

A Firewall can be hardware, purchased from a vendor, or software. The primary objective of a firewall is to monitor traffic and prevent access to a private network. There are many forms of Firewalls such as Packet Filter, which inspects transmitted data packets and checks to ensure they are on the allow list (depending on the source and destination protocol) if not, the packets are denied access. A Proxy Firewall controls packets going in and out of the network, never revealing the internal network address to the outside world. The benefit of Firewalls is that they enable you to monitor the network and protect against attacks from the outside world, on the contrary some of the disadvantages are cost, maintenance and user restriction.

The second security technology, would be authentication, which ensures the person logging in is who they claim to be. The traditional form of authentication is a username and password which can also include security verification questions. However, as cyber attacks have become more sophisticated more appropriate measures have been required, such as multi factor authentication. This is a process where a secure code is sent to a user's registered phone or a token. Once the user inputs this secure code correctly, access is granted. The benefit of this is an additional layer of security making the authentication process more challenging to breach. However, the disadvantage is that it becomes time consuming to log in.

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