



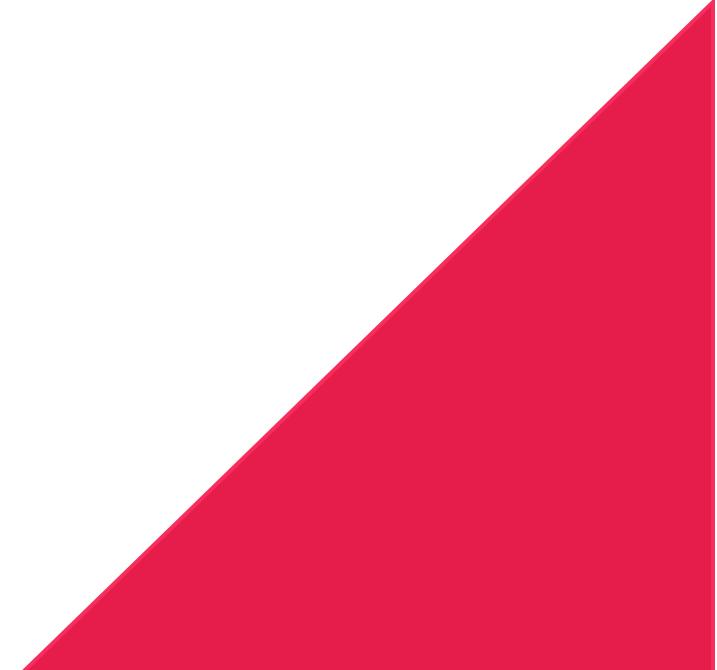
Inspektor Gadget Contribfest

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KubeCon NA 2025

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Agenda

- Dev Environment Activation
- Introduction to Inspektor Gadget
- Labs
- Closing remarks

Dev Environment Activation

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- We prepared a cloud environment to ease the setup for this talk
- Let's activate it so it's ready on time

<https://aka.ms/ig-contribfest>

Activation code: Redacted

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Activation code: ACTIVATE57731

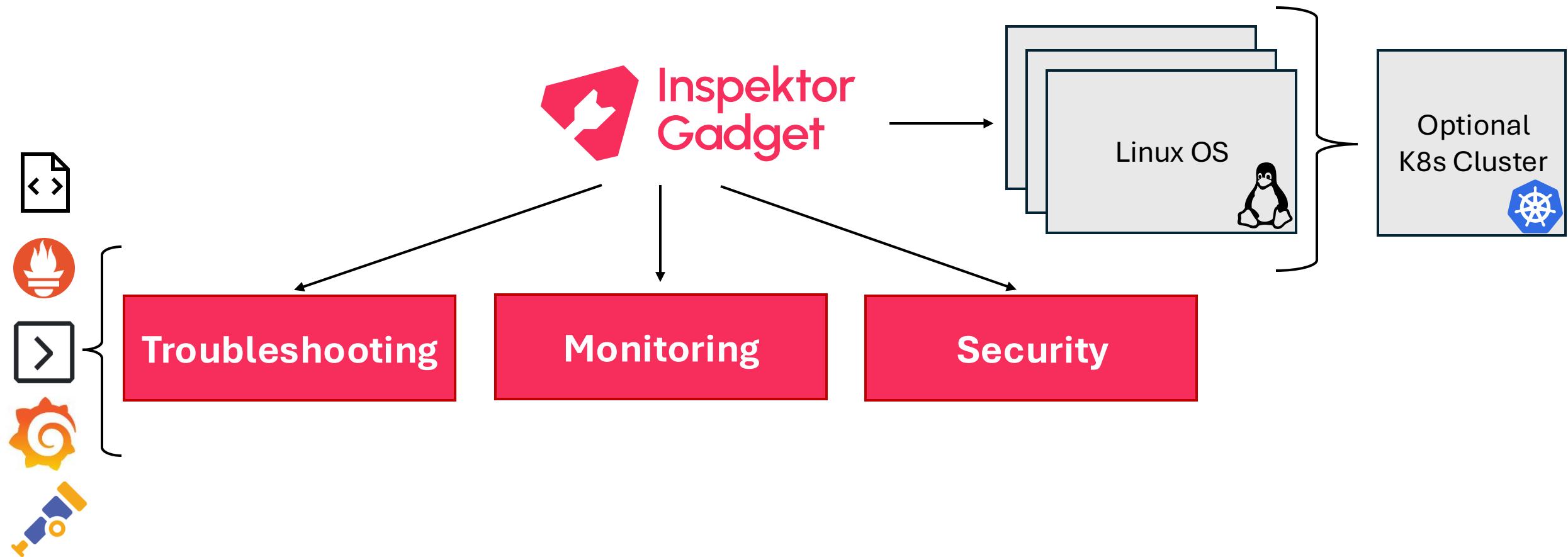


Inspektor Gadget



Inspektor Gadget is a set of tools and framework for data collection and system inspection on Kubernetes clusters and Linux hosts using eBPF

Inspektor Gadget





open source tool and framework for data collection and systems inspection on Kubernetes and Linux hosts

Gadgets



Gadgets encapsulate eBPF programs in OCI images for powerful and performant systems inspection in a secure way

Enrichment



Container and K8s aware - automatically map low-level systems information to high-level Kubernetes and container resources

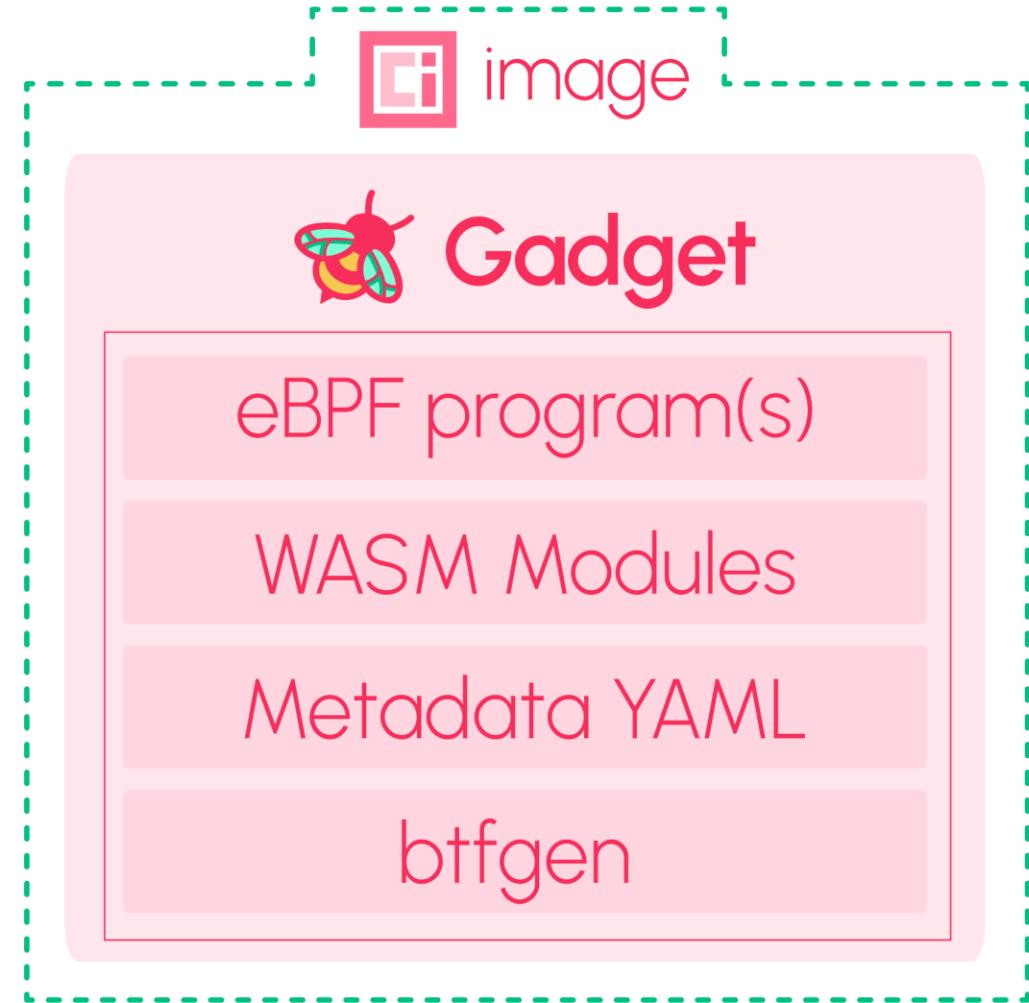
Framework



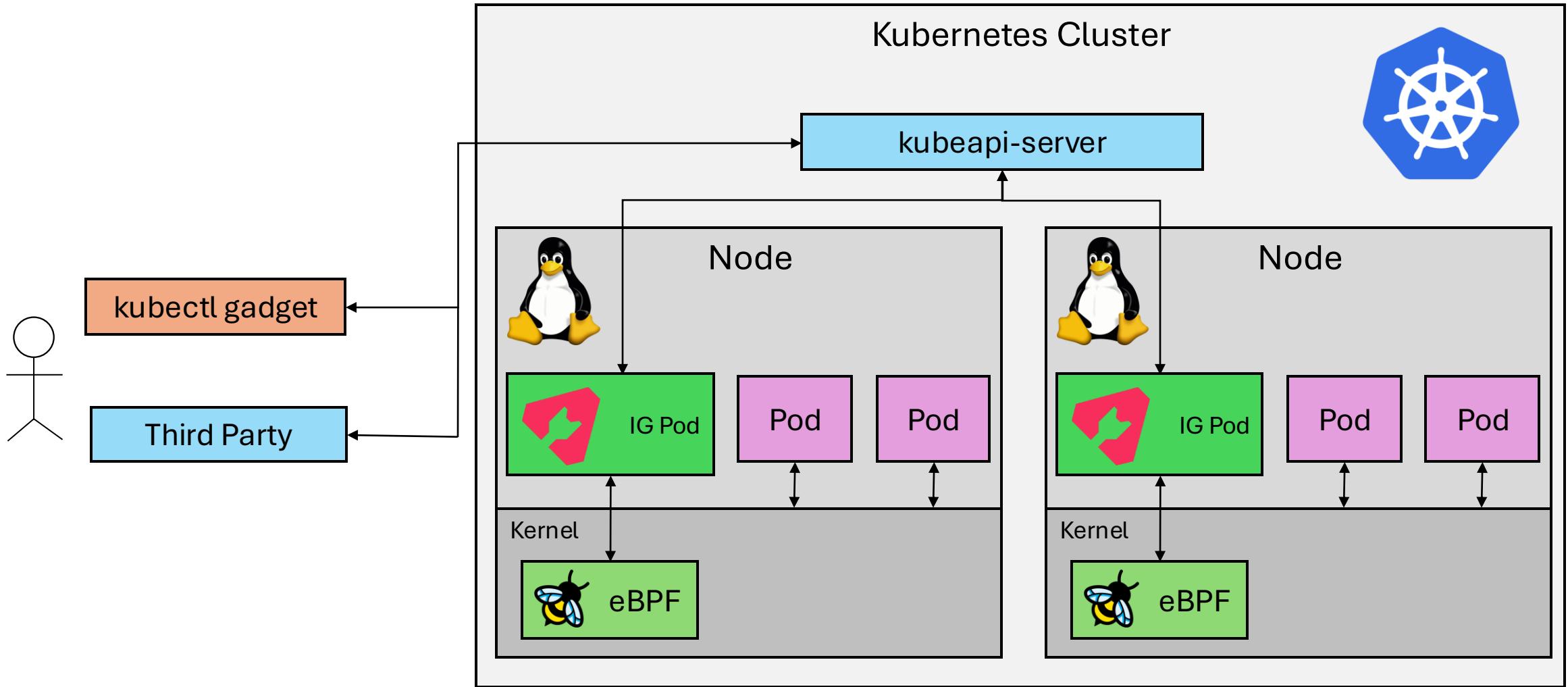
An observability framework with everything you need to collect, filter, format and export valuable systems data

Gadgets

- eBPF: Gather information from the kernel
- WASM: Post process information
- Metadata: Describes how the gadget behaves
- Btfgen: Compatibility with older kernels



Architecture



Demo time!

Lab

- We are proposing four different lab tracks
 1. Real-time troubleshooting in the CLI
 2. Monitoring with Prometheus+Grafana
 3. Creating your own gadget
 4. Contributing to the project
- Time won't be probably enough to do all of them, start with the one you are more interested

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Real-time troubleshooting in the CLI

- You will learn how to run tcpdump across the cluster using IG and debugging AI model training which is running slower than expected.
- Link: <https://github.com/inspektor-gadget/Contribfest-KubeCon-NA2025/tree/main/labs/01-troubleshooting>

Monitoring with Prometheus / Grafana

- You will learn how to export metrics to Prometheus / Grafana from Inspektor Gadget.
- Link: <https://github.com/inspektor-gadget/Contribfest-KubeCon-NA2025/tree/main/labs/02-monitoring>

Creating your own gadget

- Develop your own gadget based on a template we give you
- You'll learn eBPF, how to build, push and run a gadget
- Link: <https://github.com/inspektor-gadget/Contribfest-KubeCon-NA2025/tree/main/labs/03-creating-your-own-gadget>

Contributing to the project

- Fix bugs, add missing features, tests , docs, etc.
- Do it if you are interested on becoming a contributor
- You'll get familiar with the project internals
- Requires writing code depending on the task you take
- Link: <https://github.com/inspektor-gadget/Contribfest-KubeCon-NA2025/tree/main/labs/04-contributing>

Closing Remarks

Questions?