CS 470 Final Reflection

Dan Stull

October 22, 2023

Southern New Hampshire University

YouTube link: https://youtu.be/M9Fq3hTSBME

- **Experiences and Strengths:** Explain how this course will help you in reaching your professional goals.

After completing the eight weeks of this course, I now feel very confident in my ability to create and implement my application into a serverless solution. To explain further, I have gained the skills to utilize Docker (Containerization) and a list of AWS services, such as EC2, API Gateway, and S3, as well as its Lambda functionality. With these tools, I have learned to develop, problem-solve, deploy, and finally scale the program to meet my needs. And with all these tools and newly gained skills, I feel I can use them to build scalable programs that will meet user's needs.

Before and after this class, some of the skills about myself I deemed worthy of note included my communication skills, the ability to soak in information and keep it organized, and my ability to problem-solve. With all these strengths, I feel they apply to the team dynamic nicely, as they allow me to work effectively with others.

- **Planning for Growth:** Synthesize the knowledge you have gathered about cloud services.

With the knowledge I've gained through this course, I can now see the benefits of microservices and the serverless approach to launching applications. Microservices and the serverless solution allow for automatic scaling, which is handled by the platform. Another benefit is that one failure does not throw the whole system. If one service fails, it can be checked for errors, which makes error handling and fault tolerance easier to identify.

Policies are another benefit of the AWS serverless solution. Setting up a scaling policy could be utilized in times of traffic spikes, which will ensure that the program continues to run at peak performance because a program's best ability is its availability.

The cost of microservices can be a challenging area to maintain, but AWS offers tools to aid the developer, which can inform through allocation tags. Also, you are only charged for what you use, which is another benefit of the AWS serverless solution.

Pros would include some of the things we've already listed, like its scalability, the architecture's resilience, and the flexibility of the entire system. A con might be the learning curve of the system and how complex it seems when first learning it.

Utilizing Amazon's EC2 tool, or Elastic Compute Cloud, helps developers build scalable and resilient programs on the cloud, making sure capacity is never an issue. The pay-per-service, S3, model allows developers financial flexibility when deploying and maintaining their applications.