

Success Stories

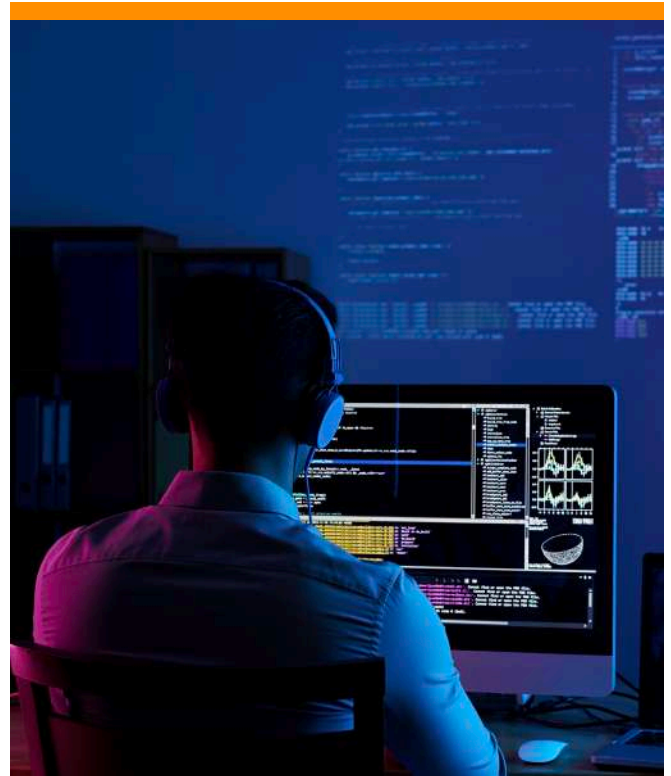
Benefits that DevOps brings to your projects

Methodology

For a technology and mobile application development company, Rootstack provided a DevOps service, applying all the benefits that this methodology brings to streamline technical projects and teams.

The software development process is not easy, it can take time and effort from several people to be successful. Having a DevOps engineer is vital for everything to flow correctly.

DevOps can be defined as a collaborative practice between engineers, developers, and everyone who works on software and technology. An Agile and Lean methodology is used.



What is DevOps?

According to the definition given by Microsoft, DevOps is a compound of development (Dev) and operations (Ops), translating this as the union of people, processes and technology to provide value to customers continuously.

This process is one that can bring valuable benefits to all companies that apply it. Among the most relevant are:

Faster and more frequent delivery of updates and features that will not only satisfy customers, but also help your business gain a foothold in a competitive marketplace.



Collaboration between the development and operation teams and the frequent capture of user feedback lead to a significant improvement in product quality.

Importance of a DevOps solution in companies

A basic DevOps solution can be useful for any company or organization in the continuous implementation of a sales funnel. Enterprise DevOps focuses on large-scale tasks or needs to promote availability and reliability.

Any company that needs to scale technology operations related to business functions must apply a DevOps solution or methodology and know all the best practices, as well as the tools to use to implement DevOps.

What are the good practices that DevOps must comply with?

Apply an agile development methodology

Agile software development is one of the most popular development methodologies, especially in the United States. Its basic principles focus on teamwork and flexibility. Focuses on resolving customer pain points by developing to an MVP (minimum viable product) early on, frequently receiving feedback from end-users to gain valuable insight to incorporate changes before development is too far along . This reduces risk, saving time and money.



Make sure you use the right tools

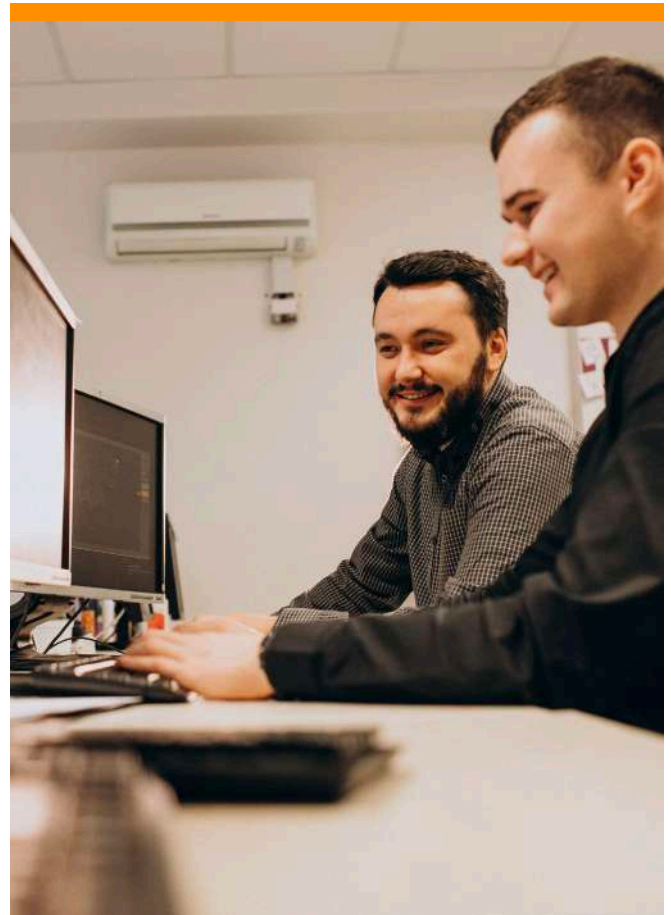
To correctly apply what a DevOps methodology as such is, you must have the right tools in each phase of the life cycle, make sure that the tools to use have the capabilities to improve software quality and delivery speed.

Implement automation

Automatic code verification is a thing of the past within the DevOps process in a project. The team in charge must automate everything from batch processing to frequent commits. Automated tests should also be included, within these are comprehensive, unit, integration and performance tests.

Monitor DevOps applications

It is very important to verify at all times the applications in production to identify failures or deficiencies in performance and thus anticipate a possible report from customers about these failures. The DevOps pipeline should also be monitored so that one failed test doesn't slow down the entire process.



Pillars of observability

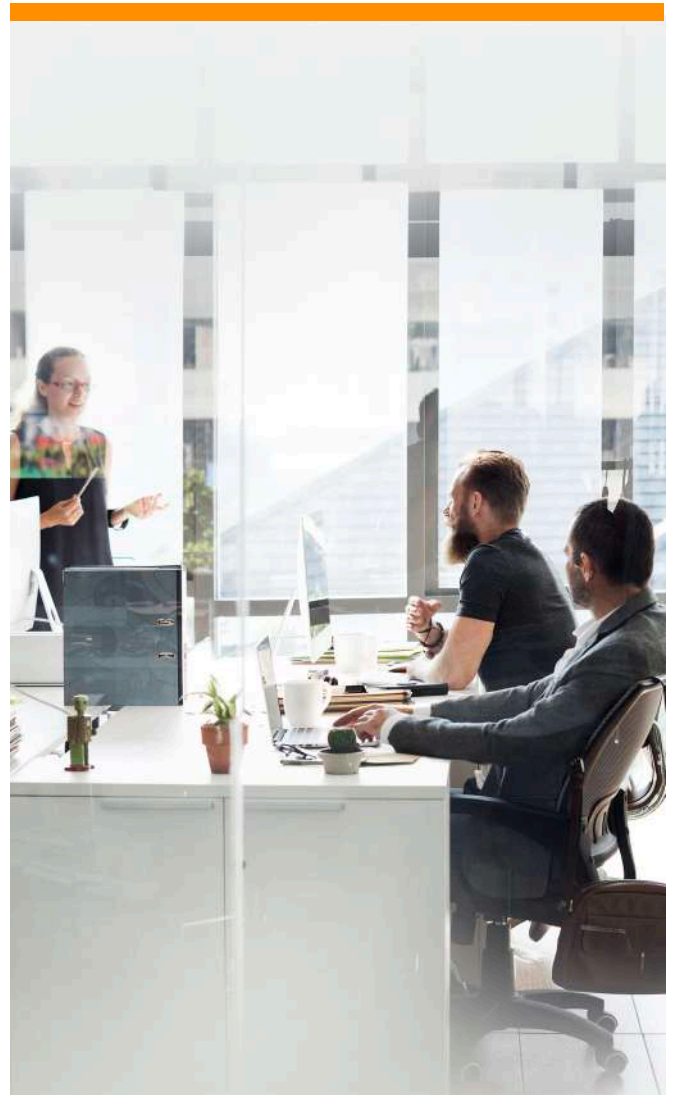
You may not have heard this phrase before, but it's key to every DevOps team. The "pillars of observability" are logs, traces, and metrics. System components and applications generate logs, these are serial data about the operation of the system. Traces are responsible for tracing the flow of application logic, and metrics allow DevOps to look at CPU/RAM usage or reservation, disk space, connectivity, and more.

Help with quality control.

DevOps, through continuous monitoring tools, parameterized all kinds of automatic tests instead of hiring a person to review each page of the app. These can stop and prevent problems in: development cycles, deployment, vulnerabilities, servers and performance.

Continuous feedback

Having an ongoing conversation with the team or sending constant reports ensures they have the accurate information they need to do their job effectively. Developers will be able to get quick results from code tests, so they know if there is a bug and fix it right away. It was believed that a development team could only optimize for speed or quality, but continuous feedback is one of the elements of DevOps that allows optimization of both aspects.



A change in culture

The DevOps methodology is based on collaboration, trust, transparency and empathy. If the organization or company that will implement this practice does not have these words cemented in its work culture, a radical change must be made to later think about implementing DevOps within the development process of a technological product. Communication lines between teams must be open and always used.

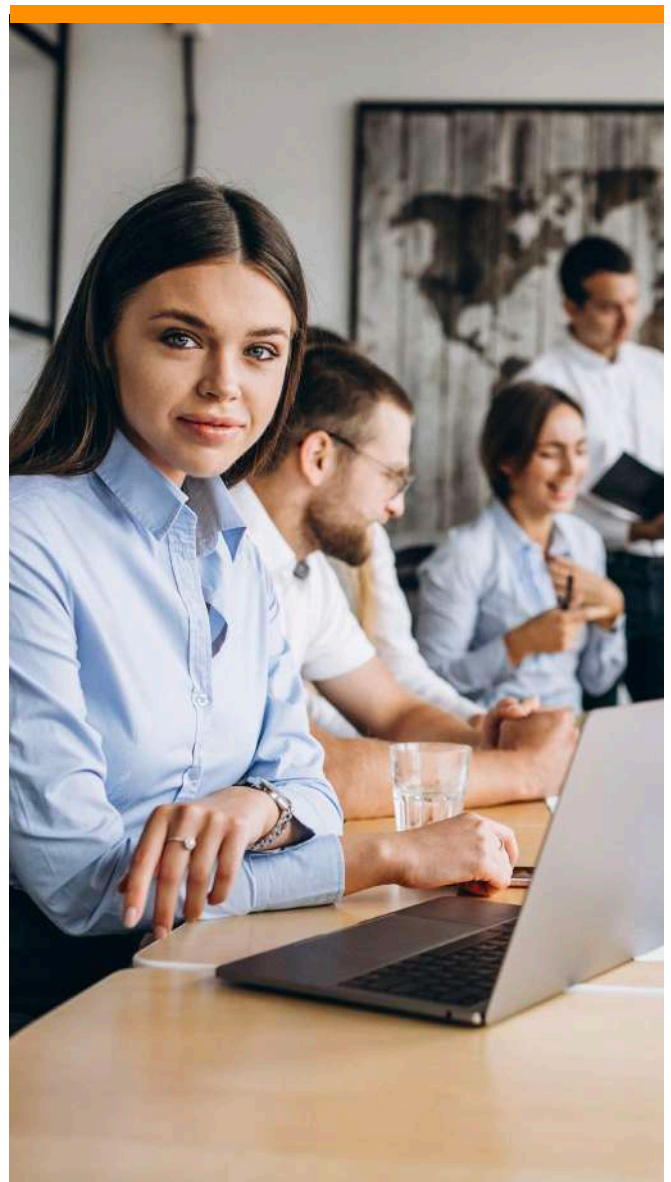
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Many of the repetitive tasks that would be carried out manually, such as the case of infrastructure or cluster tests, are automated or there is change control of what is being done, not only at the development level but also at the code.

By using GitHub Actions it is easy for developers, for example, to know the status of the deployment of a Lambda that they want to update and it is not necessary to have a deep knowledge of the infrastructure to be able to deploy.

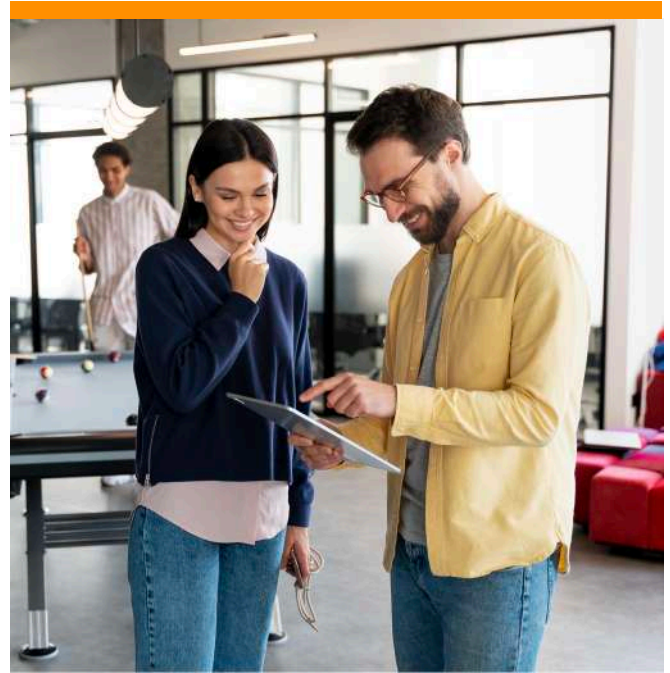
At Rootstack we have a team of experts in this development methodology, who have worked with hundreds of our clients offering the benefits of DevOps. Each project has its own needs, but we are going to talk about what our DevOps can do for your project considering the work with an important client:

- Starting, Github Actions was used for test automation, many things that were done locally manually became automated.
- The deployment of different services was also implemented through GitHub Actions after doing the tests, either using the GitHub API to trigger the AWS, it is a way to control the deployment process and not have to be performing manual.
- There is also a cost reduction in terms of the scenario you work in compared to doing these builds on AWS.
- A service was migrated between AWS accounts. Before it was in CloudFormation and it was migrated to Terraform, obtaining as a benefit the possibility of managing the platform that is being used in a more agnostic way and allowing integration with other tools that are not only AWS. Having this service in Terraform is an advantage since several accounts are handled.



- Docker was used for heavier automation tasks. There are always benefits to working with Docker and containers because you can test locally in environments that aren't necessarily production. The use of AWS on demand is also obtained as a benefit, this means using only the resources that are necessary now.

DevOps is one of the most widely used methodologies today when it comes to developing software products, adapting to the needs of each company and each major industry worldwide.



Importance of having a DevOps team on a project

Having a DevOps team pending the operation and execution of your application or technology is almost vital, this ensures peace of mind when it comes to avoiding errors and having clean code, running correctly.

Among the benefits of working with our DevOps team are reducing operational costs, simplifying the flow of data and information in a project to facilitate collaboration, increasing agility and responsiveness of teams, and accelerating time to market of products. software products.

A DevOps engineer will put all these tasks into practice to ensure that the application or website works correctly and can meet the demands and needs of the end user, without presenting sudden errors.

