

setting up

Internet Connections to WordStock

The mainstreaming of Ethernet and Internet functionality presents opportunities for WordStock customers to connect their systems to external systems, such as in-house Windows-based networks, as well as the Internet. The price of those opportunities, though, is a set of challenges to make sure that connections are correct and workflow is effective.

This document discusses a few scenarios for connecting WordStock; please be sure to read the Glossary on the reverse to become familiar with key terms.

WordStock offers consulting services that can simplify connecting WordStock systems to Virtual Private Networks and/or broadband connections to the Internet, which you'd want to do if, for example, you want to share a high-speed printer between WordStock and a Windows-based computer or network.

Information we'll need to set up your Internet connections:

1. IP address of the router/firewall whichever is used, and whether NAT is used.
2. For each **Windows** computer, we'll need to know:
 - Its IP address and subnet mask;
 - Its gateway address;
 - Its DNS server address(es).
3. For each **WordStock** computer, we'll need to know:
 - The individual IP addresses you want to use for each WordStock computer;
 - The subnet mask we should use;
 - The gateway we should use.
4. For any other devices, such as network printers, we'll need to know:
 - Its IP address and subnet mask;
 - Its gateway address.

WordStock Service Fees

The entire process of setting up the connections depends on the quality of the info supplied by your ISP [Internet Service Provider]: if the information isn't accurate, it will take more time to create the connections and to resolve problem, all of which is billable.

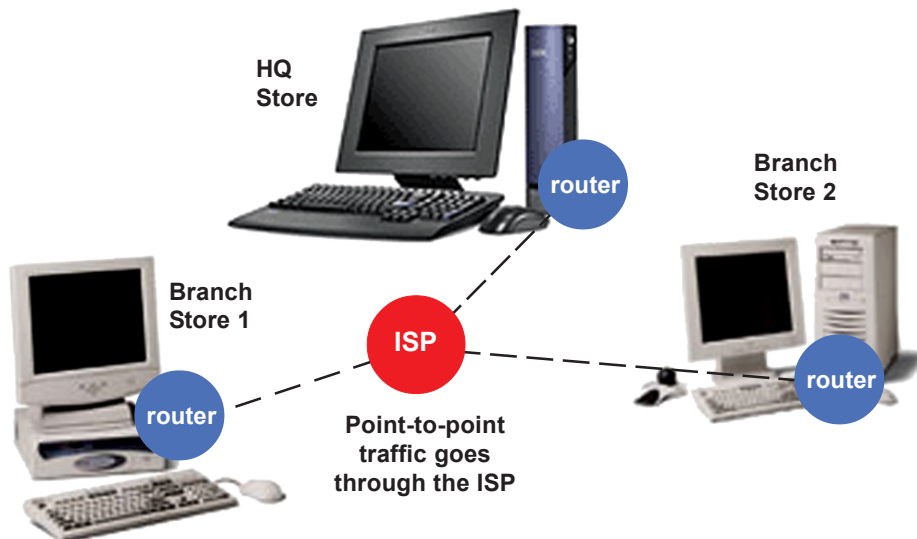
Please make sure your ISP provides you with accurate information!

Note: If you change to a different ISP, or if you add or remove hardware from your network, even something as seemingly simple as moving a printer, your hard-coded WordStock settings may need to be changed.

We treat any such incident as a new, billable case.

Please contact us in advance of making any changes to your Ethernet, especially any changes to any IP addresses of devices in your network(s).

- WordStock charges \$160/hour for all consulting and troubleshooting work associated with Virtual Private Networks and setting up DSL and ISDN Internet connections to WordStock.
- None of this work, including verifying and setting IP addresses and other parameters on Windows boxes, is covered under our standard hardware or software maintenance programs.
- Troubleshooting any and all aspects of the TCP/IP transport are billed by the hour.
- Services fees apply to troubleshooting network printers, Kermit, Phindows, TCP/IP etc.



Glossary of Basic Internet & Connectivity Terms

Virtual Private Network [VPN]

A private data network that makes use of the public telecommunication infrastructure. A VPN can be contrasted with a system of owned or leased lines that can only be used by one company. The idea of the VPN is to give the company the same capabilities of privately owned lines at much lower cost by using the shared public infrastructure, i.e., the Internet, rather than a private one.

A VPN makes it possible to have the same secure sharing of public resources for data that phone companies have for voice because a VPN encrypts data before sending it through the public network and decrypts it at the receiving end. VPN software is typically installed as part of a company's firewall server.

DNS Server Address

The IP address of the computer that will work as a "name server" on your network. Using DNS, Domain Name System, the name server translates internet host names, such as www.wordstock.com, into the numeric IP addresses used by the internet.

IP Address

A numeric address that identifies a host on the Internet. The address is made up of 4 bytes. Each byte can represent a number from 0-255. The decimal values of each byte, separated by a "." form the IP address of the machine.

Subnet Mask

An IP address identifies a network and a machine on that network. By using a subnet mask, it's possible to extend the IP address' network information to define sub-networks on the local network.

Gateway Address

A computer that forwards data packets between networks. A Gateway is physically connected to at least 2 networks, and forwards packets according to "routing tables". For this reason, they are sometimes called "IP Routers". The Gateway address is the IP address of the machine that fulfills this function on your network.

Cable Modem

Internet access over the coaxial cable that you plug into a VCR or TV. A cable modem accepts this coaxial cable and can get data from the Internet at up to and above 1.5 Mbps.

DSL [Digital Subscriber Line]

A form of high-speed Internet access currently competing with cable modems. DSL works over standard phone lines.

Router

A device used to bridge multiple Local Area Networks [LANs] to a long distance digital communications network, such as ISDN.

Subnet

Refers to a group of TCP/IP addresses defined by a subnet mask. A subnet mask determines how many addresses are in the same subnet as a particular TCP/IP address. Addresses in your subnet are reachable without going through a router, and thus can be reached by broadcasts. To reach addresses outside of a particular subnet, you must transmit through a router. This is all part of the TCP/IP protocol.

Subnet Mask is a TCP/IP number used to determine which TCP/IP subnet a device belongs to. Devices in the same subnet can be communicated with locally without going through a router. When a TCP/IP device tries to communicate with another device, the bits of the TCP/IP destination address are "ANDed" with the subnet mask to determine whether the address is a local address (broadcast-able) or must be reached through a router.

Transmission

This refers to the act of uploading or sending data. Often, the term "TX" is used on indicator lights on modems or network cards to indicate that data is flowing out of the device.

Transmission Control Protocol [TCP]

This is the part of the TCP/IP suite of protocols that is responsible for forming data connections between nodes that are reliable, as opposed to IP, which is connectionless and unreliable.

TCP/IP

[Transmission Control Protocol / Internet Protocol]
TCP/IP is a suite of communications protocols that allows communication between groups of dissimilar computer systems from a variety of vendors. The TCP/IP suite first saw usage on the original Department of Defense Internet in 1983 and it's still the protocol of the Internet. In fact, it's grown in popularity and is being used in private networks around the world.

Bandwidth

A measure, in some amount of bits per second, of the amount of data that can be sent over a particular cable, interface, or bus.

Domain

This term describes the Internet's addressing scheme in which domains are represented by domain names such as wordstock.com. These domains are mapped to TCP/IP addresses by DNS servers so that browsers can find websites.

Domain names are used to represent more complex TCP/IP addresses, e.g., the domain name wordstock.com represents our web server's Internet address.

Credits

These definitions are synthesized from whatis.com, and geek.com.