

What is a Virtual Private Network?

The addition of the word "Virtual" to "Private Network" makes an easily understood concept somewhat more difficult to understand. A "Private Network" is a collection of interconnected computers made available to a designated group of users. Many of us use private networks daily in our workplace to accomplish our jobs. We log-on to our workstation and connect to the company network to access files, databases, printers and other internal, private resources. A "Public Network", by contrast, is a collection of computers which anyone can access. The largest public network is the Internet – anyone with a computer can access information stored on millions of computers worldwide.

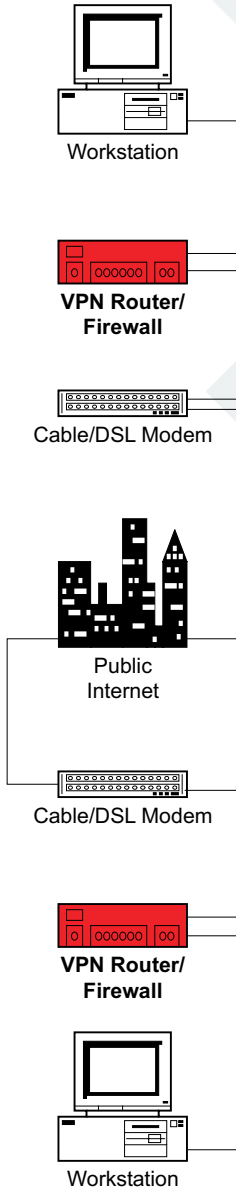
Eliminating Distance from the Equation

Large companies with offices in more than one location use expensive, direct lines leased from phone companies to interconnect their offices and facilitate communication and work. Due largely to cost this capability has not been available to smaller businesses. Virtual Private Networks change this equation and make the interconnection of computers over any distance relatively inexpensive by utilizing the Internet as the carrier. The cost of the Internet is not affected by the duration of the connection or the distance between connection points. As the connection is created and exists only while the session is active it is referred to as "virtual".

Accessing a Virtual Private Network

In order to ensure that both the networks and the information flowing between them remains private VPNs make use of a tunnelling protocol, i.e. the rules which control the transmission of private data over public networks in a way that the public network is unaware that a private transmission is taking place. To secure the connection VPNs utilize encryption and authentication. Both the data being transmitted and the sender and receiver address information is encrypted during transmission to prevent electronic eavesdroppers from "listening" in. Authentication ensures that the system attempting to create the connection to the private network has the necessary authorization to do so.

Once installed and connected a VPN enables access to a private network from any location that can connect to the Internet – virtually anywhere with a phone connection. Access can range from the ability to print to a designated printer, for example, a corporate colour laser printer, to accessing corporate email and schedules, to full access to corporate resources so that working at a remote computer is indistinguishable from working in the office. For example, this article was prepared over a VPN from Kentville connected to ON-LINE's office network. Recent advances in Cable/DSL Routers with built in VPN capabilities, like the Linksys router pictured below, place the implementation of inexpensive, effective, secure VPNs within reach of all businesses.



Linksys Etherfast Cable/DSL
VPN Router with 4 Port
10/100 Switch

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