**CSCU 453 – Signature Assignment**

**Global Network Server Implementation**

**Background:**

Fusionics Industries is an electronics manufacturer and supplier that builds electronic components for a variety of private and government clients. Their current infrastructure is outdated and has been prone to attacks by hackers that have exploited vulnerabilities in their current DNS, causing system-outages and downtime. The dated networking equipment utilized by Fusionics does not meet their network and computing throughput requirements and is also very unsecure.

Fusionics currently has 60 employees in their Los Angeles location and 20 in their Tokyo, Japan location. Fusionics is preparing to add another remote site in Washington, D.C. to support newly-awarded Department of Defense (DoD) military contracts. The Washington, D.C. location will add another 12 employees to the network. Fusionics needs to bring their current infrastructure into strict compliance with government security as a trusted network with access to government data.

**Current Infrastructure:**

Fusionics has a main site located in Los Angeles, California with one remote site in Tokyo, Japan. Another remote site is proposed for the coming year in Washington, D.C. which will add an additional 12 employees. These three sites will be connected via a VPN connection built between their three Cisco firewalls. The existing two sites are configured as follows.
The Fusionics internal domain located in Los Angeles and is called Fusionics.local and uses two domain controllers. All servers run Microsoft Windows Server 2008. All client computers run either Windows 7, or Windows 8.
The Director of Information Technology at Fusionics has asked you to design a new networking infrastructure for the company.

**Directions:**
In order to demonstrate your competency, you will submit a portfolio of items that must include the following:

You will prepare a Network Design Proposal which will include the following sections:

- Executive Summary: This high-level summary should be approximately 1 to 1.5 pages in length and should provide an overview of the proposal project. It should be geared towards a non-technical audience and should highlight the benefit/need for this network upgrade. It should also address these items:
    - Cross-cultural issues for an international network implementation
    - Consideration of  any applicable international laws or regulations

- Network Design Proposal: The network design proposal will consist of 4 subsections and should be at least 5-6 pages in length. It will contain the following subsections.
    - Proposed Network Design: Using the details provided in the scenario, design a network that meets the scenario requirements. You should discuss the needed Windows Server(s), Active Directory infrastructure, domain controllers, DHCP, DNS and organizational units.
    - Project Justification: In this section you should provide a justification and rationale for your selections/recommendations.
    - Project Deliverables: Provide a summary of what will be needed for the project. You are not required to provide specific make/model numbers of devices. But instead a high-level overview of the type of equipment and items that will be needed.
    - Project Plan & Timeline: Provide a high-level project plan and timeline. This should provide an overview of the project and the key phases that would be needed.
- Network Design Diagram: Provide a network diagram showing interconnectivity among all office locations. Include key details and important information location of key servers such as domain controllers, DHCP, DNS, etc.