

Final Paper

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CYSE368

Summer 2024

Intern at Chartway Credit Union

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1. Introduction

When I decided to pursue an internship at Chartway Credit Union, I was drawn by the opportunity to work in a well-established financial institution with a reputation for community involvement and innovation in technology. As a student with a strong interest in information technology and cybersecurity, I aimed to achieve three specific learning outcomes: gaining practical experience with IT infrastructure, understanding the integration of cybersecurity measures in a real-world setting, and developing professional skills within a corporate environment.

Before this internship, I worked at Old Dominion University's Information Technology Services(ITS), which gave me some great initial experience with Information Technology. This experience was helpful due to the fact it gave me a starting point and helped me understand what to expect from this internship. However, I knew that working at Chartway would present new challenges and learning opportunities.

This paper will detail my experience throughout this internship, starting with my orientation and training. The orientation introduced me to Chartways mission and values, and I learned about the important role of technology in an organization. The training sessions showed me some of the specific IT systems used throughout the organization and cybersecurity protocols used to keep Chartway safe from any malicious actors.

Throughout this internship, I faced many challenges, such as learning many new technologies and software's that I needed for this job, understanding many of the frameworks that are used throughout this company, and adjusting to the work life of a corporate job. Despite these challenges, I found the experience to be very rewarding, I had the chance to apply what I learned in school to real-life situations, work on projects that improved Chartways IT infrastructure, and work with Information Technology specialists who were always willing to help anyway they could and share their advanced knowledge.

One of the most satisfying parts of my internship, was seeing the impact of my work. Whether it was implementing my project or fixing simple issues when people would come over and ask for technical assistance. It felt great to know my contributions were making a difference. These experiences not only improved my technical skills, but also helped me develop my problem-solving skills.

Overall, my internship at Chartway Credit Union has been an amazing experience. It has given me practical skills, helped me grow professionally, and helped me understand how technology impacts a company. Throughout this paper, I will be talking about how I was able to implement technology to help this organization grow as a whole.

2. Beginning of the Internship

Chartway Credit Union is a financial institution founded in 1959. They serve over 190,000 members across the United States. Chartway offers a wide range of products and

services, such as savings and checking accounts, loans, credit cards, and investment services. It's a pretty big company with branches in many states such as Utah, Texas, and Virginia. One thing that really stood out to me about Chartway is their devotion to the community. They have this amazing initiative called the Promise Foundation. This foundation focuses on helping support children in need. This focus on giving back to the community really made me feel proud to be a part of the organization.

Throughout this internship, I was able to participate in many experiences such as give a puppy to a child, or give tickets to an amusement park with all conveniences included for them to have fun as they wished. This puppy reveal happened on a day that many people had marked on their calendar except for the kid. As he walked in and saw his new friend, his face brightened and you couldn't rip him away from his new best friend. As I witnessed this beautiful experience, I couldn't be more proud of working for a company as great as Chartway. At the ticket event, everyone was invited to Top Golf after work all expenses paid. This kid always had a dream of going to the biggest roller coasters in the world, so that's exactly what Chartway did, they gave him tickets to a famous amusement park with tickets to go there and hotel resorts for him to stay in and enjoy when he wasn't at the park. That night, not only did he get his dream, but he also spent the rest of the night hitting golf balls with the rest of the Chartway team.

During my initial orientation at Chartway, I was given a lot of information about the company's history, core values, and the different services they provide. It was really interesting to learn about how they've grown as a company throughout the years and how they prioritize not only their memories, but also the community they serve. The team was very welcoming, which made me feel comfortable to be myself and excited to start my summer internship.

They even gave me a very detailed overview of my summer project, which involved connecting all of the printers to Chartway's system using LDAPs, replacing the printer naming scheme that has been in place for 15 years, and ensure that all printer configurations were correct. This task seemed challenging, but it was also very exciting because it was a real project with many different outcomes. This introduction left me with a positive impression of Chartway and made me very eager to start my work journey.

3. Management Environment

The management environment at Chartway Credit Union was not only supportive but also very well-structured. This made my internship experience both productive and enjoyable. From the beginning, my supervisor/mentor was always very approachable and always made time to answer any questions I had. He provided clear guidance on my tasks throughout the project, and always made sure that I knew what was expected of me throughout this internship. The clarification helped make me confident in my work and allowed me to focus on my learning and completing my assignments effectively.

The IT department works together to do many tasks. With this group, collaboration is key, everyone in the department is encouraged to communicate openly and share ideas. This group collaboration allows a positive and effective work environment. This collaborative approach made it easier to ask for help on parts that I needed help with or allowed me to shadow them a lot

to gain experience in different parts of IT. I appreciated that my ideas were always appreciated, even as an intern, and that my ideas were always discussed within team discussions.

Regular check-ins and feedback sessions were also very important for the management of Chartway. These discussion sessions allowed me to discuss my progress, receive constructive feedback, and set goals for upcoming weeks. My supervisor was always open to my suggestions and took the time out of his day to give me great feedback, this helped me improve my skills and better understand the challenges of working in a corporate IT environment. These consistent touchpoints ensured that I stayed on track with my project and allowed me to reflect on my learning experiences.

Overall, the supportive and structured management environment at Chartway Credit Union significantly contributed to my professional growth. The clear guidance from my supervisor, the collaborative nature of the IT departments, and the regular feedback sessions all worked together to ensure that I could thrive and learn. This experience has not only enhanced my technical skills but also prepared me for future opportunities in the field of Information Technology and Cybersecurity.

4. Major Work Duties and Assignments

During my internship, my primary responsibility was to connect all the printers across Chartway's organization to their system using LDAPs. This was a pretty big task that involved several important steps. First, I had to configure the printers to make sure they could communicate properly with the network. This required getting into the printers network settings and printer management, which was a great learning experience for me.

A key part of the project was implementing SSL for secure data transmission. Since Chartway is a financial institution, security is a top priority. I learned a lot about setting up SSL certificates and making sure that all data sent to and from the printers was encrypted. This was crucial for protecting sensitive information and preventing unauthorized access. Without SSL, the information that printers send and receive is sent through plain text. This is vulnerable to a type of attack called man-in-the-middle. These attacks are where attackers intercept the data being sent and read the data. If the information had SSL, they wouldn't be able to read it due to the encryption of the SSL feature, however if LDAP wasn't configured with SSL, then the information would be able to read easily. This is very important due to the nature of what is sent in these banks, often times much sensitive information is sent through these printers making it that much more necessary for this feature to be implemented.

Another important aspect of my job was making sure the printers integrated smoothly with Active Directory (AD). This was about setting up and managing user permissions so that only authorized people could use certain printers. It gave me a practical look at how user management and security policies are implemented in a real-world setting. This not only was set with AD, but also Papercut. Papercut is a software that is used to store printer queues, and all the printers throughout the organization was stored in this software. I had to administer permissions for all the individuals throughout the branches with this software and even the individuals from headquarters.

Beyond my main project, I also got involved in troubleshooting various IT issues that came up. Whether it was a network problem or a software bug, I worked with the IT team to figure out what was wrong and how to fix it. This hands-on experience was super valuable because it taught me a lot about problem-solving and the everyday challenges that IT professionals face. There was a repetitive problem that would be asked many times, there was a conference room that was right next to the IT department that everyone in HQ uses. In this conference room, there was three televisions that would always turn off. Many people would come to the IT department in a rush because the televisions “weren’t working”, however it was always due to them being turned off. I eventually made very fancy signs signaling not to turn off the televisions after meetings were done, this overall helped the problem, however many individuals still don’t heed the signals and turn off the televisions causing the same problems.

I also had the chance to shadow different departments within the IT division. This gave me a broader understanding of how various teams work together to support the organization. From network administration to cybersecurity, I saw firsthand how different roles contribute to the overall IT infrastructure. There were many roles that stood out to me which I would like to learn more about. The first one was the Information security group, this group showed me how they manage vulnerabilities and resolve them. Not only do they work with vulnerabilities, however they also work with the Anti-virus and Anti-malware within the company. They also get all of the phishing alerts within the organization. Secondly, I was very interested in the Cybersecurity engineers role. He is a very skilled cybersecurity professional with a broad background that allowed him to excel in his current role. What he does now is manage all the firewalls within the organization. This may not seem like a lot, however there are many firewalls with many intricate designs within each of them. Not only that, but they are also switching the companies firewalls over to a different companies software. This will allow stronger security and allow HR to rest easy. Finally, I shadowed the Senior Cloud Systems Engineer. This engineer was very smart and had a strong background in Azure. When I shadowed him, he didn’t stutter a single second, meaning he had much information about everything he did. We talked for about three hours on what he does and how he does it and still rushed to finish the session. This session was very interesting and I wanted to learn more about what he does, however in the end I never got the chance to shadow him again.

In addition to these projects and troubleshooting tasks, I helped with daily operational tasks like monitoring system performance, updating software within the printers, and managing user accounts. These might seem like minor tasks, but they’re essential for keeping everything running smoothly. It was interesting to see the behind-the-scenes work that goes into maintaining a large company's IT systems.

Overall, my responsibilities during the internship gave me a deep dive into the world of IT infrastructure. From technical setups and security measures to teamwork and daily operations, I learned a ton about what it takes to keep an organization like Chartway running smoothly. This experience has definitely expanded my understanding of IT and cybersecurity, and I'm grateful for the opportunity to have worked on such meaningful projects.

5. Use of Cybersecurity Skills

When I started the internship, I had a basic understanding of cybersecurity principles from my classes and some previous experience. But working at Chartway really gave me the chance to put these concepts into practice, and it excelled my knowledge.

One of the main things I worked on was configuring LDAP over SSL. This was a big deal for making sure that data transmission across the network was secure. By setting up SSL, I helped encrypt the data being sent between the printers and the server, which protected it from being intercepted or accessed by unauthorized people. Actually doing this work made me realize just how important encryption is as a basic part of cybersecurity, especially in a company that deals with sensitive financial information.

I also got some experience with vulnerability management. This meant figuring out where there might be security weaknesses in the system and then doing something about them. I learned how to identify vulnerabilities, decide which ones were the most risky, and then implement security measures to address them. It was eye-opening to see how cybersecurity isn't just a one-time setup but an ongoing process where you have to keep monitoring and updating defenses to handle new threats.

Working on these projects made me really appreciate how critical cybersecurity is for protecting the integrity and confidentiality of data within an organization. Even small security issues can lead to big problems, like data breaches that could expose sensitive information and damage the company's reputation. This experience helped me understand why it's so important to be ensure that no vulnerability is left untouched.

Overall, my time at Chartway gave me a much better understanding of cybersecurity. Learning about these things in class is one thing, but actually doing them in a real-world setting made everything much more real and relevant. I now feel more prepared to handle security challenges in future IT roles, and I've gained a lot of practical knowledge that I can apply in my career.

6. ODU Curriculum Preparation

The curriculum at Old Dominion University equipped me with a great base of IT and cybersecurity knowledge, which helped me much during my internship. Courses on network security, IT, and cybersecurity provided a theoretical foundation that I applied hands-on in real-world scenarios at Chartway. Many of the hands-on projects and assignments at ODU mirrored the practical tasks I encountered, reinforcing my classroom learning and preparing me effectively for the internship.

7. Fulfillment of Learning Outcomes

I feel like I definitely met all the learning outcomes I set for myself during my internship. I got a lot of practical experience with IT infrastructure, especially through hands-on projects and troubleshooting different issues. This really helped me understand how things work in the real world.

I also learned much about cybersecurity, especially by working on secure configurations and getting insights from the cybersecurity team. It was amazing to see how all the security measures we talked about in class get put into practice.

On top of that, I developed some important professional skills, like teamwork, problem-solving, and effective communication. These are things I know I'll need for a successful career in IT, and it was great to get real experience with them. Overall, the internship was a great way to achieve the goals I set for myself and prepare for my future career.

8. Most Motivating Aspects

The most motivating part of my internship was getting to make a real difference at Chartway. Successfully completing the LDAPs project and seeing how it improved the companies operational process made me very happy.

Another highlight was getting involved with Chartway's Promise Foundation. Participating in their events and seeing how they positively affected the community was really inspiring. It felt great to be a part of something that actually makes a difference beyond just the office, making my time at Chartway even more meaningful.

9. Most Discouraging Aspects

The most discouraging part of my internship was definitely dealing with technical challenges that seemed almost impossible to fix at first. For example, when a printer went offline during the renaming process, it took a lot of troubleshooting and testing to get it back online. It was frustrating at times, but overcoming these issues actually helped me learn a lot and improve my problem-solving skills. I believe that the first printer that went offline took about a week before I was able to bring it back online and continue with my project.

10. Most Challenging Aspects

The most challenging part of my internship was managing the renaming and reconfiguration of printers across all the branches. It was a time-consuming task that needed a lot of attention to detail to make sure everything was done correctly without messing up the operations. Juggling this with my other responsibilities really tested my organizational and time management skills.

11. Recommendations for Future Interns

My recommendations for future interns is that they should familiarize themselves with LDAP, Active Directory, and SSL before starting the internship. Having a basic understanding of these concepts will help them hit the ground running. Additionally, being open to learning and accepting challenges thrown their way is crucial. Building good relationships with team members and seeking feedback will ensure a great experience and professional growth. I would also recommend them to be ready for the best internship they will ever have, as Chartway has provided me with nothing but great times!

12. Conclusion

My internship at Chartway Credit Union was an incredibly valuable experience that really changed my academic and career path. Getting hands-on with real IT and cybersecurity challenges gave me a much better understanding of the field and helped me build my skills. This internship definitely confirmed my interest in pursuing a career in cybersecurity and gave me a strong base for future work.

As I head back to ODU, I feel motivated and ready to dive into advanced coursework and projects. This experience has not only shaped what I want to do in my career but also made me see how important it is to be involved in the community and strive for professional excellence.



my first lunch and learn



My final presentation at Chartway