# **Getting started with DevOps**

#90DaysOfDevops



Day 1: Introduction to DevOps

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DevOps is the combination of Dev + Ops (i.e. Developer and Operations). Software development and IT teams' processes can be automated and integrated using the practices, tools, and cultural philosophy known as "DevOps." It places a strong emphasis on technology automation, team empowerment, and cross-team communication.

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The DevOps movement started in 2007 when the IT operations and software development communities voiced their concerns about the conventional software development approach, in which developers created code apart from operations, which distributed and supported the code. The term "DevOps," which combines the words "development" and "operations," refers to the process of fusing different fields into a single, continuous process.



What is Automation:

### What is Automation?

DevOps automation is the use of technology to augment processes that enable feedback loops between operations and development teams to hasten the deployment of iterative changes to applications in production.

The key component of DevOps processes is automation, and the core idea behind DevOps is to automate everything. Automation begins with the generation of code on the developer's machine and continues through pushing the code to the code, with monitoring of the application and system in production following.

The main focus of the DevOps technique is automating infrastructure setup and configuration, as well as software deployment. The DevOps methodology depends on automation to make frequent deliveries across platforms over a short period.

DevOps automation covers all aspects of development, deployment, and monitoring.

## What is Scaling?

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Developers or businesses can adopt the DevOps mindset and select the appropriate technology to scale their business growth in an automation-driven environment known as "scaling in DevOps."

The ability of a business to configure its systems to expand during periods of high demand and scale back when demand lowers is referred to as scalability. DevOps is the best setting for obtaining the right level of scalability because of particular methodologies. By the use of these strategies, people may communicate, focus on their work, have more creative options, and quickly deploy software.

### What is Infrastructure?

Infrastructure management with the help of code is the primary principle behind the DevOps infrastructure or Infrastructure Automation under the DevOps concept. This is achieved through the use of specific applications or technologies that can assist in automating the duties! The following list includes some of the top IAC tools.

Ansible



Terraform

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- Ansible
- Terraform
- SaltStack
- CloudFormation
- Azure Resource Manager
- SpectralOps

# Why DevOps is important?

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After defining DevOps, it is time to examine the motivations behind why businesses choose to use this methodology.

Before we talk about these motivations, it's interesting to note that, according to <a href="DevOps.com">DevOps.com</a>, the number of businesses implementing DevOps has been rising significantly each year.

The following factors have been most important to the growth of DevOps:

1. Simplified Time to Market

DevOps is crucial because, among other things, it makes it possible to generate software more quickly thanks to enhanced processes, automation, and release planning. Continuous delivery allows teams to build, test, and distribute software with automated technologies.

1. Improved inter-team cooperation:

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#### 1. Improved inter-team cooperation:

Create more efficient teams using the DevOps culture model, which stresses principles like accountability and ownership. Developers and operations teams communicate extensively, share numerous tasks, and merge their workflows.

#### 3) Reliability:

It improves the dependability and error-freeness of the processes for development, deployment, and other tasks. You can keep up with performance in real-time with the aid of monitoring and logging procedures.

#### 4)Security:

DevOps can contribute to enhancing system security by integrating security testing and monitoring into the development and deployment process. By ensuring that systems correspond to the necessary security standards and laws, this can assist guard against vulnerabilities and threats.

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