Joe Huffer

10/27/2024

CSD380

Professor Sampson

Module 1 - Assignment 1.3: The History of DevOps

DevOps emerged from recognition that there is a need in our workflows to solve dysfunctional systems in traditional software development. This growing ideology also recognized that separating development and operations led to inefficiencies and prolonged deployment cycles. To address these inefficiencies, the software industry began embracing many new principles, including those from the: Lean Movement, Agile Manifesto, and Continuous Delivery strategies, to enhance the previously created DevOps initiative.

The Lean Movement were adapted from a post-WWII Japanese manufacturing method that focused on efficiency and waste reduction. The principles of the Lean Movement focused on customer feedback and iterative improvements through the “Build, Measure, Learn” loop. This loop references how teams build a product or feature rapidly, measure its impact through data and feedback, and then attempt to learn from the results to adjust on the next development lifecycle that takes place. Lean Movement emphasizes waste reduction and aligns with DevOp’s goal of streamlining deployments and reducing downtime.

The Agile Manifesto was created in 2001 by a group of developers who were seeking to prioritize customer satisfaction and remain adaptable. It has an emphasis on individuals and interactions, responding to changes, and delivering functional software quickly. These principles translated smoothly and appear to have held up in creating the modern image of Agile and how flexibility and focus can create a customer-focused development goal in DevOps. In doing so, Agile Manifesto became a key pillar of DevOps and promotes shorter release cycles and adaptability.

The Continuous Delivery Movement emphasizes automating deployments and integrating code changes frequently (and obviously ‘continuously’). CI/CD (Continuous Improvement/Continuous Delivery) pipelines seek to build, test, and deploy code automatically, enabling faster releases. CI/CD automation is a foundation of DevOps, allowing multiple daily releases and continuous improvements.

These practices and ideas converged into DevOps to create combinations and adaptations that are still followed today. For example, in 2007/2008, when the DevOps movement was initiated, the focus of combining Development and operations borrows on these concepts of collaboration, automation, and fast feedback. DevOps also borrows even more from Lean, Agile, and Continuous Delivery Principles to address the original “siloed” structure of traditional IT. It is then easy to consider DevOps to be the synthesization of these practices and frameworks, which marks a shift towards a more integrated environment in technology fields. Understanding the history of DevOps, as well as Agile, CI/CD, and Lean methodologies, gives us as developers a great roadmap to follow as we embark on our coding careers and begin implementing these strategies!

Works Cited:

Atlassian. "Agile Manifesto." Atlassian, <https://www.atlassian.com/agile/manifesto>. Accessed 27 Oct. 2024.

Atlassian. "History of DevOps." Atlassian, <https://www.atlassian.com/devops/what-is-devops/history-of-devops>. Accessed 27 Oct. 2024.

IBM. "What is Continuous Delivery?" IBM, <https://www.ibm.com/topics/continuous-delivery>. Accessed 27 Oct. 2024.

University Lab Partners. "What Is the Lean Startup Methodology?" University Lab Partners, <https://www.universitylabpartners.org/blog/what-is-lean-startup-methodology>. Accessed 27 Oct. 2024.