

Devops Methodology

- It started in the year 2007.
- DevOps is a set of practices that emphasizes collaboration and communication between development and IT operations teams. It aims to automate and streamline the software delivery process while ensuring continuous feedback and improvement.
- Invented by John Allspaw and Paul Hammond at Flickr, and the Phoenix Project by Gene Kim.
- The software that is used by DevOps is pre-built, dependable, and simple to deploy.
- It focusses on automation.
- **Collaboration:** DevOps breaks down traditional silos between development and operations teams. Collaboration and shared responsibilities are key principles.
- **Continuous Integration and Deployment:** DevOps encourages automating the integration and deployment processes, enabling rapid and reliable software releases.
- **Automation:** Automation of infrastructure provisioning, testing, and deployment helps reduce manual errors and speeds up the software delivery pipeline.
- **Feedback Loop:** DevOps emphasizes the importance of collecting feedback from operations and end-users to drive continuous improvement.
- **Cultural Aspect:** DevOps is not just about tools and processes; it's also a cultural shift that promotes collaboration, accountability, and a "you build it, you run it" mindset.
- **Toolchain:** DevOps utilizes a variety of tools for version control, automated testing, continuous integration, containerization, monitoring, and more.

Agile Methodology

- It started in the year 2001
- Agile is a software development approach that focuses on flexibility, collaboration, and delivering incremental value to customers. It emphasizes adaptability to changing requirements and continuous feedback.
- Invented by John Kern, and Martin Fowler.
- Agile is a method for creating software.
- It does not focus on the automation.
- **Iterative Approach:** Agile divides the project into smaller iterations called "sprints." Each sprint typically lasts for 1-4 weeks, during which a potentially shippable product increment is developed.
- **Customer Collaboration:** Agile encourages close collaboration between development teams and customers or stakeholders. Feedback is gathered throughout the development process to ensure alignment with customer needs.
- **Emphasis on Deliverables :** Agile prioritizes delivering functional software in each iteration. This ensures that working software is available at the end of every sprint.
- **Adaptability:** Agile methodologies, such as Scrum and Kanban, allow teams to adapt to changing requirements and priorities easily.
- **Roles and Artifacts:** Agile roles include Product Owner, Scrum Master, and Development Team. Common artifacts include user stories, backlog, and sprint planning boards

- **Scope of Application:** DevOps extends into the operations phase, focusing on collaboration, automation, and faster release cycles.
- **Teams and Collaboration:** Both emphasize collaboration, DevOps emphasizes collaboration between development and operations teams.
- **Automation:** DevOps places a strong emphasis on automating deployment and operations tasks.
- **Feedback:** DevOps emphasizes operational feedback to improve the deployment and monitoring process.
- Some of the Tools-
 - Puppet
 - Ansible
 - AWS
 - Chef
 - team City OpenStack

- **Scope of Application:** Agile is primarily concerned with the development phase, ensuring customer value through iterative development.
- **Teams and Collaboration:** Both emphasize collaboration, but Agile's focus is on collaboration between development and stakeholders.
- **Automation:** Agile's automation is often centered around testing and integration.
- **Feedback:** Agile emphasizes customer feedback during development iterations.
- Some of the Tools-
 - Bugzilla
 - JIRA
 - Kanboard