

Figura 1: Logo da UFU.

Relatório 11

Redes - Atividade 11

Resposta das questões:

Exercício 1

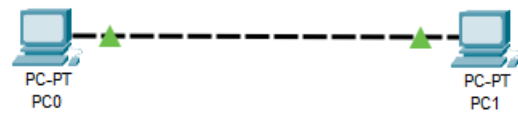


Figura 2:

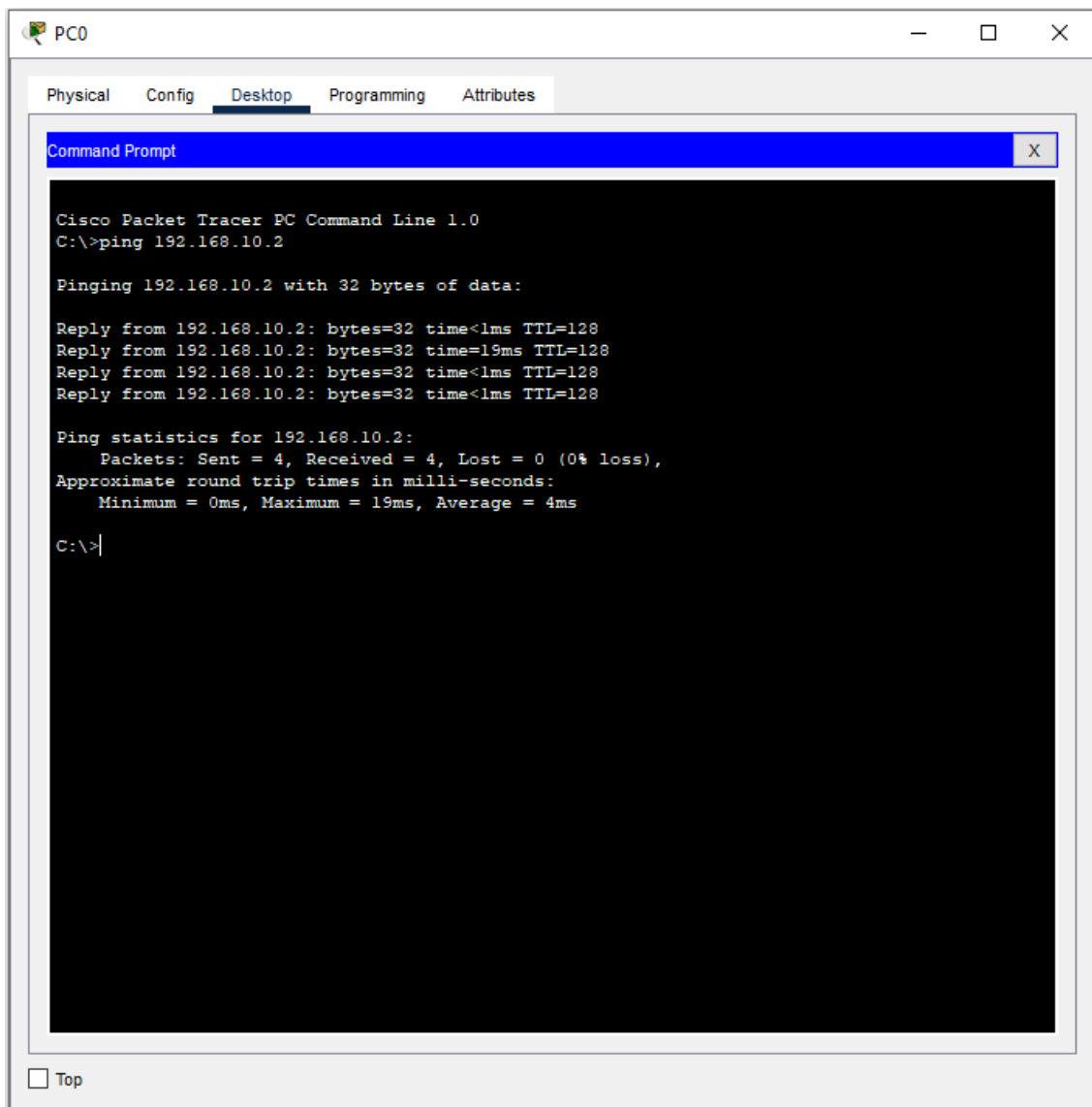


Figura 3: Teste com o comando ping do pc0

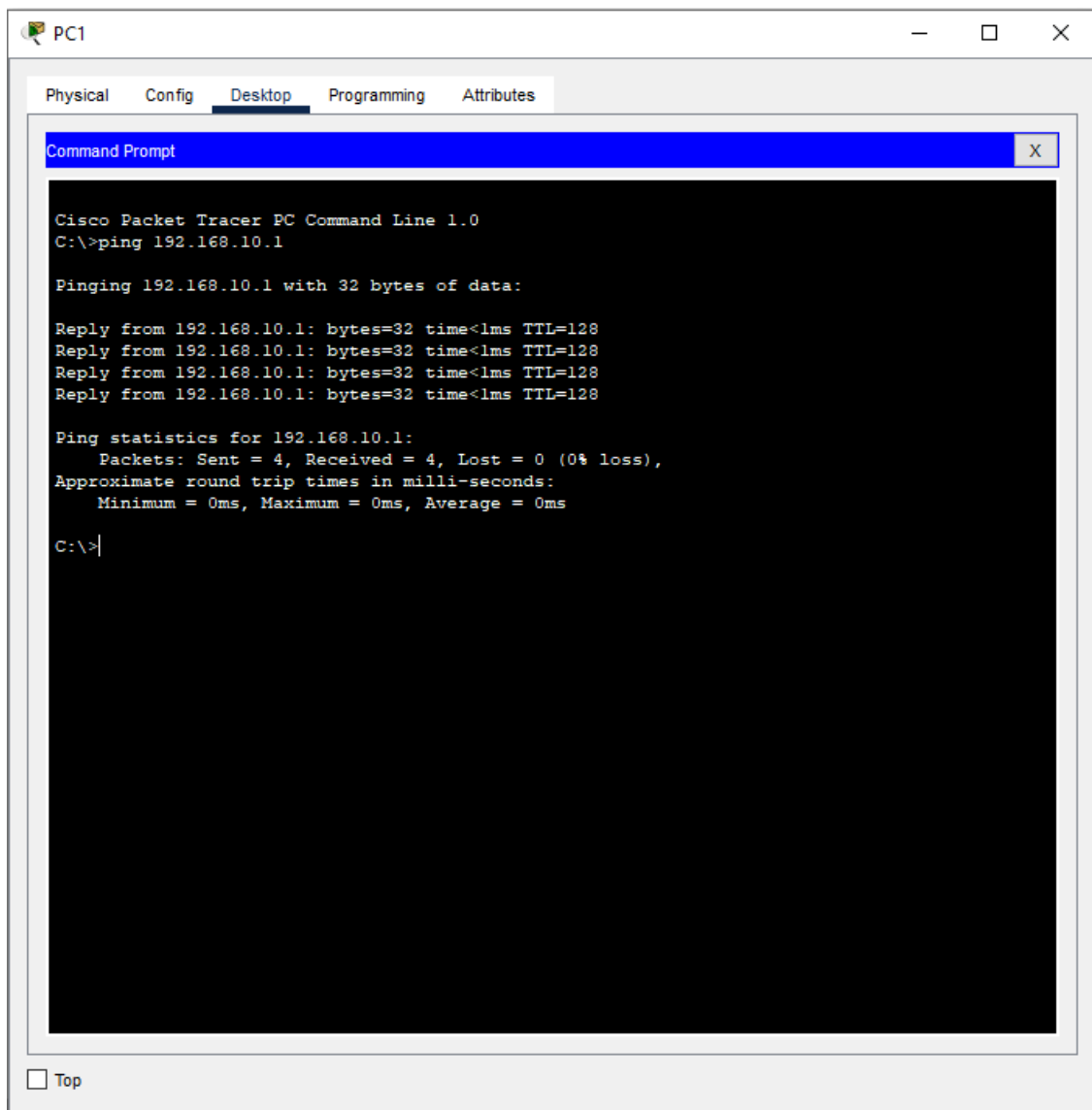
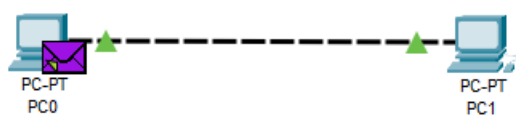


Figura 4: Teste com o comando ping do pc1



Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC0	PC1	ICMP		0.000	N	0	(edit)	
	Successful	PC0	PC1	ICMP		0.000	N	1	(edit)	

Figura 5: Teste com o envio de pdu (protocol data unit)

0.1 Exercício 2

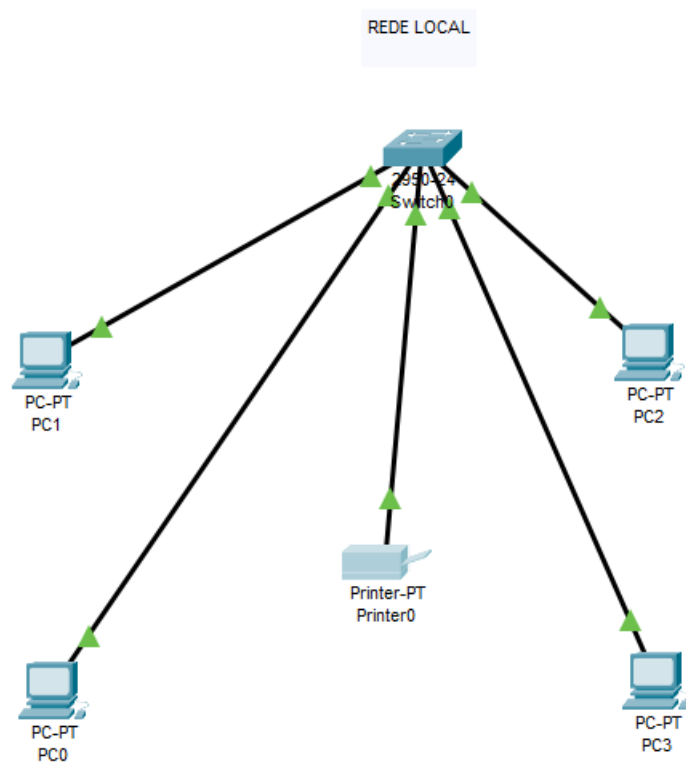
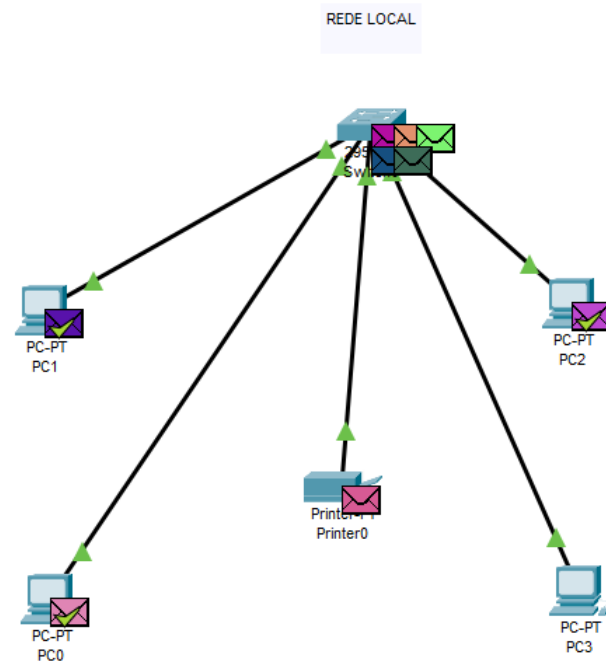
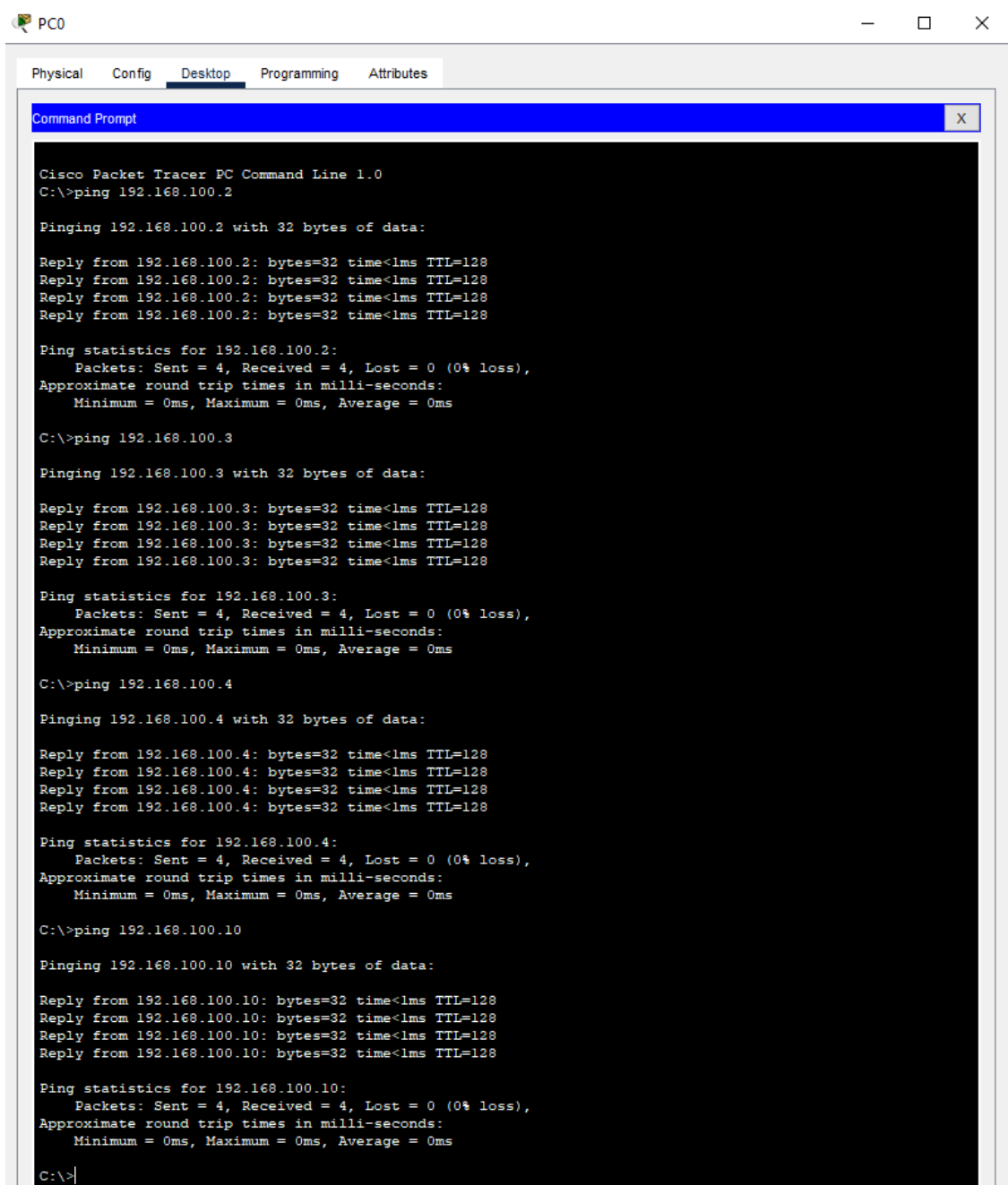


Figura 6: Rede Local



Scenario 0											
New Delete Toggle PDU List Window											
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete	
	Successful	PC0	PC1	ICMP		0.000	N	0	(edit)		
	Successful	PC0	PC2	ICMP		0.000	N	1	(edit)		
	In Progress	PC0	PC3	ICMP		0.000	N	2	(edit)		
	In Progress	PC0	Printer0	ICMP		0.000	N	3	(edit)		

Figura 7: Teste com o envio de pdu (protocol data unit)



The image shows a screenshot of a Cisco Packet Tracer PC0 Command Prompt window. The window has a title bar with 'PC0' and standard window controls. Below the title bar are tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes', with 'Desktop' being the active tab. The Command Prompt window itself has a title bar with 'Command Prompt' and a close button. The text inside the Command Prompt is as follows:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.100.2

Pinging 192.168.100.2 with 32 bytes of data:

Reply from 192.168.100.2: bytes=32 time<1ms TTL=128
Reply from 192.168.100.2: bytes=32 time<1ms TTL=128
Reply from 192.168.100.2: bytes=32 time<1ms TTL=128
Reply from 192.168.100.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.100.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.100.3

Pinging 192.168.100.3 with 32 bytes of data:

Reply from 192.168.100.3: bytes=32 time<1ms TTL=128
Reply from 192.168.100.3: bytes=32 time<1ms TTL=128
Reply from 192.168.100.3: bytes=32 time<1ms TTL=128
Reply from 192.168.100.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.100.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.100.4

Pinging 192.168.100.4 with 32 bytes of data:

Reply from 192.168.100.4: bytes=32 time<1ms TTL=128
Reply from 192.168.100.4: bytes=32 time<1ms TTL=128
Reply from 192.168.100.4: bytes=32 time<1ms TTL=128
Reply from 192.168.100.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.100.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.100.10

Pinging 192.168.100.10 with 32 bytes of data:

Reply from 192.168.100.10: bytes=32 time<1ms TTL=128
Reply from 192.168.100.10: bytes=32 time<1ms TTL=128
Reply from 192.168.100.10: bytes=32 time<1ms TTL=128
Reply from 192.168.100.10: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.100.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```

Figura 8: Exemplo testes necessários ping PC0, mas é possível perceber por esse teste que todos os outros dispositivos estão interligados.

0.2 Exercício 3

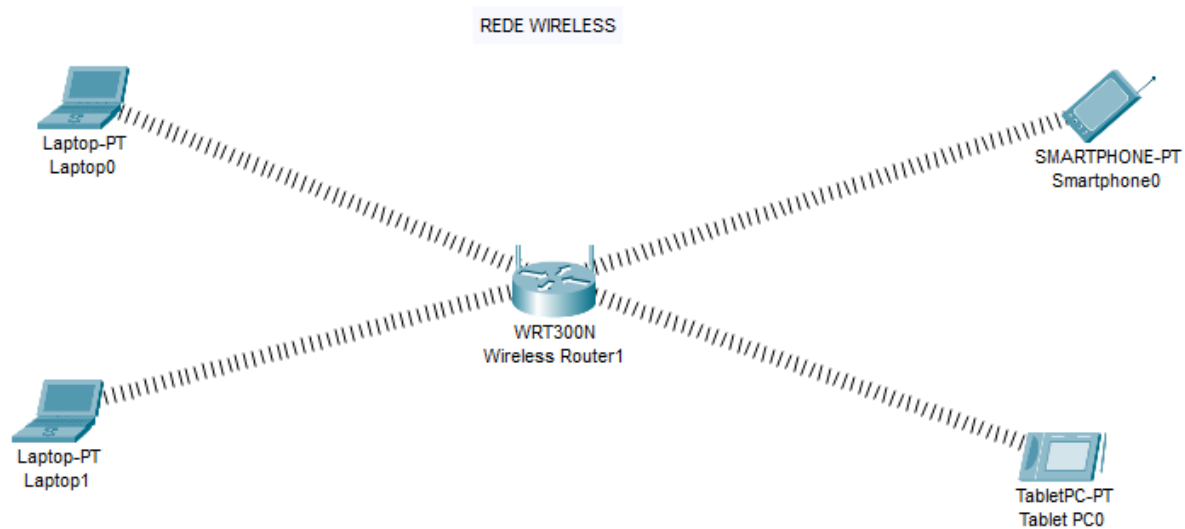


Figura 9:

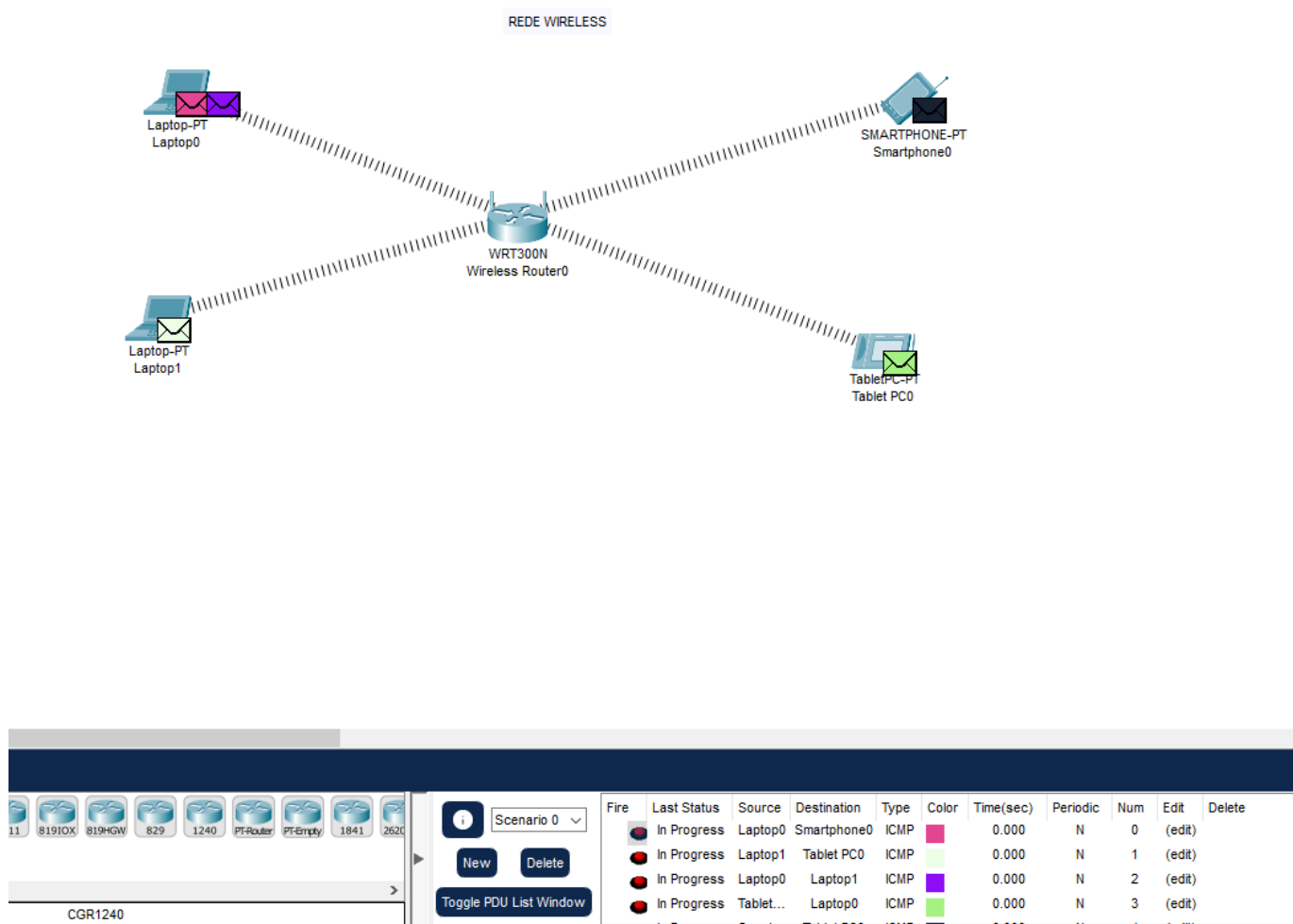


Figura 10: Teste com o envio de pdu (protocol data unit)

Wireless Router0

Physical **Config** GUI Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

Internet

LAN

Wireless

Wireless Settings

SSID: Default

2.4 GHz Channel: 6 - 2.437GHz

Coverage Range (meters): 250,00

Authentication:

☐ Disabled ☐ WEP ☒ WPA2-PSK ☐ WPA

WEP Key:

PSK Pass Phrase: criptografia

RADIUS Server Settings:

IP Address:

Shared Secret:

Encryption Type: AES

Figura 11: Exemplo inserir uma autenticação

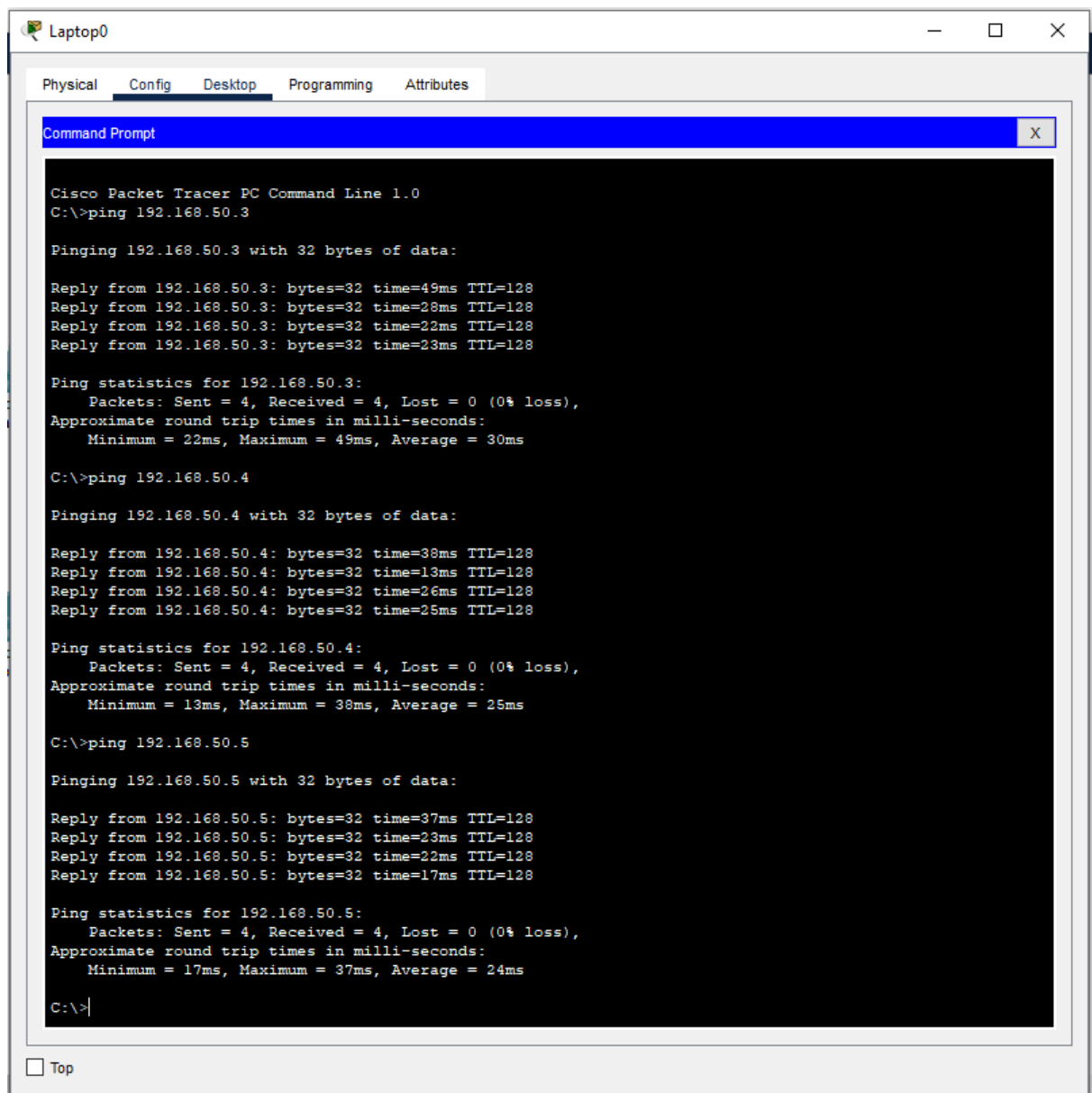


Figura 12: Testes necessários ping Laptop0

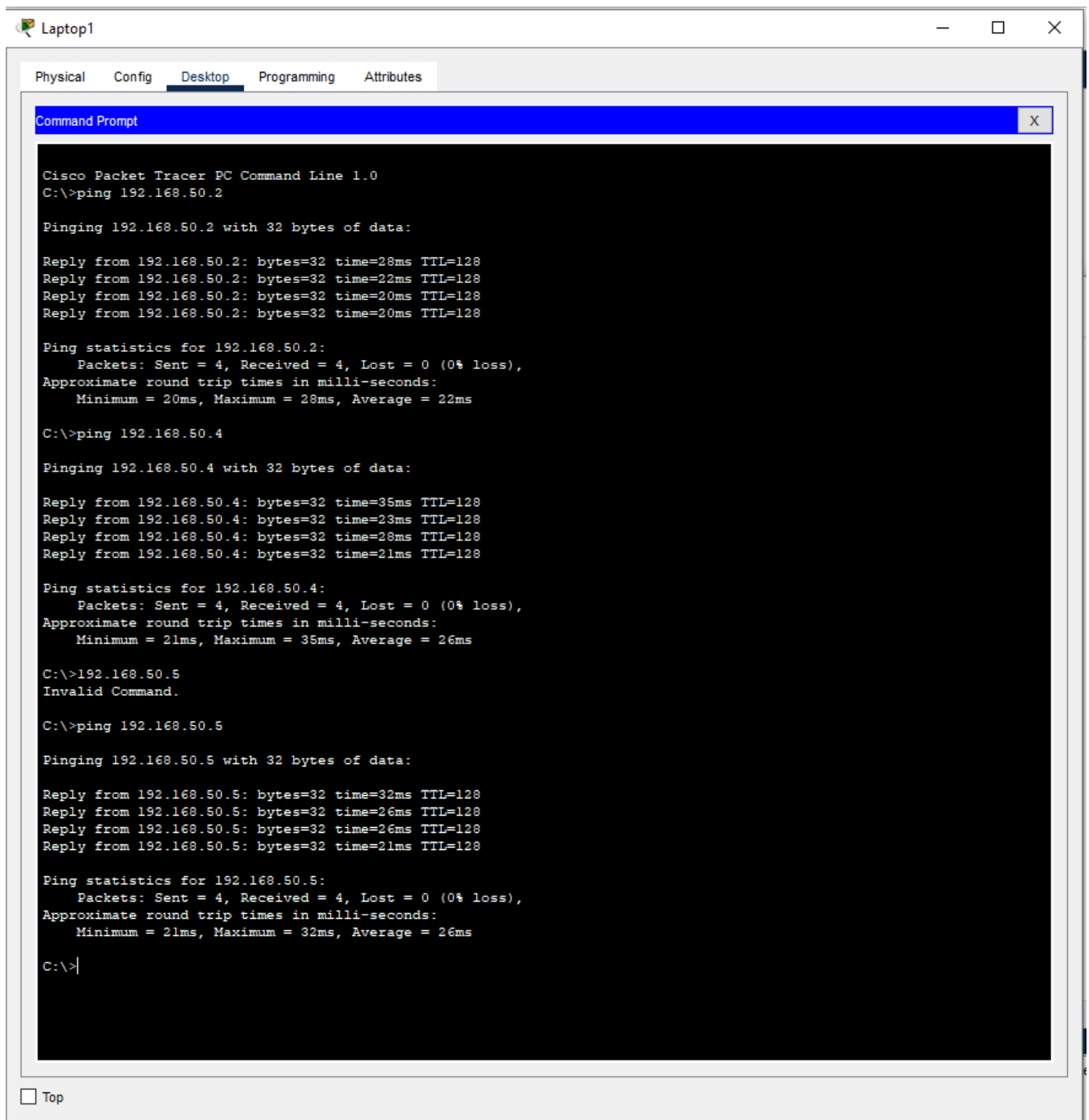


Figura 13: Testes necessários ping Laptop1

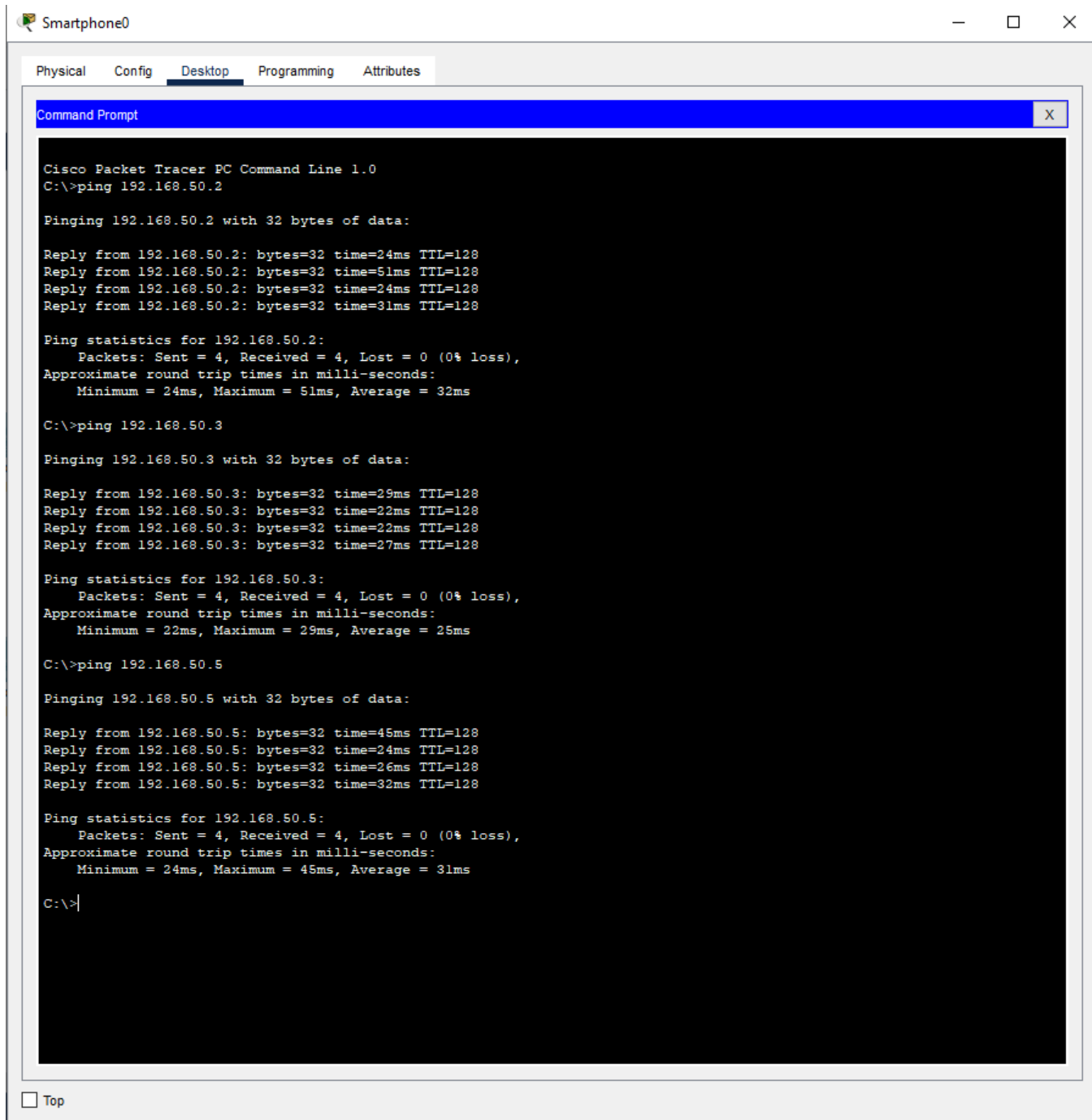


Figura 14: Testes necessários ping Smartphone

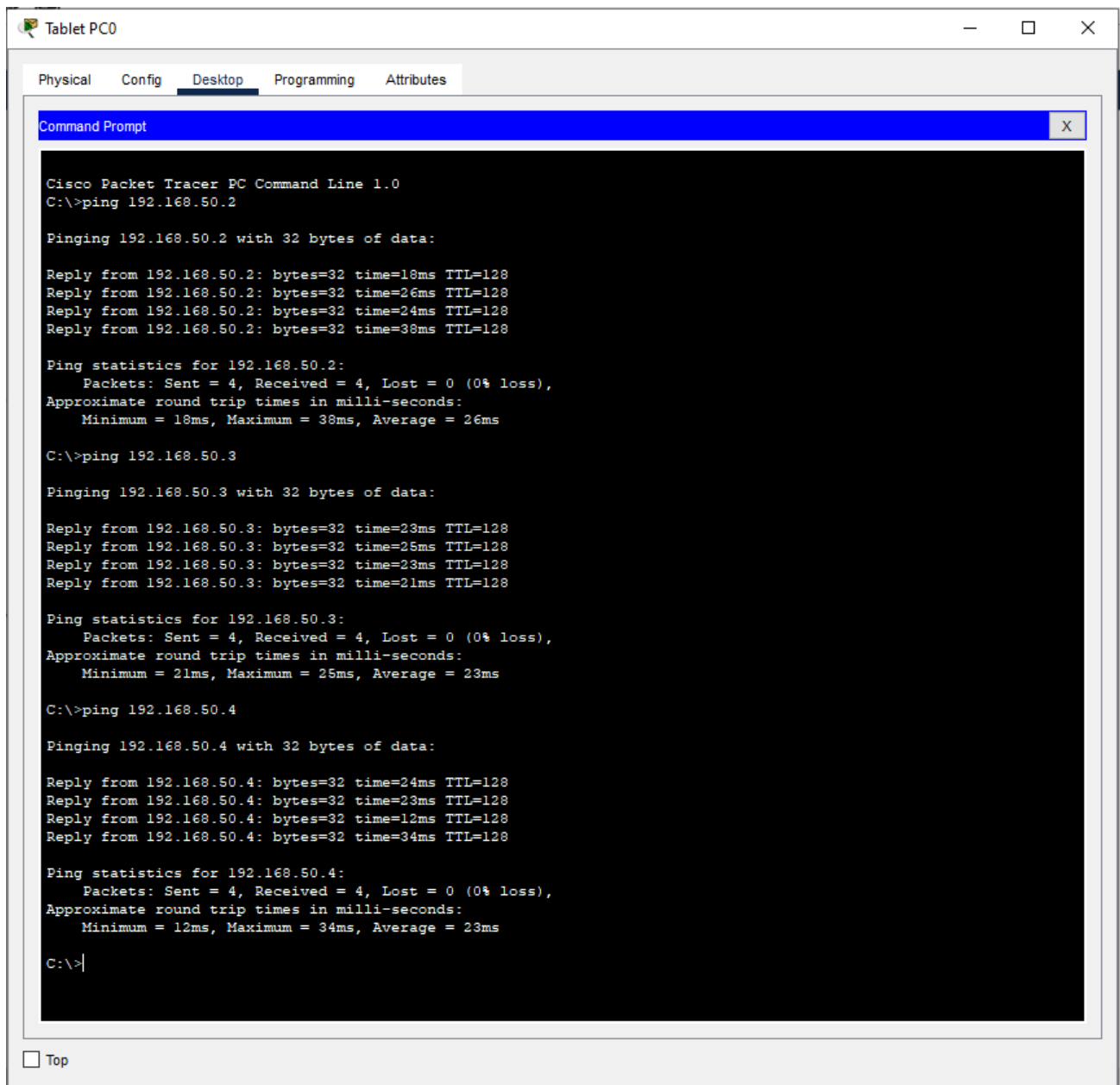


Figura 15: Testes necessários ping TabletPC

0.3 Exercício 4

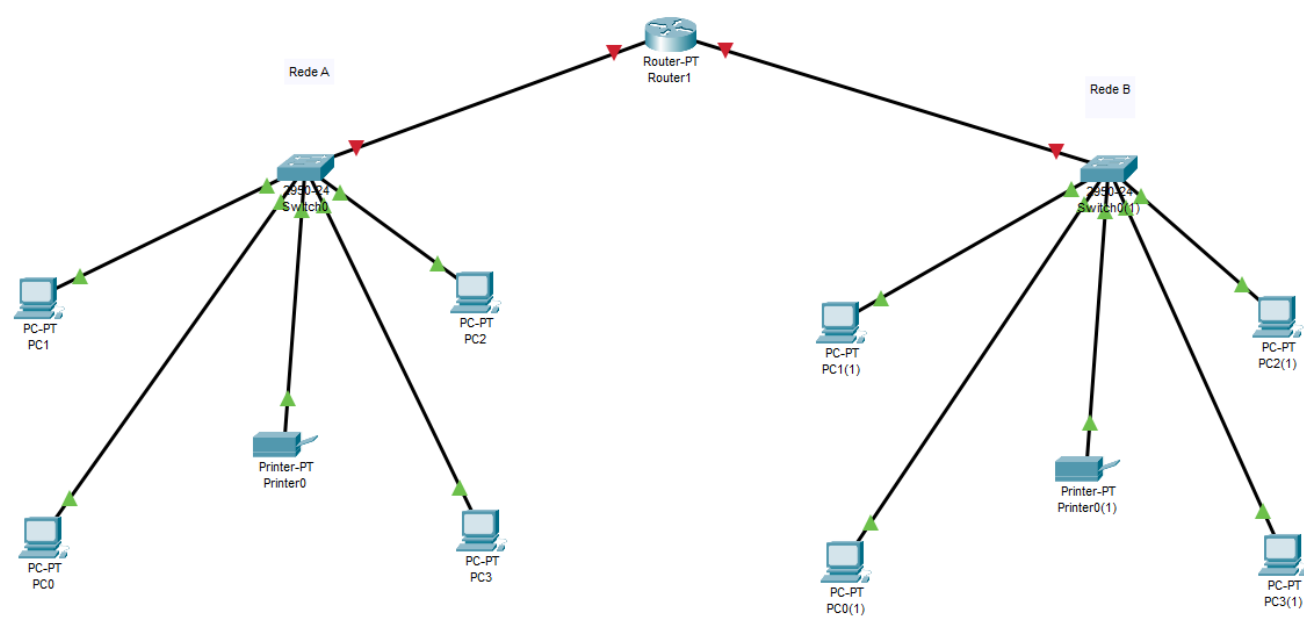


Figura 16: COMUNICAÇÃO ENTRE DUAS LANS DISTINTAS

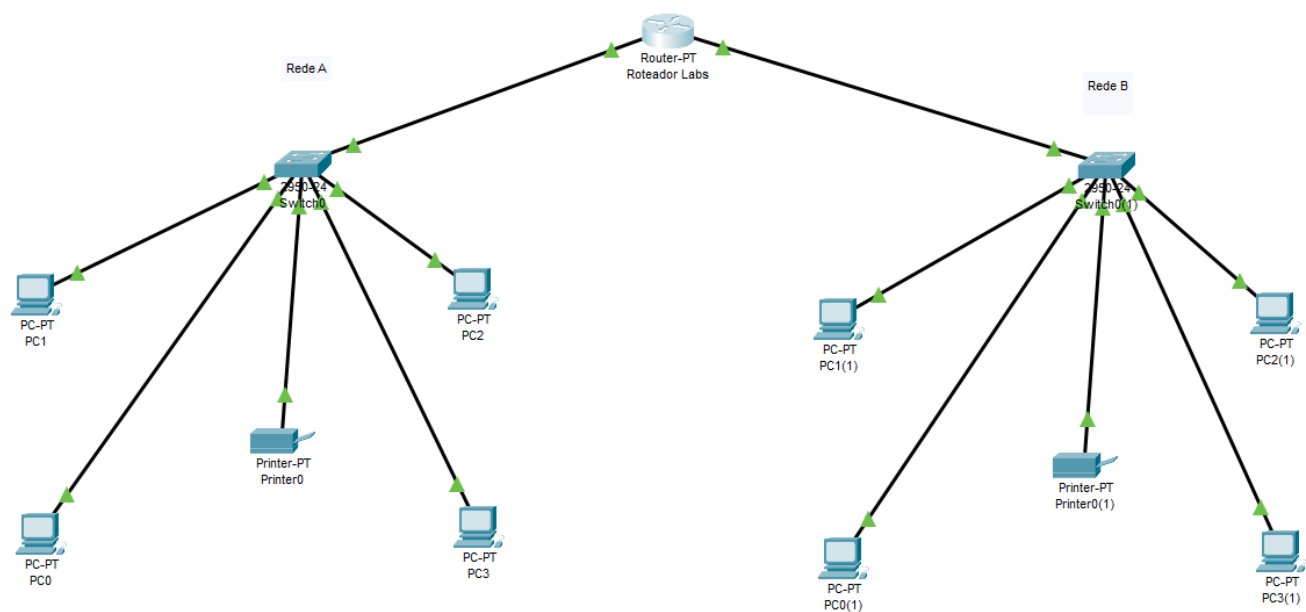


Figura 17: Configurando o roteador

PC1

Physical Config Desktop Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 192.168.100.2

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.100.100

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:D3FF:FEAD:C450

Default Gateway:

DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

Figura 18: Exemplo inserindo o gateway padrão

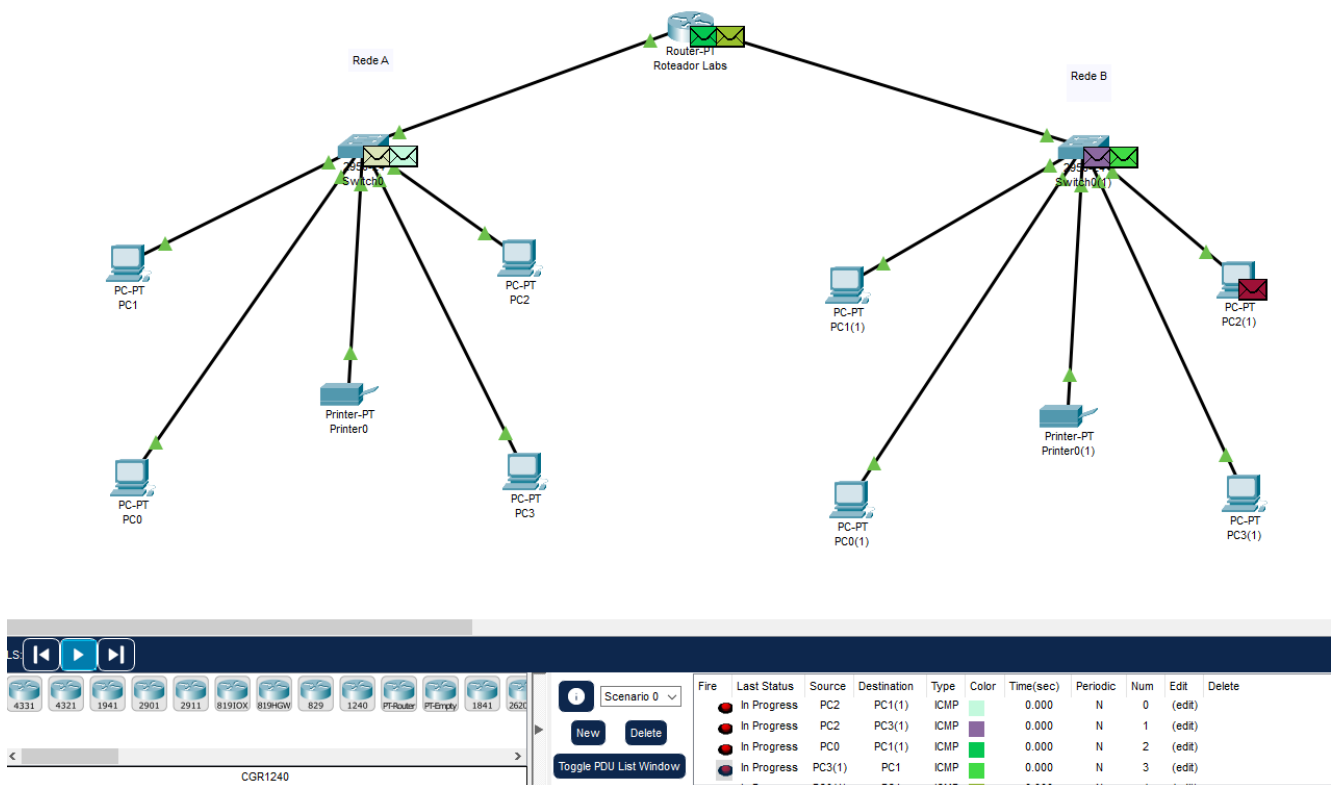


Figura 19: Teste com o envio de pdu (protocol data unit)

1)Crie no Packet Tracer um arquivo chamado AT11 atividade01.pkt e elabore uma rede local cabeada que contenha obrigatoriamente: 01 Switch, 01 Impressora, 05 Pcs, 01 Servidor(Server-PT), 02 Laptops.

Foi elaborado um SERVIDOR DNS local, visando resolver o IP: 198.162.7.1 e encaminhar para o site www.rocklee.com.Onde todos os computadores, laptops e printer, podem acessar tal rede.Seguindo as especificações da atividade e elaborando uma rede local com um servidor.Também seguindo a restrição do ip ser os dois números de matrícula.

ELABORANDO UMA REDE LOCAL COM UM SERVIDOR DNS

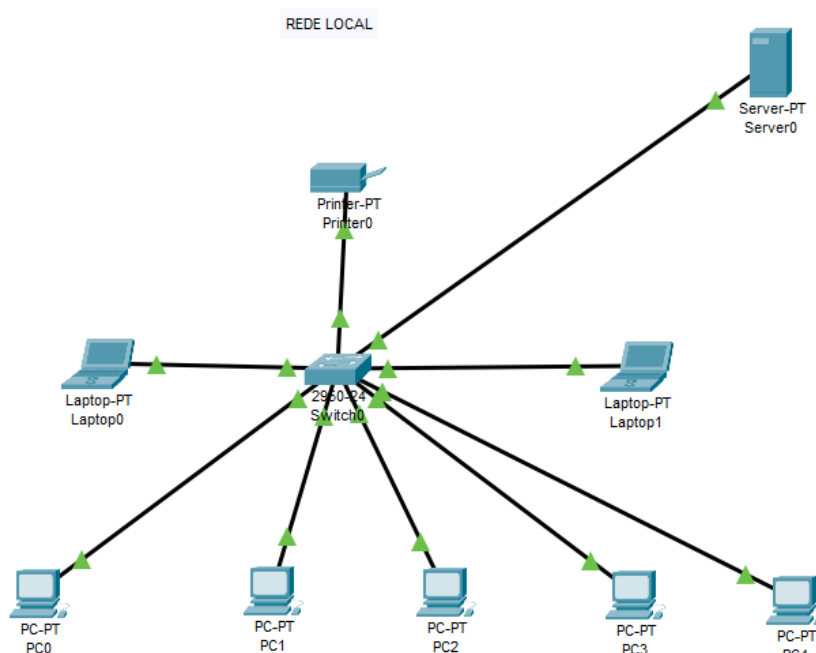


Figura 20: Rede local

Server0

PhysicalConfigServicesDesktopProgrammingAttributes

SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP

DHCP

InterfaceFastEthernet0ServiceOnOff

Pool NameserverPool

Default Gateway0.0.0.0

DNS Server192.168.0.1

Start IP Address : 19216872

Subnet Mask: 2552552550

Maximum Number of Users : 254

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

AddSaveRemove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	0.0.0.0	192.168....	192.168....	255.255....	254	0.0.0.0	0.0.0.0

Top

Figura 21: Servidor DHCP define a faixa de IPs

Server0

Physical **Config** Services Desktop Programming Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

FastEthernet0

FastEthernet0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0050.0F21.1D7A

IP Configuration

☐ DHCP

☒ Static

IPv4 Address 192.168.7.1

Subnet Mask 255.255.255.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

Link Local Address: FE80::250:FFF:FE21:1D7A

☐ Top

Figura 22: Ipv4 do servidor

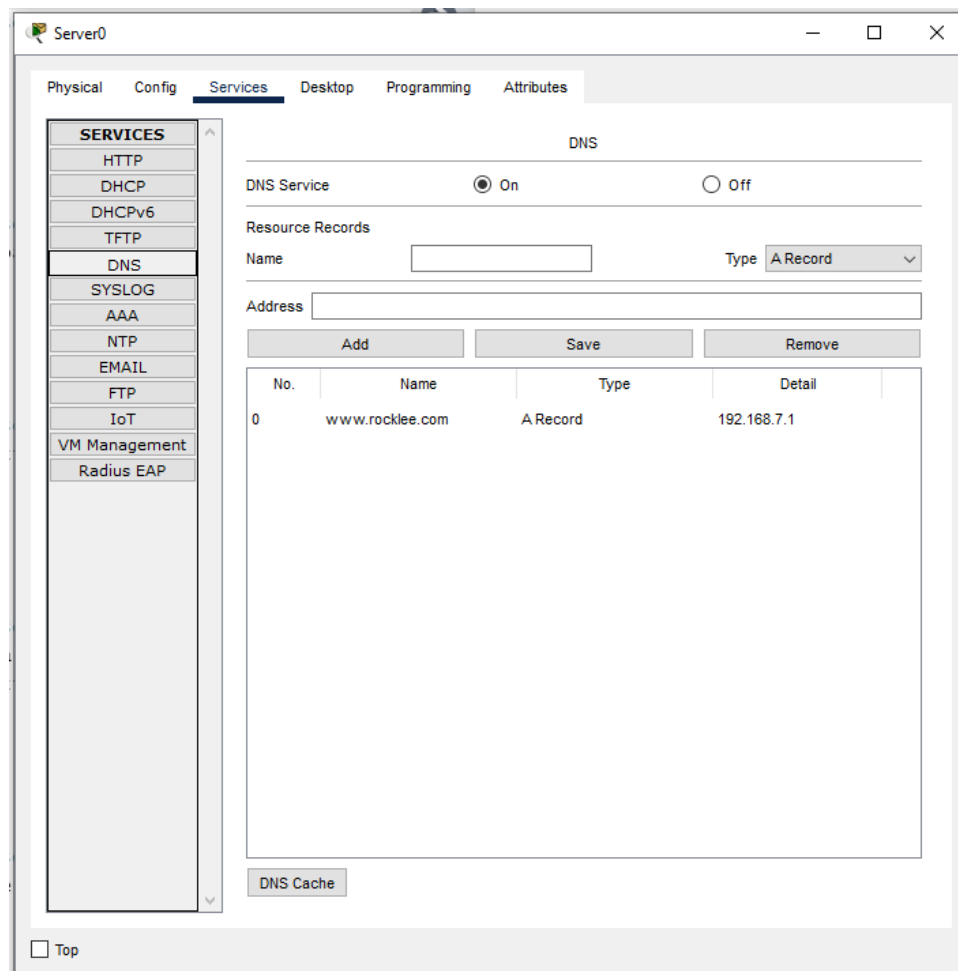


Figura 23: Serviço DNS onde resolve o IP para o site www.rocklee.com

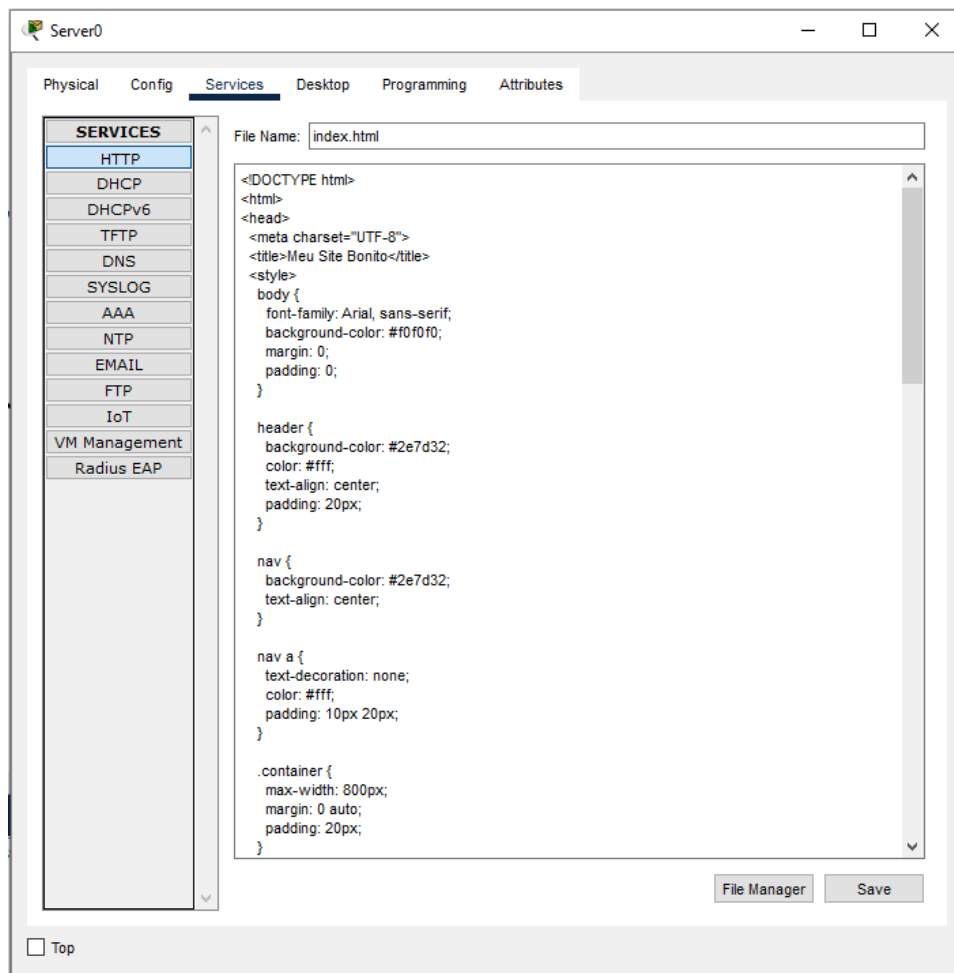


Figura 24: Site hospedado no servidor do tipo de serviço http

PC0

Physical Config Desktop Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.7.4

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 192.168.0.1

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::230:A3FF:FE3E:BE54

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

Top

Figura 25: Exemplo configuração necessária para conectar com o servidor dns, onde foi repetido para todos os dispositivos, apenas mudando o ipv4 address, conforme a restrição dos dois numero de matrícula

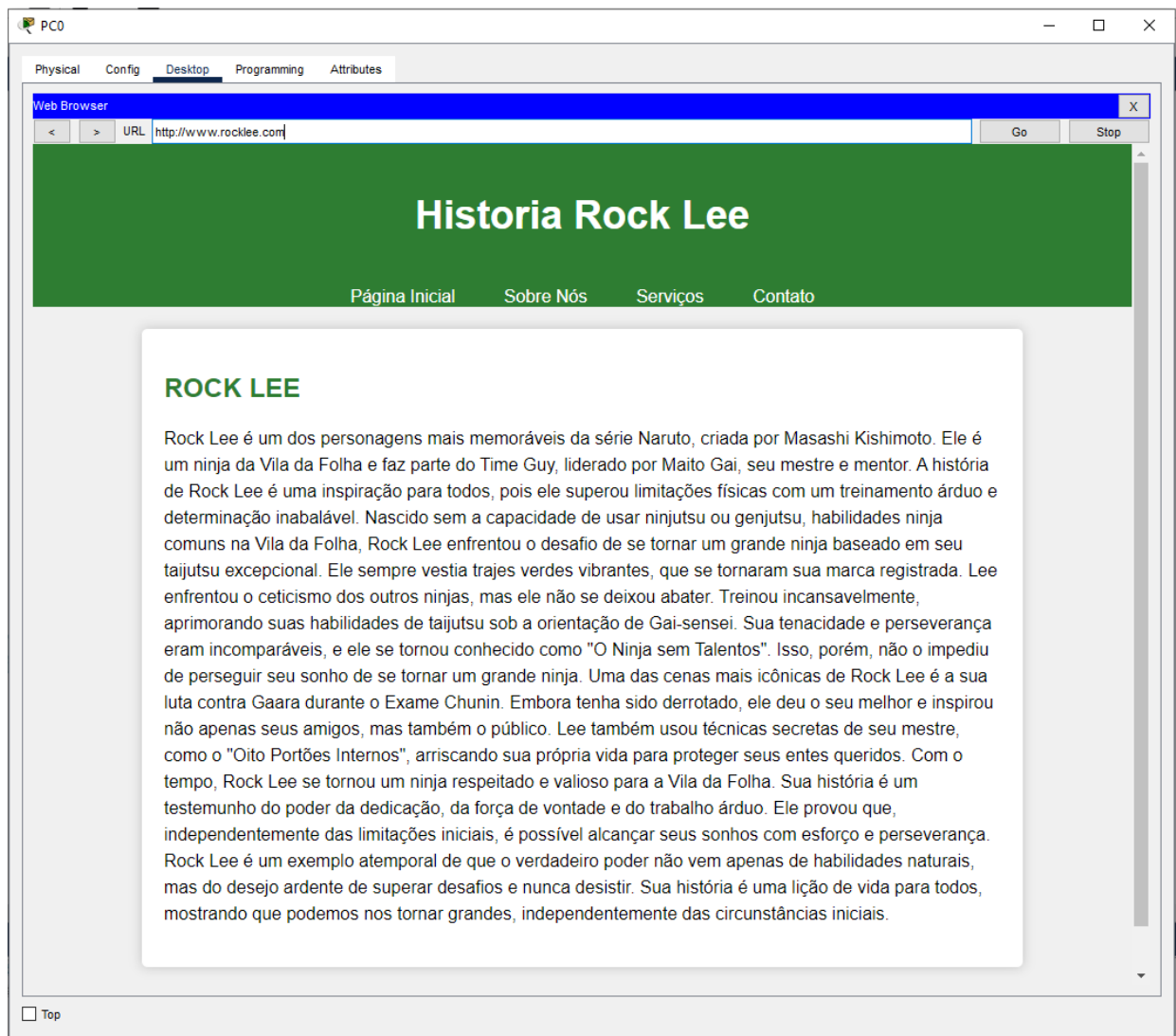


Figura 26: Exemplo resolvendo nome do site www.rocklee.com no servidor DNS

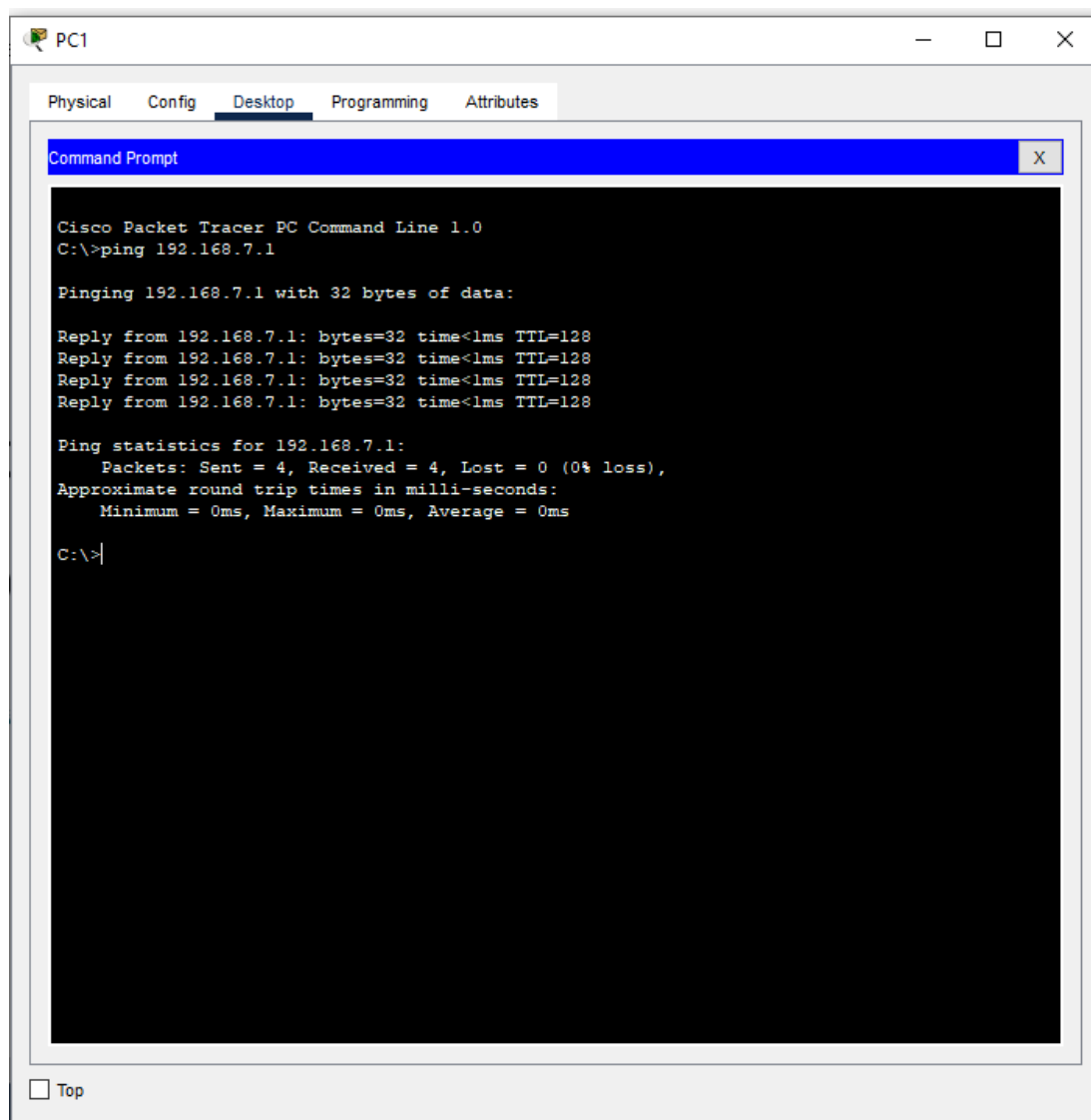


Figura 27: Exemplo teste necessário ping com o servidor.

2) Em um novo arquivo chamado AT11 atividade02.pkt, crie uma rede wireless contendo: além dos laptops e roteador wireless, uma impressora wireless e um PC com recepção wireless. Dica: para que a impressora e o PC tenham conexão wireless, lembre-se de trocar suas placas, conforme explicado anteriormente.

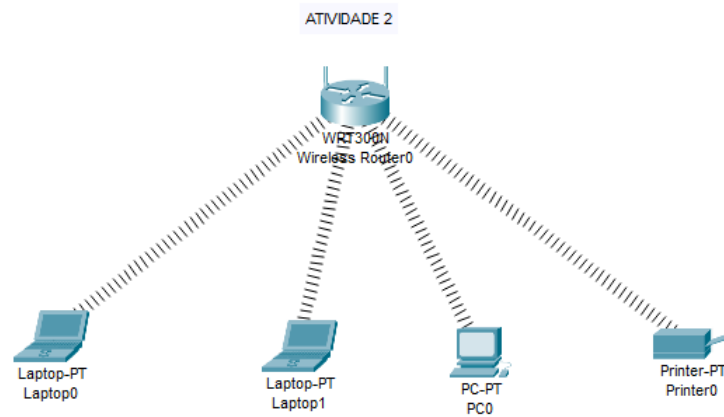


Figura 28: Rede wireless contendo: além dos laptops e roteador wireless, uma impressora wireless e um pc com recepção wireless

Wireless Router0

Physical **Config** GUI Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

Internet

LAN

Wireless

Wireless Settings

SSID: Default

2.4 GHz Channel: 6 - 2.437GHz

Coverage Range (meters): 250,00

Authentication:

☐ Disabled ☐ WEP ☒ WPA2-PSK ☐ WPA ☐ WPA2

WEP Key:

PSK Pass Phrase:criptografia

RADIUS Server Settings

IP Address:

Shared Secret:

Encryption Type: AES

☐ Top

Figura 29: Segurança na rede wireless

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 172.56.7.2

Pinging 172.56.7.2 with 32 bytes of data:

Reply from 172.56.7.2: bytes=32 time=8ms TTL=128
Reply from 172.56.7.2: bytes=32 time<1ms TTL=128
Reply from 172.56.7.2: bytes=32 time=13ms TTL=128
Reply from 172.56.7.2: bytes=32 time=33ms TTL=128

Ping statistics for 172.56.7.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 33ms, Average = 13ms

C:\>ping 172.56.7.3

Pinging 172.56.7.3 with 32 bytes of data:

Reply from 172.56.7.3: bytes=32 time=45ms TTL=128
Reply from 172.56.7.3: bytes=32 time=25ms TTL=128
Reply from 172.56.7.3: bytes=32 time=23ms TTL=128
Reply from 172.56.7.3: bytes=32 time=28ms TTL=128

Ping statistics for 172.56.7.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 23ms, Maximum = 45ms, Average = 30ms

C:\>ping 172.56.7.4

Pinging 172.56.7.4 with 32 bytes of data:

Reply from 172.56.7.4: bytes=32 time=45ms TTL=128
Reply from 172.56.7.4: bytes=32 time=37ms TTL=128
Reply from 172.56.7.4: bytes=32 time=23ms TTL=128
Reply from 172.56.7.4: bytes=32 time=25ms TTL=128

Ping statistics for 172.56.7.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 23ms, Maximum = 45ms, Average = 32ms

C:\>ping 172.56.7.5

Pinging 172.56.7.5 with 32 bytes of data:

Reply from 172.56.7.5: bytes=32 time=43ms TTL=128
Reply from 172.56.7.5: bytes=32 time=19ms TTL=128
Reply from 172.56.7.5: bytes=32 time=24ms TTL=128
Reply from 172.56.7.5: bytes=32 time=27ms TTL=128

Ping statistics for 172.56.7.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 19ms, Maximum = 43ms, Average = 28ms

C:\>
```

Figura 30: Teste com o comando ping do laptop0 para os demais dispositivos, o mesmo teste ocorre igualmente para os outros dispositivos.