

**Criar a topologia Abaixo**

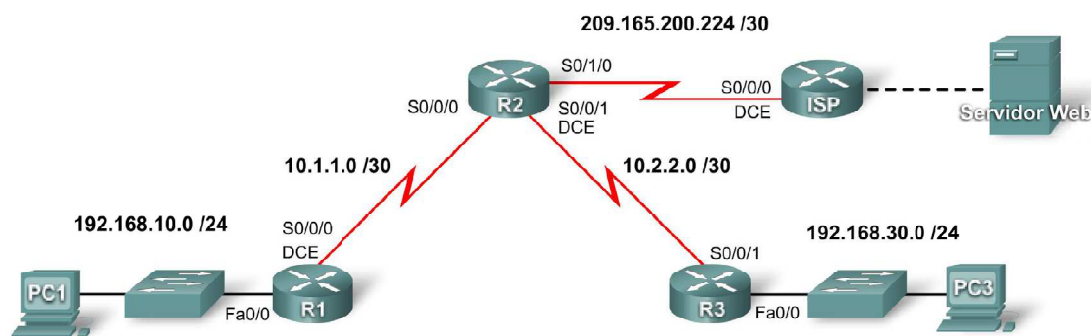


Figura 01: Topologia de Estudo

**Tabela de endereçamento**

Dispositivo	Interface	Endereço IP	Máscara de sub-rede	Gateway padrão
R1	Fa0/0	192.168.10.1	255.255.255.0	N/A
	S0/0/0	10.1.1.1	255.255.255.252	N/A
R2	S0/0/0	10.1.1.2	255.255.255.252	N/A
	S0/0/1	10.2.2.1	255.255.255.252	N/A
	S0/1/0	209.165.200.225	255.255.255.252	N/A
R3	Fa0/0	192.168.30.1	255.255.255.0	N/A
	S0/0/1	10.2.2.2	255.255.255.252	N/A
ISP	S0/0/0	209.165.200.226	255.255.255.252	N/A
	Fa0/0	209.165.200.1	255.255.255.252	N/A
Servidor Web	Placa de rede	209.165.200.2	255.255.255.252	209.165.200.1
PC1	Placa de rede	192.168.10.10	255.255.255.0	192.168.10.1
PC3	Placa de rede	192.168.30.10	255.255.255.0	192.168.30.1

## Configurando o **R1**

- **Configurando o básico no roteador**

```
Router>ena
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname R1
R1(config)#line vty 0 4
R1(config-line)#password cisco
R1(config-line)#login
R1(config-line)#exit
R1(config)#enable secret cisco
R1(config)#line console 0
R1(config-line)#password cisco
R1(config-line)#login
R1(config-line)#exit
R1(config)#service password-encryption
```

- **Configurando a interface Fastethernet**

```
R1(config)#interface fastEthernet 0/0
R1(config-if)#ip address 192.168.10.1 255.255.255.0
R1(config-if)#no shutdown
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
R1(config-if)#exit
```

- **Configurando a Interface Serial 0/0/0 como DCE com uma velocidade de 64 Kbps**

```
R1(config)#interface serial 0/0/0
R1(config-if)#ip address 10.1.1.1 255.255.255.252
R1(config-if)#encapsulation ppp
R1(config-if)#clock rate 64000
R1(config-if)#no shutdown
R1(config-if)#exit
```

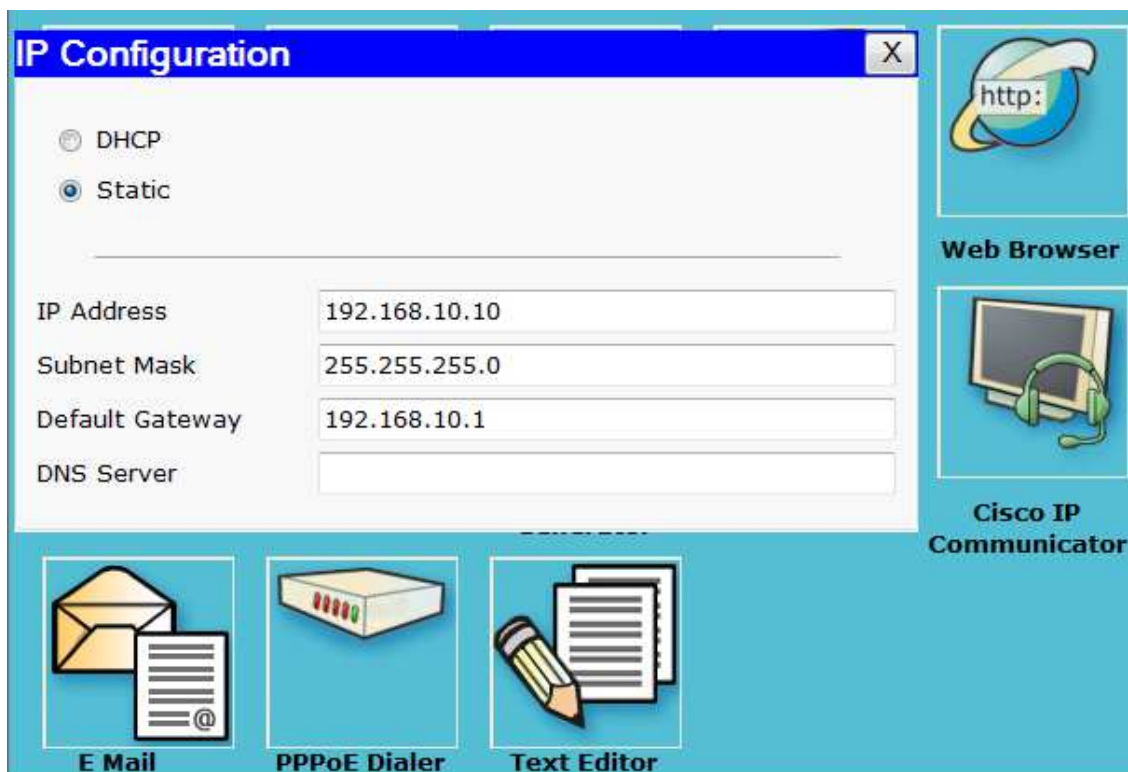
- **Configurando a tabela de roteamento**

```
R1(config)#ip route 0.0.0.0 0.0.0.0 10.1.1.2
R1(config)#exit
```

- **Salvando as configurações**

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

### Configurando a máquina da interface LAN do router



The image shows a screenshot of the 'IP Configuration' window in a Cisco router's configuration mode. The window has a blue title bar with the text 'IP Configuration' and a close button 'X'. Inside the window, there are two radio buttons: 'DHCP' (unselected) and 'Static' (selected). Below these, there are four input fields: 'IP Address' with the value '192.168.10.10', 'Subnet Mask' with the value '255.255.255.0', 'Default Gateway' with the value '192.168.10.1', and 'DNS Server' which is empty. To the right of the main configuration area, there is a vertical sidebar with three icons: a globe with 'http:' (labeled 'Web Browser'), a computer monitor with a headset (labeled 'Cisco IP Communicator'), and a folder icon (labeled 'E Mail'). At the bottom of the window, there are three icons: an envelope (labeled 'E Mail'), a network card (labeled 'PPPoE Dialer'), and a pencil writing on a document (labeled 'Text Editor').

## Configurando o **R2**

- Configurando o básico no roteador

```
R2>ena
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#hostname R2
R2(config)#line vty 0 4
R2(config-line)#password cisco
R2(config-line)#login
R2(config-line)#exit
R2(config)#enable secret cisco
R2(config)#line console 0
R2(config-line)#password cisco
R2(config-line)#login
R2(config-line)#exit
R2(config)#service password-encryption
```

- Configurando a interface Serial 0/0/0

```
R2(config)#interface serial 0/0/0
R2(config-if)#ip address 10.1.1.2 255.255.255.252
R2(config-if)#encapsulation ppp
R2(config-if)#no shutdown
R2(config-if)#exit
```

- Configurando a Interface Serial 0/0/1 como DCE com uma velocidade de 128 Kbps

```
R2(config)#interface serial 0/0/1
R2(config-if)#ip address 10.2.2.1 255.255.255.252
R2(config-if)#clock rate 128000
R2(config-if)#encapsulation ppp
R2(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial0/0/1, changed state to down
R2(config-if)#exit
```

- **Configurando a Interface Serial 0/1/0**

```
R2(config)#interface serial 0/1/0
R2(config-if)#ip address 209.165.200.225 255.255.255.252
R2(config-if)#encapsulation ppp
R2(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial0/1/0, changed state to down
R2(config-if)#ex
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
it
```

- **Configurando a tabela de roteamento**

```
R2(config)#ip route 192.168.10.0 255.255.255.0 10.1.1.1
R2(config)#ip route 192.168.30.0 255.255.255.0 10.2.2.2
R2(config)#ip route 209.165.200.0 255.255.255.252 209.165.200.226
R2(config)#exit
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up
exit
```

- **Salvando as configurações**

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

## Configurando o R3

- Configurando o básico no roteador

```
Router>ena
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname R3
R3(config)#line vty 0 4
R3(config-line)#password cisco
R3(config-line)#login
R3(config-line)#exit
R3(config)#enable secret cisco
R3(config)#line console 0
R3(config-line)#password cisco
R3(config-line)#login
R3(config-line)#exit
R3(config)#service password-encryption
```

- Configurando a interface Fastethernet

```
R3(config)#interface fastethernet0/0
R3(config-if)#ip address 192.168.30.1 255.255.255.0
R3(config-if)#no shutdown
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
R3(config-if)#exit
```

- Configurando a Interface Serial 0/0/1

```
R3(config)#interface serial 0/0/1
R3(config-if)#ip address 10.2.2.2 255.255.255.252
R3(config-if)#encapsulation ppp
R3(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up
R3(config-if)#exit
```

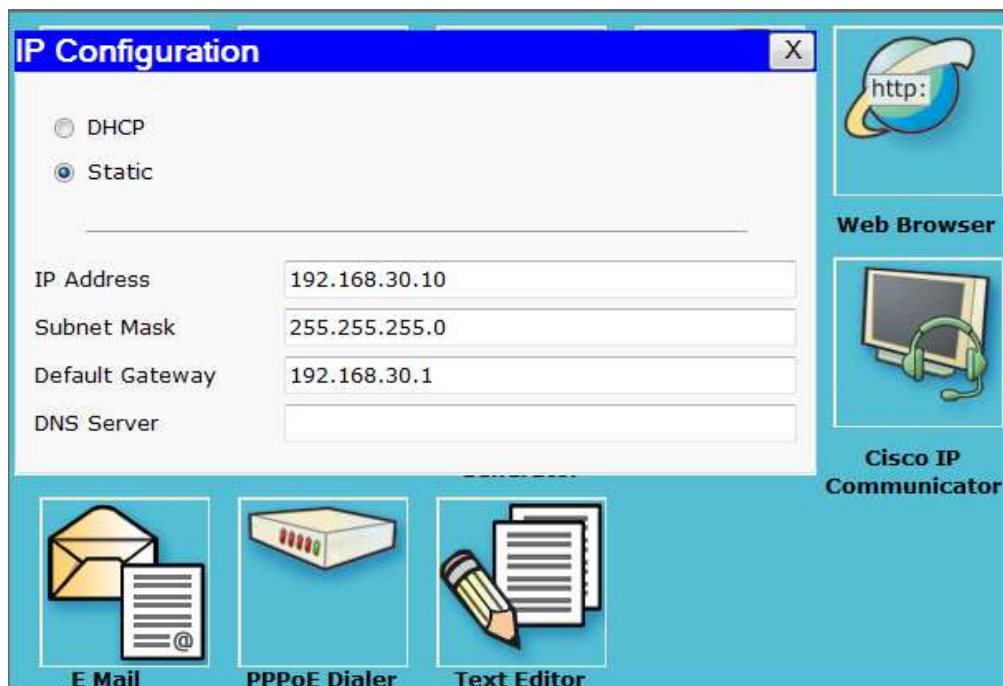
- Configurando a tabela de roteamento

```
R3(config)#ip route 0.0.0.0 0.0.0.0 10.2.2.1  
R3(config)#exit  
R3#
```

- Salvando as configurações

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

### Configurando a máquina da interface LAN do router



## Configurando o **ISP**

- **Configurando o básico no roteador**

```
Router>ena
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname ISP
ISP(config)#line vty 0 4
ISP(config-line)#password cisco
ISP(config-line)#login
ISP(config-line)#exit
ISP(config)#enable secret cisco
ISP(config)#line console 0
ISP(config-line)#password cisco
ISP(config-line)#login
ISP(config-line)#exit
ISP(config)#service password-encryption
```

- **Configurando a interface Fastethernet**

```
ISP(config)#interface fastethernet0/0
ISP(config-if)#ip address 209.165.200.1 255.255.255.252
ISP(config-if)#no shutdown
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
ISP(config-if)#exit
```

- **Configurando a Interface Serial 0/0/0 como DCE com uma velocidade de 256 Kbps**

```
ISP(config)#interface serial 0/0/0
ISP(config-if)#ip address 209.165.200.226 255.255.255.252
ISP(config-if)#encapsulation ppp
ISP(config-if)#clock rate 250000
ISP(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
ISP(config-if)#exit
```



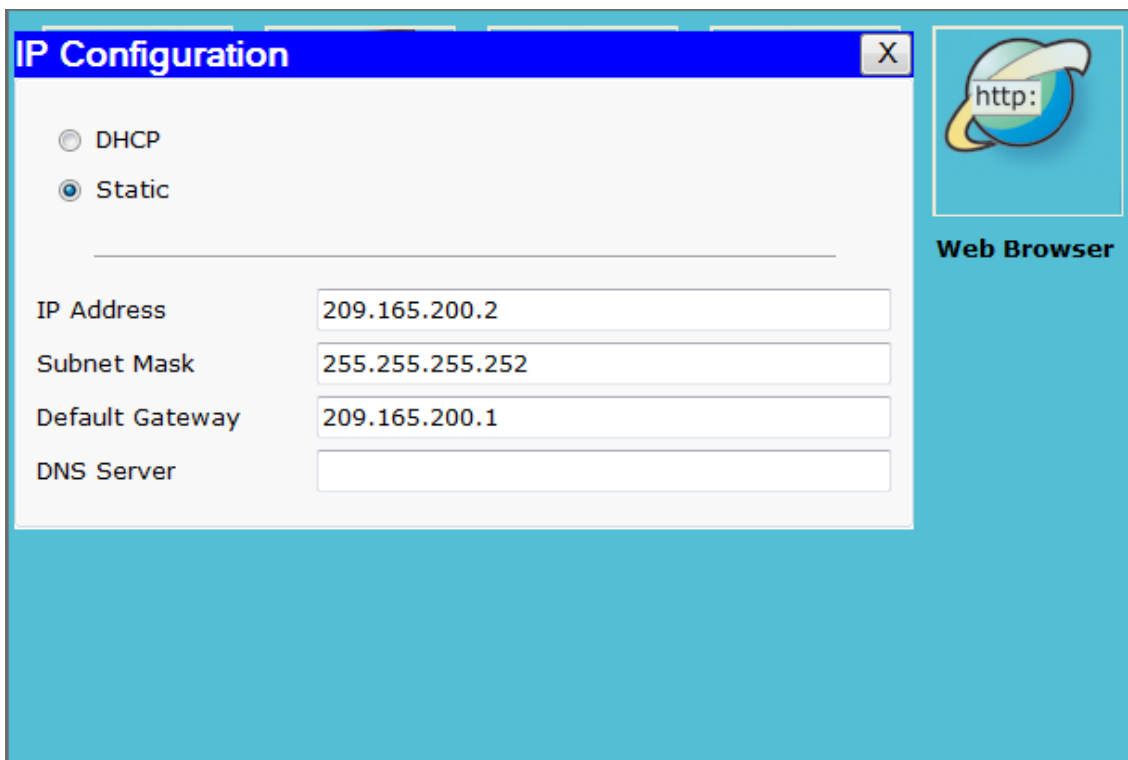
- Configurando a tabela de roteamento

```
ISP(config)#ip route 0.0.0.0 0.0.0.0 209.165.200.225  
ISP(config)#exit
```

- Salvando as configurações

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

### Configurando o servidor da interface LAN do router



IP Configuration

☐ DHCP  
☒ Static

IP Address: 209.165.200.2  
Subnet Mask: 255.255.255.252  
Default Gateway: 209.165.200.1  
DNS Server:

Web Browser