**VPN**

A VPN is a private Network which allows users to get an over secure connection providing privacy anonymity and security. VPN can be used in combination with proxy servers and overlay networks.

There are three types of VPN:

-Remote access

-Intranet based site-to site

-Extranet based site-to-site

A Virtual Private Network is a secure network that can be accessed by certain programs connecting your PC via an encrypted connection to a VPN-Server.You can visit websites using the servers IP-address and it’s handing off the information back to you.The data-traffic between you and the server is encrypted, the data traffic between the server and the website can’t be traced back at you by anyone than the server.

That way no one can “see” what data input you give the website and what data output you receive by the website.

Normally you need to identify yourself to get access to a VPN, certificates and licence keys are additional steps to make the connection save.

In a corporate setting, remote-access VPNs allow employees to access the company's intranet from outside the office.

VPN can not make network connections completely anonymous, but it can increase security at a higher level. VPN is descripted like an inner built Tunnel-Connection inner half of a connection path.

VPNs typically allow only authenticated remote access using tunneling protocols and encryption techniques

It can be used only by a priories group of external users for the extranet.

**The VPN security model provides:**

-confidentiality such that even if the network traffic is sniffed at the packet level , an attacker would see only encrypted data.

-sender authentication to prevent unauthorized users from accessing the VPN

-message integrity to detect any instances of tampering with transmitted messages

**Secure VPN include following protocols:**

-IPsec (Internet Protocol Security)

-TLS (Transport Layer Security)

-DTLS (Datagram Transport Layer Security)

-SSH (Secure Shell )

-MPPE (Microsoft Point-to-point-Encryption)