Lab 2 – Port Forwarding and Firewalls

Overview

In this lab you will practice port forwarding through your pfSense firewall to connect to remote desktop protocol (RDP) services on your 8580-<id>-desk01 and 8590-<id>-desk02 machines, and discuss key concepts related to this working. This lab must be completed online, with all work being done and written as it is done into Word 365 Online. Use the Lab Book Template and upload to your Word 365 Online and begin working there. You must also share an edit link from Word 365 Online in the comments of the assignment document submission (export a PDF and upload it to eConestoga). Not following these instructions and showing ongoing work through the change revisions tracked in the online Word mean a score of zero on the lab.

Preparation

- Have an 8580-<id>-corpfw01 pfSense machine, 8580-<id>-desk01 and 8580-<id>-desk02 Windows 10 machines configured and working, with your pfSense machine having interfaces on your _01 and _02 networks. _01 is to be used as the WAN and is to be working, and _02 is to be used as the LAN. Your desk01 and desk02 machines are to have static IPs on the LAN. You may assign any IP addresses you wish to use as long as they are valid (ie, RFC1918 private IP ranges being used for your choices for the LAN). For <id>, id is to be your initials plus last four numbers in student ID such as 8580-my1234-corpfw01.

Part 1

- Confirm RDP services are enabled on your desk01 and desk02 machines

- Configure a port forward so that port 3391 on your pfSense WAN IP goes to your desk01 RDP service, and port 3392 on your pfSense WAN IP goes to your desk02 RDP service.

- View the firewall configuration on pfSense to see the firewall configuration that is allowing this connection

- Connect to both services from your home computer to test this is working

Screenshots
- Appropriate screenshots that demonstrate the above was done and all is working
- Ensure the screenshots are convincing that it is working and done from and to the machines as asked (what can you show on the screen, etc, to make your screenshot(s) convincing?).

Reflection

1) Record any of your own observations, solutions, or comments about the work you did. What problems did you have, what was not clear, what did you take away that you value? Explain your configuration choices. This is mandatory.   Refer to your detailed observations as needed in answering this.

2) Explain what a port forward is doing and why it is needed; why can't you just connect to the desk01 and desk02 machines directly?

3) What are the benefits and drawbacks of this configuration as it currently stands? How could it potentially be improved?