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Kubecost

Amsterdam AKS Meetup Group

Speaker:
Sean Pomeroy, Solutions Engineer

February 23rd, 2022

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Agenda

1. Introductions
2. What is Kubecost?
3. Demonstration
4. Q and A

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Speaker

Sean Pomeroy

Solutions Engineer
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What is Kubecost?

Kubecost provides real-time cost visibility and insights for teams using Kubernetes, helping you continuously reduce your cloud costs.

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Why Kubecost?

- Running containers on Kubernetes requires a new approach for visualizing and optimizing spend. Kubecost is designed from the ground up for Kubernetes and the Cloud Native ecosystem.

- Kubecost is fully deployed in your infrastructure—we don’t require you to egress any data to a remote service. It’s deeply important to us that users are able to retain and control access to their own private information, e.g. sensitive cloud spend data.

- Kubecost began as an open source project with a goal of giving small engineering teams access to great cost visibility. As a result, our solution is tightly integrated with the open source cloud native ecosystem, e.g. Kubernetes, Prometheus, and Grafana.

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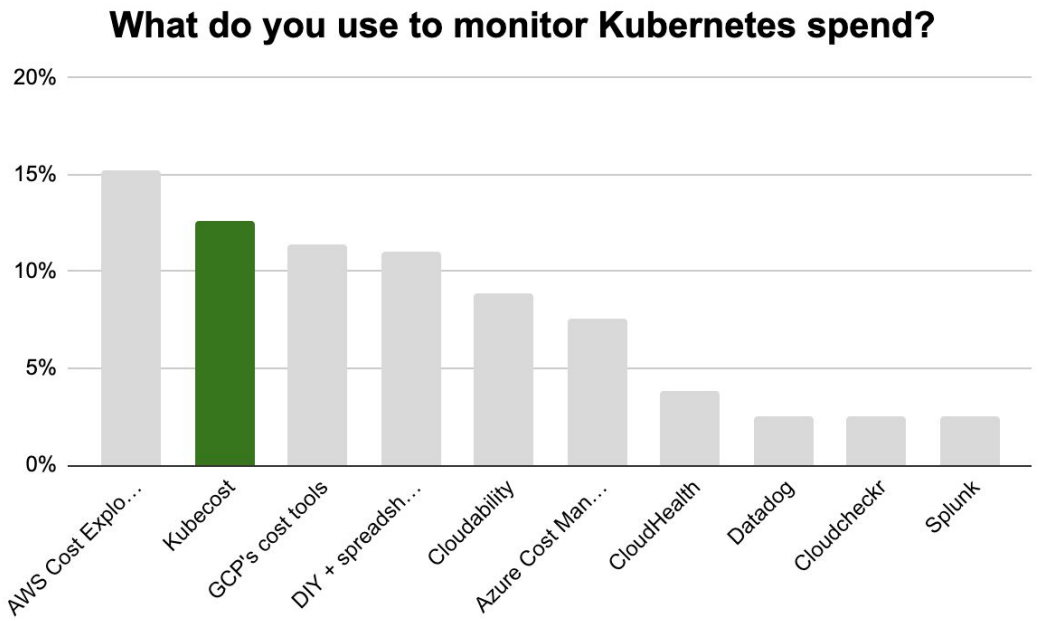
Why Kubecost?

- Most popular solution for cross-platform Kubernetes cost monitoring



Source: https://www.cncf.io/wp-content/uploads/2021/06/FINOPS_Kubernetes_Report.pdf

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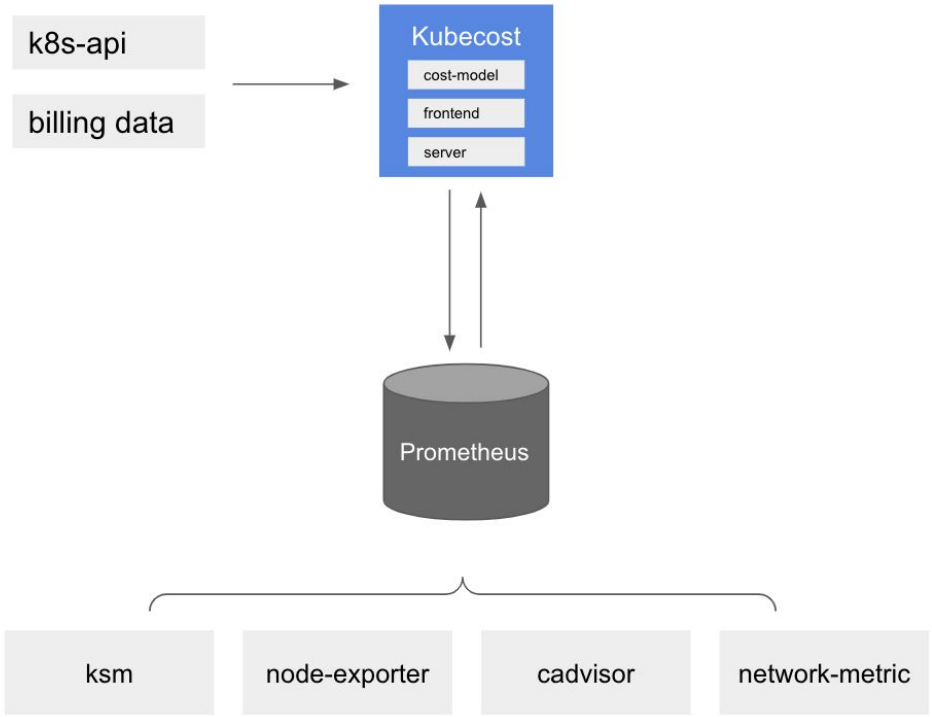
Architecture



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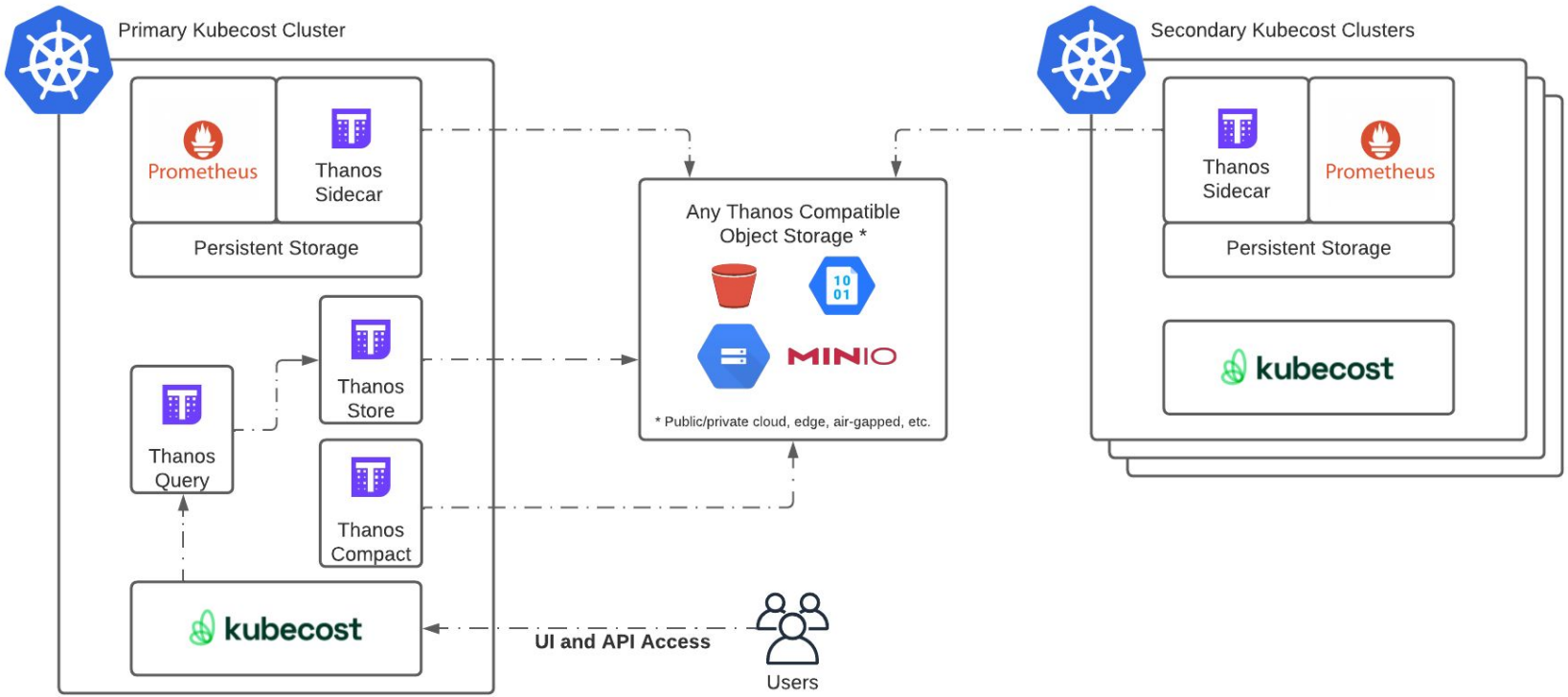
Enterprise Architecture



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Commercial License Types

Team	Business	Enterprise
Free	**Contact Us**	**Contact us**
	200+ Nodes	
Always-free plan	Everything in Free, plus	Everything in Business, plus
1 cluster, no size limit	Unlimited clusters monitored	Unified multi-cluster view
15-day metric retention	30-day metric retention	Unlimited metric retention
Cost monitoring & allocation	Saved reports	Custom integrations
Cost savings insights	Team updates & notifications	SSO / SAML
Outage risk assessment	Business support	Dedicated enterprise support
> Learn More	> Learn More	> Learn More
Get Started	Contact Us	Contact Us

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Cost Allocation

Kubecost allows you to see allocated spend across all native Kubernetes concepts, so you can provide your teams with transparent, accurate cost data reconciled with your actual cloud bill.

- Break down costs by namespace, deployment, service, and more across any major cloud provider or on-prem Kubernetes environment.
- Allocate costs to organizational concepts like team, individual application, product/project, department, or environment for showback or chargeback.
- View costs across multiple clusters—even in multi-cloud environments—in a single view or via a single API endpoint.

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View unified spend by joining real-time costs from your Kubernetes cluster (CPU, memory, storage, network, etc.) with outside costs, e.g. tagged RDS instances, BigQuery warehouses, or S3 buckets.

Name	CPU	GPU	RAM	PV	Network	LB	Shared	External	Efficiency	Total cost
Totals	$26.96	$0.00	$26.37	$14.59	$1.61	$7.20	$68.85	$56.99	0%	$202.57
kubecost	$8.97	$0.00	$24.69	$14.59	$1.13	$7.20	$36.44	$42.95	21.9%	$135.97
kube-system	$18.00	$0.00	$1.68	$0.00	$0.48	$0.00	$32.40	$0.00	13.7%	$52.56
external-resources	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$12.72	–	$12.72
spinnaker	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1.32	–	$1.32

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Optimization Insights

Kubecost automatically generates insights you can use to save 30-50% or more on your infrastructure spend, without exposing your private information—your data never gets shared externally, even with us.

- Get context-aware, cluster-level insights designed to help you manage the tradeoff between cost and performance, while factoring in your workloads and service requirements.
- Avoid over- or under-provisioning with reports that let you drill down to the node and pod level, and optimize your persistent volumes.
- View recommendations via UI or APIs, plus the optional ability to dynamically apply insights for immediate results.

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Right-size your cluster nodes

Adjust the number and size of your cluster's nodes to stop over-spending on unused capacity.

save up to $36.57/mo →

Manage underutilized nodes

Turn down or resize nodes with low memory and CPU utilization.

save up to $30.37/mo →

Resize local disks

Resize local disks with low utilization, and see whether you may launch new nodes with smaller disks on the next node turndown.

save up to $11.20/mo →

Right-size your container requests

Over-provisioned containers provide an opportunity to lower requests and save money. Under-provisioned containers may cause resources to run out.

save up to $94.60/mo →

Reserve instances

Consider purchasing reserved instances based on required RAM and CPU capacity.

save up to $11.80/mo →

Manage unclaimed volumes

Delete volumes that are unused by any pods or move them to a cheaper storage tier.

save up to $0.00/mo →

Remedy abandoned workloads

Scale down, delete or resize pods that don't send or receive a meaningful rate of traffic.

save up to $1.07/mo →

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Alerts and Governance

With real-time alerting functionality and recurring reports, Kubecost empowers teams to take control of their Kubernetes-enabled infrastructure, stay within budgeted limits, and address monitoring interruptions immediately.

- Set budgets for configurable aggregation levels, e.g. team, application, etc.
- Get real-time alerts (via Slack or email) for budget overruns, anomalous spend patterns, and below-efficiency Kubernetes tenants.
- Create and automate recurring cost reports to track trends and efficiency across all or a set of namespaces, with costs broken down by namespace.

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Product Demonstration

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Questions?

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Thank You!

Azure Hack Hours Lab: https://github.com/Azure/kubernetes-hackfest/tree/master/labs/monitoring-logging/kubecost

More Information: https://www.kubecost.com/

Documentation: https://guide.kubecost.com/

View our GitHub projects: https://github.com/kubecost

Check out our Blog: https://blog.kubecost.com/

Join us on Slack!