

It may seem foolish to share out a 28kbps dial-up connection but since there are users who actually need or want to do it, we'll help you figure out how. This same article does apply to sharing out tethered cell phone connections, and bridged DSL modems that use dialer software on the computer.

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## Internet Host Computer Configuration

In order to share your dial-up connection using your wireless router, you will first need to configure your computer for Internet Connection Sharing (ICS). This article assumes that you have Windows XP. Windows 2000 users will find much of this to be the same but Windows 98 and ME users may need to experiment to get this part working.

On your computer, with your dial-up connection already configured, you'll need to turn on ICS. Basically, ICS will "bridge" your WAN (which is the dial-up connection) with the LAN. You can turn on ICS by running the network wizard and choosing to share your Internet connection on the network. You can also share it by going to Network Connections, right-click on the dial-up connection, select Properties, then Advanced. Here you can select to share your Internet connection on the network. If you can't find the options I'm describing, likely your ISP has installed their own custom dialer software, something I loathe. If this is the case, drop your ISP yesterday and get a real one. Between now and yesterday, you can try running the network wizard instead to get you up and running until you get signed up with a real ISP.

Once ICS is turned on, your computer will be a DHCP server, that is, it will hand out IP addresses to client computers on the network that have their DHCP client turned on (most have it turned on by default). Your ICS computer's LAN network adapter should now have a static IP address of 192.168.0.1 and please don't change it, as changing the IP address may "break" ICS. Your ICS computer will now also serve as a DNS server. Essentially, using ICS makes your computer a router since it routes LAN traffic to and from the WAN, performs NAT, and also performs port forwarding. The scary part about this is that Windows lacks a lot of real features that are found in traditional routers and/or Internet sharing servers/devices. Windows gives you no control over the DHCP server or what IP addresses will be used for which clients, and what scheme the IP addresses will be in. Sick.

Now that you have your computer configured, you need to configure the router. The computer configurations that we just made should work for both router configurations listed below.

The two configurations listed below are not for using two routers or different kinds of routers. We've listed two configurations because both of them have pros and cons. Try one, then the other, if you need to, to see which one gives you the results you're looking for. If you want to use two routers, follow this configuration to get your first router configured, then read the How-To's on Wireless Bridging, Client-Bridging, or WDS to configure your second router.

# Router Configuration

## Router 1

This configuration puts your router and all client computers connected to the router, in a subnet that's separate from the Internet host computer. This means that no computers can share files or printers with the Internet host computer.

- Log into the router's web interface using a cable that goes into one of the switch ports. Remember to save settings after making changes.
- Go to "Setup" > "Basic Setup"
- Set Internet to Static IP
- Use 192.168.0.x (Make x higher than 1)
- Use 192.168.0.1 for Gateway and DNS server in the Internet Connection settings
- While not real important, you can and should leave the router's IP address set to 192.168.1.1
- Leave DHCP turned on in the router. You should never have two DHCP servers on the same network. But technically you won't. DHCP from the Internet host computer won't come through the WAN port.
- Now plug the cable from the Internet computer into the WAN port on the router.

Now you should be good to go. Client devices will automatically get IP addresses in the 192.168.1.x scheme and should see your router as their Gateway and DNS server.

## Router 2

If you want to have file sharing work back to the computer that is hosting your network connection, then this configuration is for you. This configuration will use the Access Point and the switch features of your wireless router, but it will not be performing NAT, port forwarding, or any other functions typical of a router, since technically, you will not be using your wireless router as a router. Your Internet host computer will serve IP addresses to clients, perform NAT, and hopefully, act as a firewall, essentially, acting as your router.

- Log into the router's web interface using a cable that goes into one of the switch ports. Remember to save settings after making changes.
- Go to "Setup" > "Basic Setup"
- Set Internet to "Disable".
- Disable DHCP.
- Give the router an LAN IP address of 192.168.0.x where x is higher than 1.
- Right underneath the LAN IP address, set 192.168.0.1 as default gateway and DNS server.
- Now you'll need to plug the network cable from the Internet host computer into one of the switch ports in the back of the router, NOT into the WAN port.

Clients should receive addresses of 192.168.0.x. Their gateway and DNS server will be 192.168.0.1.