The History of DevOps

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DevOps is a combination of two words derived from software development and IT operations. It combines the principles of agile development, lean management, and IT operations to improve quality across the entire software lifecycle. As early 2007, an engineer named Patrick Debois starts to learn about IT from multiple perspectives. DevOps has a couple different parts that have created what we know of DevOps today, such as The Lean Manifesto, The Agile Manifesto, and Continuous Delivery Movement.

The concept of the lean principles is to optimize DevOps team workflows, reducing waste, and improving collaboration between development and operations teams. There are five core principles of lean management. The first would be defining a value. This is to identify the value of a product and eliminate nonvalue added activities. Once the DevOps team has defined the value, it is now time to move on to mapping the value stream. They must visualize the process flow to identify waste and inefficiencies. Continuing with creating a future state value stream. This principle is designed for a more efficient process to achieve the desired value. They then produce the future state by implementing the new process and continuously monitor it. At the end, the DevOps team must establish a pull. This principle is to manage work in a just-in-time fashion, ensuring that team members have constant productivity.

The next concept is the Agile Manifesto. Originally written in 2001 for software development, it has now been widely adopted and adapted in the DevOps community. The change happened when they wanted to find an improved way to handle software projects. The Agile Manifesto has four core values, Individuals and Interactions, Working Software, Customer Collaboration, and Responding to Change. The first value, Individuals and Interactions, emphasizes the importances of collaboration amongst the DevOps team, as well as with the customers and stakeholders. Doing this will create an environment of empowerment to share ideas and solve problems. Working Software focuses on delivering working software in shorter cycles with frequent deployments and continuous integration / continuous development. It also reduces the need of over producing extensive documentation. Rather creating a false sense of security, it should not hold the delivery of working on the software. Customer Collaboration is a very important part of the Agile Manifesto. This part prioritizes customer feedback and involvement throughout the development and deployment process. It will allow customers to be informed about progress and challenges that the DevOps team faced. Lastly, Responding to Change. DevOps encourages the adaptability and rapid response of changing requirements, environments, and market conditions.

The Continuous Delivery Movement aims to reduce time and cost associated with releasing software changes into production, while ensuring high quality and reliability. The first key principle of the CD movement is to automate everything. To be able to automate building, testing, configuration processes allow minimization of manual intervention and reduces errors. The next principle would be continuous integration. Integrating codes changes frequently, so the DevOps team must ensure that each change is verified by automated tests before moving it on to the next stage. The next principle is to never stop testing. Continue to perform tests throughout the delivery pipeline. Continuous Deployment is next. Automate the deployment of tested code changes to production, which enables rapid and safe releases. Lastly, feedback loops. The DevOps team needs to establish feedback mechanisms to monitor production deployments, identify issues, and iterate on improvements.

With these three methodologies, DevOps has grown into a global interest I just two years. In Ghent, Belgium, DevOps was introduced in a conference which has become a global buzzword in the tech ecosystem. By 2018 there are up to 30 DevOpsDays conferences held across the United States. 27% of organizations have adopted DevOps with large companies like Amazon, Netflix, and Target. For the future of DevOps, we will continue to see a growth of numbers in different sectors of the tech industry. Such as DevSecOps, which includes cybersecurity into DevOps. GitOps for the Git corporation. DevOps started with just one idea in 2007, and it will continue to improve for the future.

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