

# دواپس و نقشه راه

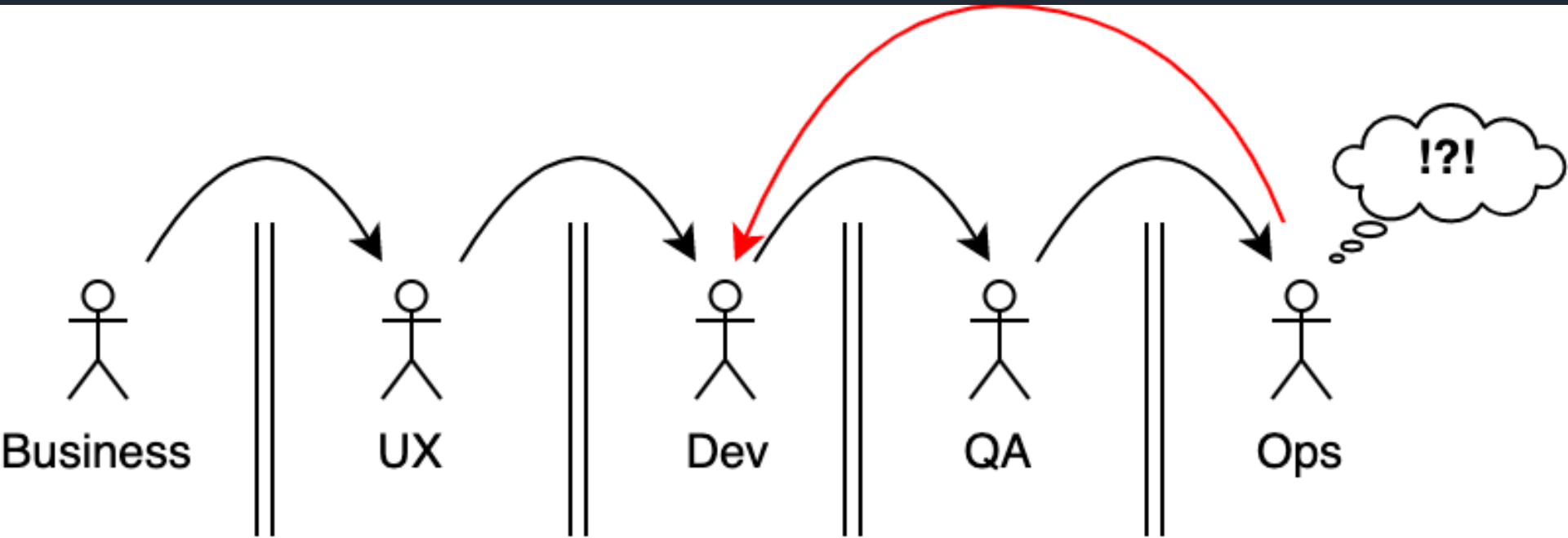
باز هم یک مقدمه آرام

آکادمی  
ابرها

سیدمصطفی افزونی

آکادمی ابرها

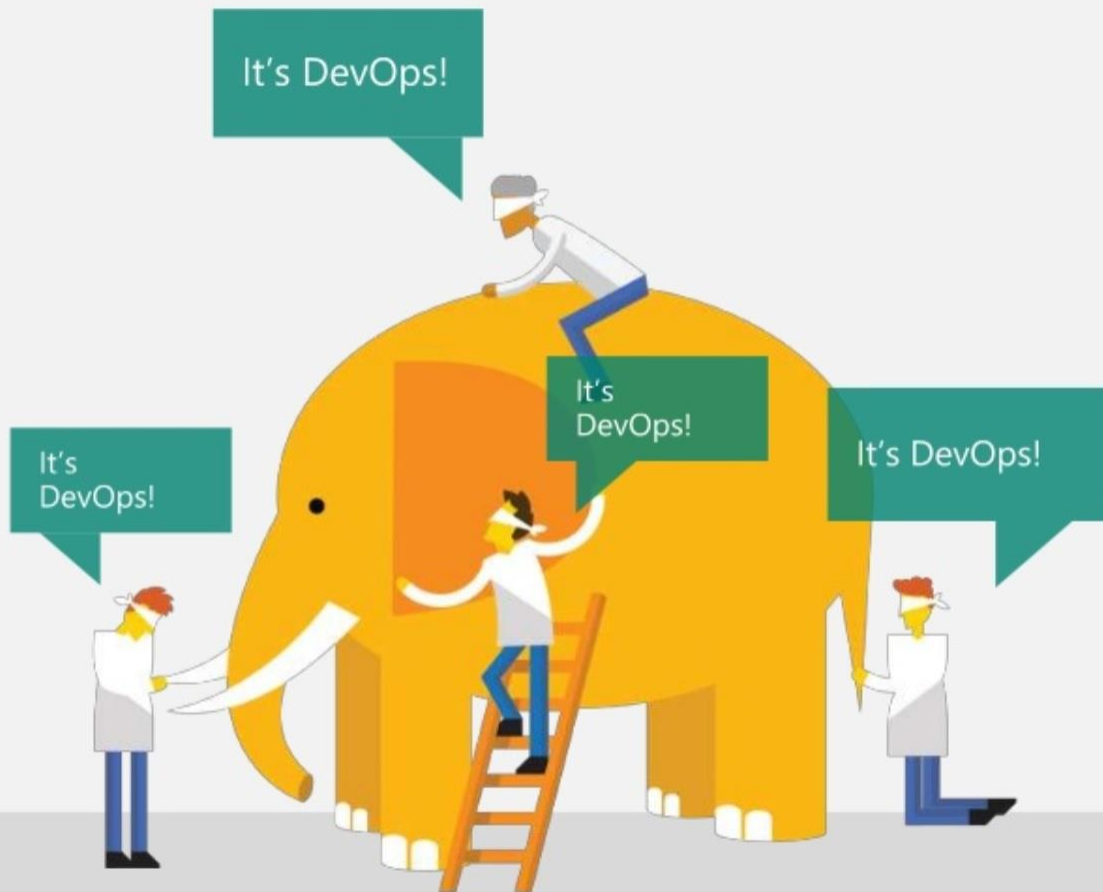
تیر ۱۴۰۱



“DevOps is development and operations **collaboration**”

“DevOps is using **automation**”

“DevOps is **small** deployments”



“DevOps is treating your **infrastructure as code**”

“DevOps is feature **switches**”

“**Kanban** for Ops?”

# 10 deploys per day

Dev & ops cooperation at Flickr

John Allspaw & Paul Hammond  
Velocity 2009

مجموعه‌ای از روش‌ها، فرآیندها و ابزارها است

تمرکز بر ارتباطات و همکاری و یکپارچگی

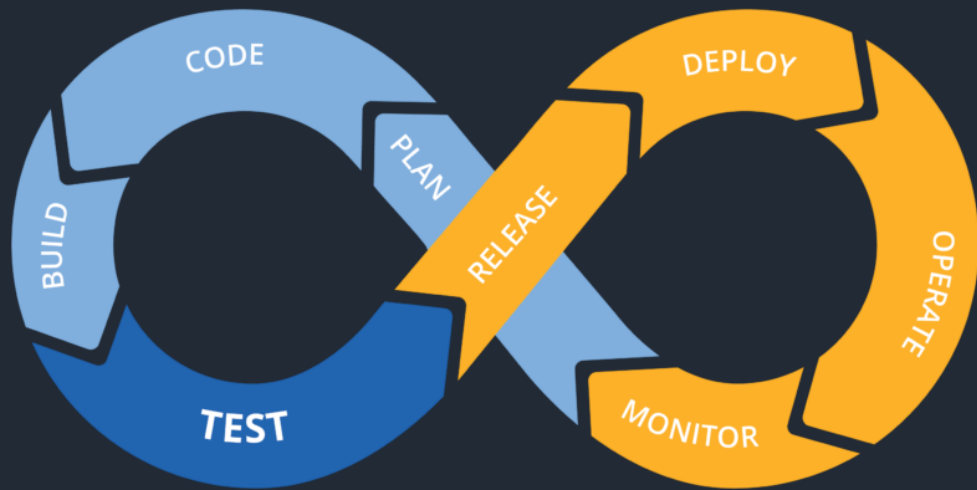
بین تیم‌های توسعه، تست و عملیات (اجرا + پشتیبانی)

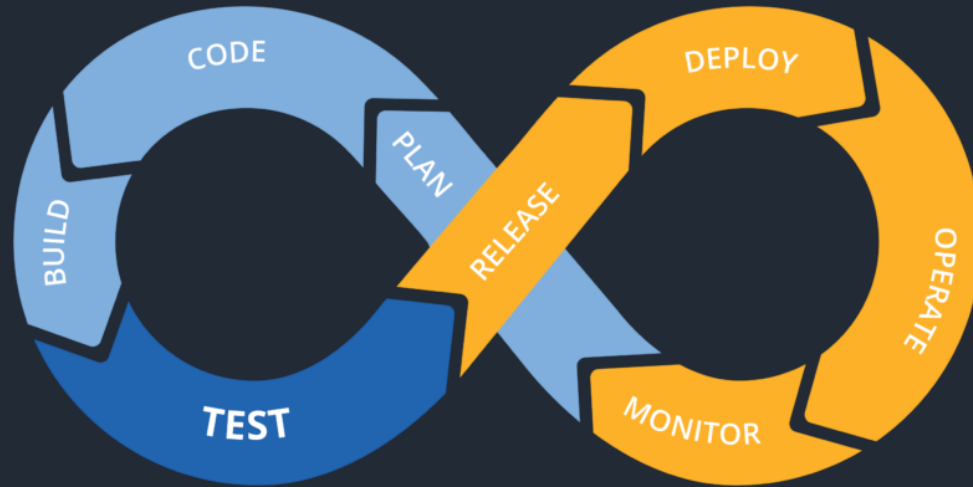
ارزش‌های تولیدشده (مثل فیچر یا رفع باگ)

سریع و بصورت مستمر به مشتریان نهایی می‌رساند

مستمر

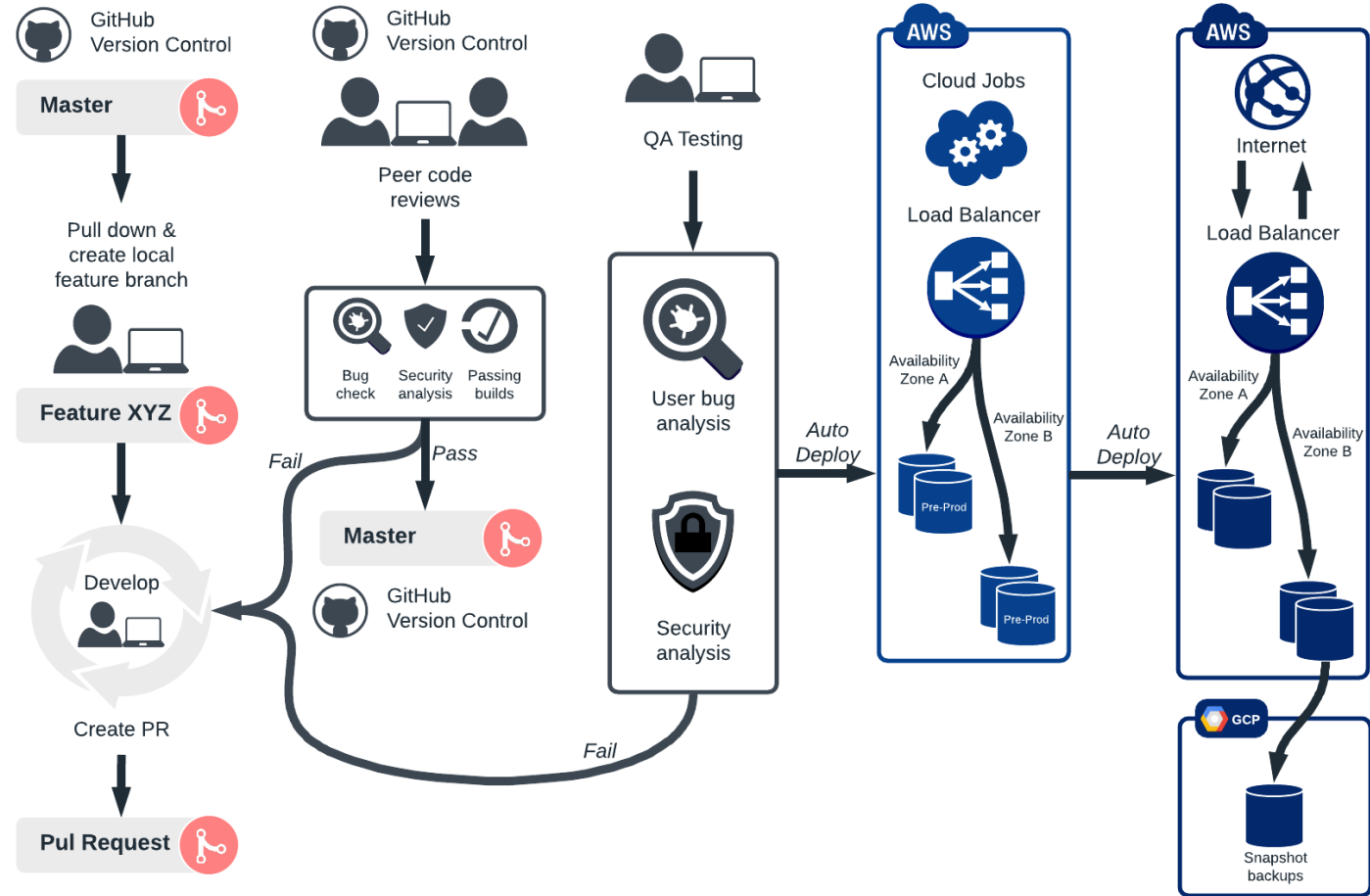
سريع

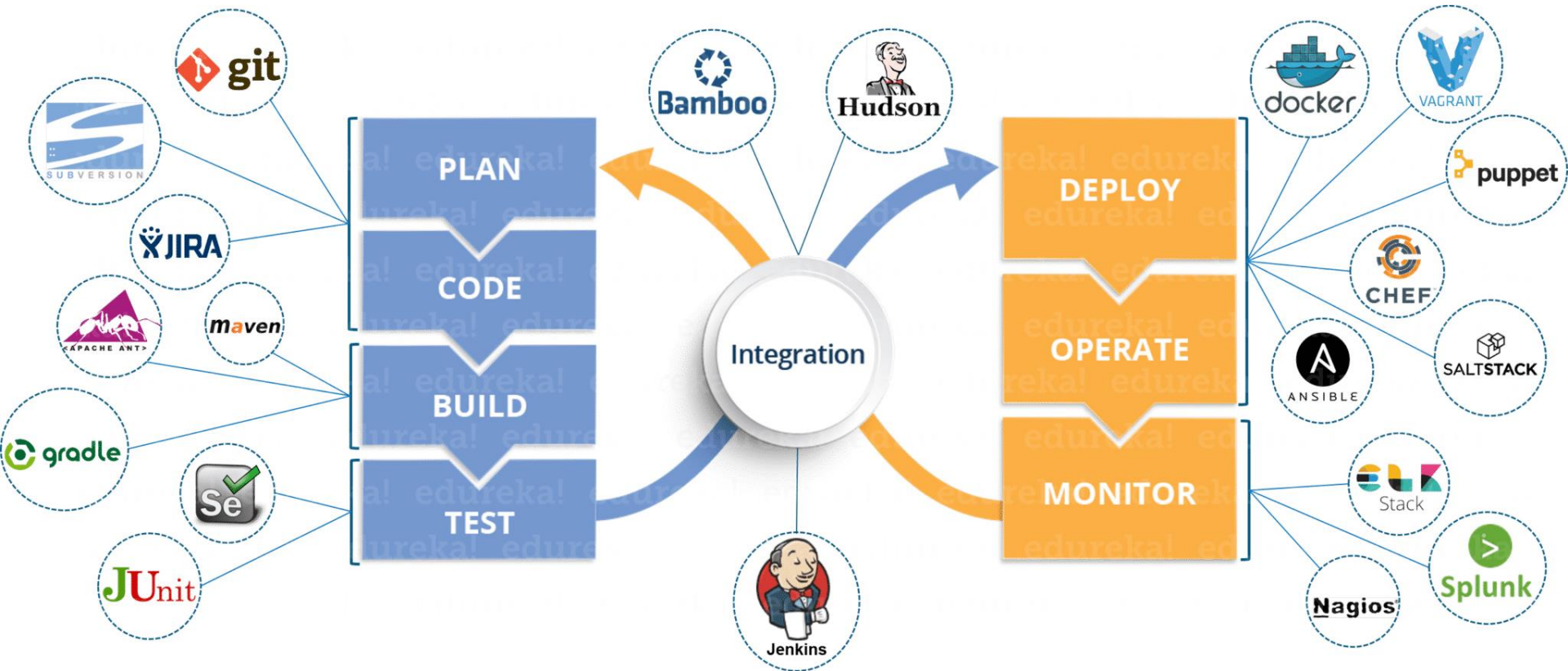






Development → Peer Review → QA → Pre-Prod → Production





# Collaborate

# Build

# Test

# Deploy

# Run

## Application Lifecycle Mgmt.



## SCM/VCS



## Testing



## Deployment



## Cloud / IaaS / PaaS



## Communication & ChatOps



## CI



## Config Mgmt./Provisioning



## Orchestration & Scheduling



## Knowledge Sharing



## Build



## Database Management



## Testing

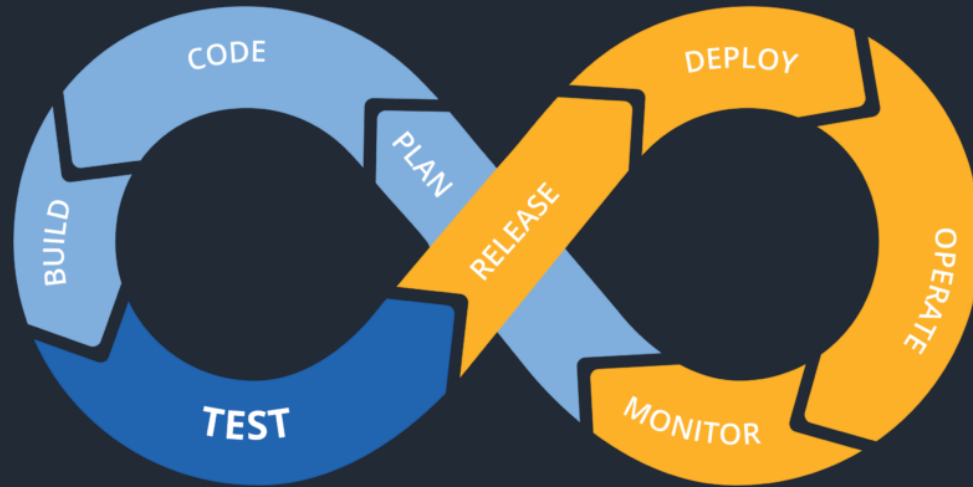


## Artefact Management



## BI / Monitoring / Logging





## RESPONSIBILITIES

- Take responsibility for the quality, reliability, and availability of systems and services
- Act as a systems and services owner (Deploy, Operate, Support, Monitor, Troubleshoot, Maintain, Automate, Document and etc.)
- Work continuously on a task until completion or referral to third parties
- Rapidly establishing a good working relationship with staff
- Ensuring timely communication and driving technical issues toward resolution
- Develop support processes and procedures
- Create technical documentation
- Participate in an on-call rotation

### Responsibilities

- Continuous Integration / Continuous Delivery
- Application Performance Optimization
- Backups
- Release Management
- Config management
- Environment build
- DevOps Tools
- App security Implementation

## Requirements

### Mandatory Qualifications

- Strong Linux administration skills.
- Strong TCP/IP knowledge
- Strong troubleshooting skills will be a plus.
- Knowledge of clouds.
- Experience in automation development.
- Knowledge of Container technology and orchestration.
- Working knowledge of utilizing REST APIs
- Intermediate to advanced knowledge of at least one high-level scripting language
- Thorough understanding of major system components used in system administration
- Good written and verbal communication skills in English

## Requirements

- Experience within a relevant position
- Experience in Linux/Unix systems administration
- Experience in networking (TCP/IP, HTTP, DNS and etc.)
- Proficient in at least one scripting language (Shell scripting, Python and etc.)
- Familiarity with one or more:
  - configuration management tools (Ansible, Puppet, Chef, SaltStack and etc.)
  - virtualization technologies (KVM, QEMU and etc.)
  - containerization technologies (Docker, rkt, LXC and etc.)
  - orchestration tools (Kubernetes, Swarm, Rancher and etc.)
  - alerting, logging, and monitoring tools (Grafana, Prometheus, ELK and etc.)
- Experience developing and maintaining technical documentation
- Excellent communication and interpersonal skills
- Ability to effectively prioritize and execute tasks
- Willingness to take responsibility, accountability, and ownership
- Strong team player

## شرح موقعیت شغلی

- حداقل 2 سال تجربه عملی با Linux servers, DevOps, CI/CD و سرویس هایی -high traffic, fault-tolerant, & highly در دسترس بودن 24 ساعته در 7 روز هفته کل سال
- تجربه کار با Continuous integration and Continuous delivery
- درک قوی از Linux و دانش عمیق از TCP/IP
- داشتن تجربه خوب در مدیریت سیستم های Linux/Unix
- داشتن تجربه خوب در شبکه (TCP/IP, HTTP, DNS and etc).
- مسلط به حداقل یک زبان اسکریپت نویسی (Bash, Python, Go and etc).
- تسلط به دیتابیس های relational و non-relational و برنامه ریزی برای HA. تجربه تولید در سطح Enterprise
- تسلط با ابزارهای زیر:
- ابزار مدیریت پیکربندی (Ansible, Terraform, Puppet, Chef and etc)
- CI/CD Tools (Jenkins, Gitlab CI ...)
- Containerization technologies (Docker and etc.)
- Orchestration tools (Kubernetes, Docker Swarm, and etc.)
- Alerting, logging, and monitoring tools (Grafana, Prometheus, Graylog, ELK, Sentry and etc.)



برنامه نویسی

شبکه و امنیت

لینوکس

مانیتورینگ

CI/CD

Infrastructure as code



توزیع پیشنهادی

Ubuntu Server / Desktop

# LPIC-1

```
# /opt/myscript.sh  
bash: /opt/myscript.sh: Permission denied
```

LPIC-1

LPIC-2

nginx

apache

postgresql

mysql

php

ssh

Linux  
Essentials

دانش عمومی شبکه

**Network+**

دانش عمومی امنیت

**Security+**

**CEH**

زبان اسکریپتی

خودکارسازی

Git

Python

Bash

Go

استک  
محصول

**Container / Orchestration**

**Configuration Management**

**Docker**

**Docker  
Compose**

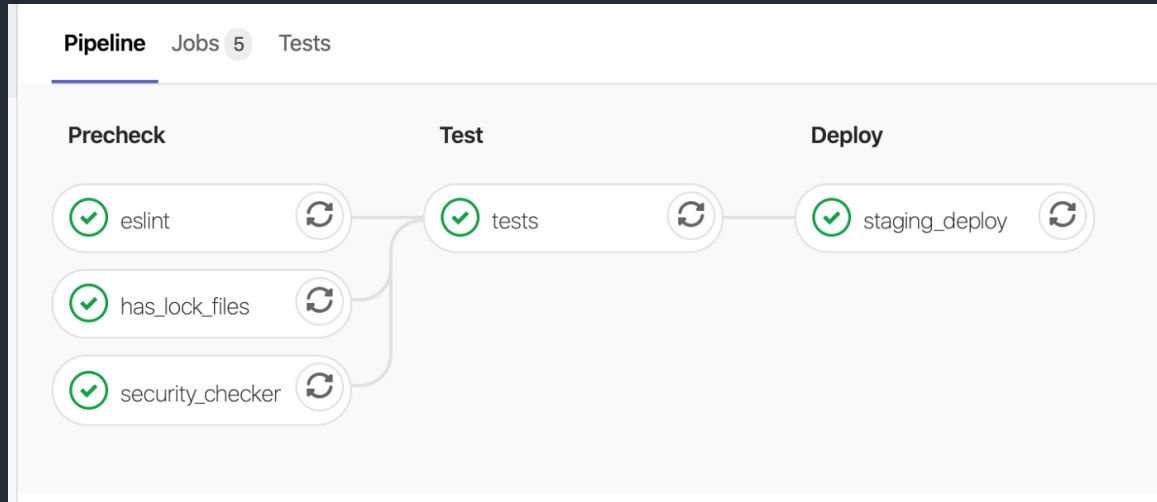
**Ansible**

**Docker Swarm**

**Kubernetes**

## Gitlab CI

## Jenkins



Gitlab CI Pipeline

## Monitoring

## Logging

Prometheus

Grafana

Elasticsearch

Zabbix

Logstash / Fluentd

Kibana





ZABBIX
Monitoring
Inventory
Reports
Configuration
Administration

Dashboard
Problems
Overview
Web
Latest data
Graphs
Screens
Maps
Discovery
Services
Support
Share
?
⏻

Central NOC

## Zabbix Global View

Edit dashboard
☰
↗

All dashboards / Zabbix Global View
Zoom out
Last 1 hour

### Storage IOPs

### UTC time

### Zabbix Cluster

### Detected problems

Host group	Disaster	High	Average	Warning	Information	Not classified
Cloud/AWS				1		
Cloud/Azure				1	1	
End user services			7	5		
Europe/Latvia/Daugavpils						
HPC Cluster			2	27	1	
Internal infrastructure	2	3		41	2	
R&D Lab1						
R&D Lab2				1		
Region/Australia				1		
Region/Brazil						32
Region/China	1			1		
Region/Europe						
Region/Japan			5			
Region/USA			3	1		
SAP HANA Infra				1	1	

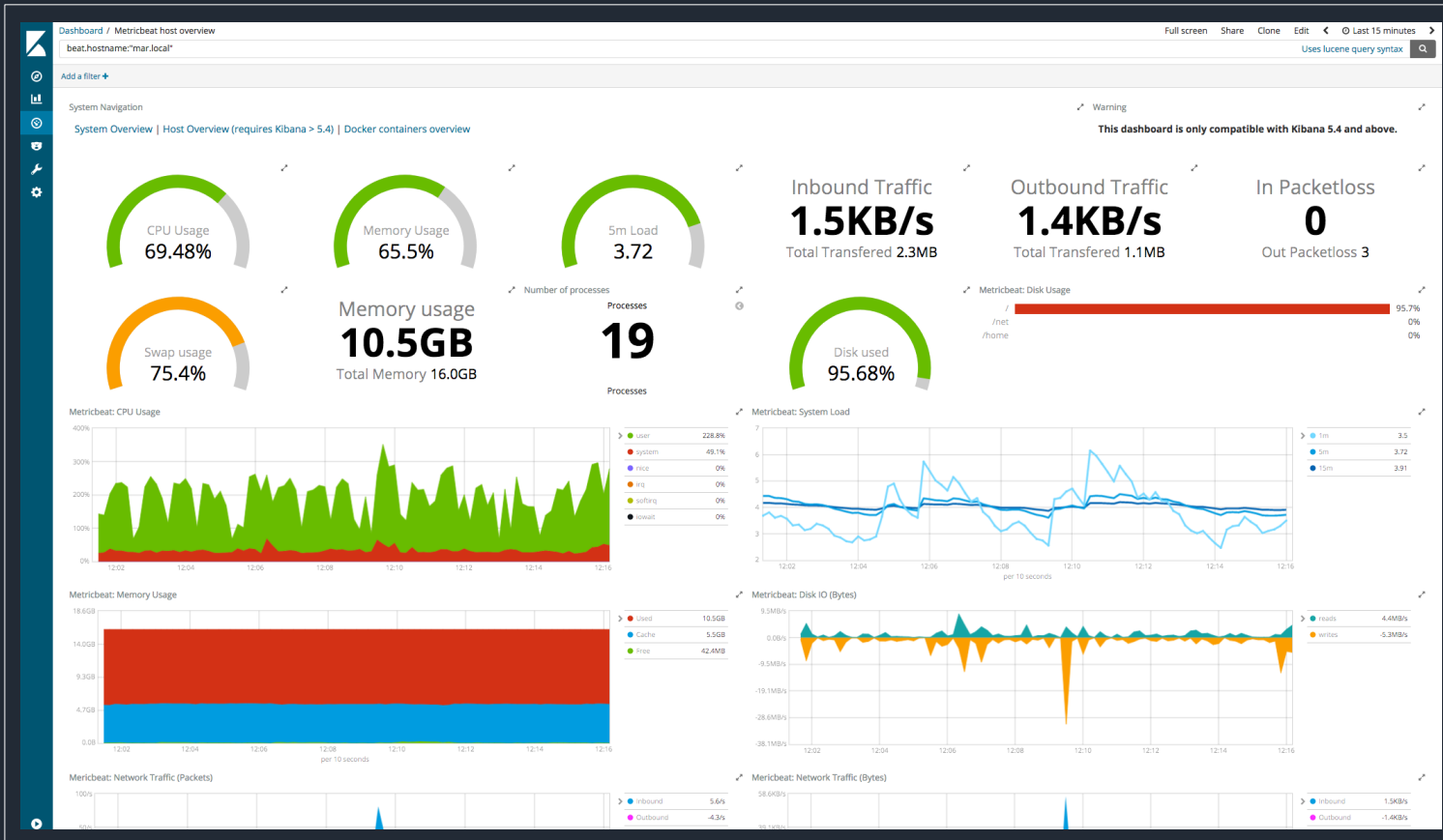
### API calls/s

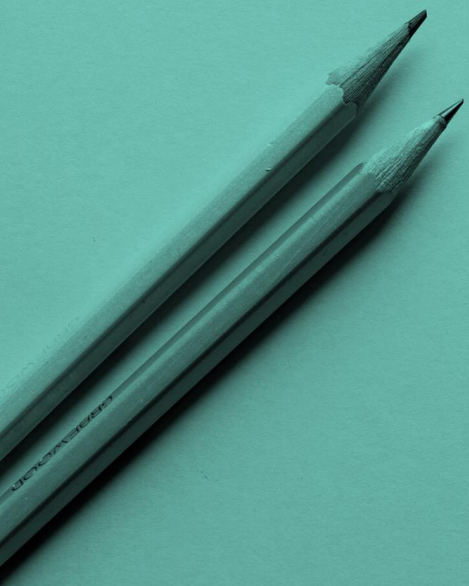
### Value cache misses

### Collected values/s

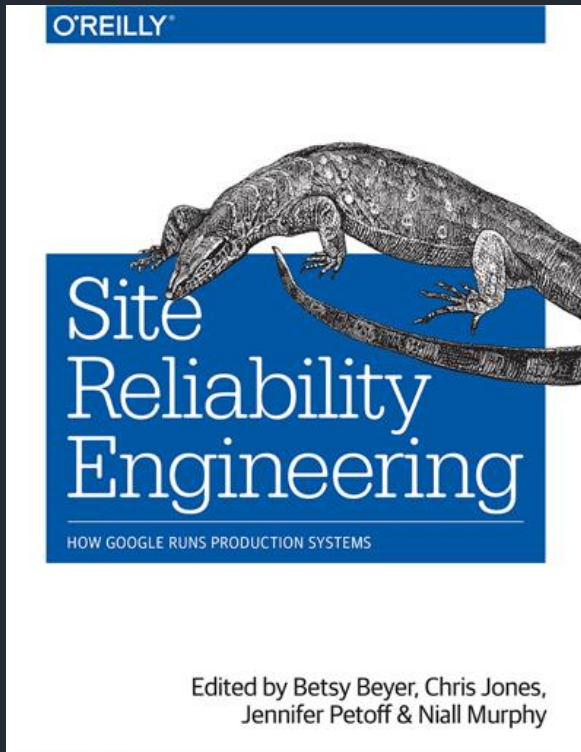
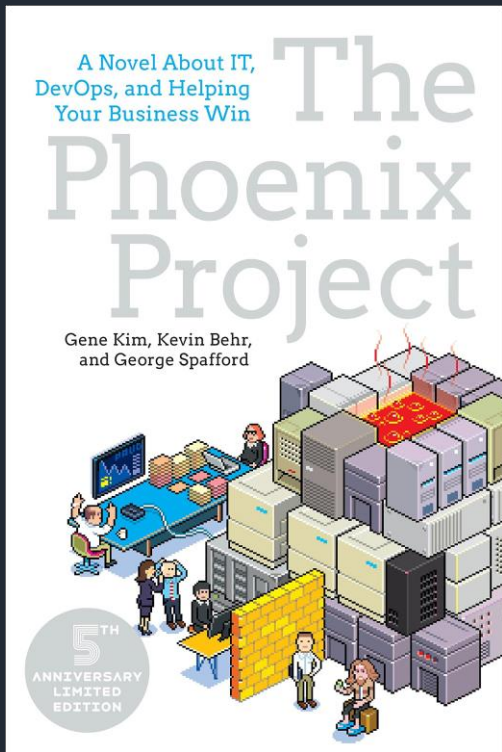
### TPS

### CPU usage



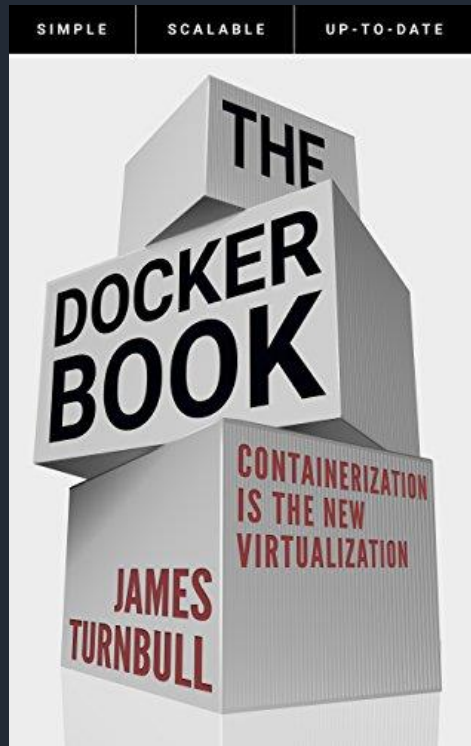


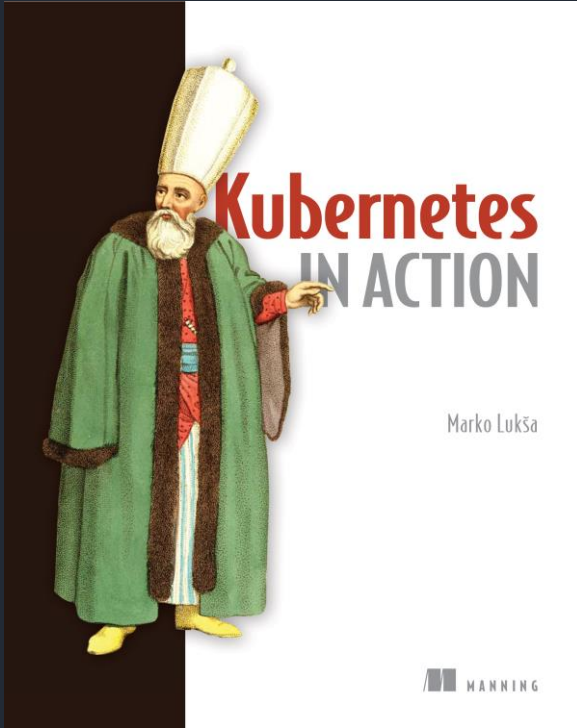
معرفی منابع



○ سایت [sudoers.ir](https://sudoers.ir)

○ ویدئوهای آموزشی جادی + کتاب LPIC-1





[kubernetes.io](https://kubernetes.io) ○



[prometheus.io](https://prometheus.io) ○



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