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Windows Vista
Microsoft

Checking for TCP/IP Connection Problems in Windows Vista

Pinging your way into a diagnostic

When a Windows Vista desktop is separated from the network, one of the most common sources of problems is the physical connection between the computer and the network. As Windows Vista's default communication protocol for the Internet is TCP/IP, users will be able to ping their way into a connection diagnostic. The ping utility will immediately and effortlessly identify and display connection problems TCP/IP-based networks. Connection problems can be local, restricted, due to the lack of connectivity among computers that are part of the same network, or can be related to external Internet locations. The first stage of troubleshooting involves verifying the validity of the physical connection that ties the computer to the network. Via the ping utility, users can check both the integrity of a local network and an Internet connection. Windows Vista will send out Internet Control Message Protocol (ICMP) packets to an address that is specified by the users. In this context, the user can target another computer on the network via the IP or an online location. Windows Vista will display responses from the addresses to the echo datagrams sent initially and will verify if the connection is alive. A ping command can be run from, well, the Run dialog box accessible by holding down the Windows key and then pressing "R" or through a command prompt window, enter "cmd" in the Search box under the Vista Start menu and hit Enter. In order to access all the commands which can be used together with ping, type "ping /?" in a command prompt window and hit enter. "ping www.address.com" or "ping [192.00.00.11]" are examples of how you can verify the connection to an Internet location or to a certain computer. In order to increase the default number of packets that the computer is sending out, users can enter "ping -n 40 [192.00.00.11]." Bear in mind that the packets have to return in the same amount of time that they were sent out in order to exemplify a healthy network. The "Request timed out" message is illustrative of problems that exist along the connection but not on the computer that is sending the packets. In order to verify if the TCP/IP connection on the local machine is functioning within normal parameters, users can also ping their own computer with the following commands "ping ::1" (Ipv6 address), "ping 127.0.0.1" (IPv4 address) and "ping localhost." Any error message is an indication of the fact that the TCP/IP connection on the local machine is at fault. Users also have the possibility to ping the IP address of routers and default gateways and DNS servers, in addition to their own Windows Vista machine, other computers on the network and websites.