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*** Obs: Todas as etapas da Atividade 06 estão presentes neste PDF.**

- **Etapa 1**

Nesse exercício serão apresentadas etapas de configuração onde duas redes locais interligadas por roteadores usarão serviços de rede como HTTP, FTP, DNS e DHCP.

Em cada etapa serão definidas atividades que evoluem para uma configuração
onde os serviços se tornam operacionais.

1) Etapa1-Planejamento das rotas e configuração das redes locais

a) Planejamento das redes identificando os ids das redes.
b) As redes locais estão caracterizadas por um switch conectado a uma interface de um roteador. Essa interface é chamada de default gateway e pertence a faixa de endereços IP da Rede Local do switch.

3) Cada enlace entre dois roteadores é caracterizado com um id de rede.

4) No enlace entre os dois roteadores serão usados dois ips para identificar cada lado do enlace. Os dois ips pertencem a faixa de ips da rede que está associada ao enlace.

5) No planejamento da rede deve constar as rotas de cada roteador onde é explicitado o salto a ser feito para alcançar determinada rede. Esse mapeamento das rotas será usado no roteamento estático.

6) As rotas estáticas de cada Roteador estão assim definidas:

R1

192.168.30.0/24 via 192.168.10.2

192.168.40.0/24 via 192.168.20.2

192.168.60.0/24 via 192.168.10.2

192.168.60.0/24 via 192.168.20.2

R2

192.168.20.0/24 via 192.168.10.1

192.168.40.0/24 via 192.168.30.2

192.168.50.0/24 via 192.168.10.1

192.168.60.0/24 via 192.168.30.2

R3

192.168.10.0/24 via 192.168.20.1

192.168.30.0/24 via 192.168.40.2

192.168.60.0/24 via 192.168.40.2

192.168.50.0/24 via 192.168.20.1

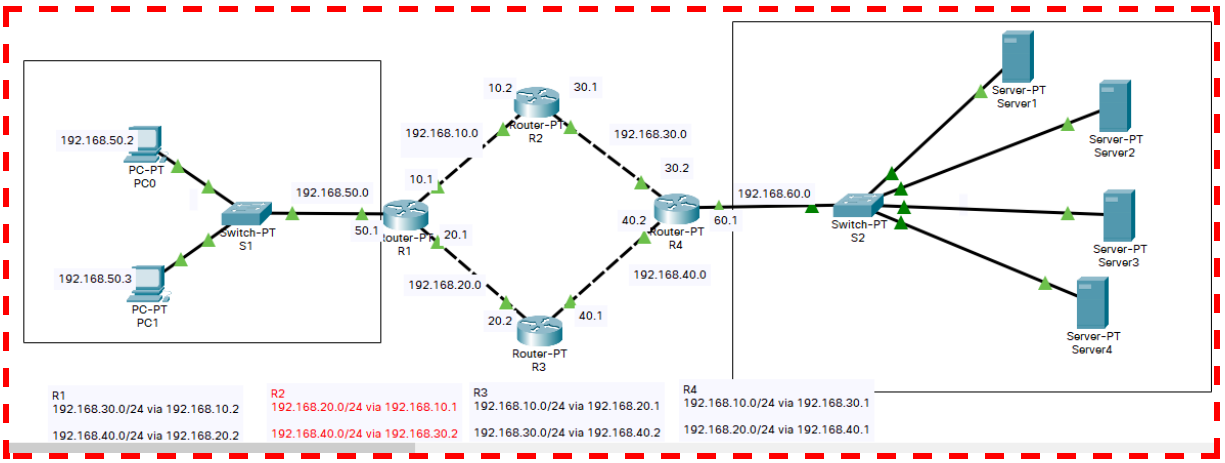
R4

192.168.10.0/24 via 192.168.30.1

192.168.20.0/24 via 192.168.40.1

192.168.50.0/24 via 192.168.30.1

192.168.50.0/24 via 192.168.40.1



- **Etapa 2**

Nessa etapa faremos a configuração das interfaces dos roteadores para viabilizar a conectividade entre os roteadores envolvidos entre as duas redes locais.

Consultar Módulo-10 Configuração Básica do Roteador.

1) Configuração das interfaces do Roteador R1

```
** Configuração Básica do Roteador **
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R1
R1(config)#
```

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R1
R1(config)#
```

```
** Habilita senha do modo privilegiado **
R1(config)#enable secret class
R1(config)#line console 0
R1(config-line)#password cisco

** Permite tentativa de acesso remoto **
R1(config-line)#login
```

```
R1(config)#enable secret class
R1(config)#line console 0
R1(config-line)#password cisco
R1(config-line)#login
```

```
** Configuração das linhas vty para acesso remoto
** ao roteador usando o protocolo Telnet (porta 23)
R1(config-line)#line vty 0 4
R1(config-line)#password cisco
R1(config-line)#login
```

```
R1(config)#line vty 0 4
R1(config-line)#password cisco
R1(config-line)#login
```

```
** Configurar a interface FastEthernet0/0
R1(config)#interface fastEthernet 0/0
R1(config-if)#description Enlace R1-R2 192.168.10.0
R1(config-if)#ip address 192.168.10.1 255.255.255.0
** Ativa a interface f 0/0
R1(config-if)#no shutdown
R1(config-if)#exit
```

```
R1(config)#interface fastEthernet 0/0
R1(config-if)#description Enlace R1-R2 192.168.10.0
R1(config-if)#ip address 192.168.10.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
```

```
** Configurar a interface fastEthernet 1/0 **
R1(config)#interface fastEthernet1/0
R1(config-if)#description Enlace R1-R3
R1(config-if)#ip address 192.168.20.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
```

```
R1(config)#interface fastEthernet 1/0
R1(config-if)#description Enlace R1-R3
R1(config-if)#ip address 192.168.20.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
```

```
** Configurar a interface fastEthernet6/0 **
R1(config)#interface fastEthernet 6/0
R1(config-if)#description Enlace LAN 192.168.50.0
R1(config-if)#ip address 192.168.50.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
```

```
R1(config)#interface fastEthernet 6/0
R1(config-if)#description Enlace LAN 192.168.50.0
R1(config-if)#ip address 192.168.50.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#exit
```

2) Configuração das interfaces do Roteador R2

```
** Configuração Básica do Roteador **
Router(config-if)#hostname R2
R2(config)#enable secret class
R2(config)#line console 0
R2(config-line)#password cisco
R2(config-line)#login
R2(config-line)#line vty 0 4
R2(config-line)#password cisco
R2(config-line)#login
```

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R2
R2(config)#
R2(config)#enable secret class
R2(config)#
R2(config)#line console 0
R2(config-line)#password cisco
R2(config-line)#login
R2(config-line)#
R2(config-line)#line vty 0 4
R2(config-line)#password cisco
R2(config-line)#login
```

```
** Configurar a interface fastEthernet 0/0 **
R2(config)#interface fastEthernet 0/0
R2(config-if)#description Enlace R2-R1 192.168.10.0
R2(config-if)#ip address 192.168.10.2 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#exit
```

```
R2(config)#interface fastEthernet 0/0
R2(config-if)#description Enlace R2-R1 192.168.10.0
R2(config-if)#ip address 192.168.10.2 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#exit
```

```
** Configurar a interface fastEthernet 1/0 **
R2(config)#interface fastEthernet 1/0
R2(config-if)#description Enlace R2-R4
R2(config-if)#ip address 192.168.30.1 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#exit
```

```
R2(config)#interface fastEthernet 1/0
R2(config-if)#description Enlace R2-R4
R2(config-if)#ip address 192.168.30.1 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#exit
```

3) Configuração das interfaces do Roteador R3

```
** Configuração Básica do Roteador **
Router(config-if)#hostname R3
R3(config)#enable secret class
R3(config)#line console 0
R3(config-line)#password cisco
R3(config-line)#login
R3(config-line)#line vty 0 4
R3(config-line)#password cisco
R3(config-line)#login
```

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R3
R3(config)#
R3(config)#enable secret class
R3(config)#
R3(config)#line console 0
R3(config-line)#password cisco
R3(config-line)#login
R3(config-line)#
R3(config-line)#line vty 0 4
R3(config-line)#password cisco
R3(config-line)#login
```

```
** Configurar a interface fastEthernet0/0
R3(config)#interface fastEthernet0/0
R3(config-if)#description Enlace R3-R1 192.168.20.0
R3(config-if)#ip address 192.168.20.2 255.255.255.0
** Ativa a interface **
R3(config-if)#no shutdown
```

```
R3(config-if)#exit
```

```
R3(config)#interface fastEthernet 0/0
R3(config-if)#description Enlace R3-R1
R3(config-if)#ip address 192.168.20.2 255.255.255.0
R3(config-if)#no shutdown
R3(config-if)#exit
```

```
Configurar a interface fastEthernet 1/0
R3(config)#interface fastEthernet 1/0
R3(config-if)#description Enlace R3-R4
R3(config-if)#ip address 192.168.40.1 255.255.255.0
R3(config-if)#no shutdown
R3(config-if)#exit
```

```
R3(config)#interface fastEthernet 1/0
R3(config-if)#description Enlace R3-R4
R3(config-if)#ip address 192.168.40.1 255.255.255.0
R3(config-if)#no shutdown
R3(config-if)#exit
```

4) Configuração das interfaces do Roteador R4

```
** Configuração Básica do Roteador **
Router(config-if)#hostname R4
R4(config)#enable secret class
R4(config)#line console 0
R4(config-line)#password cisco
R4(config-line)#login
R4(config-line)#line vty 0 4
R4(config-line)#password cisco
R4(config-line)#login
```

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R4
R4(config)#
R4(config)#enable secret class
R4(config)#
R4(config)#line console 0
R4(config-line)#password cisco
R4(config-line)#login
R4(config-line)#
R4(config-line)#line vty 0 4
R4(config-line)#password cisco
R4(config-line)#login
```

```
** Configurar a interface fastEthernet 0/0
R4(config)#interface fastEthernet 0/0
R4(config-if)#description Enlace R4-R2 192.168.10.0
R4(config-if)#ip address 192.168.30.2 255.255.255.0
** Ativa a interface
R4(config-if)#no shutdown
```

```
R4(config-if)#exit
```

```
R4(config)#
R4(config)#interface fastEthernet 0/0
R4(config-if)#description Enlace R4-R2 192.168.10.0
R4(config-if)#ip address 192.168.30.2 255.255.255.0
R4(config-if)#no shutdown
R4(config-if)#exit
```

```
** Configurar a interface fastEthernet 1/0
R4(config)#interface fastEthernet 1/0
R4(config-if)#description Enlace R4-R3
R4(config-if)#ip address 192.168.40.2 255.255.255.0
R4(config-if)#no shutdown
R4(config-if)#exit
```

```
R4(config)#interface fastEthernet 1/0
R4(config-if)#description Enlace R4-R3
R4(config-if)#ip address 192.168.40.2 255.255.255.0
R4(config-if)#no shutdown
R4(config-if)#exit
```

```
** Configurar a interface fastEthernet 6/0 **
R4(config)#interface fastEthernet 6/0
R4(config-if)#description Enlace LAN 192.168.60.0
R4(config-if)#ip address 192.168.60.1 255.255.255.0
R4(config-if)#no shutdown
R4(config-if)#exit
```

```
R4(config)#interface fastEthernet 6/0
R4(config-if)#description Enlace LAN 192.168.60.0
R4(config-if)#ip address 192.168.60.1 255.255.255.0
R4(config-if)#no shutdown
R4(config-if)#exit
```

- **Etapa 3**

Nessa etapa faremos a configuração das rotas estáticas nos roteadores para viabilizar
o encaminhamento de pacotes entre as duas redes locais.

Consultar Módulo-08 Camada de Rede

Usar as tabelas de rotas definidas na etapa-1

1) Configurar as rotas do Roteador R1

```
** Acessar o roteador R1 digitando a senha cisco **
R1>enable

** Entrar no modo EXEC Privilegiado com a senha class **
R1#

** Entrar no modo de Configuração Global **
```

```
R1#configure terminal
R1(config)#

** Configurar as rotas estáticas **
R1(config)#ip route 192.168.30.0 255.255.255.0 192.168.10.2
R1(config)#ip route 192.168.40.0 255.255.255.0 192.168.20.2
R1(config)#ip route 192.168.60.0 255.255.255.0 192.168.10.2
R1(config)#ip route 192.168.60.0 255.255.255.0 192.168.20.2

** Voltar ao modo EXEC Privilegiado **
R1(config)#exit
R1#
```

```
User Access Verification

Password:

R1>
R1>enable
Password:
R1#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#
R1(config)#ip route 192.168.30.0 255.255.255.0 192.168.10.2
R1(config)#ip route 192.168.40.0 255.255.255.0 192.168.20.2
R1(config)#ip route 192.168.60.0 255.255.255.0 192.168.10.2
R1(config)#ip route 192.168.60.0 255.255.255.0 192.168.20.2
R1(config)#
R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console
```

```
** Mostrar a tabela de rotas **
R1#show ip route
```

```
R1#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    192.168.10.0/24 is directly connected, FastEthernet0/0
C    192.168.20.0/24 is directly connected, FastEthernet1/0
S    192.168.30.0/24 [1/0] via 192.168.10.2
S    192.168.40.0/24 [1/0] via 192.168.20.2
C    192.168.50.0/24 is directly connected, FastEthernet6/0
S    192.168.60.0/24 [1/0] via 192.168.10.2
                     [1/0] via 192.168.20.2
```

```
** Salvar as configurações **
R1#copy running-config startup-config
```

```
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R1#
```

2) Configurar as rotas do Roteador R2

```
** Acessar o roteador R2 digitando a senha cisco **
R2>enable

** Entrar no modo EXEC Privilegiado com a senha class **
R2#

** Entrar no modo configure terminal **
R2#configure terminal
R2(config)#

** Configurar as rotas estáticas **
R2(config)#ip route 192.168.20.0 255.255.255.0 192.168.10.1
R2(config)#ip route 192.168.40.0 255.255.255.0 192.168.30.2
R2(config)#ip route 192.168.50.0 255.255.255.0 192.168.10.1
R2(config)#ip route 192.168.60.0 255.255.255.0 192.168.30.2

** Voltar ao modo EXEC Privilegiado **
R2(config)#exit
R2#
```

```
User Access Verification

Password:

R2>enable
Password:
R2#configure t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#
R2(config)#ip route 192.168.20.0 255.255.255.0 192.168.10.1
R2(config)#ip route 192.168.40.0 255.255.255.0 192.168.30.2
R2(config)#ip route 192.168.50.0 255.255.255.0 192.168.10.1
R2(config)#ip route 192.168.60.0 255.255.255.0 192.168.30.2
R2(config)#exit
R2#
%SYS-5-CONFIG_I: Configured from console by console
```

```
** Mostrar a tabela de rotas **
R2#show ip route
```

```
R2#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    192.168.10.0/24 is directly connected, FastEthernet0/0
S    192.168.20.0/24 [1/0] via 192.168.10.1
C    192.168.30.0/24 is directly connected, FastEthernet1/0
S    192.168.40.0/24 [1/0] via 192.168.30.2
S    192.168.50.0/24 [1/0] via 192.168.10.1
S    192.168.60.0/24 [1/0] via 192.168.30.2
```

```
** Salvar as configurações **
R2#copy running-config startup-config
```

```
R2#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R2#
```

3) Configurar as rotas do Roteador R3

```
** Acessar roteador R3 digitando a senha cisco **
R3>enable

** Entrar no modo EXEC Privilegiado com a senha class **
R3#

** Entrar no modo Configuração Global **
R3#configure terminal
R3(config)#

** Configurar as rotas estáticas **
R3(config)#ip route 192.168.10.0 255.255.255.0 192.168.20.1
R3(config)#ip route 192.168.30.0 255.255.255.0 192.168.40.2
R3(config)#ip route 192.168.50.0 255.255.255.0 192.168.20.1
R3(config)#ip route 192.168.60.0 255.255.255.0 192.168.40.2

** Voltar ao modo EXEC Privilegiado **
R3(config)#exit
R31#
```

```
User Access Verification

Password:

R3>enable
Password:
R3#configure t
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#
R3(config)#ip route 192.168.10.0 255.255.255.0 192.168.20.1
R3(config)#ip route 192.168.30.0 255.255.255.0 192.168.40.2
R3(config)#ip route 192.168.50.0 255.255.255.0 192.168.20.1
R3(config)#ip route 192.168.60.0 255.255.255.0 192.168.40.2
R3(config)#exit
R3#
%SYS-5-CONFIG_I: Configured from console by console
```

** Mostrar a tabela de rotas **
R3#show ip route

```
R3#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

S    192.168.10.0/24 [1/0] via 192.168.20.1
C    192.168.20.0/24 is directly connected, FastEthernet0/0
S    192.168.30.0/24 [1/0] via 192.168.40.2
C    192.168.40.0/24 is directly connected, FastEthernet1/0
S    192.168.50.0/24 [1/0] via 192.168.20.1
S    192.168.60.0/24 [1/0] via 192.168.40.2
```

** Salvar as configurações **
R3#copy running-config startup-config

```
R3#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R3#
```

4) Configurar as rotas do Roteador R4

** Acessar o roteador R4 digitando a senha cisco **
R4>enable

** Entrar no modo EXEC Privilegiado com a senha class **
R4#

** Entrar no modo configure terminal **
R4#configure terminal
R4(config)#

```
** Configurar as rotas estáticas **
R4(config)#ip route 192.168.10.0 255.255.255.0 192.168.30.1
R4(config)#ip route 192.168.20.0 255.255.255.0 192.168.40.1
R4(config)#ip route 192.168.50.0 255.255.255.0 192.168.30.1
R4(config)#ip route 192.168.50.0 255.255.255.0 192.168.40.1

** Voltar ao modo EXEC Privilegiado **
R4(config)#exit
R4#
```

```
User Access Verification

Password:

R4>enable
Password:
R4#
R4#configure t
Enter configuration commands, one per line.  End with CNTL/Z.
R4(config)#
R4(config)#ip route 192.168.10.0 255.255.255.0 192.168.30.1
R4(config)#ip route 192.168.20.0 255.255.255.0 192.168.40.1
R4(config)#ip route 192.168.50.0 255.255.255.0 192.168.30.1
R4(config)#ip route 192.168.50.0 255.255.255.0 192.168.40.1
R4(config)#
R4(config)#exit
R4#
%SYS-5-CONFIG_I: Configured from console by console
```

```
** Mostrar a tabela de rotas **
R4#show ip route
```

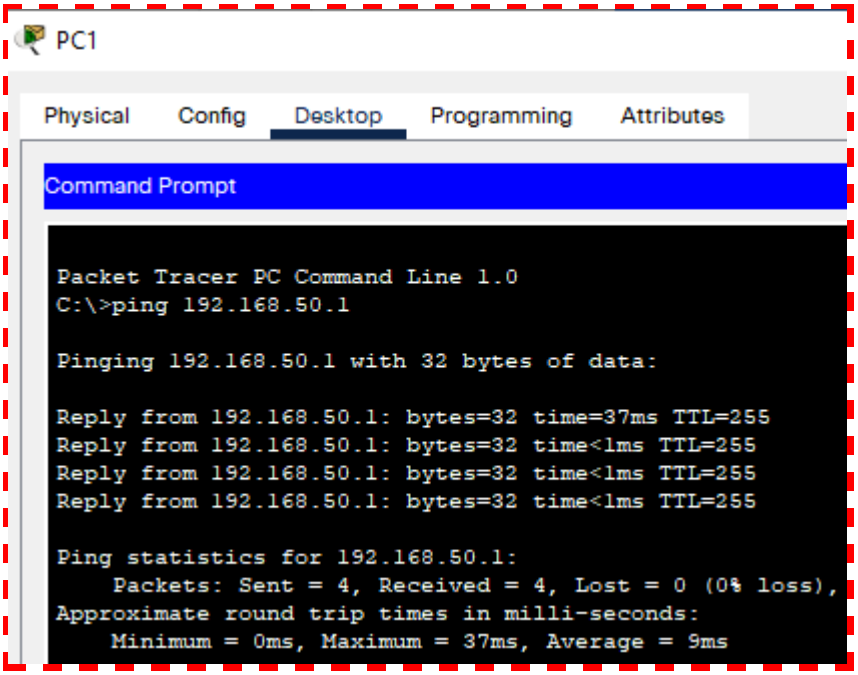
```
R4#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

S    192.168.10.0/24 [1/0] via 192.168.30.1
S    192.168.20.0/24 [1/0] via 192.168.40.1
C    192.168.30.0/24 is directly connected, FastEthernet0/0
C    192.168.40.0/24 is directly connected, FastEthernet1/0
S    192.168.50.0/24 [1/0] via 192.168.30.1
                     [1/0] via 192.168.40.1
C    192.168.60.0/24 is directly connected, FastEthernet6/0
```

```
** Salvar as configurações **
R4#copy running-config startup-config
```

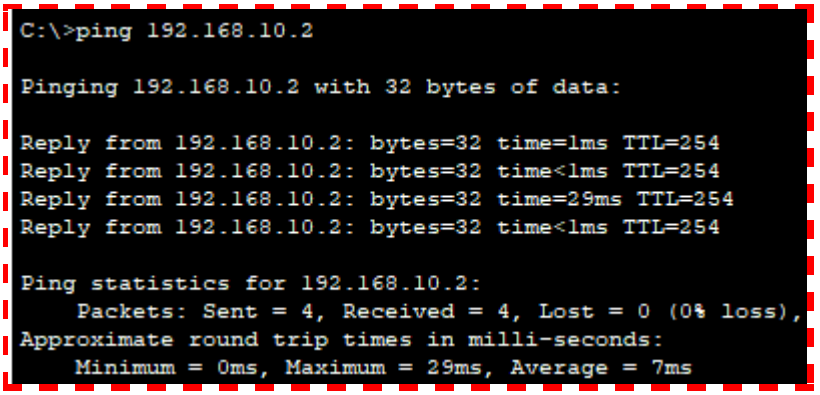
```
R4#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R4#
```

5) Testar a conectividade entre as duas redes locais

** pingar do computador PC1 para os endereços IP listados abaixo **
192.168.50.1



192.168.10.2



192.168.20.2

```
C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time=33ms TTL=254
Reply from 192.168.20.2: bytes=32 time=10ms TTL=254
Reply from 192.168.20.2: bytes=32 time=11ms TTL=254
Reply from 192.168.20.2: bytes=32 time=10ms TTL=254

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 10ms, Maximum = 33ms, Average = 16ms
```

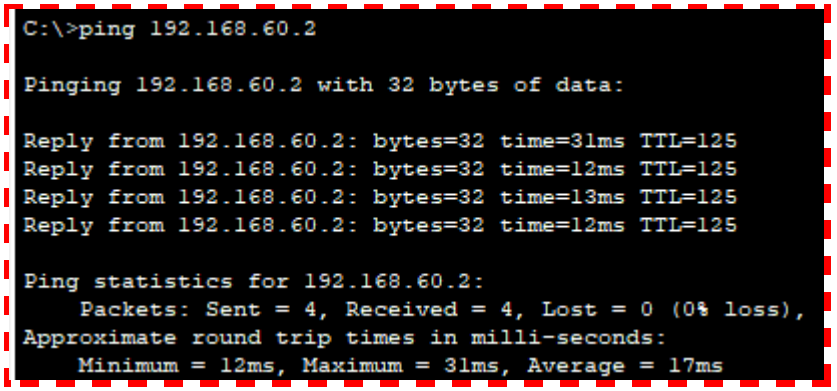
192.168.40.2

```
C:\>ping 192.168.40.2

Pinging 192.168.40.2 with 32 bytes of data:

Reply from 192.168.40.2: bytes=32 time=24ms TTL=253
Reply from 192.168.40.2: bytes=32 time=20ms TTL=253
Reply from 192.168.40.2: bytes=32 time=12ms TTL=253
Reply from 192.168.40.2: bytes=32 time=14ms TTL=253

Ping statistics for 192.168.40.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 12ms, Maximum = 24ms, Average = 17ms
```

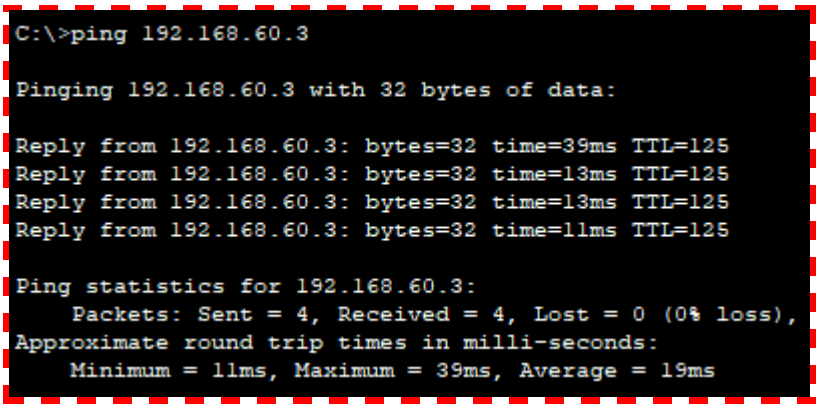
192.168.30.2

```
C:\>ping 192.168.30.2

Pinging 192.168.30.2 with 32 bytes of data:

Reply from 192.168.30.2: bytes=32 time=76ms TTL=253
Reply from 192.168.30.2: bytes=32 time=12ms TTL=253
Reply from 192.168.30.2: bytes=32 time=14ms TTL=253
Reply from 192.168.30.2: bytes=32 time=17ms TTL=253

Ping statistics for 192.168.30.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 12ms, Maximum = 76ms, Average = 29ms
```

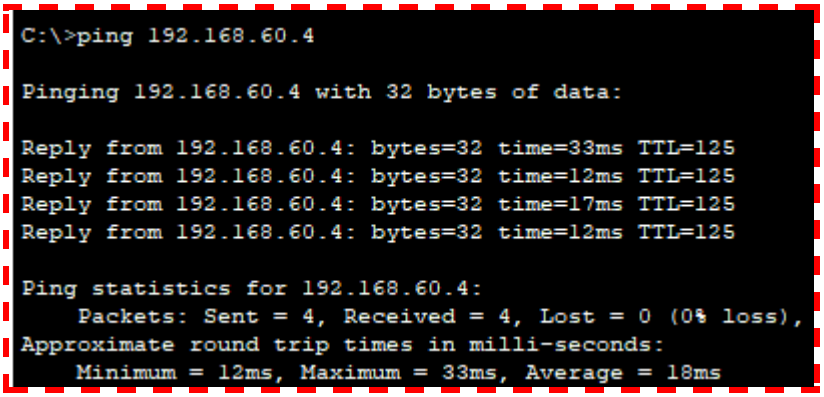
192.168.60.2



192.168.60.3



192.168.60.4



192.168.60.5

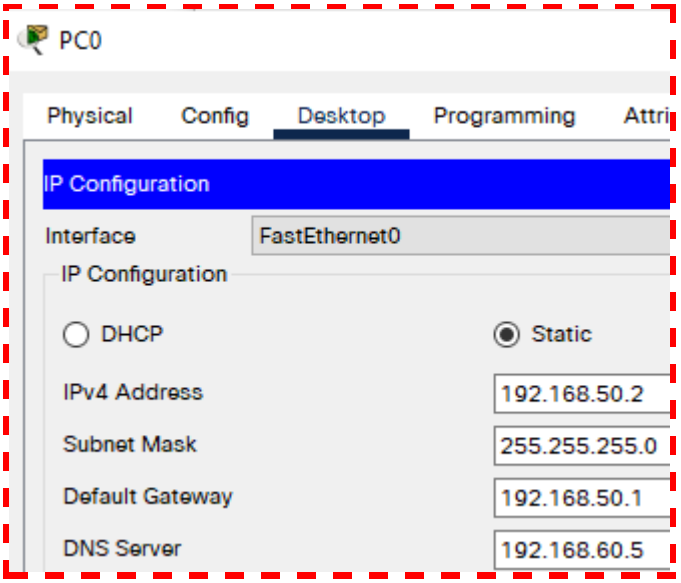
```
C:\>ping 192.168.60.5

Pinging 192.168.60.5 with 32 bytes of data:

Reply from 192.168.60.5: bytes=32 time=45ms TTL=125
Reply from 192.168.60.5: bytes=32 time=12ms TTL=125
Reply from 192.168.60.5: bytes=32 time=13ms TTL=125
Reply from 192.168.60.5: bytes=32 time=13ms TTL=125

Ping statistics for 192.168.60.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 12ms, Maximum = 45ms, Average = 20ms
```

- **Etapa 4**

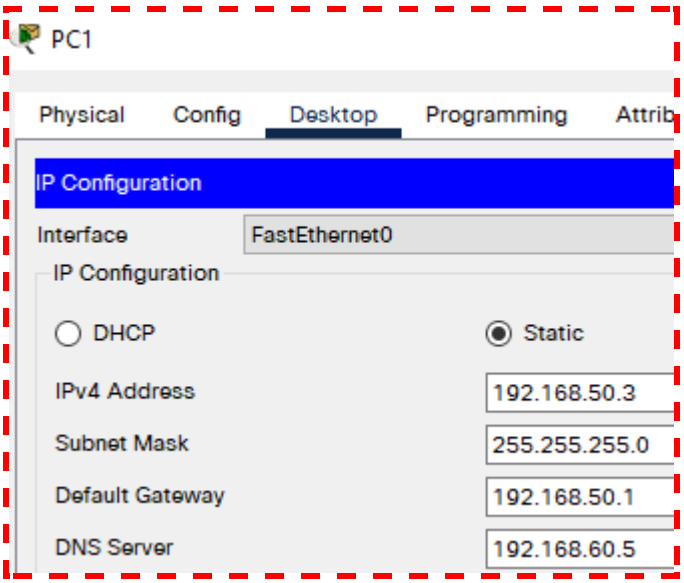
Nessa etapa faremos a configuração dos serviços HTTP, DHCP, FTP e DNS.

1) Configurar e testar o serviço DNS

Configurar os PC´s da rede 192.168.50.0 para usar o endereço de DNS 192.168.60.5



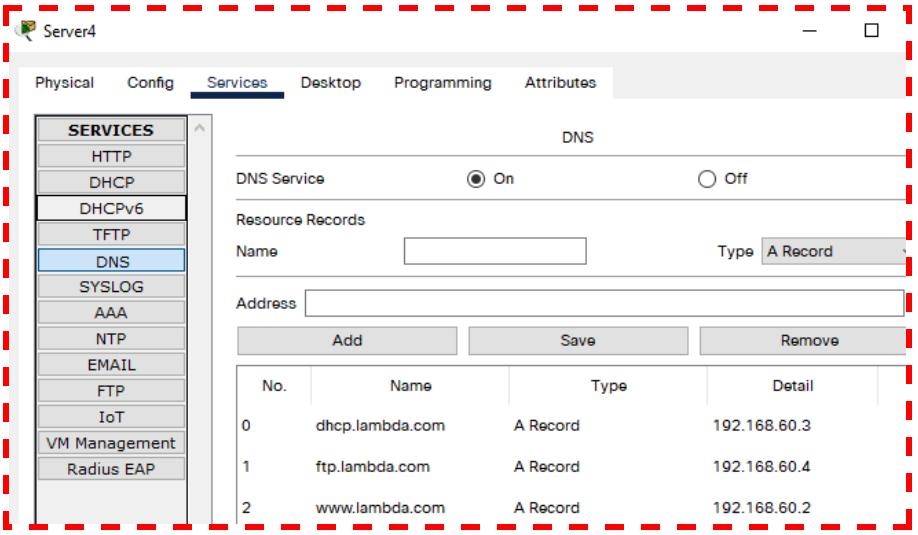
PC 0



PC 1

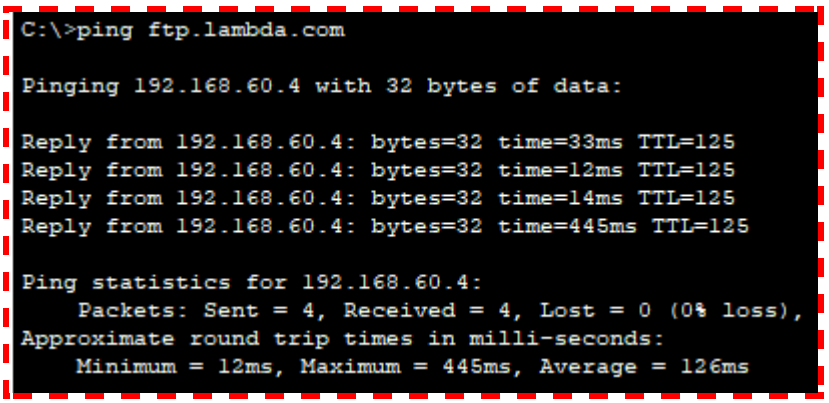
Configurar o serviço DNS no computador dns.lambda.com cujo endereço IP é 192.168.60.5

Seguir a configuração conforme a figura DNS-01.jpeg

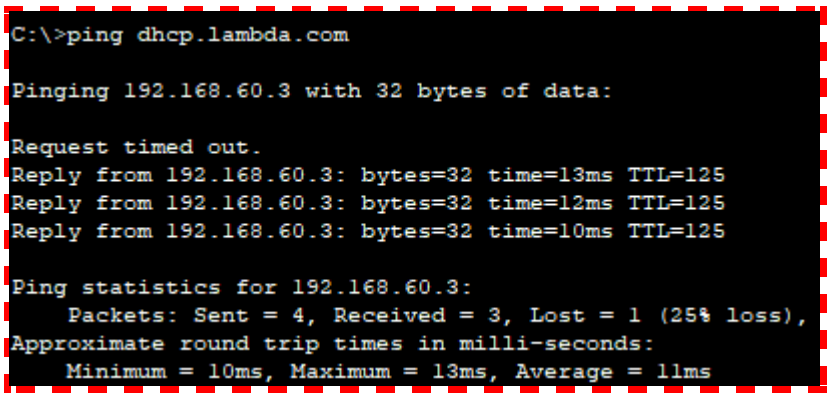


Testar a partir do PC0 ou do PC1 a conectividade usando os seguintes comandos:

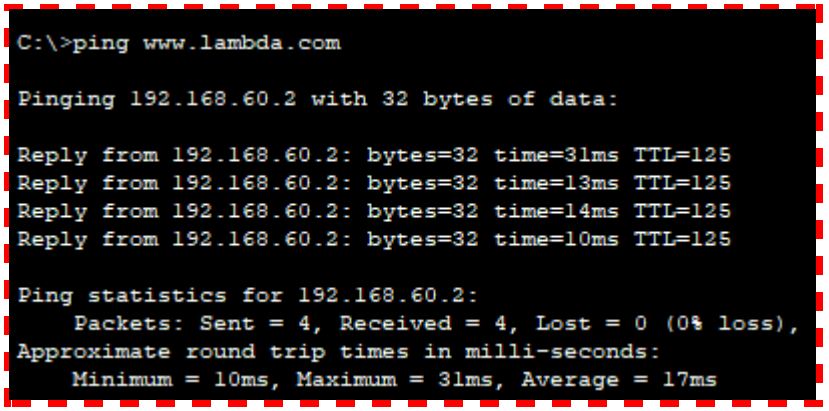
```
C:\>ping ftp.lambda.com
```



C:\>ping dhcp.lambda.com



C:\>ping www.lambda.com

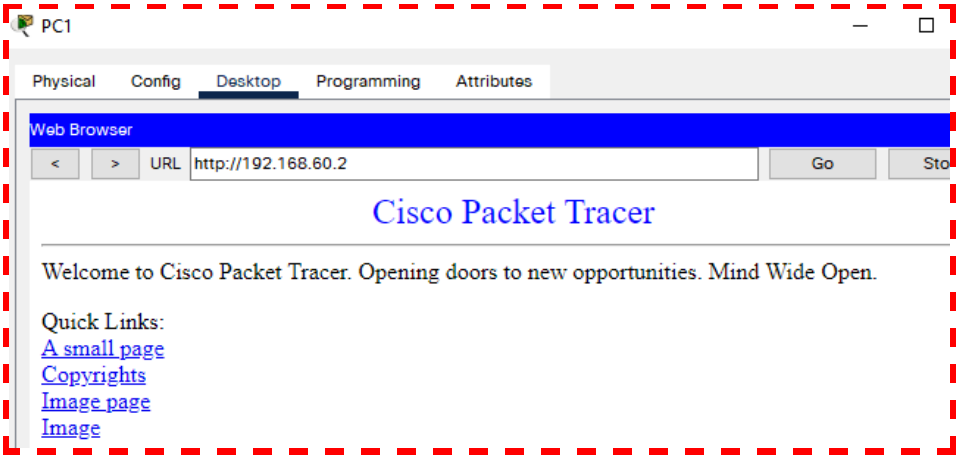


Observação: No inicio a resposta é lenta por conta do processo de resolução de nomes.

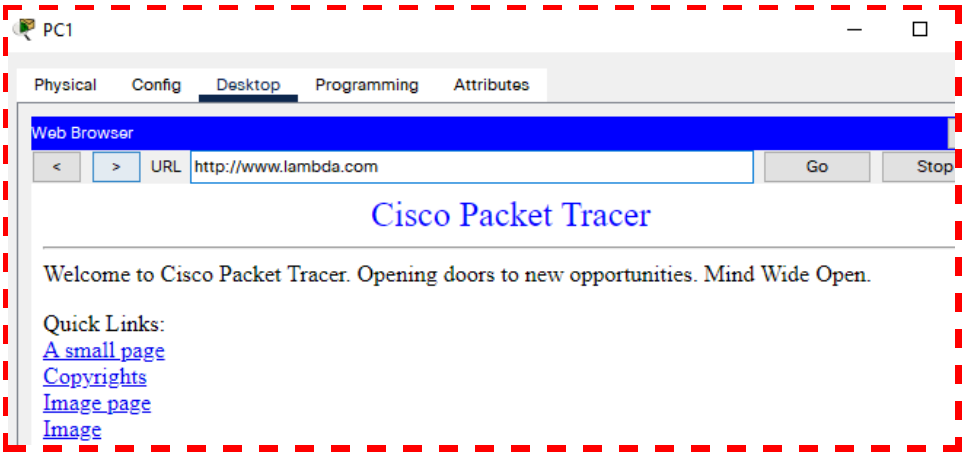
2) Configurar e testar o serviço HTTP

A configuração do serviço HTTP consiste em ativa-lo conforme a figura

Testes HTTP
do PC1 chamar do WebBrowser a URL 192.168.60.2



do PC1 chamar do WebBrowser a URL http://www.lambda.com



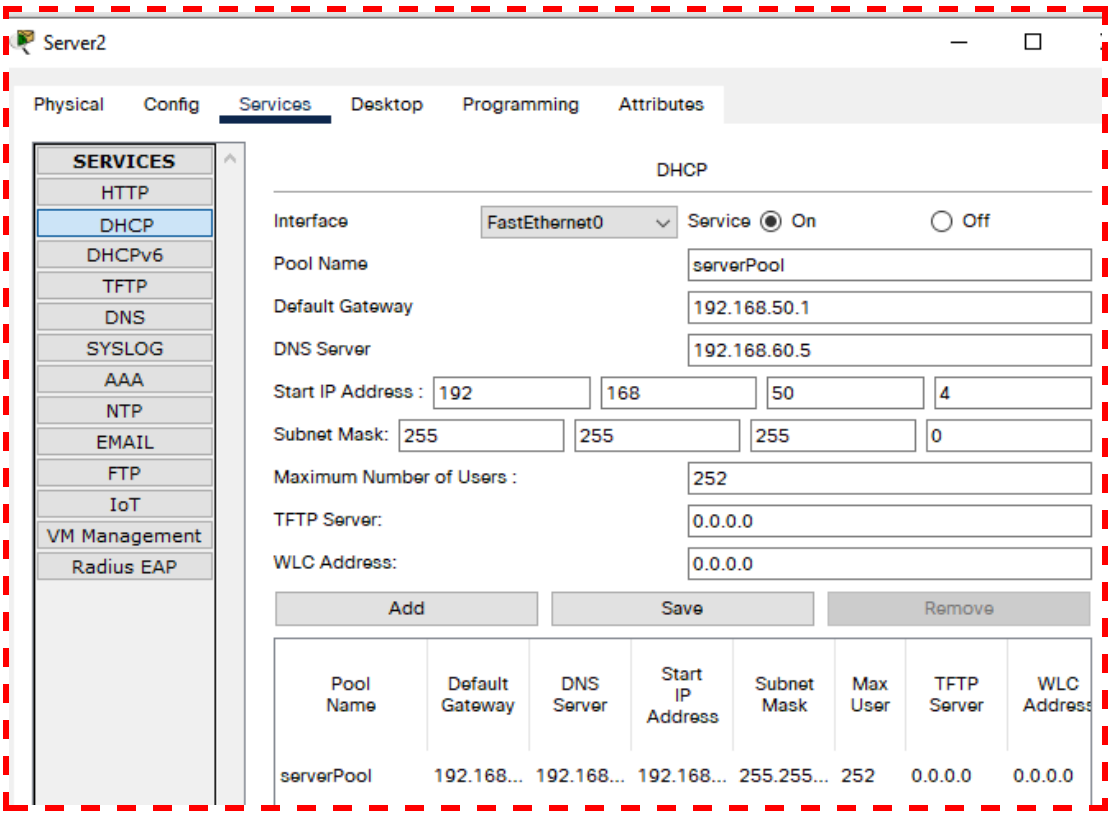
3) Configurar e testar o serviço DHCP

Configurar um computador da rede 192.168.50.0 com DHCP (Ip Dinamico)
Observar se o endereço IP é configurado.

Para receber endereços DHCP na rede 192.168.50.0 é necessário configurar
a interface do roteador a qual está configurado o default gateway. Assim
os broadcast de requisição de endereço DHCP serão passados adiante.

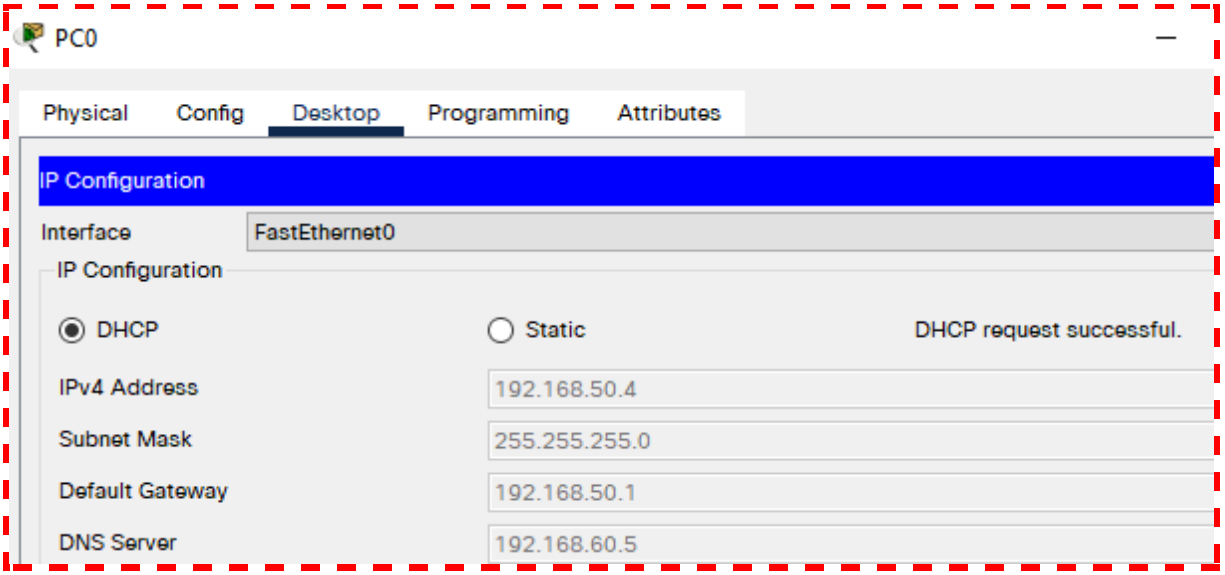
Configurar a interface Fastethernet 6/0 do roteador R1 para
encaminhar broadcast de requisição DHCP até o DHCP Server 192.168.60.3

```
R1#configure terminal
Enter configuration commands, one per line.  End with CRTL/Z.
R1(config)#interface fastethernet 6/0
R1(config-if)#ip helper-address 192.168.60.3
R1(config-if)#end
R1#
```




```
R1>enable
Password:
R1#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#interface fastethernet 6/0
R1(config-if)#ip helper-address 192.168.60.3
R1(config-if)#end
R1#
```

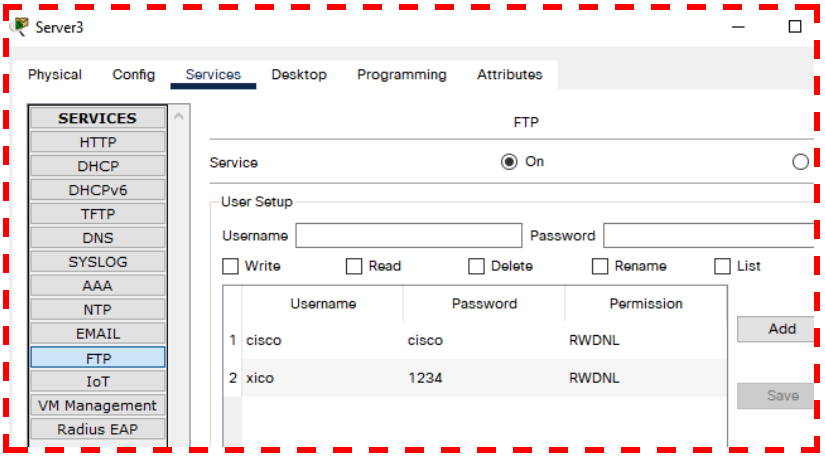
Observar se o endereço IPv4 foi configurado no computador.



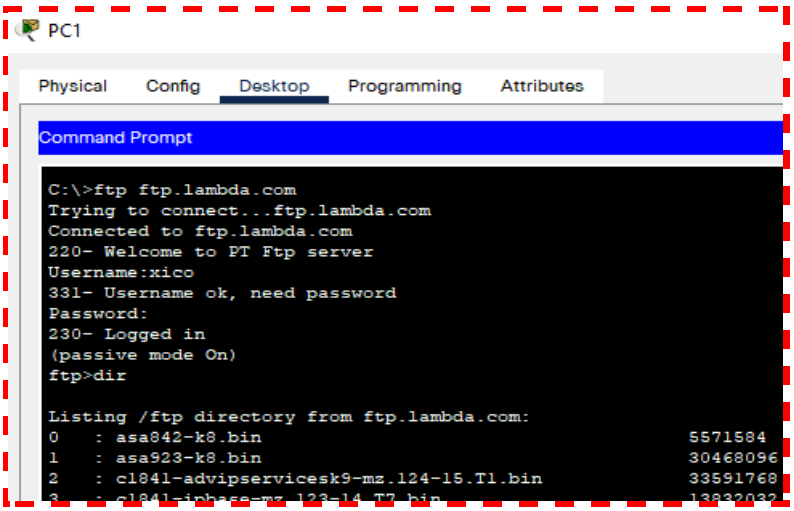
Testar a conectividade usando o ping para o IP 192.168.60.2

```
C:\>ping  192.168.60.2

Pinging 192.168.60.2 with 32 bytes of data:

Reply from 192.168.60.2: bytes=32 time=37ms TTL=125
Reply from 192.168.60.2: bytes=32 time=14ms TTL=125
Reply from 192.168.60.2: bytes=32 time=17ms TTL=125
Reply from 192.168.60.2: bytes=32 time=29ms TTL=125

Ping statistics for 192.168.60.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 14ms, Maximum = 37ms, Average = 24ms
```

4) Configurar e testar o serviço FTP




```
C:\>ftp ftp.lambda.com
Trying to connect...ftp.lambda.com
Connected to ftp.lambda.com
220- Welcome to PT Ftp server
Username:xico
331- Username ok, need password
Password: 1234
230- Logged in
(passive mode On)
ftp>dir
ftp>help
```


PC1
Physical
Config
Desktop
Programming
Attributes
Command Prompt
C:\>ftp ftp.lambda.com
Trying to connect...ftp.lambda.com
Connected to ftp.lambda.com
220- Welcome to PT Ftp server
Username:xico
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>dir
Listing /ftp directory from ftp.lambda.com:
0 : asa842-k8.bin 5571584
1 : asa923-k8.bin 30468096
2 : c1841-advipservicesk9-mz.124-15.T1.bin 33591768