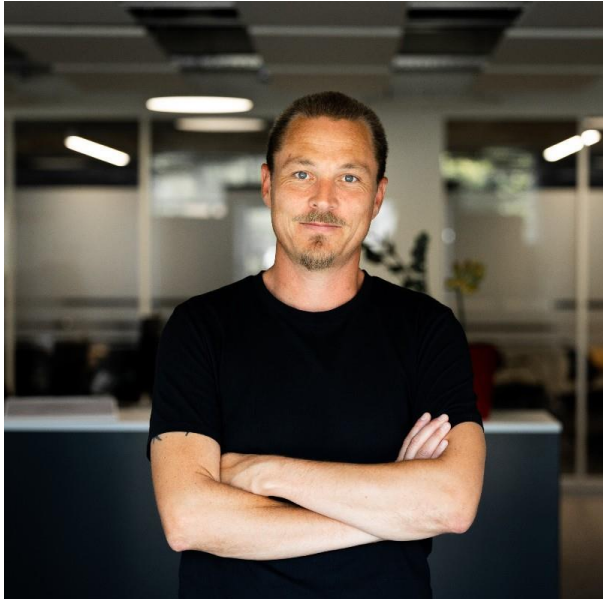




# So let's focus on Kubernetes friends

## Fribourg Linux Seminar

# SPEAKER



- Electrician EPAI FR 2003
- Diplôme Ingénieur Télécomm. HEIA-FR 2009
- Various companies in Suisse Romande
- IT & DevOps Solutions Architect
- Working at CISEL since 6.5 years

Linkedin : <https://www.linkedin.com/in/fabrice-c-a7126536>

# CISEL GROUP

## Our presence in Switzerland



Genève



Renens



Matran



Morges



Martigny



1971

Over 50 years of experience

Headquarter Matran

Succursales à Genève, Renens, Morges, Martigny, Lugano

>170

Employees

>42 million CHF

Revenues 2022

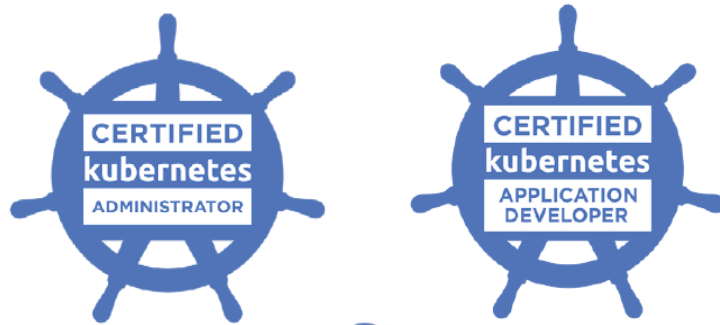
>170

Customers

Linkedin : <https://www.linkedin.com/company/cisel-informatique-sa/mycompany/>

Jobs : <https://www.linkedin.com/company/cisel-informatique-sa/jobs/>

# CISEL DEVOPS



- Dedicated Team founded early 2019
- Projects and services around Cloud Native
- Kubernetes expertise
- \*Ops methodologies

Blog technique



# So let's focus on Kubernetes friends

- CNCF Landscape
- Exoscale & Terraform : Hosting
- ArgoCD : Deployment
- Kasten : Backup & DR
- Prometheus and Grafana : Observability
- Trivy & Kubescape & GitLeaks : Security

Repo public : <https://github.com/ciseldevops/kubernetes-friends-2023>



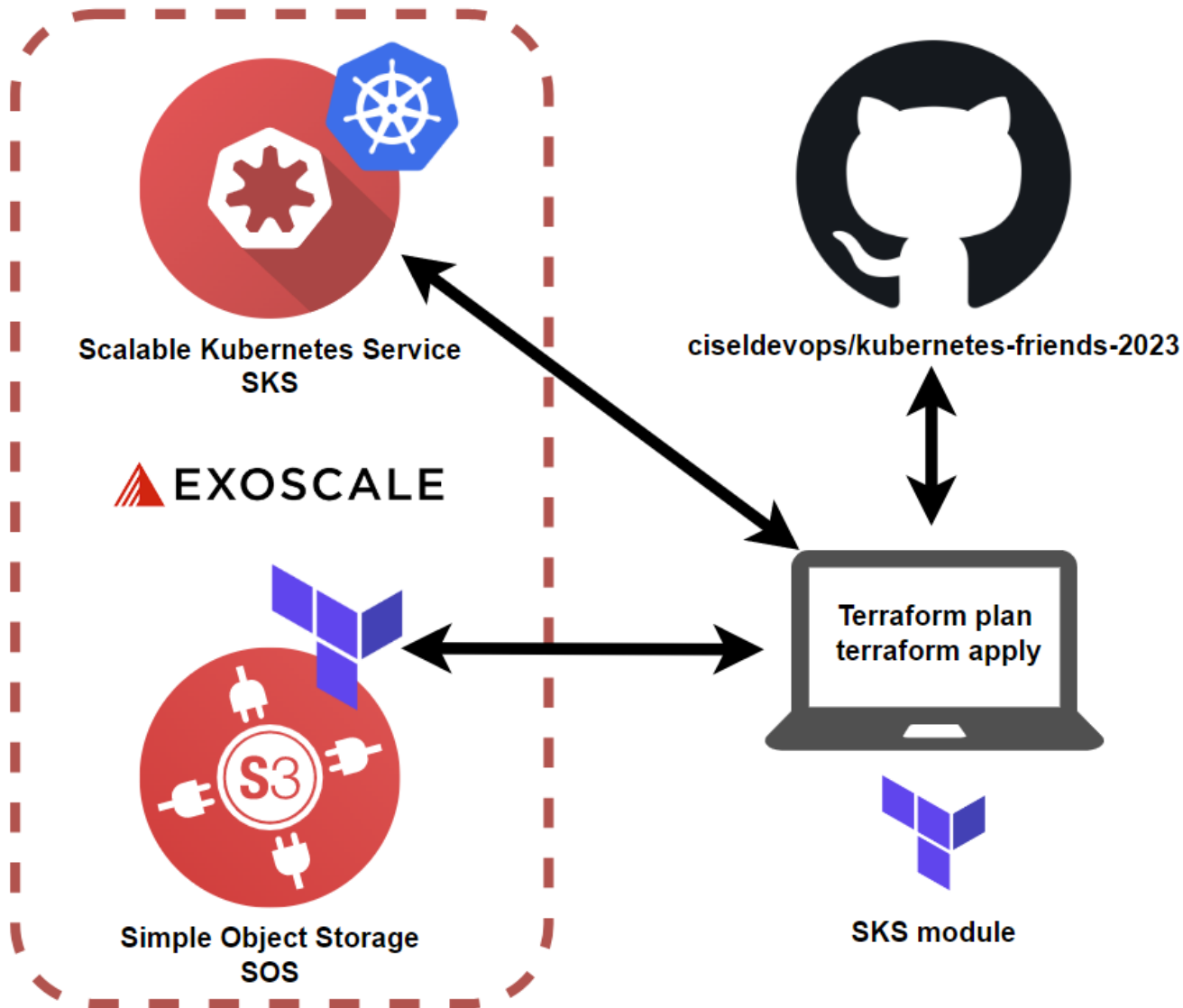
# CNCF Landscape - that's quite a lot of Friends

The image displays the CNCF Landscape website, which categorizes various open-source projects into different functional groups. The categories and their respective projects are as follows:

- Database:** KV, Vitess, Cockroach Labs, Couchbase, etc.
- Streaming & Messaging:** cloudevents, NATS, etc.
- Application Definition & Image Build:** Backstage, Buildpacks.io, KubeVela, KubeVirt, HELM (highlighted), argo (highlighted), flux, keptn, OpenKruise, etc.
- Continuous Integration & Delivery:** agola, etc.
- Platform:** Certified Kubernetes - Distribution, Certified Kubernetes - Hosted (highlighted), Certified Kubernetes - Installer, PaaS/Container Service, etc.
- Scheduling & Orchestration:** kubernetes (highlighted), Crossplane, VOLCANO, etc.
- Coordination & Service Discovery:** CoreDNS, etcd (highlighted), etc.
- Remote Procedure Call:** gRPC, etc.
- Service Proxy:** envoy, etc.
- API Gateway:** EMISARY INGRESS, etc.
- Service Mesh:** LINKERD (highlighted), Istio, etc.
- Cloud Native Storage:** ROCK, CephFS, LONGHORN (highlighted), etc.
- Container Runtime:** cri-o (highlighted), etc.
- Cloud Native Network:** cilium (highlighted), etc.
- Observability and Analysis:** Monitoring, Prometheus (highlighted), etc.

<https://landscape.cncf.io/>  
<https://landscape.cncf.io/?selected=cisel-informatique-kcsp>

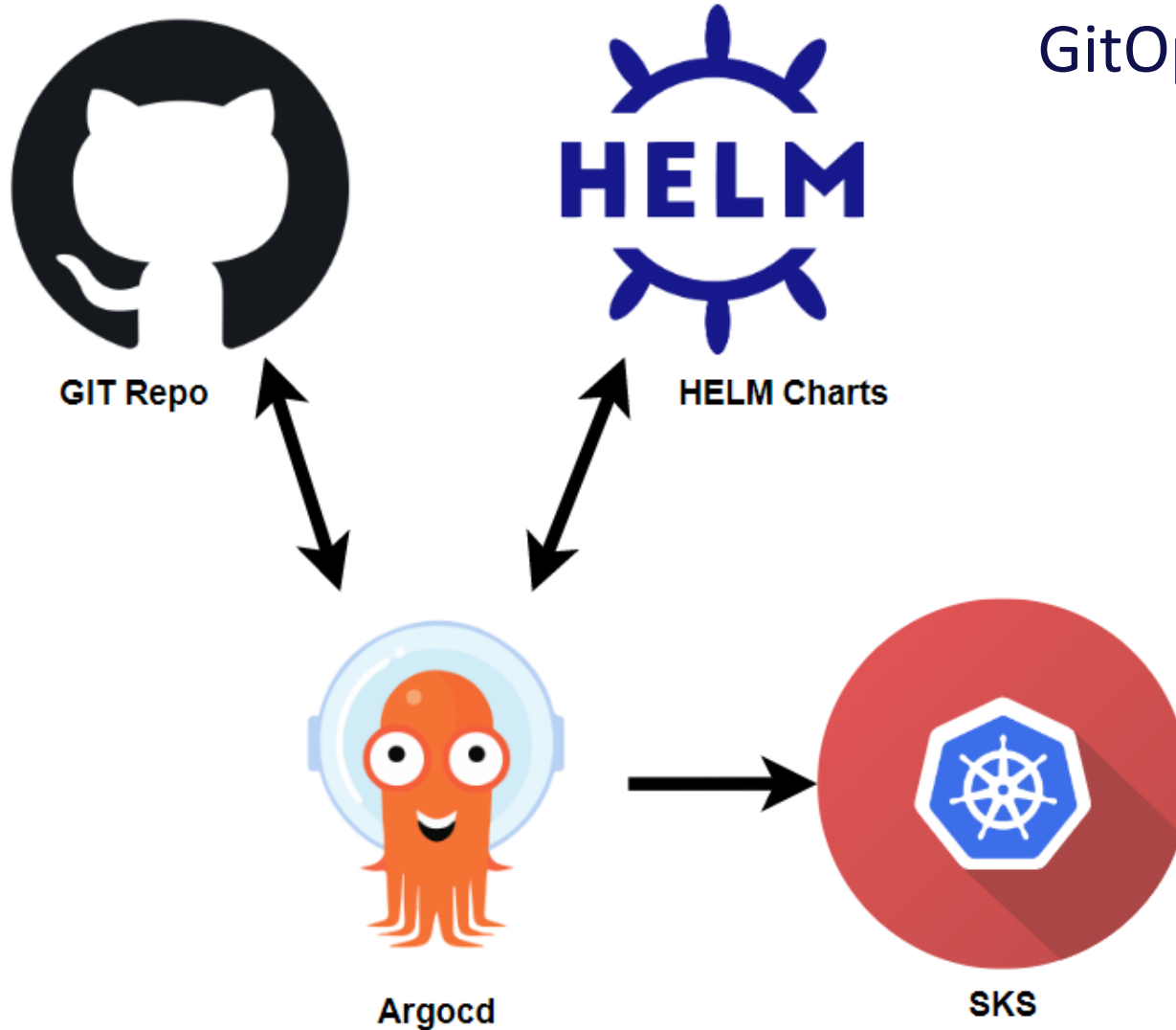
# Exoscale + Terraform - The pair of IaC Friends



No more ClickOPS!!

- IaC with Git and Terraform
- Exoscale SKS (K8S) PaaS
- Exoscale SOS (S3)
- Exoscale Terraform module

# ArgoCD – The Deployment **Friend**

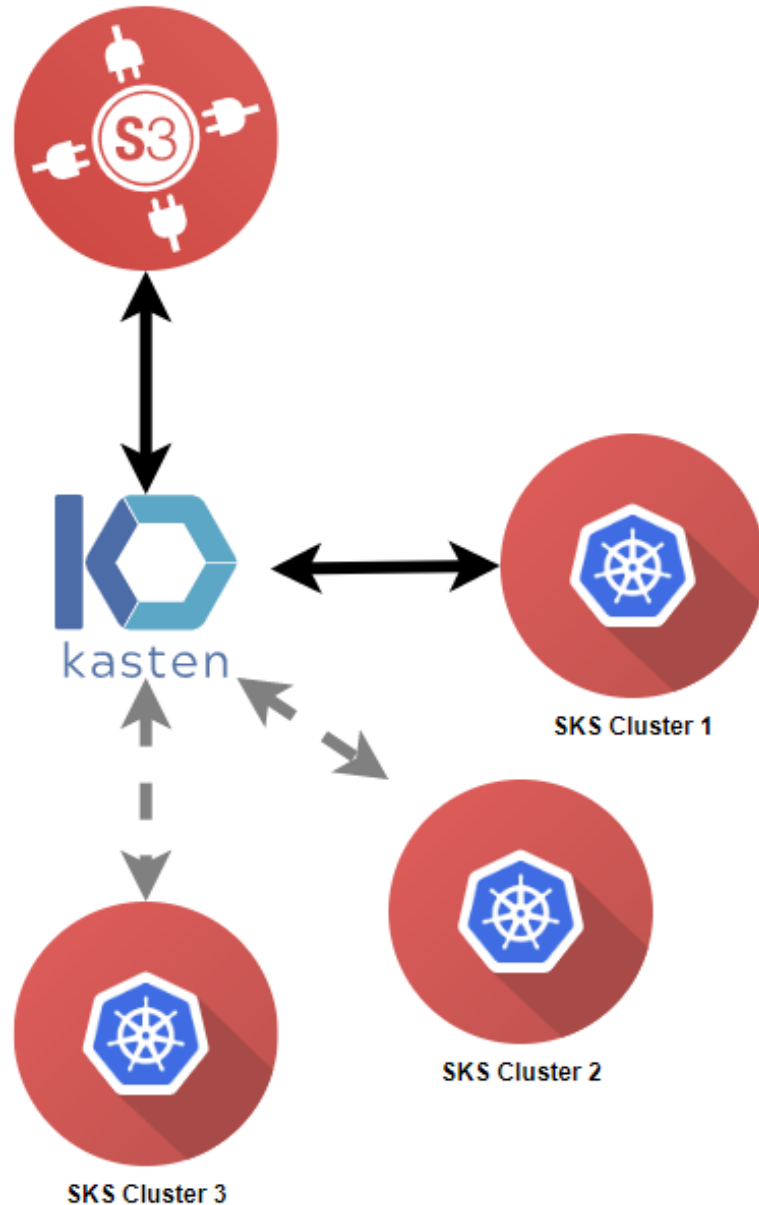


GitOps and the single source of truth

- Continuous Deployment
- GIT repo or HELM Charts
- Manual Synch or Auto Synch
- Containers Logs
- Deployment upgrades
- Helm values
- SSO, RBAC, Projects and Clusters



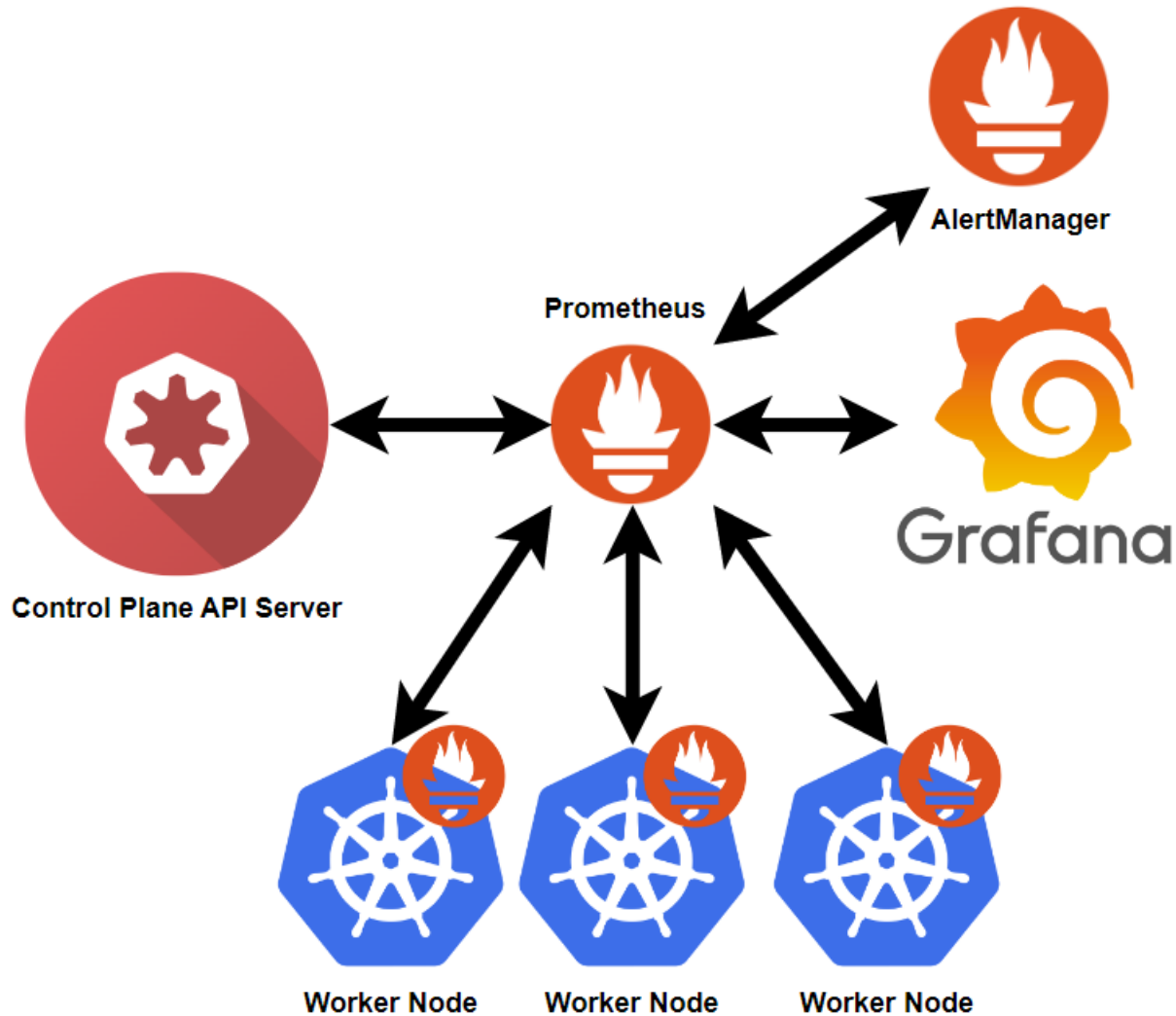
# Kasten – The Backup & DR Friend



Deal with Statefull applications

- Dedicated instance by cluster
- Application auto-discover
- Application snapshot
- Data export to S3
- Disaster recovery mode
- Monitoring and Alerting

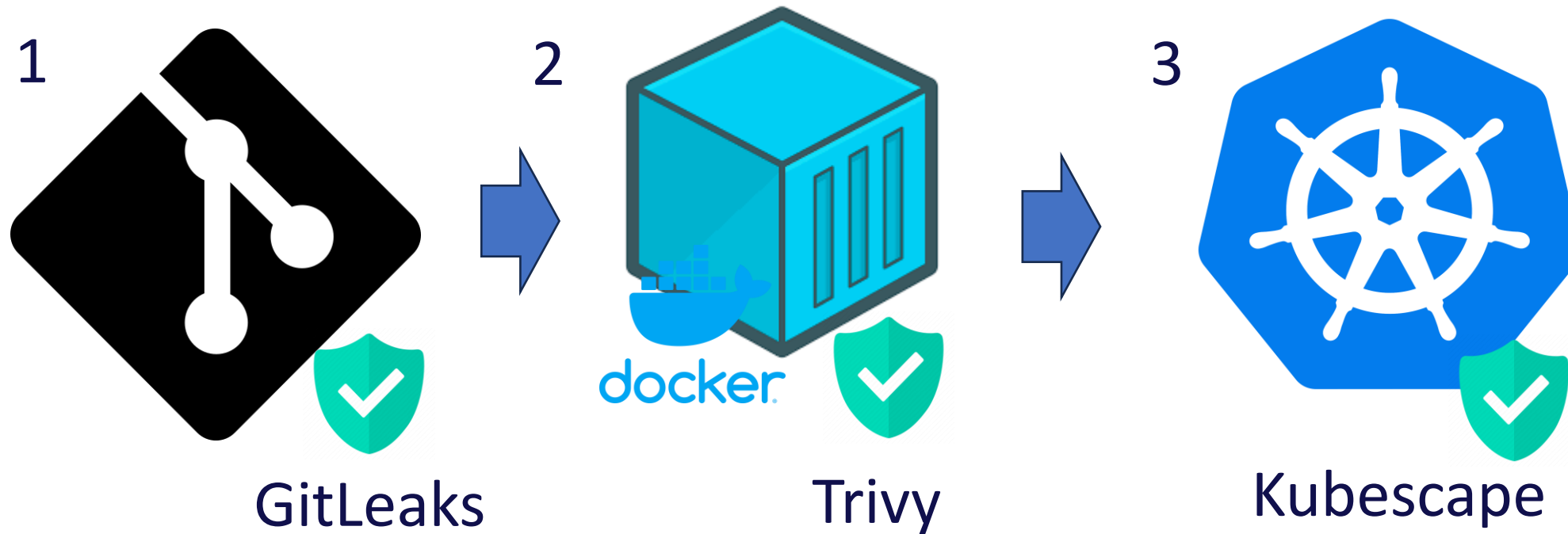
# Prometheus & Grafana - The Obs Friends



Accessing metrics and resource usage

- Cluster Nodes Monitoring
- Workload Monitoring
- Alerting and Incident

# Trivy & Kubescape & GitLeaks - Security Audit Friends



**Security** at each steps

# Tools as Friends

Other Security Tools :

<https://devops.cisel.ch/kubernetes-containers-and-code-security-tools>

Some Ops Tools :

<https://devops.cisel.ch/kubernetes-operational-tools-you-must-try>

Some DevOps & Kubernetes HowTo :

<https://devops.cisel.ch>

Blog technique



Site internet



\_01 [://cisel.ch](http://cisel.ch)

\_02

\_03

# Merci de votre attention !

\_04

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\_04

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