

devops is adding value to software products

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how devops adds value to software products:

- by automation (Ansible, Terraform, etc.)
- by streamlining workflows/identifying bottlenecks
- ...

typical risks in software lifecycle

risk	mitigation
outdated documentation	automate documentation generation
unclear responsibilities between teams/actors	?
manual interventions and handoffs	automation and self-service tools
unauthorized/unintentional configuration changes	infrastructure and configurations as code
inconsistencies between dev/qa/production environments	<i>idem</i>
unable to diagnose issues with incomplete, scattered, logs and traces	implement built-in observability
manual incident management can cause delays	automate incident notifications into communication channels

development stage

onboarding and tools

- every actor requires Slack Exchange access
- source control: automate GitLab account management
- cloud environment: AWS developer account
- provisioning: provisioning development environments and tools (documentation and guidelines)
- local environment: IDE, text editor, and dependencies (docker, linters, web server, etc.)

integration and testing stages

- code review process
 - GitLab web app
 - static code analysis (sonarqube, esLint, etc.)
- dependency management
 - maven, nuget, npm, pip, etc.
- security scans
- build management
 - Gitlab CI + runners, etc. (Jenkins, gradle, bamboo, travis)
- artifact management repository
- QA environment (deploying artifact to QA envir)
- functional testing
- workflow management
 - GitLab (Jira, Trello, Asana, etc.)

deployment (release) stage

- performance testing (against regression)
 - webload, jMeter, loadninja, loadrunner, etc.
- containerization
 - docker, rkt, mesos
 - docker compose vs. Ansible
- cloud deployment
 - avoid vendor lock-in(really?)

monitoring and analytics stage

- gathering logs
 - splunk, elasticsearch => searching, reporting purposes
 - log aggregation
- using logs and data to build dashboards
- observability
 - datadog, new relic, honeycomb, dynatrace
- monitoring
- incident management and collaboration