Router Fail - Network Down

1 Overview

A company had the internet go down. The way their system was built, they had a 2nd firewall behind a cable company router. I was able to access the network before the firewall, which meant that their firewall might've failed.

2 Diagnosis

The internal firewall had no LED power light or activity. So, no internet.

First, their network was a 192.168.0.0/24 subnet. I first put them behind a second wireless router which was upstream of the cable modem and not offline. However the network of that internet router was 192.168.1.0/24. This means a few things. 1) All computers (Windows unfortunately), must be set to DHCP (in this case they were all static), and leases must be renewed. So, at least you need a reboot of computers in this situation. 2) They had server software in the LAN that depended upon the 192.168.0.0/24 subnet to work. I didn't find this out until later.

Originally, I started with the default wireless network of 192.168.1.0/24 but I found that the server software wasn't working. In this case, the most efficient way to rebuild the network, with all the statics intact, was to set the new (temporary) replacement router to be the same subnet. I didn't have the password for the wireless router, so a simple factory reset enabled me access (although lucky for me, the default subnet was in fact 192.168.0.0/24).

3 Conclusion

When replacing a failed router in a situation like this, the new router should ideally have the same subnet. You might be able to get away without this in smaller offices, but if there is any server software, or if the computers have static IPs [1] you will run into a few more minutes of work.

There are no rules; this is not set in stone, however, it's the easiest path. As this was only a temporary router replacement, it was not important to have the network 1:1 with the original. In my setups, (this network was not mine) I prefer to have redundant hardware, so you can replace a broken firewall, with a similarly configured duplicate.

[1] Or if any other device hsa a static ip, e.g. CCTV camera