

**Reflective Essay**

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### **Introduction**

Certainly, cybersecurity is an evolving science field with myriad subdisciplines, applications, and required skills. My job, as a cybersecurity student, has been to navigate this complex career field exploring different concepts, utilizing various software, and understanding a little of various career avenues within the cybersecurity career field through courses over the past four years. While it is difficult to mention every assignment, project, feeling, and memory I have experienced while working as a cybersecurity student, I can mention three skills with varying artifacts I can recognize to be my top most marketable skills. Network management, Windows server management, and communication are the skills I have recognized as my most discerning skills.

### **Network Management**

I strongly favor network management as a strong skill I have due to the several virtual machine lab assignments I have had to complete for a courses. CYSE301, Cybersecurity Techniques and Operations, was a phenomenal course covering various concepts related to network management in a virtual lab environment mimicking what network administrators may do in a real world example. In addition, this was my favorite course and the course I would have very much enjoyed continuing to learn about. One notable artifact of this skill, a traffic analysis virtual lab assignment, required me to ping an internet protocol address and record the internet message control protocol packets sent across a virtual local network using a packet sniffing tool called Wireshark. This assignment gave me an introduction to network traffic analysis and processes. In addition, a follow up artifact project displayed my role as the attacker in sniffing command line packets the victim, who was also played by myself, was entering in the local machine. I chose this second artifact because it displayed my understanding of both an attacker

and a victim in a network sniffing attack within the context of how both parties might act in a passive, reconnaissance, and information gathering attack. Lastly, I think my work on the Sword vs Shield assignment provided an excellent view as to my experiences using Nmap to get a better understanding of a local network's subnet topology and open ports. This aided my network management skills as I was able to act as a network administrator as I was tasked with understanding areas of network vulnerabilities, understanding why ports were open, and working with yet another network management tool frequently used by network administrators. These three artifacts provided me with having the perspective of the hacker and victim increasing my knowledge of networking. I had an excellent experience with this course and feel it prepared me for working in the technology field like no other. My experience with this course was great, but my experience working in the Windows server management course comes at a close second.

### **Windows Server Management**

CYSE280, Windows System Management and Security, was an excellent course offering its enrolled students with the knowledge and skills necessary to navigate through Windows server user interface in the desktop supported version, standard command line supported version, and becoming a skilled user in the most used operating system in the world. My first chosen artifact showed my use of Windows Server 2019 desktop version in a virtual lab environment to import a DNS server module, defining three DNS client subnets, and making two different DNS zone scopes. This lab accurately displays my use of both command line interface experience managing DNS servers and clients on the Windows Server 2019 software. In addition, my skills in configuring virtual disk storage in Windows Server 2019 can be displayed in the appropriate artifact showcasing my configuration of Disk 2 with Redundant Array of Independent Disk level 0 providing data stripping and level 5 providing redundancy in case of storage loss. This artifact

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shows my understanding and ability to configure storage and RAID levels according to the needs of redundancy and storage capacity. Artifact 3 supports my skills in using Active Directory Users and Computers to define users and group affiliation. Due to the use of the Cengage software to complete various lab assignments for this course, limited visual recorded data of my work is provided by the application. However, my experience and knowledge and memory of my experience was crucial to my understanding of how to navigate Windows Server environments and what may be required of me in the near future in possible upcoming career opportunities as a Windows Server administrator.

### **Communication Through Written Works**

Perhaps the most broad skillset I have developed regardless of which course I have taken in my academy journey has been communication. I have had the chance to communicate through typed or written work in discussion board assignment, essays, and lab reports of my work done for assignment explained sequentially as can be displayed in my network management artifacts. To best display my written communication skillset, I chose to include my final reflection essay assignment for COMM112R Introduction to Interpersonal Communication. This assignment displayed my ability to communicate thoughts, feeling, and reflections accurately in a long and professionally formatted paper. The artifact covers my understanding of listening styles, conflict resolution, and key basics of practicing interpersonal communication. Within any career, interpersonal communication is unavoidable, and my experience in this course allied me to gain a necessary skillset to work in my chosen information technology career field. In addition, my final research paper for my Interdisciplinary Theories and Concepts showcases my ability to draw connections between misrepresented groups in the cybersecurity field while detailing technologies available to physically disabled individuals to work in this field. Furthermore, these

artifacts can show my ability to understand cybersecurity workplaces can be diverse and can be accommodating of even physical disabilities. This paper allowed me to learn about misrepresented groups in the cybersecurity workplace and being knowledgeable of emerging technologies that may have a place in the future of cybersecurity. This piece of work in my long cybersecurity journey remains significant due to my ability to produce complex reports on emerging technologies increasingly relevant to the continuously evolving cybersecurity career field. Certainly, a great way to showcase my ability to communicate my understanding of cybersecurity in the world can be showcased in my essay regarding the review of the National Cybersecurity Strategy 2023 addressed by former President of the United States of America Joe Biden. This policy review paper allowed me to view cybersecurity on an international scale and learn the modern approach the United States has had to international and domestic cyber operations.

### **Conclusion**

I have had the delightful experience of having a long and arduous learning experience in a variety of different courses. Among many skills that I have gained over the last four years, I recognize network management, Windows server management, and communication as my strongest skills. As cybersecurity continues to be an evolving science, I understand my three core skills make me an ideal candidate for any employer looking to reach mutual success in the cybersecurity and information technology career field.