The Principles Underpinning DevOps

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WEB-430

Assignment 1.3

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There are three key principles underpinning DevOps Flow. These principles are know as flow, feedback and continuous learning. People who practice DevOps feel their company can build high quality software products/services quicker by using these three principles.

The first principle that we will talk about is Flow, sometime called System Thinking. Flow emphasizes on system thinking, working on the flow of work as one continuous system that is capable of continually being refined and optimized. There are many key principles to this. Making work visible, limiting work-in-progress, reducing batch sizes, reducing hands-offs between teams, and identifying and removing constraints and waste. These all play an important role in the flow. (Quaresma 2016) Improving the flow throughput in your business might not "just" be about people or technology, it might also be related to the company's culture and processes.

The second principle used is feedback. This principle is all about understanding and responding to the customers/stakeholders needs by shortening all feedback loops. It focuses on increasing feedback loops from left to right. This principle is said to be at the core of the DevSecOps movement. It enables fast constant feedback cycles through the stages of the development cycle.

The third and final principle we will talk about is Continuous experimentation and learning. This involves taking some risks, put yourself out there by experimenting. Having well established processes and practice to the point that operation activities become boring and predictable is what you should aim for. The third way is about ensuring that you are continually putting tension in the system. This is so you are continually reinforcing habits while also improving something.

You can create a learning culture on your team by doing 4 things. Reward continuous learning, this is important if you would like your team to produce something innovative. Give meaningful and constructive feedback. There are going to be flaws, and negative feedback must be given in a constructive and delicate way. Lead by example, as what you do has a strong influence on the behaviors of the rest of your team. Hide curious people, by doing this, you maximize the fit between their interests in the role they are in. There is no need to worry about their willingness to learn because of their curiosity.

WIP also known as Work in Process, limits constraints that your team/organization impose upon themselves to limit the total number of work items at a given time. These limits are needed to identify wasteful an inefficient process. Though implementing WIP limits often times proves to be challenging, the benefits outweigh the pains of change. There are four benefits that optimize work overflows. WIP limits enable us to manage capacity. It encourages us to practice systems thinking. WIP limits help identify opportunities for process improvement. Lastly, it introduces slack into the system.

DevOps is a very important tool to use for all companies. Using these principles and fostering a positive environment to grow as individuals and a team will pay off in the long run.

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