



Choose the right network for your business...

Businesses that require a wide area network to link multiple sites should choose carefully from the available technologies.

While there is no 'right' or 'wrong'; it's important to consider the costs and benefits of the most appropriate networking solution as part of your overall IT strategy.

At a high level, the two major choices are either an Internet VPN or a Private IP network. It is important to understand the major differences between these two approaches.

Internet Virtual Private Networks (VPNs) provide a "cheap and cheerful way" to securely link multiple offices across the Internet. They offer a cost-effective, entry-level solution for small businesses with simple networking requirements. Encryption is used to ensure business data remains confidential.

Private IP networks, such as Internode Business Connect (IBC), are quite different. These inherently secure networks are engineered to deliver Quality of Service, that support newer business applications such as IP telephony, IP videoconferencing and thin client computing.

Co-location of customer equipment in carrier-grade data centres, as well as effective management services for Internet gateways and customer routers, are also possible with a Private IP architecture.

In many cases, the optimal solution will combine both approaches. Private IP can deliver the high availability and throughput required for the backbone network between major offices; Teleworkers and minor worksites can gain access via low-cost Internet VPNs.

Security

An Internet VPN runs across the Internet, which is an insecure, unmanaged and ubiquitous global network. By contrast, Internode Business Connect is constructed over Internode's private network backbone, so business data does not travel over the Internet.

While an Internet VPN can be protected from incursion by encryption and layers of security, this delivers a performance hit and increases networking equipment complexity and cost. Issues can also arise from inappropriate staff use of these multiple Internet connections.

By contrast, IBC networks are inaccessible from the public Internet, with most customers utilising a single managed Internet gateway, robustly protected by a corporate-grade firewall.

Performance

The encryption process will affect the performance of Internet VPN links. Since a Private IP network is inherently secure, this encryption overhead is eliminated. Another performance benefit of IBC over a VPN is that it transfers data over a managed private network backbone, freeing it from the problem of transient Internet congestion.

There is also a significant architectural difference. Private IP networks can route traffic on an 'any site to any site' basis, which improves performance by using the shortest path and minimises potential single points of failure.

Although "any to any" is theoretically possible with an Internet VPN, it is seldom deployed because of the penalty in terms of cost, security and management complexity – particularly as the number of sites on the network increases.

Quality of Service

As a Private IP network, IBC can prioritise time-sensitive applications, such as Video, Voice over IP (VoIP) and thin-client applications, before time-tolerant applications such as email and data backups. A 'virtual router' within Internode's MPLS network is dedicated to each customer network, and performs routing and prioritisation of data traffic 'in the cloud'.

This sophisticated Quality of Service prioritisation is simply not possible with an Internet VPN, since it has no central control point.

IBC's ability to prioritise important data provides a much better environment over which to run emerging corporate applications such as VoIP, IP Videoconferencing and thin client remote access to business systems.

No usage charged metering

As a VPN operates via the public Internet, it incurs charges based on a per-megabyte download limit at each site. By contrast, IBC, as a private network, has a fixed price per site – regardless of the amount of data traffic. This allows the use of operationally valuable applications such as online backups of corporate data between sites or to secure off-site locations such as an Internode Data Centre, not to mention the budget certainty it provides.

Cost

Costs for an entry-level Internet VPN start from \$80 per site per month whereas private network connections start from \$150 a month. Both approaches will scale up through the range of broadband ADSL speeds, SHDSL and Ethernet up to 1 Gbps.

While Internet VPNs can certainly be cheaper than a Private IP approach, the true costs and benefits of a fully secured, high availability and well managed multi-site network require some careful consideration and analysis.

The network is just one aspect of an overall business information systems strategy: The extra features of IBC often outweigh the extra costs by enabling greater efficiencies and productivity across the enterprise.

Internode Business Connect

There's no 'one-size-fits-all' solution to multi-site networking. The best solution comes from working with a consultative business partner who can tailor a solution to meet the specific needs of your business – both now and into the future."



For more information about the benefits of Internode Business Connect (IBC) or to arrange a consultation, visit www.internode.on.net/ibc or call **13 NODE (13 66 33)**