

## DEVSECOPS

### **DevOps:**

Development and Operations, is a collaborative approach to software development and IT operations that emphasizes communication, integration, and automation between development teams (Dev) and IT operations teams (Ops).

**Goal :** primary goal of DevOps is to shorten the software development life cycle, increase deployment frequency, and deliver applications more reliably and efficiently.

### **Key aspects of DevOps include:**

Collaboration

Automation

CI/CD (Continuous Integration / Continuous Deployment / Continuous Delivery )

Infrastructure as Code (IaC)

Monitoring and Feedback

Version Control

Microservices and Containers

Resilience and Reliability

Continuous Learning and Improvement

## **DevSecOps Fundamentals**

## DEVSECOPS

DevSecOps is a software development approach that **integrates Development (Dev), Security (Sec), and Operations (Ops)** into a single, cohesive and continuous process. The primary objective of DevSecOps is to infuse security practices and principles throughout the entire software development lifecycle, from the initial design and development stages to deployment and ongoing maintenance.

**Automation**

**Continuous Integration and Continuous Deployment (CI/CD)**

**Collaboration**

**Shift-Left Approach**

**Continuous Monitoring and Incident Response**

**Infrastructure as Code (IaC) Security**

**Security Culture and Awareness**

# DevSecOps Fundamentals

## DevOps VS DevSecOps Pipeline

| Cloning Git | Build-and-Tag | Post-to-dockerhub | Pull-image-server |
|-------------|---------------|-------------------|-------------------|
| 43s         | 31s           | 24s               | 36s               |
| 3s          | 29s           | 25s               | 46s               |

| Cloning Git | SAST | Build-and-Tag | IMAGE-VULNERABILITY-TEST | Post-to-dockerhub | Pull-image-server | DAST |
|-------------|------|---------------|--------------------------|-------------------|-------------------|------|
| 6s          | 28s  | 30s           | 38s                      | 1min 25s          | 18s               | 50s  |
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