kubecost

FinOps Summit

Webb Brown, Aug 2020

About Kubecost

- Co-founders previously built infrastructure monitoring platforms at Google. Focus on cloud services and internal infrastructure.

- Last two years, focused on cost visibility & optimization solutions for Kubernetes-centric infra. Headquartered in San Francisco with distributed engineering team.

- Over 1000 deployments of Kubecost across all major cloud providers + on prem.

Kubernetes changes most everything for the actual *application* of FinOps...

1

New platform abstractions + tools

Pods

Name ⬍	Node	Status ⬍
✅ kubernetes-dashboard-7b9c7b	minikube	Running
✅ heapster-qhq6r	minikube	Running
✅ influxdb-grafana-77c7p	minikube	Running
✅ kube-scheduler-minikube	minikube	Running
✅ etcd-minikube	minikube	Running

2

Developer Empowerment

3

Evolving open source ecosystem

HELM

Prometheus

argo

LINKERD

1 **Embrace *the right* platform features + tools**

- Many core platform features impact cost management & optimization
  - Admission controllers.
  - Taints & Tolerations.
  - Affinities.
  - Pod + Cluster Autoscaling.
  - Pod disruption budgets.
  - And more!

- Context matters greatly for choosing the right solutions

- Example: leveraging admission controllers (or otherwise) to define workload owners.

2 Empower engineers to make great decisions

- Developers are insanely busy, so focus on being highly targeted with requirements + recommendations + alerts.

- Allow engineers to integrate data and cost management tools into their regular workflows via tools they already find useful.

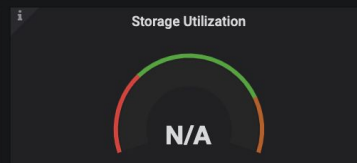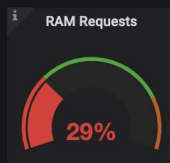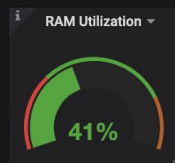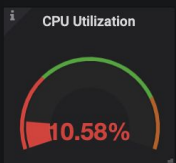- Example: leveraging Grafana, Operators for minimal interruption
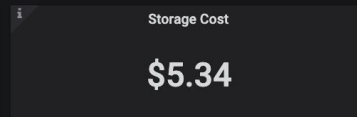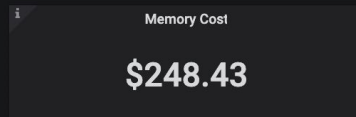
Last 12 hours

Note: this dashboard requires Kubecost metrics to be available in your Prometheus deployment. Learn more

CPU Cost	Memory Cost	Storage Cost	Total Cost
$507.67	**$248.43**	**$5.34**	

$761.44

CPU Utilization	CPU Requests	RAM Utilization ▾	RAM Requests	Storage Utilization
10.58%	62.95%	41%	29%	N/A

Compute Cost

$50
$40
$30
$20
$10
$0
20:00   00:00   04:00

Memory Cost

$25
$20
$15
$10
$5
$0
20:00   00:00   04:00

Storage Cost

3.0
2.5
2.0
1.5
1.0
0.5
0
20:00   00:00   04:00

Total Cost

800
600
400
200
0
20:00   00:00   04:00

Cost by node

node	CPU Cost	Mem Cost	GPU ▲	Total
gke-niko-n1-standard-2-wljla-8df8e58a-hfy7	$507.67	$248.43	0	$756.10

Cost by Resource

$80
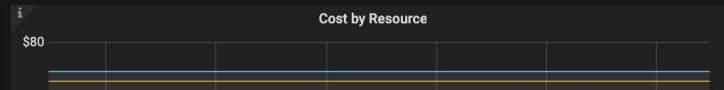
3 **Leverage a growing + transparent ecosystem**

- Evolving ecosystem places a new focus on Privacy + Security + Flexibility.

- Embracing ultimately leads to much more control for your team.

- Example: teams are leveraging open source technologies like AlertManager to act on real-time cost data.

Kubernetes brings new complexity to FinOps, but with it comes exciting native frameworks and tools to help us all!

Learn more

- **Kubecost project @ github.com/kubecost**

- **Contact me (webb@kubecost.com) or our team (team@kubecost.com) if we can help.**