

10 Sun



08:45 PM

Sako M OpenGov

UTC+4

kiss-conf

2 days, 13 speakers

Keep it stupid simple

DevOps in Action

Proudly supported by



https://kiss-conf.goupaz.com

Host: Nabi Nabizade



Sako M

Love investment on people and self growth

Contact

Linkedin: https://www.linkedin.com/in/sakom

Education

MSc: ITU(US), Eurecom(France), Qafqaz Uni(Azerbaijan)

Experience

Current:

Devops - OpenGov, San Francisco Area Founder - GOUP, JobHax

Past:

NGINX, Fraunhofer, SAP, Huawei, ZTE, Bakcell



OpenGov

The Leader in Enterprise Cloud Solutions for Government

Mission driven: Powering More Effective and Accountable Government

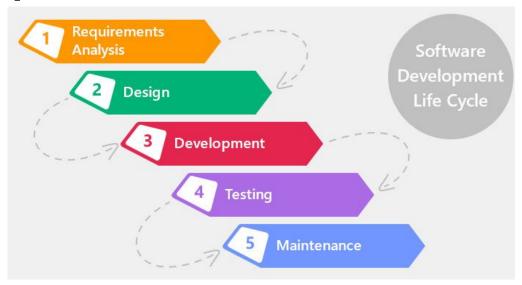
- 1. We do what we say we'll do.
- 2. We drive for customer impact.
- 3. We have passion for the mission.

Great Culture: smart, fun, humble

More: https://opengov.com

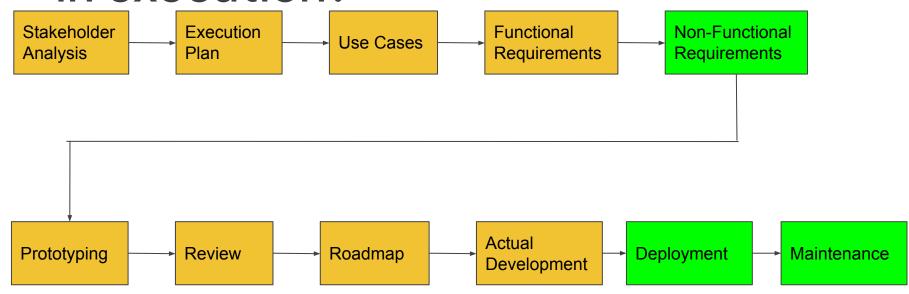


Software Development



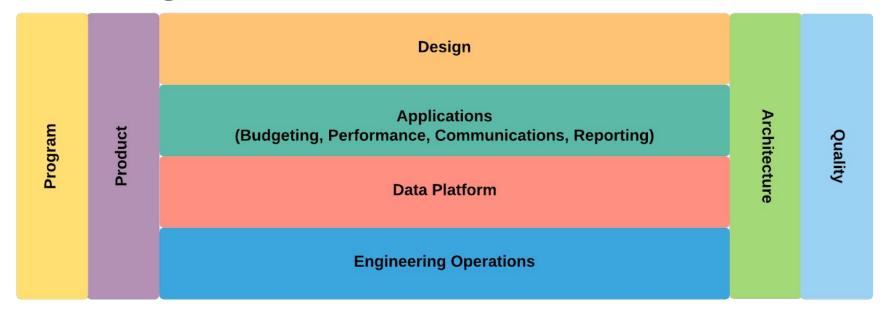
https://www.linkedin.com/pulse/what-software-development-life-cycle-sdlc-phases-private-limited/

Where lands DevOps in execution?





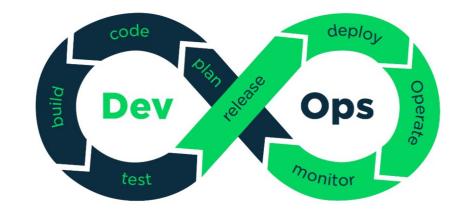
Where lands DevOps in organization?



What is DevOps?

Short: Combination of development and operation Long:

- security
- performance
- scalability
- availability
- reliability
- Maintainability
- ...





Roles in DevOps?

- **Developer Experience** CI/CD Pipelines
- **SRE** Infrastructure tooling
- **Security** Infrastructure, Data, Application, Compliance
- Architect Continuous design high-performance cost effective
- Quality Assurance Unit, integration, functional, performance, system, x-platform

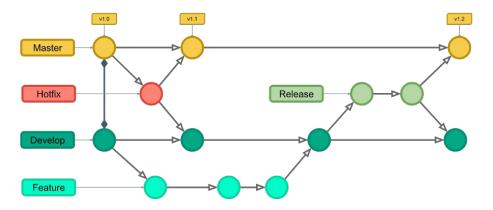
Note: In small to midsize companies QA can be part of DevOps team



DevEx - Git

Created by Linus Torvald for Linux kernel development

- Distributed version control system
- Collaborative development
- Multiple copies in local and remote
- Revert changes
- Track what changed and when





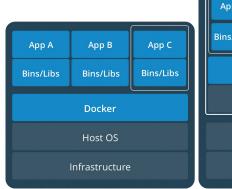


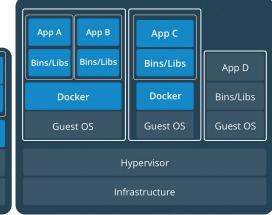
DevEx - Docker

Share an application with all of their dependencies across multiple environments. Build & ship, not RUN



- Docker container
- Docker Client
- Docker Images
- Docker Registry
- Docker Containers





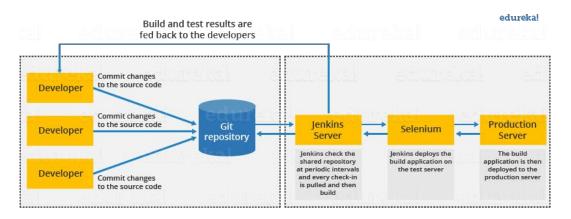


DevEx - Jenkins

Jenkins is an open source automation tool written in Java with plugins built for Continuous Integration



- Build and release automation
- Integrates with Git and more
- Cross platform
- Easy to debug each commit
- Easy install and configure



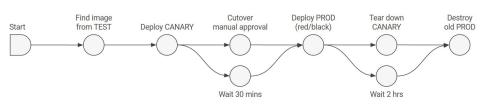


DevEx - Spinnaker

Spinnaker is an open-source, multi-cloud continuous delivery platform to release software



- Build pipeline consisting of stages
- Stages: deploy, resize, disable, manual judgement
- Supports blue/green deployment
- Support canary strategies
- Easy rollback in case of failure
- Notification: Email, Slack, SMS



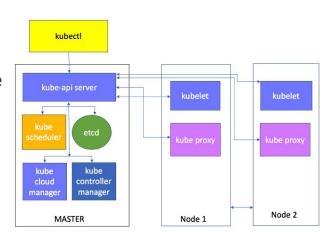


Infrastructure - Kubernetes

ng

Kubernetes is a open-source platform for managing containerized workloads

- Service discovery and load balancing
- Storage orchestration automount local or remote storage
- Automated rollouts and rollbacks
- Automatic bin packing autofit apps based on CPU/RAM
- Self-healing
- Secret and configuration management





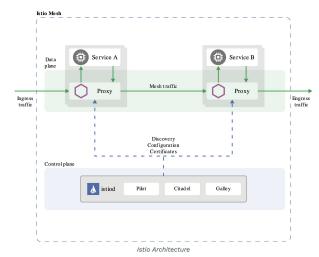


Infrastructure - Service Mesh

Connect, secure, control, and observe services



- Intelligent control the traffic flow between services
- Auto secure auth/authorization/encryption of traffic
- Auto tracing, monitoring, logging



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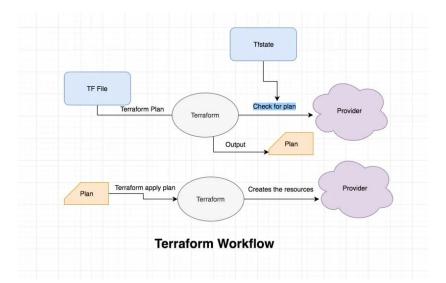


Infrastructure - Terraform

laaC - Infrastructure as a Code



- Write declarative configuration files
- Plan and predict changes
- Create reproducible infrastructure



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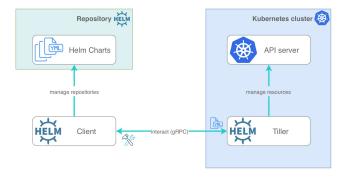


Infrastructure - Helm

Helm helps deploy Kubernetes applications.



- Chart is a bundle necessary to create an instance of application
- Config configuration merged into a packaged chart to create a releasable object
- Release is a running instance of a chart, combined with a specific config



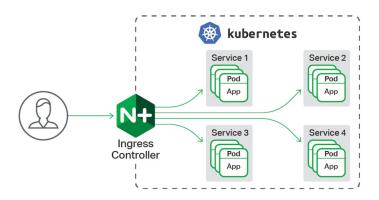


Infrastructure - NGINX

NGINX is open source software for web serving, reverse proxying, caching & load balancing.



- TLS/SSL termination
- Supports load balancing Websocket, gRPC, TCP, UDP
- Traffic splitting
- Advanced content-based routing

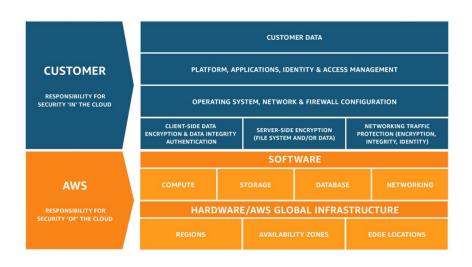




Security - Infrastructure

Shared Responsibility model

- Strong IDS/IPS/WAF/DDoS solution
- Disallow unrestricted public ports
- Enable logging/audit logs
- Centralized authentication/authorization
- Host vulnerability management
- Staff training







Security - Data

User Controls Privacy. Companies Ensure Protection

- Identify sensitive data
- Secure process around data in transit, process and rest
- Define company data policies
- Increase time, effort and cost of steal data
- Conduct regular risk assessment
- Keep audit logs
- Staff training

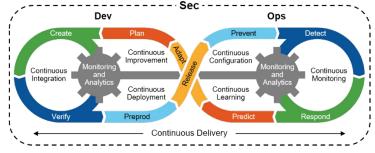




Security - Application

AppSec is a continuous journey, to make it effective requires to be part of development lifecycle

- Secure Authentication/Authorization flow
- Set strong encryption
- Periodic Security Health/Configuration audit
- Secure Logging/error handling
- Secure language-specific best practices
- Secure dependency management
- Staff training

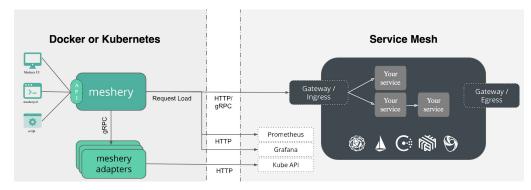


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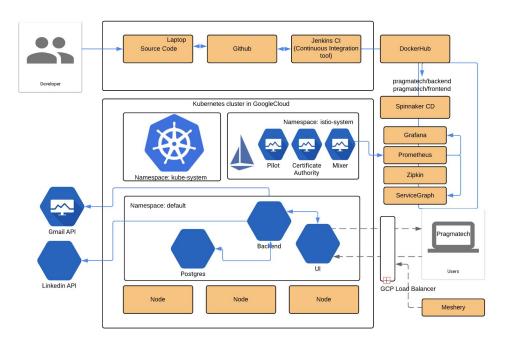
Quality - Meshery

Benchmark and manage the performance of application across different service meshes.

- Track application performance
- Understand different meshes
- Provision service meshes
- Assess service mesh configuration
- Assess service mesh overhead



All pieces together



Q&A Discussion

Link to Q&A Panel: https://bit.lv/2KvViHb

Wrap-up

Before reach me:



Collaborate, contribute, benefit!

Remember!

- Re-Search
- Be short and clear
- Re-mind
- Over Linkedin
 https://www.linkedin.com/in/sakom/
- NO Facebook