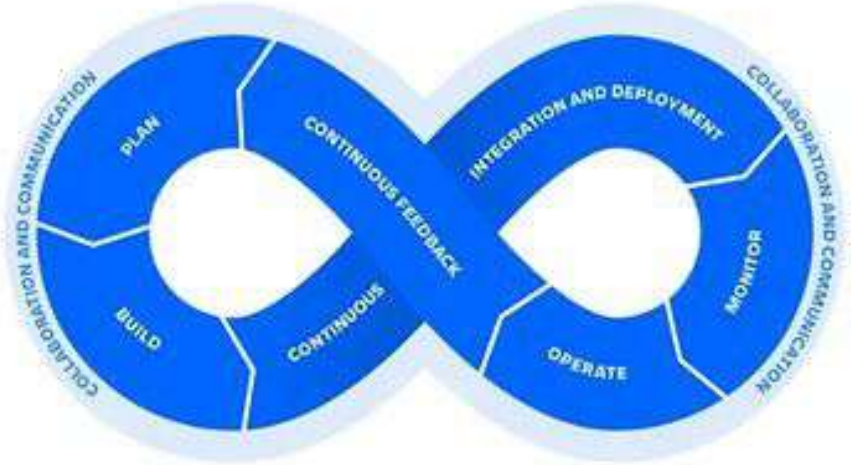
WHAT IS DEVOPS AND DEVOPS TOOLS

@developers_school

DevOps is not a technology. The word DevOps is a combination of the terms development and operations, meant to represent a collaborative or shared approach to the tasks performed by a company's application development and IT operations teams.



DevOps environments generally apply common methodologies like:

- continuous integration and continuous delivery or continuous deployment (CI/CD) tools, with an emphasis on task automation;
- systems and tools that support DevOps adoption, including real-time monitoring, incident management, configuration management and collaboration platforms; and
- cloud computing, microservices and containers implemented concurrently with DevOps methodologies.

How does DevOps work?

DevOps process is an infinite loop, comprising these steps: plan, code, build, test, release, deploy, operate, monitor and -- through feedback -- plan, which resets the loop.

Developers and stakeholders communicate about the project, and developers work on small updates that go live independently of each other. To avoid wait times, IT teams use CI/CD pipelines and other automation to move code from one step of development and deployment to another.

What problems does DevOps solve? (1/2)

Speed

Teams that practice DevOps release deliverables more frequently, with higher quality and stability. Continuous delivery allows teams to build, test, and deliver software with automated tools.

Improved collaboration

The foundation of DevOps is a culture of collaboration between developers and operations teams, who share responsibilities and combine work. This makes teams more efficient and saves time

Rapid deployment

By increasing the frequency and velocity of releases, DevOps teams improve products rapidly.

What problems does DevOps solve? (2/2)

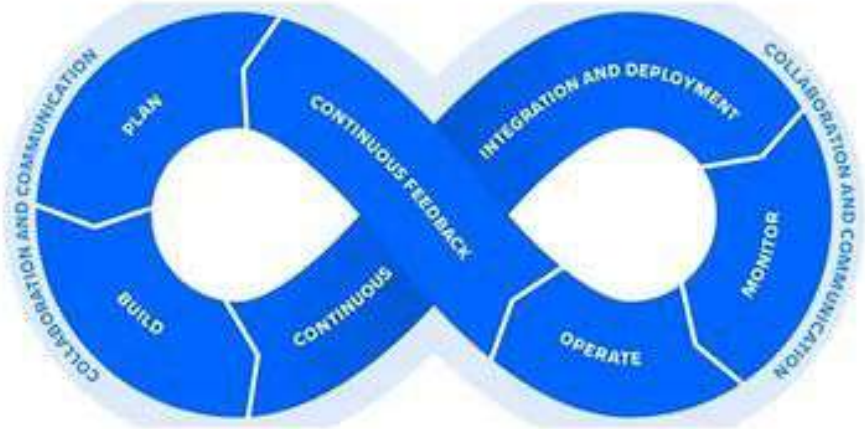
Quality and reliability

Practices like continuous integration and continuous delivery ensure changes are functional and safe, which improves the quality of a software product.

Security

By integrating security into a continuous integration, continuous delivery, and continuous deployment pipeline, DevSecOps is an active, integrated part of the development process. Security is built into the product by integrating active security audits and security testing into agile development and DevOps workflows.

DevOps tools



1. Version Control tools: GitHub, Bitbucket, GitLab

2. Container Management tools Docker, Kubernetes, Mesos

3. Application Performance Monitoring tools Prometheus, Dynatrace, AppDynamics

DevOps tools

4. Deployment & Server Monitoring tools	Splunk, Datadog
5. Configuration Management tools	Chef, Puppet, Ansible
6. CI / Deployment Automation tools	Bamboo, Jenkins
7. Test Automation tools	Test.ai, Selenium
8. Artifact Management tools	Sonatype NEXUS, CloudRepo
9. Codeless Test Automation tools	AccelQ, Appvance