
sidion
SIDION
Zuhören. Analysieren. Beraten.

YAGNI

„Always implement things when you actually need them, never when you just foresee that you [will] need them.“

Ron Jeffries

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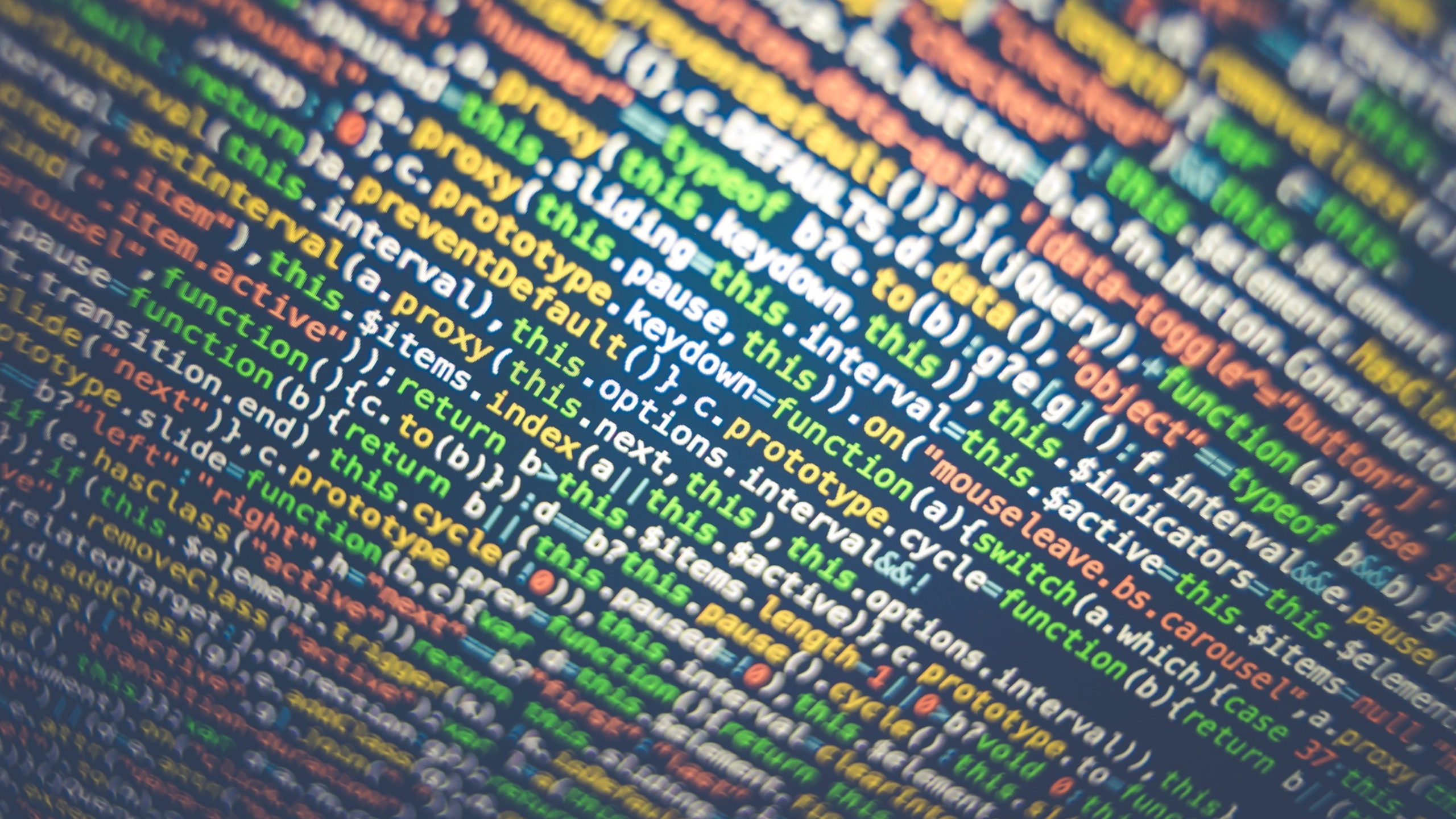

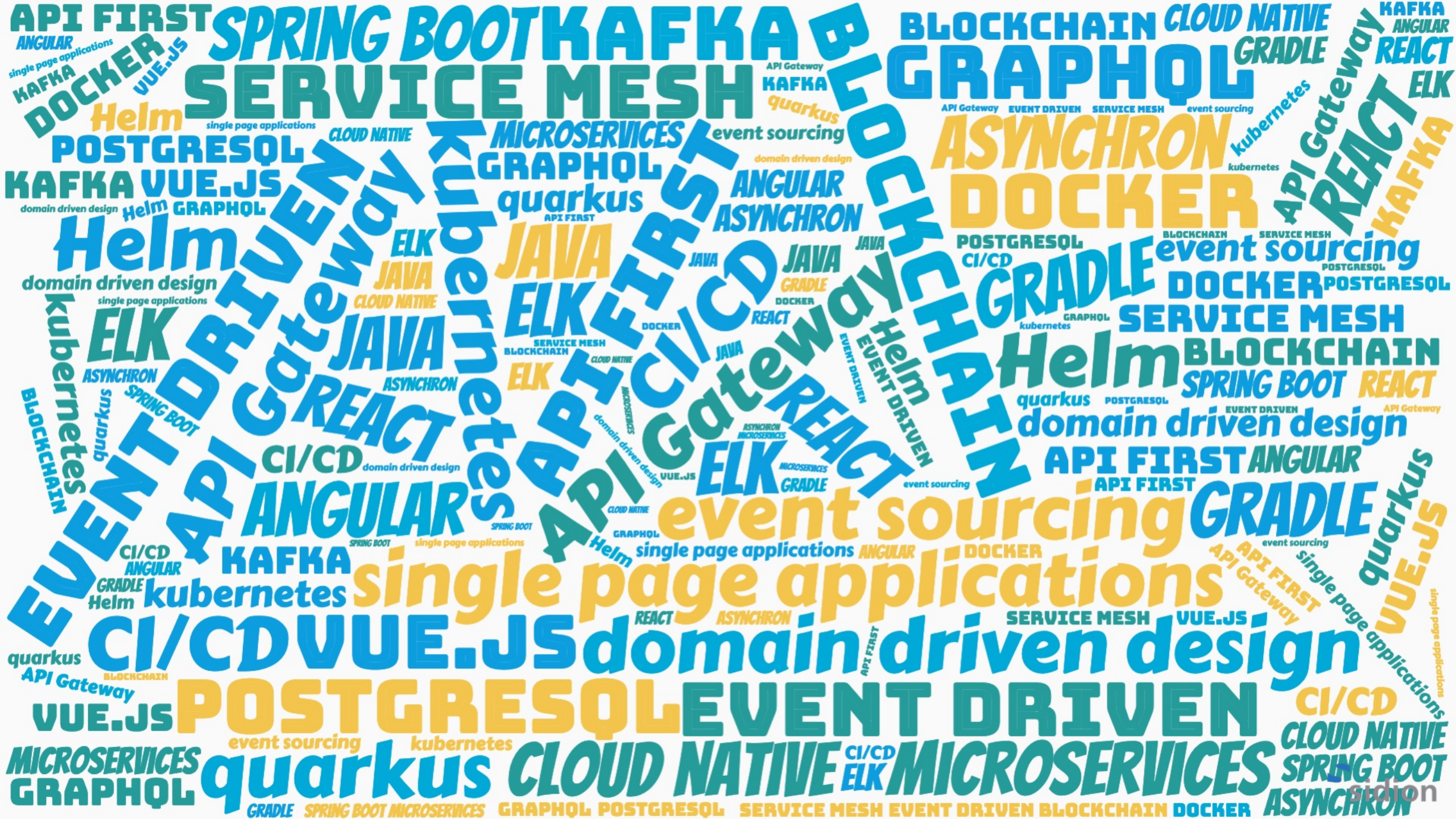
API FIRST
SPRING BOOT
KAFKA
BLOCKCHAIN
CLOUD NATIVE
ANGULAR
single page applications
DOCKER
VUE.JS
SERVICE MESH
GRAPHQL
GRADLE
KAFKA
ANGULAR
REACT
ELK
Helm
API Gateway
KAFKA
quarkus
kubernetes
POSTGRESQL
CLOUD NATIVE
MICROSERVICES
event sourcing
ASYNCHRON
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domain driven design
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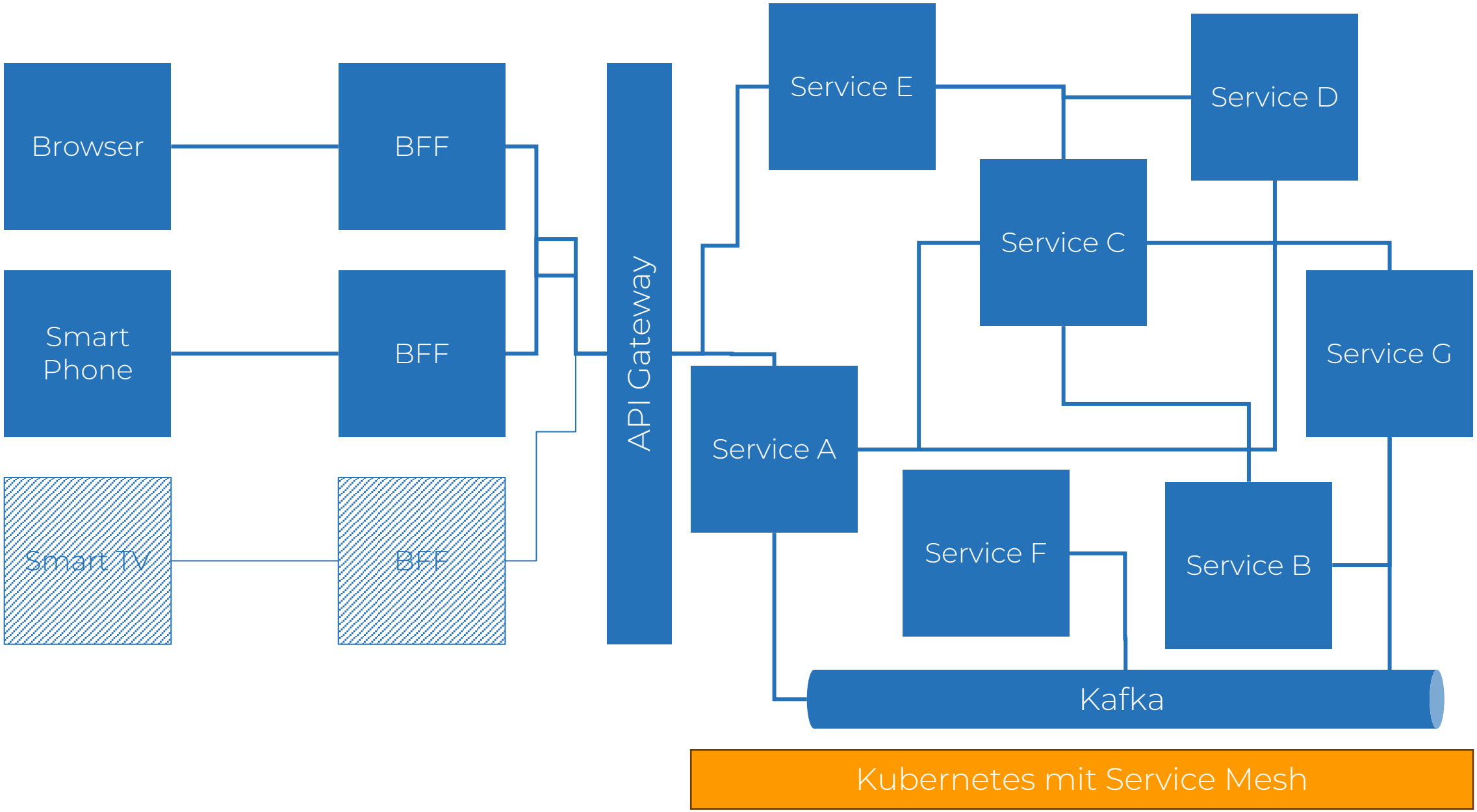
DOCKER


Browser
Smart Phone
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Service F
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Kafka
Kubernetes mit Service Mesh

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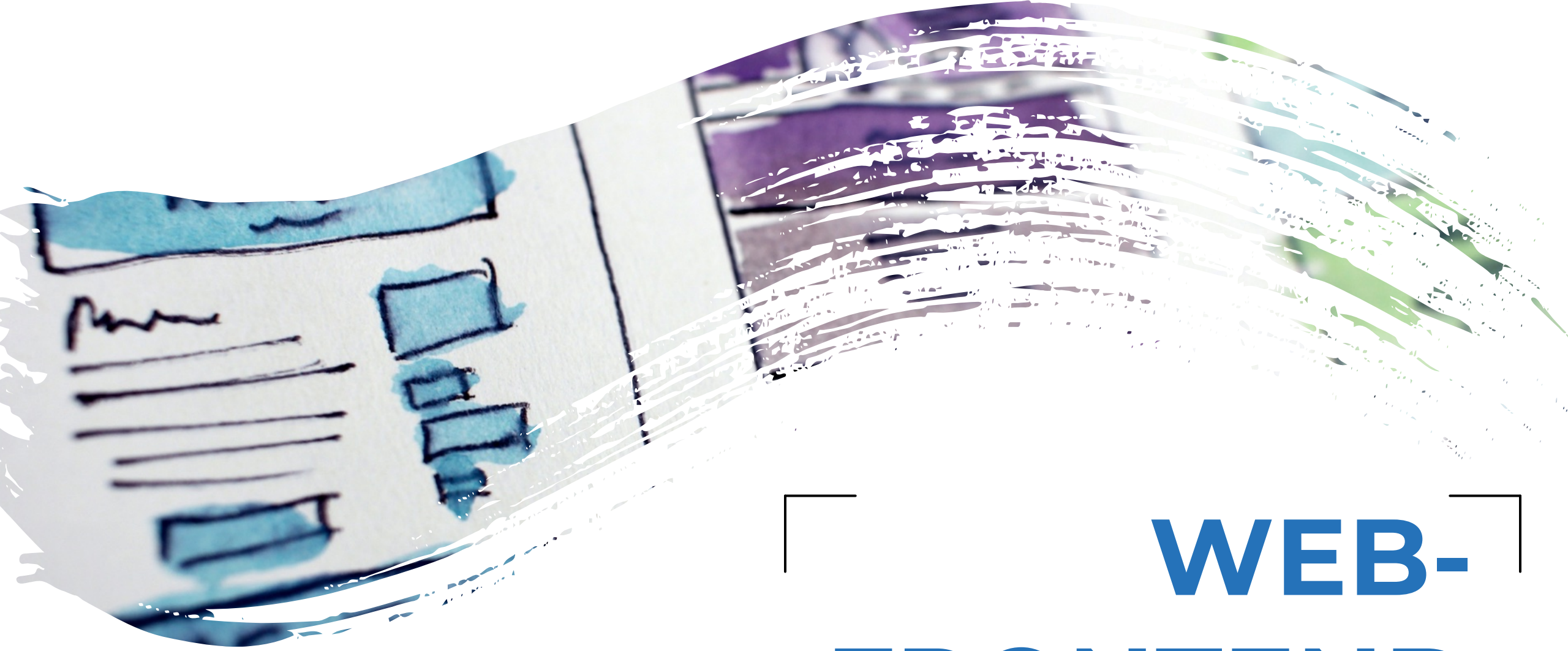

WEB-FRONTEND

Foto von Hal Gatewood auf Unsplash

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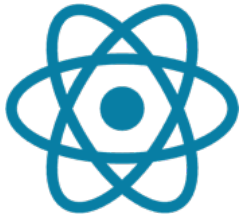

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NEXT.JS

HOTWIRE

- `npx create-next-app@latest`

```
|____README.md
|____styles
| |____globals.css
| |____Home.module.css
|____public
| |____favicon.ico
| |____vercel.svg
|____.gitignore
|____package.json
|____pages
  |____index.js
```

- `npx next -h`
- `next build`
- `npx next start`

1. Schritt

```
<script type="module">
  import hotwiredTurbo
    from 'https://cdn.skypack.dev/@hotwired/turbo';
</script>
```

2. Schritt

```
<a href="/edit" data-turbo-action="replace">Edit</a>
```

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GATEWAY

Foto von David Barajas auf Unsplash

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```yaml
spring:
  cloud:
    gateway:
      routes:
      - id: circuitbreaker_route
        uri: lb://backing-service:8088
        predicates:
        - Path=/consumingServiceEndpoint
        filters:
        - name: CircuitBreaker                                          "))
          args:
            name: myCircuitBreaker
            fallbackUri: forward:/inCaseOfFailureUseThis
        - RewritePath=/consumingServiceEndpoint, /backingServiceEndpoint
```

```
            .route("hystrix_fallback_route", r -> r.host("*.hystrixfallback.org")
                .filters(f -> f.hystrix(c -> c.setName("slowcmd").setFallbackUri("forward:/hystrixfallback")))
                .uri("http://httpbin.org"))
            .route("limit_route", r -> r
                .host("*.limited.org").and().path("/anything/**")
                .filters(f -> f.requestRateLimiter(c -> c.setRateLimiter(redisRateLimiter())))
                .uri("http://httpbin.org"))
            .build();
    }
}
```

The yaml document from hell

https://ruudvanasseldonk.com/2023/01/11/the-yaml-document-from-hell

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```yaml
server_config:
  port_mapping:
    # Expose only ssh and http to the public internet.
    - 22:22
    - 80:80
    - 443:443

  serve:
    - /robots.txt
    - /favicon.ico
    - *.html
    - *.png
    - !.git  # Do not expose our Git repository to the entire world.

  geoblock_regions:
    # The legal team h
    - dk
    - fi
    - is
    - no
    - se
```

{"port_mapping": [1342, "80:80", "443:443"]}

{"serve": ["/robots.txt", "/favicon.ico", ""]}

{"geoblock_regions": ["dk", "fi", "is", false, "se"]}

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RUNTIME UND MIDDLEWARE

Foto von Martin Sanchez auf Unsplash

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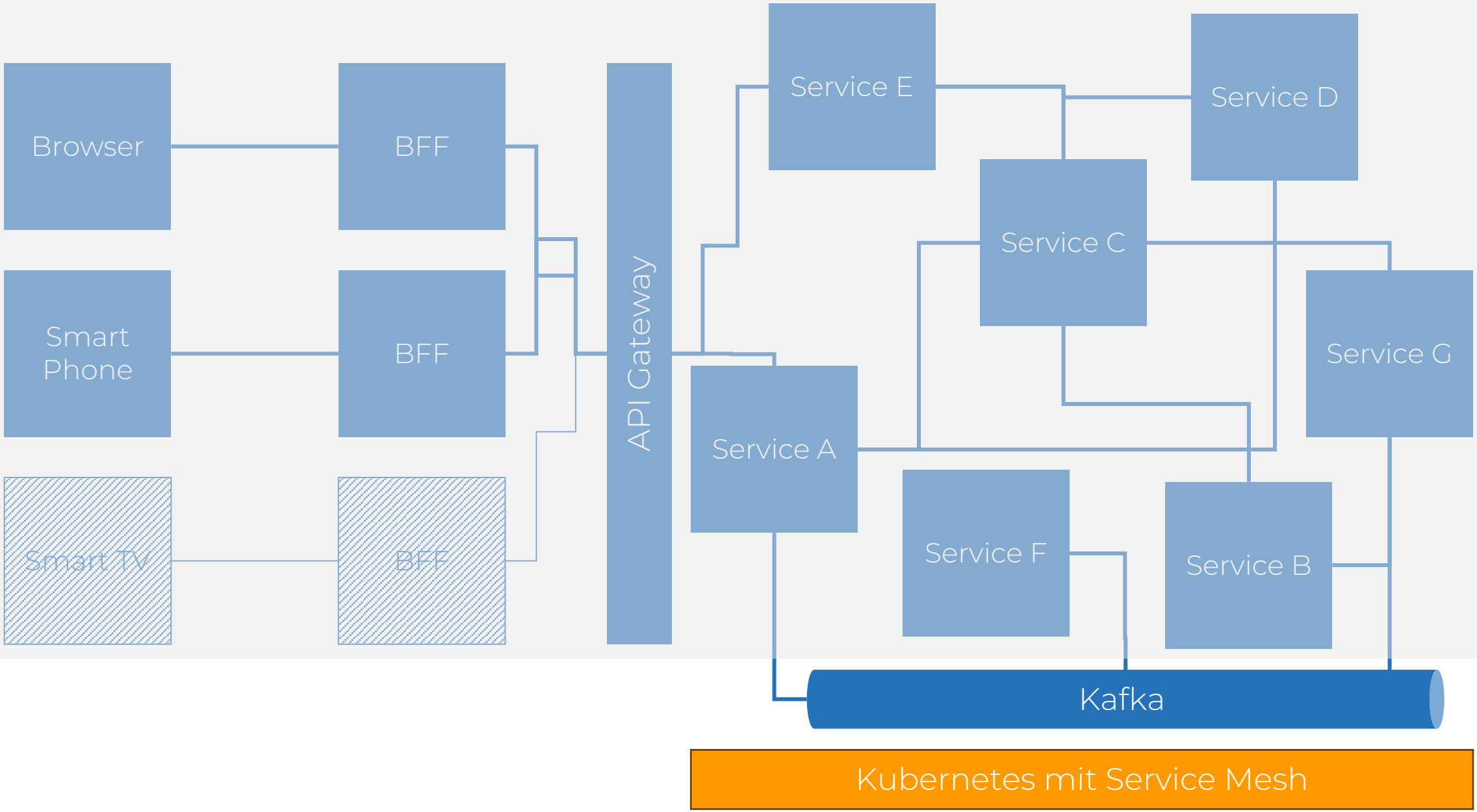
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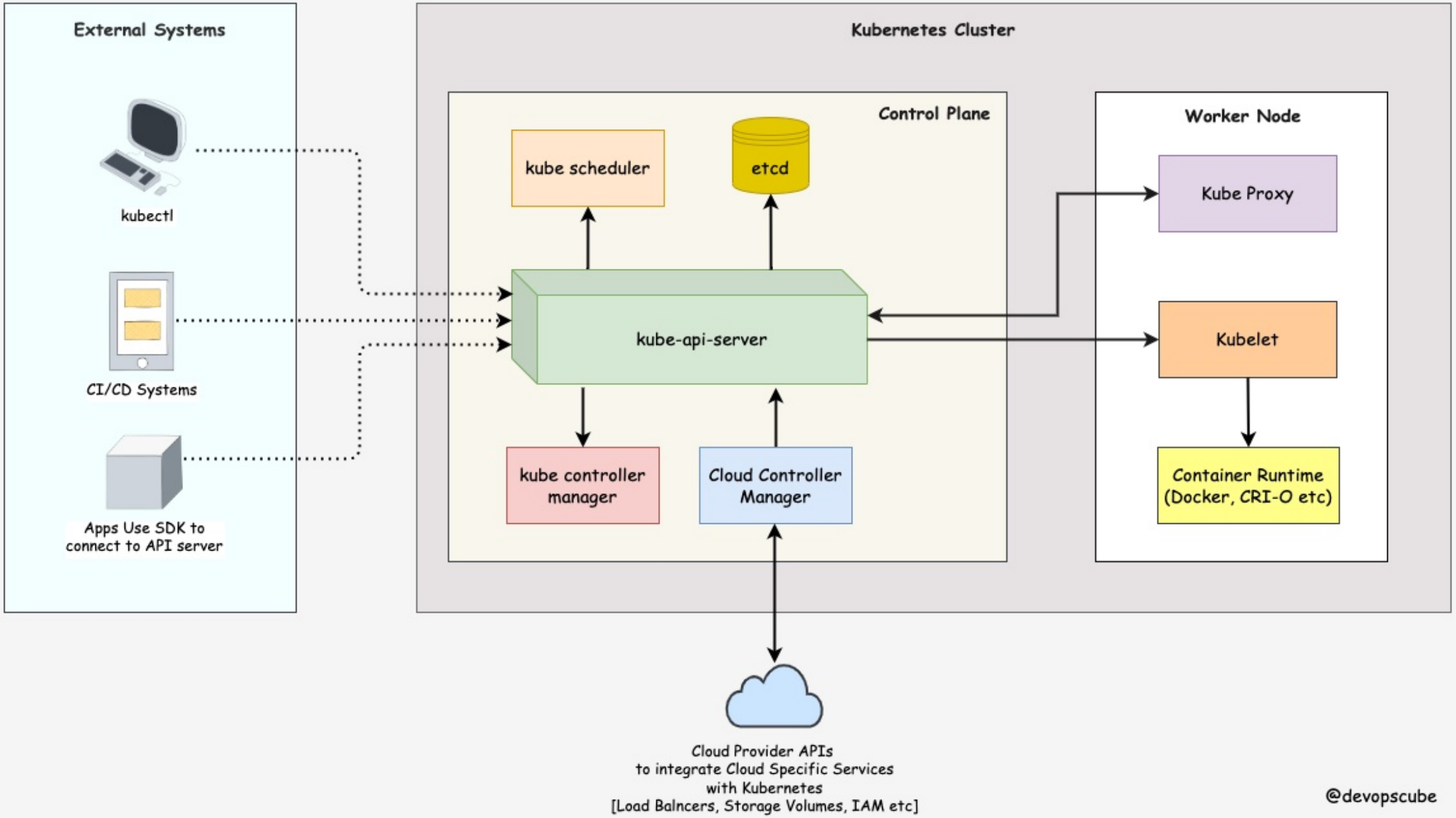
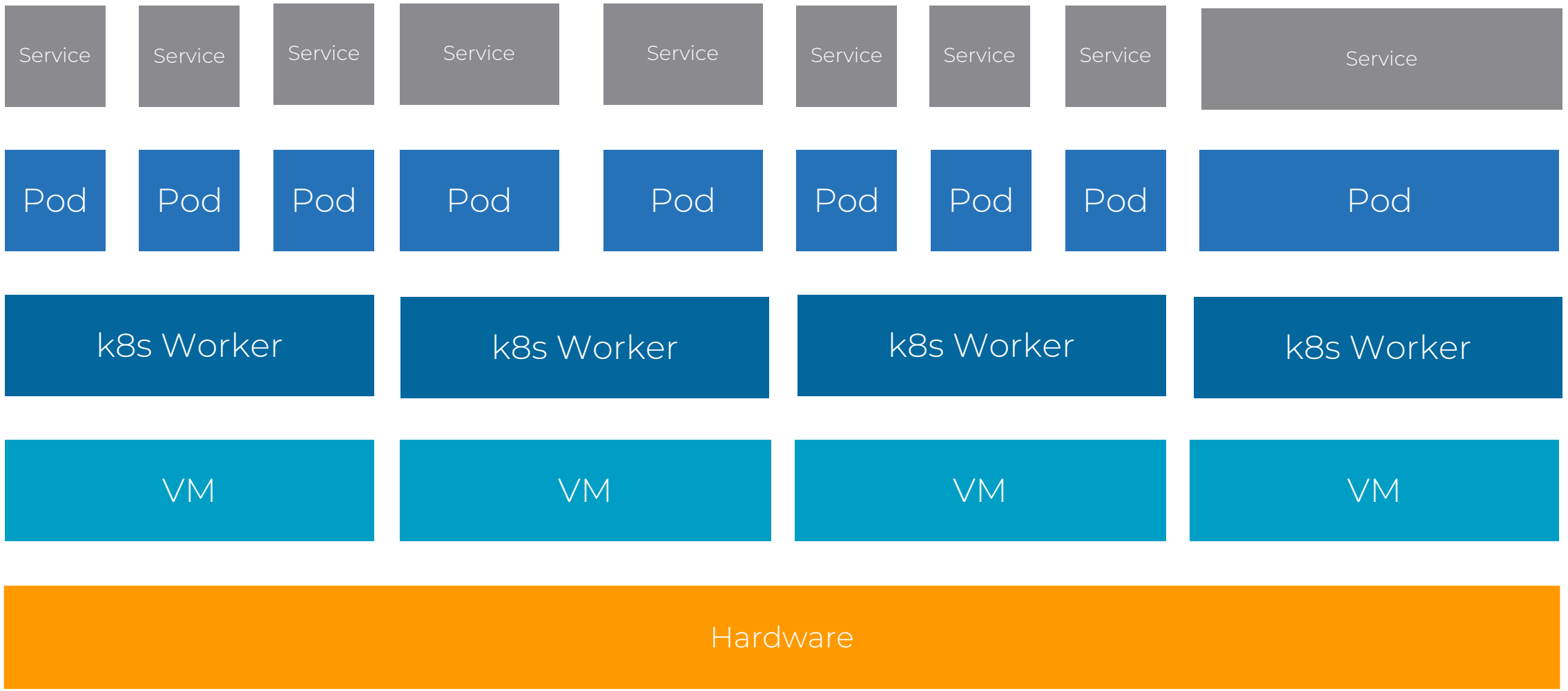

External Systems
kubectl
CI/CD Systems
Apps Use SDK to
connect to API server
Kubernetes Cluster
Control Plane
kube scheduler
etcd
kube-api-server
kube controller
manager
Cloud Controller
Manager
Worker Node
Kube Proxy
Kubelet
Container Runtime
(Docker, CRI-O etc)
Cloud Provider APIs
to integrate Cloud Specific Services
with Kubernetes
[Load Balncers, Storage Volumes, IAM etc]
@devopscube


Service
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k8s Worker
k8s Worker
k8s Worker
k8s Worker
VM
VM
VM
VM
Hardware

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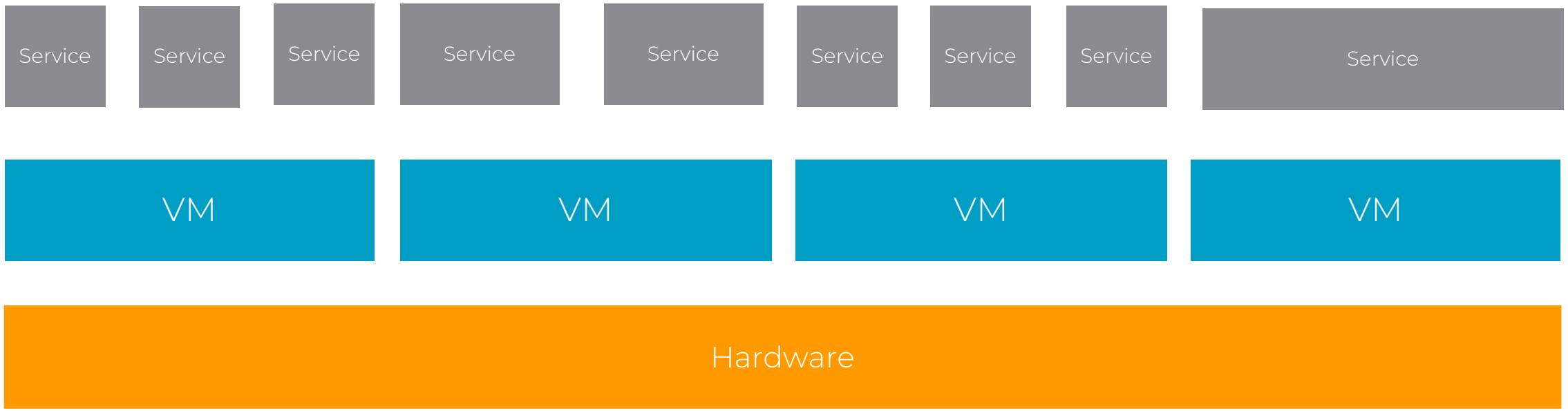
Service
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VM
VM
Hardware

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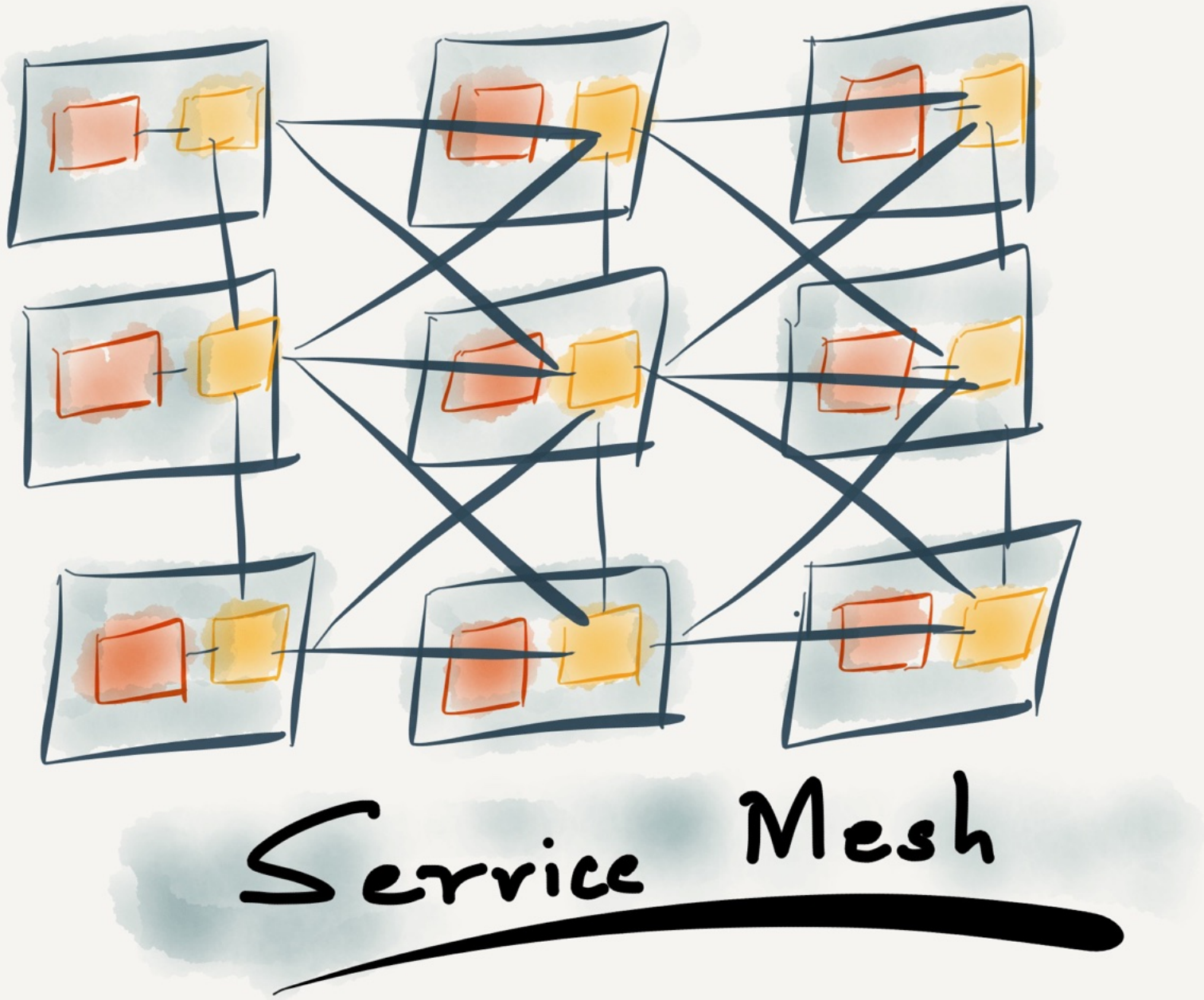
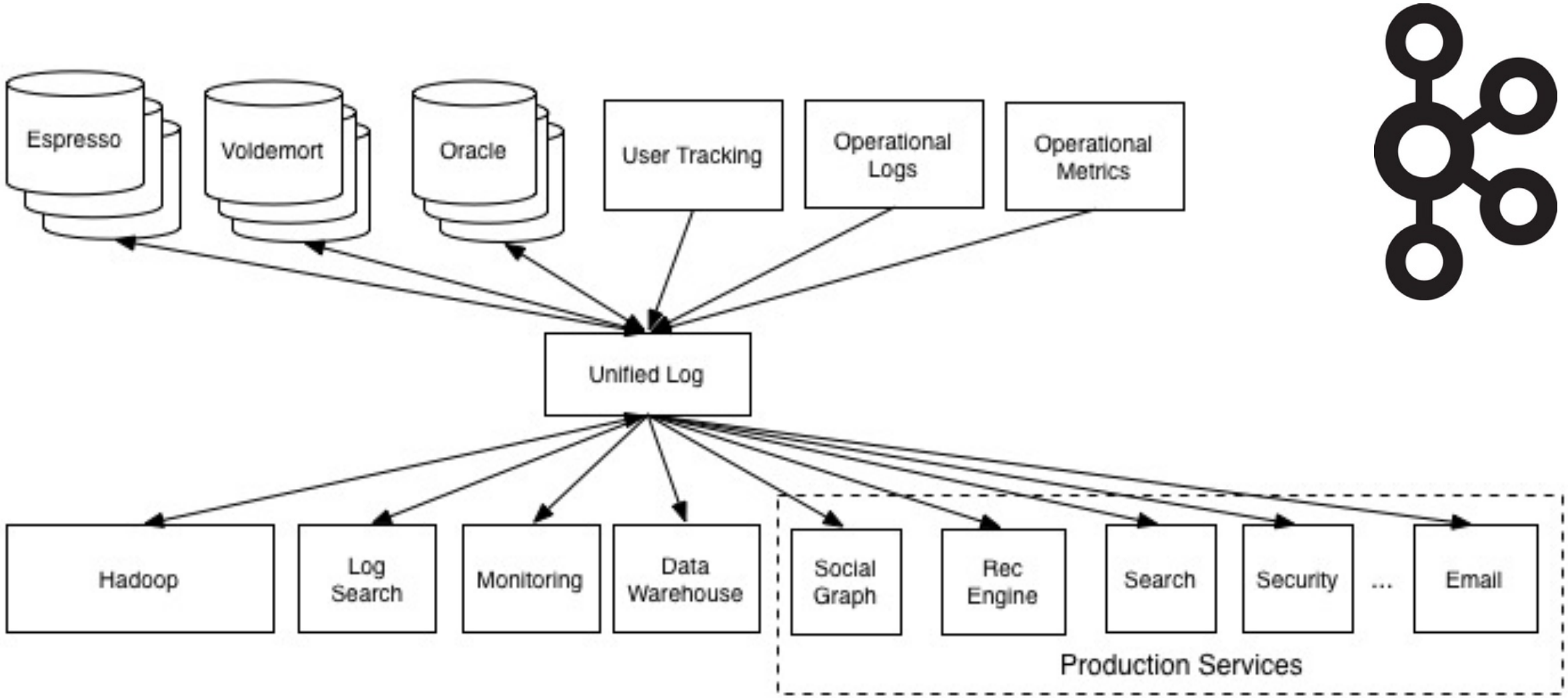
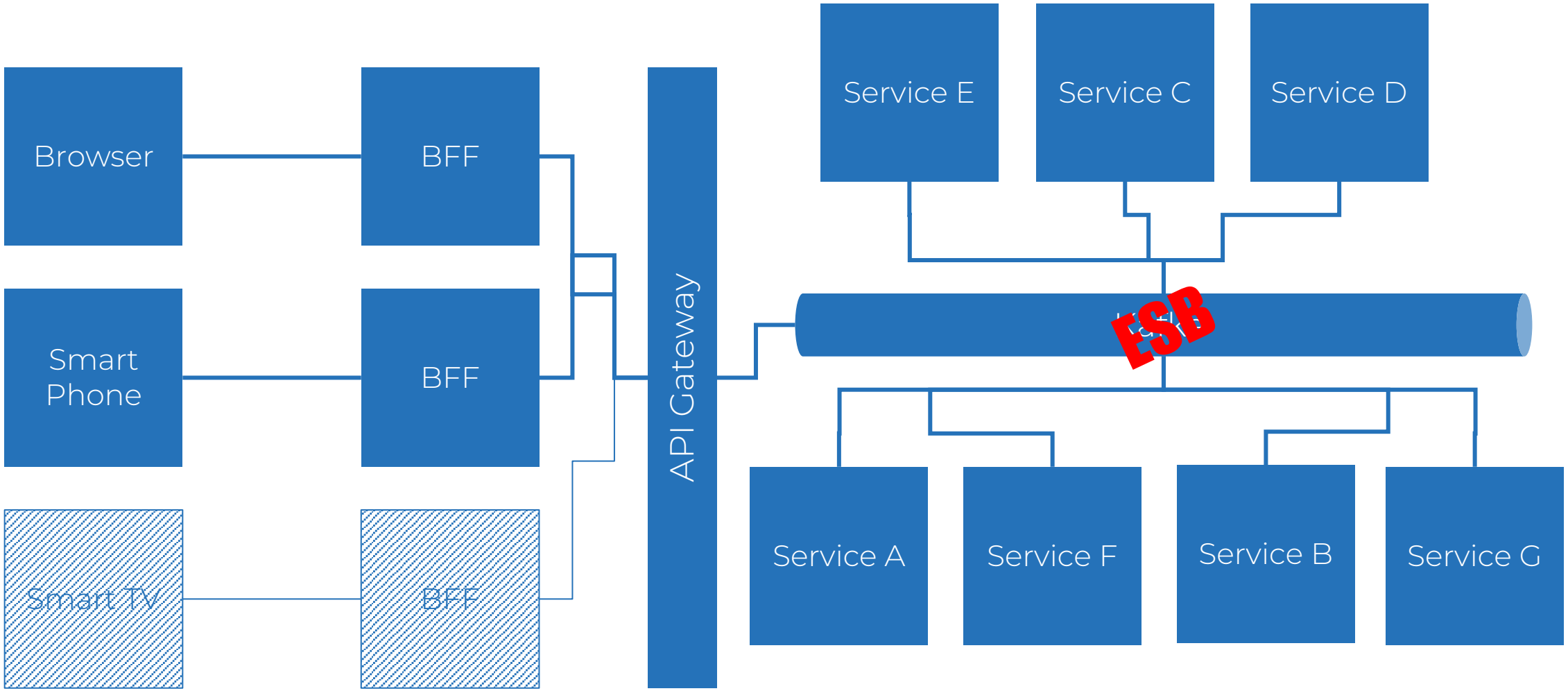


https://softwareengineeringdaily.com/2020/01/07/service-meshes/



https://engineering.linkedin.com/distributed-systems/log-what-every-software-engineer-should-know-about-real-time-datas-unifying



Kubernetes mit Service Mesh

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SERVICES

Foto von Erik Mclean auf Unsplash

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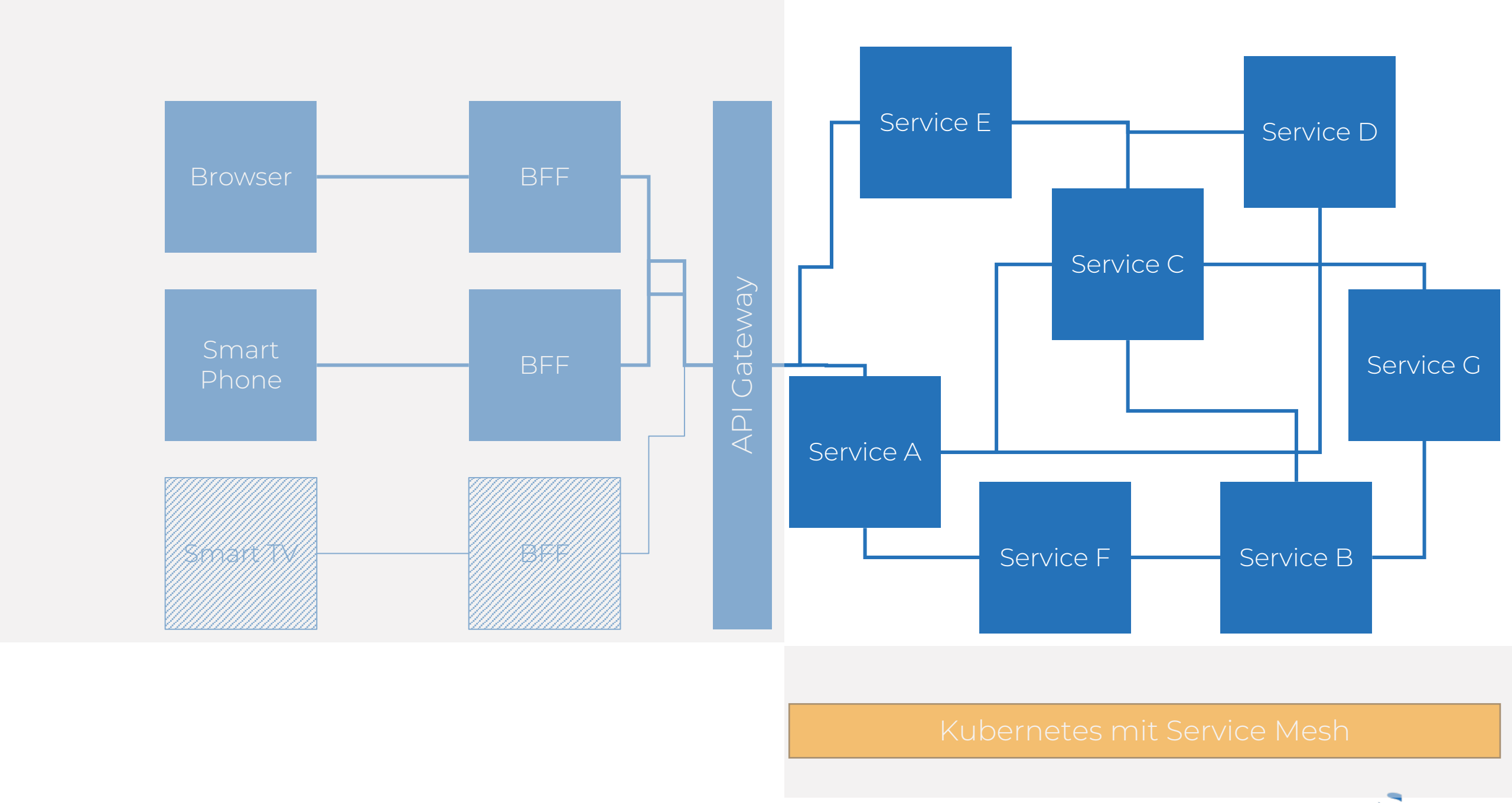
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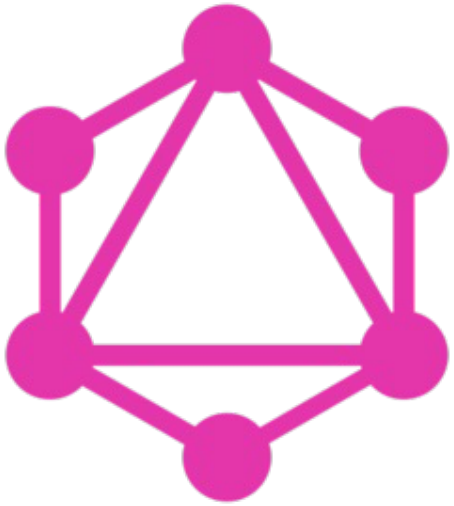

Apache Thrift™

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Essential Complexity

- Zwingend Erforderlich um Anforderungen zu erfüllen
- Kann nicht weiter reduziert werden
- Geschäftsregeln oder rechtliche Vorgaben
- Schafft Mehrwert

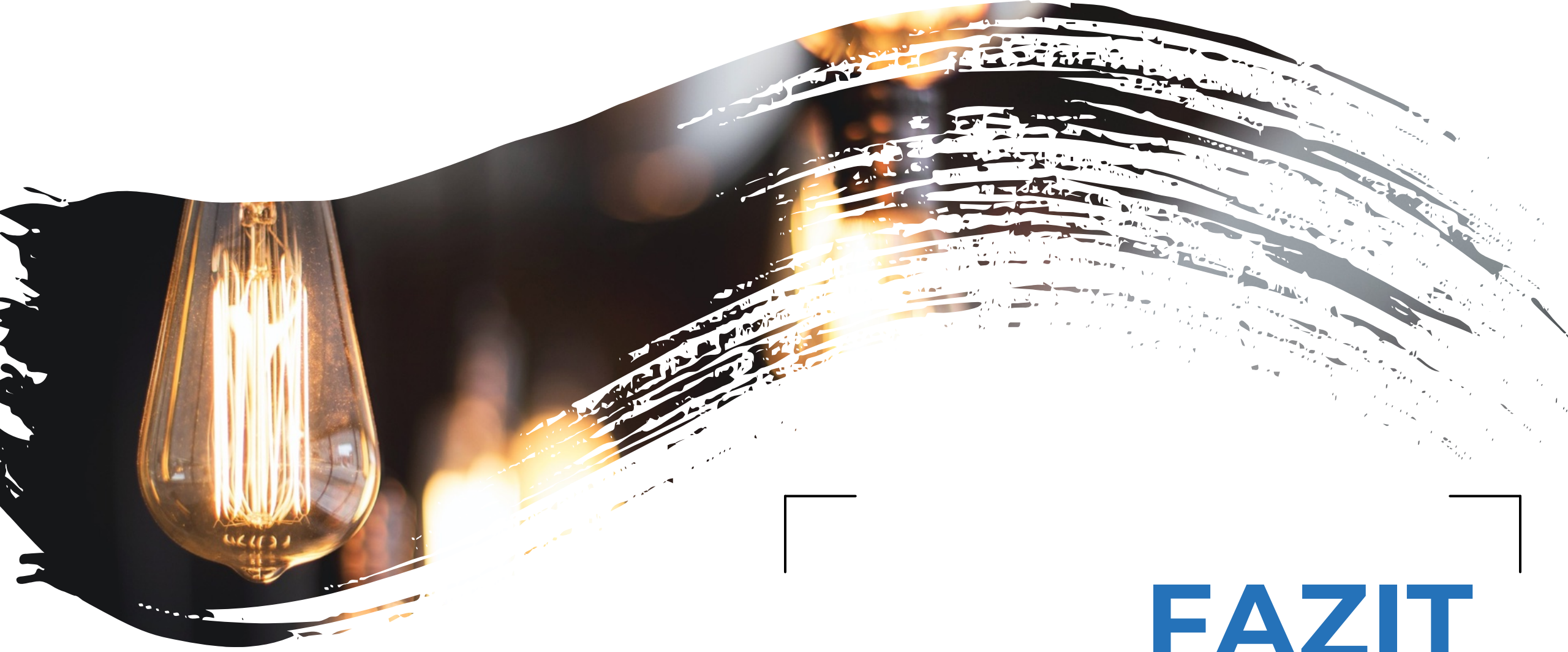
Accidental Complexity

- Entsteht durch mangelndes Verständnis der Anforderungen
- Fehlerhafte oder schlechte Kommunikation zwischen Fachbereich und Entwicklung
- Ärgerlich kann aber durch Training und Lernen reduziert oder vermieden werden

Incidental Complexity

- Selbstgemachtes Problem
- Fehlender Focus auf das nötigste
- Entsteht durch das Lösen “eingebildeter“ Probleme


APISIX
Java
Grafana
OpenTelemetry
ceph
docker
OPENMETRICS
QUARKUS
spring by VMware Tanzu
kubernetes
Istio
Gradle
PostgreSQL
TS
Stack
flux
HELM



FAZIT

Foto von Kari Shea auf Unsplash

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Es gibt keinen
heiligen Graal.

Foto von J. Balla Photography auf Unsplash


Change

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FRAGEN?