

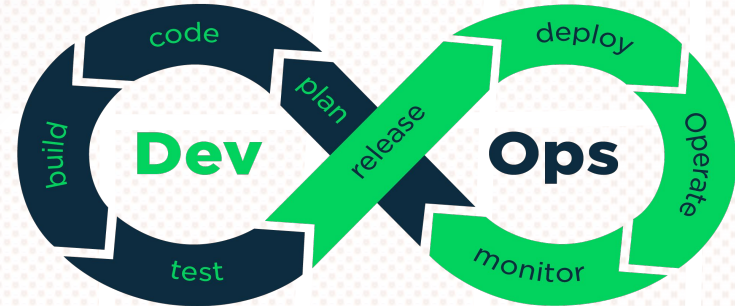
DEV - OPS



Facultad de Ingeniería
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GENERAL DEFINITION

DevOps is a collaborative software development approach that seeks to integrate and coordinate the processes of development and operations with the goal of accelerating the delivery of high-quality software and reducing time to market. The term DevOps originated from the combination of the words "development" (Dev) and "operations" (Ops)



"Según Microsoft Azure
(<https://azure.microsoft.com/es-es/resources/cloud-computing-dictionary/what-is-devops/>)"

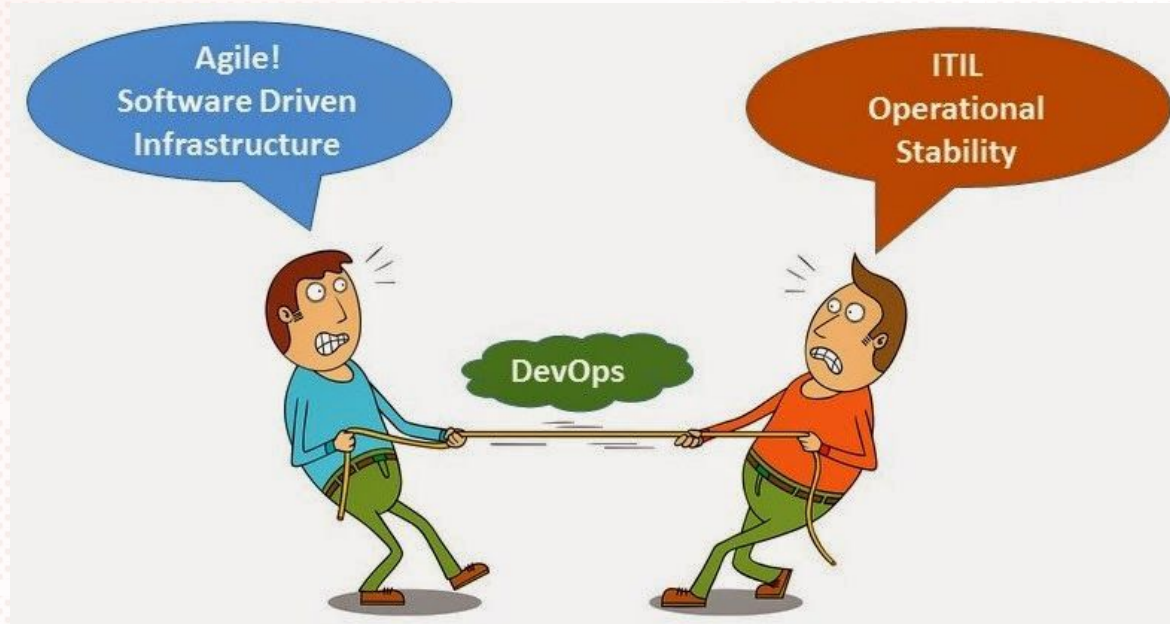
HISTORY

- Origins of the movement: DevOps emerged in the early 2000s as a response to the need to speed up software delivery and improve collaboration between development and operations teams.
- Influences: DevOps was influenced by several previous movements and practices, such as the Agile movement, test automation, and continuous integration.
- Pioneers of the movement: Some of the pioneers of the DevOps movement include Patrick Debois, who organized the first DevOps event in 2009, and Gene Kim, author of "The Phoenix Project" and co-author of "The DevOps Handbook."
- Evolution of the concept: As the DevOps movement has gained popularity, it has also evolved to include a variety of practices, tools, and technologies. Some current trends in DevOps include infrastructure automation, containerization, and cloud adoption.
- Impact on the industry: The adoption of DevOps has had a significant impact on the software industry, helping companies to speed up software delivery, reduce downtime, and improve software quality.

What is DevOps?



BASIC CONCEPTS



Retrieved from <https://blogs.starzio.com/2015/01/who-owns-devops.html>

Collaboration and Communication:

DevOps emphasizes collaboration and communication between development and operations teams. This means breaking down silos and promoting a culture of shared responsibility.

Continuous Integration and Delivery:

DevOps relies on automated processes for building, testing, and deploying software. Continuous integration (CI) ensures that changes are integrated into the main codebase as quickly and seamlessly as possible. Continuous delivery (CD) ensures that the software is always in a releasable state.

Continuous Deployment

is the practice of automatically deploying every change that passes through the delivery pipeline to production without any human intervention. This means that if a change passes all the automated tests and quality gates, it is automatically deployed to production. This practice allows for a faster and more reliable delivery of software, as well as greater efficiency and productivity for the development and operations teams.

Infrastructure as Code:

DevOps uses infrastructure as code (IaC) to automate the process of provisioning and managing infrastructure. This ensures that the infrastructure is consistent and repeatable, and can be version-controlled like any other code.

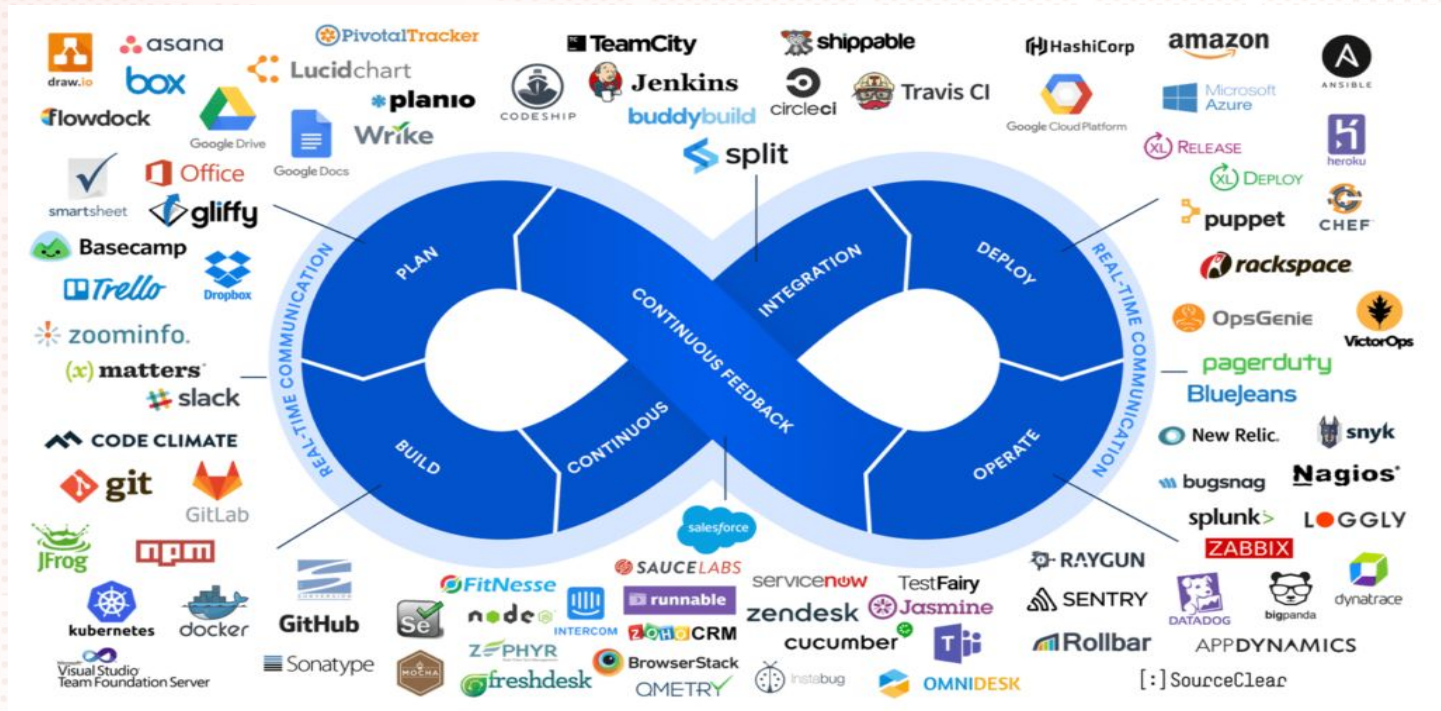
Monitoring and Feedback:

It enables teams to quickly identify issues and fix them before end users are impacted. Additionally, by collecting real-time data and metrics, teams can continually improve software performance and quality through constant feedback, leading to a faster and more efficient software delivery cycle. In short, monitoring and feedback are essential to ensure a high-quality and efficient software delivery process


Continuous Improvement:

DevOps is an iterative process that emphasizes continuous improvement. This means regularly reviewing and refining processes and practices to optimize efficiency, reduce waste, and improve quality.

MANY MANY TOOLS

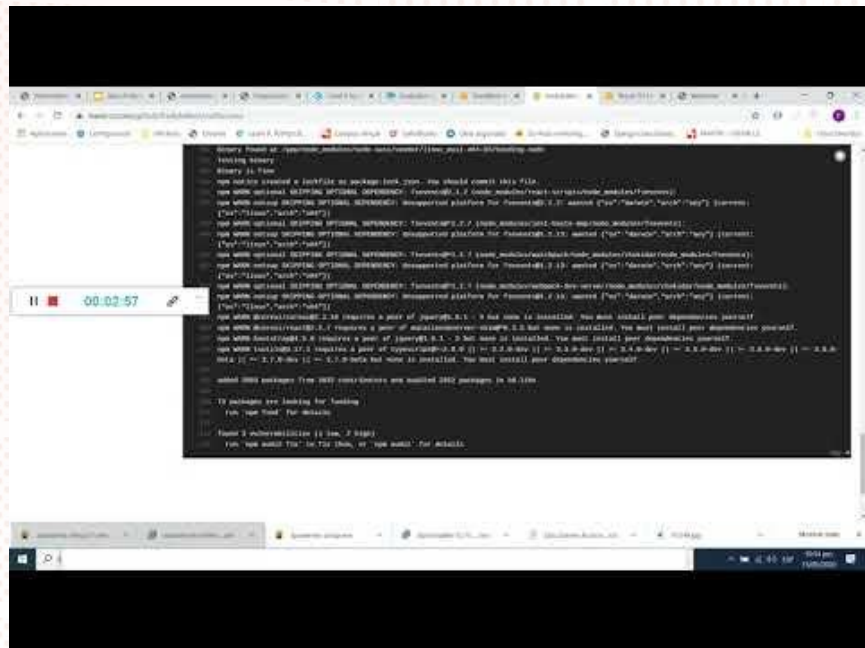


DEVOPS ADOPTION STRATEGIES

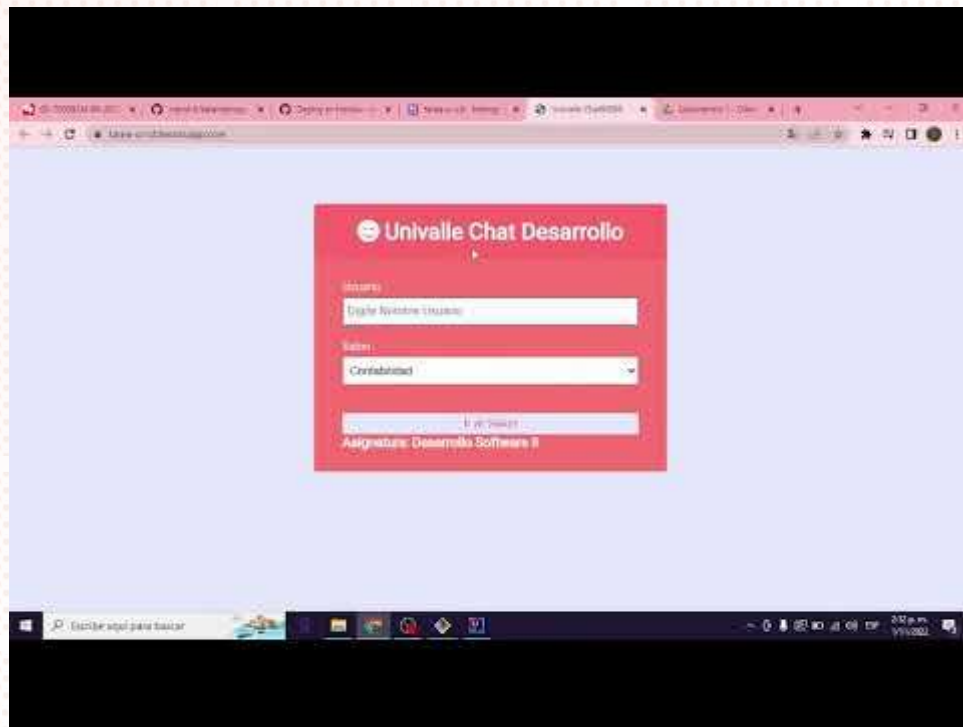
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- **Top-down adoption:** This strategy starts with strong leadership from the top and executives, who set the vision, goals, and benefits of DevOps for the entire company.
 - **Pilots:** This strategy involves implementing DevOps in small pilot areas within the organization and gradually expanding to other areas as benefits are achieved.
 - **Center of excellence (CoE):** This strategy involves creating a DevOps center of excellence in the company, where DevOps experts provide guidance and support to teams and departments that are adopting DevOps

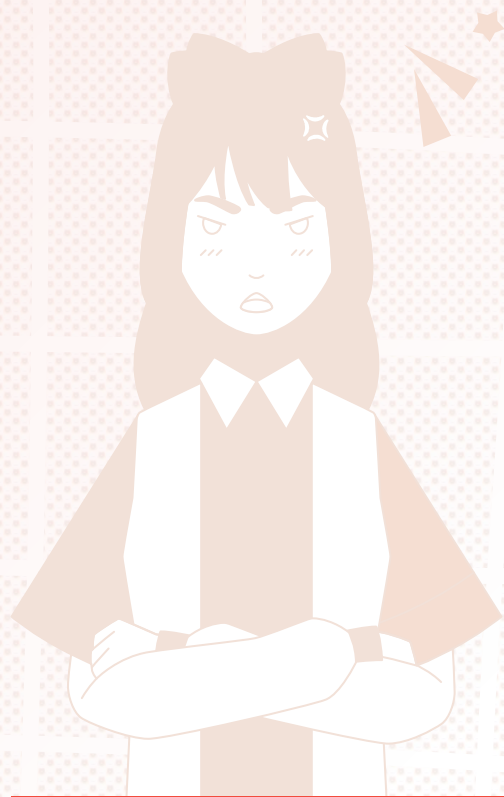
- **Continuous improvement initiatives:** This strategy involves identifying and addressing issues and bottlenecks in existing development and operations processes, using continuous improvement practices to achieve better results and adopt DevOps in the process
 - **Hybrid adoption:** This strategy involves combining DevOps with traditional development and operations practices, allowing the company to adopt DevOps gradually and at its own pace.
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DEMO 1



DEMO 2





“Let's talk about the final
project .”

—get your hands dirty

REFERENCES

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