Example of remote access protocols case study

Technology, Internet

Remote access protocols

There are many remote access protocols that are used in Windows and, therefore, choosing a remote access protocol is a procedure that is important. The remote access protocol that will be selected will depend on the use of the protocols. When undertaking a plan to configure a remote access network environment, it is important to know what protocols the client, and the server will be using. This will determine the protocols that will be used for authentication, connectivity and encryption. There are two categories of protocols that are used for connectivity. These categories are dial-up and virtual private networking. Each of these categories will have various protocols for various purposes. There are protocols that are used for connectivity, others for authentication and others used for data encryption (Gee, 2007).

When making decisions on what protocols to adopt for remote connections, two things will always come into the mind, the security and compatibility with older systems and equipment.

Dial-up connection protocols

The protocols that are used for dial-up connections include point-to-point protocol (PPP). This protocol can be used for both the server and the client. This protocol is used is there is a need to have encryption in both the server. This protocol supports TCP/IP protocol and other protocols that are used in LANs.

Another dial-up connection protocol is Serial Line Internet Protocol (SLIP). This is used in a client in a network that uses windows 2000 and NT. This is

used when the server does not support PPP. This protocol only allows the use of TCP/IP and not any other protocol like DCHP and WINS.

Another connection protocol is that of Asynchronous NetBEUI (AsyBEUI). This is a Microsoft protocol that is propriety and is used in legacy systems like early Windows NT versions and DOS. There are also Windows Workgroups, which make use of this protocol. This protocol only supports NetBEUI LAN protocol (Embree, 2005).

Virtual private networking protocols

The virtual networking protocols sandwich PPP frames into IP datagrams. These are the data units that are found at the data link layer in the OSI reference model. After these datagrams have been created, they are then sent across an internetwork or even the internet. The internetwork could be a private network or a public internet. This encapsulation of the PPP frames creates a tunnel which acts as a WAN link which is dedicated. This tunnel uses the internet in the real sense. Given the fact that VPN still use PPP, the authentication protocols that are used in PPP are still applicable in VPN.

One protocol that is used in VPN is that of Point-To-Point Tunneling Protocol (PPTP). This protocol is only applicable to an internetwork. All the other networks will not be applicable to the connectivity of the protocols.

Another connectivity protocol that is used in this category is that of Layer 2 Tunneling Protocol (L2TP). This protocol is used on internetwork protocols. It can also be used over frame Relays PVCs, X. 25, ATM network or even virtual circuits of ATM. This protocol is a combination of both PPTP protocol and a protocol from Cisco Networking Company technology called Layer 2 Forwarding.

When choosing a protocol to use, it is important to know what network to use and the requirements of the network. Most virtual networks are now adopting the use of VPN category of networks.

References

Embree, L. F. (2005). Data communication. Pennsylvania: Dowden, Hutchinson and rose, Inc.

Gee, K. C. E., (2007). Introduction to local area computer networks. NJ: Wiley.