

How to connect more than one PC to the Internet



Today, in a typical household, any child from primary school age to college student will have their own PC, while their parents will have a computer in the home office. Come mid-evening the trouble really starts.

Adults will want to download e-mails or surf the Net after a busy day at the office, but the children have other ideas.

The teenagers want to finish researching the Web for their essay or project before watching TV, while younger kids may want to play online games or join a chatroom. When it's only possible to connect one machine at a time to the Internet, someone is going to end up disappointed.

Internet connection sharing (ICS) software can put an end to these domestic disturbances. This is software that enables more than one PC to connect to the Internet. One user can send and receive e-mail, another can download a file, while another can surf their favourite Web sites - all at the same time.

The good news is that the ICS software comes pre-installed in PCs running Windows 2000 and Windows XP. And the actual set up is pretty straightforward.

There's a bit of work required to configure every PC in the network, but you shouldn't need to spend more than about 20 minutes setting up each computer.

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What do you need to get started?

All the computers in your network must be running either Windows 2000 or Windows XP; All the computers should be set up in a local area network. If there are only two computers you can link them via the USB connection found in most PCs built in recent years. If your PCs aren't connected in either of these ways then you can follow the simple instructions at ([Link to building a simple peer-to-peer network here](#));

At least one of the PCs must already be connected to the Internet. If not, follow the simple instructions at ([Link to 'Connecting to the Internet' pages](#)).

Hosts and Clients

Each of the PCs in the network will require a bit of basic configuration. This varies between the computer that is directly connected to the Internet (the host) and the remaining PCs, called 'clients'.

NB: You can run any combination of Windows 2000 or Windows XP on host and client machines. Having said that, there are subtle differences in the set-up instructions depending on the operating system and whether machines are running as hosts or clients.

To make things as simple as possible, we've provided instructions for the four possible operating system/host-client combinations: Host computer running Windows XP
Client computer running Windows XP
Host computer running Windows 2000
Client computer running Windows 2000

Setting up a host computer running Windows XP

Click on Start and scroll up to Programs, Accessories, Communications and Network Setup Wizard;
When prompted, select This computer connects directly to the Internet. The other computers on my network connect to the Internet through this computer;
A list of your computer's network connections will now be displayed. Click on the entry corresponding to your Internet connection;
When prompted, select Determine the appropriate connections for me;
The wizard will now show you your computer details and your workgroup name. Click Next;
Apply the new settings and wait;
When you restart your machine, the required network connections for Internet sharing should have been established.

Setting up client PCs running Windows XP

Click Start and scroll up to Programs, Accessories, Communications and Network Setup Wizard;
When prompted, select This computer connects to the Internet through another computer on my network or through a residential gateway;
The wizard will now show you your computer details and your workgroup name. Click Next.
Apply the new settings and wait.
When you restart your machine, the required network connections for Internet sharing should have been established.

Using wizards to set up Internet connection sharing with Windows 2000

If you want to share network connections with, or between machines running on Windows 2000, you can still use Network Setup Wizard.

You can choose to run the XP wizard by inserting your Windows XP CD. Alternatively, you can use another network set up disk if you have one. This is by far the fastest and simplest option for creating shared Internet connections with Windows 2000.

If you need to configure the connections manually, go through the following steps for every host and client computer in your network.

Manually configuring a host computer running Windows 2000/XP

Click Start and scroll up to Settings. Open the Control panel and double click on Network and Dial-up connections/ Network connections;

When the Window opens, you should see at least two connections listed: one for your Internet connection, and one for your local area connection;

Right-click on the entry corresponding to your Internet connection, and select Properties;

You should see the following components listed in the General tab (ignore any other icons);

Client for Microsoft Networks

NetBEUI Protocol

Internet Protocol (TCP/IP)

Click on the Sharing tab and turn on the Enable Internet connection sharing for this connection option by ticking the box;

Click on OK;

Restart the computer.

Manually configuring client PCs running Windows 2000/XP

Click Start and scroll up to Settings. Open the Control panel and double click on Network and Dial-up connections/ Network connections;

When the Window opens, you should see the connection listed for the local area network that you have created (ignore any other networking icons/entries);

Right-click on this entry and select Properties;

Among the installed components listed in the General tab, the following should be listed;

Client for Microsoft Networks

Internet Protocol (TCP/IP)

If NetBEUI is checked for this connection, un-check it now. It's not needed, and may prevent Internet connection sharing from working;

Highlight the Internet Protocol (TCP/IP) entry and click Properties;

Choose the Obtain an IP address automatically and Obtain DNS server address automatically options;

Click on the Advanced tab and make sure the various lists in the IP Settings; DNS, and WINS tabs are all empty (there are no ticks in the boxes);

Click OK and then OK again;

Restart the computer;

Repeat this process for every client PC in your network.

Starting Up

Once the host and all the clients have been configured, you should check each PC in turn. Switch on the host PC first of all, and log on to the Internet. Then try using the Internet by launching the browser on each machine. Each one should behave exactly as if it were directly connected. The same applies for email and any other online applications.

Hints, tips and trouble shooting

Once you've set up all your PCs, it should be possible to access the Internet, download e-mail etc. from any of the computers on the network simultaneously. But remember:

The host PC must always be switched on and connected to the Internet for any of the clients to have online access;

You can't widen the pipe. If more than one PC in the network is online, it will inevitably slow down email and web page access. If things become painfully slow, you should consider switching to broadband access if you don't have it already, or upgrading to a faster modem.