
DAY 1
Simplify DevOps
DEVOPS & CLOUD
100-DAY CHALLENGE
100% LEFT

What is DevOps?

DevOps is a collaborative approach that bridges the gap between development and operations teams.

New way to define DevOps:

Collaboration	Development	Operations
Agile	Continuous Integration	Communication
Automation		

The OODA loop

The OODA loop is a decision-making cycle that can be used to improve the speed and agility of DevOps teams. The OODA loop consists of four steps:

Observe: Gather information about the current state of the system.
Orient: Analyze the information and identify the key problems.
Decide: Make a decision about how to address the problems.
Act: Implement the decision and monitor the results.

Core Principles of DevOps

1

Automation

Automating industry-standard best practices helps in reducing operational costs and reliability while increasing overall efficiency.

2

Continuous Delivery

Continuous delivery allows teams to release software updates into production quickly, safely, and frequently.

3

Feedback Loop

Feedback loops provide teams with the opportunity to continually refine their processes, learn from mistakes and improve overall experience for customers.

4

Infrastructure as Code

Managing infrastructure as code allows for faster deployment times, fewer errors, and more predictable outcomes.

5

Shared Responsibility

Shared responsibility is a core principle of DevOps that emphasizes the importance of collaboration and accountability across all teams

Benefits of DevOps

Faster Deployment

DevOps enables you to release code into production more quickly, reducing the time it takes to get the latest features in front of customers.

Improved Quality

Continuous integration and delivery help to identify and fix issues before they reach production, improving the quality of releases.

Enhanced Collaboration

DevOps encourages cross-functional collaboration between development and operations teams, promoting greater efficiency and a more unified approach.

Rapid Problem Resolution

Having an environment where everyone collaborates and shares information can help in identifying and solving problems quickly.

Scalability

Effortlessly handle increased demand.

DevOps in Action: Real-World Examples

Netflix

Netflix uses DevOps principles to offer seamless, reliable, and scalable streaming services to millions of users worldwide.

Amazon

DevOps is one of the key factors contributing to Amazon's success in delivering products quickly and meeting customer needs.

Etsy

Etsy builds and updates features used by millions of sellers and buyers worldwide with their DevOps approach.

Target

Target improved its website stability by adopting DevOps practices for faster delivery times and better efficiency.

Key DevOps Tools

Jenkins

A popular open-source automation server used for continuous integration and continuous delivery (CI/CD) pipelines.

Docker

A platform for developing, shipping, and running applications in containers. Containers provide a lightweight and portable way to package and deploy software.

Kubernetes

An open-source container orchestration system used to automate the deployment, scaling, and management of containerized applications.

Ansible

An open-source automation platform used for configuration management, application deployment, and task automation. Ansible uses a simple syntax called "playbooks" to define and execute tasks.

Git

A distributed version-control system used to track changes in source code during software development. Git is widely used by software development teams to manage their codebase and collaborate on projects.

These tools automate repetitive tasks, enhance team collaboration, and improve overall efficiency, bringing faster feedback cycles, more reliable releases, and better customer experiences.

DevOps Culture and Collaboration

Cross-Functional Teams

DevOps values a diverse range of skills and backgrounds, ensuring teams are composed of cross-functional expertise that facilitates knowledge sharing and problem-solving.

Continuous Learning

DevOps encourages learning new skills and fostering a culture of continuous improvement.

1 2 3 4 5

Communication

Having an open and continuous communication is an essential part of successful DevOps

Trust and Ownership

Teams that trust each other can more easily adopt new methods and practices that help them

DevOps Practices

Following a set of best practices like Infrastructure as Code, Continuous Delivery, and Automation can improve


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