**Term Paper Project: Designing a Secure Network**

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Description

Term Paper Project: Designing a Secure Network Due Week 10 and worth 210 points This term paper involves putting together the various concepts learned throughout this course. You are tasked with designing the most secure network possible, keeping in mind your goal of supporting three (3) IT services: email, file transfer (centralized), and VPN. Your first step is to design a single network capable of supporting three (3) different services. Once you have fully designed your network, you will need to provide three (3) workflow diagrams explaining how your designed network handles the three (3) different transactions. The first is an internal user sending an email using his / her corporate email address to a user on the Yahoo domain with an arbitrary address of user534@yahoo.com. The second workflow diagram should show a user initiating an FTP session from inside your network to the arbitrary site of ftp.netneering.com. The third workflow is an externally located employee initiating a VPN session to corporate in order to access files on the Windows desktop computer, DT-Corp534-HellenS, at work. Write a paper in which you complete the following three (3) parts. Note: Please use the following breakdown to complete your assignment: Overall network diagram Datapath diagrams (one for each of the steps in the scenarios below) Write-up Part 1 1a. Using Microsoft Visio or its open source alternative, create a diagram showing the overall network you've designed, from the user or endpoint device to the Internet cloud, and everything in between, in which you: Follow the access, core, distribution layer model. Include at a minimum: The authentication server (i.e. Microsoft Active Directory) Routers Switches (and/or hubs) Local users Remote users Workstations Files share (i.e. CIFS) Mail server Web servers (both internal and external) Firewalls Internet cloud Web proxy Email proxy FTP server (for internal-to-external transport) 1b. Explain each network device's function and your specific configuration of each networking device. 1c. Design and label the bandwidth availability or capacity for each wired connection.