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DevOps in Action
From Code to Cloud with CI/CD & IaC

DevOps combines software development and IT operations to enable faster, more reliable releases through automation, collaboration, and continuous improvement.

Core components of DevOps:

1. Infrastructure as Code (IaC): IaC enables consistent, automated environments across development, staging, and production.
- Repeatable and reliable infrastructure creation
- Enables full automation of network and service lifecycles
- **Tools:** AWS CloudFormation, AWS CDK, CDK for Kubernetes

2. CI/CD (Continuous Integration / Continuous Delivery): CI/CD reduces time-to-market and increases reliability in production.
- CI: Integrate and test code frequently (hourly or daily)
- CD: Package, release, and deploy automatically
- **Benefits:** Fewer bugs, faster releases, more feedback loops

3. Automated Testing: This ensures updates don't break functionality or degrade performance.
- Functional, integration, and performance tests
- Regression and disaster recovery (DR) testing
- Pre-deployment validation of containers and services

4. Provisioning Automation: Provisioning automation speeds up environment setup and scaling.
- Spin up new environments on demand
- Scale infrastructure efficiently
- Integrated with CI/CD for seamless deployment

5. Environment Monitoring: Monitoring helps detect issues early and optimize performance across all environments.
- Real-time visibility into dev, staging, and production
- Prevent downtime and identify bottlenecks
- Improve reliability and customer satisfaction

Key Benefits

Faster Delivery	Automate builds, tests, and releases to ship features quicker.
Better Quality	Continuous testing reduces bugs and improves code reliability.
Consistent Processes	Automation standardizes workflows and reduces human error.
Higher Productivity	Teams spend less time fixing and more time innovating.
Rapid Feedback	CI/CD loops bring real-time user insights to developers.
Stronger Stability & Security	Integrated security measures throughout the pipeline reduce vulnerabilities and improve uptime and recovery.

Organizations that adopt DevOps see up to 46x more frequent code deployments and 5x lower change failure rates. - DORA Report

How Magic Beans can help

At **Magic Beans**, we help you adopt and scale **DevOps** with the right tools, processes, and cloud-native expertise. From **Infrastructure as Code** to **CI/CD automation,** our team ensures faster delivery, higher quality, and smoother operations, so you can focus on innovation.

Let's talk
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