

Setting a Virtual Private Network (VPN)

June 15, 2010

What is a VPN?

If we desire remote access to a server through an external connection such as joining our business network from our laptop at home, we will want to set up a VPN.

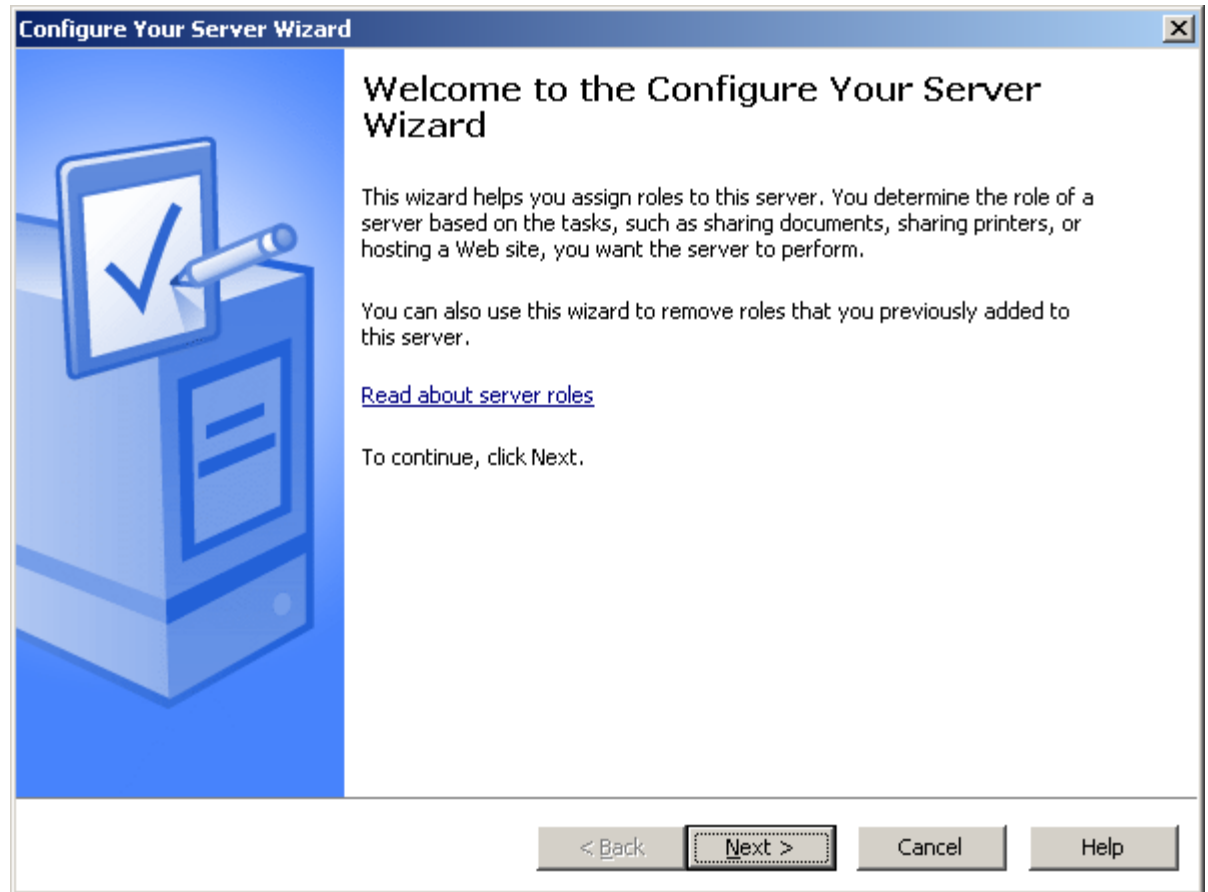
If we already setup the computer as a Domain Controller, the Routing and Remote Access Server role is already loaded.

The next few slides will show how to install the RRAS role for those who do not have it.



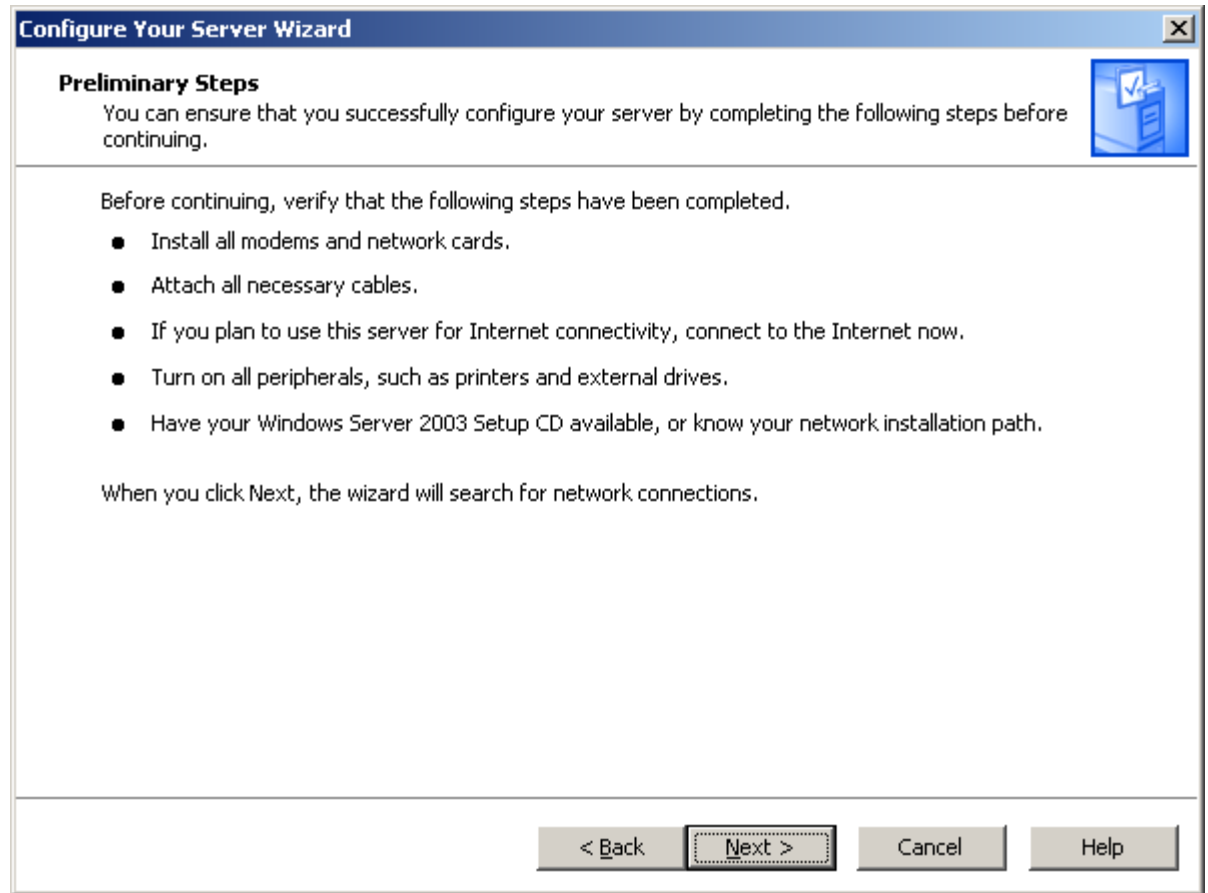
Configure the Server Wizard

Now to setup the RRAS server, we choose the Configure Your Server Wizard . The first window in the procedure will appear on the graphical display and we select the Next command button to continue.



Preliminary Steps

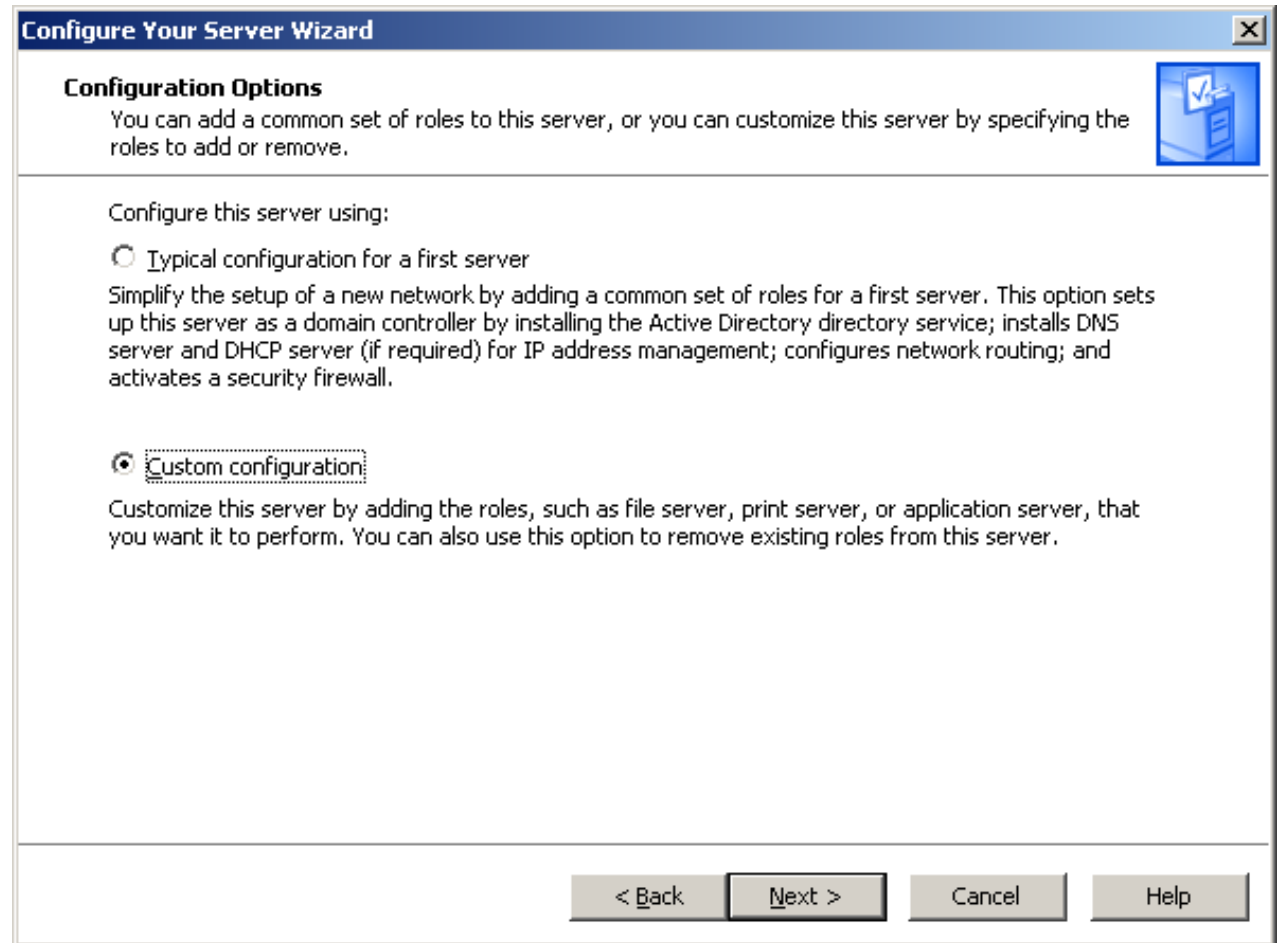
We are prompted to have the Windows Server CD available to load extra files and to have the necessary Network Interface Cards, cables and Internet connections to complete the task. When we are ready, we should press the Next command button.



Configure your Server Wizard

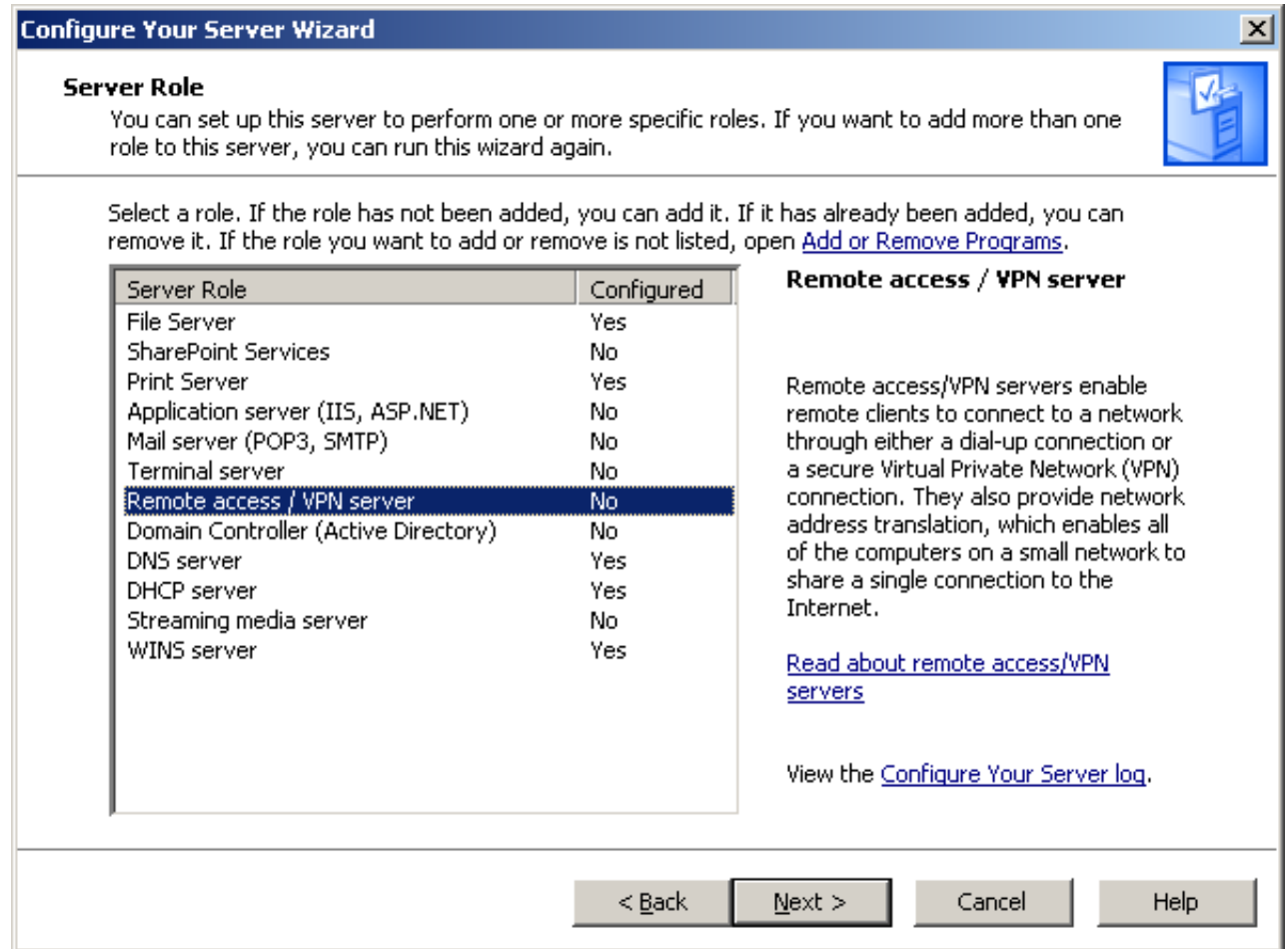
In most cases, we will choose a custom configuration. A typical configuration will have us install Active Directory (domain controller), DNS role, DHCP role and activate a security firewall.

We will opt for custom configuration and select the Next button.



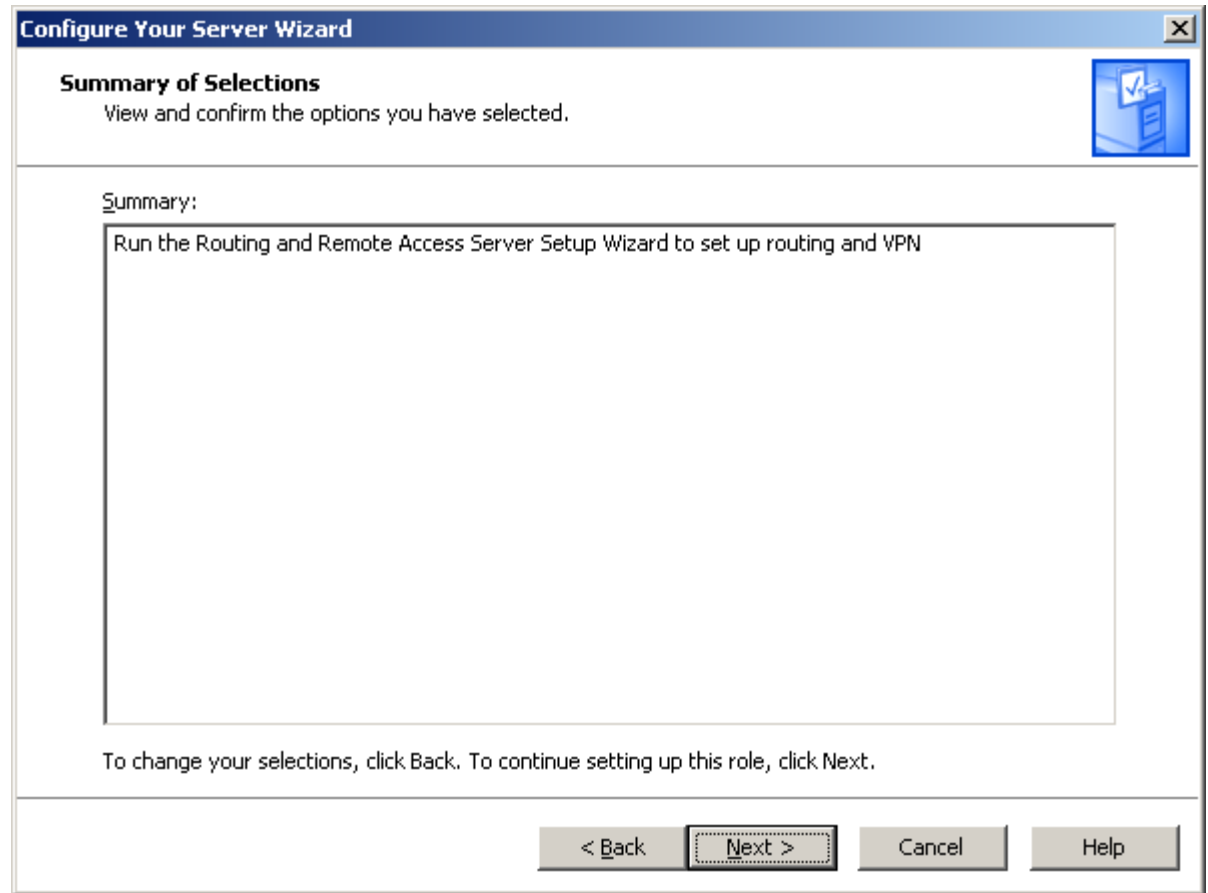
Select Remote Access Server

We will pick the Remote Access / VPN Server function and we then push the Next button.



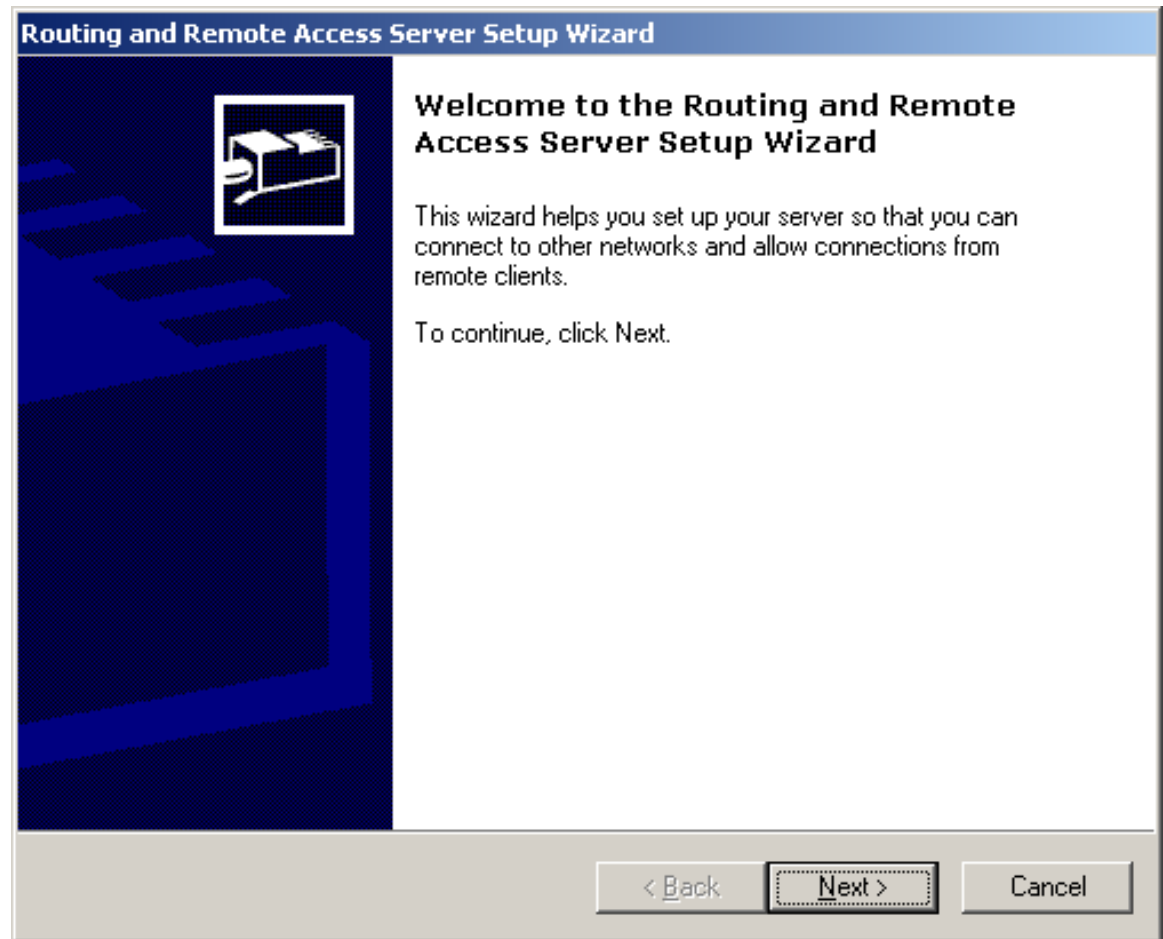
Install RRAS Server and New Scope

Next, a window shows the summary of selections. We go for the Next button to continue.



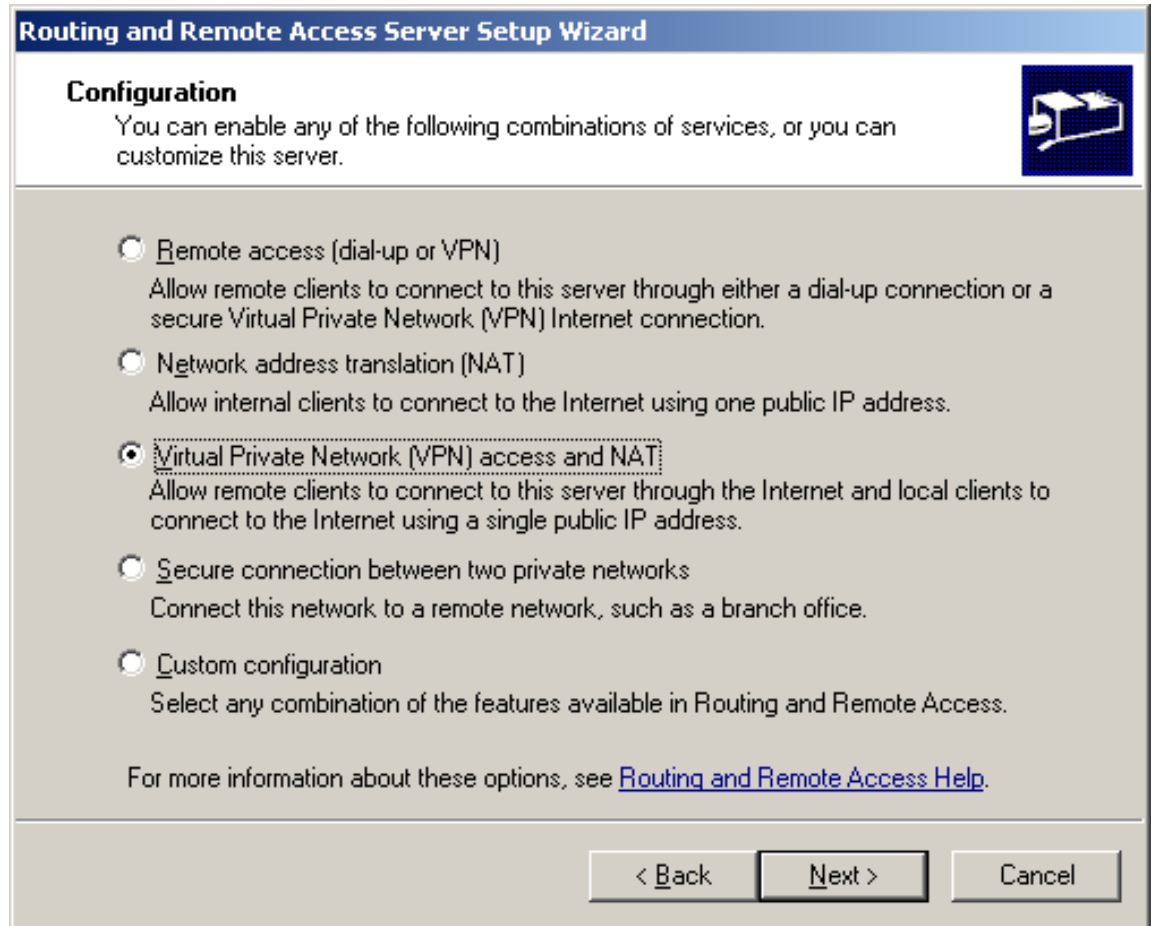
Routing and Remote Access Server Setup Wizard

We now are entering the Routing and Remote Access Server Setup Wizard . We press Next to continue.



Configuration of RRAS

This window gives us five unique roles for the RRAS setup. The first is a dial-up or dedicated connection to the server. The next is Network Address Translation which opens the Internet to internal clients. The next is VPN and NAT, which is our choose. The fourth option is making a connection to a branch office and the last is custom configuration.



Routing and Remote Access Server Setup Wizard

Configuration
You can enable any of the following combinations of services, or you can customize this server.

- Remote access (dial-up or VPN)
Allow remote clients to connect to this server through either a dial-up connection or a secure Virtual Private Network (VPN) Internet connection.
- Network address translation (NAT)
Allow internal clients to connect to the Internet using one public IP address.
- Virtual Private Network (VPN) access and NAT
Allow remote clients to connect to this server through the Internet and local clients to connect to the Internet using a single public IP address.
- Secure connection between two private networks
Connect this network to a remote network, such as a branch office.
- Custom configuration
Select any combination of the features available in Routing and Remote Access.

For more information about these options, see [Routing and Remote Access Help](#).

< Back Next > Cancel

VPN Connection

We show what Local Area Connection connects to the Internet.

Routing and Remote Access Server Setup Wizard

VPN Connection
To enable VPN clients to connect to this server, at least one network interface must be connected to the Internet.

Select the network interface that connects this server to the Internet.

Network interfaces:

Name	Description	IP Address
Internet	Intel(R) PRO/100 M Net...	192.168.10.5
Local Area Connection	3Com EtherLink XL 10/...	(DHCP)

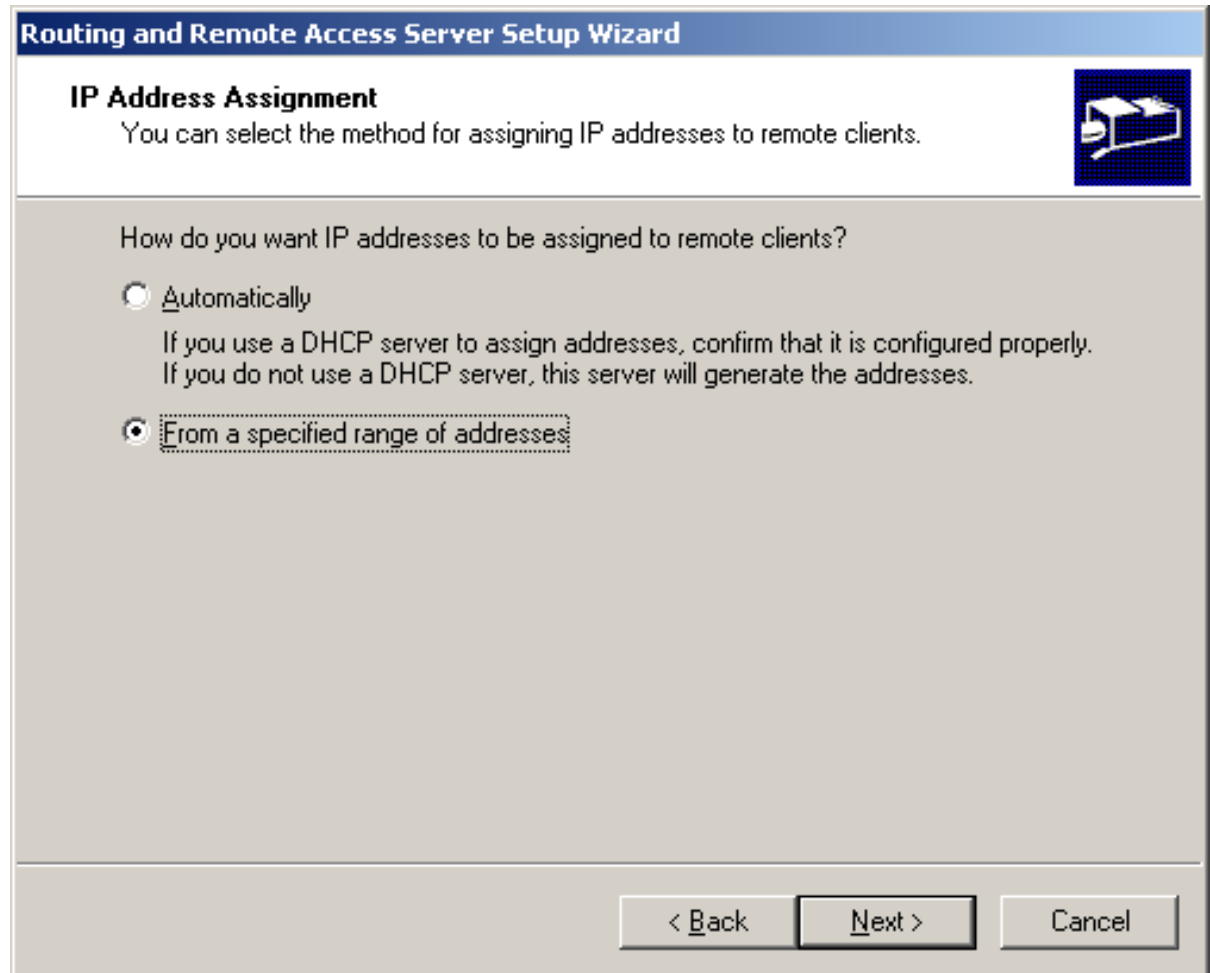
Enable security on the selected interface by setting up Basic Firewall.
Basic Firewall prevents unauthorized users from gaining access to this server through the Internet.

For more information about network interfaces, see [Routing and Remote Access Help](#).

< Back Next > Cancel

IP Address Assignment

We suggest that we use a specific range of IP addresses to connect to the DHCP server. Otherwise, we can automatically assign IP addresses to external clients from the full range available.



The screenshot shows a window titled "Routing and Remote Access Server Setup Wizard" with a sub-header "IP Address Assignment". Below the sub-header is the text "You can select the method for assigning IP addresses to remote clients." and a small icon of a server. The main content area asks "How do you want IP addresses to be assigned to remote clients?" and provides two radio button options: "Automatically" and "From a specified range of addresses". The "From a specified range of addresses" option is selected. Below the options is a text box containing the text "From a specified range of addresses". At the bottom of the window are three buttons: "< Back", "Next >", and "Cancel".

Routing and Remote Access Server Setup Wizard

IP Address Assignment
You can select the method for assigning IP addresses to remote clients.

How do you want IP addresses to be assigned to remote clients?

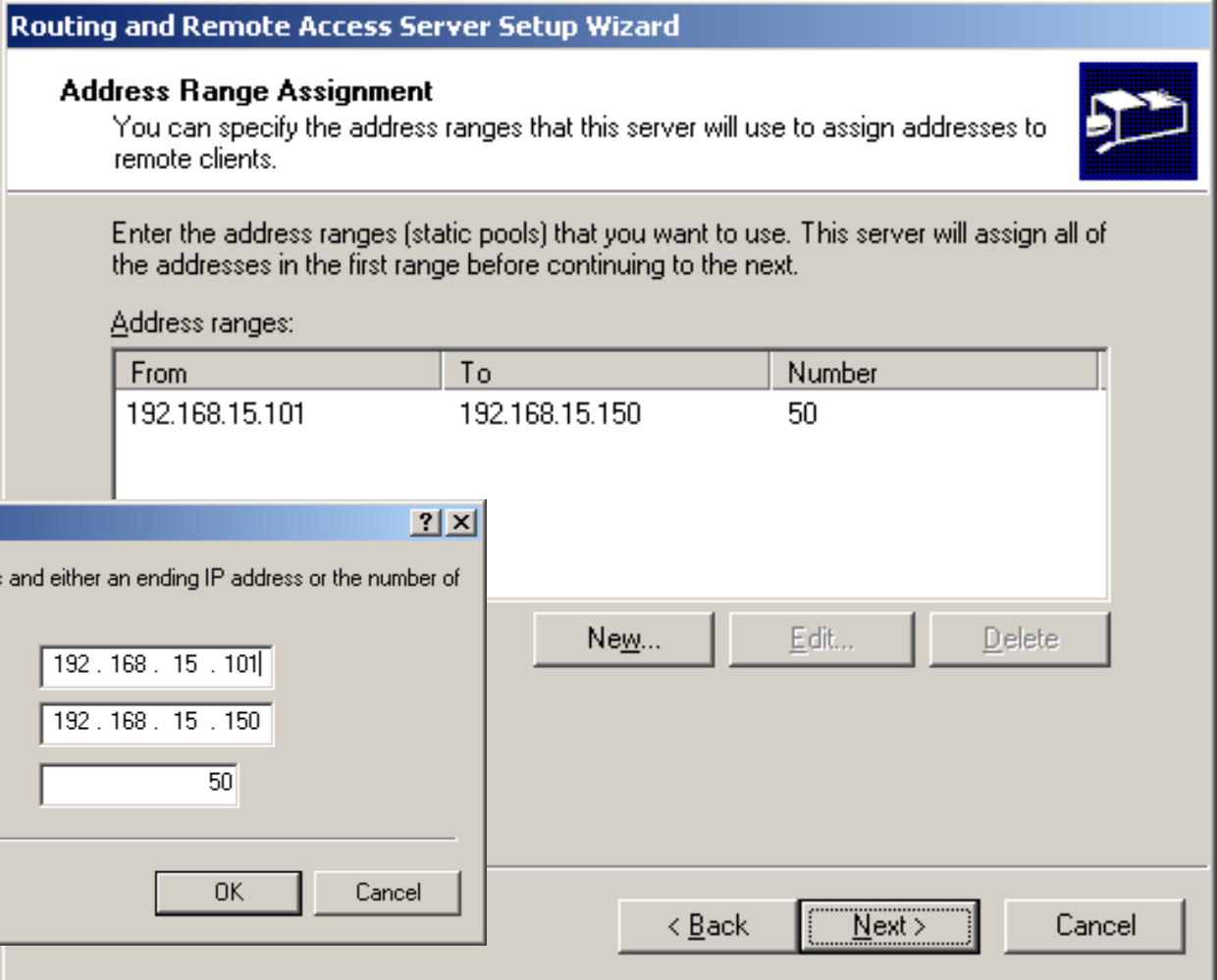
Automatically
If you use a DHCP server to assign addresses, confirm that it is configured properly.
If you do not use a DHCP server, this server will generate the addresses.

From a specified range of addresses

< Back Next > Cancel

Address Range Assignment

In these windows, we show the range of IP addresses that can connect to the server.



Routing and Remote Access Server Setup Wizard

Address Range Assignment

You can specify the address ranges that this server will use to assign addresses to remote clients.

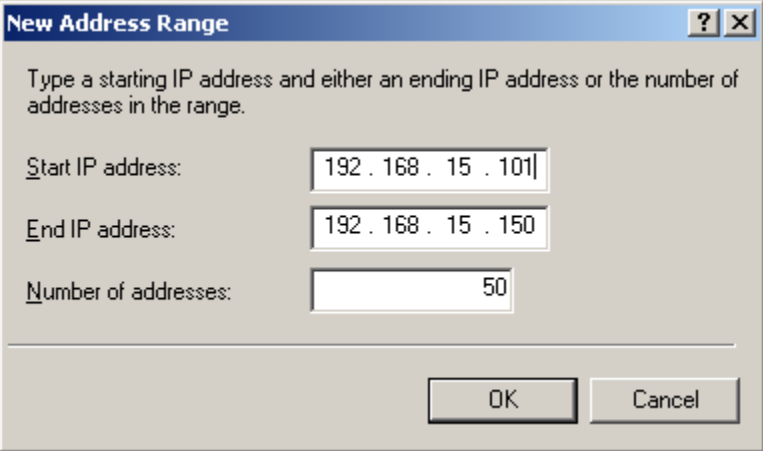
Enter the address ranges (static pools) that you want to use. This server will assign all of the addresses in the first range before continuing to the next.

Address ranges:

From	To	Number
192.168.15.101	192.168.15.150	50

Buttons: New... Edit... Delete

Navigation: < Back Next > Cancel



New Address Range

Type a starting IP address and either an ending IP address or the number of addresses in the range.

Start IP address: 192 . 168 . 15 . 101

End IP address: 192 . 168 . 15 . 150

Number of addresses: 50

Buttons: OK Cancel


Authenticate Connection

We will authenticate when we logon to the RRAS server when we choose the no option.

Routing and Remote Access Server Setup Wizard

Managing Multiple Remote Access Servers

Connection requests can be authenticated locally or forwarded to a Remote Authentication Dial-In User Service (RADIUS) server for authentication.



Although Routing and Remote Access can authenticate connection requests, large networks that include multiple remote access servers often use a RADIUS server for central authentication.

If you are using a RADIUS server on your network, you can set up this server to forward authentication requests to the RADIUS server.

Do you want to set up this server to work with a RADIUS server?

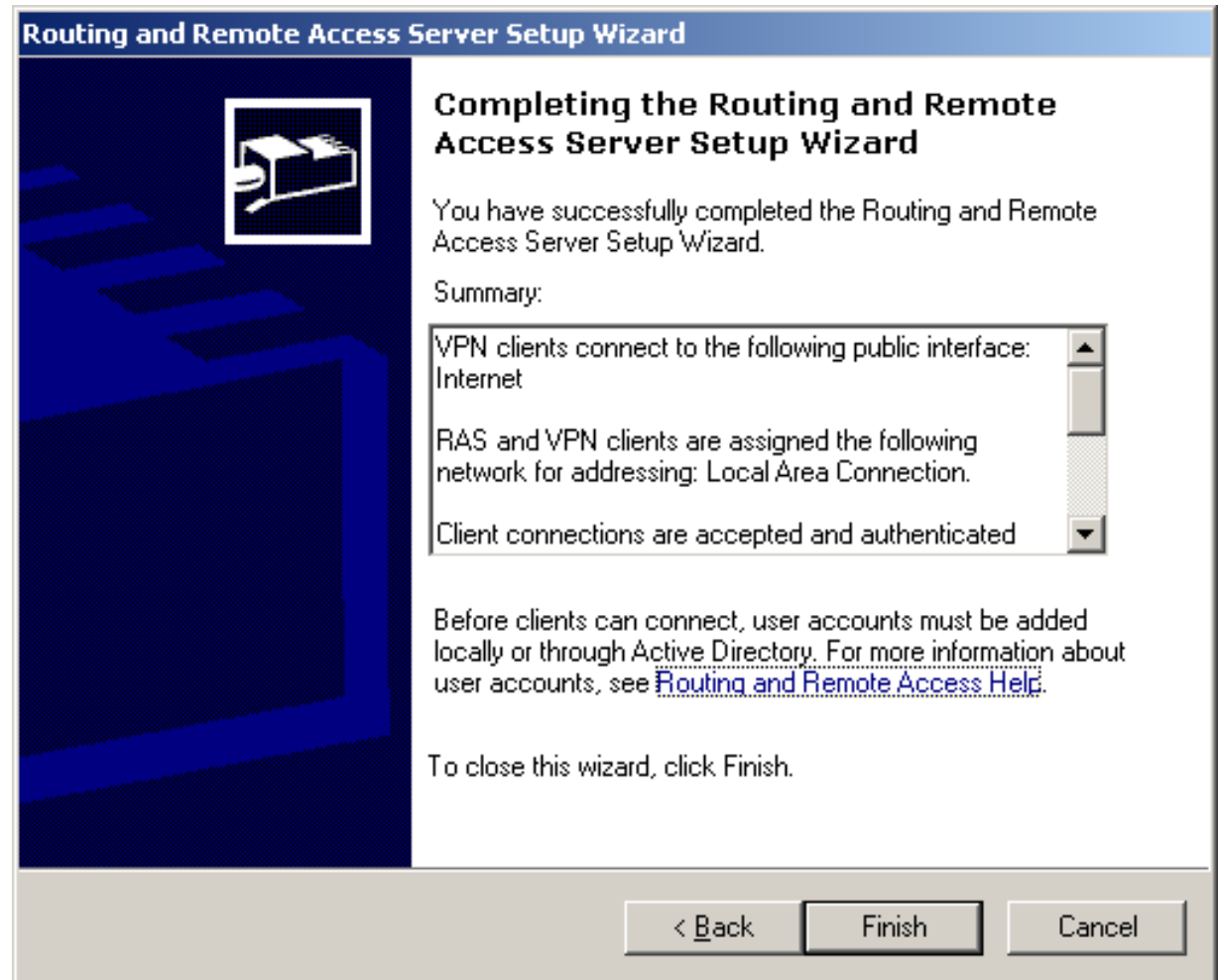
No, use Routing and Remote Access to authenticate connection requests

Yes, set up this server to work with a RADIUS server

< Back Next > Cancel

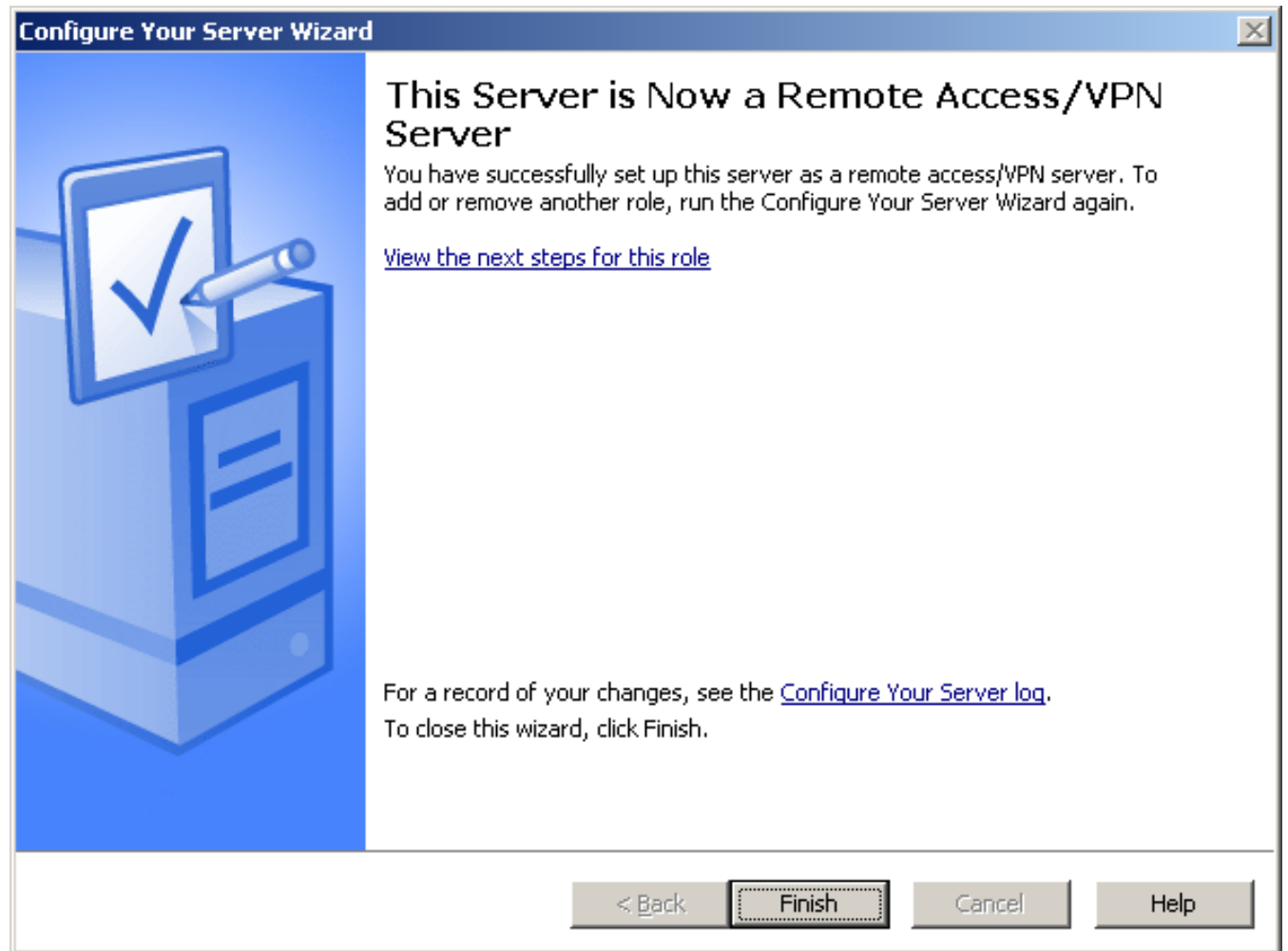
Completing the RRAS Setup Wizard

We are now finished with the Routing and Remote Access setup wizard. We should press the finish button and then setup the individual accounts for VPN connections.



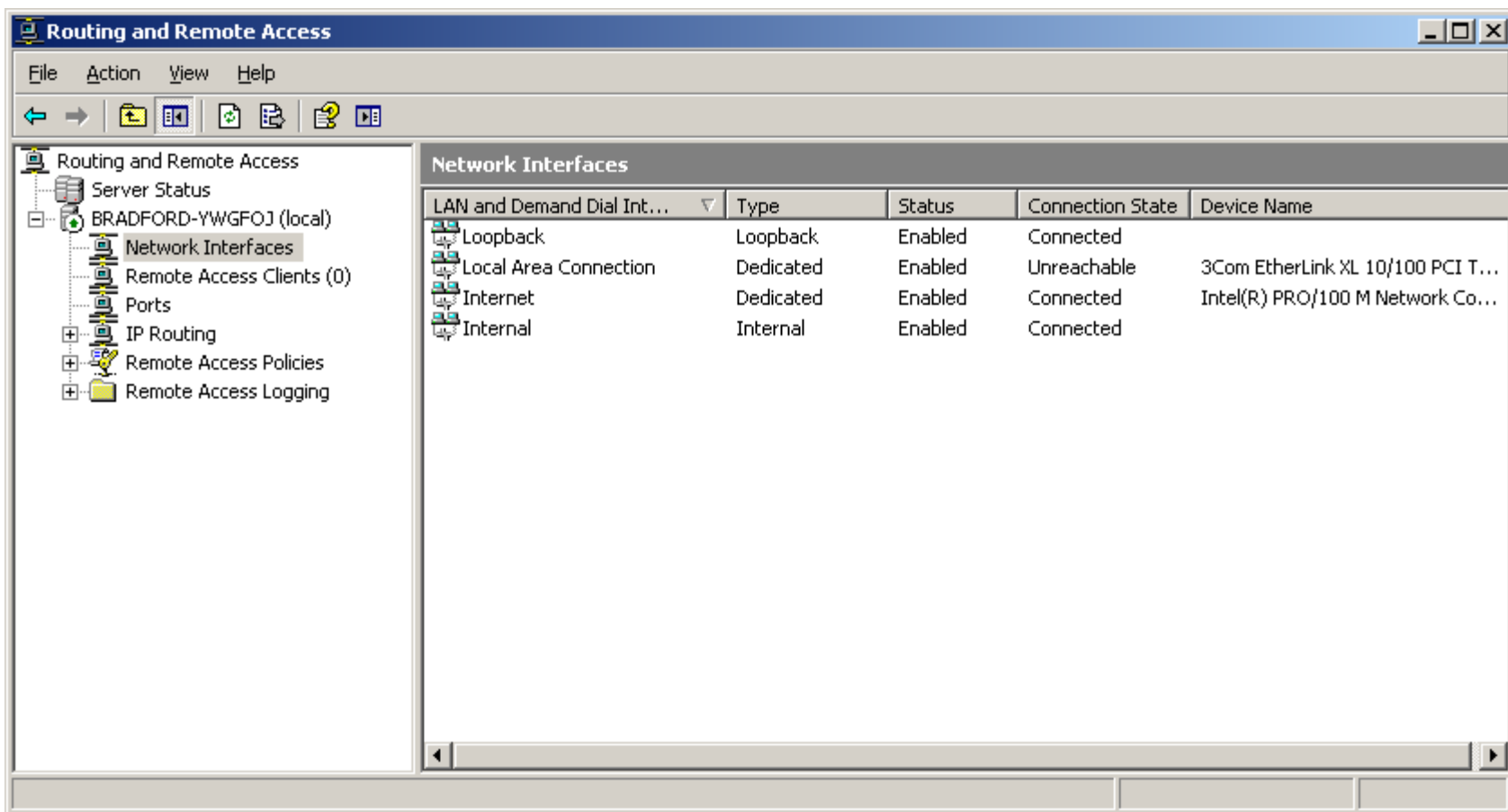
Remote Access / VPN Server

This server is now a VPN server.



RRAS Console

To open the RRAS console. We go to administrative tools and double click on Remote Access . Here, we can see the server remote connection operating,



User Configuration

In a user account, we choose the Dial-in tab and we opt for Allow Access and No Callback.

