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

Due at the end of Week 7 (October 14, 2018 at 11:59PM). No exceptions

Note about Group work: this project may be done in groups or individually. If you do it in group, the group size must not exceed four students. In the body of the report, you must clearly type the names of each member who participated in group work.

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

1. Create a network drawing, specific to Acme Corporation, listing the network's topology including any necessary hardware. Your drawing should be detailed enough and show how the topology is interconnected. Viewing this diagram should give the reader detailed understanding about the Acme network environment.
2. Address any recommended cabling for this installation.
3. Recommend wiring closets for both campuses and their configuration wherever you determine they are needed.
4. Recommend ways to ensure that the network is safe from being attacked.
5. Make recommendations for laying traps to stop attackers and prevent damage to the Acme network infrastructure.
6. Include recommendations for WAN connections that takes into considerations the geographical factor of the two locations.
7. Include recommendations for wireless technology and the type of wireless communications to be used in both locations.
8. Include recommendations for any technology needed in the data center for high availability.
9. Justify your recommendations with external sources referenced using APA format.