**Cabling Project for Skill Struck**

Hailey Strobelt

IT 2400-601: Cabling

Professor Kelly Keetch

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**Project Description**

At first, the plan was to provide cable management and installation of low voltage frames for Skill Struck. Just as a side note, Skill Struck is a local business located within the American Fork area. However, when there was further conversations with the chief technology officer, he had decided that was not the best idea. This was mainly because they were currently renting out the building and there are only certain things they are able to make modifications to within that building.

In addition to this, their building’s lease was coming up in a few months and they were unsure if they were going to resign a new lease at the same location, meaning it would be even more important to be careful of what they changed at that building. In the end, what he wanted to get done was to the team to test the existing low voltage frames and see if the ethernet ports worked properly. He said that they mostly use Wi-Fi.

However, when they had signed the lease, they said that the owners were unsure if the ethernet ports on the low voltage frames worked in their workspace. Wanting to have that secondary option of connectivity for the employees in the office was something that he was interested in having tested. If one was going to look around their workspace, they could be able to find ten low-voltage frames. In addition to these ten low-voltage frames, there were a combination of one or two ethernet ports for each frame. This meant that there was a total of twenty-one ethernet ports that needed to be tested.

Because the initial project proposal had to be changed for a revised project, the goals and the accomplishments of our project also had to be shifted. The main goal of the revised project was to test each of the ethernet ports on the low-voltage frames. They needed to be tested in order to see if they were working properly. If they worked properly, then the remaining ports could get tested as well.

On the other hand, if they did not work properly, the team would need to report them to the CTO and give him the information from the ethernet port number that did not work. In addition to this, depending on the test type of failure, the team would need to give the CTO information on what type of failure happened, if any. The plan was also to explain what each of the test failures meant to the CTO, but of course the team would need to understand how each of these works first.

What was accomplished was that the team was able to test all twenty-eight of the ethernet ports and all of them had a good connection. So in the end, there wasn’t an explanation necessary. Although, there was still conversation on the tests if they were faulty, so that in case that ever did happen, the company could know what the issue was, so it could get fixed more easily. The team was able to report to the CTO that ethernet ports in the low-voltage frames do indeed work and that if the Wi-Fi were to go out, that his employees could connect to the network through the ethernet connection.

**Photos of Project**

**Photos Before Project**



Figure 1. Data Closet

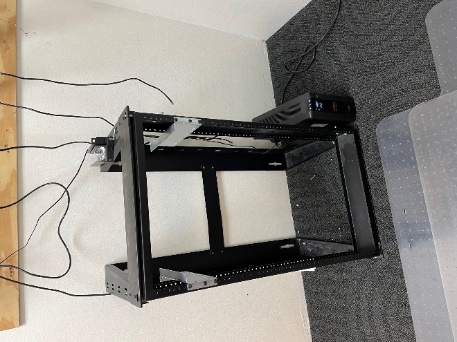


Figure 2. Data Rack

A picture containing text, wall, indoor, electronics

Description automatically generated

Figure 3. Ethernet Port #1

A picture containing text, electronics, jack, file

Description automatically generated

Figure 4. Ethernet Port #5

A picture containing electronics, indoor, jack

Description automatically generated

Figure 5. Ethernet Port #21

**Photos During/After the Project**

A picture containing diagram

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Figure 6. Ethernet and Tester

A picture containing person

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Figure 7. Ethernet Test

**Tools Used**

- Klein Tools Network LAN Cable Tester

- Cat 5E patch cable

**Obstacles Encountered**

The largest problem we faced was that the whole project had to be changed to something different than what we were expecting. To begin with, we were set to install a few low-voltage frames and conduct some cable management. On the other hand, since the company we had spoken to had second thoughts about renewing their lease at the current location and there were few adjustments we could make to the building, the plan had to change. Instead, we created a new plan to test the ethernet ports on the existing low voltage frames. The other challenge that we overcame as a team was that we were unable to agree upon a day and time to do the project. We all had varying schedules and commitments that would interfere with nailing down a date. We also had to make sure we were able to get the right equipment for our project as we were having difficulties figuring that out. In the end, we finally found a time that worked for everyone and were able to figure out the right equipment to get to complete our project.

**Service Log**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Start** | **Finish** | **Hours Spent** | **Description** |
| 02/19/2022 | 11:00 A.M. | 11:15 A.M. | 0.25 hrs. | Retrieved CTO information |
| 02/20/2022 | 10:30 A.M. | 11:00 A.M. | 0.5 hrs. | Asked CTO about need for cabling project |
| 04/06/2022 | 12:00 P.M. | 12:30 P.M. | 0.5 hrs. | Travel to Skill Struck |
| 04/06/2022 | 12:30 P.M. | 2:00 P.M. | 1.5 hrs. | Workspace look around and inspection |
| 04/06/2022 | 2:00 P.M. | 2:30 P.M. | 0.5 hrs. | Travel from Skill Struck |
| 04/06/2022 | 4:00 P.M. | 5:15 P.M. | 1.25 hrs. | Talked with team, gave updates, planned when to do project |
| 4/10/2022 | 10:00 A.M. | 10:30 A.M. | 0.5 hrs. | Retrieved Klein Tools Network LAN Cable Tester |
| 4/10/2022 | 3:00 P.M. | 3:30 P.M. | 0.5 hrs. | Retrieved Cat 5E patch cable |
| 4/11/2022 | 5:00 P.M. | 6:00 P.M. | 1.0 hrs. | Learn how to use tester. Practice with tester. Make sure tester works correctly. |
| 04/16/2022 | 9:30 A.M. | 10:00 A.M. | 0.5 hrs. | Travel to workspace |
| 04/16/2022 | 10:00 A.M. | 12:30 P.M. | 2.5 hrs. | Working on testing ethernet ports |
| 04/16/2022 | 12:30 P.M. | 1:00 P.M. | 0.5 hrs. | Travel from Skill Struck |
| 04/18/2022 | 11:00 A.M. | 11:30 A.M. | 0.5 hrs. | Travel to Skill Struck |
| 04/18/2022 | 11:30 A.M. | 12:30 P.M. | 1.0 hrs. | Reported work to CTO |
| 04/18/2022 | 12:30 P.M. | 1:00 P.M. | 0.5 hrs. | Travel from Skill Struck |
| **Total Hours** |  |  | **12 hrs.** |  |

**Reflection**

**Attitude**

The company overall responded very well! We were able to help them with their Wi-fi and make sure everything was working properly. Wi-Fi is a super important thing for any company and for everyone in general. Most companies would not be able to function without Wi-fi, but especially this company, as most of the employees were working from home.

Obviously, the most surprising part of the project was the fact that we had to change directions completely in what we were going to do. This was what I disliked about the project the most as well. It was frustrating not being able to do as much since they were renting the building and would only allow us to do a certain amount. What I did like about it though was being able to learn how to use a new tester. I don’t think I’ve used a tester like that before and we had to do some research on it as well to learn how to do the job correctly.

This project was a really good experience to have in so many ways. First of which was that we were able to help a local business with something that they would have normally had to pay a technician to do for them. It gave myself and my team some real hands-on experience in the cabling profession and gave us some exposure to working for a small business. This project could have been done as a single person project, but it was a good use of communication, scheduling, and teamwork to have two other people to work with. It was also helpful to do this project because we had to balance the needs of the business, factor in their scheduling for coming in to look at their equipment, and proper use of email etiquette when sending emails in a professional setting.

**Behavior**

I feel like this project was a very good experience for learning how to work for a business. The things that I was able to help out with was helping to plan the project and figuring out the tools required. I also helped to find the right equipment, learn how to use that equipment properly, and then help test all the ports. I think in the future, I would want to plan ahead better with the company and manage time better. It was quite the inconvenience that our project had to change.

However, due to the fact that we were running out of time, it was kind of too late to set something up with a new company. Next time, I will make sure to ask questions like how much they are able to allow us to do, before we commit to anything. Also, it’s really hard working with a group and coordinating everything. I feel like we could have done a better job at communicating and keeping each other updated on everything. This is my first time ever doing a project like this, so I definitely think this has been a great experience in teaching me a lot of lessons, not only when it comes to cabling, but as well as group work and working for a business.

**Cognitive Connection**

When reading the rubric, I do feel like some of the things we will be short on just due to time and the fact the project had to change. For example, it probably would have taken more time to do the project, getting more valuable hours, if the company would have given us more freedom. Also, since they changed the project to late into the semester, it would’ve been too hard to find a new company to help and it wouldn’t have been appropriate to cancel on our current company after already promising to help them.

Because of the things we learned in class, I feel like it made this project a lot easier to approach. Even though I was doing something somewhat new, I already had some experience with figuring out how to use cabling equipment. So in that regard, it made it easier figuring out how to learn new cabling tools.

When doing this project, I somewhat wish I took some videos. That could have been a great way to show what we learned and the whole process too! I also just enjoy making videos in general, so I feel like that could have been a fun idea.

In addition to this, I don’t think I would make students do a service project like this one. I do think it’s good to practice with group projects, so maybe it could be replaced with an in class project instead. The main problem, in my opinion, with the service project is the fact that much of the equipment is expensive for the students to by their own equipment, when they already have to pay a ton for tuition and lab expenses as is. Not only this, but a lot of students I know that are going into IT don’t want to do the cabling side of things, but are still required to take a cabling class. So those students will be spending a lot of money on tools they can only use once. Also, it is going to be hard to find a company that wants you to help them when you haven’t had much experience in cabling. A lot of these cabling experiences will come once you get a job anyway, so I don’t think it’s necessary to require a project like this just for this class. I don’t necessarily regret anything, it was still a good experience. I personally just would not require it for my own students for those reasons is all.

Overall, I feel like I did alright on this project, but there are definitely things that I feel like I could have done better, and would like to see improvements on the near future. I think taking a reflection like this though can really help to evaluate what went well and what went wrong and how to look forward to the future.