

# *INSTALL AND OPERATE* **ZABBIX IN KUBERNETES**

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*Head of Cloud Native Infrastructure  
& Services*

00 INTRO

# INTRODUCTION

**MCL** Group

**MCL** Group

**WE DO IT  
TOGETHER.**

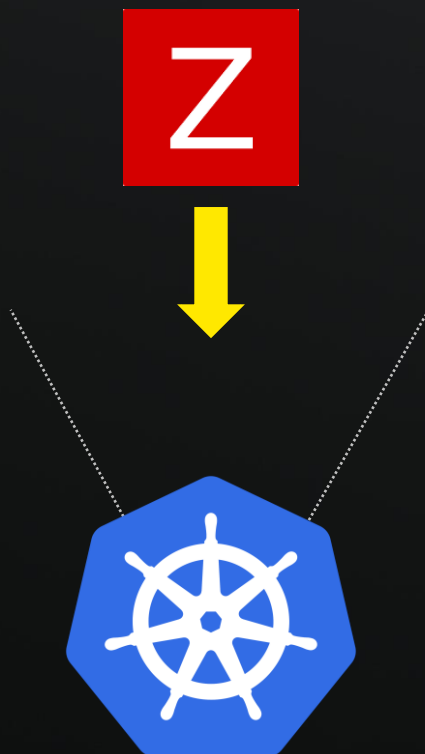
**Elanity**  
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**SECADM**  
SECURE FOR SURE

**VINTIN**  
make IT unique

**MCL**  
IT-Möglichmacher

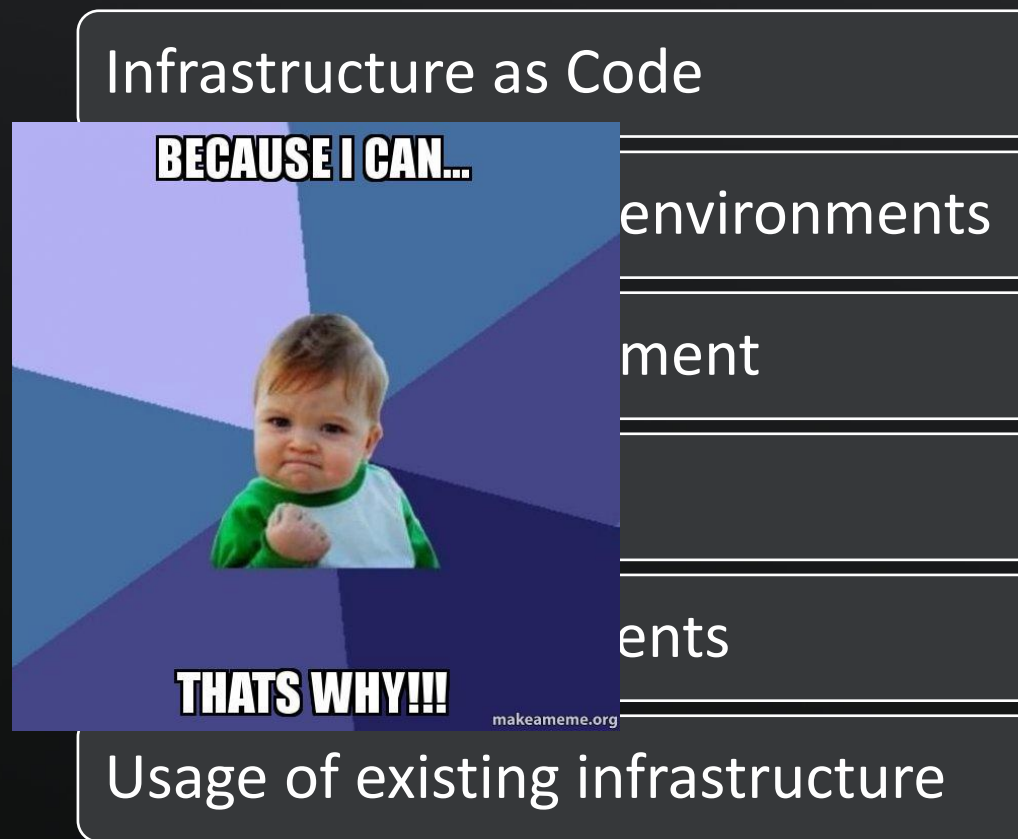
# WHAT IS THIS ABOUT?



How to put Zabbix **inside** Kubernetes

- Installation
- Lifecycle management (reconfiguration, upgrade, ...)
- **NOT** Monitoring Kubernetes with Zabbix!

# REASONS TO DEPLOY ZABBIX IN KUBERNETES



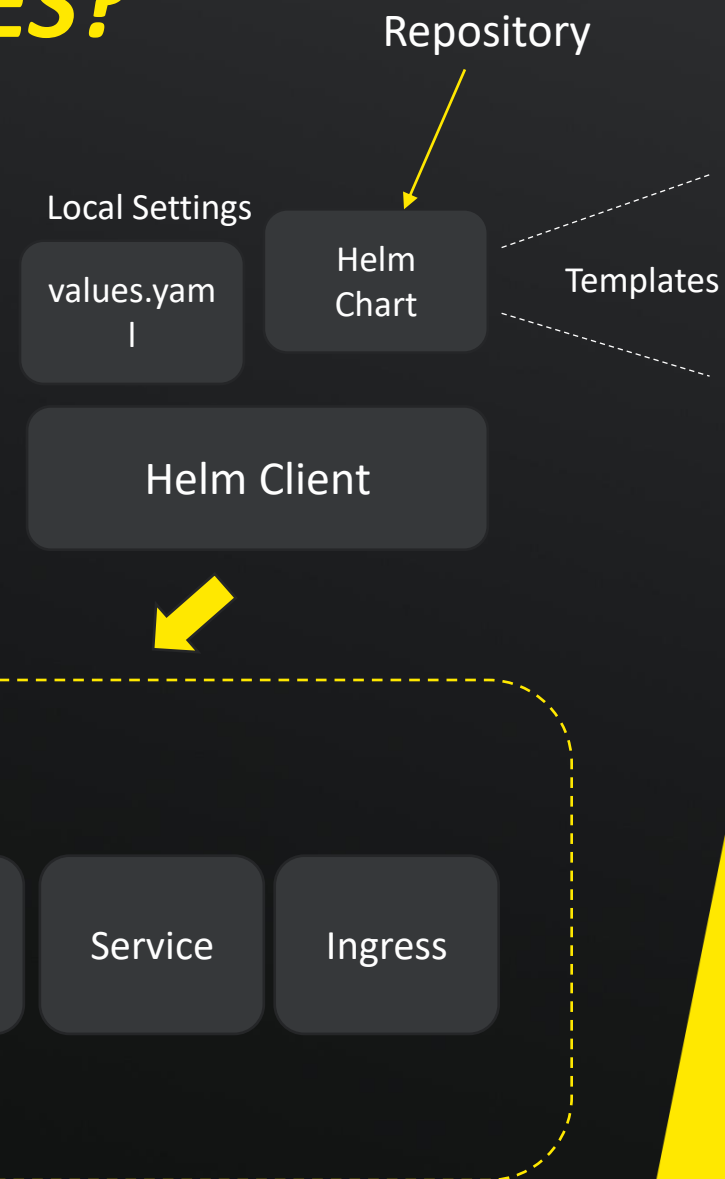
# DOES IT EVEN GO TOGETHER?

- Zabbix is not entirely „microserviced“ yet
- Zabbix (Docker) Container images are available with every new release
- Container images are widely configurable and well documented
- Zabbix components (Zabbix Server, Zabbix Web frontend, ...) available as individual container images



# HOW TO INSTALL APPS IN KUBERNETES?

- In Kubernetes, applications are usually being installed using **Helm Charts**
- Helm is the „package manager“ for Kubernetes
- A Helm chart is centrally configured using one yaml file and deploys / changes all the needed objects for one application
- Installation / Upgrades / Changes

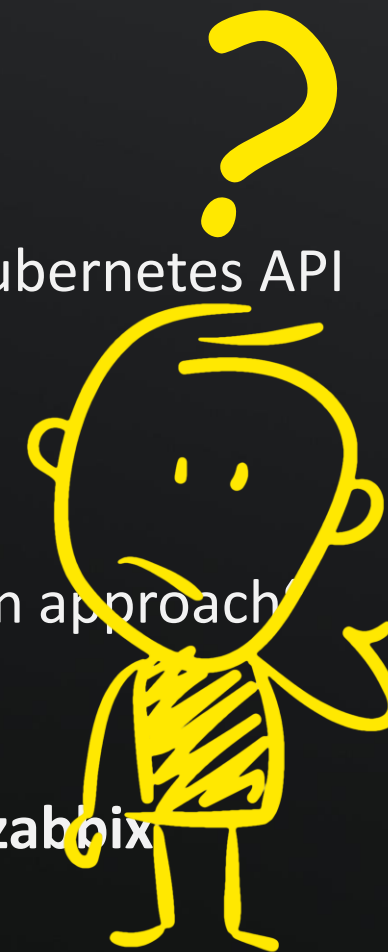


# ***ZABBIX HELM CHART***

***THE MOST SIMPLE AND POWERFUL WAY TO DEPLOY  
ZABBIX IN KUBERNETES***

## SEEKING FOR OPTIONS...

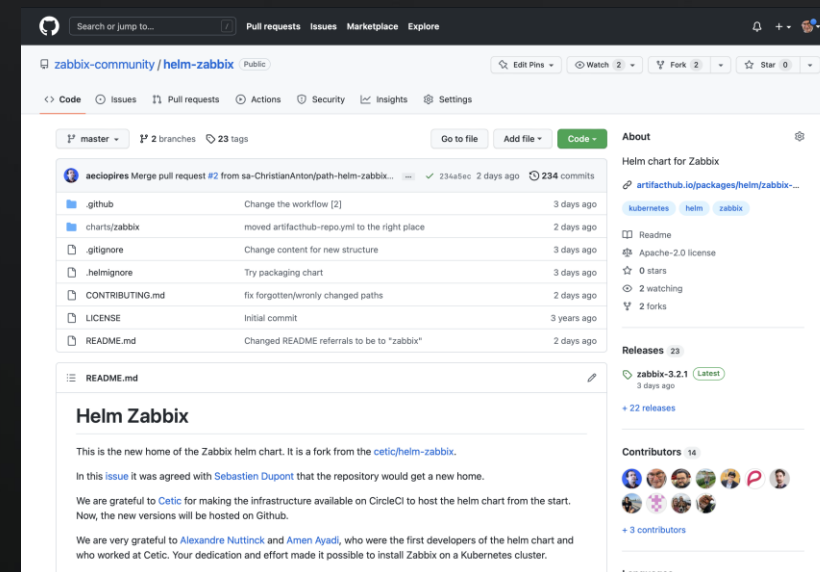
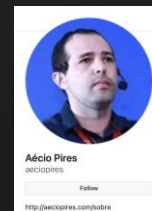
- Helm Chart maintained by Zabbix
  - special use case: Kubernetes Monitoring
  - installs Zabbix Proxy + necessary permissions to read from Kubernetes API
- YAML Files on Github by Zabbix
  - good examples
  - Only containing the „building blocks“ but not the „application approach“
- Community Helm Charts
  - the most popular and evolved one: [github.com/cetic/helm-zabbix](https://github.com/cetic/helm-zabbix)
  - yet missing some features





# GOT INVOLVED

- found a new friend
- spent a lot of time improving the chart and contributed
- Discussed with the organization holding the repository
- Finally, migrated the Chart to a new home and got official Maintainer

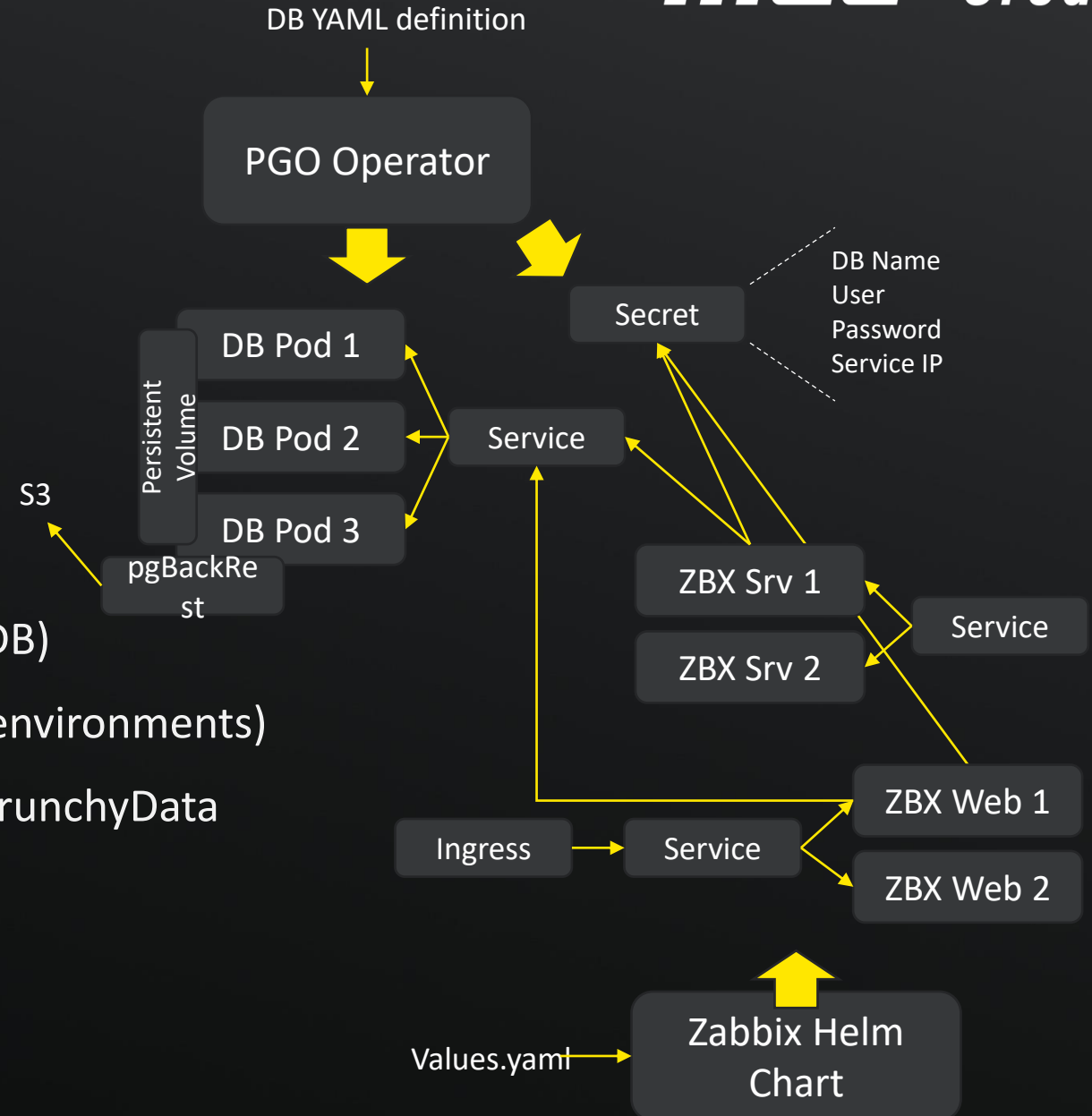


<https://zabbix-community.github.io/helm-zabbix/>

CHART

# FEATURES

- Full coverage of Zabbix 6 features:
  - Zabbix Server High Availability
  - Zabbix Web Service
  - Zabbix Agent 2
- Database backend
  - Currently supported: Postgres (+TimescaleDB)
  - deployed with the Chart (for testing/small environments)
  - external DB for production (optimized for CrunchyData Operator)
- Distribution of Pods amongst cluster nodes
- Custom Init/Sidecar containers
- SAML, ...



***DEMO!***

***A SIMPLE USE CASE***

zabbix-community/helm-zabbix

Rancher

github.com/zabbix-community/helm-zabbix

git | ingress contr...k8s | gitLogin MP VMwareDashboard RBK8SImportiertLeonhardkurzBitmarckRed HatAxelspringer

Search or jump to...

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zabbix-community / helm-zabbixPublic

Edit PinsWatch4Fork2Star5

<> CodeIssues4Pull requestsActionsSecurityInsightsSettings

master2 branches24 tags

Go to fileAdd fileCode

aeciopires Change workflow of chart release87493a023 days ago237 commits

.github	Change workflow of chart release	23 days ago
charts/zabbix	Added new metadata in Chart.yaml	23 days ago
.gitignore	Change content for new structure	25 days ago
.helmignore	Try packaging chart	25 days ago
CONTRIBUTING.md	fix forgotten/wronly changed paths	23 days ago
LICENSE	Initial commit	3 years ago
README.md	Fix path of chart README.md	23 days ago

README.md

# Helm Zabbix

This is the new home of the Zabbix helm chart. It is a fork from the [cetic/helm-zabbix](#).

In this [issue](#) it was agreed with [Sebastien Dupont](#) that the repository would get a new home.

We are grateful to [Cetic](#) for making the infrastructure available on CircleCI to host the helm chart from the start.

About

Helm chart for Zabbix

[artifacthub.io/packages/helm/zabbix-c...](#)

kuberneteshelmzabbix

ReadmeApache-2.0 license5 stars4 watching2 forks

Releases24

zabbix-3.2.2Latest

23 days ago

+ 23 releases

Contributors14

helm-zabbix/README.md at m... Rancher

github.com/zabbix-community/helm-zabbix/blob/master/charts/zabbix/README.md#installation

git | ingress contr... k8s | git Login MP VMware Dashboard RB K8S Importiert Leonhardkurz Bitmarck Red Hat Axelspringer

504 lines (411 sloc) | 31.9 KB

<> Raw Blame

# Installation

Access a Kubernetes cluster.

christian.anton@pas-mac-ca1:~/OneDrive - secadm GmbH/Summit 2022

```
~/OneDrive - secadm GmbH/Summit 2022/ helm search repo zabbix-community
NAME          CHART VERSION  APP VERSION  DESCRIPTION
zabbix-community/zabbix 3.2.2         6.0.8       Zabbix is a mature and effortless enterprise-cl...

~/OneDrive - secadm GmbH/Summit 2022/
```

Upgrade a helm chart:

helm-zabbix/README.md at m... Rancher

github.com/zabbix-community/helm-zabbix/blob/master/charts/zabbix/README.md#installation

git | ingress contr... k8s | git Login MP VMware Dashboard RB K8S Importiert Leonhardkurz Bitmarck Red Hat Axelspringer

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~/OneDrive - secadm GmbH/Summit 2022/
~/OneDrive - secadm GmbH/Summit 2022/ helm inspect values zabbix-community/zabbix > values.yaml
~/OneDrive - secadm GmbH/Summit 2022/ subl values.yaml
~/OneDrive - secadm GmbH/Summit 2022/ subl demo_values.yaml
~/OneDrive - secadm GmbH/Summit 2022/
```



helm-zabbix/README.md at m... Rancher

← → ↺ rancher.fibbs.org/dashboard/c/c-m-f2cxbs7z/explorer/pod

git | ingress contr... k8s | git Login MP VMware Dashboard RB K8S Importiert Leonhardkurz Bitmarck Red Hat Axelspringer

ca-rke2 zabbix x

Cluster Workload CronJobs 1 DaemonSets 0 Deployments 3 Jobs 1 StatefulSets 1 Pods 7 Apps Service Discovery Storage More Resources

Cluster Tools

v2.6.8

Pods ☆

Download YAML Delete

Create from YAML

Filter

State	Name	Image	Ready	Restarts	IP	Node	Age
Namespace: zabbix							
Completed	myzbx-zabbix-init-db-schema-n2nz6	zabbix/zabbix-server-pgsql:ubuntu-6.2.3	0/1	0	10.42.213.26	ca-rke2-pool1-29091014-qqzv	15 mins
Running	myzbx-zabbix-postgresql-0	postgres:14	1/1	0	10.42.184.24	ca-rke2-pool1-29091014-b57bb	15 mins
Running	myzbx-zabbix-zabbix-server-847dcd9f54-4rsqz	zabbix/zabbix-server-pgsql:ubuntu-6.2.3 + 1 more	2/2	0	10.42.184.23	ca-rke2-pool1-29091014-b57bb	15 mins
Running	myzbx-zabbix-zabbix-server-847dcd9f54-r5k7s	zabbix/zabbix-server-pgsql:ubuntu-6.2.3 + 1 more	2/2	0	10.42.213.24	ca-rke2-pool1-29091014-qqzv	15 mins
Running	myzbx-zabbix-zabbix-web-cc76fbc88-k695g	zabbix/zabbix-web-nginx-pgsql:ubuntu-6.2.3	1/1	0	10.42.184.22	ca-rke2-pool1-29091014-b57bb	15 mins
Running	myzbx-zabbix-zabbix-web-cc76fbc88-ms744	zabbix/zabbix-web-nginx-pgsql:ubuntu-6.2.3	1/1	0	10.42.213.25	ca-rke2-pool1-29091014-qqzv	15 mins
Running	myzbx-zabbix-zabbix-web-service-7f666c54f8-8pzw2	zabbix/zabbix-web-service:ubuntu-6.2.3	1/1	0	10.42.184.21	ca-rke2-pool1-29091014-b57bb	15 mins

```
~/OneDrive - secadm
NAME: myzbx
LAST DEPLOYED: Tue Oct 1 10:00:00 2024
NAMESPACE: zabbix
STATUS: deployed
REVISION: 1
TEST SUITE: None
NOTES:
Get the application URL by running these commands:
export POD_NAME=$(kubectl get pods --namespace zabbix -l app=myzbx -o jsonpath='{.items[0].metadata.name}')
export CONTAINER_PORT=$(kubectl get pod $POD_NAME -o jsonpath='{.spec.containers[0].ports[0].containerPort}')
echo "Visit http://10.42.184.24:8080 to access your application"
kubectl --namespace zabbix port-forward $POD_NAME 8080:8080
~/OneDrive - secadm
```





**THANK YOU!**



<https://zabbix-community.github.io/helm-zabbix/>

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[www.linkedin.com/in/christiananton1](https://www.linkedin.com/in/christiananton1)