

# How to become a professional DevOps

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## Abstract

An important part of the EPAM university program is the training of DevOps specialists. This is primarily due to the high demand for these specialists both inside and outside EPAM. DevOps specialists act as integrators of two closely interrelated areas of companies' activities: development and operation. Developer roles are primarily application development/modification; try new technologies. Operations roles: build, deploy, and release; performance and availability; create or improve services.

From planning through delivery, the goal of DevOps is to improve collaboration across the value stream by developing and automating a continuous delivery pipeline. In going so, DevOps: increases the frequency and quality of deployments; improves innovation and risk-taking by making it safer to experiment; realizes faster time to market; improves solution quality and shortens the lead time for fixes; reduces the severity and frequency of release failures; improves the Mean Time to Recovery (MTTR).

Common DevOps responsibilities: application and infrastructure planning, testing and development; maintaining CI/CD pipelines; automation implementation; on-call, incident response and incident management; monitoring.

Common DevOps roles: integration engineer; cloud specialist; automation Engineer; release Engineer; security Engineer.

Main areas of knowledge for DevOps and examples: programming languages (Bash, Python, Groovy, PowerShell, Ruby, Go); Operation Systems (Linux, Windows); Version Control System (Git); Cloud computing (AWS, Google, Azure); Containerization (Docker, Kubernetes); Infrastructure as code (Ansible, Chef, Puppet, SaltStack); CI/CD (Jenkins, Bamboo, TeamCity); Test Automation (Selenium, Apache JMeter).

A detailed analysis of the requirements for DevOps specialists allowed us to develop a DevOps External program. Training in this program allows you to quickly prepare specialists of the Junior level.

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