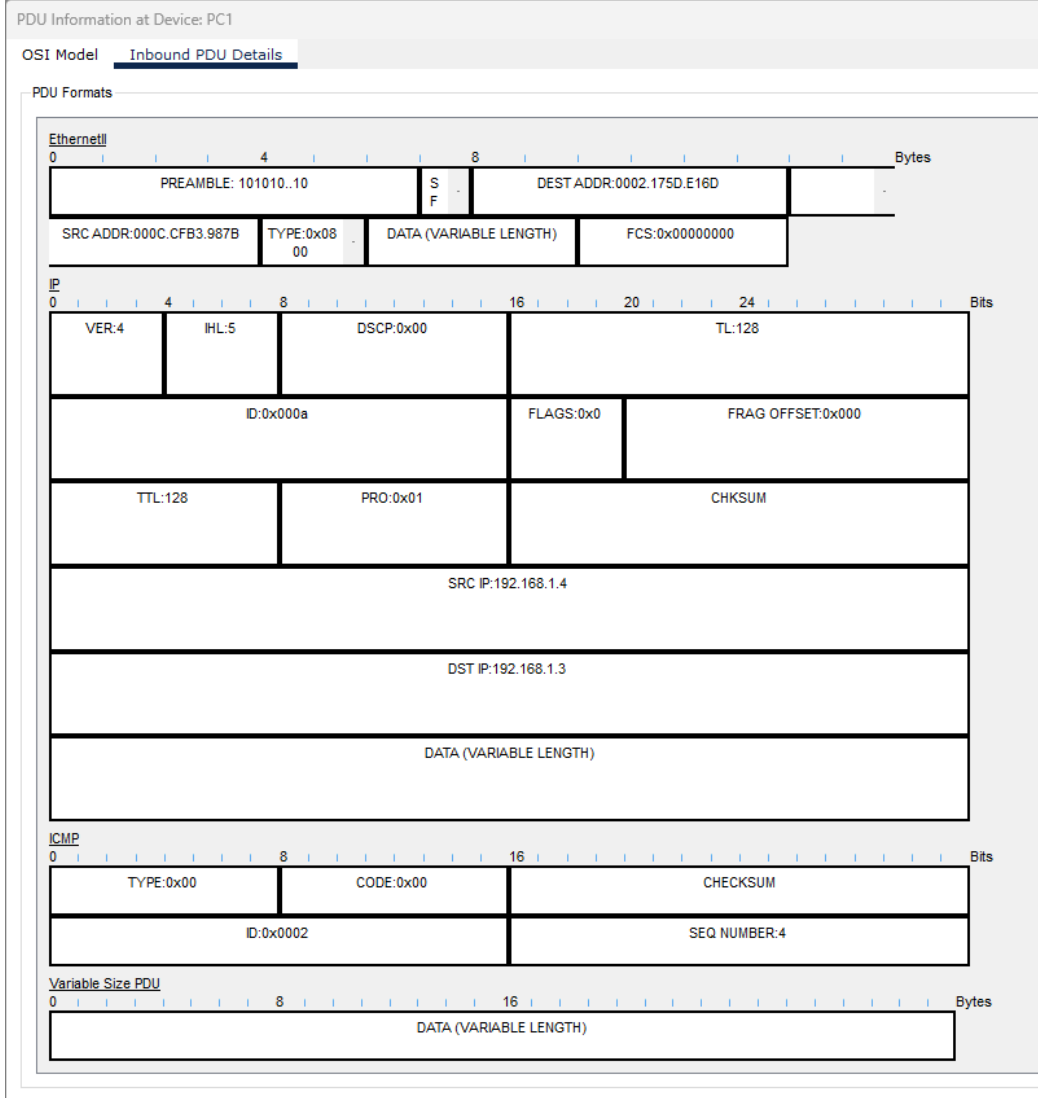
Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 4ms, Maximum = 8ms, Average = 5ms

C:\>arp -a
Internet Address      Physical Address      Type
192.168.1.3           0002.175d.e16d        dynamic
192.168.1.4           000c.cfb3.987b        dynamic

C:\>
```

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Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
Visible	0.000	--	PC0	ICMP
Visible	0.000	--	PC0	ARP
	0.001	PC0	Switch0	ARP
	0.002	Switch0	Server0	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	PC2	ARP
	0.003	PC2	Switch0	ARP
	0.004	Switch0	PC0	ARP
	0.004	--	PC0	ICMP
	0.005	PC0	Switch0	ICMP
	0.006	Switch0	PC2	ICMP
	0.007	PC2	Switch0	ICMP
	0.008	Switch0	PC0	ICMP
	1.011	--	PC0	ICMP
	1.012	PC0	Switch0	ICMP
	1.013	Switch0	PC2	ICMP
	1.014	PC2	Switch0	ICMP
	1.015	Switch0	PC0	ICMP
	2.016	--	PC0	ICMP
	2.017	PC0	Switch0	ICMP
	2.018	Switch0	PC2	ICMP
	2.019	PC2	Switch0	ICMP
	2.020	Switch0	PC0	ICMP
	3.023	--	PC0	ICMP
	3.024	PC0	Switch0	ICMP
	3.025	Switch0	PC2	ICMP
	3.026	PC2	Switch0	ICMP
	3.027	Switch0	PC0	ICMP



PC1

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.4

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time=9ms TTL=128
Reply from 192.168.1.4: bytes=32 time=4ms TTL=128
Reply from 192.168.1.4: bytes=32 time=4ms TTL=128
Reply from 192.168.1.4: bytes=32 time=4ms TTL=128

Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 4ms, Maximum = 9ms, Average = 5ms

C:\>arp -a
Internet Address      Physical Address      Type
192.168.1.4           000c.cfb3.987b        dynamic

C:\>
```

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Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC1	ARP
	0.000	--	PC1	ICMP
	0.000	--	PC1	ARP
	0.001	PC1	Switch0	ARP
	0.001	--	PC1	ARP
	0.002	PC1	Switch0	ARP
	0.002	Switch0	Server0	ARP
	0.002	Switch0	PC0	ARP
	0.002	Switch0	PC2	ARP
	0.003	Switch0	Server0	ARP
	0.003	Switch0	PC0	ARP
	0.003	Switch0	PC2	ARP
	0.004	PC2	Switch0	ARP
	0.005	Switch0	PC1	ARP
	0.005	--	PC1	ICMP
	0.006	PC1	Switch0	ICMP
	0.007	Switch0	PC2	ICMP
	0.008	PC2	Switch0	ICMP
	0.009	Switch0	PC1	ICMP
	1.009	--	PC1	ICMP
	1.010	PC1	Switch0	ICMP
	1.011	Switch0	PC2	ICMP
	1.012	PC2	Switch0	ICMP
	1.013	Switch0	PC1	ICMP
	2.017	--	PC1	ICMP
	2.018	PC1	Switch0	ICMP
	2.019	Switch0	PC2	ICMP
	2.020	PC2	Switch0	ICMP
	2.021	Switch0	PC1	ICMP
	3.022	--	PC1	ICMP
	3.023	PC1	Switch0	ICMP
	3.024	Switch0	PC2	ICMP
	3.025	PC2	Switch0	ICMP
Visible	3.026	Switch0	PC1	ICMP

Conclusión:

En esta actividad de planificación de redes tenemos que simular una red con un servidor y 3 PCs con DHCP y ARP haciendo las debidas pruebas en cada caso ejecutando además la simulación.