

Homework 10 Exercise 11 Page 467

Using my favorite search engine (bing.com), identify firewall issues that might arise for a company that uses cloud computing in its online sales system. Summarize your findings in terms of the perimeter expansion problem.

First we briefly discuss what a traditional firewall is since that was nearly 99% of what I could find on the internet. The traditional firewall has to do with keeping local network traffic and local systems and servers away from the internet, by only exposing the applications and port numbers necessary to support sales to the public internet. All local and business important information is unreachable from the public internet.

Next comes the cloud and how to create firewalls for the cloud. The main issue with the cloud is the servers and systems change on the public cloud frequently as numbers of users of your systems grow and shrink. What is exposed and what is not is much harder to define. How to surround your information which you don't want public access and information which you do want public access seem to be changing location and usage all the time as employees need access to the information to conduct the business.

Next is what to do about this. Do you establish 2 firewalls, 1 for the local network, and another for the public cloud. Keeping the rules consistent and correct becomes a nightmare of configuration and changes. This is where the perimeter expansion problem comes into play as the rules in the public cloud expand but keeping the private network secure leads to unhappy employees and troubles.

What is the solution? I found this white paper from Cisco© which discusses how they will create an environment which has only 1 control panel but will control both firewalls through a single interface. This way the configuration never become different, and it is easy to control and see what is happening within your local network as well as the public cloud. Cisco© calls this micro-perimeters around multiple assets which are all controlled from a single control source.

Sources:

“Electronic Commerce Twelfth Edition”. Gary P. Schneider. Cengage. 2015. Chapter 10, Page 461.

Cisco© Whitepaper: <https://shorturl.at/kHbkN>

Actual URL: <https://www.cisco.com/c/en/us/products/collateral/security/firewalls/ngfw-futureoffirewalling-wp.pdf>