The Challenge of Securing Containers and Kubernetes

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Me

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- Network Security
- Endian co-founder (Endian Firewall)
- Industrial/Healthcare IoT Security

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- K8s and SecDevOps world
- Cloud Native Security
- Sysdig + Falco

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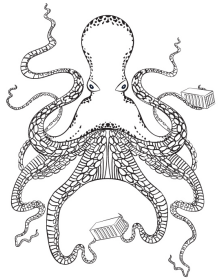
Sysdig - Open Source Foundation



Founded by the creator of

WIRESHARK

Protocol analysis and network security

Sysdig | *Open Source*

Deep container forensics and troubleshooting

Falco

Cloud native threat and anomaly detection

aws · GitLab · Google · HUAWEI · IBM · mercari · Postmates · T-Mobile · SAMSUNG · VOLVO · Walmart

~5k GitHub stars · 40M downloads

HQ in	Operations in	Employees:	Customers:	VC Funding:
San Francisco	**20+ Countries**	**>500**	**>700**	**$750M**

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Agenda

- Cloud-Native architecture security challenge
- K8s/containers general security workflow overview
- Runtime Threat Detection with Falco

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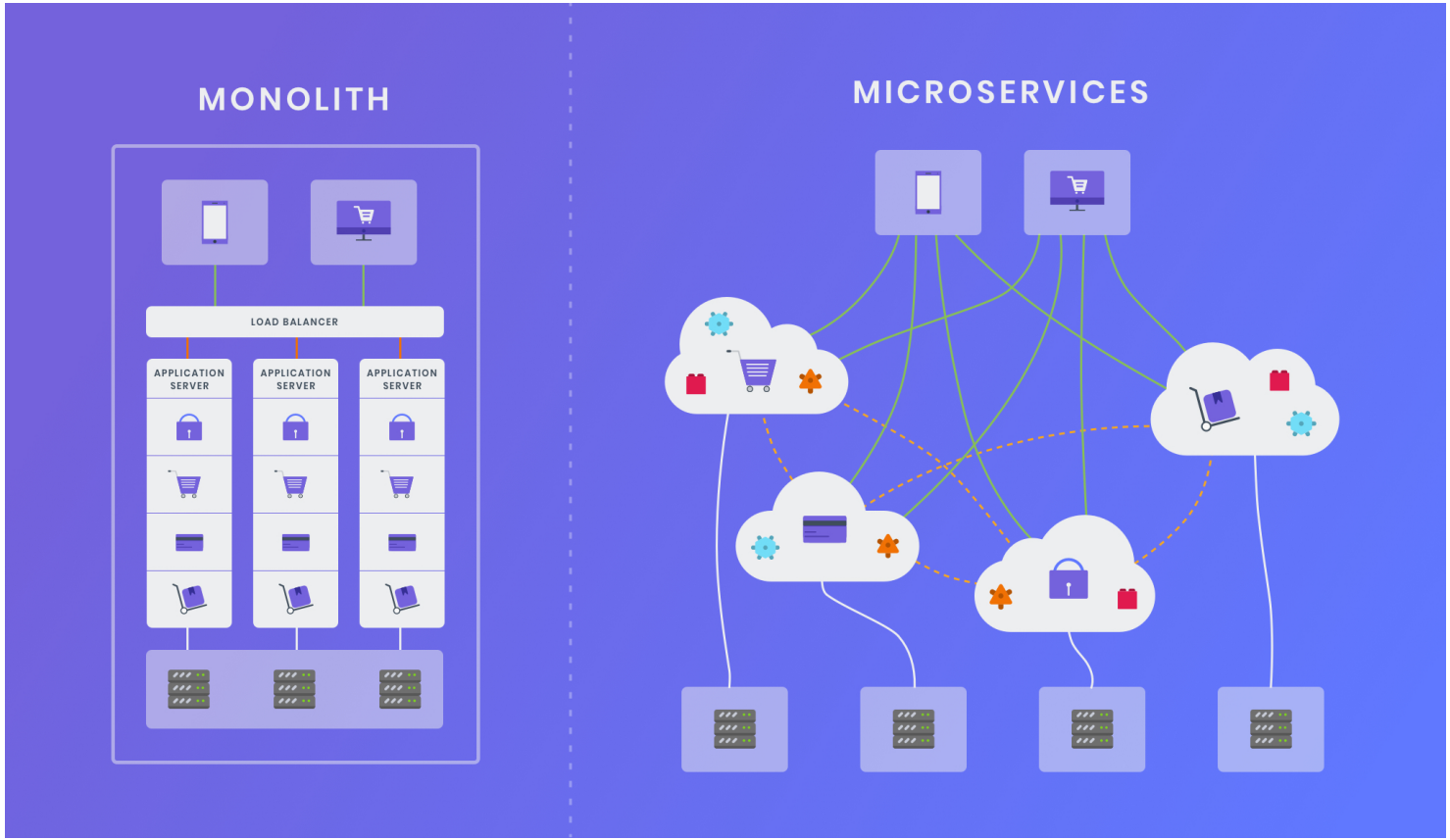
From Monolithic to Microservices



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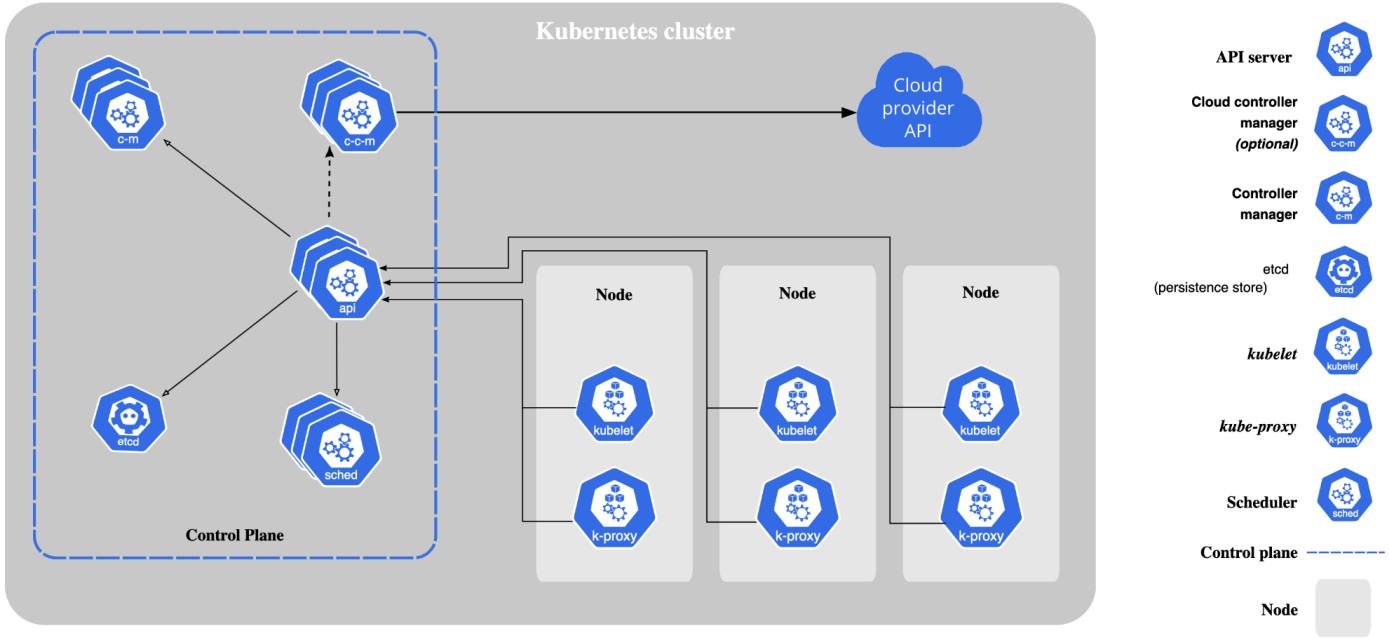
Kubernetes, the cloud OS



The components of a Kubernetes cluster

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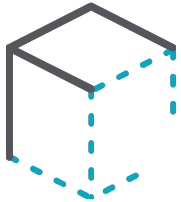
Operational Challenges with Containers



Containers disappear and leave no trail

Cloud native leaves you blind

Security and operations fail without context

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Traditional Security Challenges Exist in Cloud

Fix Software Vulnerabilities

Manage Configs and Permissions

Detect and Respond to Threats

Meet Compliance

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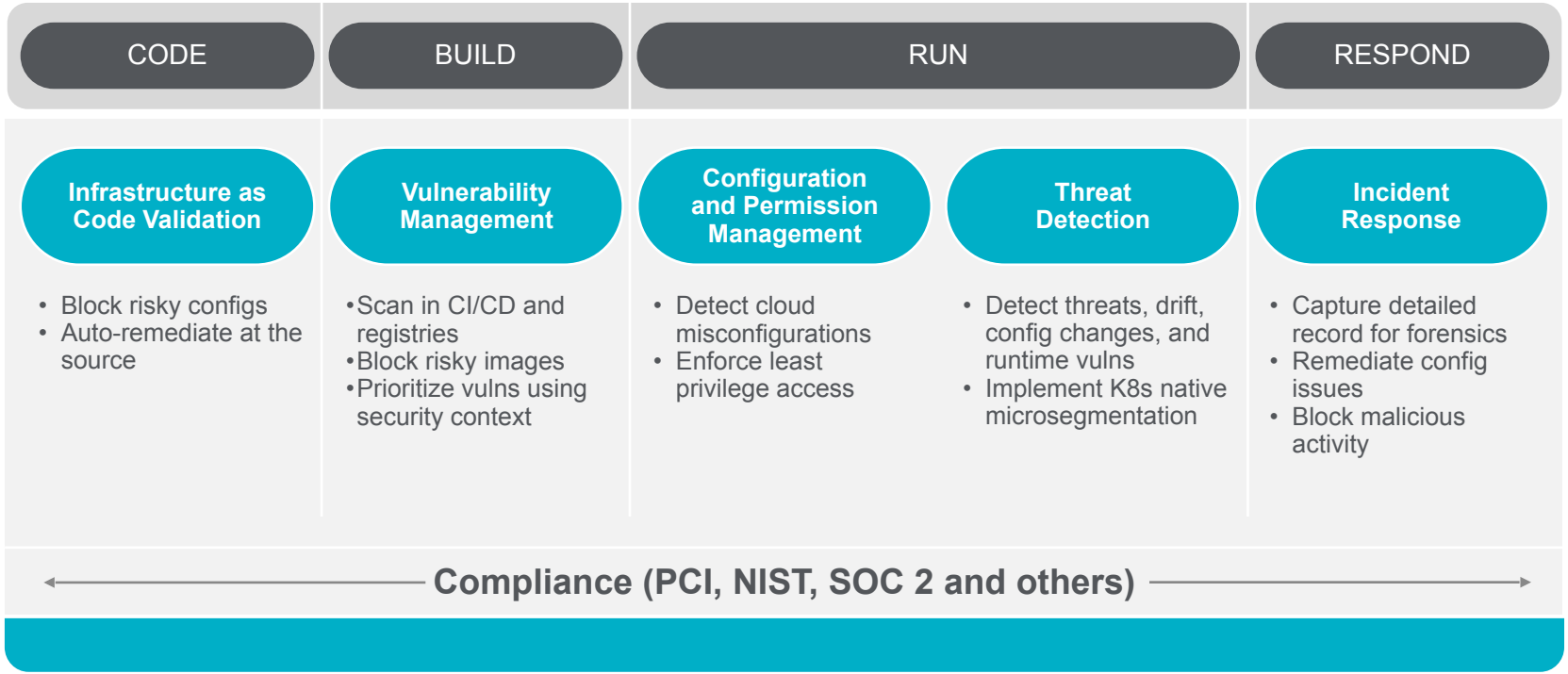
Secure Containers, Kubernetes and Cloud Services



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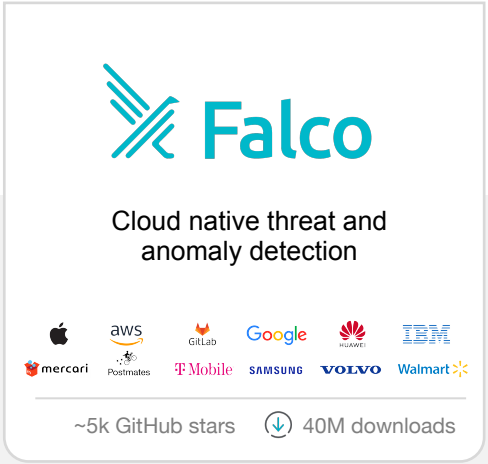
Falco



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What Falco is used for?

- **Runtime container security:** Detect intrusions and anomalous file, user, and network activity using community-driven policies
- **Kubernetes security monitoring:** Detect suspicious activities on Kubernetes' control plane APIs
- **Cloud security monitoring:** Detect unexpected behaviors and changes to configurations, intrusions, and data theft

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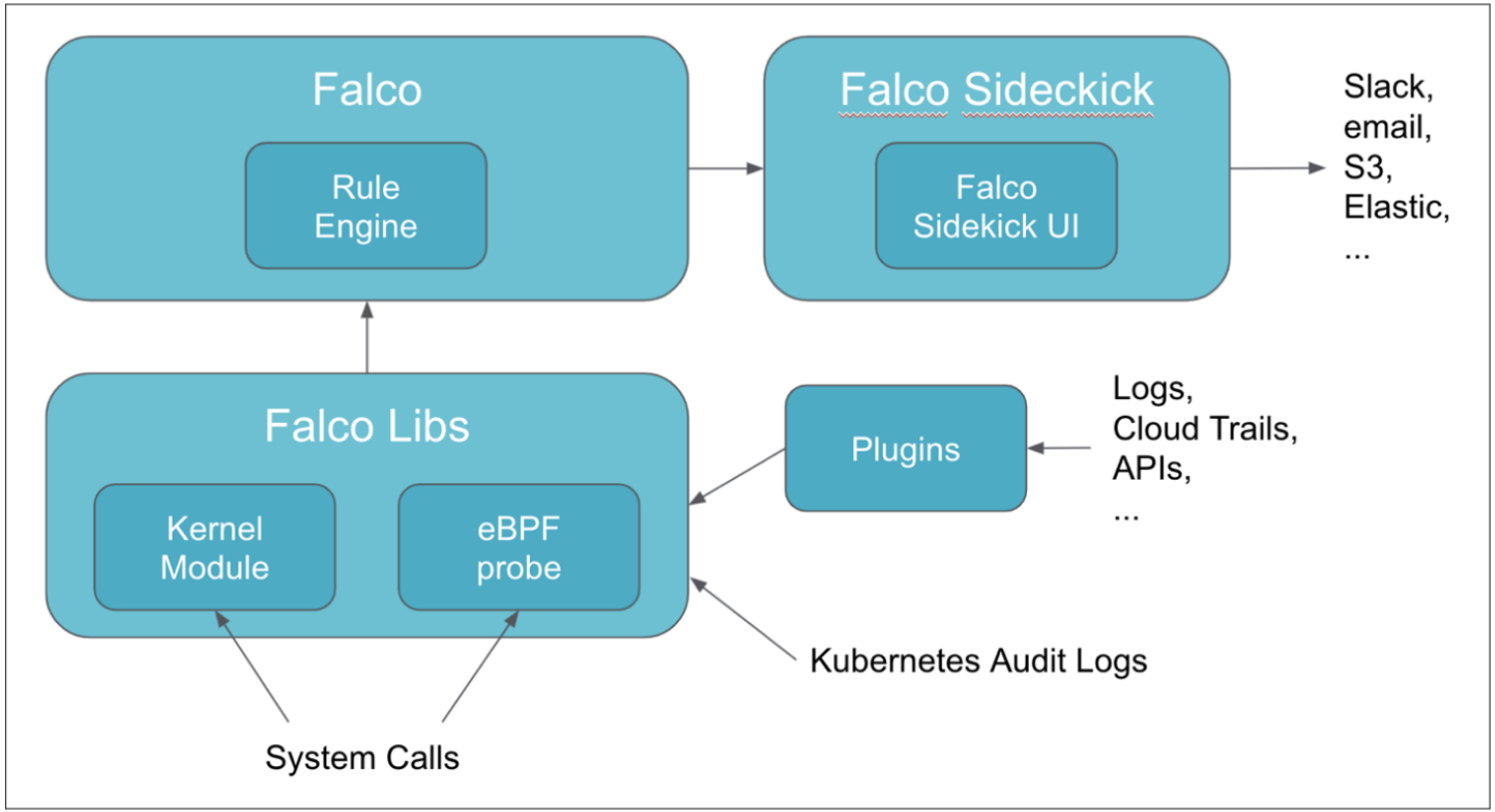
Falco High Level Architecture



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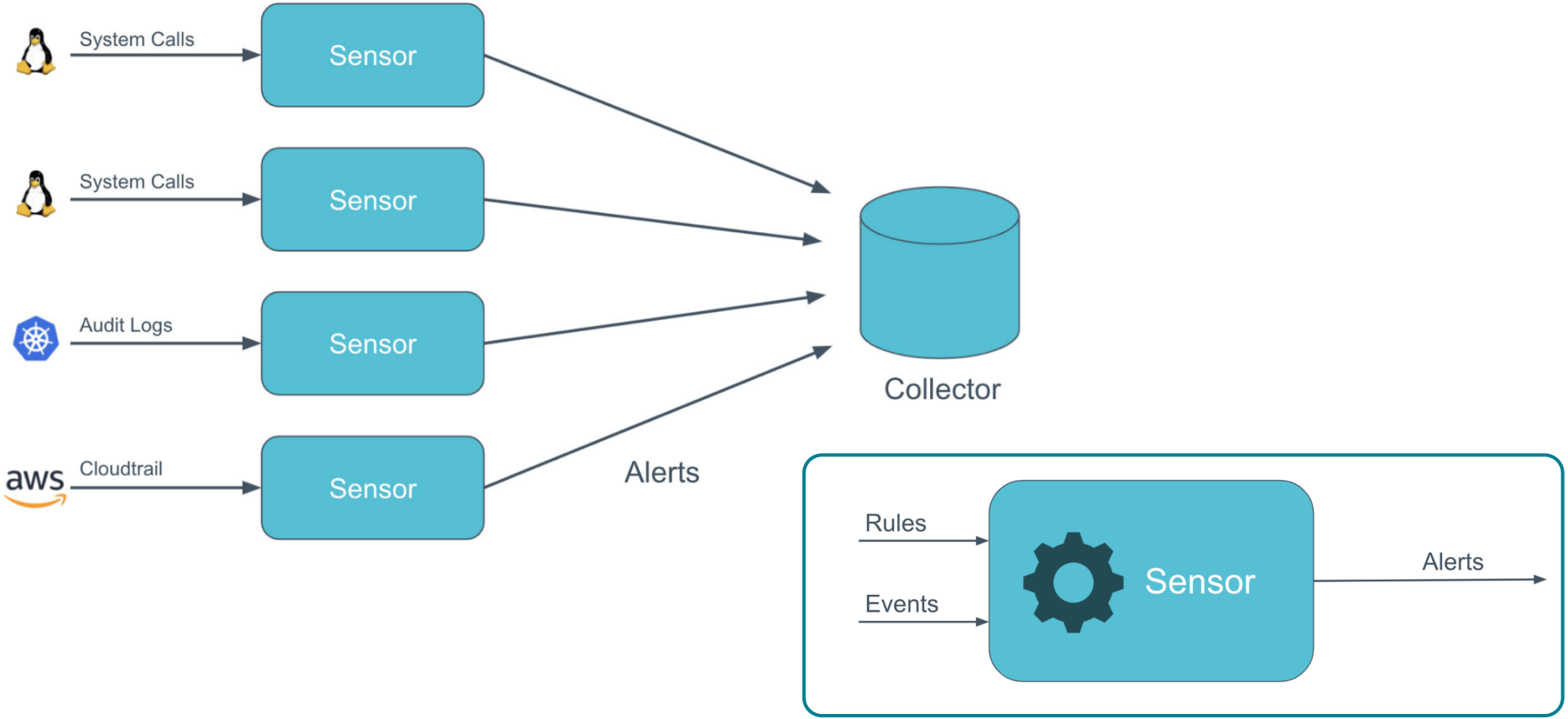
Edge Computing to Scale!!



Falco Demo

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Seeing is Securing