

Re: Router install problem

Source:

http://www.tech-archive.net/Archive/WinXP/microsoft.public.windowsxp.network_web/2007-04/msg00178.html

- *From:* "PaulFXH" <paulfxhackett@xxxxxxxx>
 - *Date:* 6 Apr 2007 12:11:01 -0700
-

On 6 abr, 12:26, Lem <lem...@xxxxxxxxxxxxx> wrote:

PaulFXH wrote:

Hi Paul,

I only see one post from today and none from yesterday.

If you can't connect to the DI524 from your laptop, as I suggested, there are only a limited number of possibilities:

1. The cable is bad. This probably is not the case, assuming that you're using the same cable to connect the laptop to the DI524 that you used to connect the laptop to the Encore NIC in the main computer. If you have another cable, you might try that.
2. The NIC in the laptop is bad. This is not the case. You know the laptop's NIC works because you can get to the Internet when it's connected to the Encore NIC.
3. The laptop NIC is not configured to use DHCP or it is set to use a

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static IP OTHER than 192.168.0.2 to 192.168.0.254. This also is not likely to be the case because we know that the Encore NIC has an IP of 192.168.0.1 (coincidentally the same as the default IP address of the DI524), and we know that the laptop communicates with the Encore NIC.

To test, set the laptop to have a static IP of 192.168.0.2 and subnet mask 255.255.255.0. Before you do this, make sure you write down how the laptop's NIC is configured so you can restore it when this test is done. I suspect it is set to obtain an IP address automatically. You can leave default gateway blank at this time. Disconnect everything from the router except a cable from a LAN jack to the laptop. Enter 192.168.0.1 in a browser on the laptop. What happens?

4. The DI524 has been set to an IP address of something other than the 192.168.0.1 and is not resetting to 192.168.0.1 when the reset button is depressed. I suppose it's possible that Brazilian versions of the DI524 have a different default IP, but I doubt it. What happens if you open a command prompt on the laptop and type "ping 192.168.0.1" (without quotes) and press Enter?

5. Some portion of the DI524 is broken.

At this point, I'm leaning toward #5.

As a last resort, try the following:

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With your system configured as it used to be, i.e., the laptop connected directly to the Encore card, and with Internet connectivity from the laptop confirmed, run `ipconfig /all` on the laptop and record the information. I suspect that the laptop's IP address will be 192.168.0.x, but I don't know if the default gateway will be 192.168.0.1 (which is what I think it ought to be) or 201.58.171.234 (or something else).

Disconnect the laptop and set its NIC to a static IP of 192.168.0.2 (actually, you can use anything other than .1, .100, or .254). Set the subnet mask to 255.255.255.0. Set the default gateway whatever it was when you had Internet connectivity through the Encore NIC.

Connect the router as in your first setup above (the desktop Encore 10/100 Mbps card to the LAN #1 on the DI524 and went from LAN #2 port to the laptop). You should not get the "conflicting IP address" error message this time. If you don't get Internet connectivity, try setting the default gateway to 201.58.171.234 if you had set it to 192.168.0.1.

Even if this works, however, if you are unable to access the DI524's configuration pages, you will be unable to properly configure its wireless settings. Although you may be able to connect wirelessly, your network will be completely vulnerable to outside attack, because it will be using the default SSID and no encryption.

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Hi Lem

Still can't figure out what happened to my two posts from Wednesday. Presumably, they got as far as some server in trouble which proceeded to dump them. Oh well.

However, just when we thought things were starting to look a little hopeless, a faint light is now starting to emerge at the end of this long tunnel.

The test you suggested as a last resort above actually got me to the login page for D-Link configurations.

I used the following parameters for the static IP address config:

IP 192.168.0.2

Subnet mask 255.255.255.0

Default gateway 192.168.0.1 although I got to the D-Link page also when the default gateway was set to 201.58.171.234

Although this page was sitting there right in front of me inviting me to change the routers configuration, I felt it better to wait to hear from you before taking this bold step.

Before doing any of this on the laptop, I ran ipconfig/all at a DOS prompt and got the following:

Configuração de IP do Windows

```
Nome do host . . . . . : PAUL2
Sufixo DNS primário. . . . . :
Tipo de nó . . . . . : misto
Roteamento de IP ativado . . . . . : não
Proxy WINS ativado . . . . . : não
Lista de pesquisa de sufixo DNS. . . : mshome.net
```

Adaptador Ethernet Conexão local:

```
Sufixo DNS específico de conexão . . : mshome.net
Descrição . . . . . : Intel(R) PRO/100 VE
Network Connec
tion
Endereço físico . . . . . : 00-18-FE-27-B5-9C
DHCP ativado. . . . . : Sim
```

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Configuração automática ativada . . . : Sim
Endereço IP : 192.168.0.132
Máscara de sub-rede : 255.255.255.0
Gateway padrão. : 192.168.0.1
Servidor DHCP : 192.168.0.1
Servidores DNS. : 192.168.0.1
Concessão obtida. : sexta-feira, 6 de abril
de 2007 09
:23:48
Concessão expira. : sexta-feira, 13 de abril
de 2007 0
9:23:48

I think the Portuguese here is readily translatable (possible exception is Node Type = Mixed where it says "Tipo de nó : misto").

I do hope this means that perhaps we're now entering the home straight.

Thanks
Paul

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Lem MS MVP -- Networking

To the moon and back with 64 Kbits of RAM and 512 Kbits of ROM.
http://en.wikipedia.org/wiki/Apollo_Guidance_Computer

Paul,

I think we **are** nearing the finish line.

At the risk of making this long thread even longer, and of giving you information that you already may know, let me try to explain a little of what is going on.

There are 3 blocks of IP addresses reserved for use as private networks (local networks). The block typically used by SOHO LANs is 192.168.0.0 through 192.168.255.255. Such networks can be further subdivided into "subnets." This is where the "subnet mask" comes in. In order to

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communicate directly (without a router), computers must be on the same subnet. With a subnet mask of 255.255.255.0, and on a LAN using the 192.168.x.y block of addresses, the subnet can be thought of as the third octet in the address, i.e., "x" in the example. Thus, in order to communicate directly, devices on such a LAN must have IP addresses in which the first 3 octets are identical. That is, in your case, all IP addresses on your LAN must be 192.168.0.y.

Each IP on the LAN must be unique. So, when you got the "conflicting address" error, you had two devices with the same IP, probably 192.168.0.1.

IP addresses can either be set statically or automatically, using Dynamic Host Configuration Protocol (DHCP).

Because of the way your Internet access is configured (which I don't fully understand), your LAN consists of (1) the Encore NIC on the main computer, (2) the DI-524, and (3) the NIC on the laptop. You have at least two devices on this LAN that are capable of performing the DHCP function: Windows ICS running on the Encore and the DHCP server built into the DI-524.

You don't want two active DHCP servers on the same LAN because of the danger that they will assign the same IP address to different devices. Because the DHCP function of ICS can't be turned off or configured, you must turn off the DHCP server in the DI-524 (as a practical matter, of course, if all the computers connected through the DI-524 are set with static IP addresses, it wouldn't matter if you left the DI-524 DHCP server turned on).

As an aside, if you really were unable to see the DI-524 configuration login screen when you connected the laptop with the laptop's NIC set to obtain an IP address automatically, but could see it when you set a static IP on the laptop, it suggests that the DI-524's DHCP server is either already turned off or broken.

Another aspect of Windows ICS that cannot be configured is the IP address that is set on the shared NIC, i.e., on the Encore. ICS forces the Encore to a static IP address of 192.168.0.1.

See <http://support.microsoft.com/kb/306126/> and <http://support.microsoft.com/kb/310563/en-usfor> more information.

Because the Encore has an IP address of 192.168.0.1 and the default IP address of the DI-524 is also 192.168.0.1, if you connect the Encore to one of the LAN jacks of the DI-524, you will get an error message warning that there are conflicting devices on the network. Thus, you need to change the IP address of the DI-524. In order to be able to communicate with this device, its IP address must be in the same 192.168.0.x subnet. If you set the DI-524 to 192.168.0.2, you will be able to communicate with it both from the main computer (because the Encore's IP is 192.168.0.1) and the laptop (which you will either set to a static IP of 192.168.0.x where x is greater than 2, or to obtain an IP

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automatically).

If you set the laptop to obtain an IP automatically, the ICS DHCP allocator will set it appropriately. This software is smart enough to see the IP address of the DI-524 and to make the laptop's IP address different. ICS also should set the laptop's default gateway and DNS server to 192.168.0.1 (the address of the Encore).

So, with all of that in mind, access the DI-524 configuration system and change its IP address to 192.168.0.x, where x is less than 254 and neither 0, nor 1, nor whatever you might have set as a static address on the laptop). Leaving the laptop connected to one of the DI-524 LAN ports, connect a cable between another DI-524 LAN port and the Encore, and things should finally work. Remember -- you can always reset the DI-524 to its factory default if things spiral out of control.

Assuming that you can now reach the Internet through the DI-524, have yourself a caipirinha or three and relax. You can then turn to setting up security on your new wireless network.

You want to do at least 3 things:

- change the default SSID (the wireless network name) to something unique (but not your name or address)
- enable the strongest encryption that is compatible with the DI-524 and the wireless adapter on the laptop
- change the password for accessing the DI-524 configuration.

The major downside to configuring your network in the above manner is that your main computer -- which controls your connection to the Internet -- must be on whenever you want to connect to the Internet from the laptop. That's why my first suggestion was to connect the DI-524 directly to the SS5200. The DI-524 has built-in computational capability that can connect to most broadband modems. That is the function of the WAN port. Unfortunately, I don't understand how your computer is communicating with the SS5200, so I can't tell you how to configure the DI-524 to do the same. If you could figure this out, the only hardware that would need to be powered on would be the SS5200 and the DI-524 and whichever computer you wanted to use to get to the Internet.

Good luck.

P.S. The node type of "mixed" will work, although it's not ideal.

See <http://nitecruzr.blogspot.com/2005/05/address-resolution-on-lan.html>

Well, Lem, I haven't earned those caipirinhas yet but I am trying. I went into the D-Link configuration wizard and made what I considered to be appropriate changes to get an internet connection. However, when I clicked to save changes and restart the DI524, it went into a stall

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(up to 30 minutes). So, it just wasn't happy about something. Incidentally, before I give in detail what I did in the wizard, I will mention that on the tab marked DHCP in this DI524 "site", it actually specifies the DHCP server as being enabled.

I don't know if this signifies that this DHCP server is malfunctioning as you suggested as a possibility.

Nevertheless, I set it to Disabled before proceeding.

I then returned to the Internet Connection Wizard and set the following:

WAN IP 192.168.0.5 (was 192.168.0.1)

Subnet mask 255.255.255.0 (was the same)

Def. Gateway 192.168.0.1

It then asked for the DNS server addresses from the ISP. I actually called the ISP twice to confirm these numbers but after being put on hold for lengthy periods on each occasion, I gave up on this.

Firts I used these DNS addresses which come up when I run "ipconfig/all" on the desktop:

200.165.132.147

200.165.132.154

It then asks for some security information and then I click to save and restart the DI524. However, this is where it stalls.

I tried again with only one DNS server address (192.168.0.1 which just doesn't sound right but that what I get when I run "ipconfig/all" on the laptop.

However, the result is the same....an interminable stall.

Note that it had been my intention to set the DI524 IP address to 192.168.0.5 (with a static IP of 192.168.0.2 on the laptop) which is why I set the WAN IP to 192.168.0.5. However, I fear this is my inexperience coming through and the WAN is something else.

After I couldn't get the configuration to proceed, I click the LAN tab in the DI524 configuration site. Here I was surprised to find that the DI524 IP was still set at 192.168.0.1.

So, I changed it to 192.168.0.5

Then I opened another tab and subsequently went back to the LAN tab and was surprised to find that the DI524 IP was back at 192.168.0.1

So, I'm puzzled and would appreciate any pointers.

Thanks

Paul

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Lem MS MVP -- Networking

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