The Principles Underpinning DevOps

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Assignment 1.3

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There are three key principles underpinning DevOps Flow, Feedback, continuous experimentation and learning. People who practice DevOps feel their company can build high quality software products and services quicker by utilizing these three principles. We will cover these principles further and get an understanding of how they work.

The first principle we will discuss is Flow. Flow emphasizes on system thinking, optimizing the business process, streamlining it and making it more reliable. This is all accomplished by understanding and increasing the flow of work, removing constraints and enhancing the performance of the complete process. Some common practices that should be used are continuous integration, continuous delivery, continuous deployment, value stream mapping, Kanban and theory of constraints.

The second principle used is feedback. This principle is all about understanding and responding to the customers/stakeholders needs by shortening all feedback loops. By doing this a corrective action can be taken as soon as possible. There are several practices that should be used such as automated testing, peer review of changes, monitoring practices, status updates, production logs, process measurements and post-mortems to name a few.

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. Yes, you may fail at times, but the lesson is to learn from your mistakes and grow from there. In order to succeed you need to practice and master and fully understand your area of expertise. This can be done by setting aside time daily to learn and expand your knowledge. These three principles is all about delivering value to your customer at a fast pace.

Work in progress also known as WIP is a very important concept to consider helping you with your journey in DevOps. Work in progress is the number task items that a team is currently working. By having this in mind you can visualize the capacity of the team’s workflow at any time. Limiting the number of tasks, a team has in progress is a core property of Kanban and enables you to manage the processes that create smooth workflow and keep your team from being overloaded with tasks.

Eliminating hardships and wastes in the value stream can greatly enhance your productivity and quality product that you deliver to your customers. Waste in the development value stream is anything that causes a delay for the customer. Some problem areas that waste can be found are partially done work, extra processes, extra features, task switching waiting on QA or testing, no coding standard, defects and bugs. This can have a very big impact on the over all development time of your projects that can cost you time and money. Keeping waste to a minimum in the value stream should always be considered and improved upon over time.

DevOps is a very important tool to use for any company. Keeping these principles in mind and fostering a positive environment to grow as individuals and a team will pay off in the long run. Give DevOps a try and join the growing DevOps community and grow your business.

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References

Florys, M. (2017, April 5). The Three Ways - key principles of DevOps. Retrieved July 14, 2019, from <https://www.linkedin.com/pulse/three-ways-key-principles-devops-michal-florys>

Kadan. (n.d.). What is a Kanban WIP Limit? Why Do You Need It? Retrieved July 14, 2019, from <https://kanbanize.com/kanban-resources/getting-started/what-is-wip/>

Priyank. (2018, April 29). Devops and The Principle Of Flow. Retrieved July 14, 2019, from <https://priyankvex.wordpress.com/2018/04/29/devops-and-the-principle-of-lean/>