

# The Hidden Costs of Kubernetes

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**3**

2018 PULITZER  
PRIZES



**2,000+**

JOURNALISTS



**110**

NEWSROOMS



**127MM+**

UNIQUE  
MONTHLY  
USERS



**11.6MM**

DAILY  
NEWSPAPER  
READERS

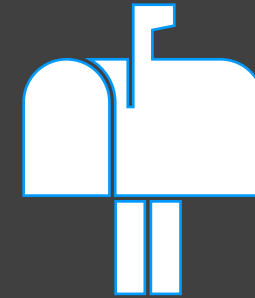
Previous:  
\$800/Day

Now:  
\$400/Day



Cost

Previous:  
2 Hours



Now:  
15 Minutes

Deployment Time

Failover

Previous:  
3-4 Hours



Now:  
10 Minutes

Developer Time



Previous: Dependent  
on Platform team

Now: Totally self  
dependent

# Deploys + CI

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From:

- Custom API for deploys
- Totally different CI per team

To:

- Helm
- CI as a service
- Shared DSLs

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*CI hosting cost*

*Developer time*



# Monitoring + Logging

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From:

- Manual creation of monitoring
- Logs only in cluster

To:

- Terraform
- Sumo Logic

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*Terraform gains*



*Sumo Logic cost*



# Secrets + Configs

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From:

- K8 secrets
- K8 configmaps

To:

- Hashicorp Vault
- Hashicorp Consul

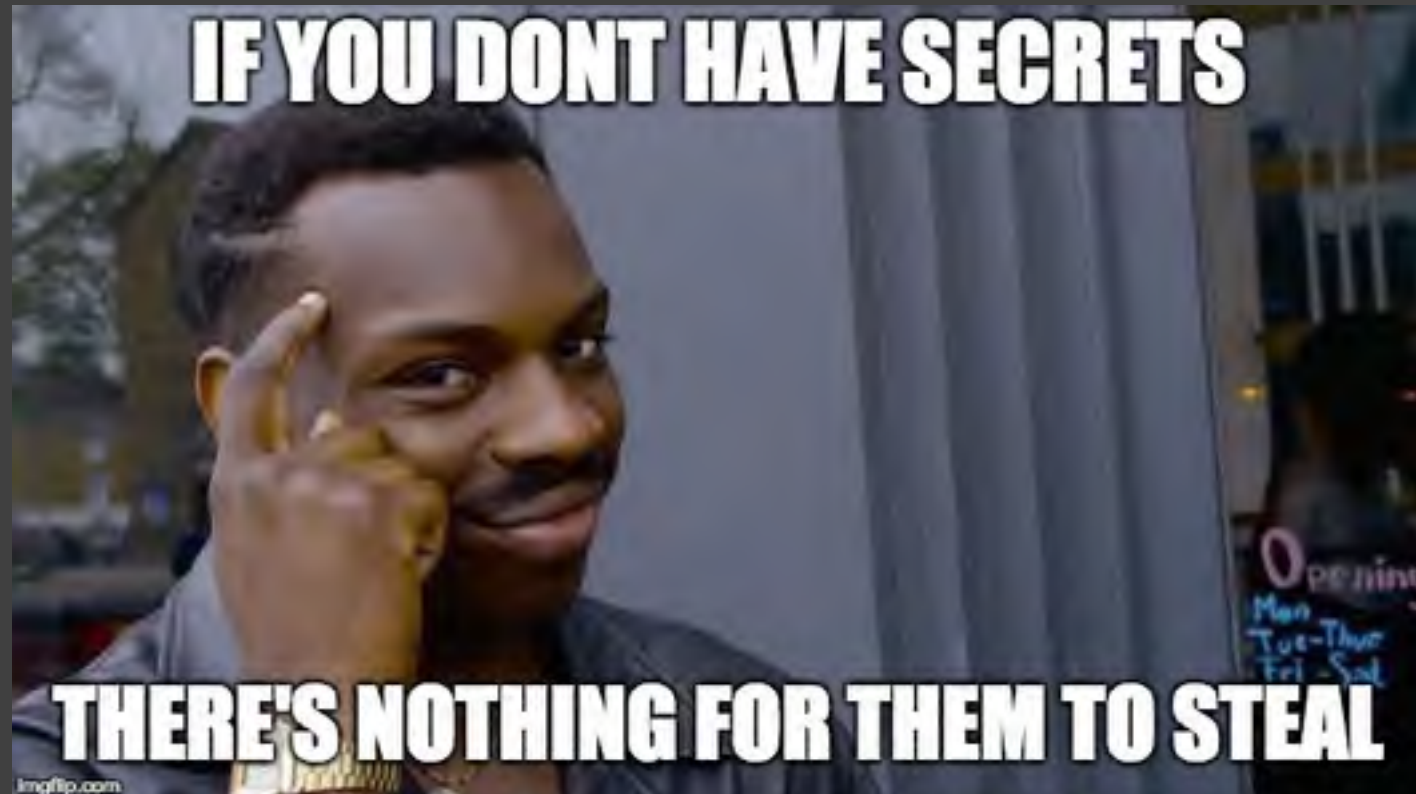
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*Management*

*Audit blast radius*

*Infrastructure*





*Saved dev time*



*Infrastructure*



*Dedicated GKE team*



# Maintenance

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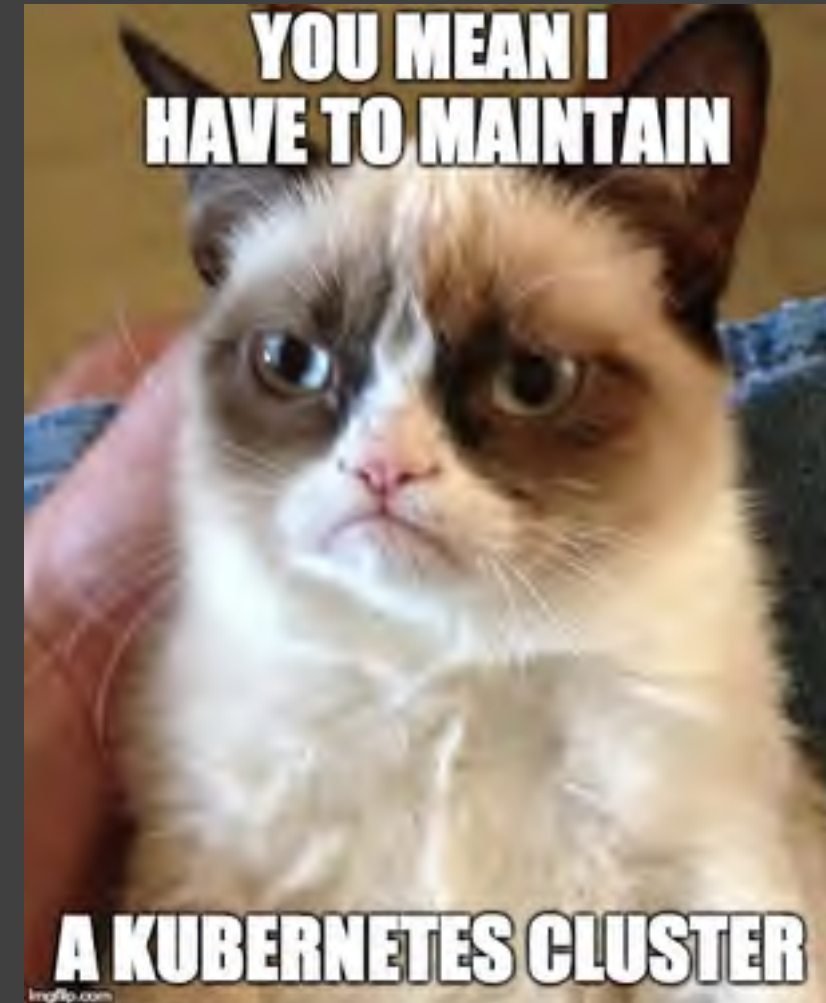
From:

- Unclear SLA's and responsibilities
- Volatile upgrades

To:

- Cluster operations team
- Smoother upgrades

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*“Undefined” resources*



# Billback + Showback

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- Cost tracking
- Scalr (CMP) per-team allocation
- Shared GKE labels and namespaces





*Cost-conscious design*



# Right sizing

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- VM to containers 1-1 match
- Load testing
- Hidden bottlenecks
- Over provisioning VS rearchitecting
- Architecture Council

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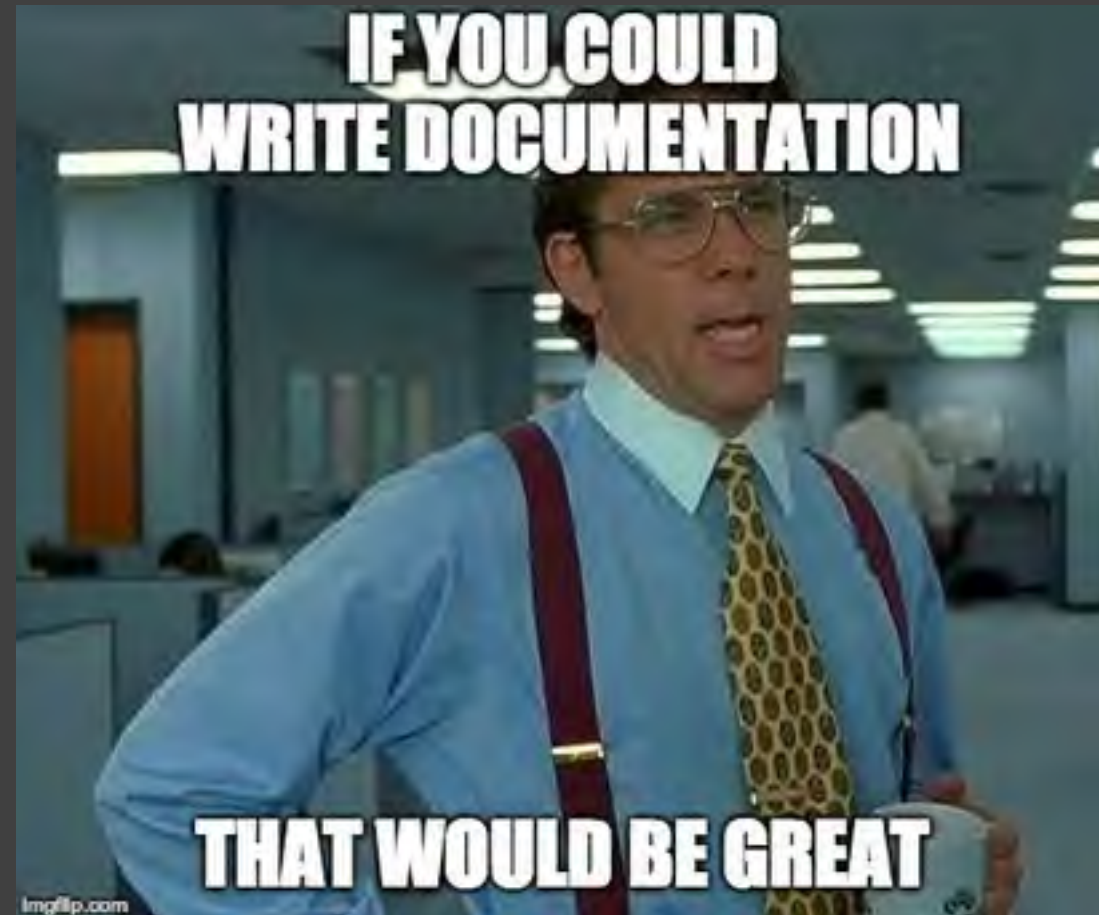
*Adoption rate*



# Documentation

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- Pre-planning
- Defining standards
- Strategy



# Employee Happiness

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- Re-tasking employees
- Job changes
- Ripple effect
- Shared, cross-team problem
- Migrating culture

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Employee morale



Employee burnout



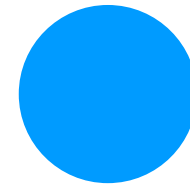
# Cost of Not Migrating?

**medium.com/  
usa-today-network**

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