

Container Orchestration and Microservices

Lev Epshtein

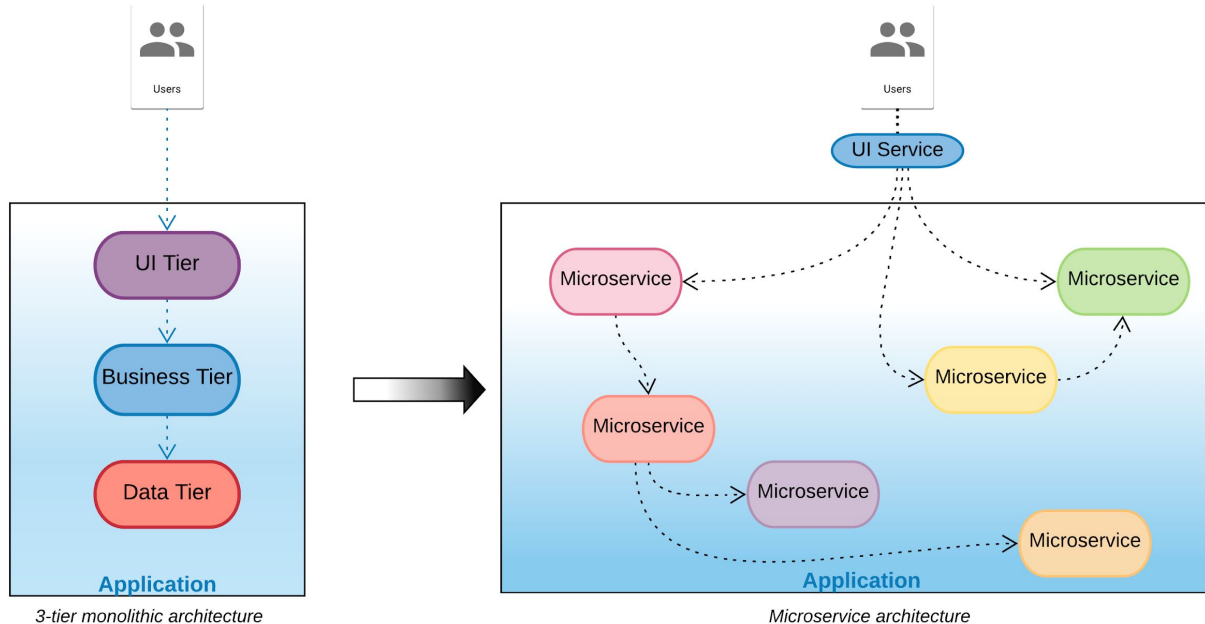
Microservices

What Are Microservices?

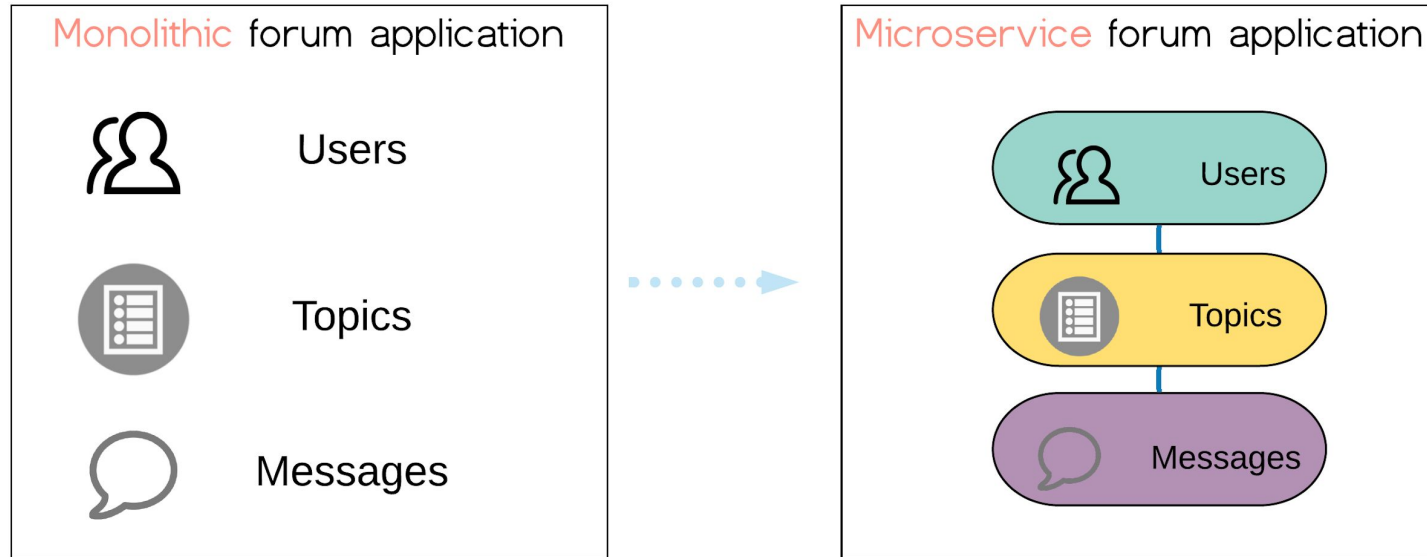
Applications composed of **independent services** that communicate over **well-defined APIs**

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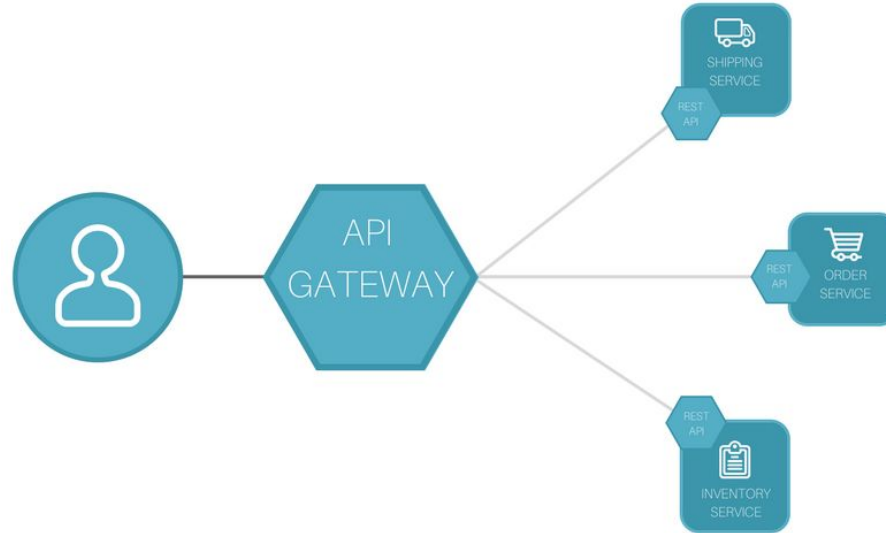
Monolithic to Container-Based Microservices



Why Use Microservices?

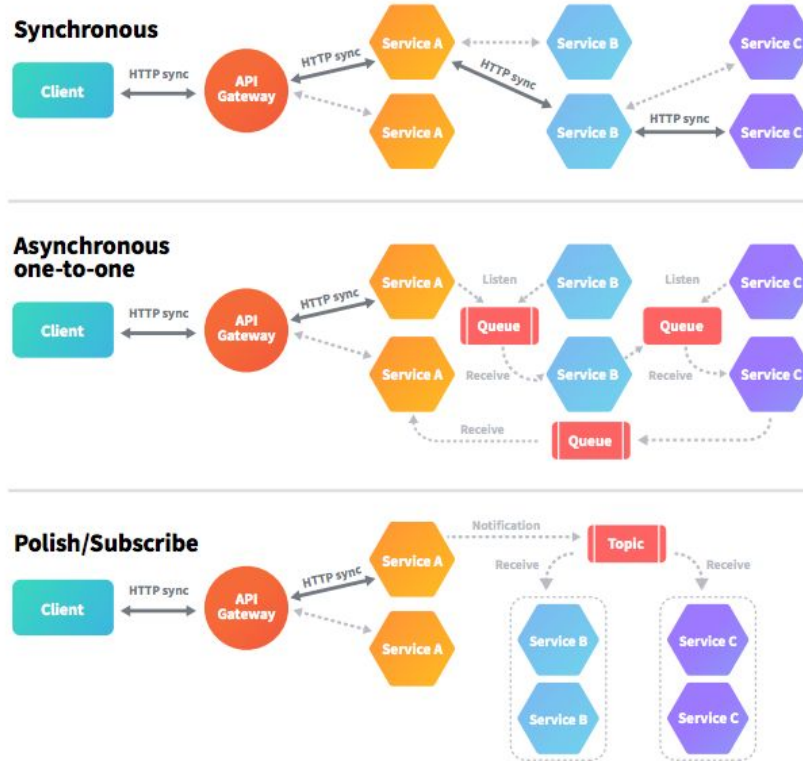
- Forced Separation of Concerns
- Natural Team Ownership
- Frequent Deployments
- Heterogeneous Selection of Languages

Microservices



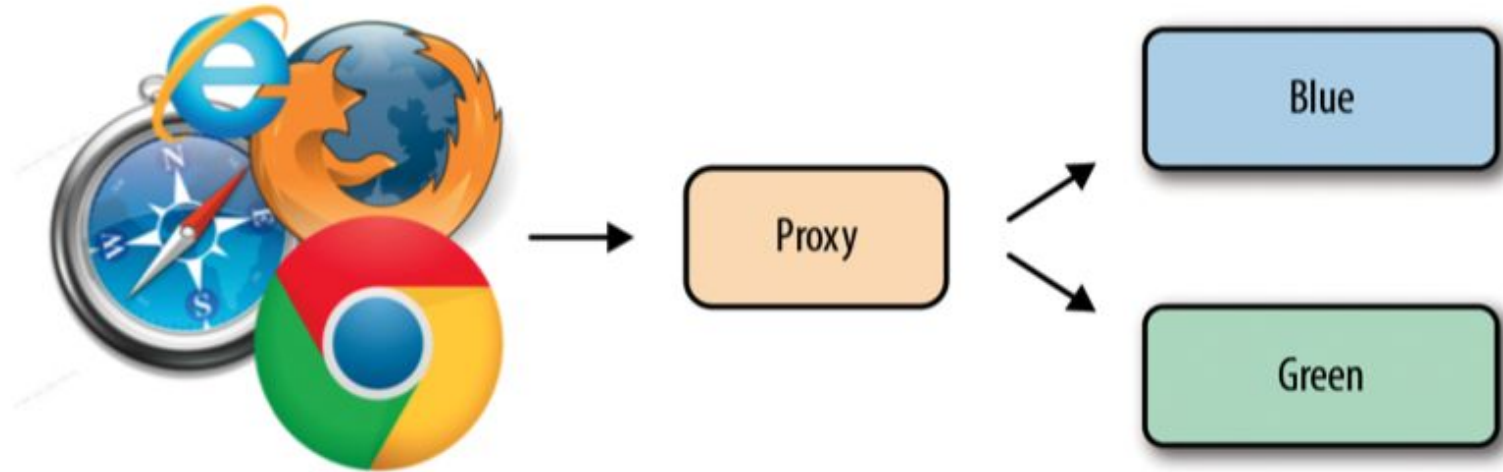
Communication in a microservice architecture

Anti-pattern →



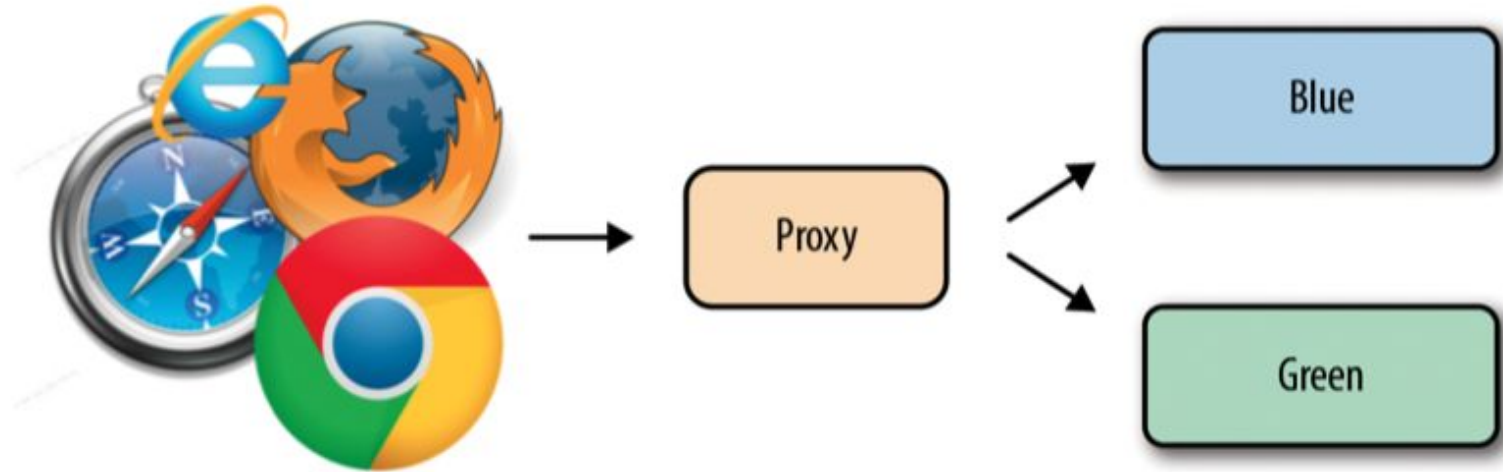
Zero Downtime and Microservices

Blue/Green Deployment

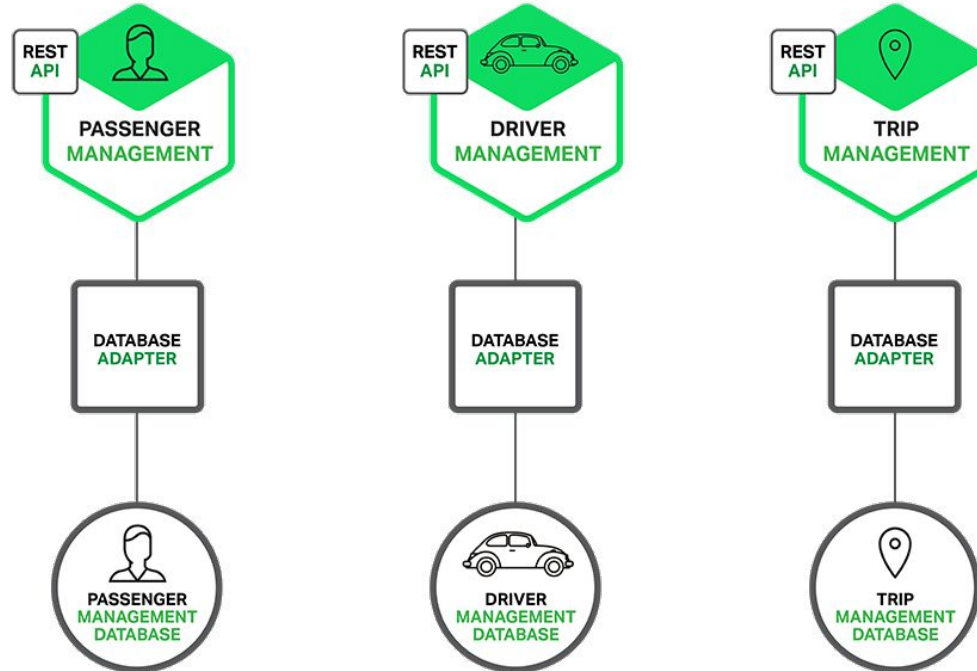


Zero Downtime and Microservices

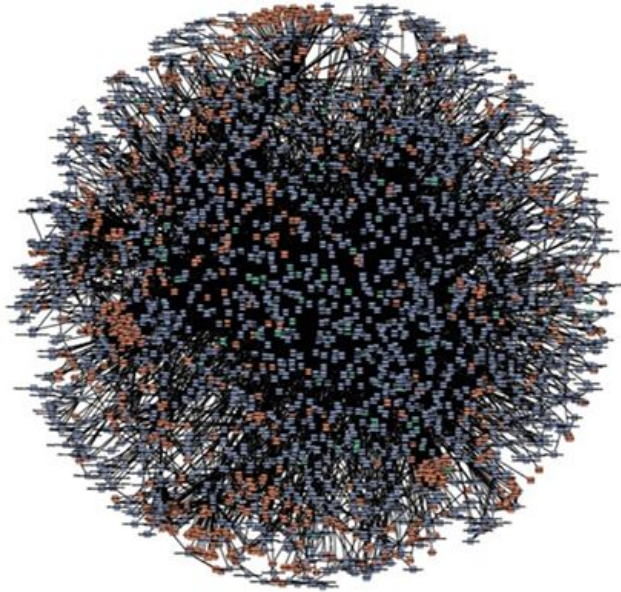
Canary Deployment



Microservices & DB Relationship

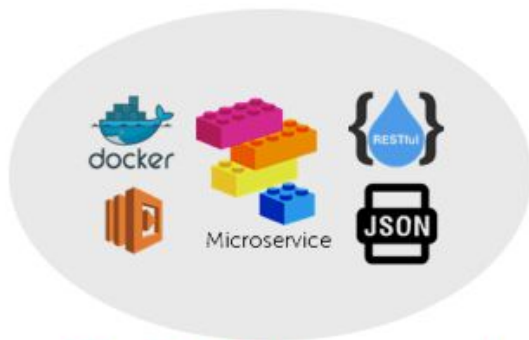


Microservices



amazon.com


NETFLIX



iPaaS & API Management

Web/Mobile



MICROSERVICES

Agile Development



DevOps



Container Orchestration

Container Orchestration

Container Orchestration Software
(Docker, Openshift & Kubernetes)



OPENSIFT

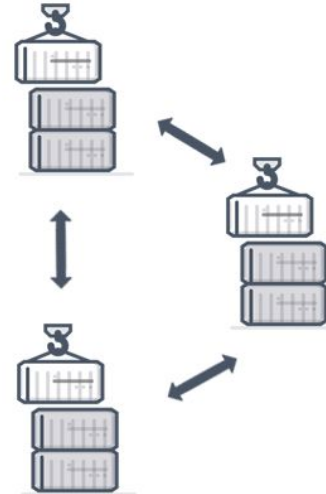


Automate:

- Configuration
- Provisioning
- Availability
- Scaling
- Security
- Resource allocation
- Load balancing
- Health monitoring



Application Environment
w/ Multiple Containers





kubernetes

VS



MESOS