CISCO PACKET TRACER

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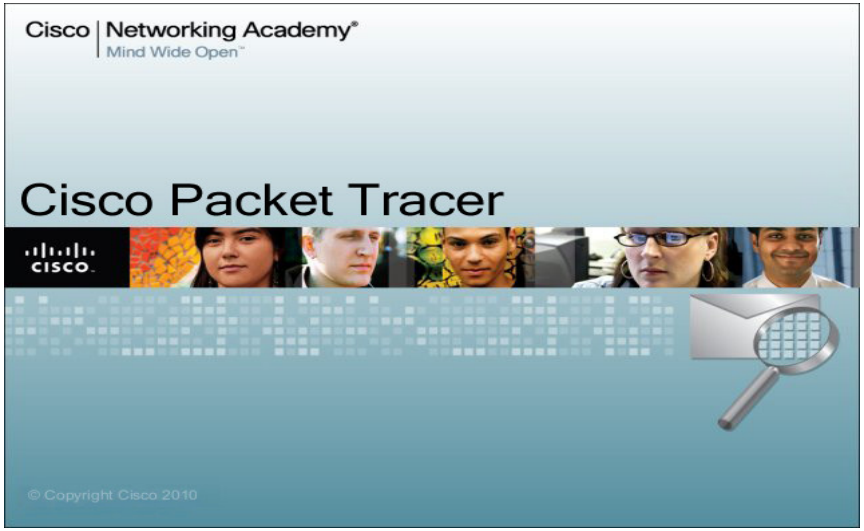
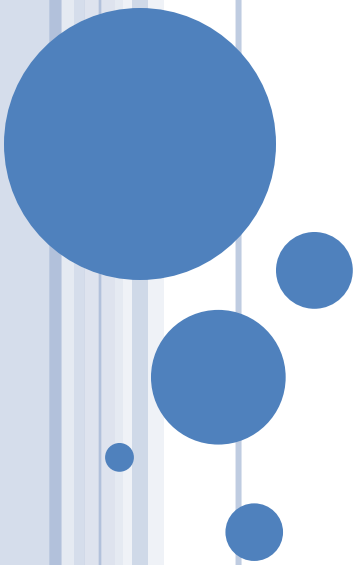
Introdução

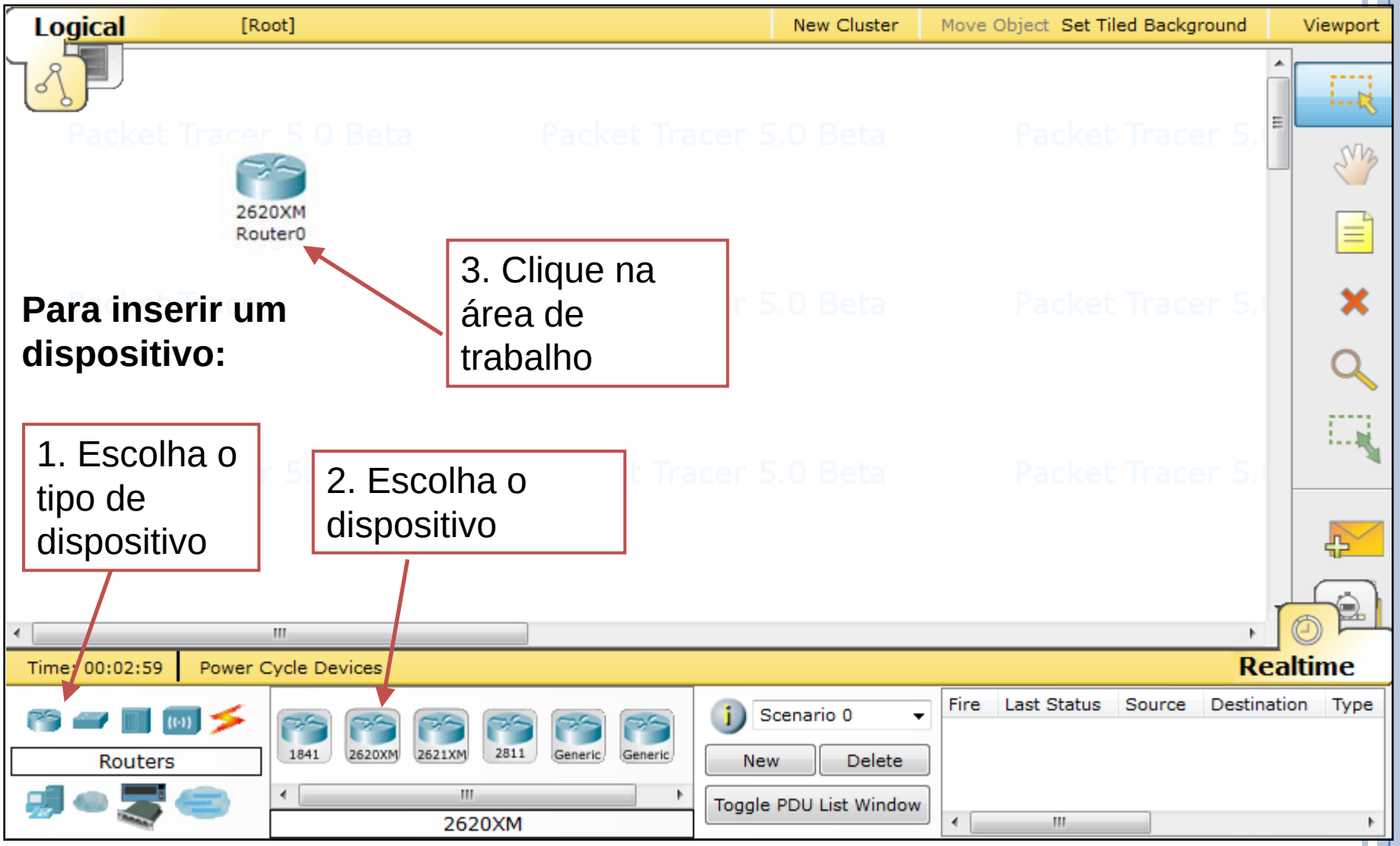
- Packet Tracer v5.3 é um simulador de redes desenvolvido pela Cisco Systems®;
- Capaz de simular o funcionamento de uma rede ethernet de par trançado, wireless (802.11) ou de fibra óptica;





Interface

Inserindo dispositivos

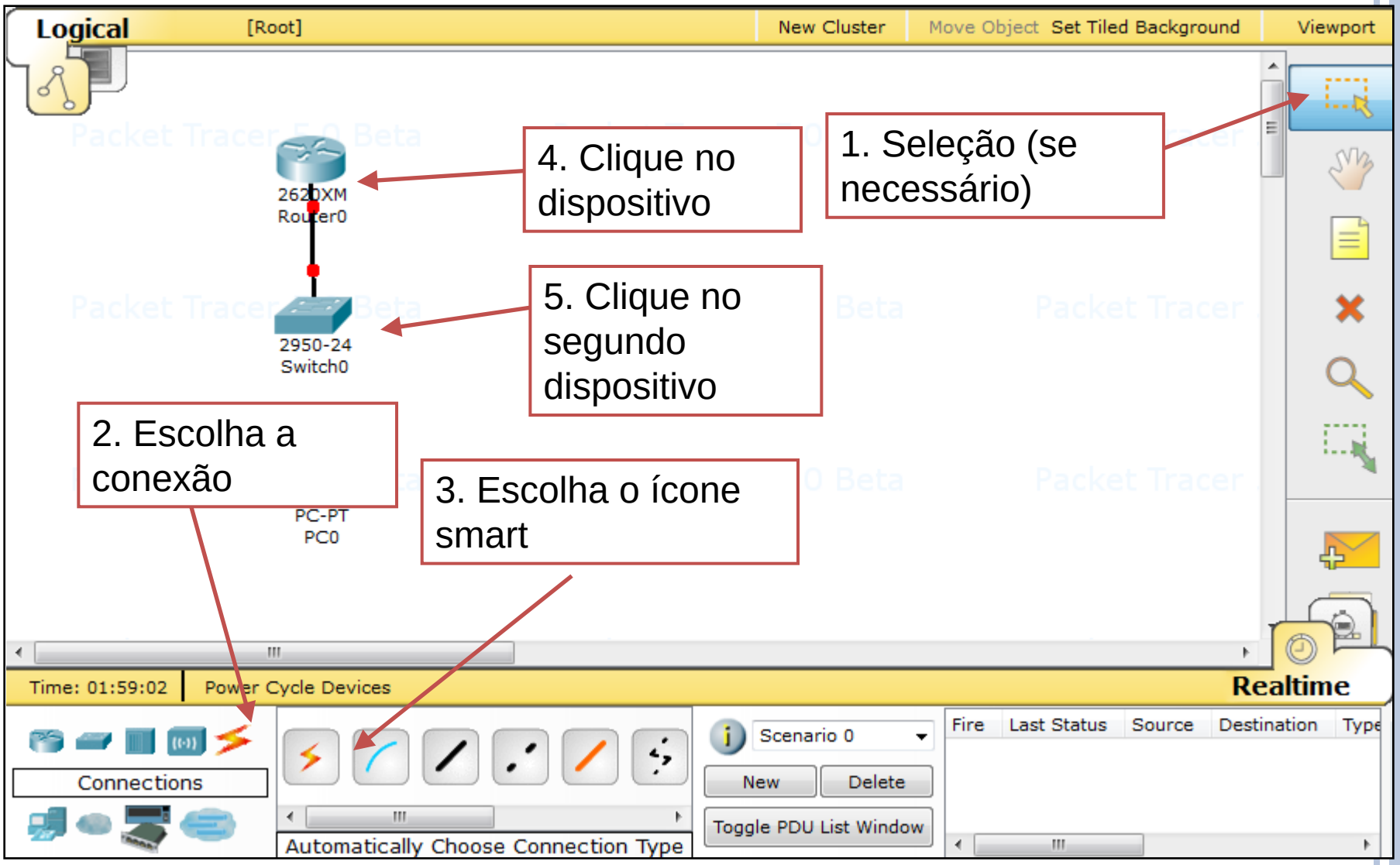


Principais Ferramentas

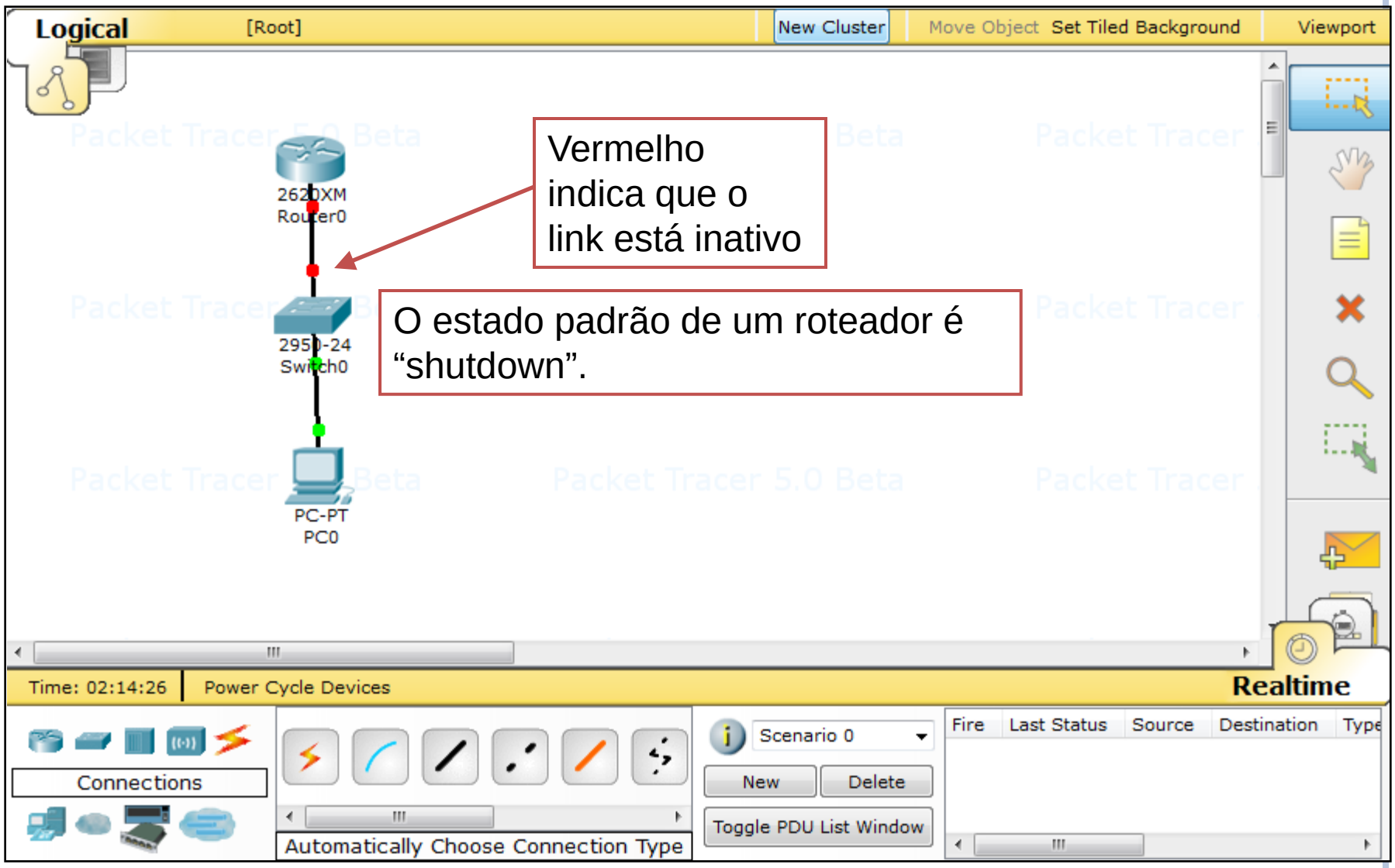
Dicas

- Você pode criar várias instâncias do mesmo dispositivo, mantendo pressionada a tecla CTRL ao selecionar o dispositivo para adicionar ao espaço de trabalho.
- Você pode cancelar a criação de vários dispositivos, clicando nele novamente ou outra ferramenta. Além disso, a tecla ESC irá cancelar qualquer ação.
- Vários dispositivos podem ser selecionados ao mesmo tempo usando a ferramenta de selecionar e arrastar em torno dos dispositivos desejados.

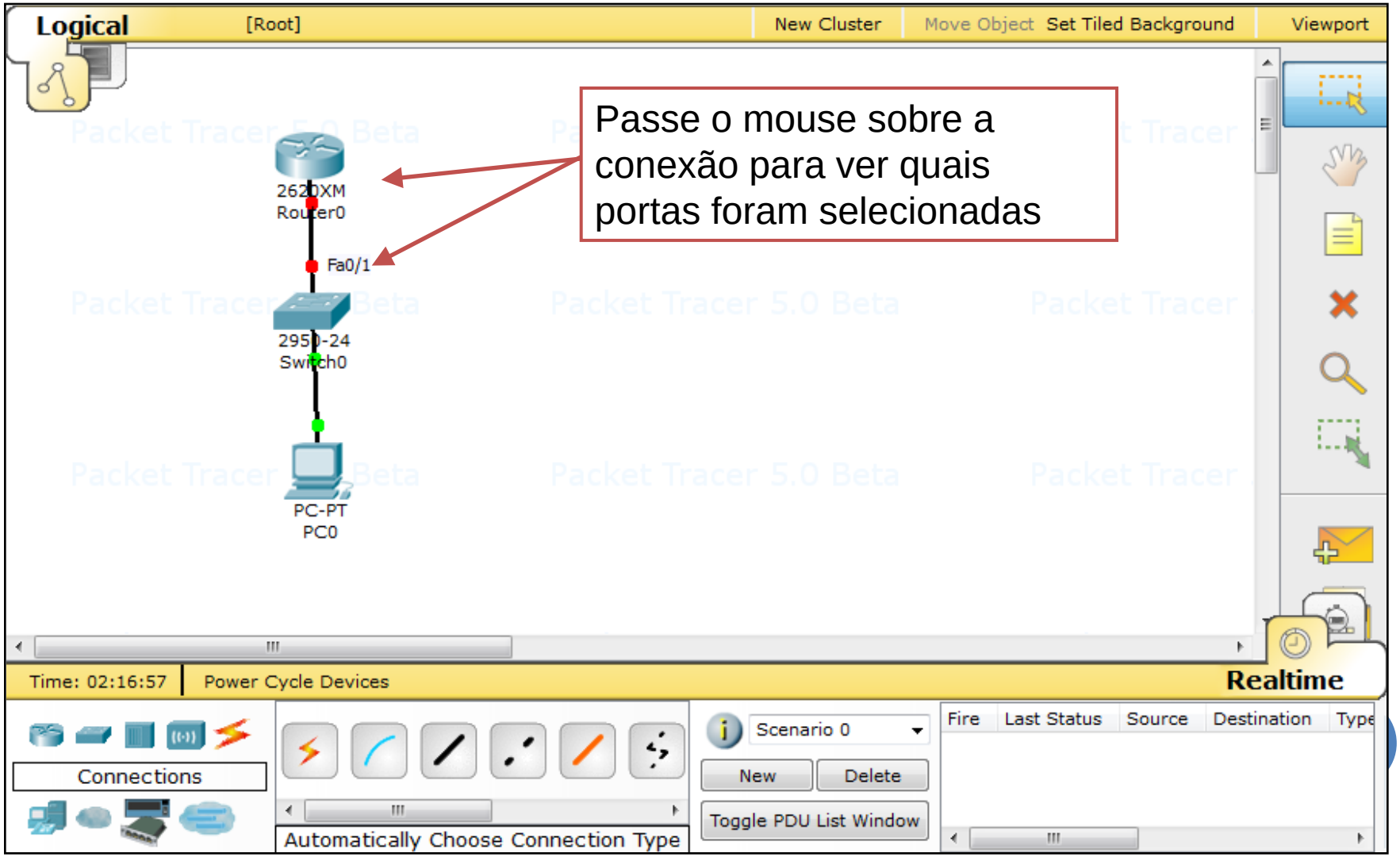
Conexões


Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
2620XM
Router0
2950-24
Switch0
PC-PT
PC0
4. Clique no dispositivo
1. Seleção (se necessário)
5. Clique no segundo dispositivo
2. Escolha a conexão
3. Escolha o ícone smart
Time: 01:59:02
Power Cycle Devices
Realtime
Connections
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type

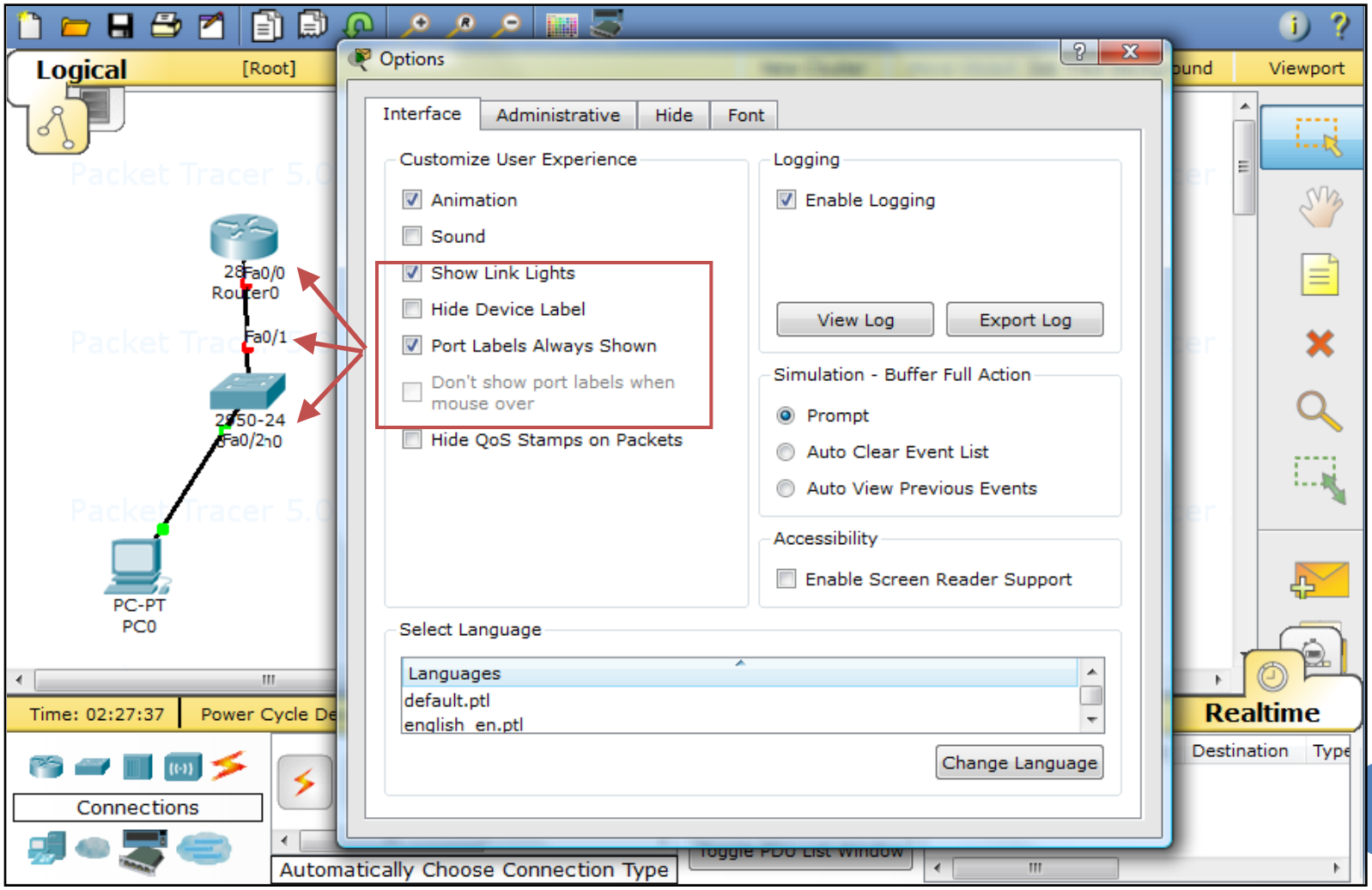
STATUS DA CONEXÃO



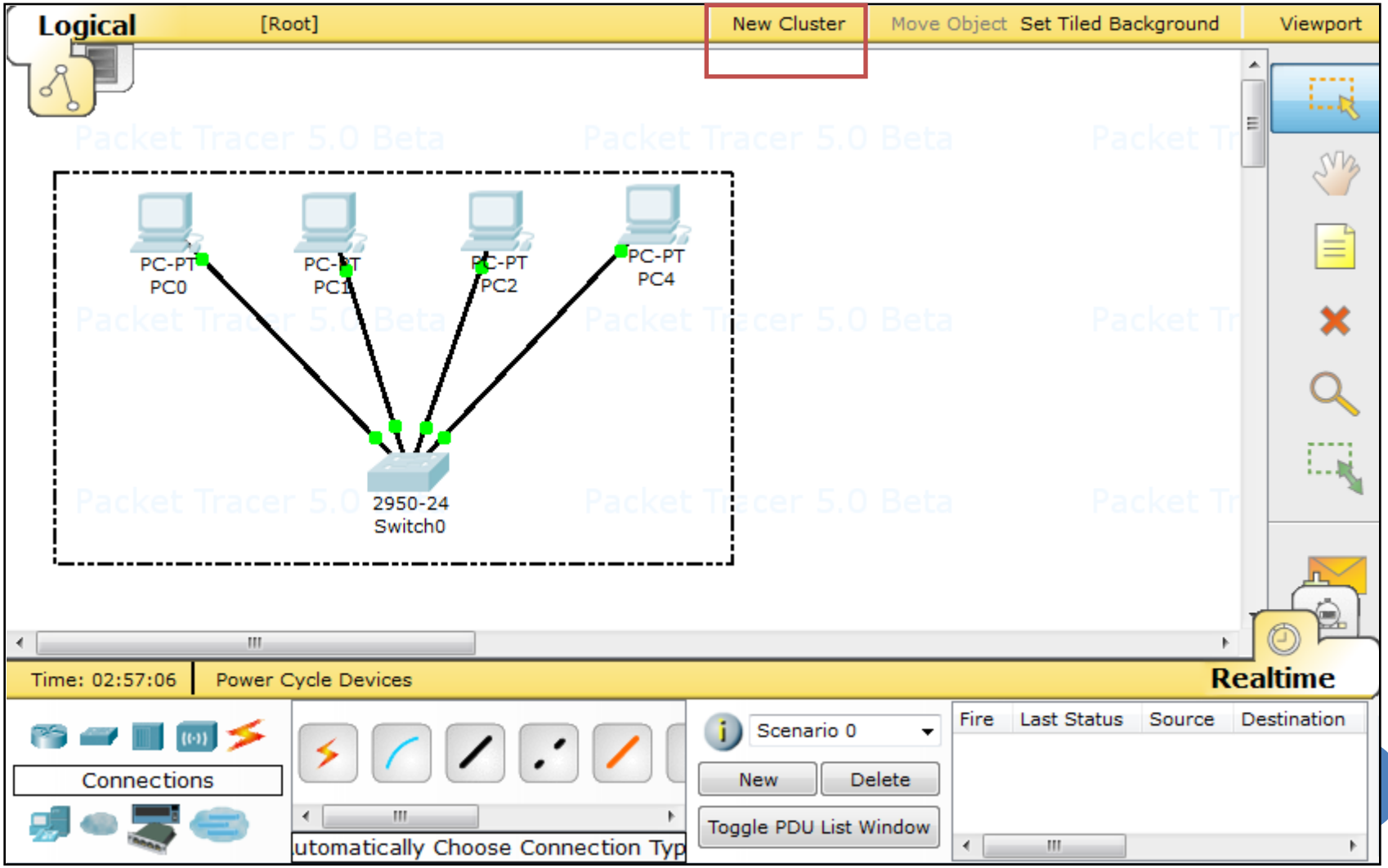
Visualizando Portas



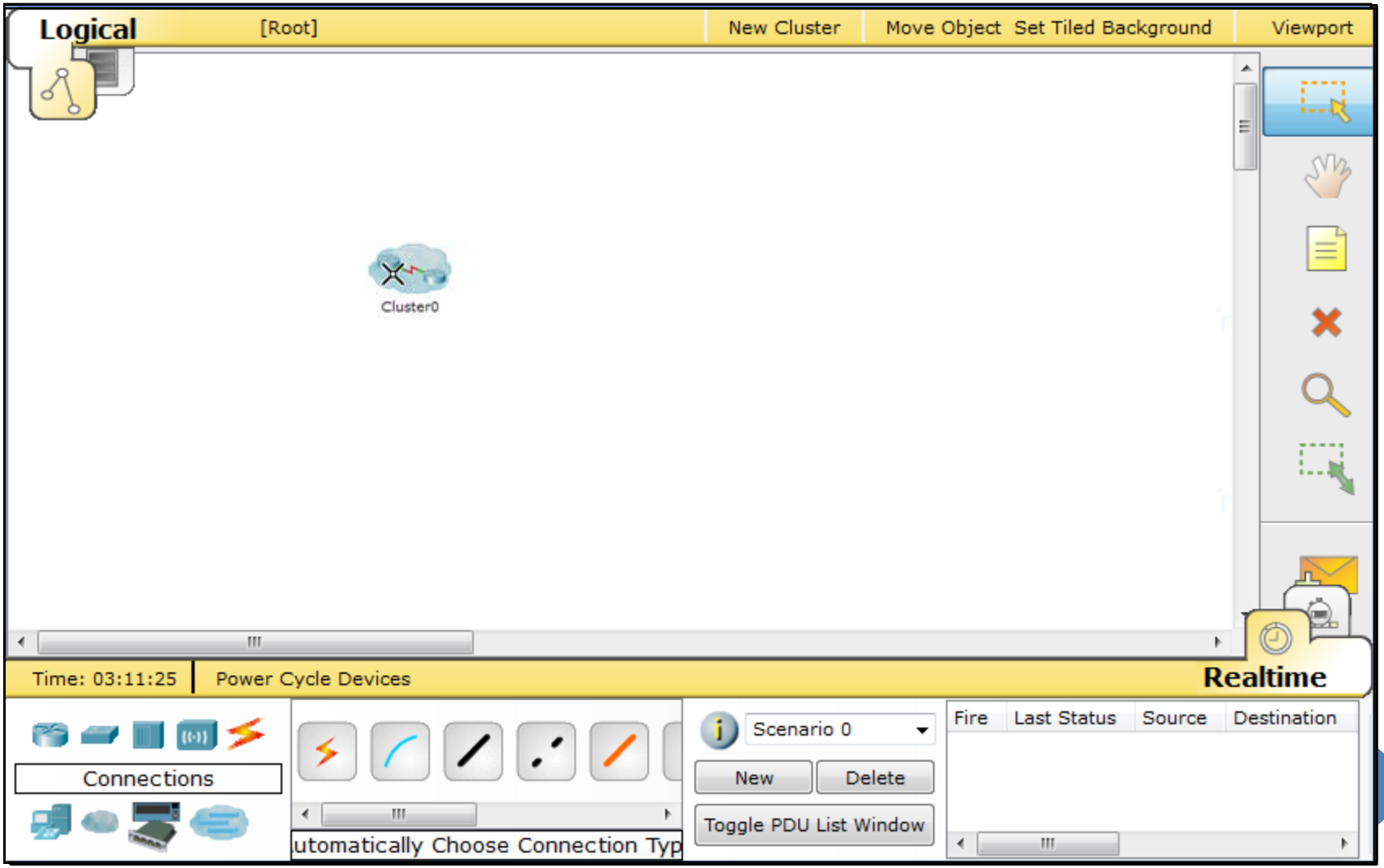
Opções dos Dispositivos



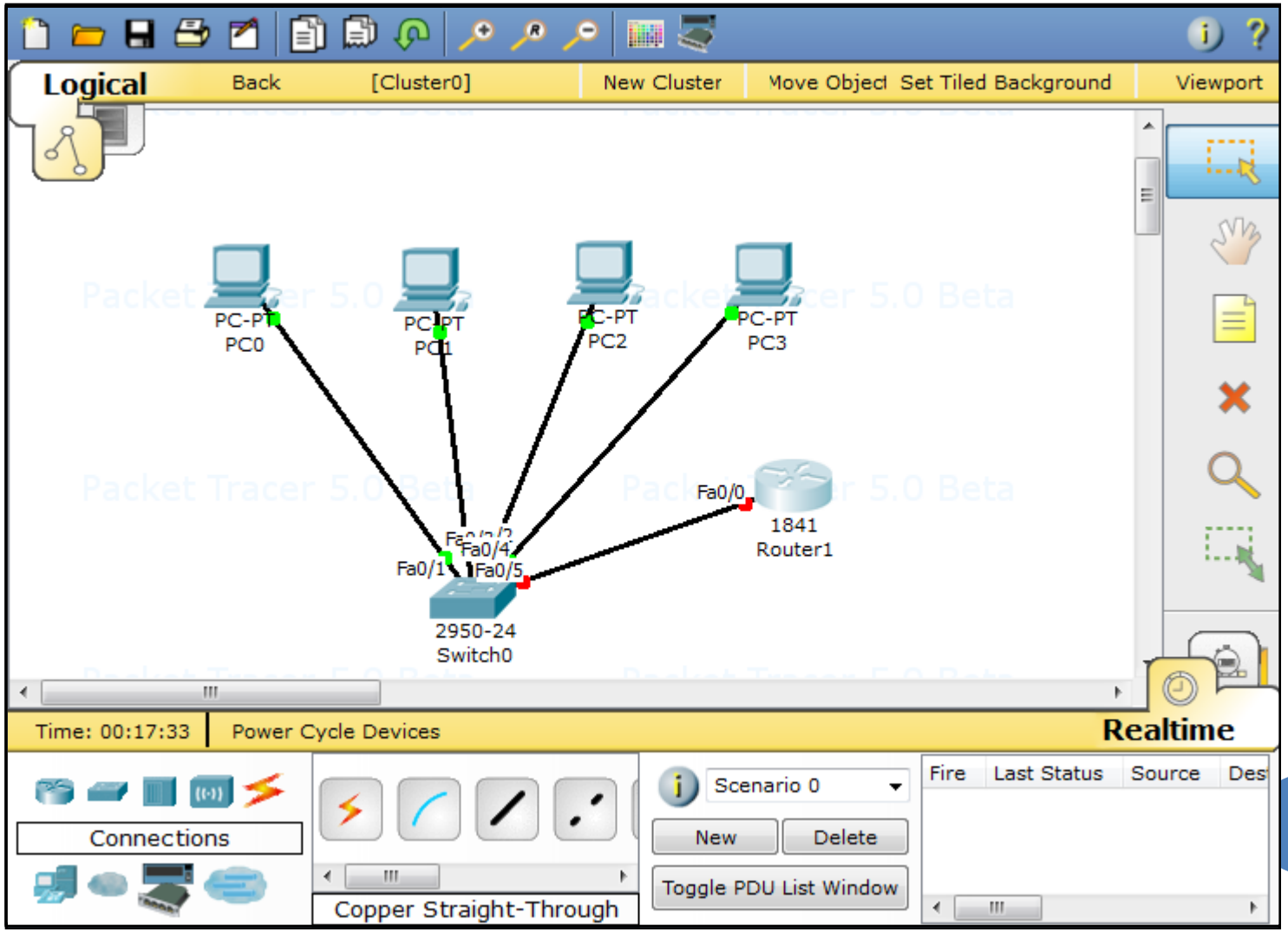
Criando Clusters (Subredes)



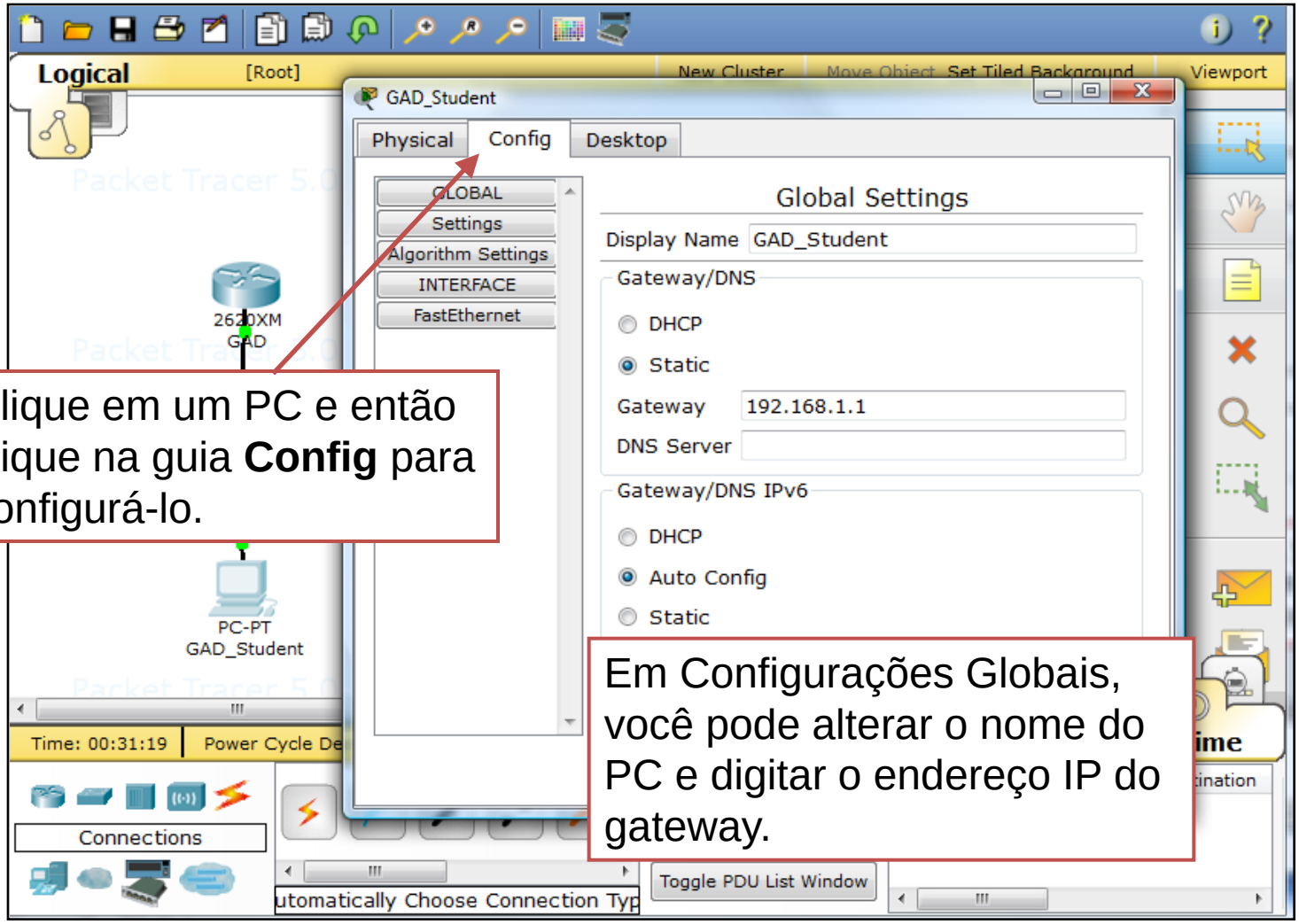
Criando Clusters (Subredes) (2)



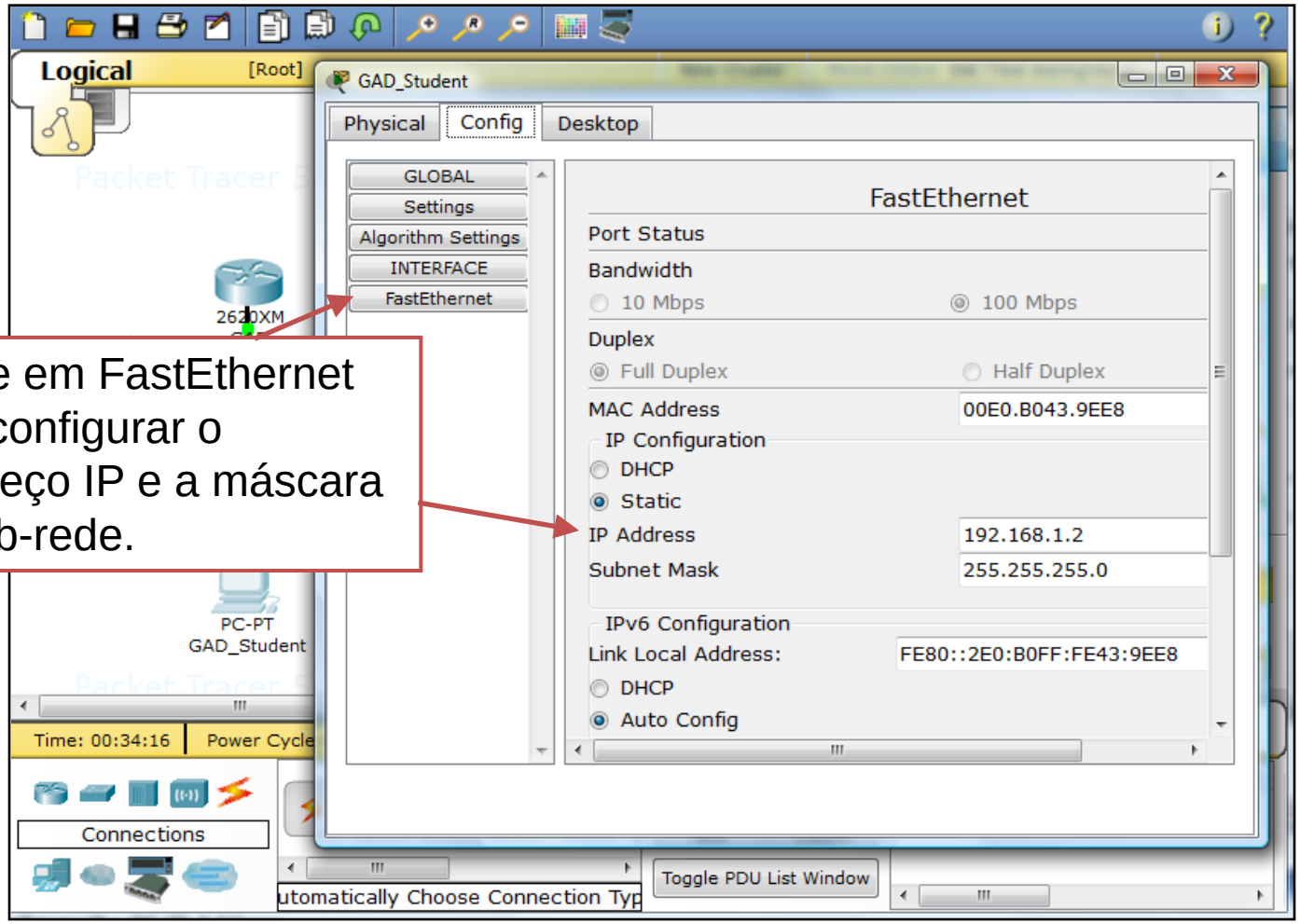
Adicionando um dispositivo ao cluster



Configurando o Endereço do Gateway

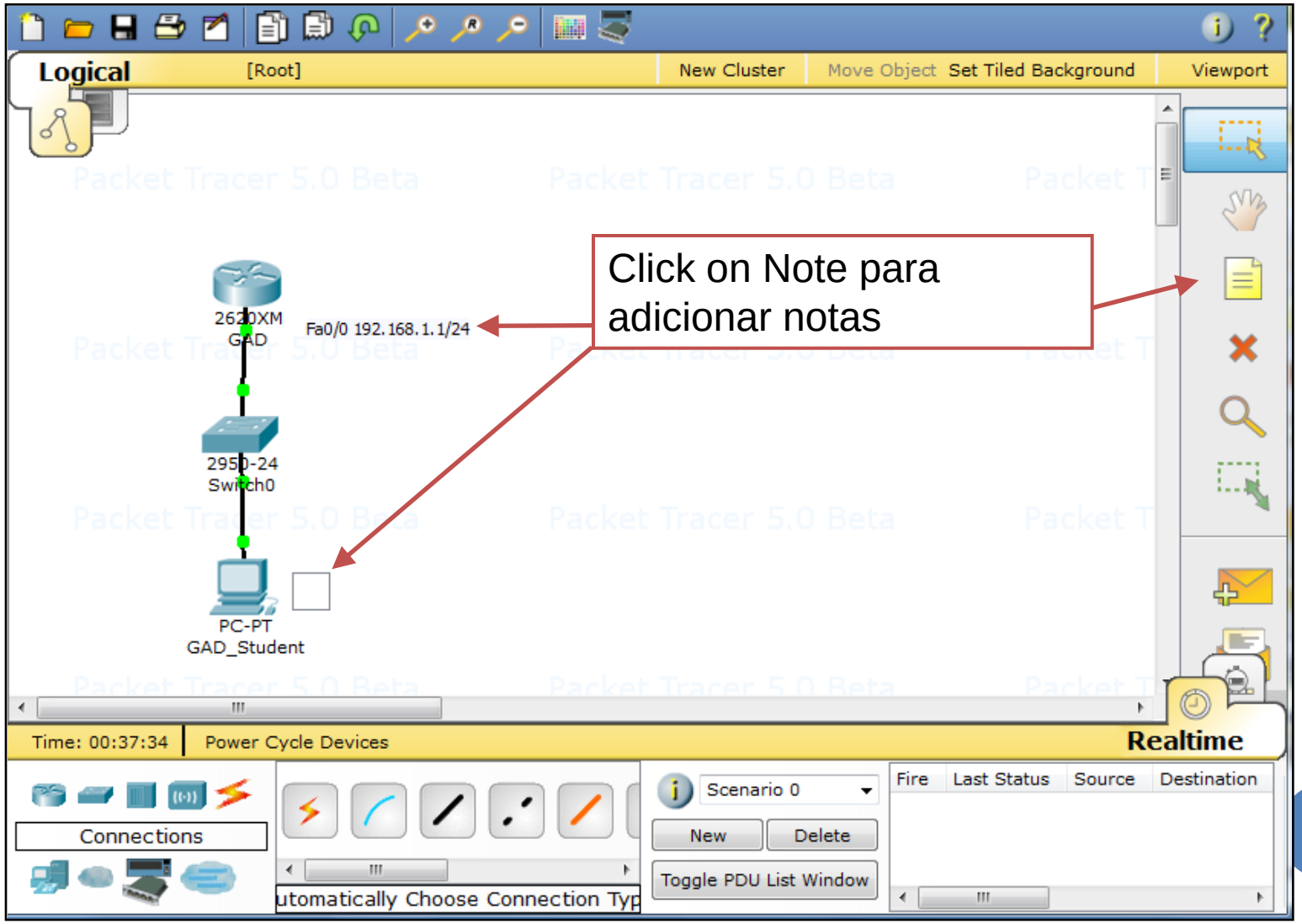


Configure o endereço IP do PC

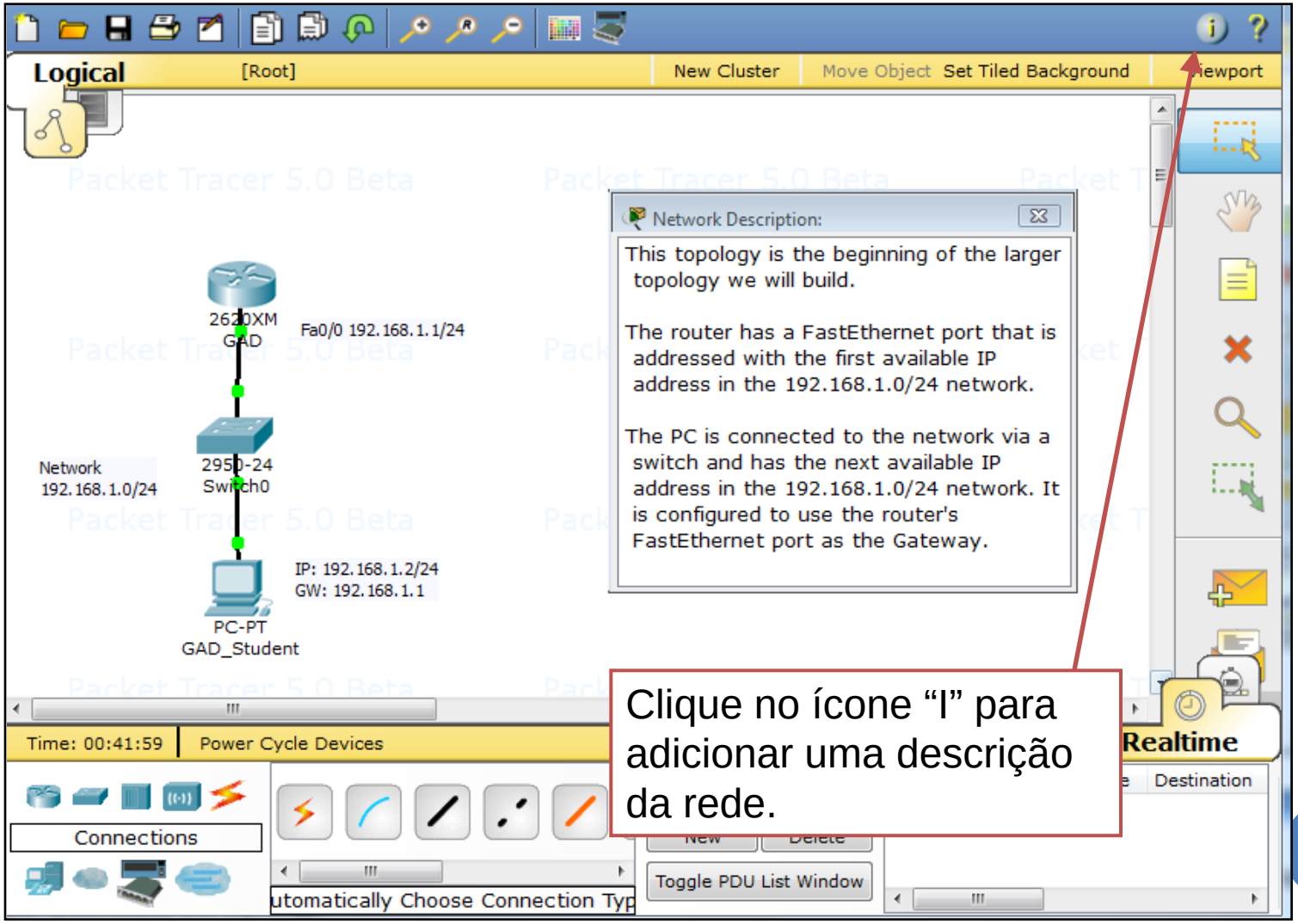


Clique em FastEthernet para configurar o endereço IP e a máscara de sub-rede.

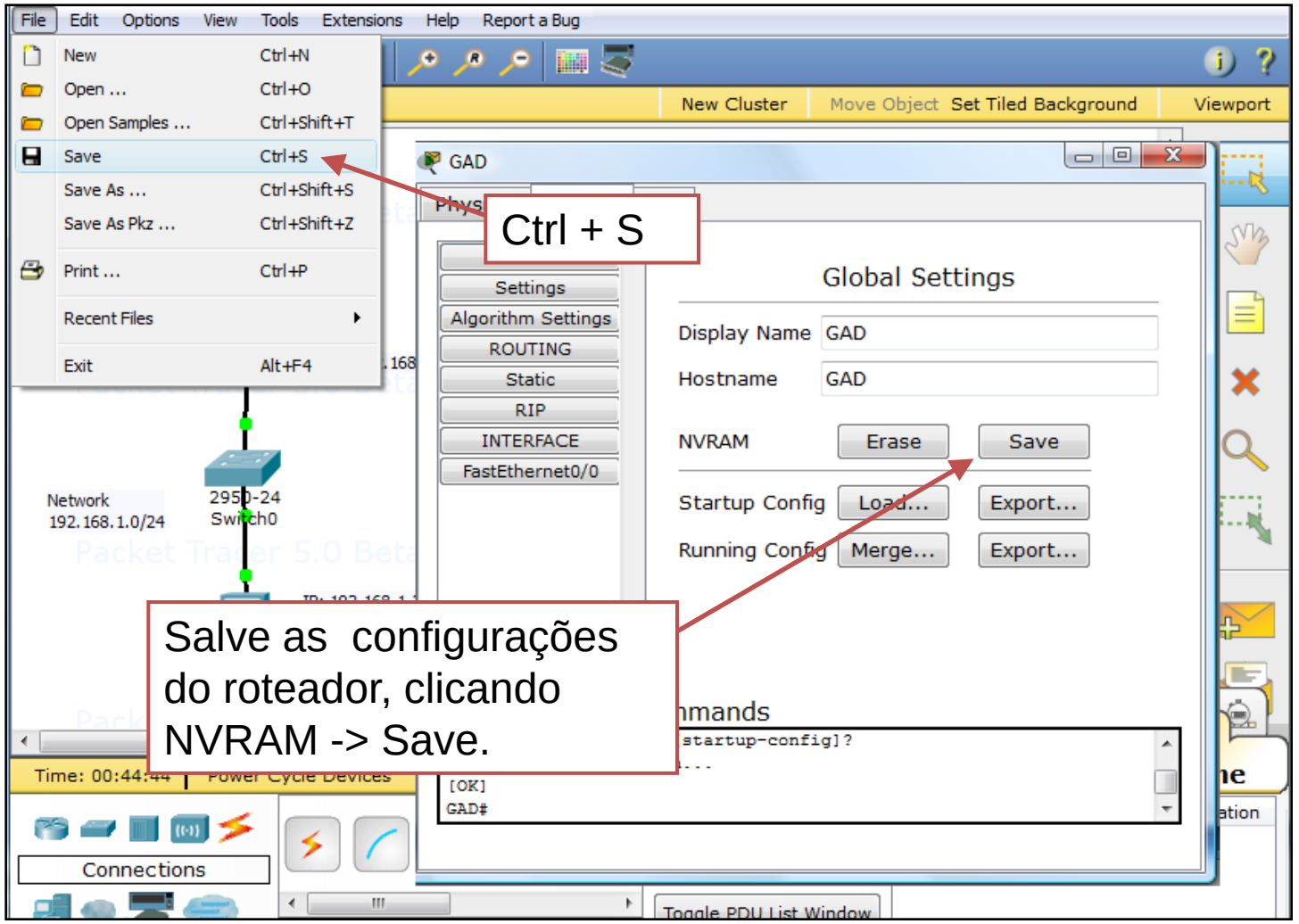
Adicionando Notas



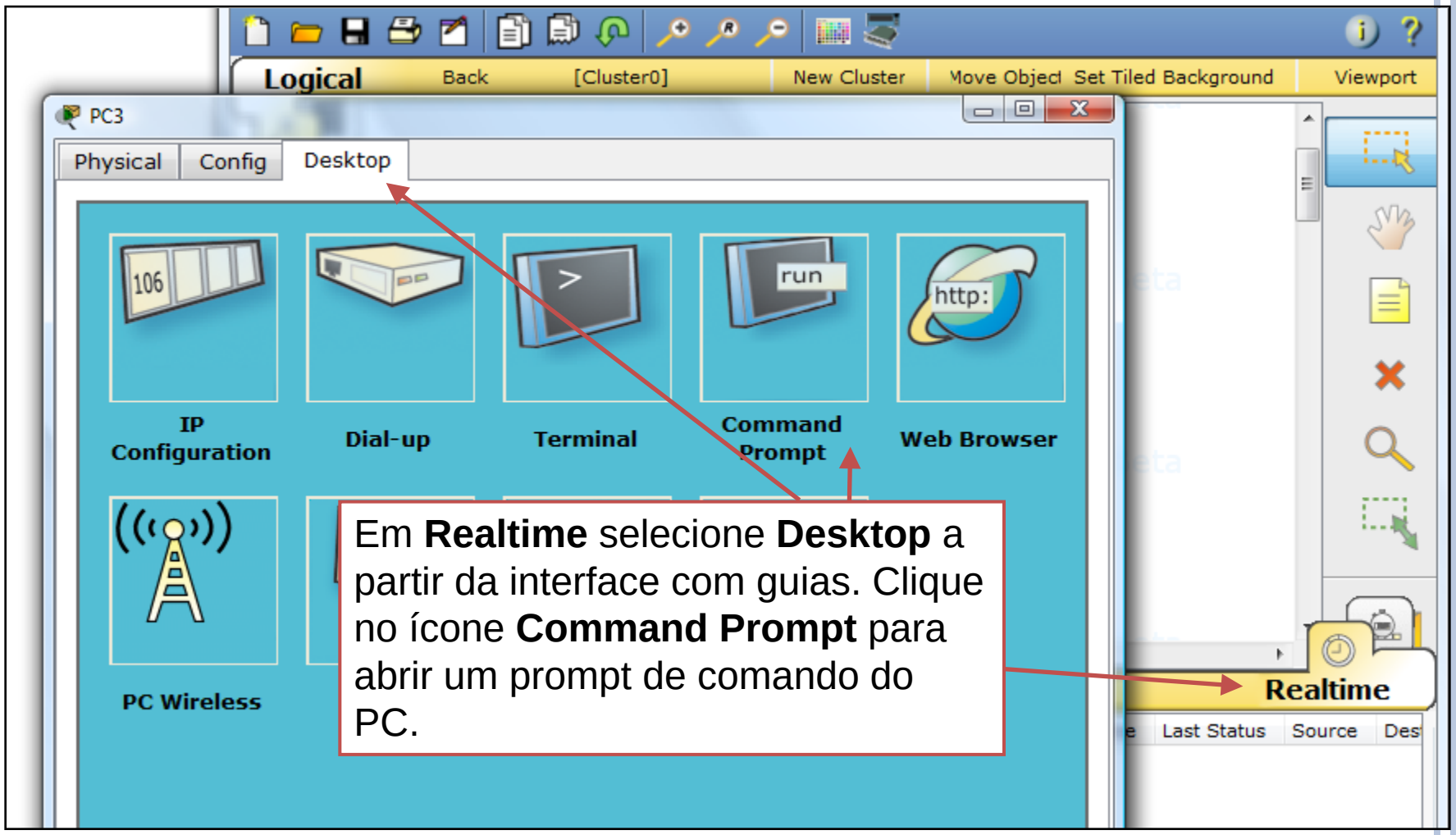
Descrição da Rede



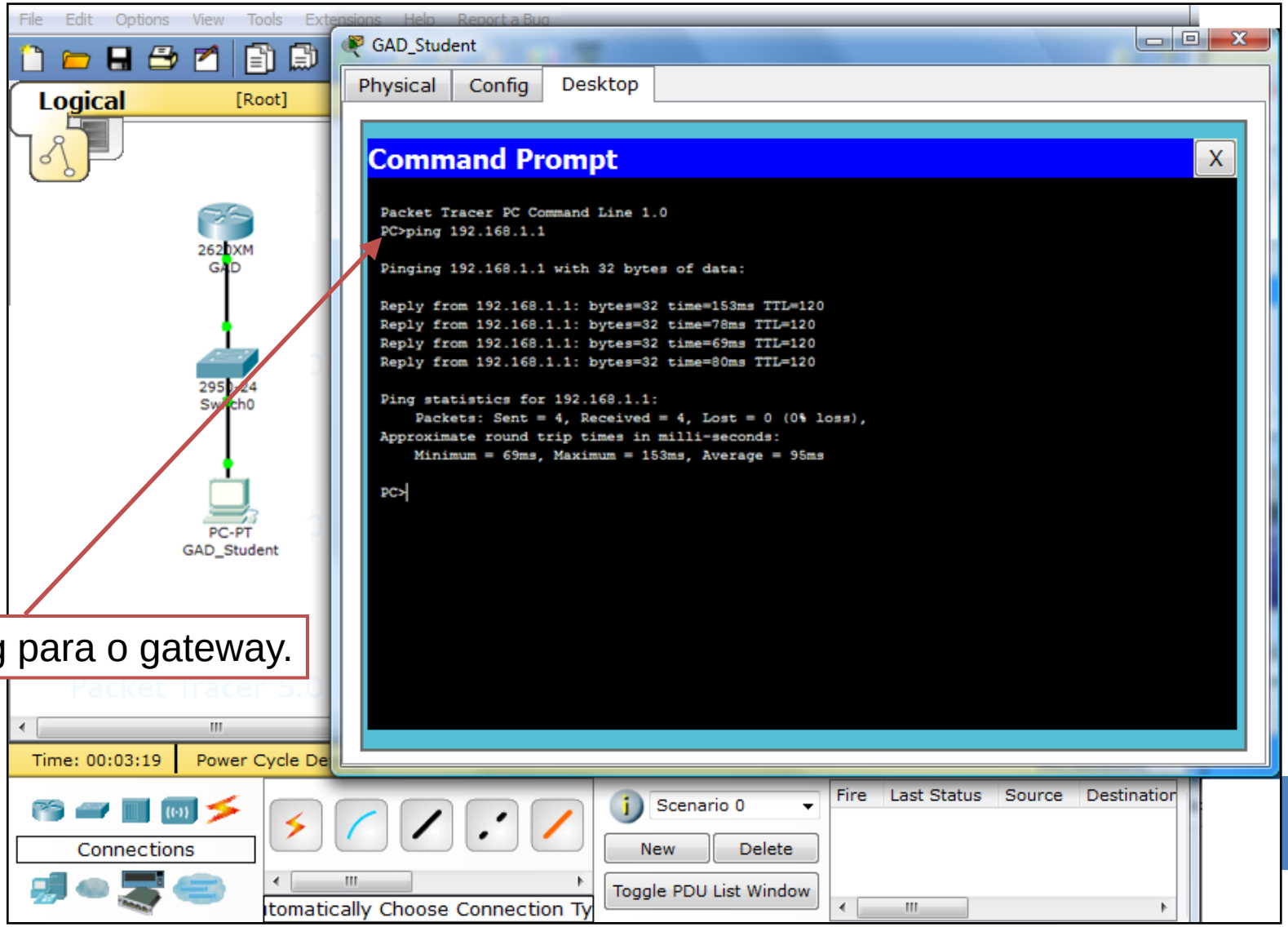
Salvando a topologia



Verificação em Tempo Real



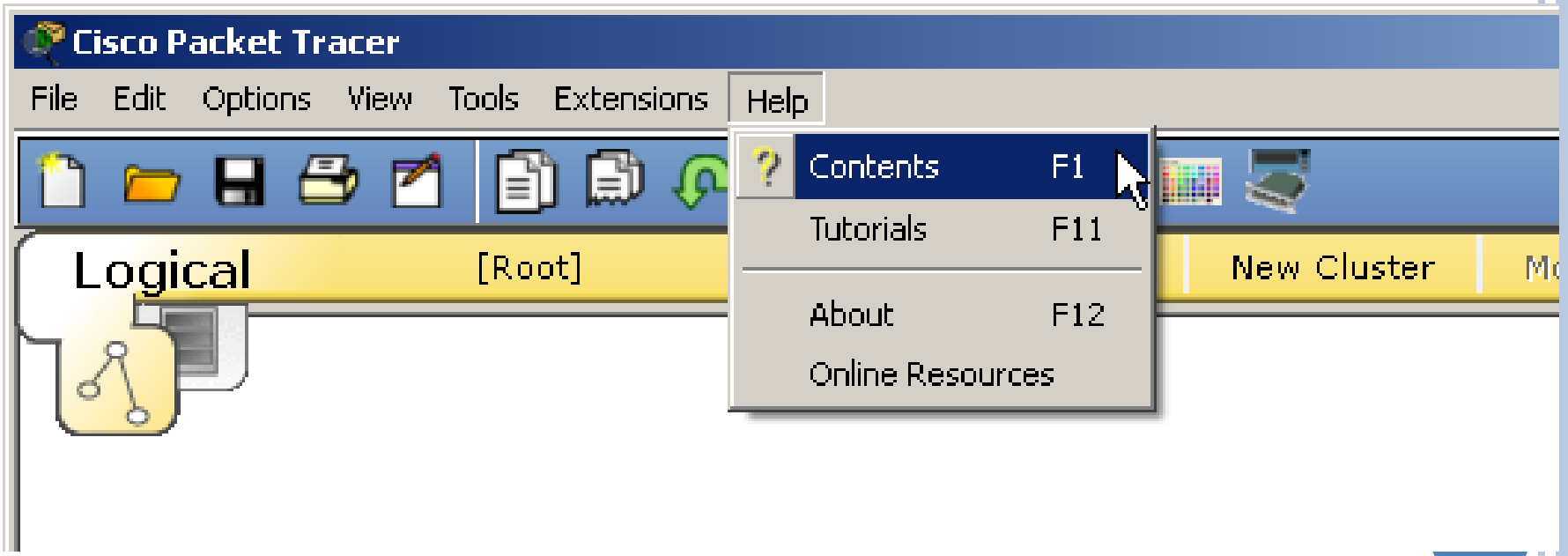
Ping para o Gateway



Ping para o gateway.

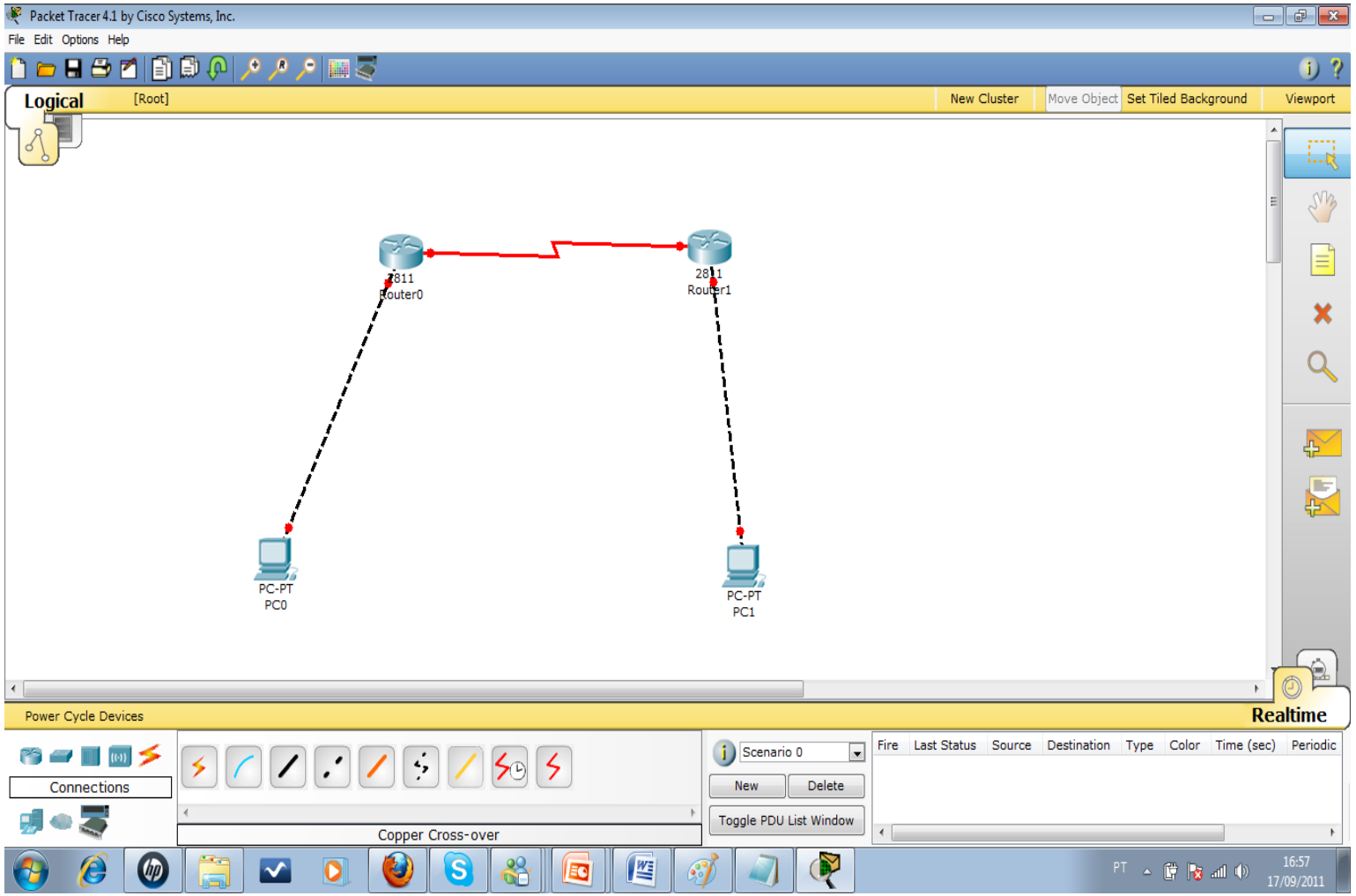
Em caso de dúvida …

- Ajuda (F1)
- Tutoriais (F11)
- Recursos Online (Online Resources)



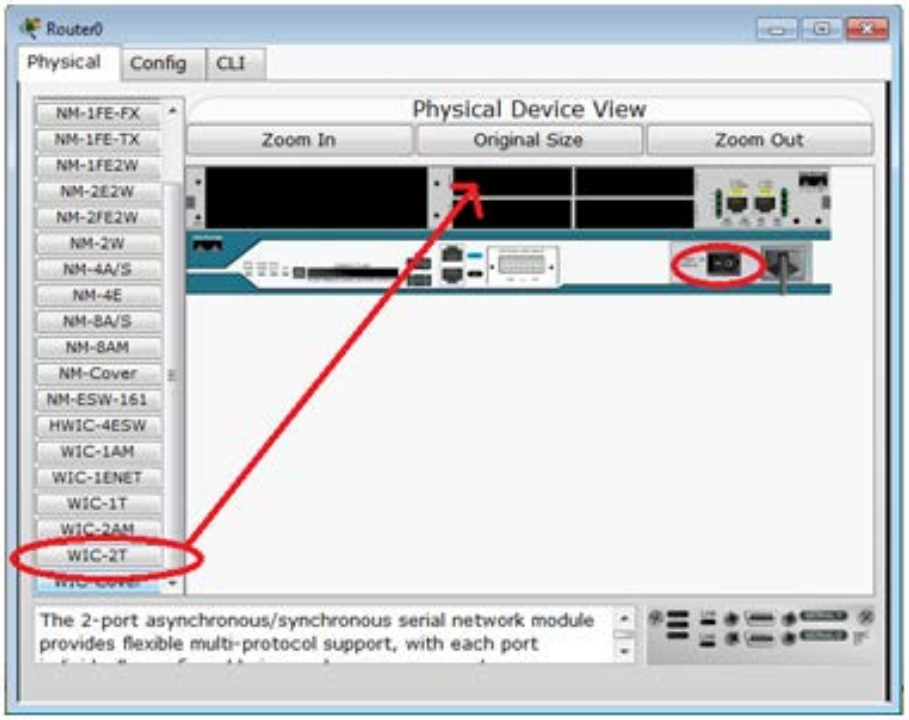
Tutorial RIP

TOPOLOGIA


Packet Tracer 4.1 by Cisco Systems, Inc.
File Edit Options Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
7811
Router0
2811
Router1
PC-PT
PC0
PC-PT
PC1
Power Cycle Devices
Realtime
Connections
Copper Cross-over
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time (sec)
Periodic
PT
16:57
17/09/2011

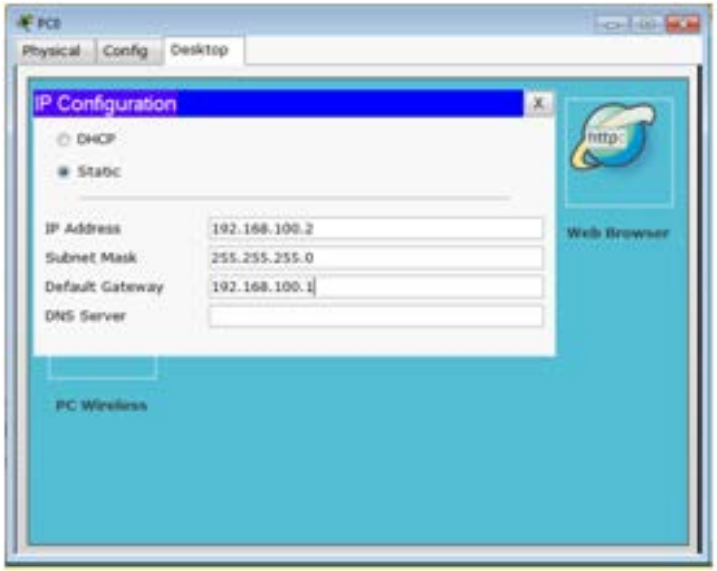
Roteadores

- Dois cliques em cima do Router0
- Desligar o roteador da tomada
- Escolher a placa WIC-2T (clica e arrasta) para o slot vazio
- Ligar roteador na tomada.
- Repetir processo no router 1



Configurações

- PC0:
  - IP: 192.168.100.2
  - netmask: 255.255.255.0
  - gateway: 192.168.100.1
- PC1:
  - IP : 172.16.0.2,
  - netmask: 255.255.0.0
  - gateway: 172.16.0.1



Configurando os Roteadores

- No Router0:

Continue with configuration dialog? [yes/no]: no

Router>enable

Router#configure terminal

Router(config)#interface FastEthernet0/0

Router(config-if)#ip address 192.168.100.1
255.255.255.0

Router(config-if)#no shutdown

Router(config-if)#exit

Configurando os Roteadores (2)

- No Router0:

Router(config)#interface Serial0/3/0

Router(config-if)#ip address 200.100.100.1 255.255.255.0

Router(config-if)#clock rate 500000

Router(config-if)#no shutdown

Configurando os Roteadores (3)

- Idem no Router1:

Continue with configuration dialog? [yes/no]: no

Router>enable

Router#configure terminal

Router(config)#interface FastEthernet0/0

Router(config-if)#ip address 172.16.0.1 255.255.0.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#interface Serial0/3/0

Router(config-if)#ip address 200.100.100.2 255.255.255.0

Router(config-if)#no shutdown

Testando a rede

- Clicar no PC0 e escolher aba “Desktop”
- No prompt digitar: ping 172.16.0.2 (PC1)
- O comando irá falhar!

Configurando RIP

- No Router0:

Router(config-if)#exit

Router(config)#router rip

Router(config-router)#network 200.100.100.0

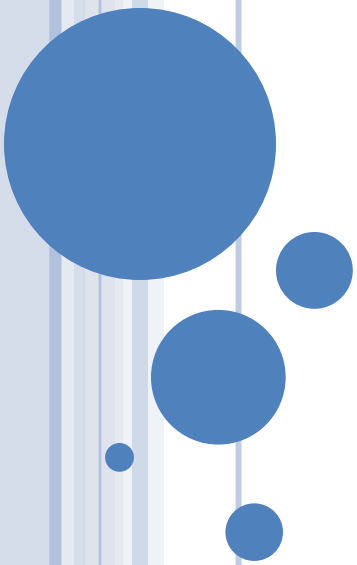
Router(config-router)#network 192.168.100.0

- No Router1:
- Router(config-if)#exit
- Router(config)#router rip
- Router(config-router)#network 200.100.100.0
- Router(config-router)#network 172.16.0.0

Configurando RIP

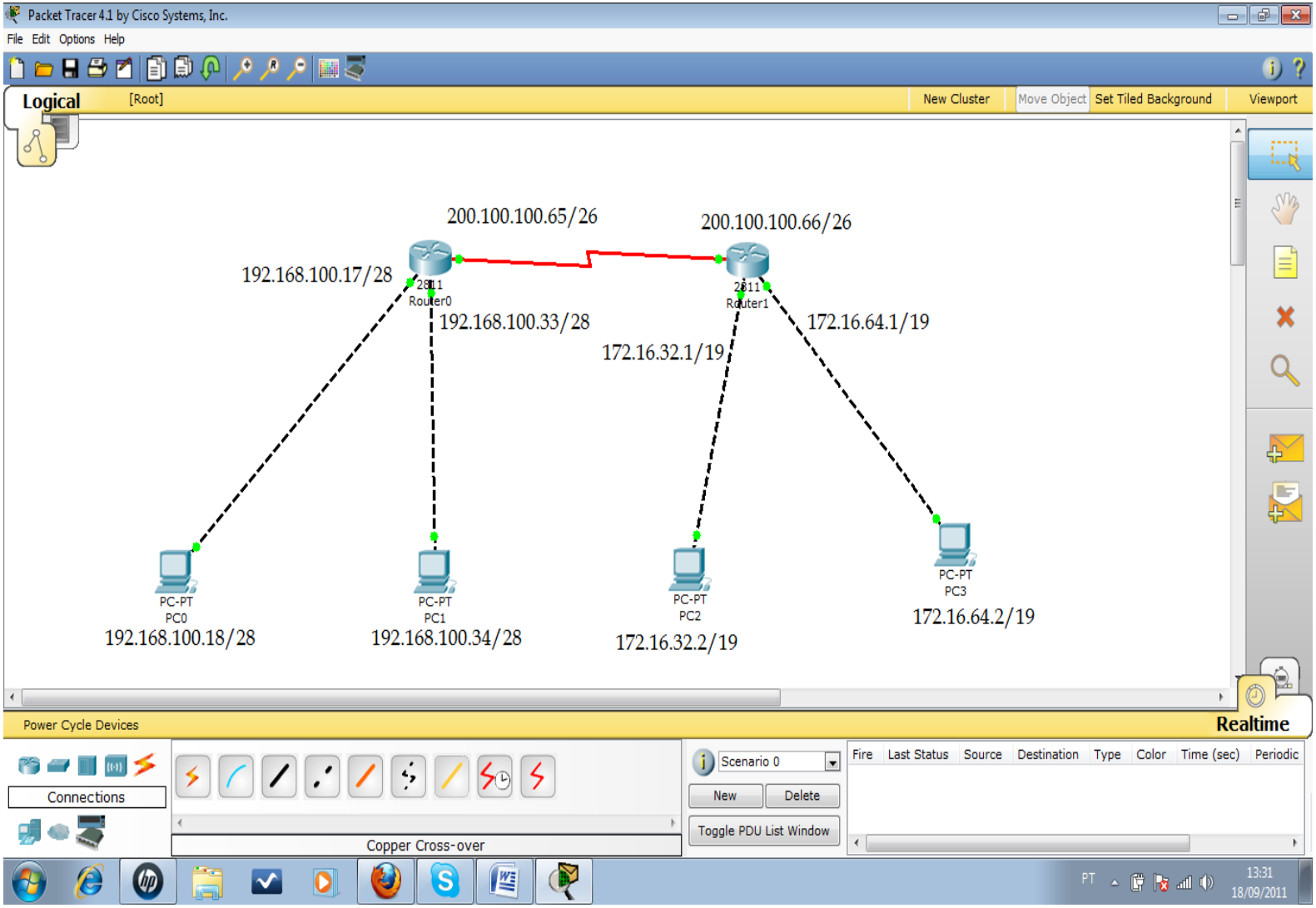
- Verificando:

```
Router(config-if)#exit
Router(config)#exit
Router>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

R    172.16.0.0/16 [120/1] via 200.100.100.2, 00:00:02, Serial0/3/0
C    192.168.100.0/24 is directly connected, FastEthernet0/0
C    200.100.100.0/24 is directly connected, Serial0/3/0
```



Tutorial OSPF

TOPOLOGIA


Packet Tracer 4.1 by Cisco Systems, Inc.
File Edit Options Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
200.100.100.65/26
200.100.100.66/26
192.168.100.17/28
2811
Router0
2811
Router1
192.168.100.33/28
172.16.32.1/19
172.16.64.1/19
PC-PT
PC0
192.168.100.18/28
PC-PT
PC1
192.168.100.34/28
PC-PT
PC2
172.16.32.2/19
PC-PT
PC3
172.16.64.2/19
Power Cycle Devices
Realtime
Connections
Copper Cross-over
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time (sec)
Periodic
PT
13:31
18/09/2011

Topologia (2)

- PC0:
  - IP: 192.168.100.18
  - netmask: 255.255.255.240 (/28)
  - gateway: 192.168.100.17
- PC1:
  - IP: 192.168.100.34
  - netmask: 255.255.224.0
  - gateway: 192.168.100.33
- Interfaces serias:
  - Router0: 200.100.100.65, 255.255.255.192 (/26)
  - Router1: 200.100.100.66, 255.255.255.192

Topologia (3)

- PC3:
  - IP: 172.16.32.2
  - netmask: 255.255.255.240 (/19)
  - gateway: 172.16.32.2
- PC4:
  - IP: 172.16.64.2
  - netmask: 255.255.255.240
  - gateway: 172.16.64.1

Configurando os Roteadores

```
# Router0
Router>enable
Router#configure terminal
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.100.17
   255.255.255.240
Router(config-if)#no shutdown
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 192.168.100.33
   255.255.255.240
Router(config-if)#no shutdown
```

Configurando os Roteadores (2)

```
# Router0
Router(config-if)#exit
Router(config)#interface Serial0/3/0
Router(config-if)#ip address 200.100.100.65
   255.255.255.192
Router(config-if)#clock rate 500000
Router(config-if)#no shutdown
Router(config-if)#exit
```

Configurando os Roteadores (3)

```
# Continue with configuration dialog? [yes/no]: no
# Router1
Router>enable
Router#configure terminal
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 172.16.32.1 255.255.224.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 172.16.64.1 255.255.224.0
Router(config-if)#no shutdown
Router(config-if)#exit
```

Configurando os Roteadores (4)

```
# Router1
Router(config)#interface Serial0/3/0
Router(config-if)#ip address 200.100.100.66
   255.255.255.192
Router(config-if)#clock rate 500000
Router(config-if)#no shutdown
```

Configurando o OSPF

```
# Configurando OSPF no router0
Router(config-if)#exit
Router(config)#router ospf 1
Router(config-router)#network 200.100.100.64
   0.0.0.63 area 0
Router(config-router)#network 192.168.100.16
   0.0.0.15 area 0
Router(config-router)#network 192.168.100.32
   0.0.0.15 area 0
```

Comandos (6)

Configurando OSPF no router1

Router(config-if)#exit

Router(config)#router ospf 1

Router(config-router)#network 200.100.100.64 0.0.0.63 area 0

Router(config-router)#network 172.16.32.0 0.0.31.255 area 0

Router(config-router)#network 172.16.64.0 0.0.31.255 area 0

Comandos (7)

#Teste de conectividade.
#No PC0 digite:
ping 172.16.32.2

#Configurando conexãoTelnet
#Faremos o PC0 ter acesso as configurações no router1

#Digitar no router1:
Router(config-router)# exit
Router(config)#enable password ufpe
Router(config)#line vty 0 4
Router(config-line)#password ufpe

Comandos (8)

#Abrir prompt no PC0 e digitar:

telnet 200.100.100.66

password: ufpe

Router>enable

password: ufpe

#Usar ACL para barrar o acesso ao telnet

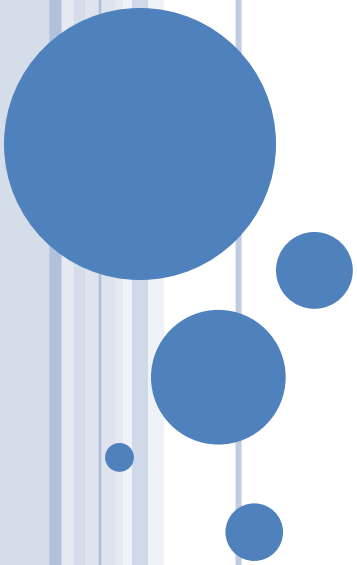
#Digitar no router1

Router(config-line)#exit

Router(config)#access-list 111 deny tcp 192.168.100.16 0.0.0.31 200.100.100.64 0.0.0.63 eq 23

Router(config)#interface Serial0/3/0

Router(config-if)#ip access-group 111 in



Obrigado! Perguntas?