

# C-Day Poster Summer 2020



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**Masters in Computer Science**



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# Global Product & Technology Intern, ADP

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## Overview

As a Global Product and Technology Intern at ADP, I was part of an SRE team. This was a team comprised of engineers taken from a diverse set of disciplines. This cross functional team was designed to support one of the key product offered by the company. The objective of the team was to improve the reliability, scalability and self-service capabilities of the system. I actively worked on a cloud migration project.

## Introduction

**What is SRE?** - Stands for "Site Reliability Engineering." SRE is a structured approach to software development that originated at Google. The goal of SRE is to create and maintain software applications that are reliable and scalable.

As a Global Product and Technology Intern at ADP, I was part of an SRE team. Initially I was provided with the task of learning the architecture of the product and the understanding the underlying infrastructure. As the information was all stored on confluence, I got first hand experience of working on confluence. I was involved in the stand-up meets and backlog review meetings which provided great exposure to agile work environment and hands on experience of tools like Jira. The source control management tool that was used in our project was Bitbucket. All the source code along with all scripts were maintained in the Bitbucket. The project followed the principle of CI/CD which is Continuous integration Continuous Development. The tool that enabled the implementation of CI/CD was Jenkins. In case of any modification in any of the scripts, the modification was to be made in the local copy and pull request was submitted in Bitbucket. Once the pull request was approved, Jenkins used to trigger the build. In case of any failure, I had to check review the Jenkins pipeline and identify the error. I was fortunate to have an opportunity to work on these advanced technologies.

## Working Experience

One of the key projects on which I spent most of my time during my internship was database migration from on-prem private cloud of ADP to public cloud on AWS. The objective of the project was to set up and have an EC2 instance up and running with ADP Oracle database. A Red Hat company specific AMI was available to be used for initializing the EC2 instance. Once the instance is up and running, an Oracle database was to be integrated with it. There were multiple scripts written in Python, Unix and Terraform to complete these tasks.

The Terraform scripts were used to manage the EC2 instances on AWS and the Unix scripts were used to automate the AWS instance commands. I had access to the AWS to monitor the EC2 instances, check the logs on CloudWatch and also manage the containers. Once the EC2 is up and running, the next task was to create database using shell scripts. My responsibility was to fire up EC2 instances and integrate them with database instances. I got a chance to work on Terraform and shell scripts.

I had a very fulfilling experience working in the employee friendly environment provided by ADP. My colleagues including my manager, my mentor and the HR team were very helpful and understanding.

## Highlights

This internship has given me a chance to learn about the corporate world and let me have exposure to the agile work environment. I learned a lot in this brief tenure. I learned about agile work methodologies and concepts like stand-up meetings, backlog review calls. Tools like Jira and Confluence facilitate smooth implementation of agile work environment. I was part of the SRE team which helped me learn key Site Reliability Engineering concepts. I also got opportunity to learn about AWS and its key concepts. I was part of a large team which had variety of team members with different roles. This was a unique experience which helped me groom as a good team player as well.



## Automatic Data Processing (ADP)

For over 70 years, ADP has served as a trusted human resources, payroll and benefits partner to employers around the world. ADP is a global provider of cloud-based human capital management (HCM) solutions that unite HR, payroll, talent, time, tax and benefits administration, and a leader in business outsourcing services, analytics and compliance expertise. ADP's unmatched experience, deep insights and cutting-edge technology have transformed human resources from a back-office administrative function to a strategic business advantage.

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- Benefits and Insurance
- HR services
- HR outsourcing and PEO

“ADP's mission is to provide insightful solutions that drive value and success for their clients by allowing them to focus on their business”

## Tools Used

- AWS
- Confluence, Jira
- Bitbucket, Jenkins
- Unix
- Splunk

## Future Career Plans

- Complete master's degree in computer science.
- Working here provided me opportunity to learn about niche technologies like AWS. Plan to enhance the knowledge in this field.
- Work on cloud transformation projects.

**Thank You**