ISOL 532: Telecommunications & Network Security
Case Project (Network Security Plan)

Due 7/28/2019 at 11:59PM. No exceptions

Note about Group work: this project needs to be done in teams. The team size must not exceed five students. In the body of the report, you must clearly type the names of each member who participated in team work and also the team name. Only one student submits on behalf of the entire team.

The NetWay Corporation is a new startup that wishes to sell their new phone, called NetWayPhone, to the public. NetWayPhone plans to offer two options. 1) a secure version of the phone designed for business organizations called the NetWayPhone B+, and 2) a highly secure version of the phone designed for the government, called the NetWayPhone G+.

Due to the fear of corporate espionage and government security requirements, there are many security concerns that must be addressed. As a network security professional, you have been employed to design a network infrastructure for their two campuses located in Atlanta and Cincinnati based upon the following specifications:

1. There needs to be a constant connection between the two locations that can carry at least 50 Mbps of data.
2. Each facility has three floors. The buildings are rectangular with each floor 350'x350'.
3. There will be 200 network connections on each floor with an additional 100 network connections in the data centers located on the third floor of each building.
4. The primary data center will be located at the Atlanta location.
5. There will be a failover data center at the Cincinnati location.
6. Each location should be protected from intrusions that are not limited to state change attacks.
7. The Atlanta location will house the two secure development teams. As such, it will need the greater level of security. The primary database servers and the corporate Web servers will be housed at that location as well.
8. Database servers will also be located at the Cincinnati site as well.
9. All servers must have redundancy.
10. The solution must have a plan to verify security measures.

Your task is to develop a report addressing the details of the secure network infrastructure design that meets the requirements above. Your submission must address the following items. Please provide as much details as possible. Please make sure that while addressing these points, your discussion must be specific to the case

scenario given and it must not be discussed in generic terms. In other words, make sure that you **<u>directly</u>** address all the following points

1. Create a network drawing, specific to NetWay Corporation, listing the network's topology including any necessary hardware. Your drawing must be detailed enough and show how the topology is interconnected. Viewing this diagram should give the reader detailed understanding about the NetWay network environment including devices and device locations.
2. Your network diagram must be drawn professionally and you must discuss your drawing and justify your choices. Please don't submit your drawing without a detailed discussion of all of its aspects
3. Address any recommended cabling for this installation.
4. Recommend wiring closets for both campuses and their configuration wherever you determine they are needed.
5. Recommend ways to ensure that the network is safe from being attacked. Discuss what measures and installations are required in terms of firewalls, IDS, Anti-Virus software or other measures as you see appropriate.
6. Make recommendations for laying traps to stop attackers and prevent damage to the NetWay network infrastructure.
7. Include recommendations for WAN connections that takes into considerations the geographical factor of the two locations.
8. Include recommendations for wireless technology and the type of wireless communications to be used in both locations.
9. Include recommendations for any technology needed in the data center for high availability.
10. Justify your recommendations with external sources referenced using APA format.