What is DevOps?

"DevOps combines development (Dev) and operations (Ops) to increase the efficiency, speed, and security of software development and delivery compared to traditional processes. A more nimble software development lifecycle results in a competitive advantage for businesses and their customers." (What is DevOps?? | GitLab, 2023)

So, DevOps is a way of working in software development that combines development (dev) and operations (ops) teams to improve **teamwork**, **accountability**, and **shared responsibility**. By using DevOps practices, organizations aim to **deliver software faster and with better quality through automation, ongoing development, and a culture of collaboration**. It builds on Agile and lean principles, emphasizing quick delivery and continuous improvement throughout the software development process.

“Regardless of the type of DevOps toolchain an organization uses, a DevOps process needs to use the right tools to address the key phases of the DevOps lifecycle:

- Discover
- Plan
- Build
- Test
- Monitor
- Operate
- Continuous feedback” (Atlassian, n.d.)

What is a DevOps platform?

“A DevOps platform brings tools together in a single application for unparalleled collaboration, visibility, and development velocity.

A DevOps platform is how modern software should be **created**, **secured**, **released**, and **monitored** in a **repeatable fashion**. A true DevOps platform means teams can iterate faster and innovate together because everyone can contribute. This integrated approach is pivotal for organizations looking to navigate the complexities of modern software development and realize the full potential of DevOps.” (What is DevOps?? | GitLab, 2023)

A DevOps platform is a central place to manage all your DevOps tools. It helps you see all the tools you're using in a project, making it easier to coordinate your development and operations.

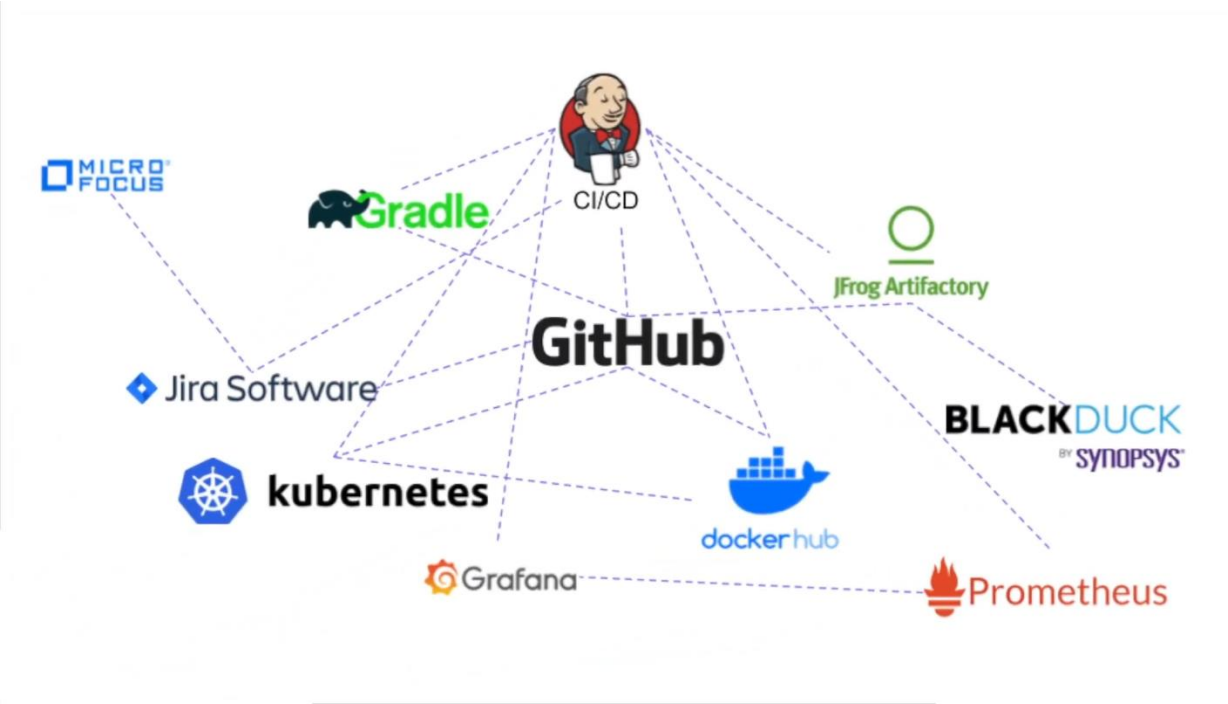

Figure 1: An example of a DevOps Life Cycle

In the example above, we see a DevOps lifecycle structure. Each icon is a DevOps tool. Which work together. Now, in the image might look a bit chaotic, this is because this example of a DevOps lifecycle doesn't use a DevOps platform. A DevOps platform is a platform wherein you can either add external DevOps tools or use integrated DevOps tools to enhance your DevOps lifecycle.

Here is an example what it looks like in GitLab. GitLab is a DevOps platform with its own integrated DevOps tools. Using a DevOps platform also gives you a better overview of the DevOps lifecycle.

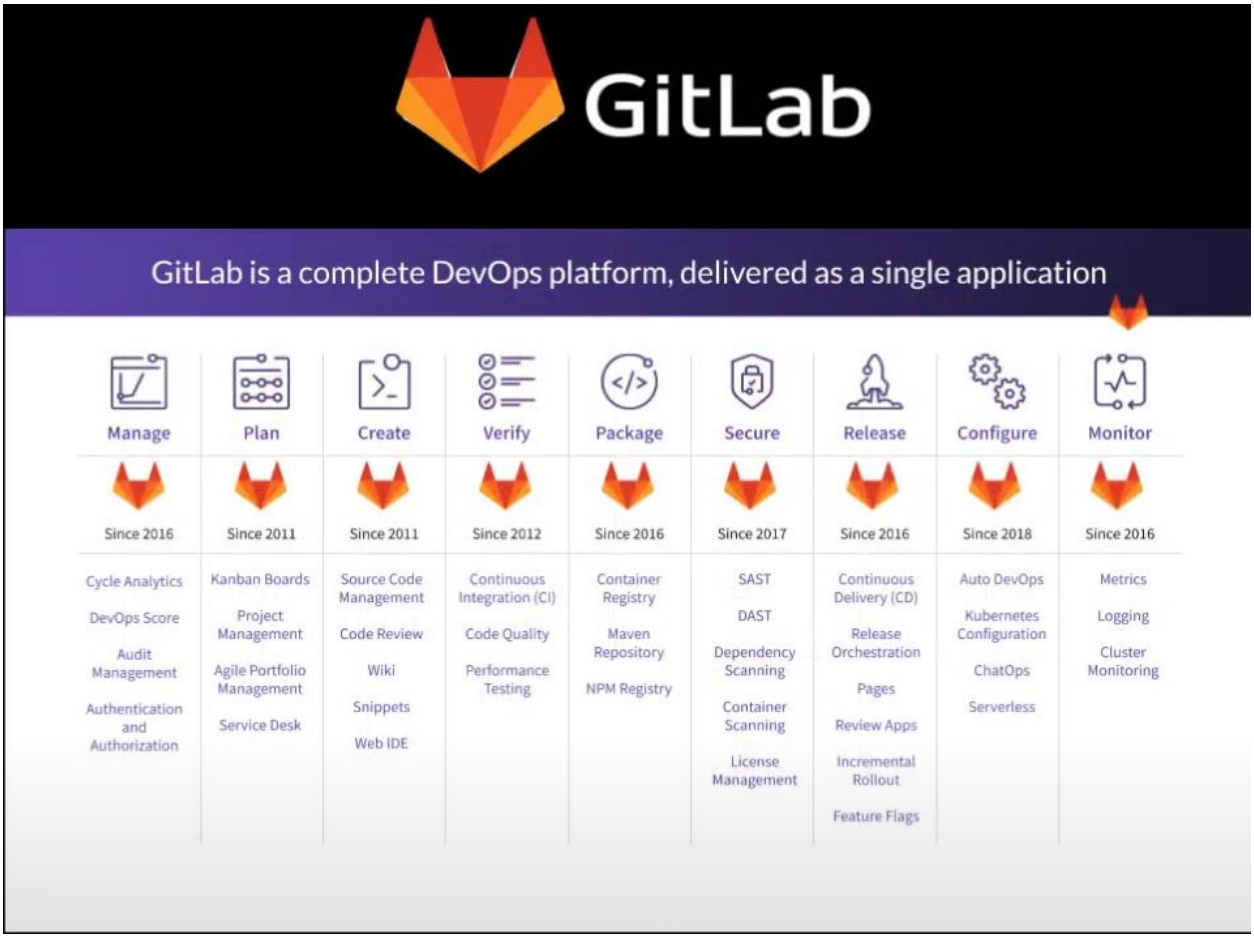

Figure 2: Using GitLab as a DevOps platform

What are DevOps Tools?

DevOps tools are tools you use to do one of the earlier mentioned concepts: Discover, Plan, Build, Test, Monitor, Operate, Continuous feedback (the bullet points of the DevOps lifescycle). For example, for discovery it is a good practise to use Miro or Mural, and for planning it's a good practise to use Jira or Slack and so forth.

A benefit that GitLab provides is that it contains built in tools for each phase in the DevOps lifecycle which makes it very simple to use. This video explains more about the benefits of using GitLab as a DevOps platform (GitLab, 2019)

Why do I need a DevOps platform?

A DevOps platform simplifies and streamlines the entire **DevOps lifecycle**. It helps your team develop, deliver, and manage software more quickly and easily.

What DevOps platform should we use?

There is no free DevOps platform that allows you to use all DevOps tools. Therefore, it is key to use a paid DevOps platform. Since we get a free premium subscription for GitLab it is obvious that we should use GitLab as our DevOps platform.

Bibliography

Atlassian. (n.d.). *DevOps tools for each phase of the DevOps lifecycle*. Retrieved from Atlassian: https://www.atlassian.com/devops/devops-tools

GitLab. (2019, August 7). *The benefits of a single DevOps platform*. Retrieved from YouTube: https://www.youtube.com/watch?v=MNxkyLrA5Aw

What is DevOps?? | *GitLab*. (2023, January 25). Retrieved from GitLab: https://about.gitlab.com/topics/devops/