

INFORMATION SERIES

E - C O M M E R C E F O R S M A L L B U S I N E S S

FACT SHEET # 9

SECURITY WITH FIREWALLS

Computers and the Internet are now an absolute necessity for SMEs to operate. The more reliant your SME becomes on them, the greater the danger from various forms of IT security breaches. Firewalls are the first line of defence to protect your computers and data. This Fact Sheet describes firewalls and explains how they are a necessary part of any commercial online operation.

WHAT ARE FIREWALLS?

Firewalls are designed to restrict access between the Internet (or some other network) and your computer or network. A firewall system may be hardware- or software-based and is mounted strategically at the edge or inside of private or closed networks. It prevents unauthorised access into those networks or segments of those networks. This is why they are called perimeter defence mechanisms or security gateways. Desktop firewalls that function to protect an individual computer from malicious attacks are also available.

WHAT DO FIREWALLS DO?

A good firewall should examine all traffic coming into the protected computer or network from the Internet or external network.

It provides protection by analysing network traffic and permitting entrance based on pre-established rules. Traffic that does not meet the specified, rules-based security criteria is blocked from accessing your computer or network. The firewall can also ensure that there is no direct connection between your computers and outside computers.

In addition to these technical screening functions, firewalls have a number of other useful capabilities, including:

- **Authentication** – identifying individuals through user names and passwords
- **System management** – allowing computer system administrators to monitor activity and provide notification of suspected breaches
- **Encryption** – allowing you to scramble or code information that passes across public networks
- **Logging and reporting on computer use**

The size and focus of an SME will determine which firewall is best. The larger the computer network is or the more important or sensitive the data held on your computers, the more likely it is that you will need more sophisticated firewalls.

WHAT FIREWALLS DO NOT DO

Firewalls provide little protection against internal attacks (eg disgruntled employees). They also provide little protection against viruses which are delivered by email.

In some cases, firewalls may also restrict access to outside services which you want.

Firewalls can also be overcome where there are other weaknesses in the system (such as where unrestricted modem access is permitted). It is therefore that firewalls are used in conjunction with intrusion detection systems so you can monitor their effectiveness and take remedial action if they are found to be wanting. There are many vendors of cost effective firewall solutions who are well placed to assess your needs.

USEFUL LINKS

Internet Security Portal

<http://www.security.iaa.net.au>

Understanding Firewalls

<https://www.securitytechnet.com/resource/rsc-center/vendor-wp/symantec/promotions.pdf>

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