Analysing VPN Impact & Cost to Secure Wireless LAN

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Abstract

Wireless network technologies cover a broad range of functions and capabilities oriented toward different users and needs. Wireless local area network (WLAN) devices, for instance, allow users to move their laptops from place to place within their offices without the need for wires and without losing network connectivity giving a greater flexibility. This offers an increase in work efficiency and collaboration opportunity, additionally it offers a dramatic cost saving. At the same time, businesses are increasingly more concerned about Wireless LAN security. IT Managers have been reluctant to deploy WLAN technology despite of the advantages it offers. This work proposes to alleviate these worries by suggesting and evaluating complexity of using Virtual Private Network (VPN) technology. Cost of the implementation and load on the network due to encryption and decryption as well as additional headers are studied and analyzed.

Security varies from one organization to another; depending on how much secrecy they value their manipulated data across their network infrastructure. This thesis simulates wireless LAN of IEEE802.11 g protocol, and analyzes the impact of integrating Virtual Private Network technology. The result indicates that there is secure method of implementing WLAN with a slight degradation in network performance.