The History of DevOps

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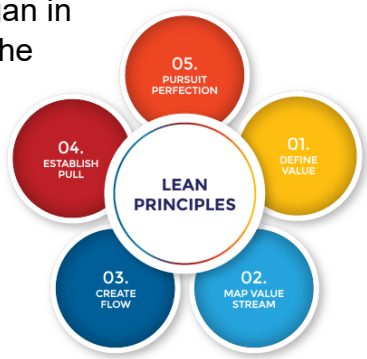
Before the days of DevOps, software releases were often known to be stressful and unpredictable for developers and organizations. There was often little to no communication between the development and operations teams. This would lead to failures and finger-pointing.

DevOps, which is a combination of the terms and concepts for “development” and “operations,” rose in popularity after Patrick Debois, who is often coined as “the father of DevOps,” recognized the challenges in collaboration between both teams in 2007. DevOps is essentially a set of practices that combines software development and IT operations with the goal of shortening development cycles while also delivering high-quality software. This ideology helps bridge the gap between teams with a focus on collaboration, automation, and efficiency. DevOps has come a long way since 2007, with the help of publications such as “The Phoenix Project” in 2013. The book written by Gene Kim, George Spafford, and Kevin Behr helped create a narrative-style fictional novel that follows a character trying to navigate IT in a failing American company living through a digital transformation. This novel introduces the concept of DevOps. By 2017, Forrester Research coins the year as “the year of DevOps” as it reports that “up to 50% of organizations are implementing DevOps.”

The Lean movement or the theory of lean manufacturing began in the manufacturing world by the Toyota Production System(TPS) in the mid-20th century. Toyota developed Lean as a way to help improve their production efficiency and reduce the organization’s waste. The lean movement runs on five principles:

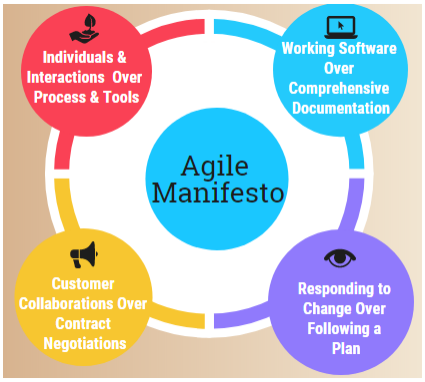


- Value
- Map the Value Stream,
- Create Flow
- Establish a Pull System
- Pursuit of Perfection

The lean movement's five principles are what makes it closely related to the DevOps ideology. By adopting the lean movement principles, teams are able to create efficiency, automation, quality, and speed.

The Agile Manifesto came into existence in 2001 after seventeen software developers who were done with the waterfall method met. Together, they created a sixty-eight-word document known as “The Manifesto for Agile Software Development” but frequently referred to as “The Agile Manifesto.” The Agile Manifesto listed four key values and twelve corresponding principles.

The four core principles,



- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

Helped emphasize the importance of people, working software, and collaboration between teams and customers, as well as promote adaptability. By following these values and principles, organizations can benefit by enhancing productivity and overall customer satisfaction. Agile introduced iterative development, which delivers software in smaller, more frequent increments versus one large release. The principles of collaboration and flexibility are important in having development and operation teams work together. Overall, the Agile Manifesto values established the foundation for the collaborative and iterative approach at the core of DevOps.

Continuous Delivery, or CD, is a software development practice that enables teams to automate the deployment process to help software be released quickly and at a higher quality. The main goal of Continuous Delivery is to do just as the name implies: continuously deliver new features, fixes, and updates within small time frames and effort. With the addition of deployment process automation, CD helps remove manual tasks that usually slow down software delivery, such as testing and configurations. CD and DevOps are related in that they both work together to create a faster, more efficient software delivery channel. Continuous Delivery aligns with the DevOps principles by enabling teams to deliver high-quality software quickly and consistently. It also has a high focus on providing quicker feedback. Both concepts establish a culture of communication and collaboration. This leads to fewer errors. More frequent releases are another common principle between the two; this helps users access new features and fixes quickly. Releases are more reliable due to the automation of the deployment process and testing, which leads to releases being more reliable and less error-prone.

Many things have heavily influenced the development of DevOps throughout the years, such as the Lean Movement, the Agile Manifesto, and the Continuous Delivery Movement. Each principle and practice has attributed to the overall growth of DevOps. DevOps enables organizations to accelerate delivery cycles, improve the quality of software, and enhances collaboration efforts between development and operations teams. The overall DevOps approach streamlines work but is also adaptable to the ever-changing world of technology.

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