THE LINUX FOUNDATION

OPEN SOURCE SUMMIT

NORTH AMERICA

A Cloud Native Pitch Meeting

Carson Anderson, Weave

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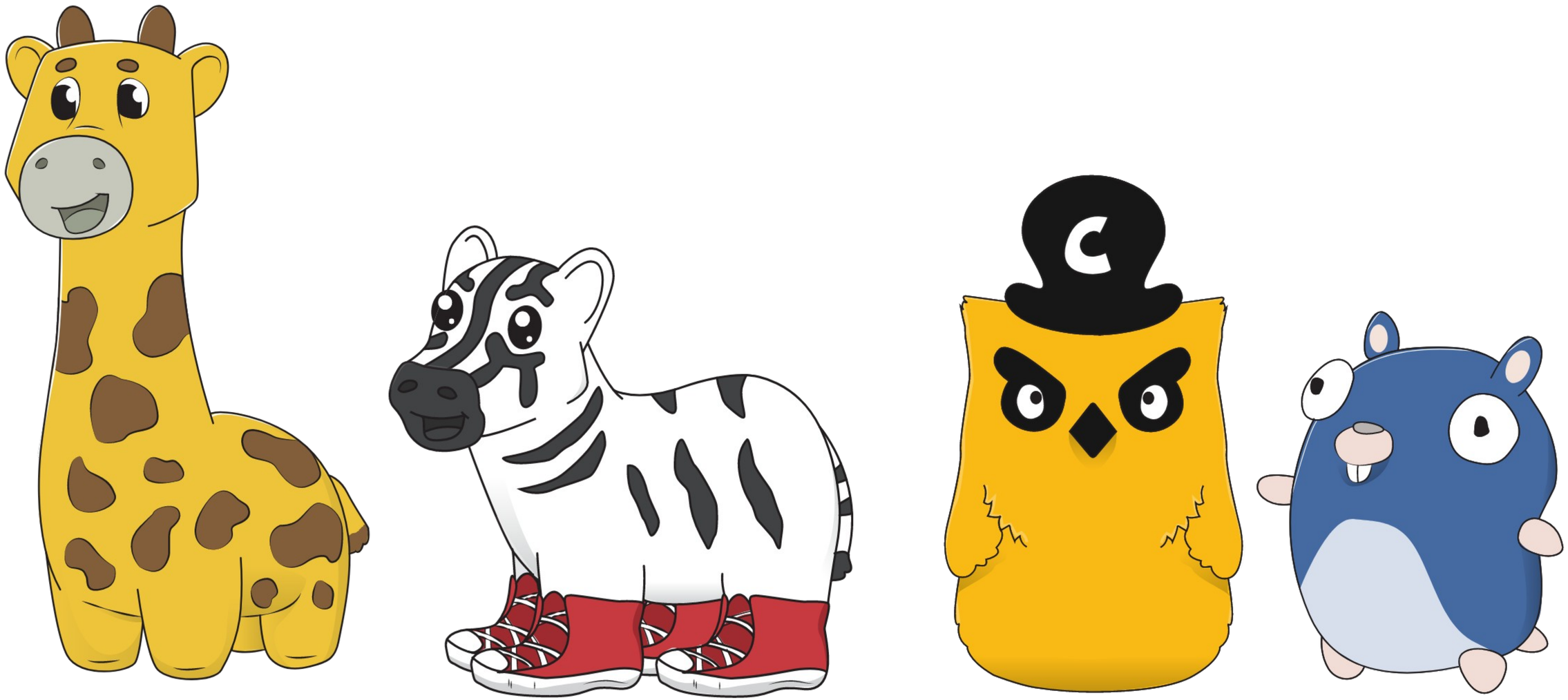
getweave.com

getweave.com



phippy.io

Cloud Native Computing Foundation

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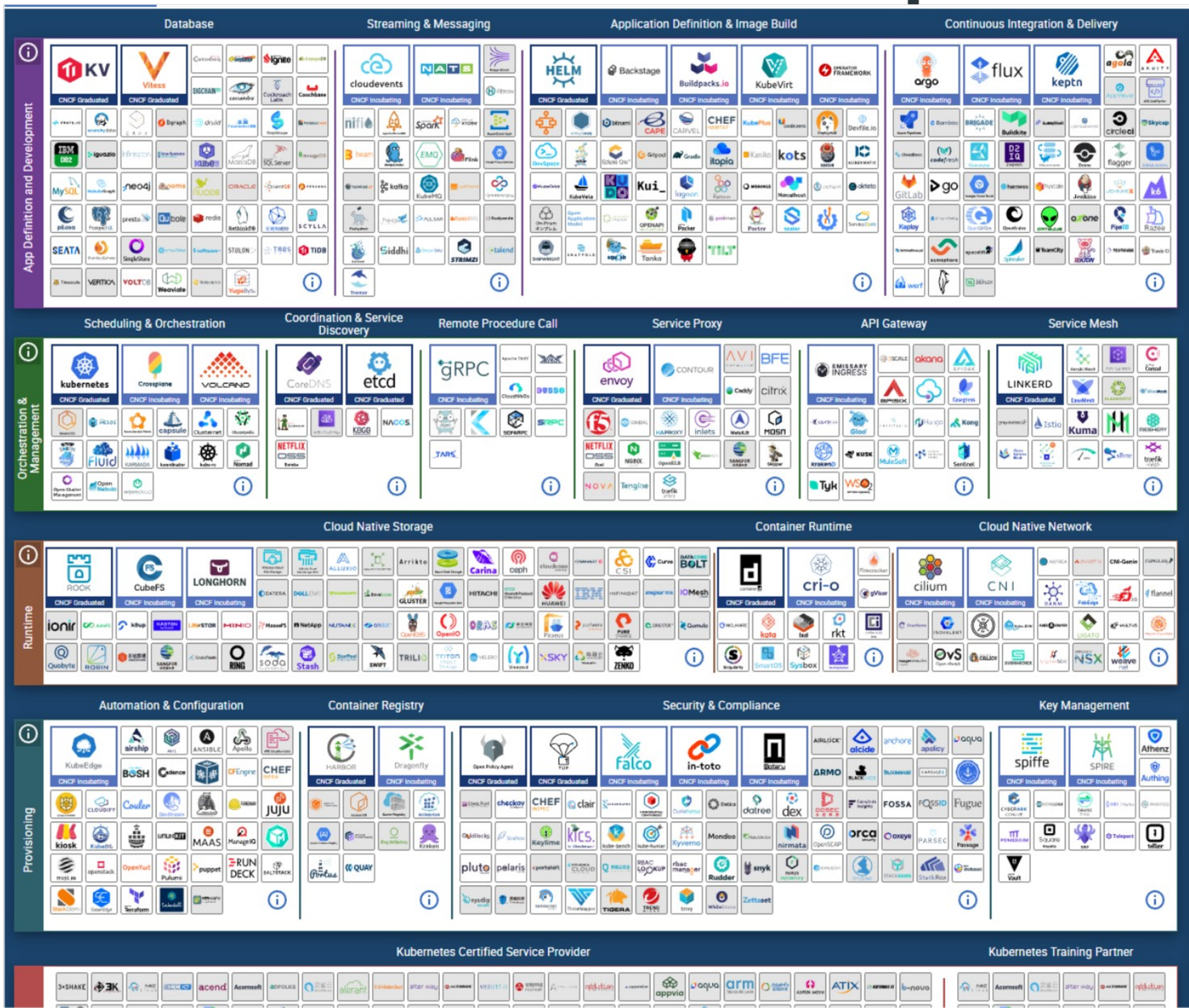
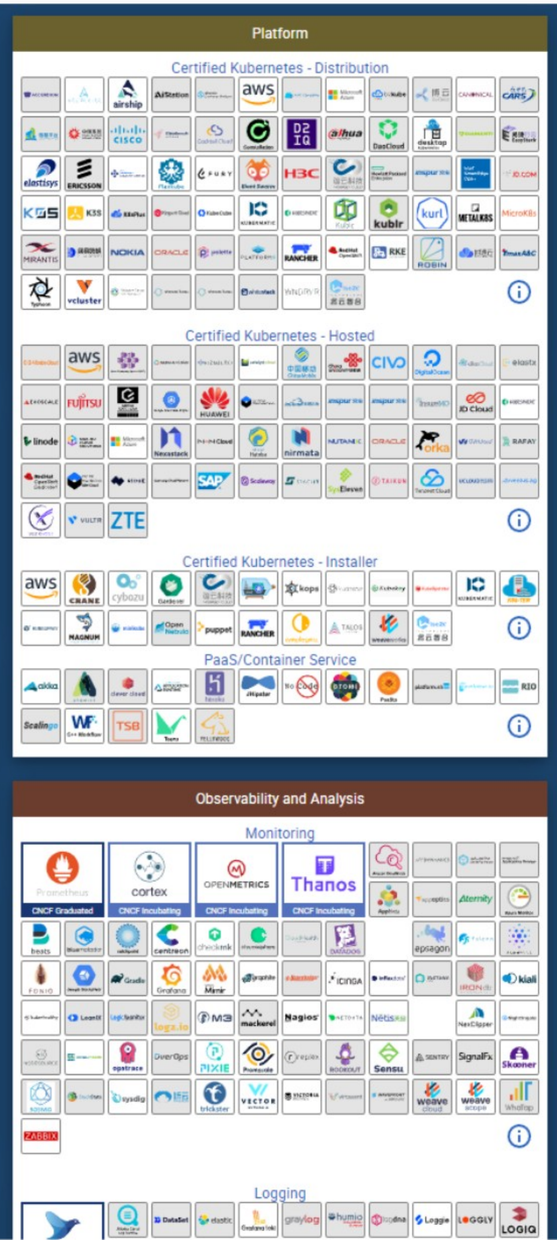
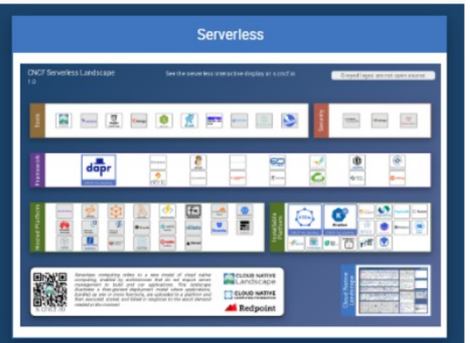
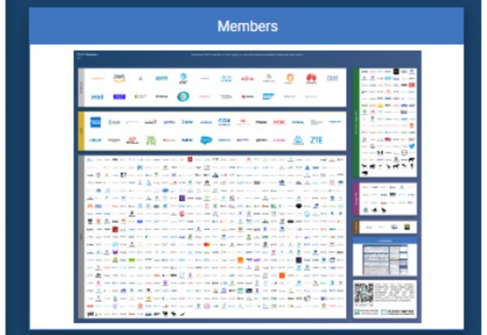
landscape.cncf.io









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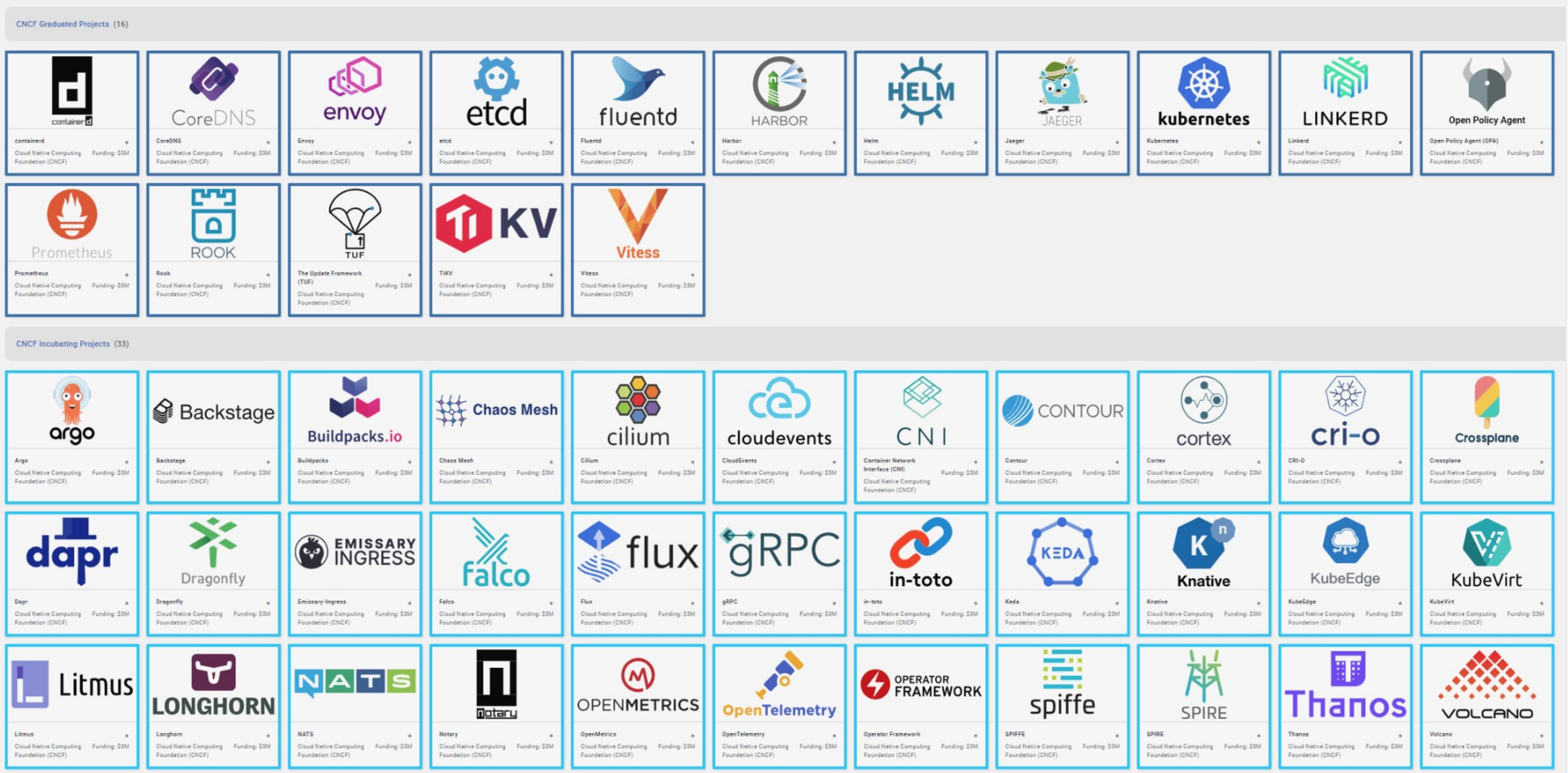

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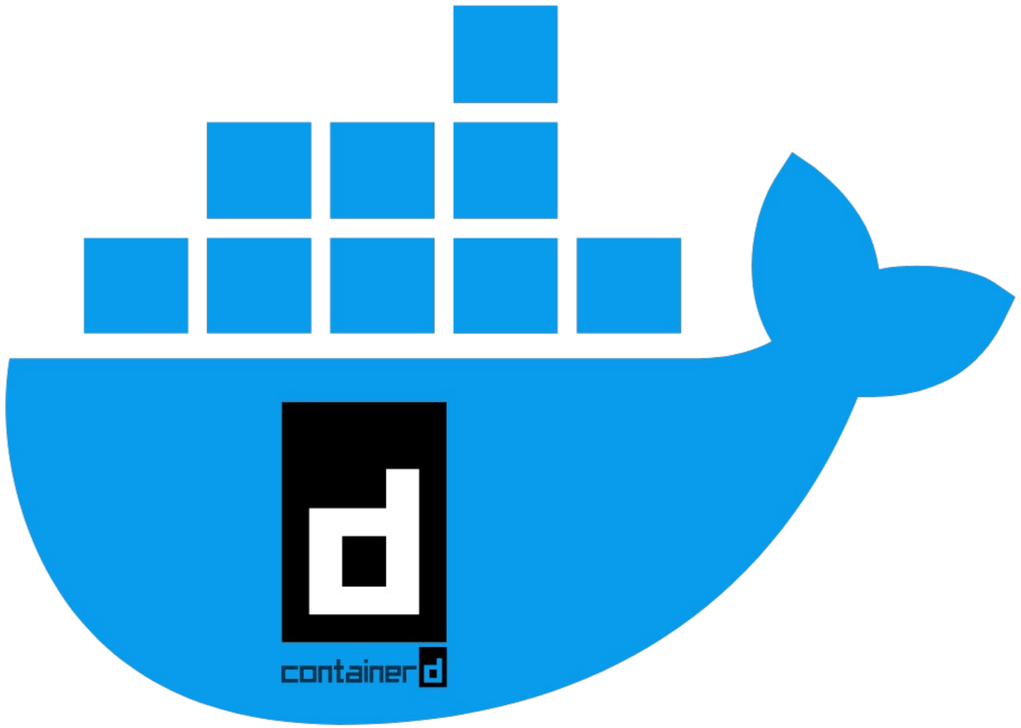
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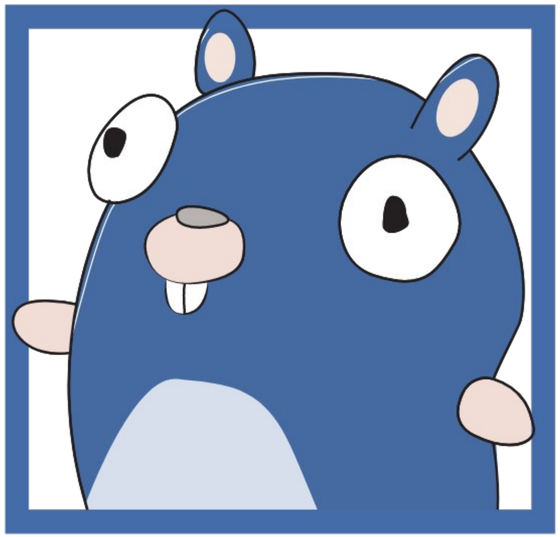

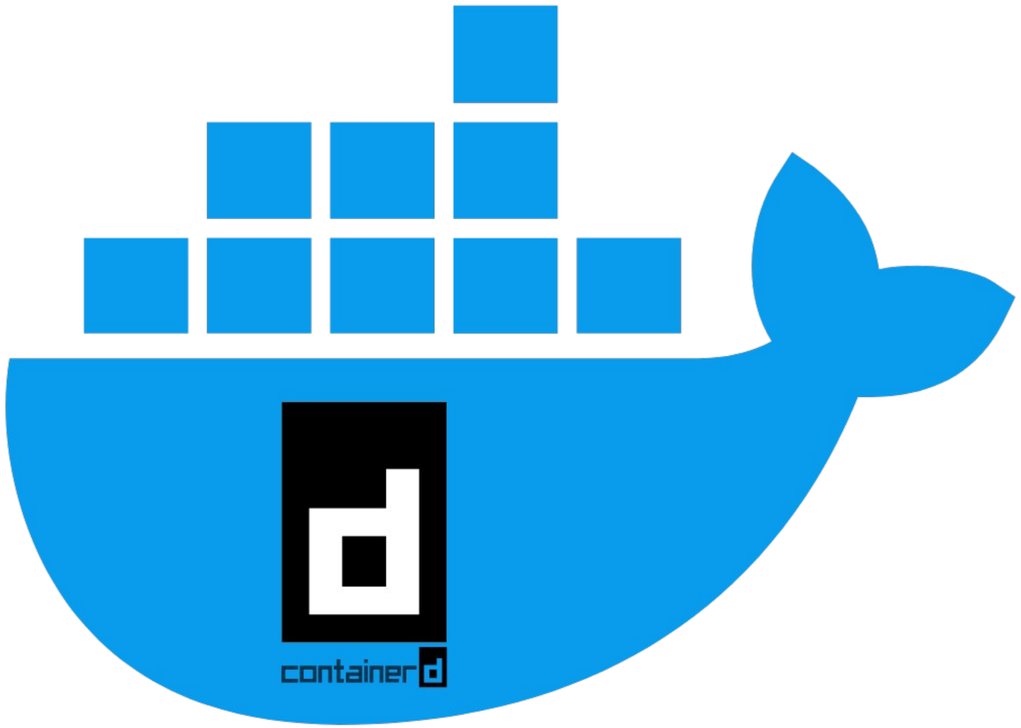
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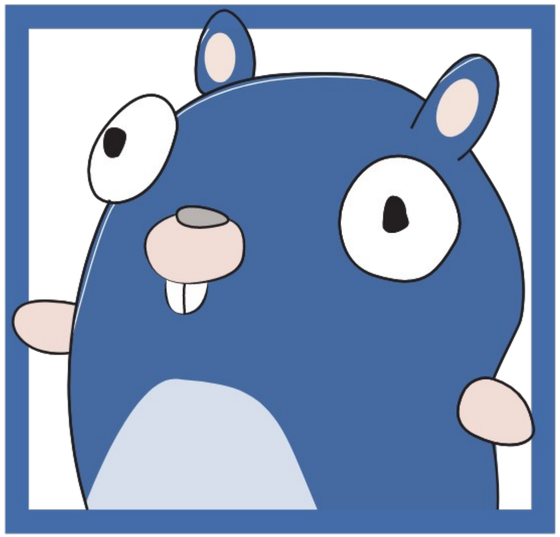

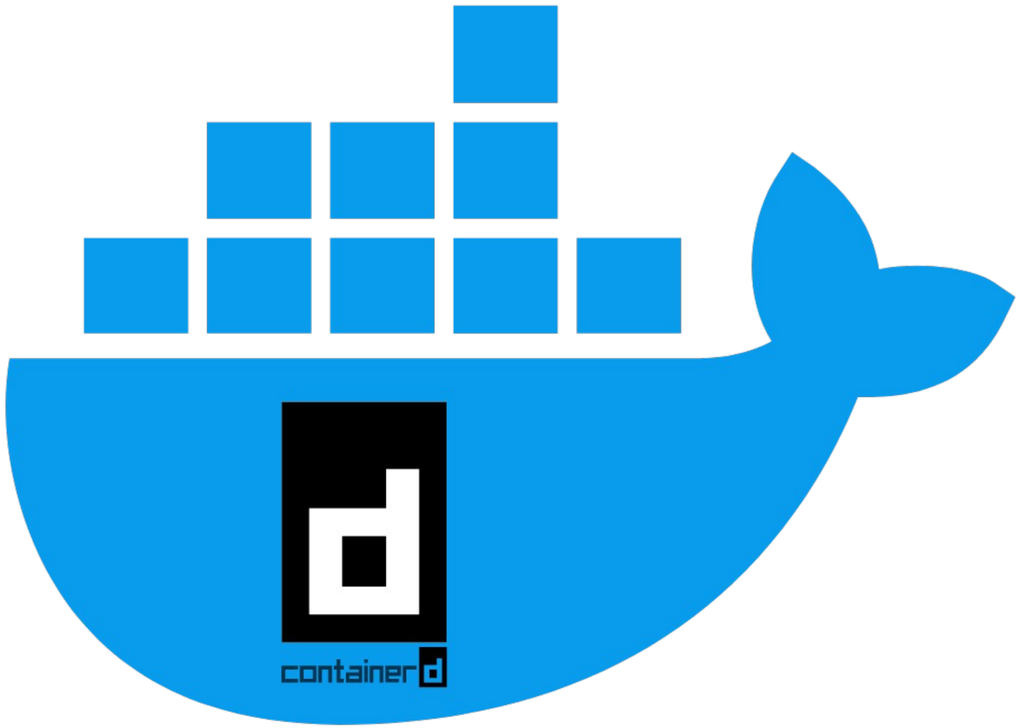
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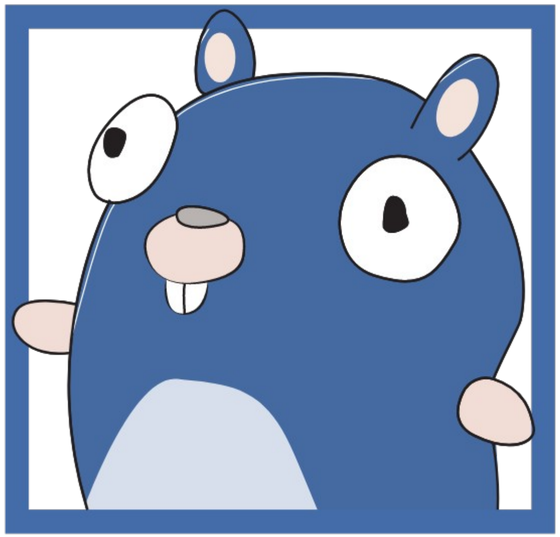

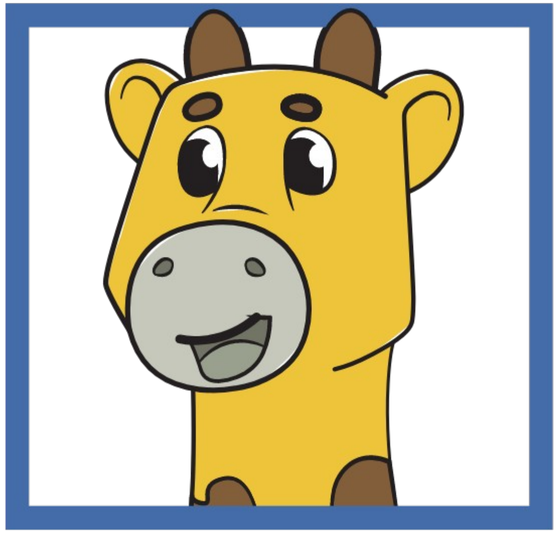

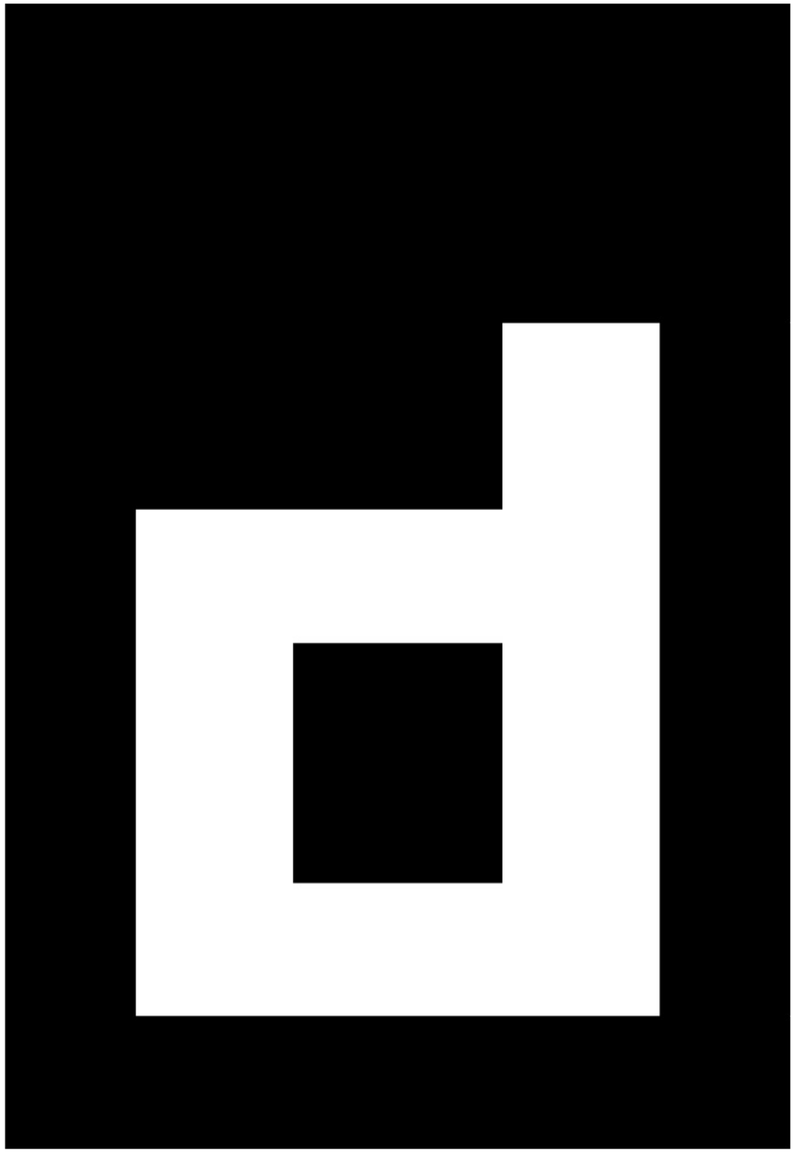

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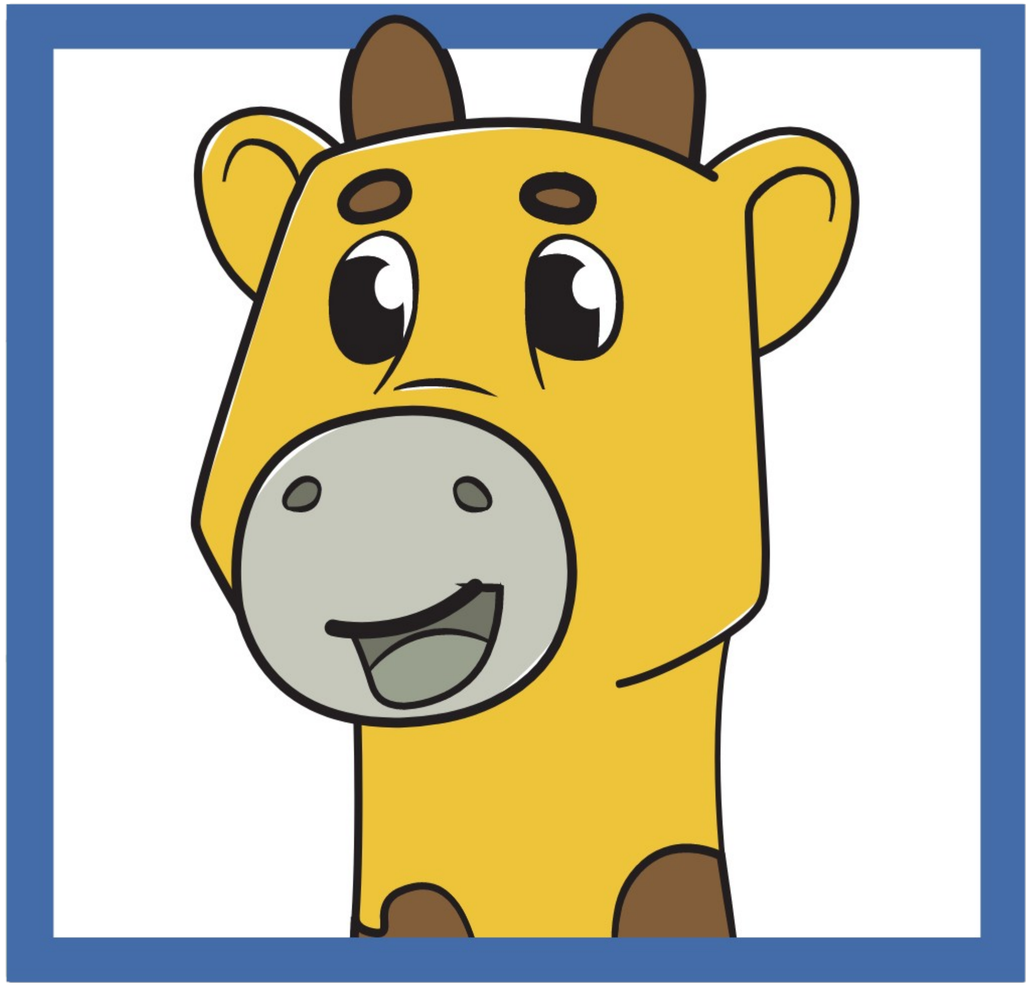

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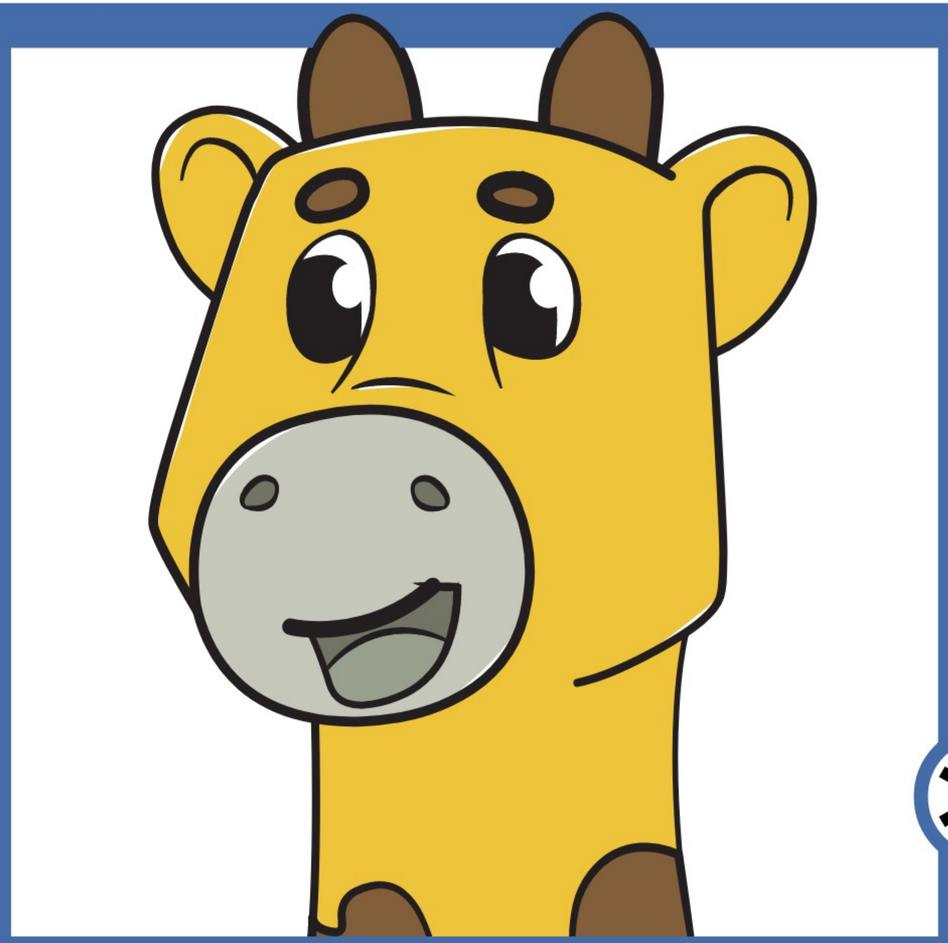

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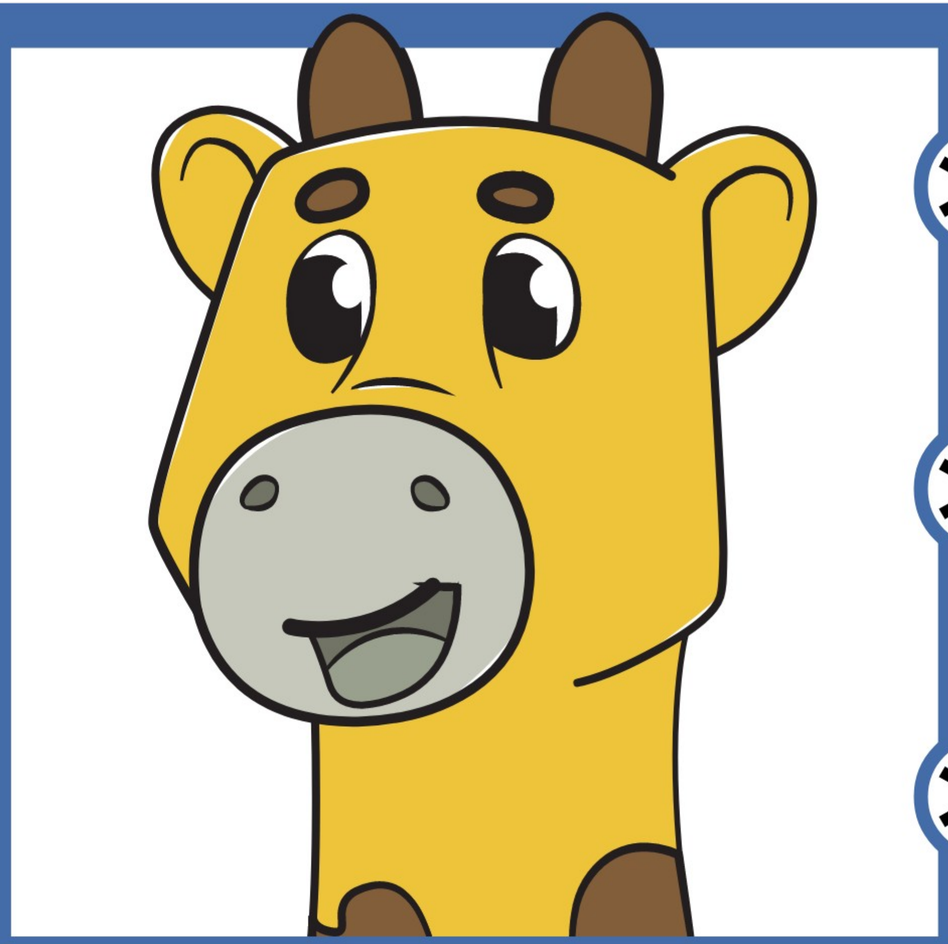

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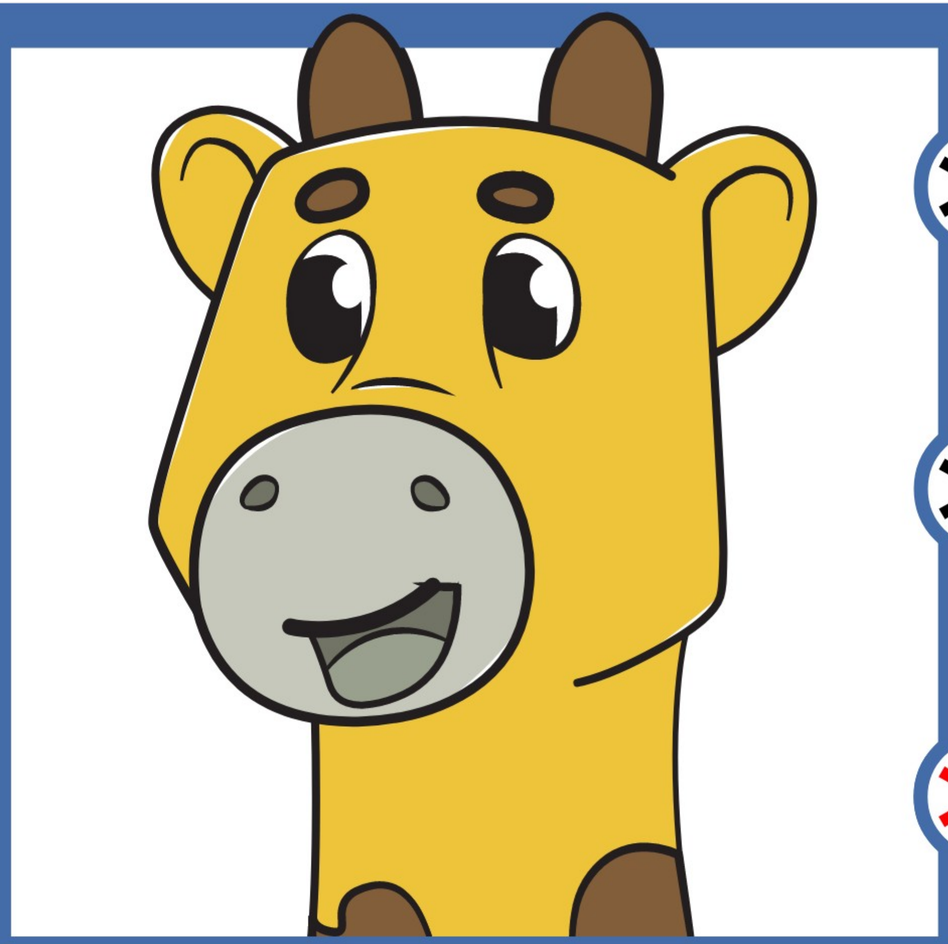

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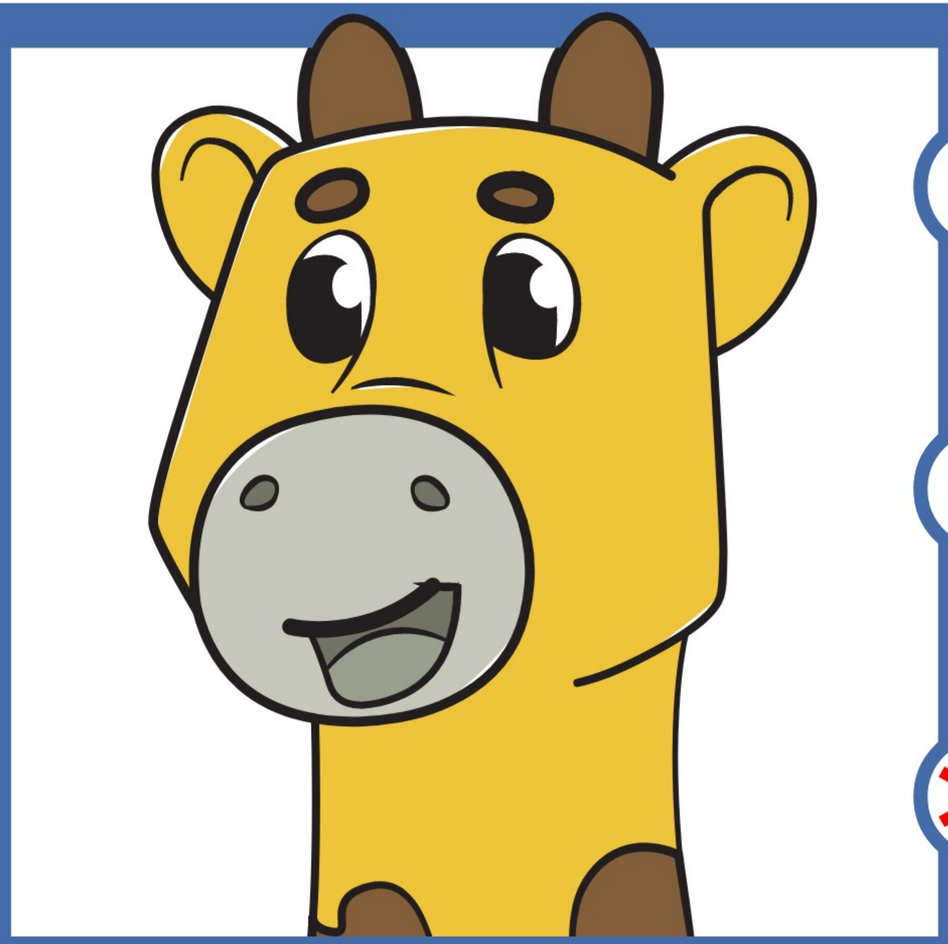

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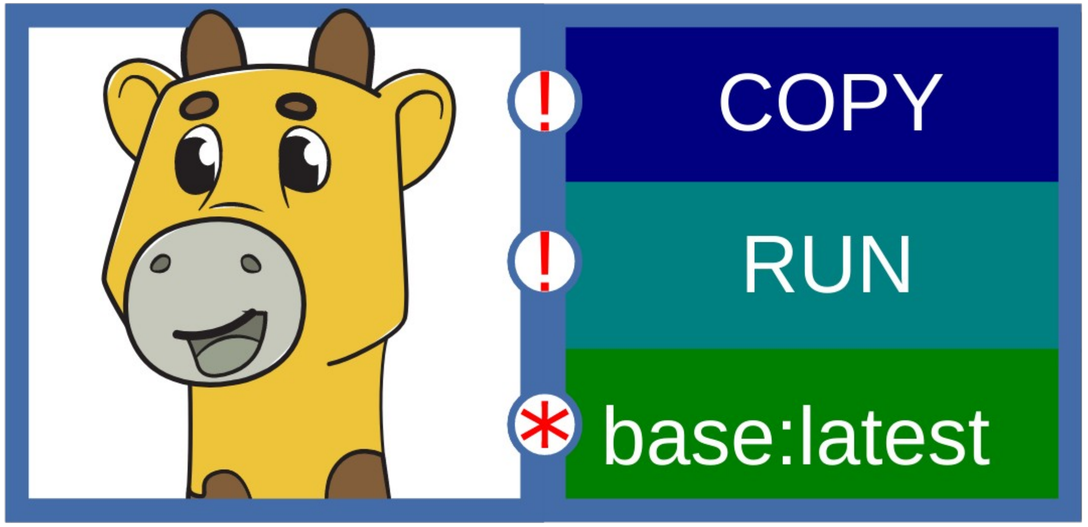

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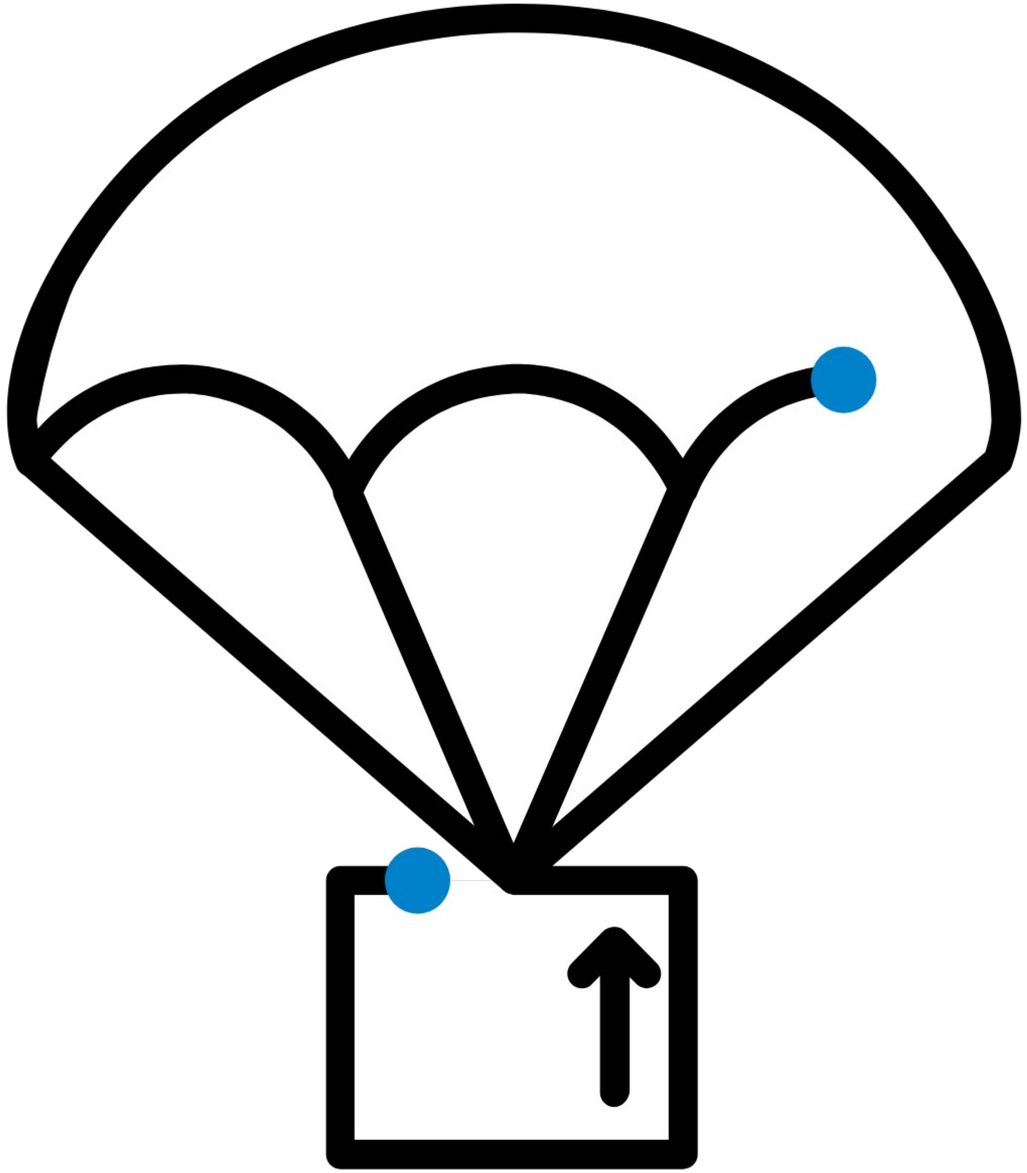

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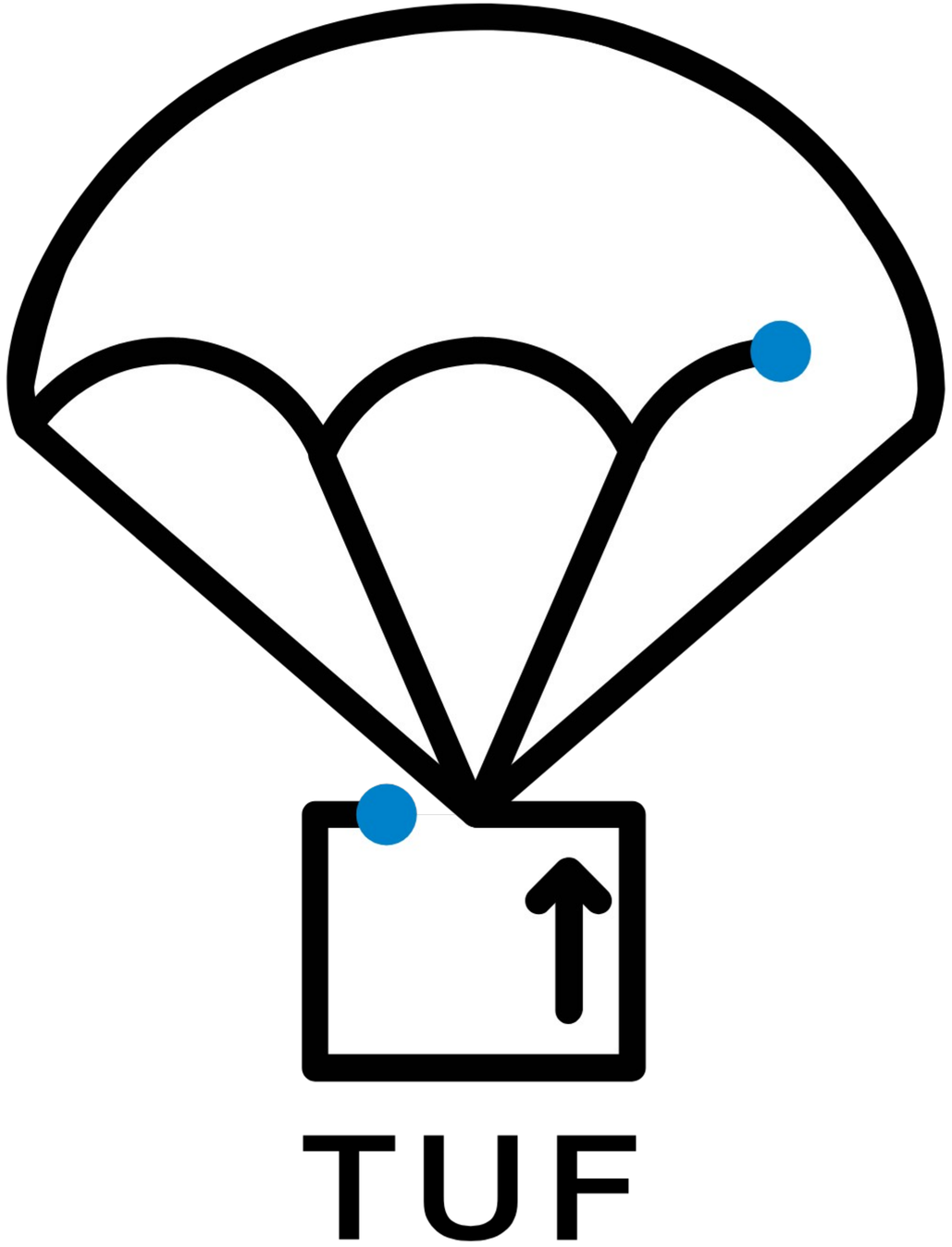
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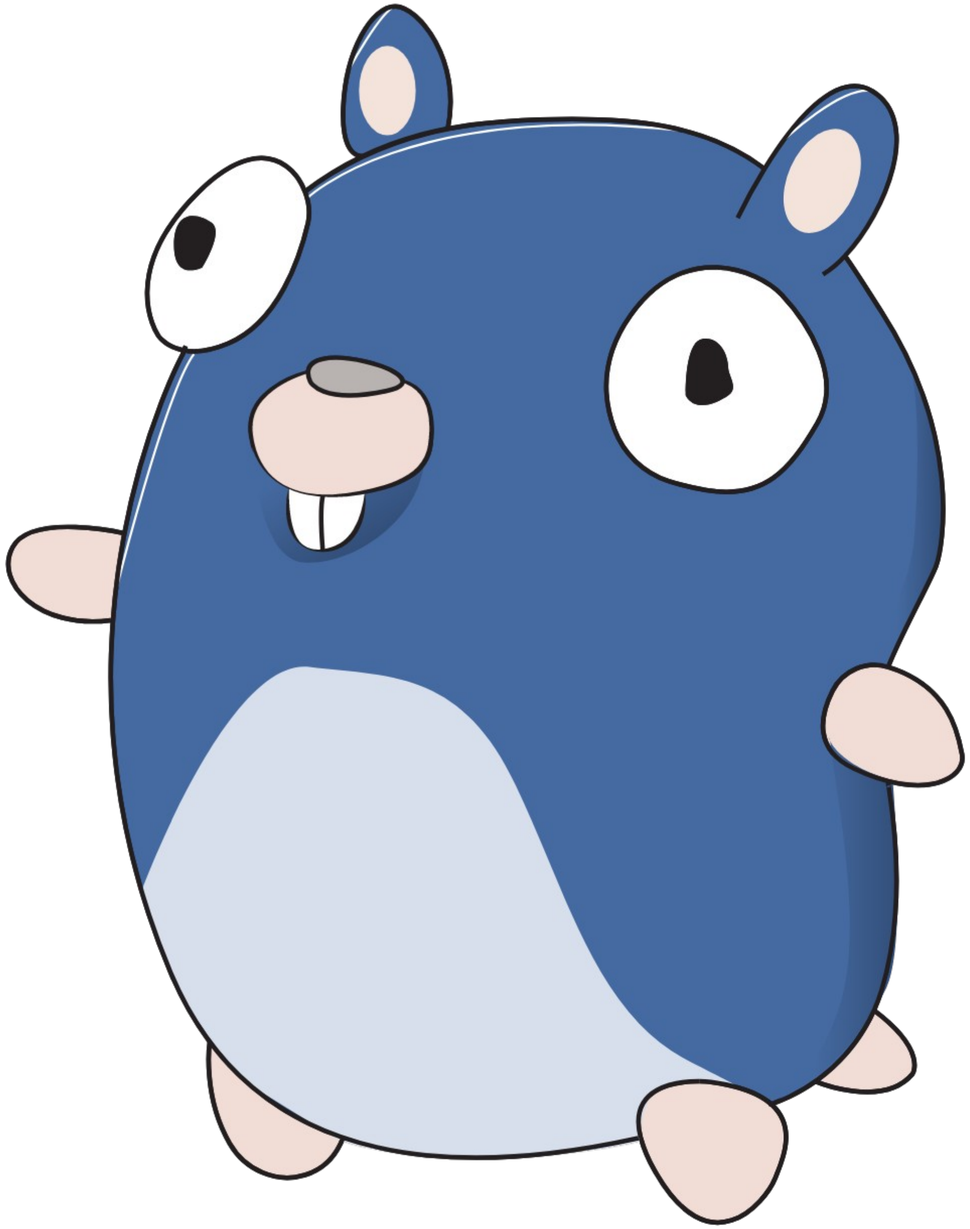

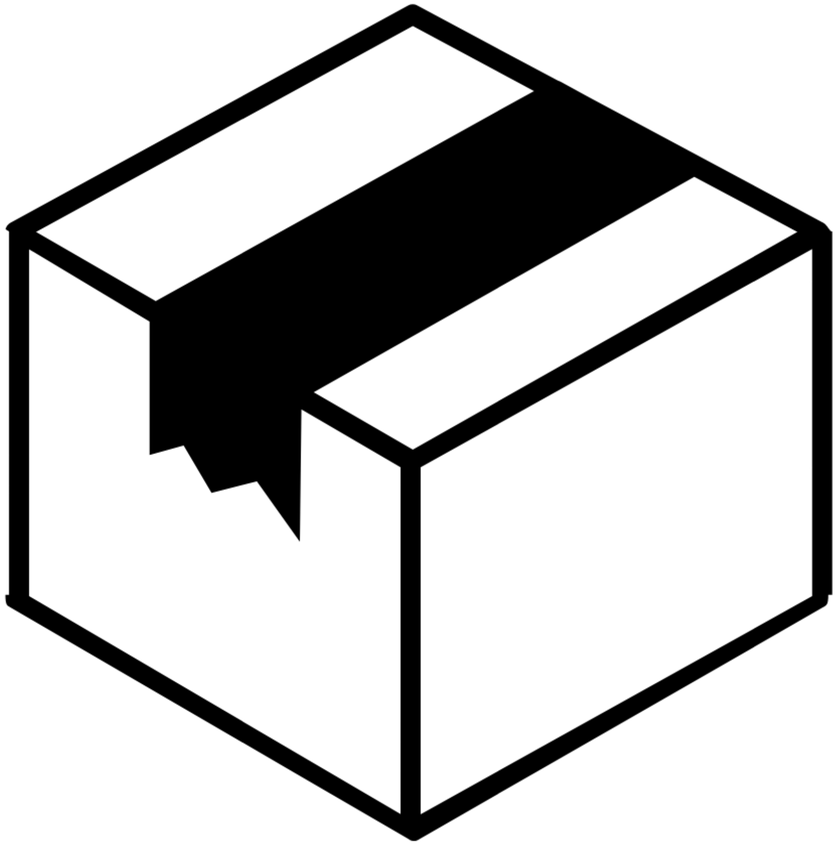

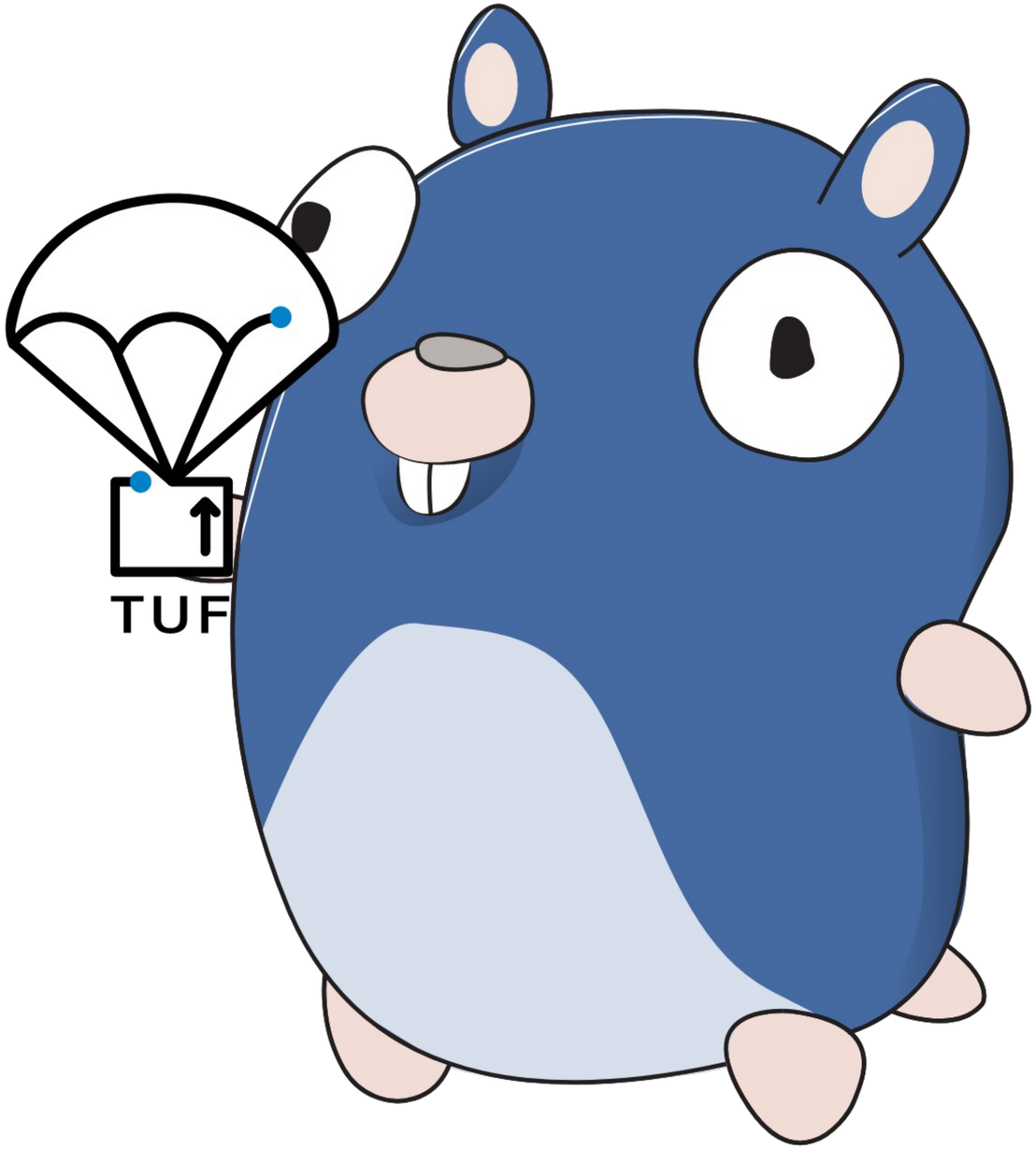
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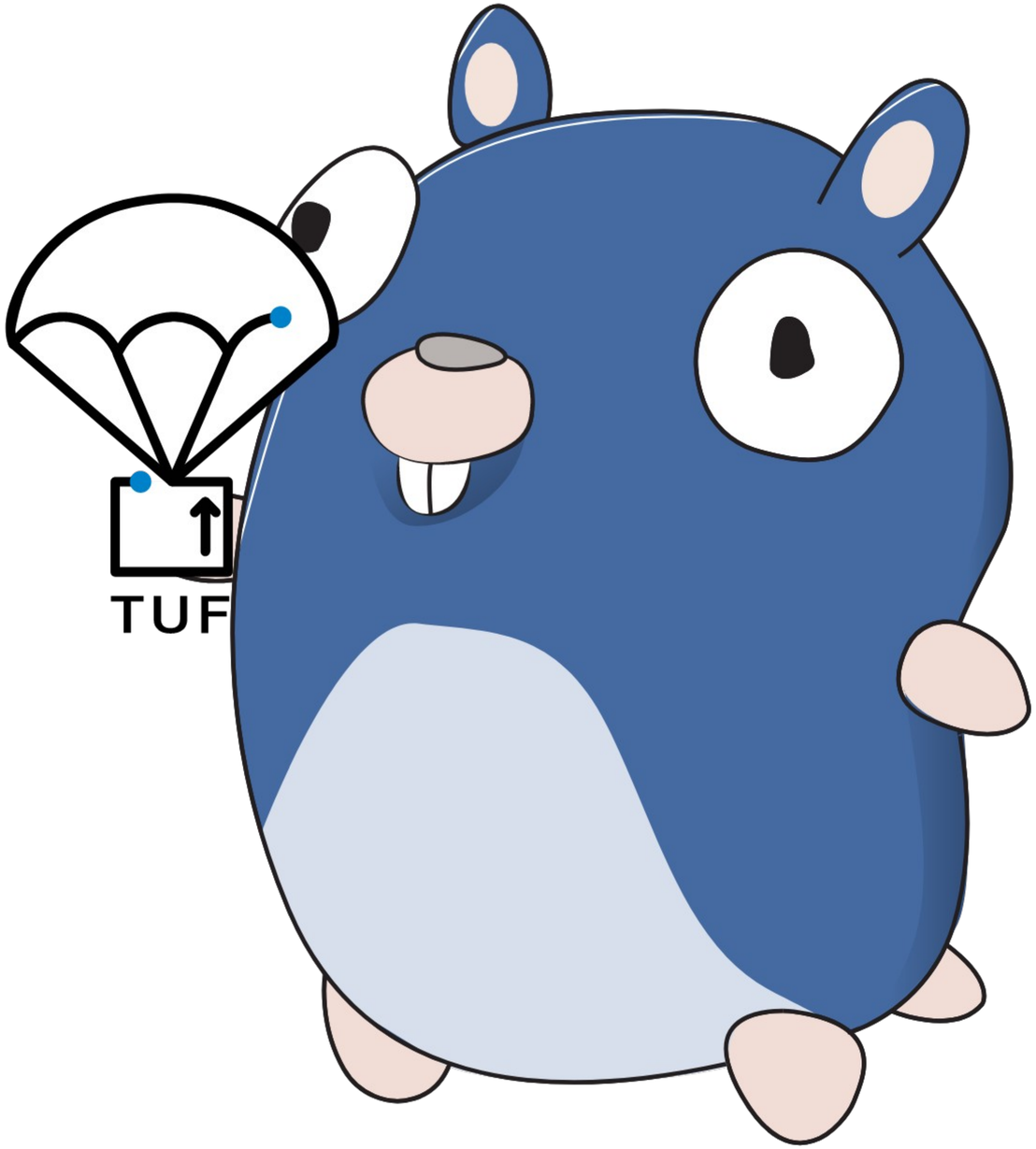
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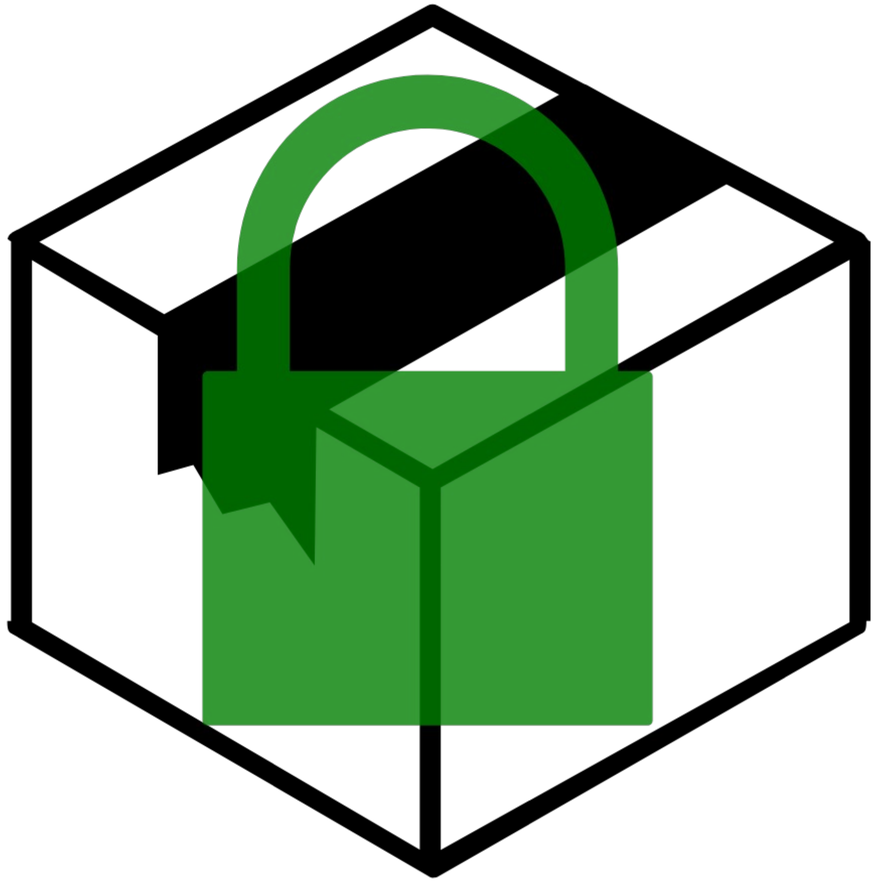

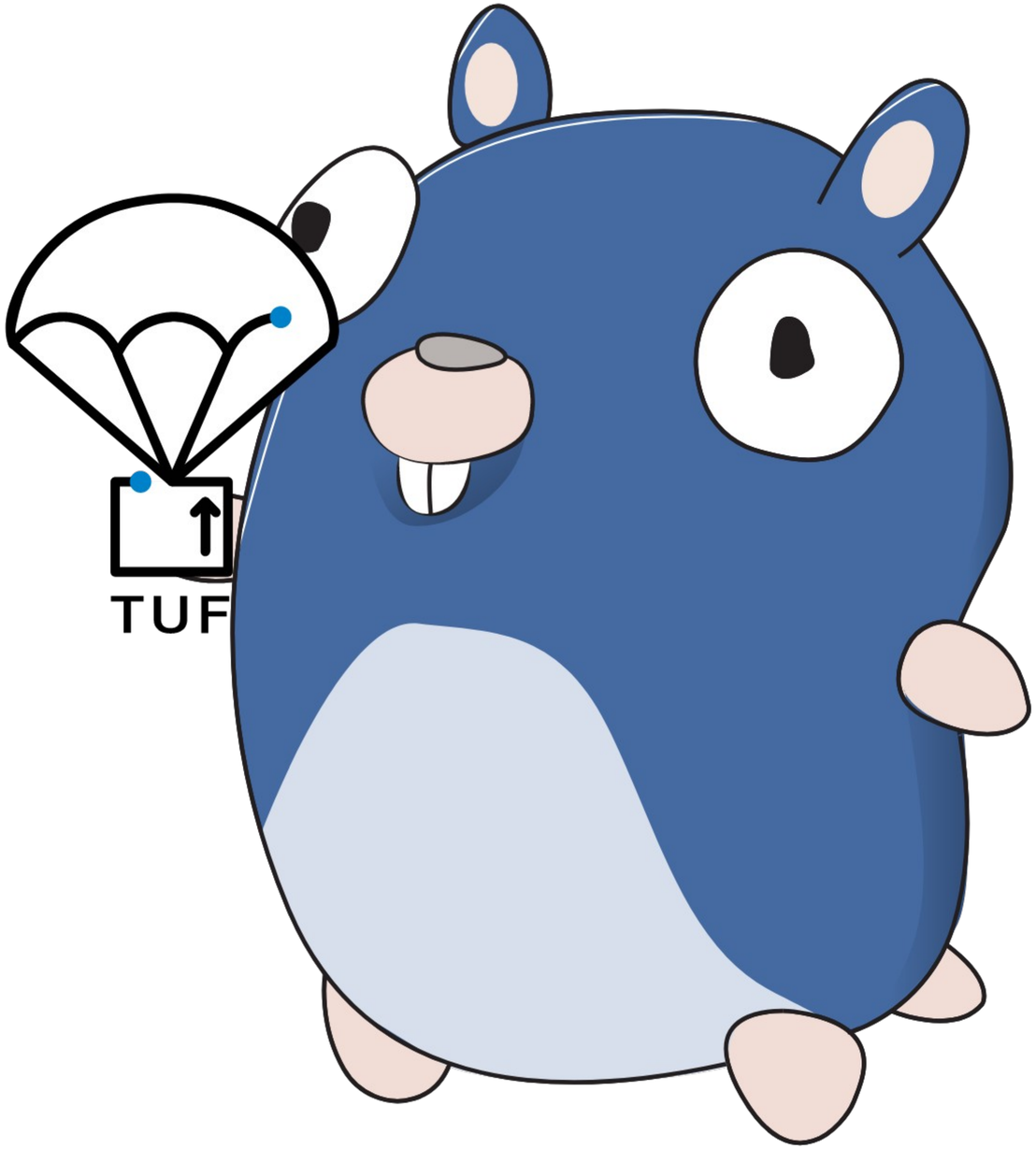
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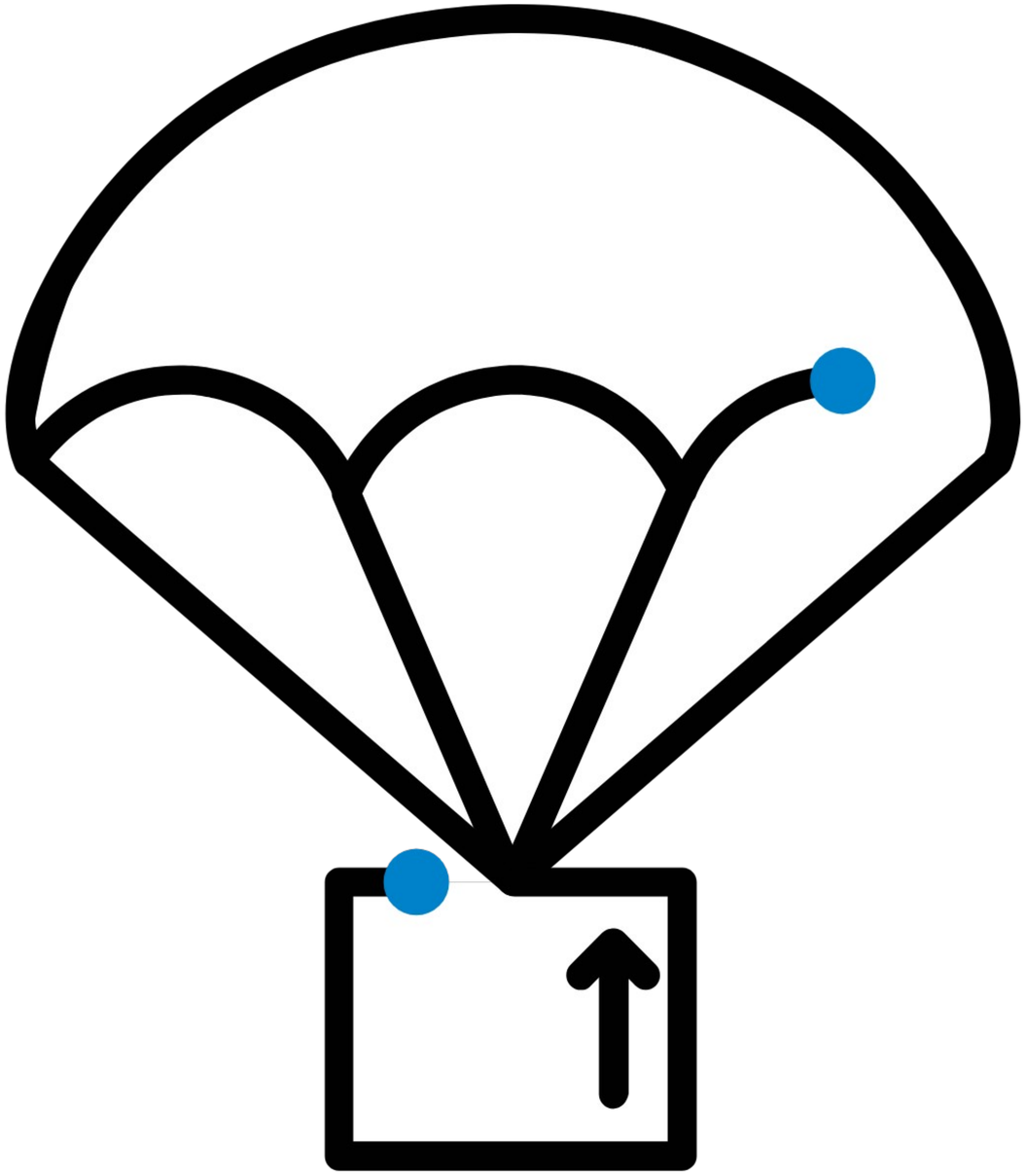

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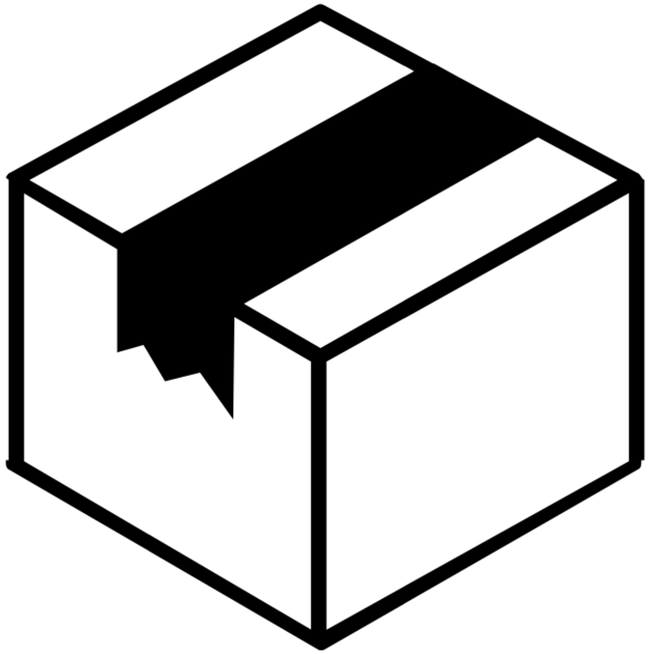

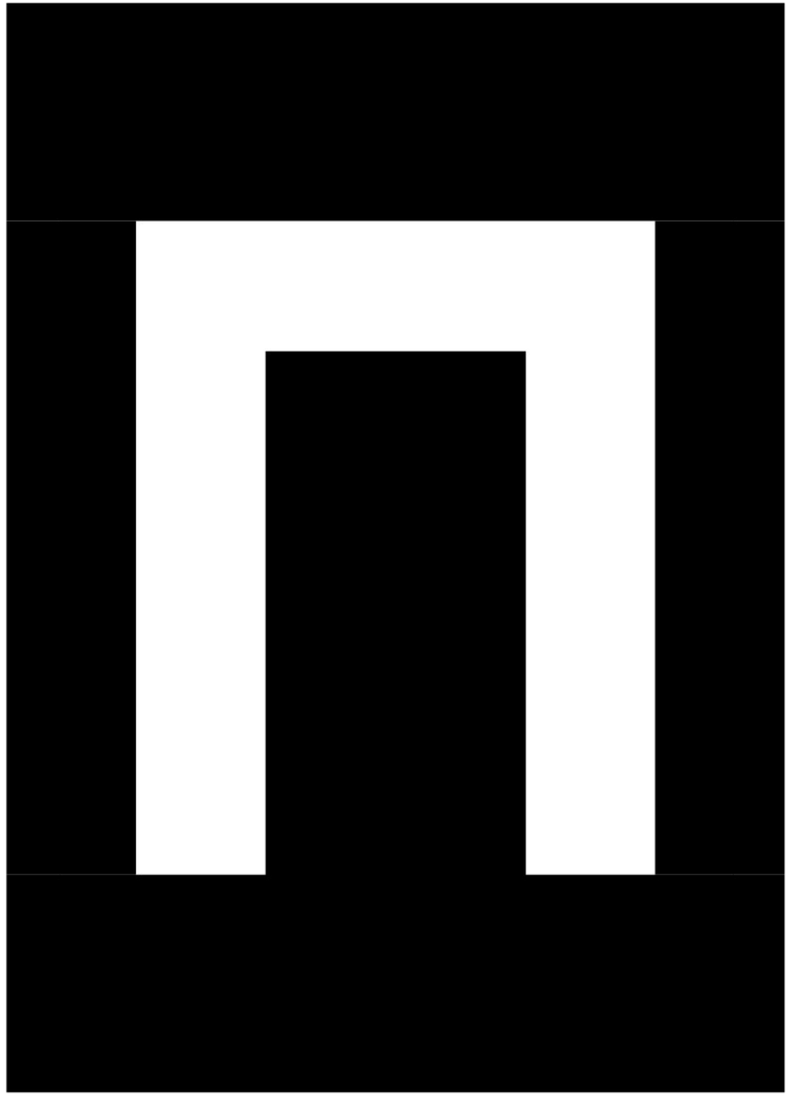

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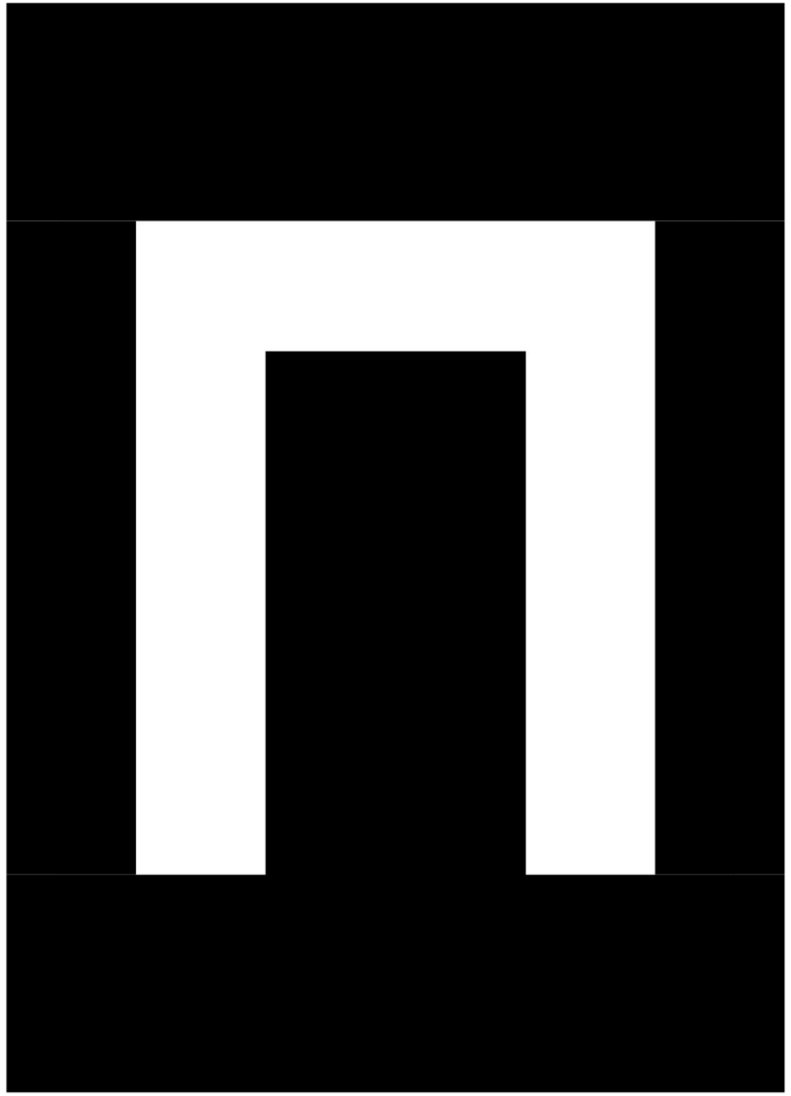

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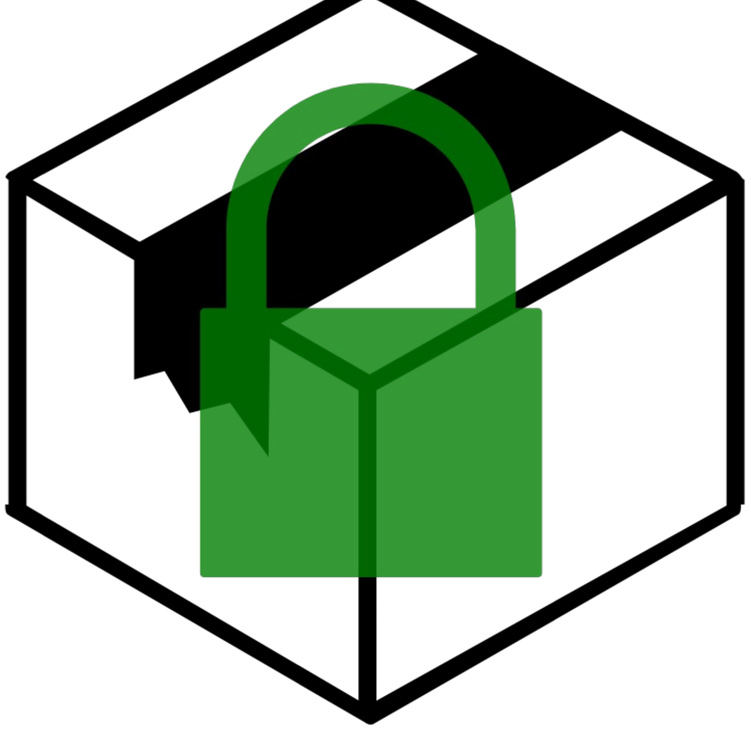

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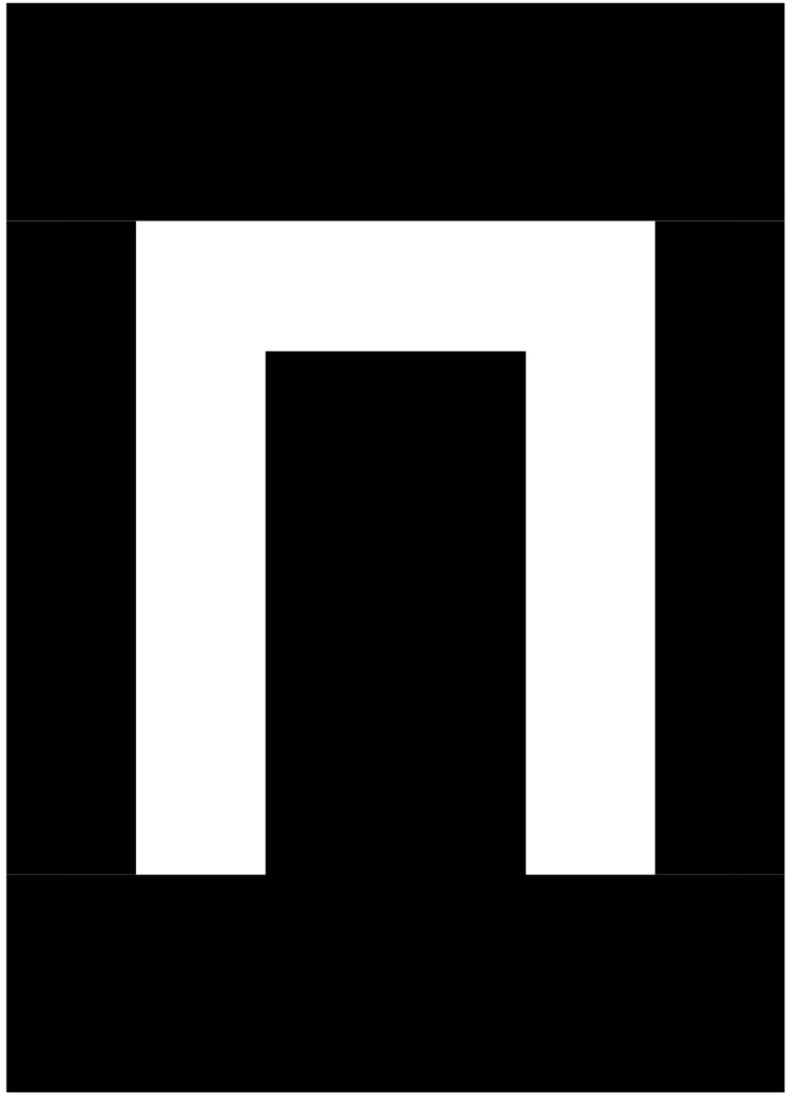

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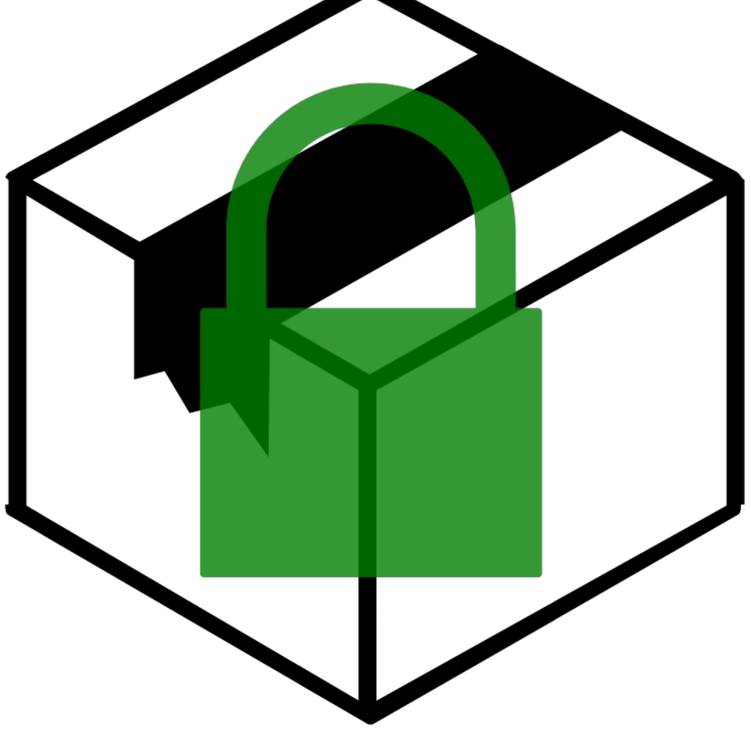

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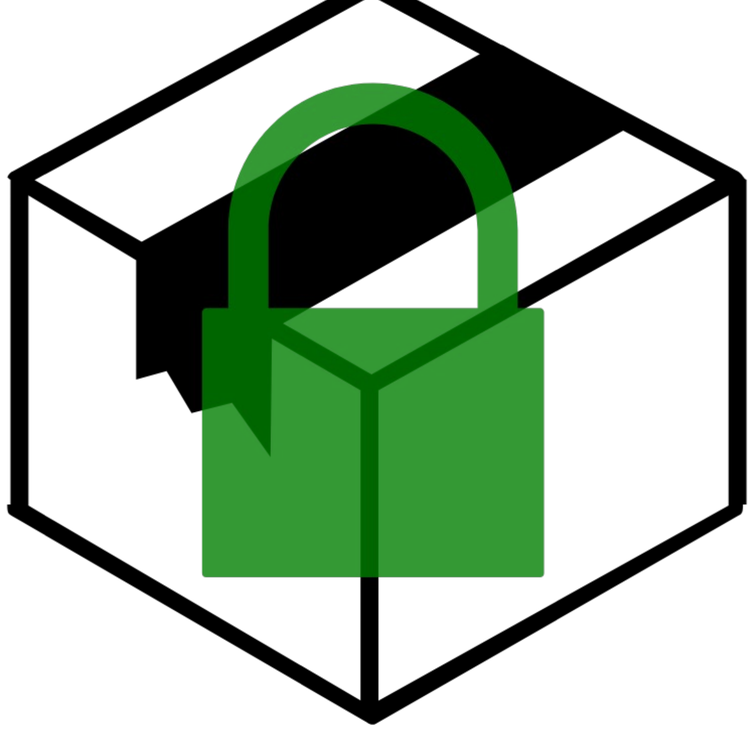

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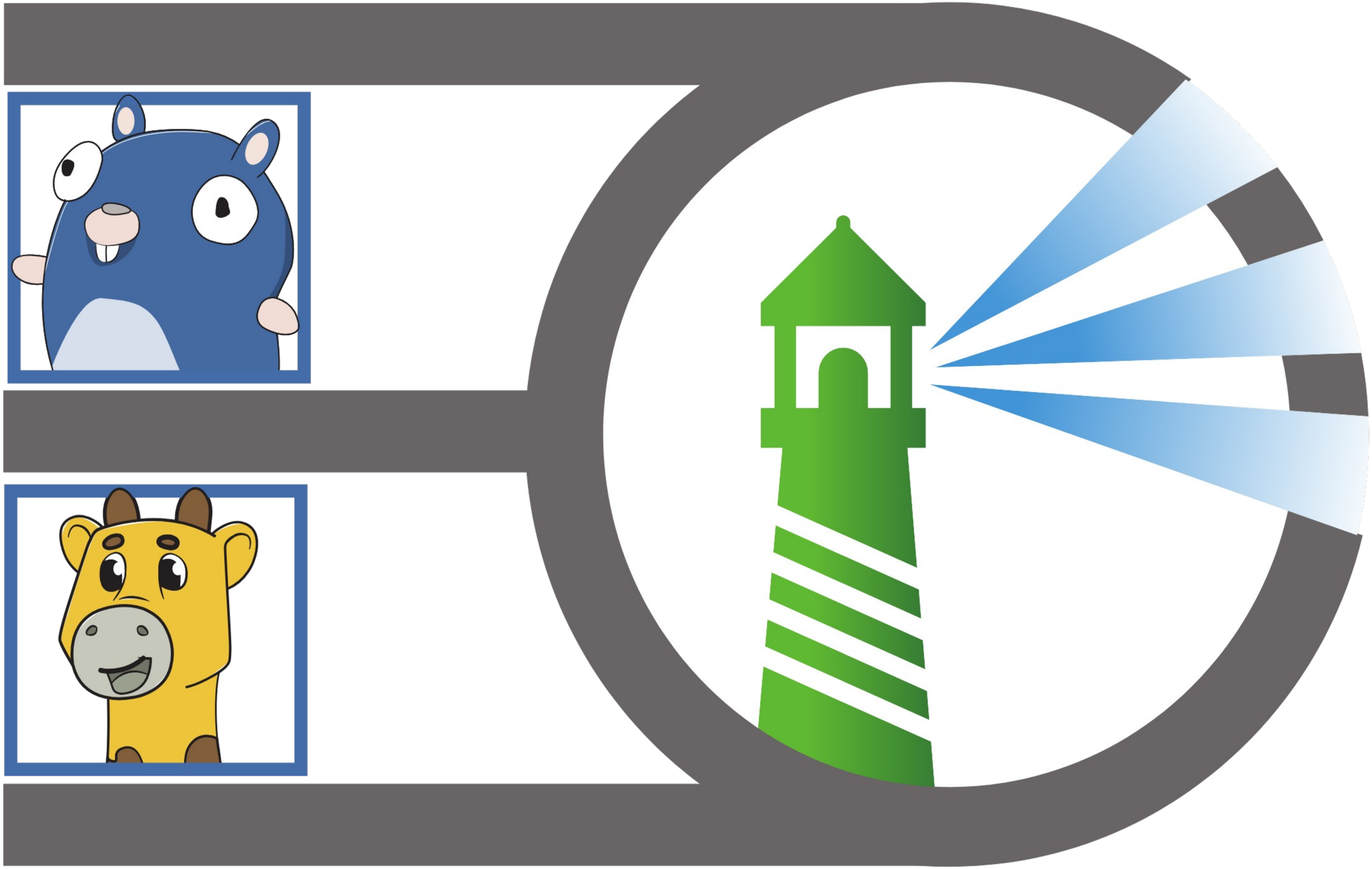

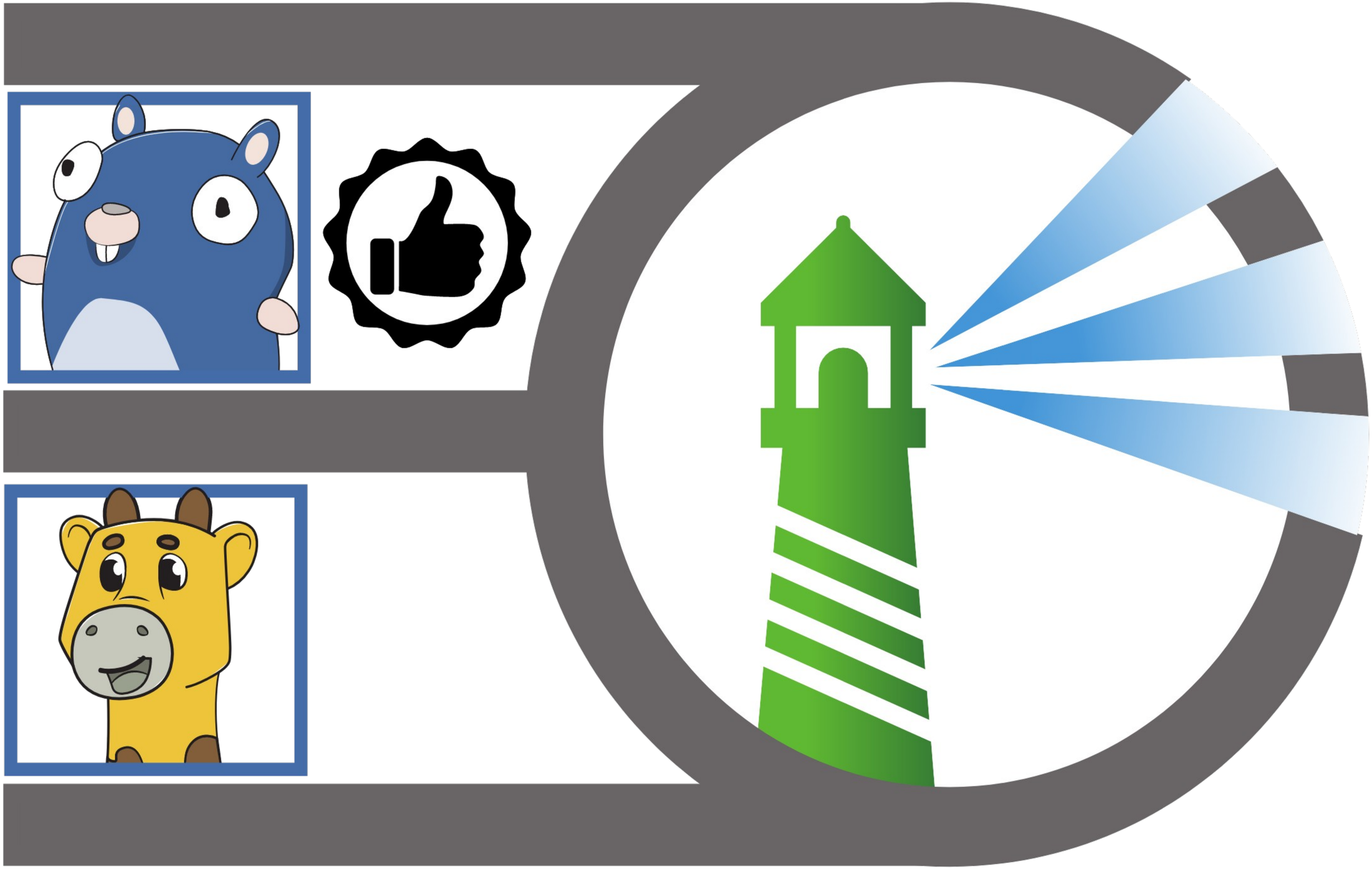

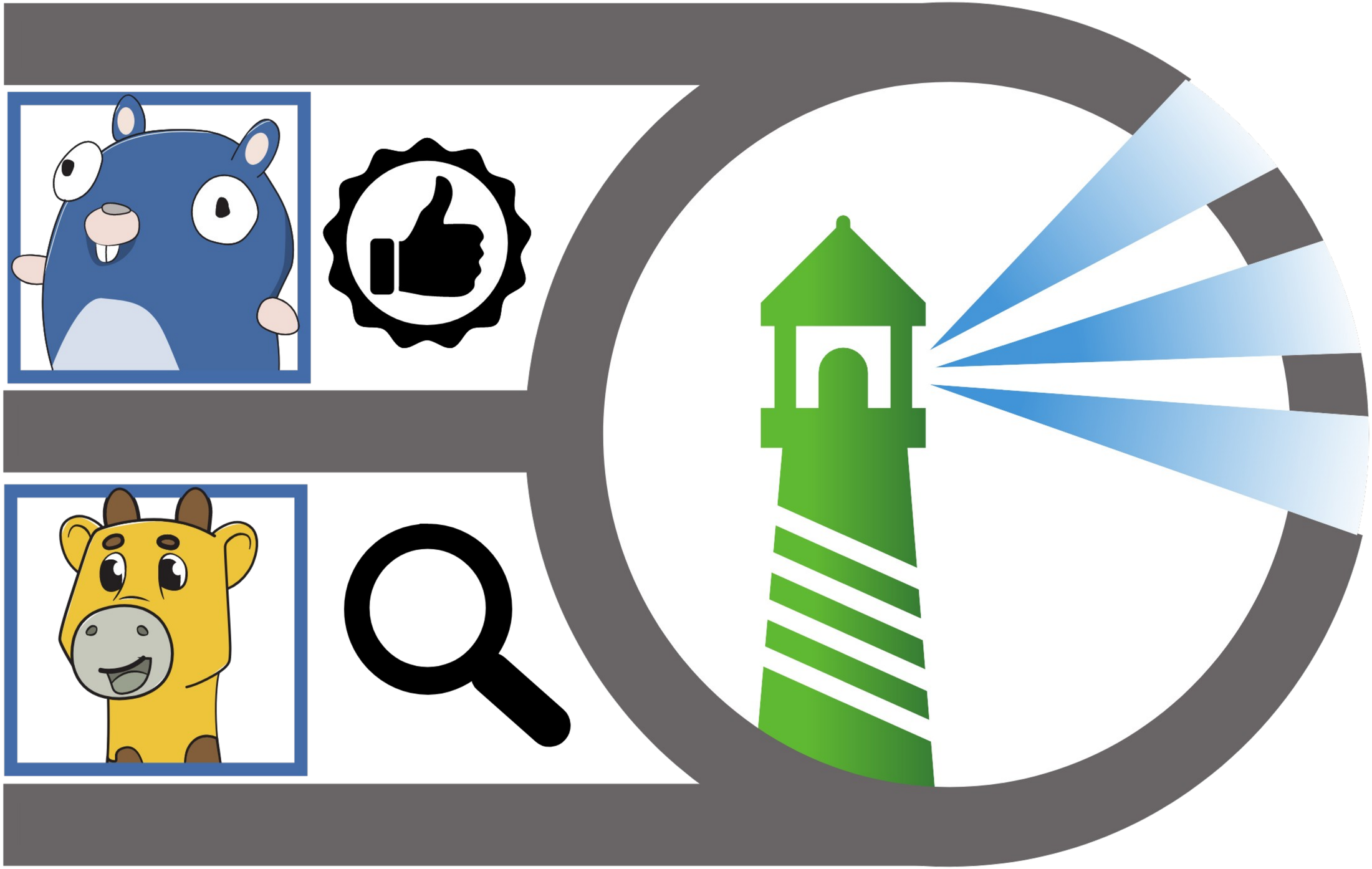

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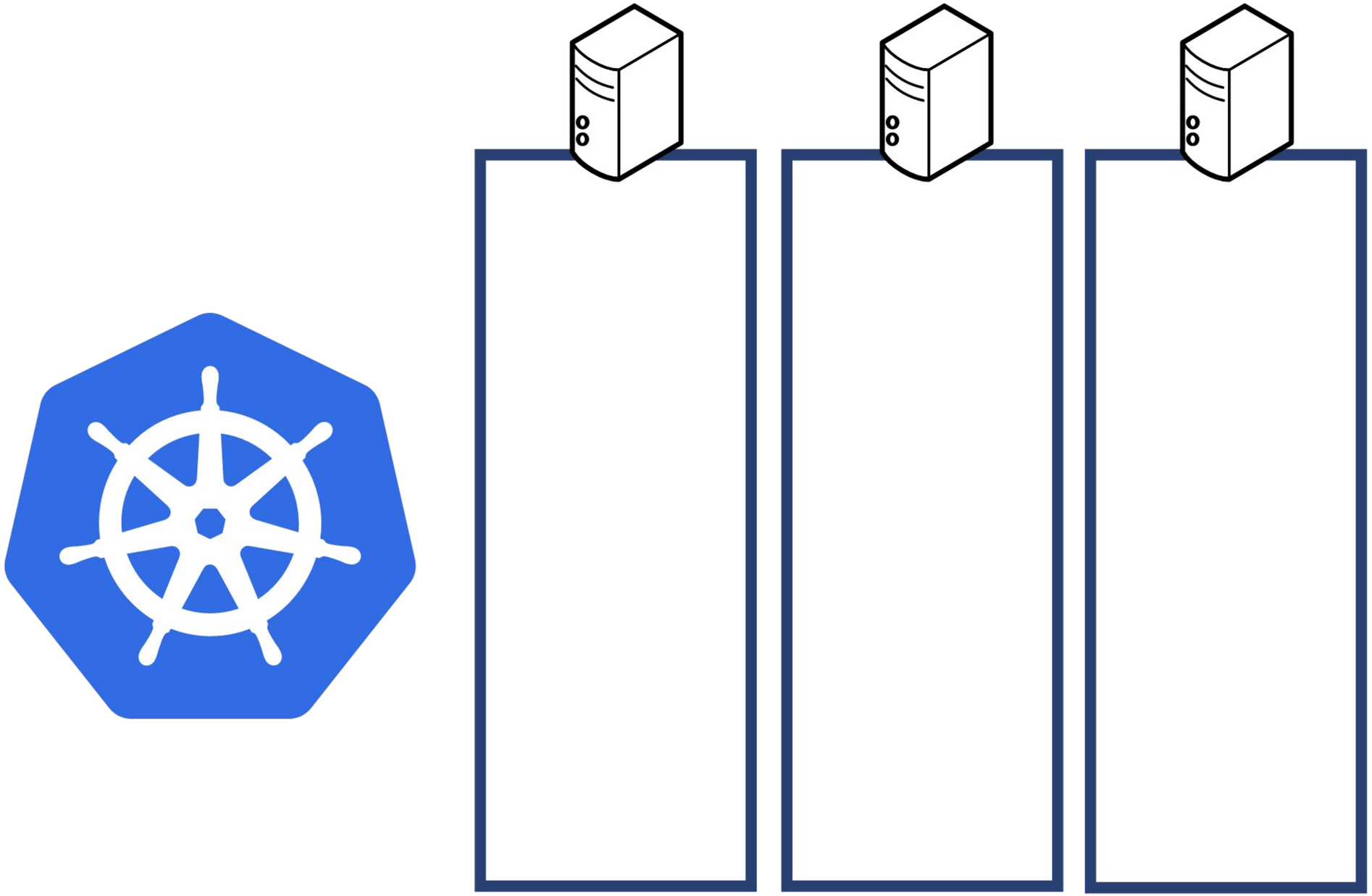

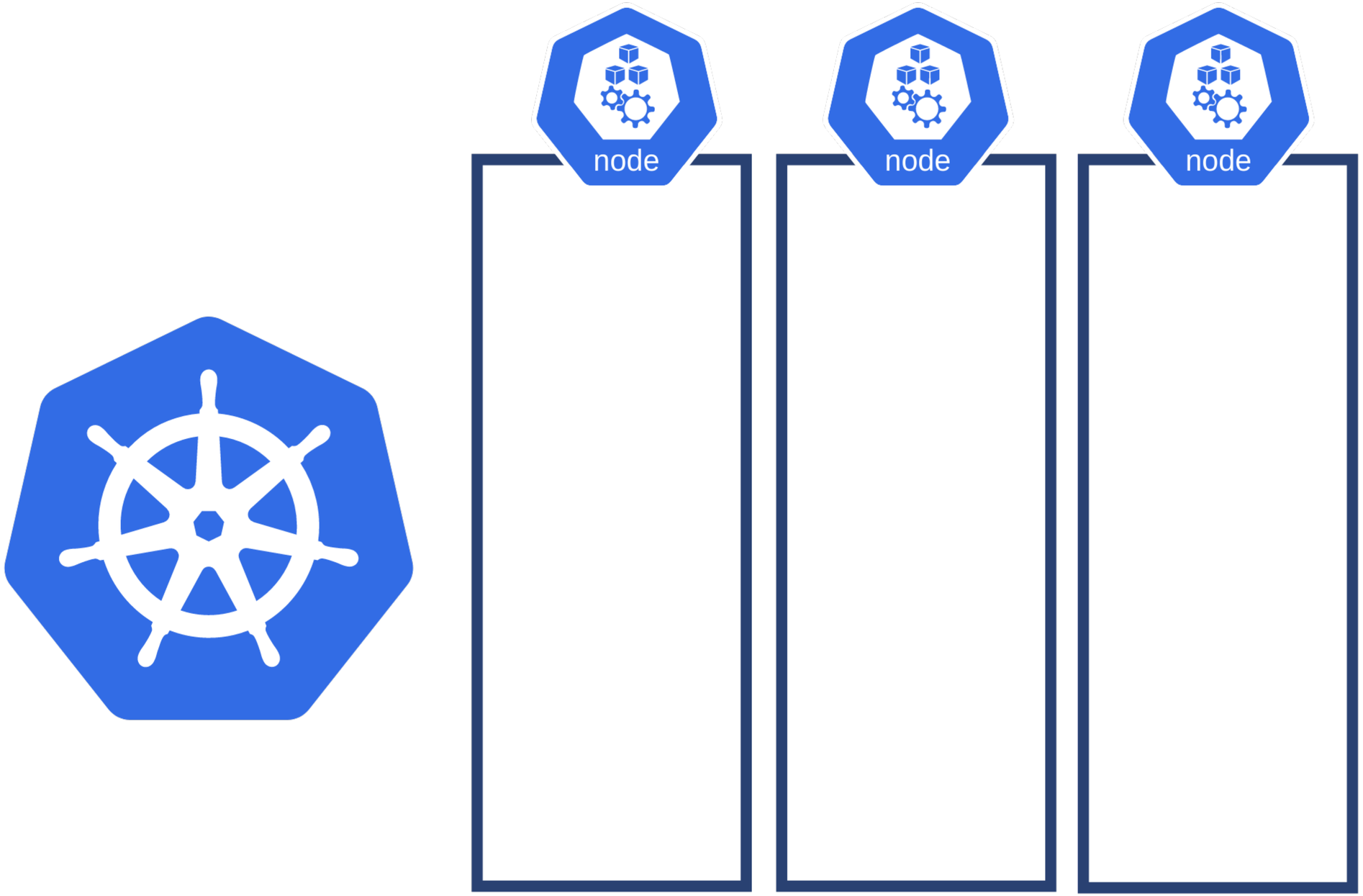
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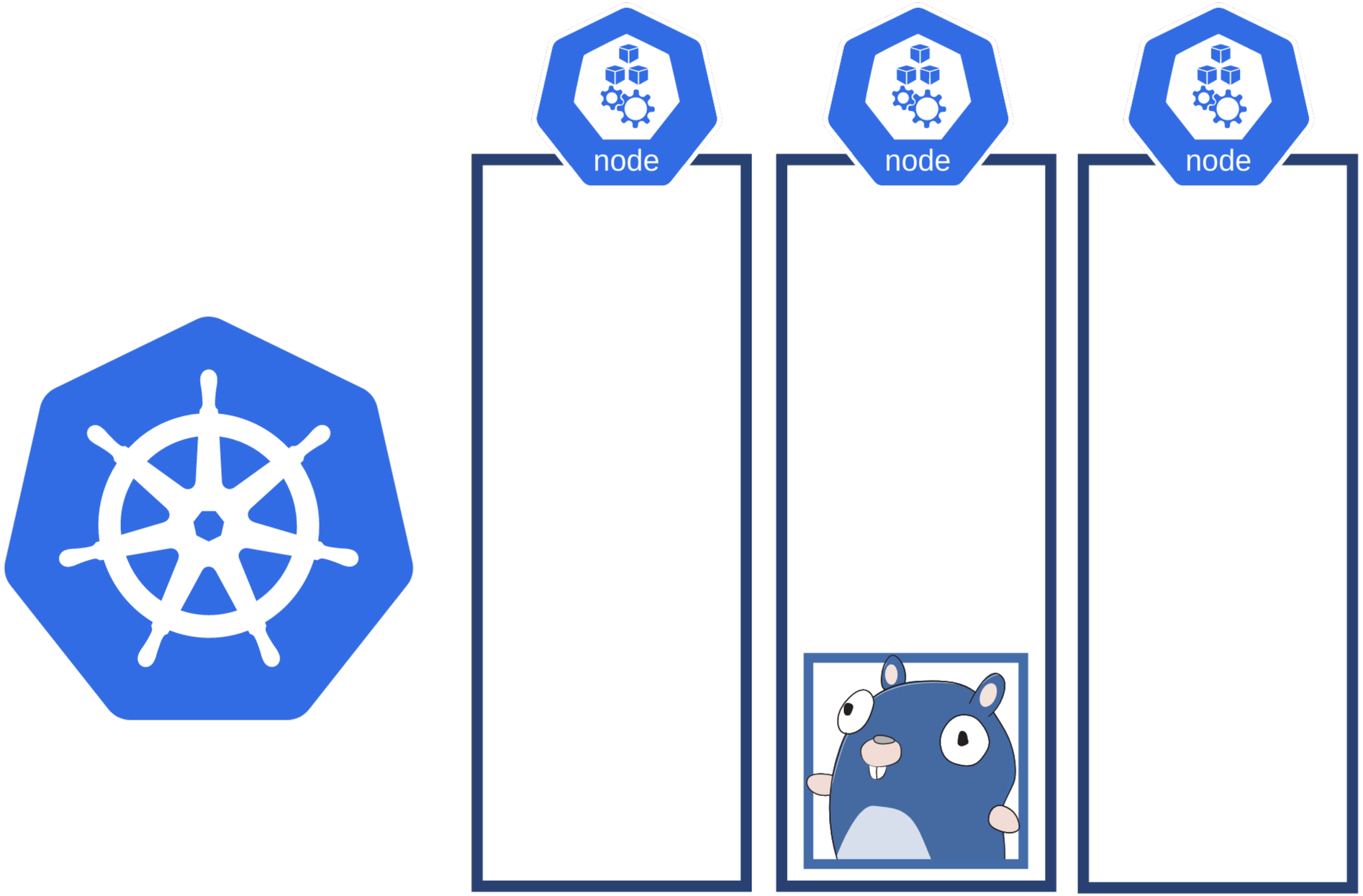
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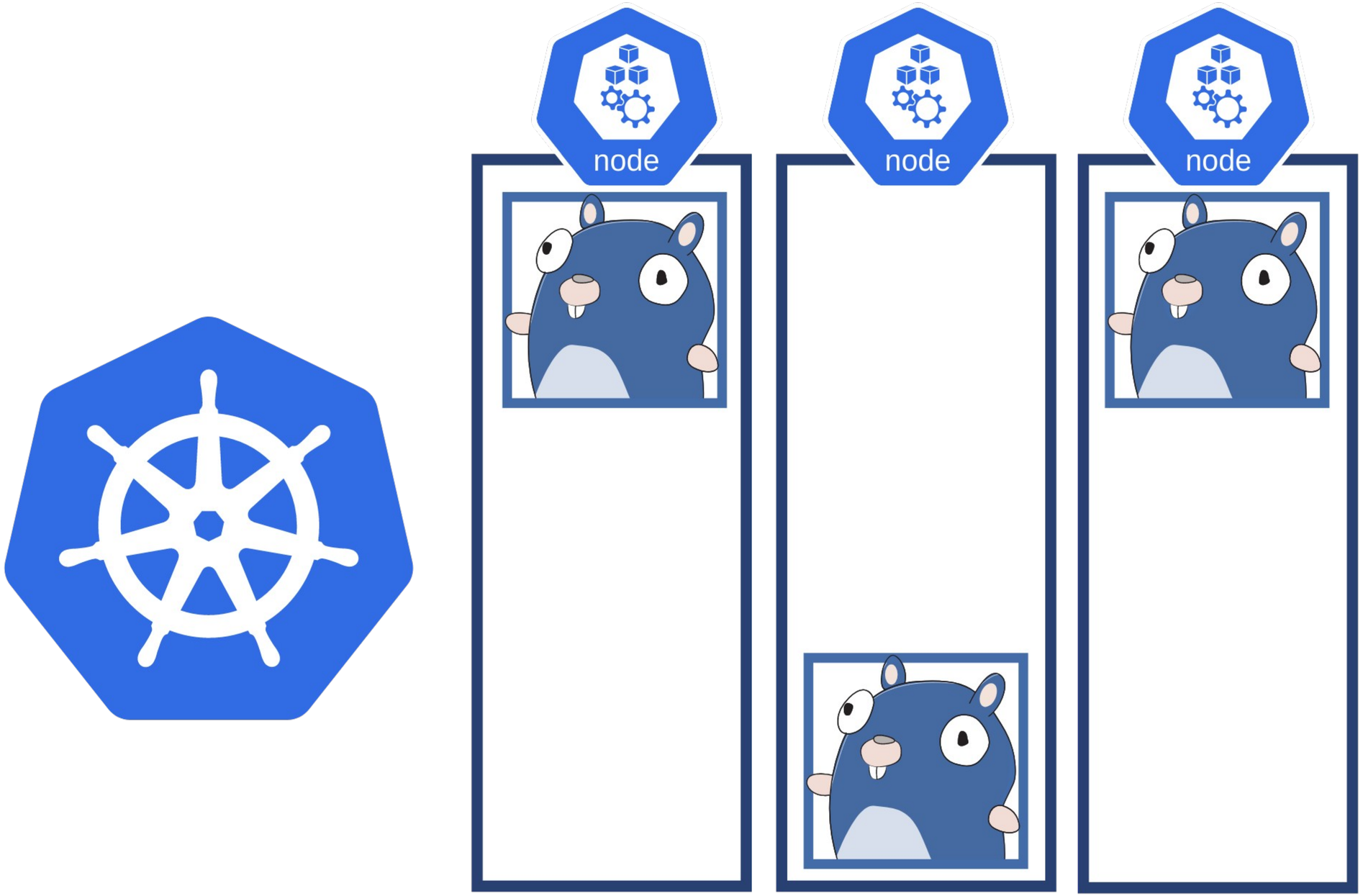
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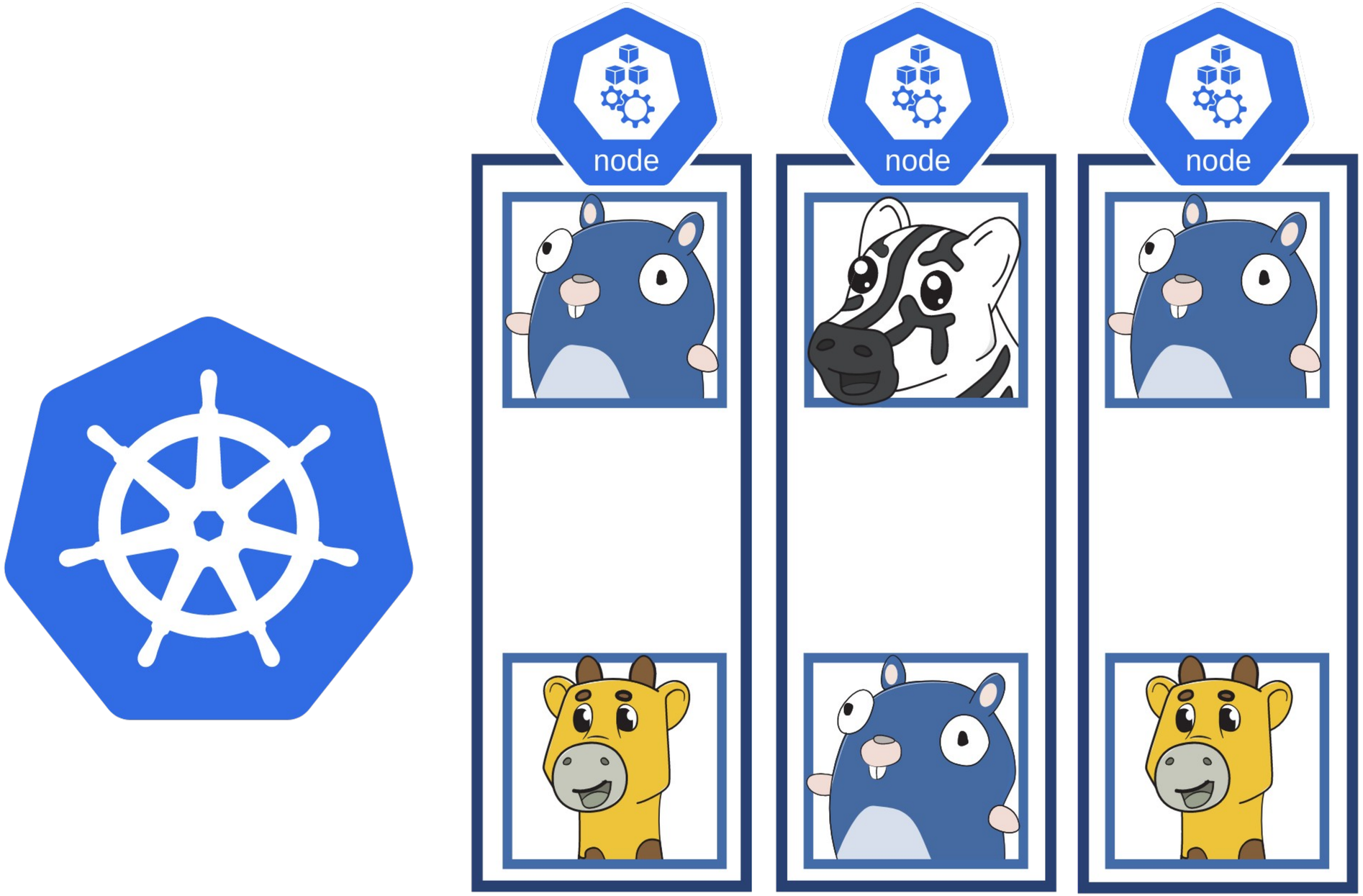
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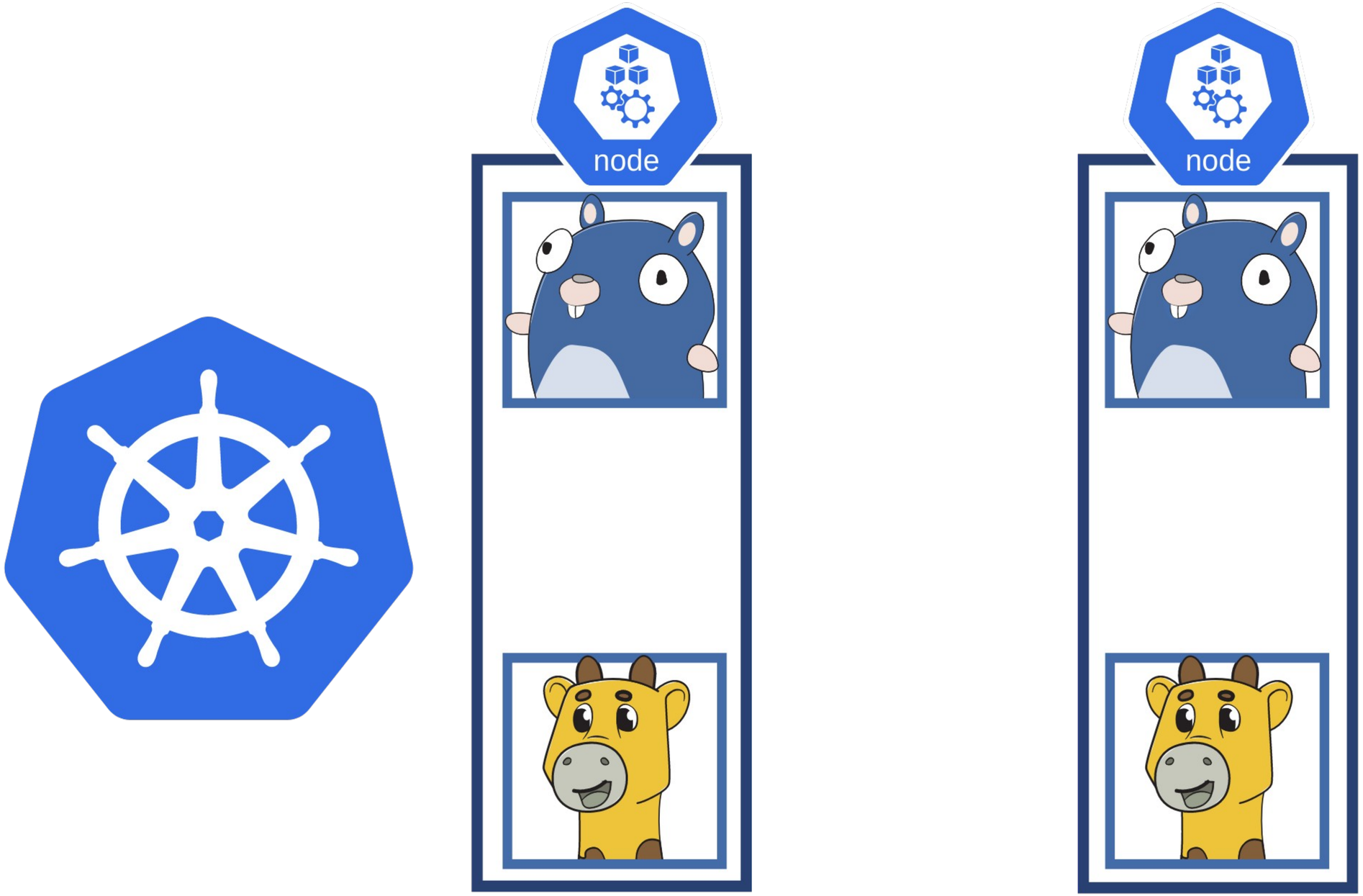
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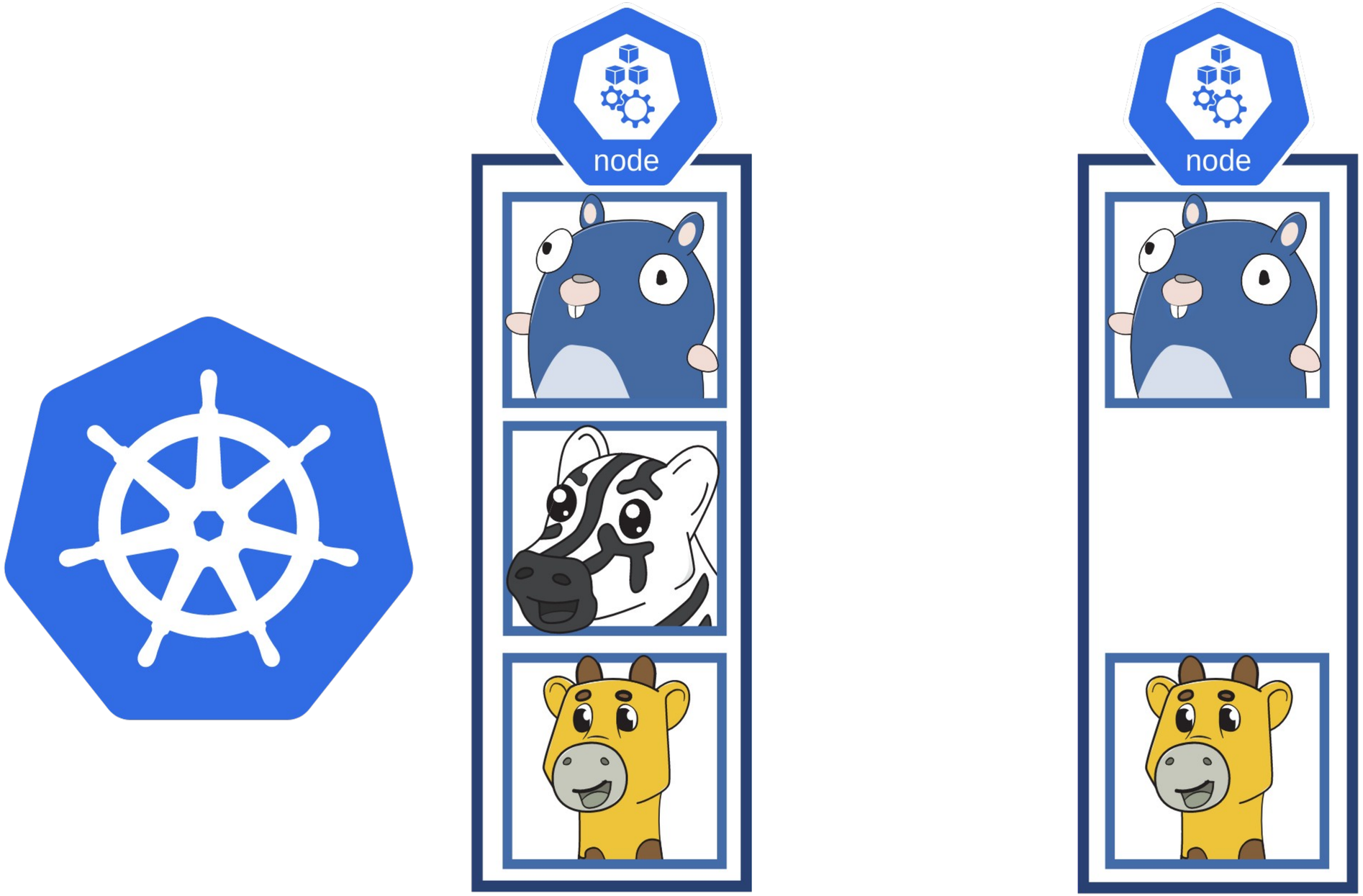
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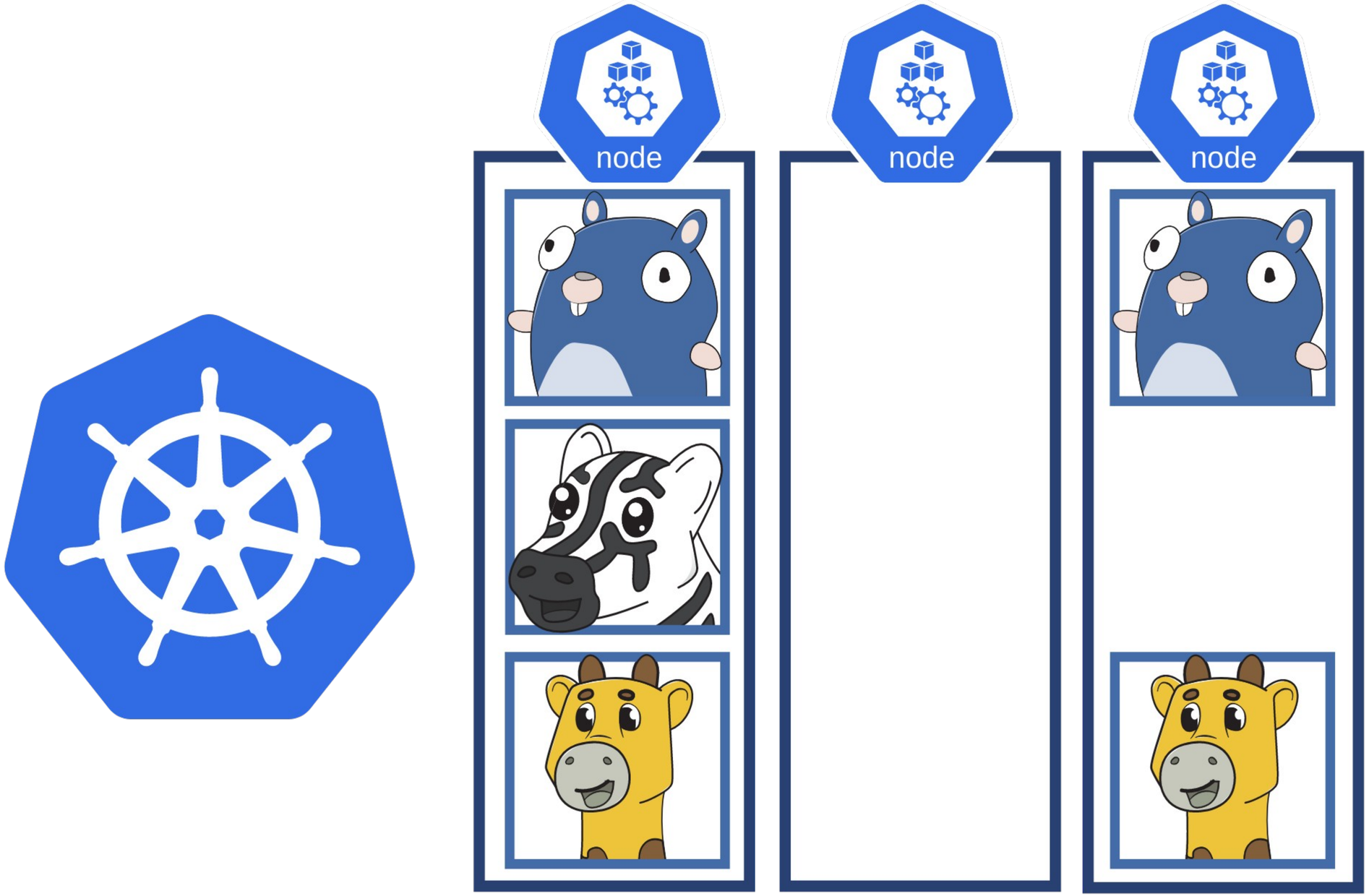
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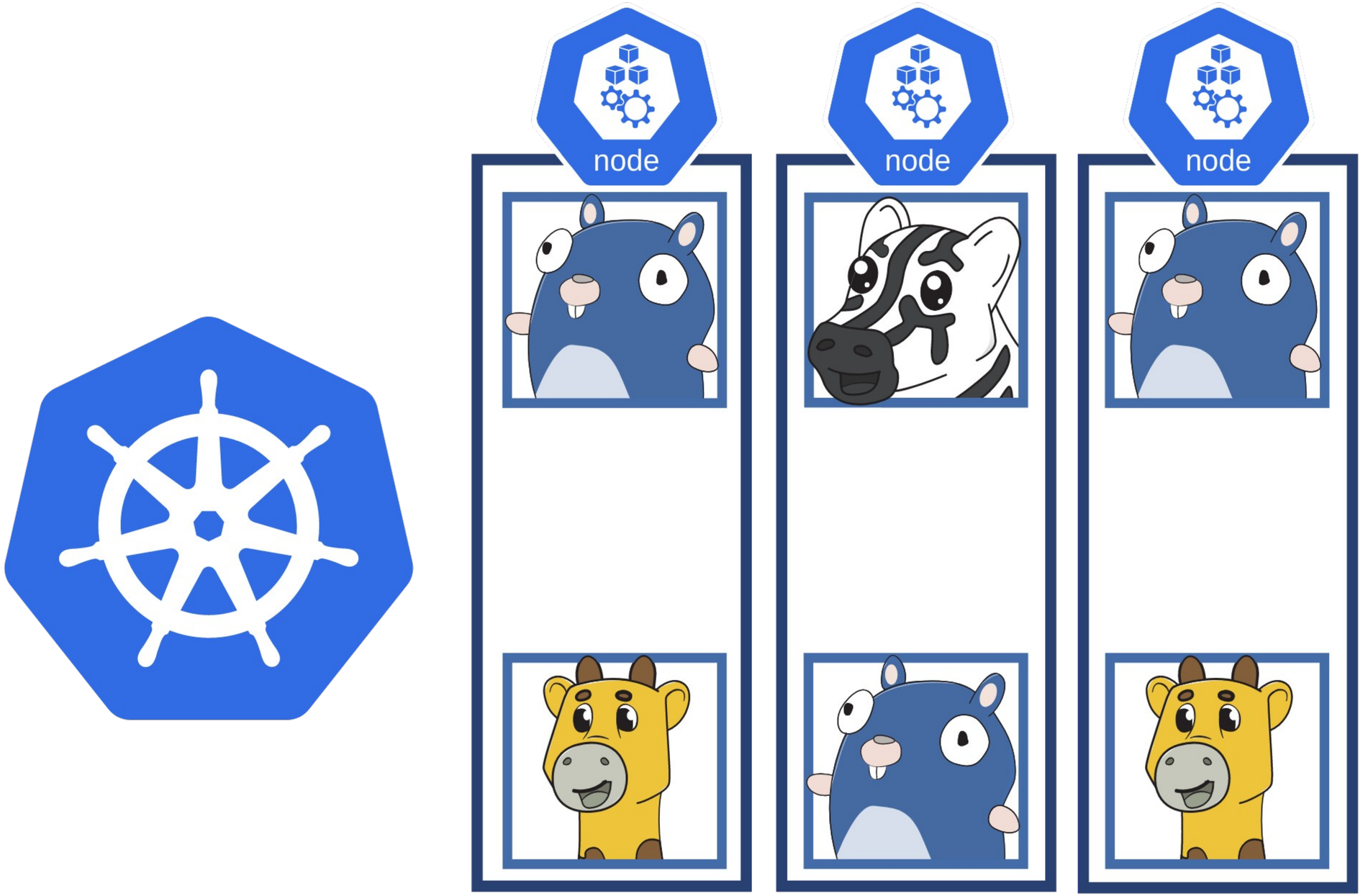
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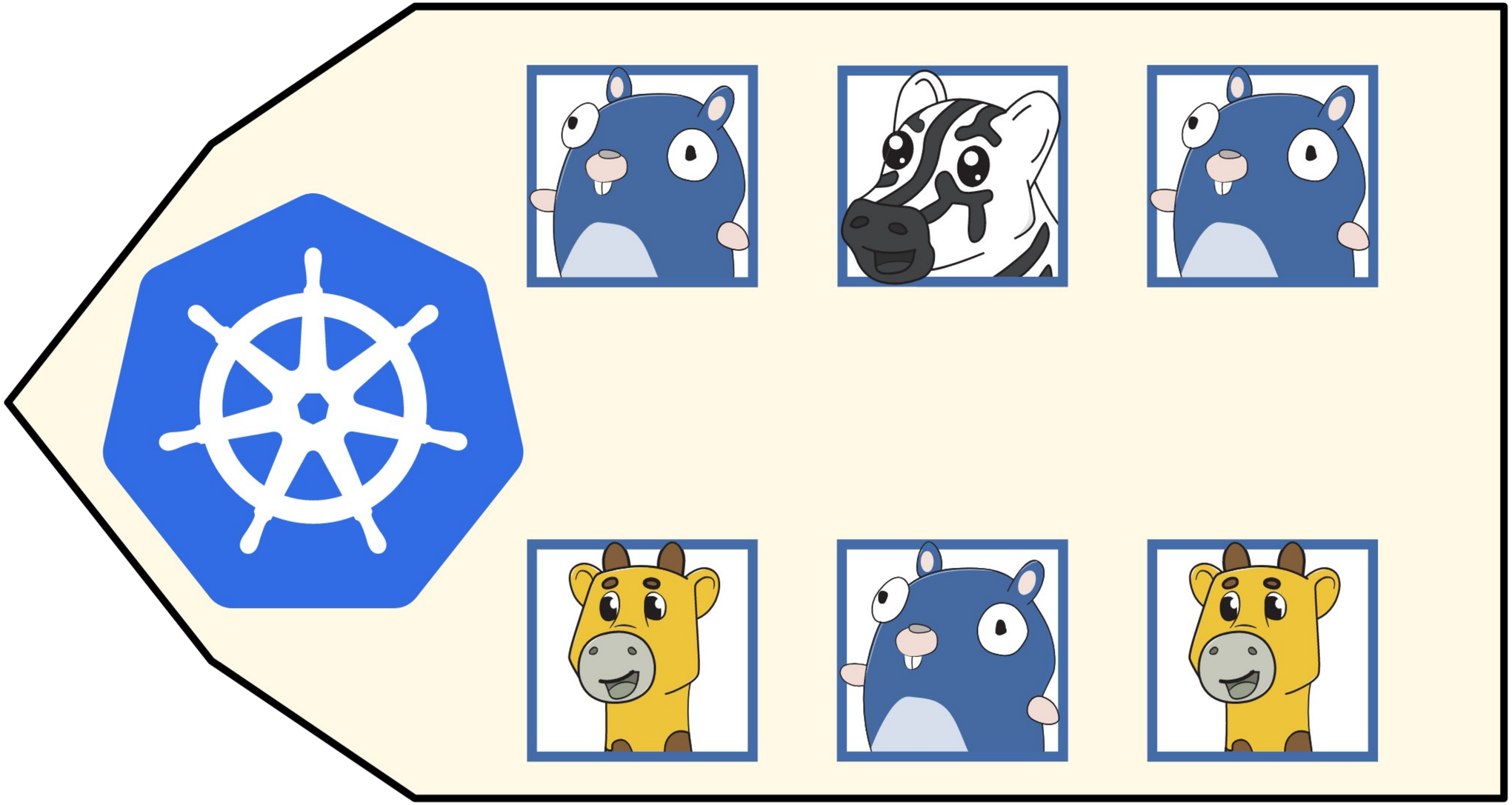

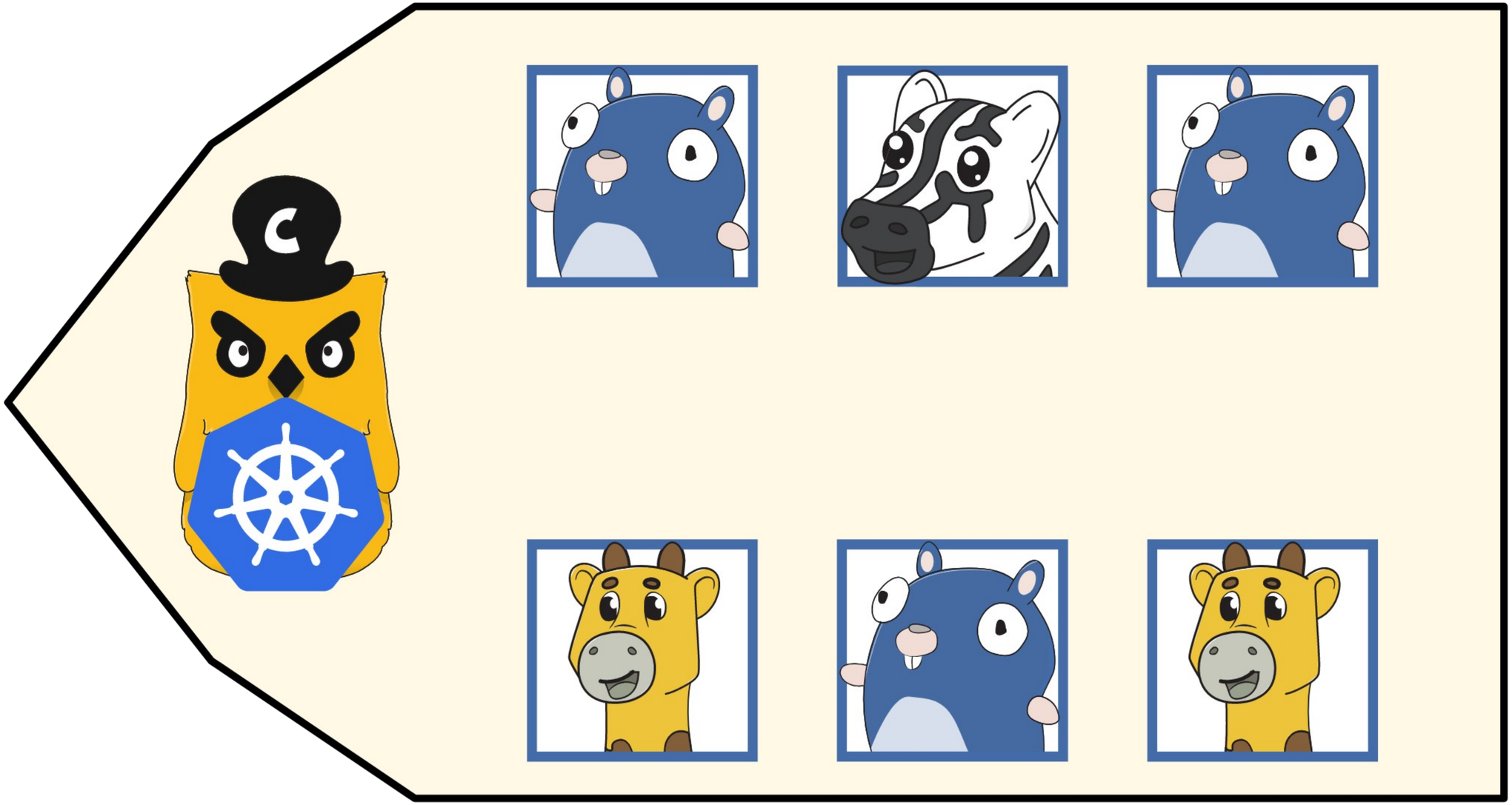

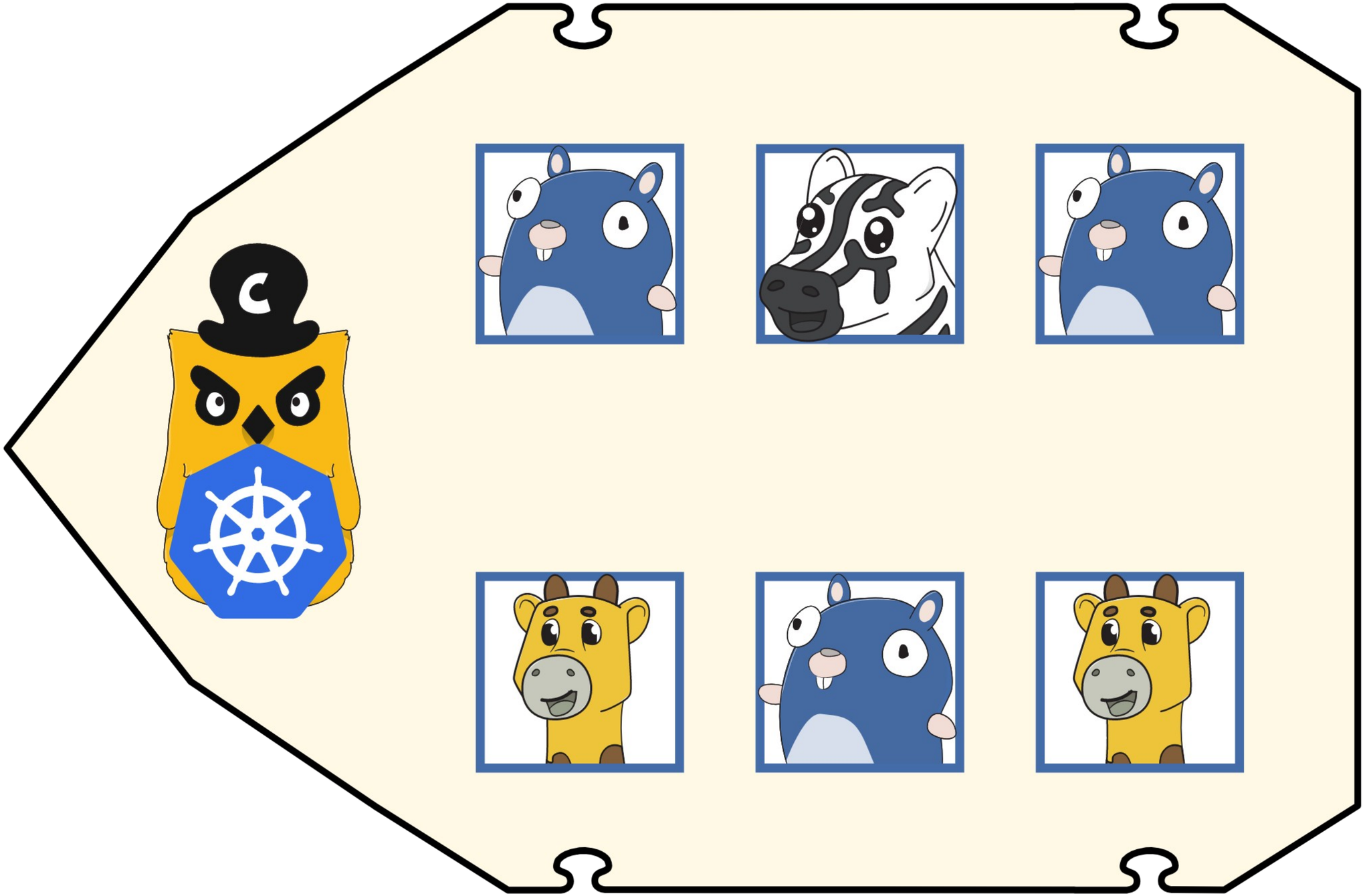

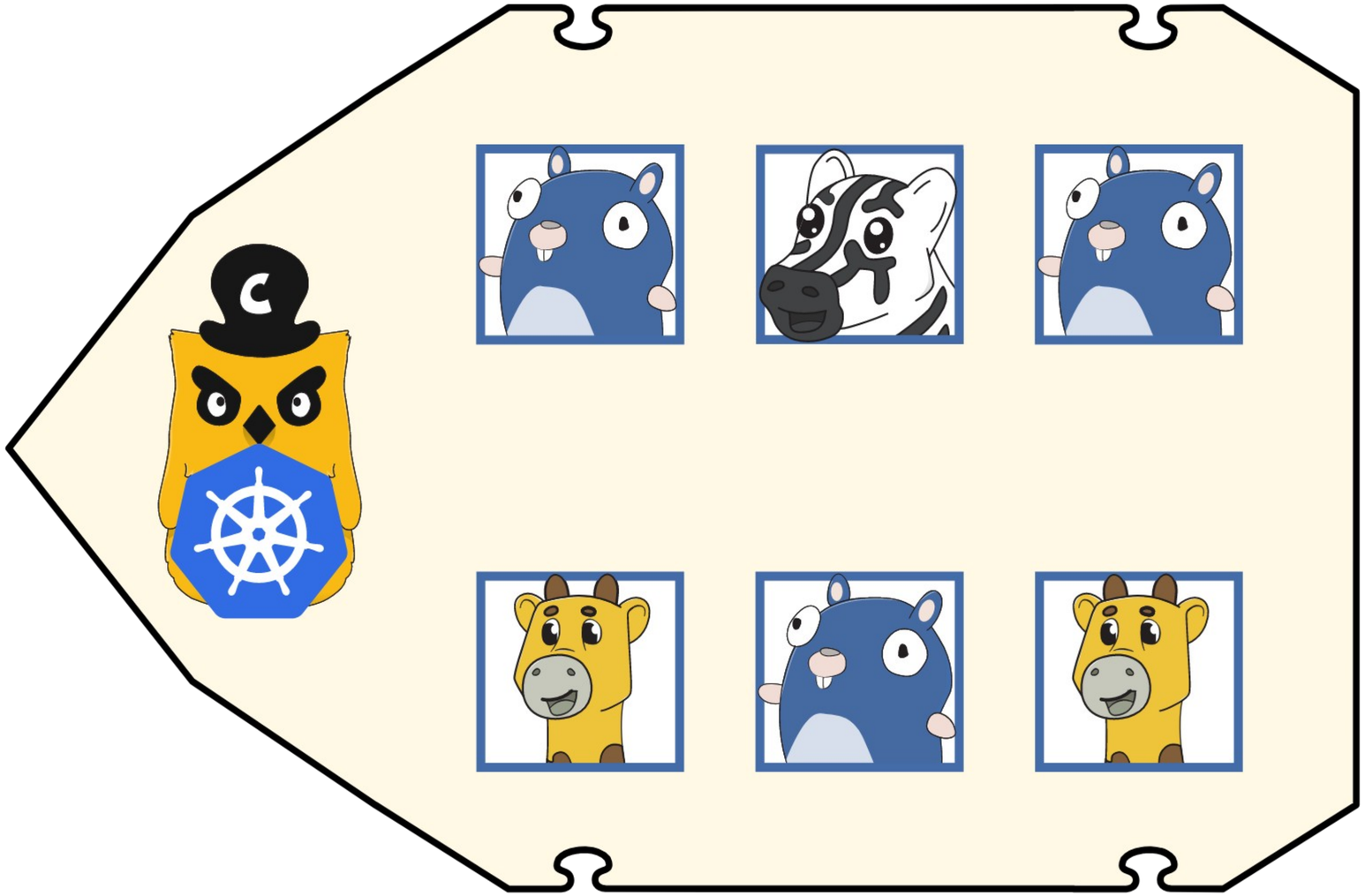

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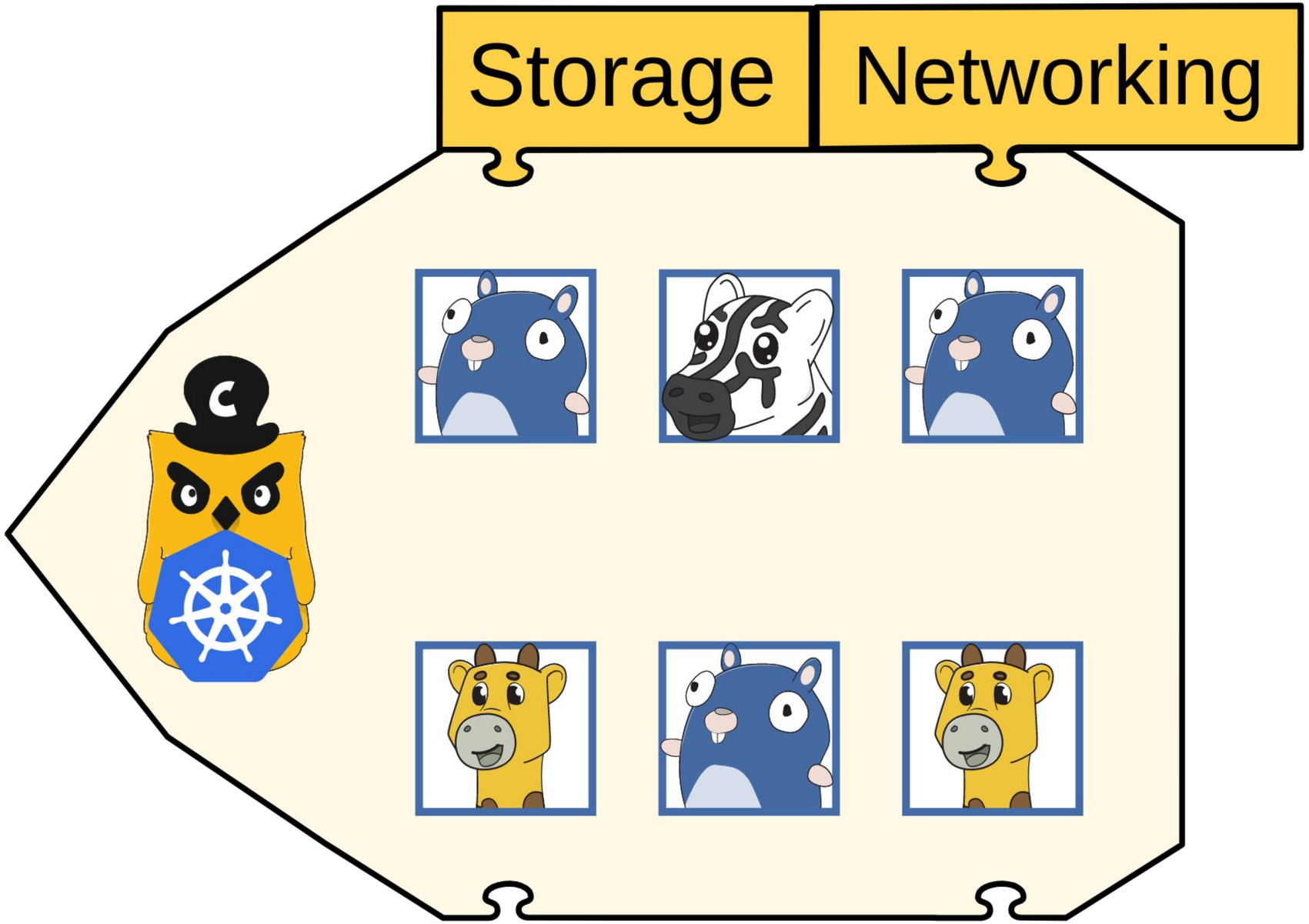
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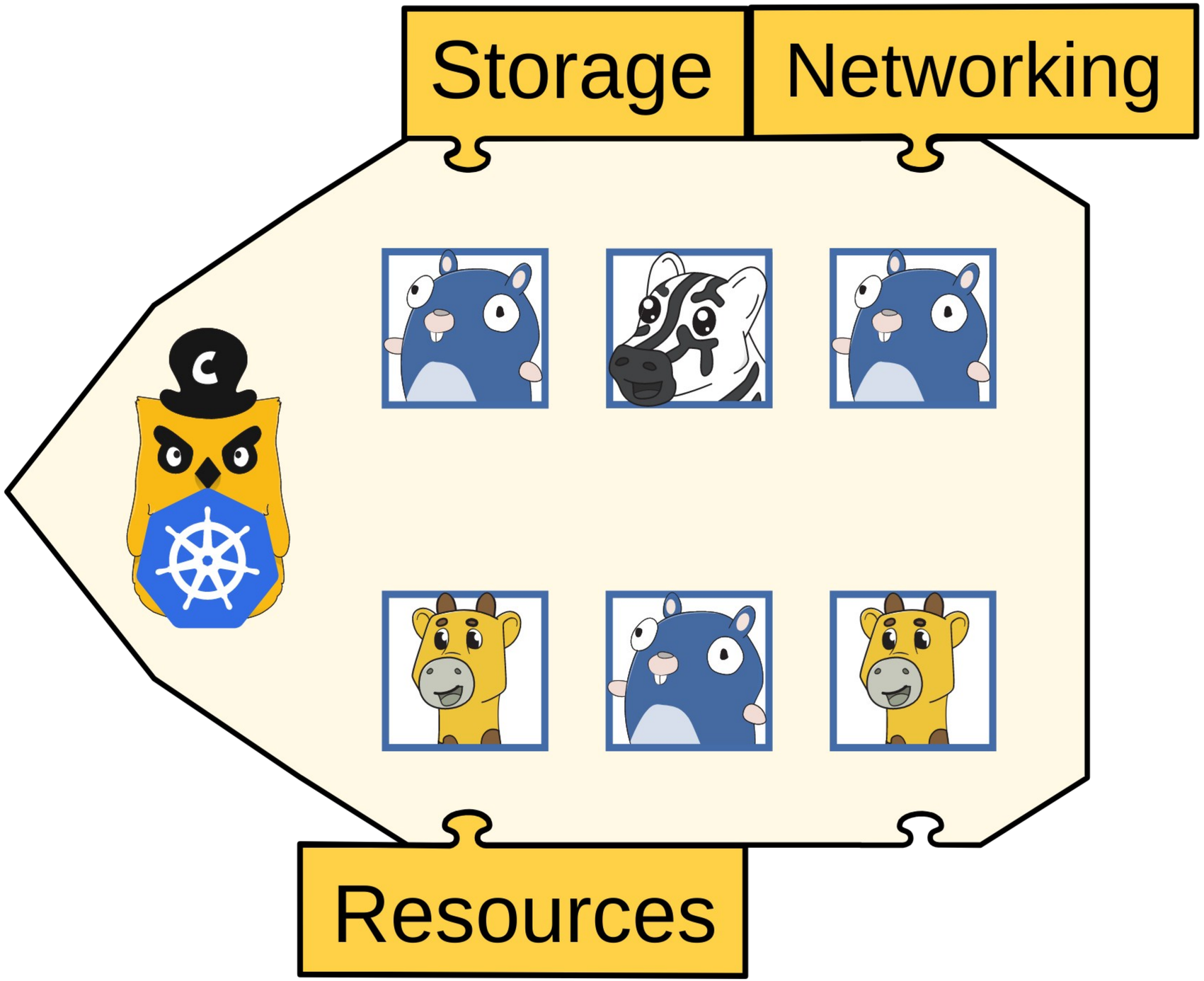
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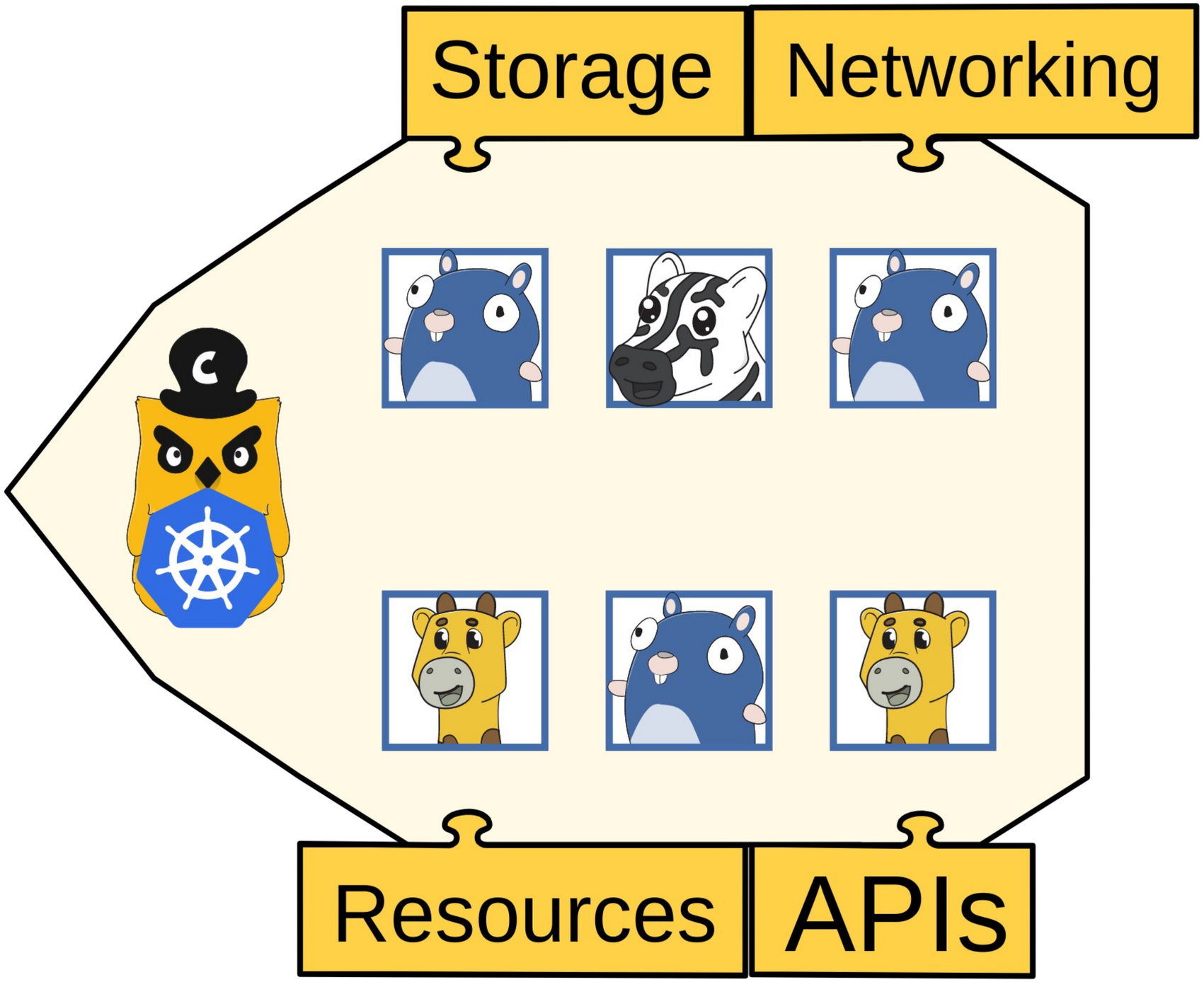
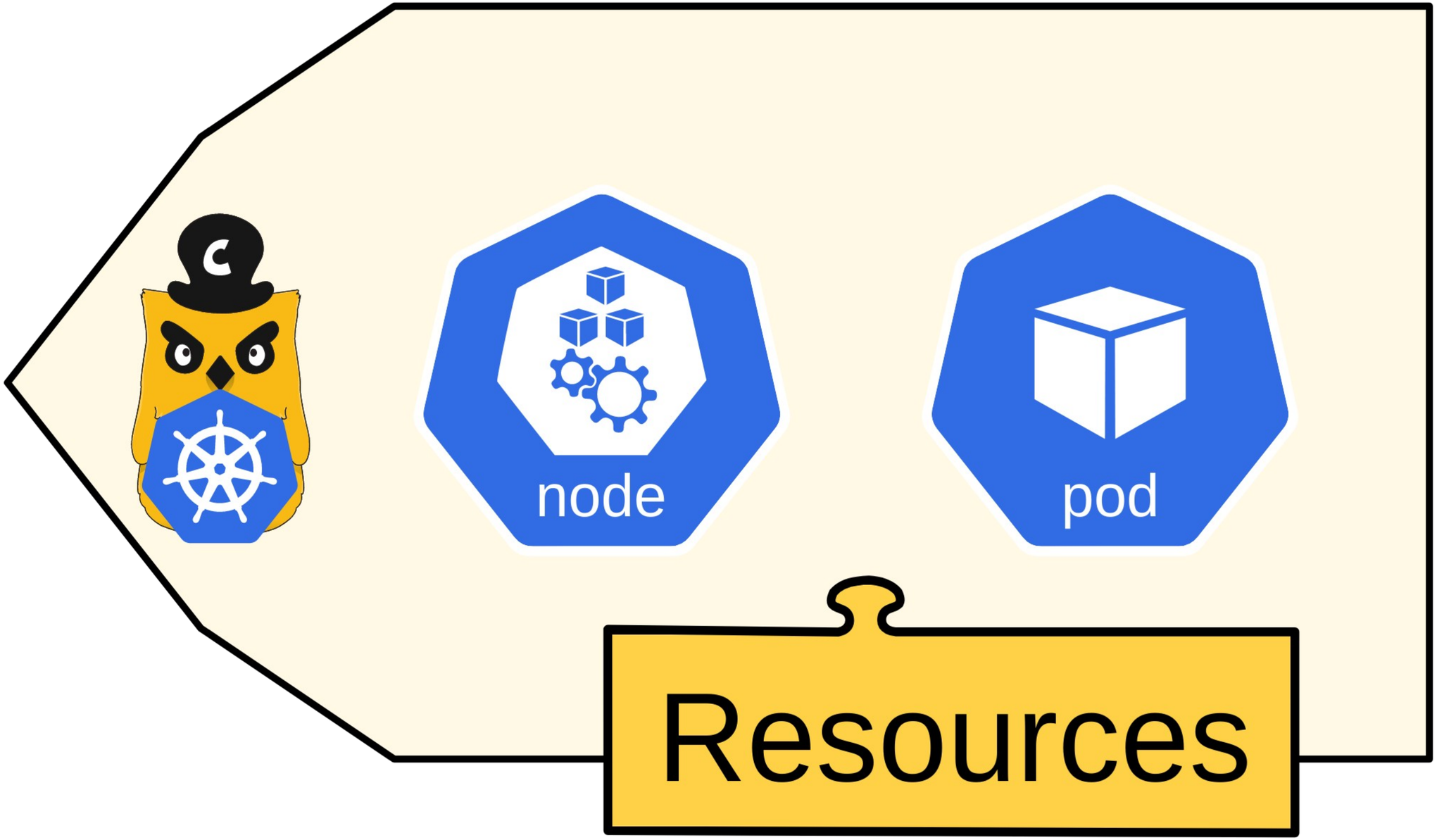

Storage
Networking
Resources
APIs

Resources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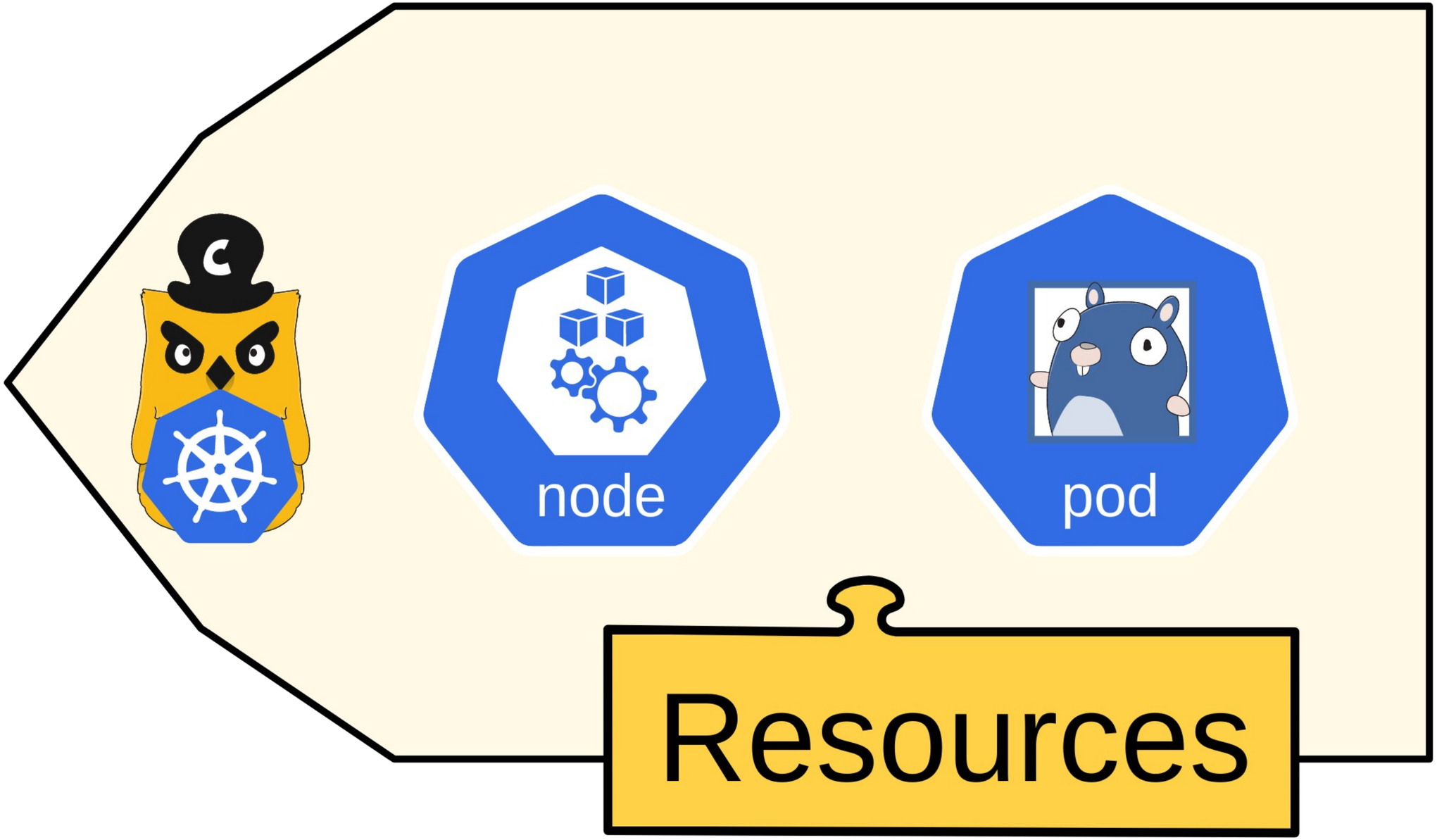
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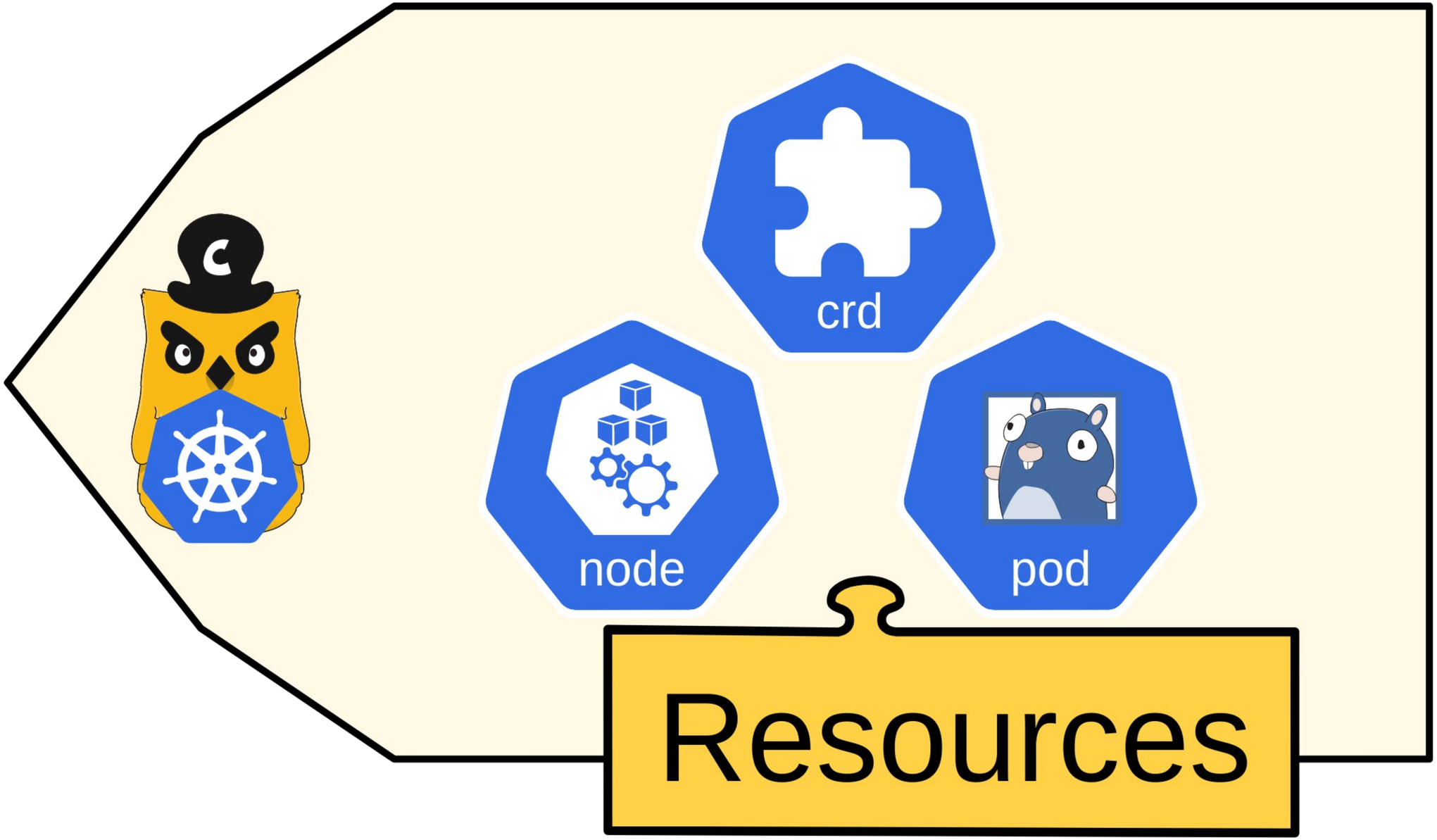
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Resources

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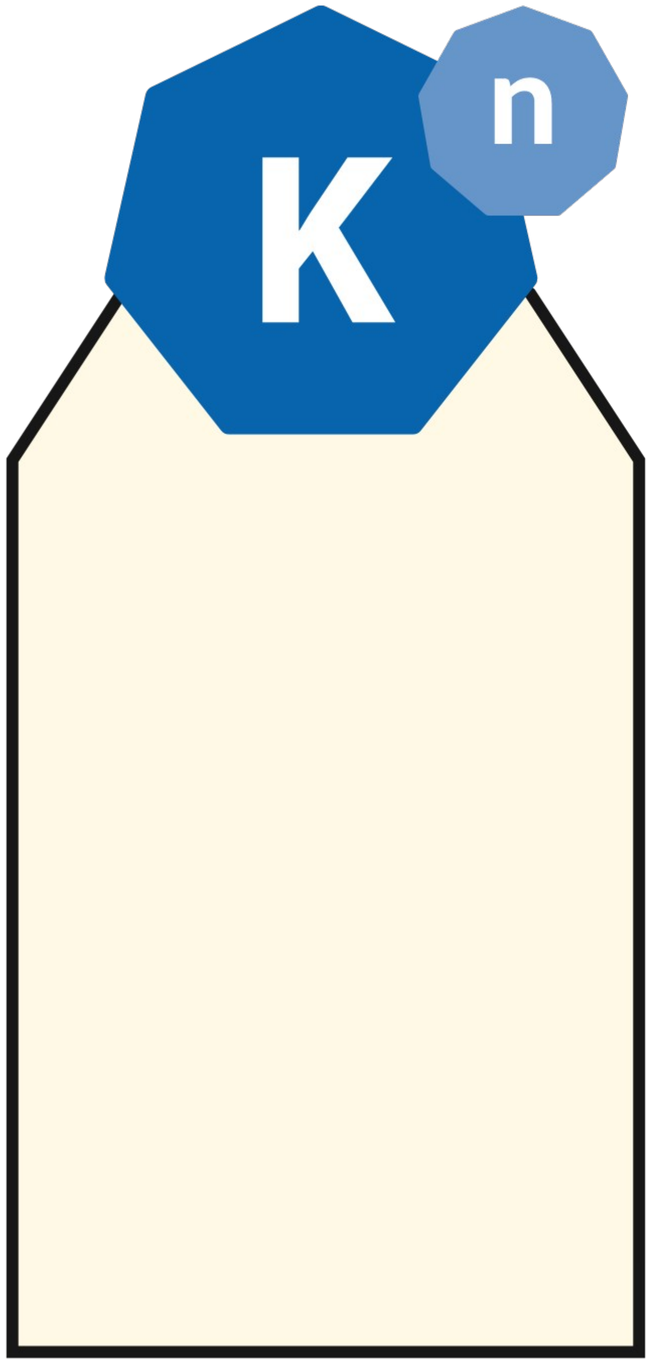
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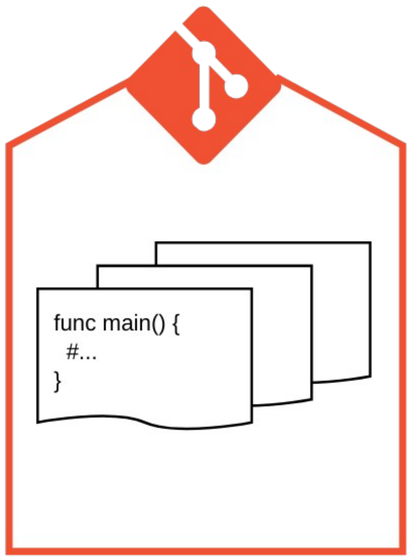
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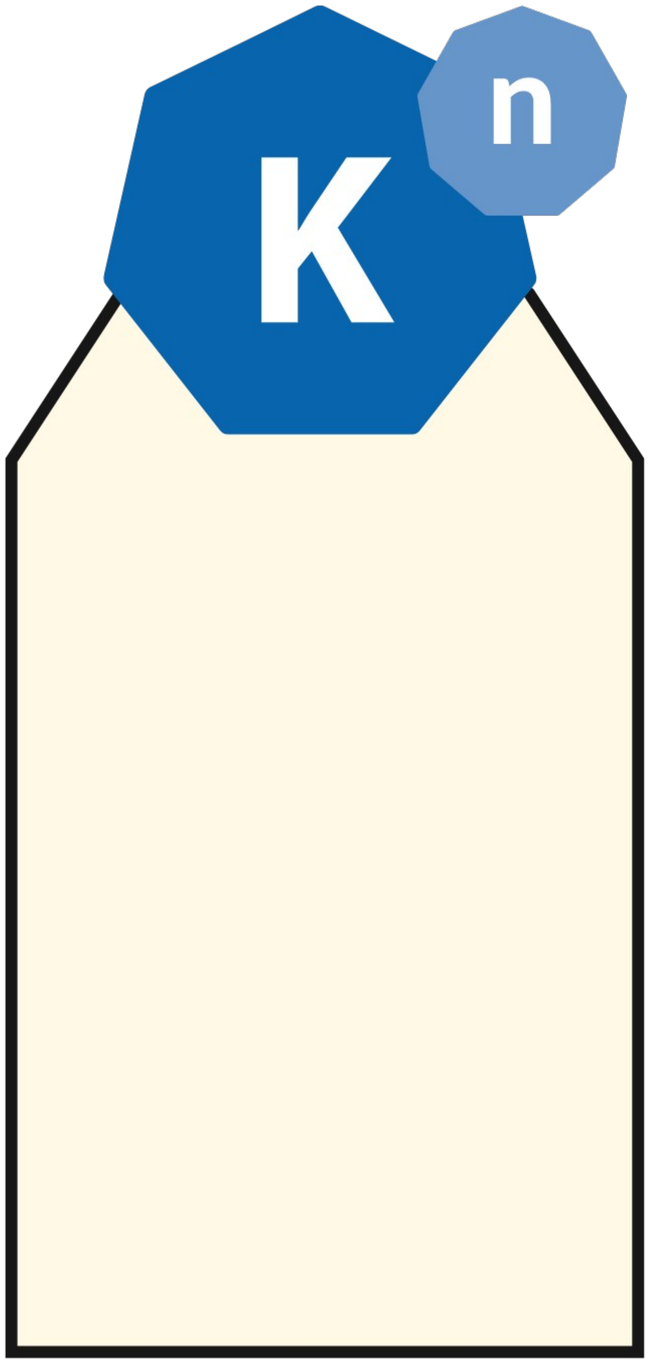
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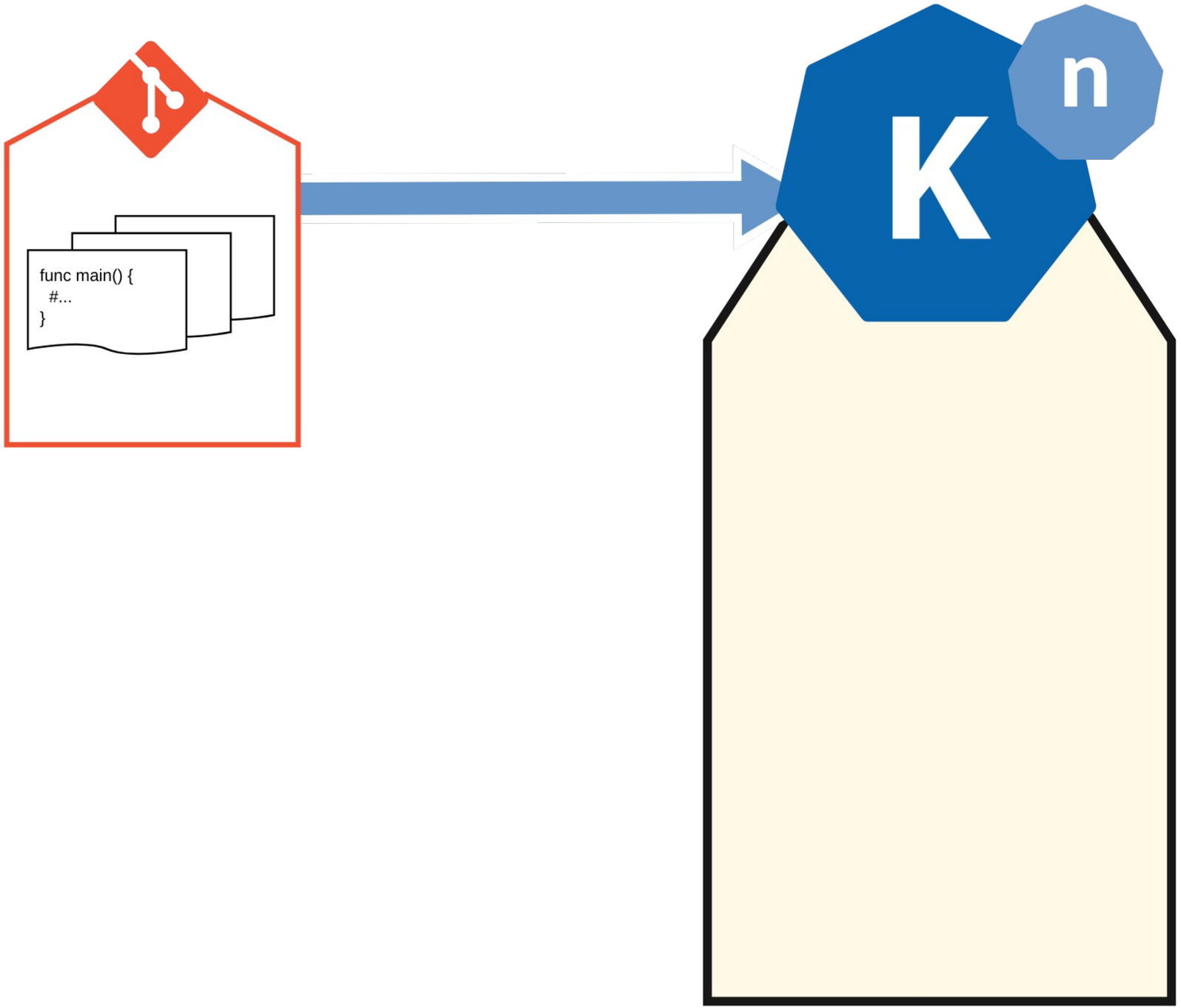
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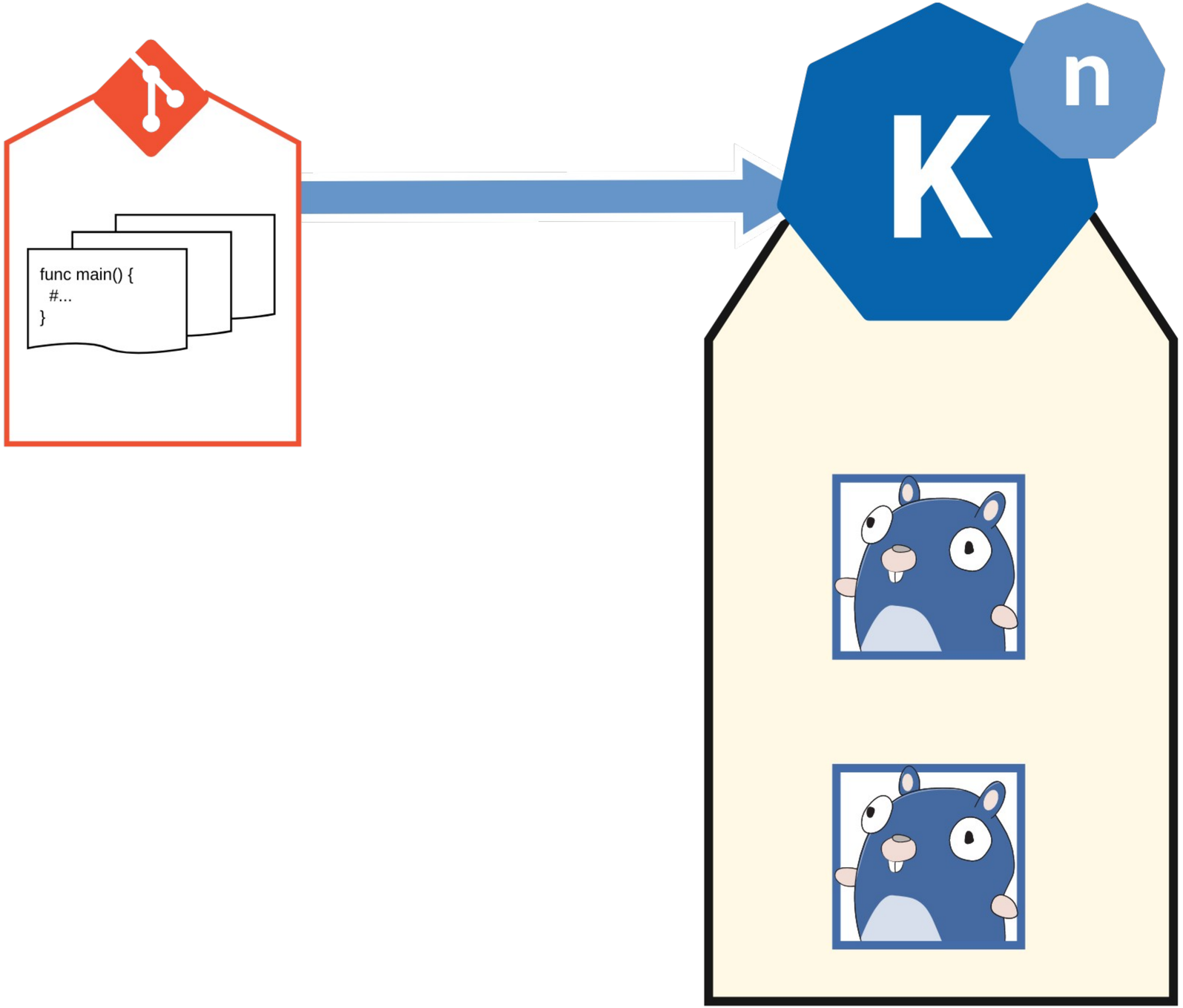
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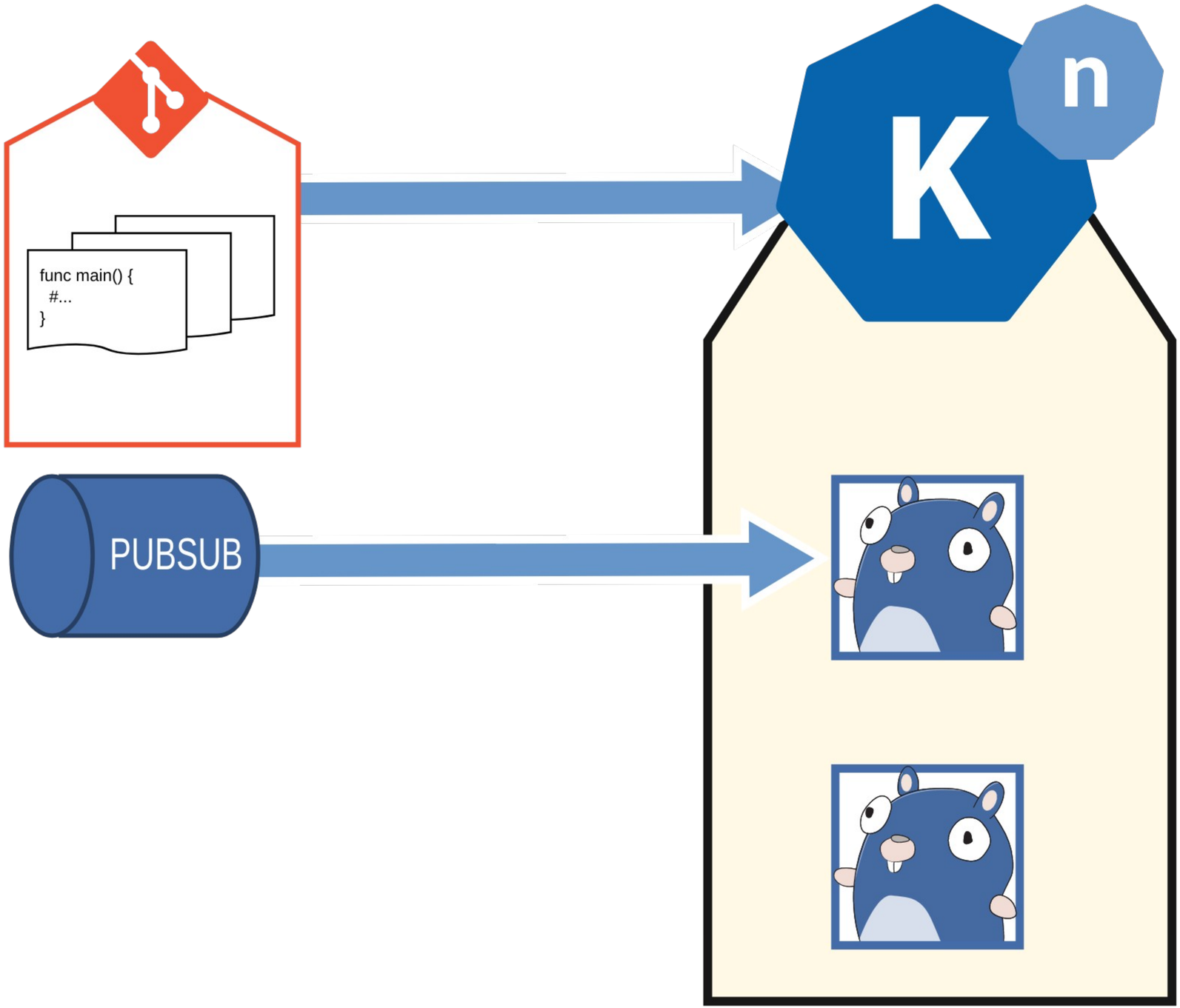
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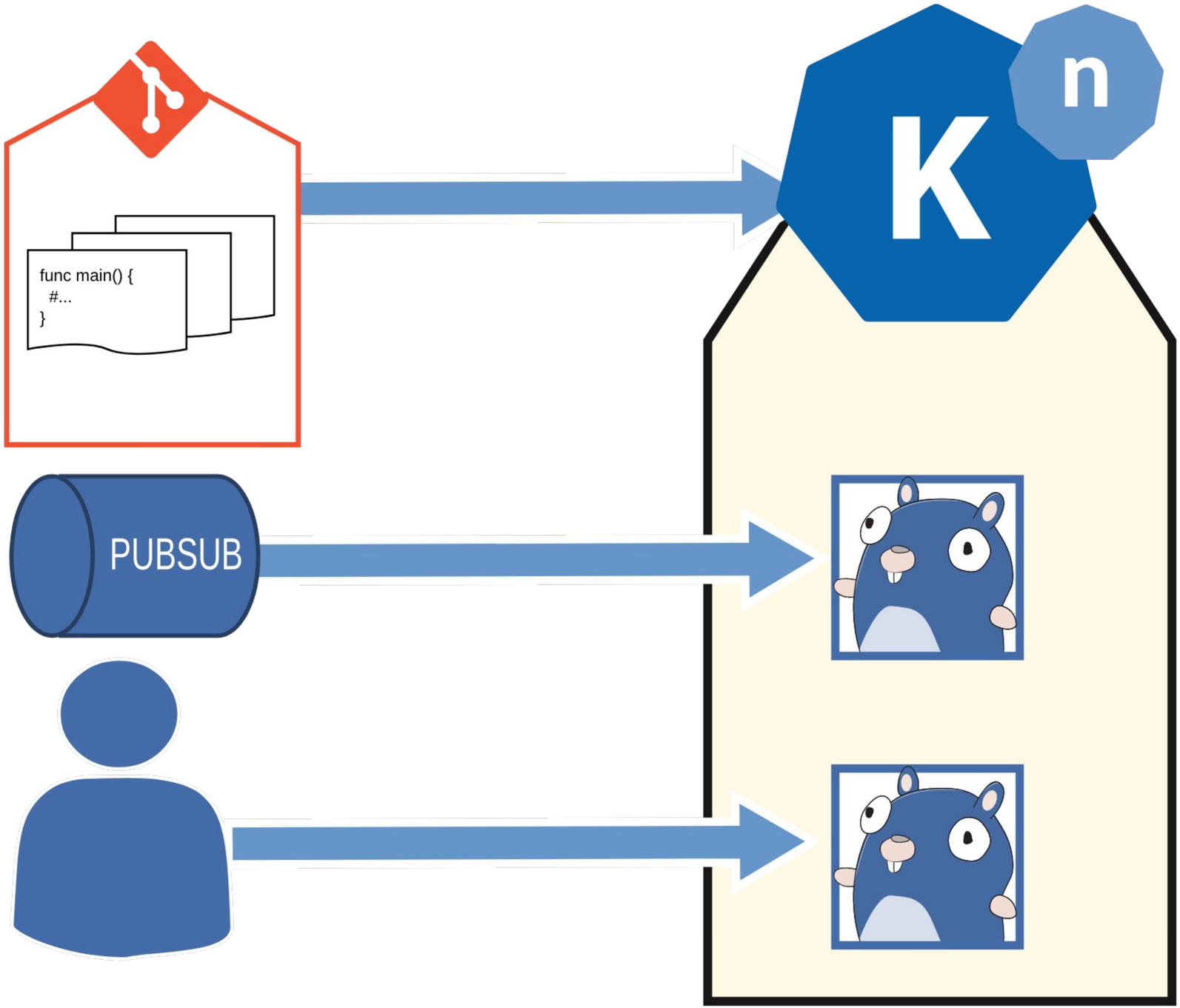
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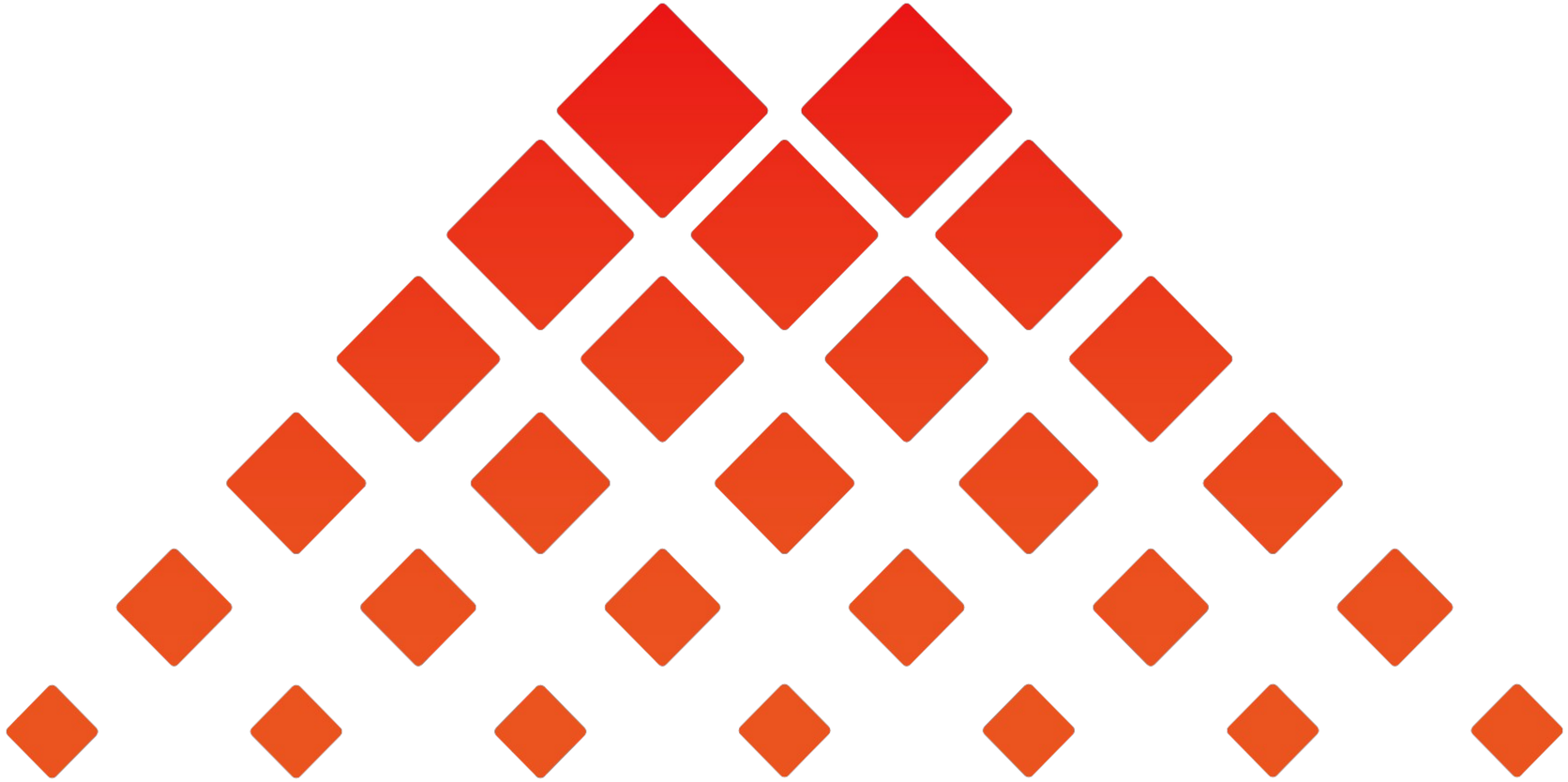

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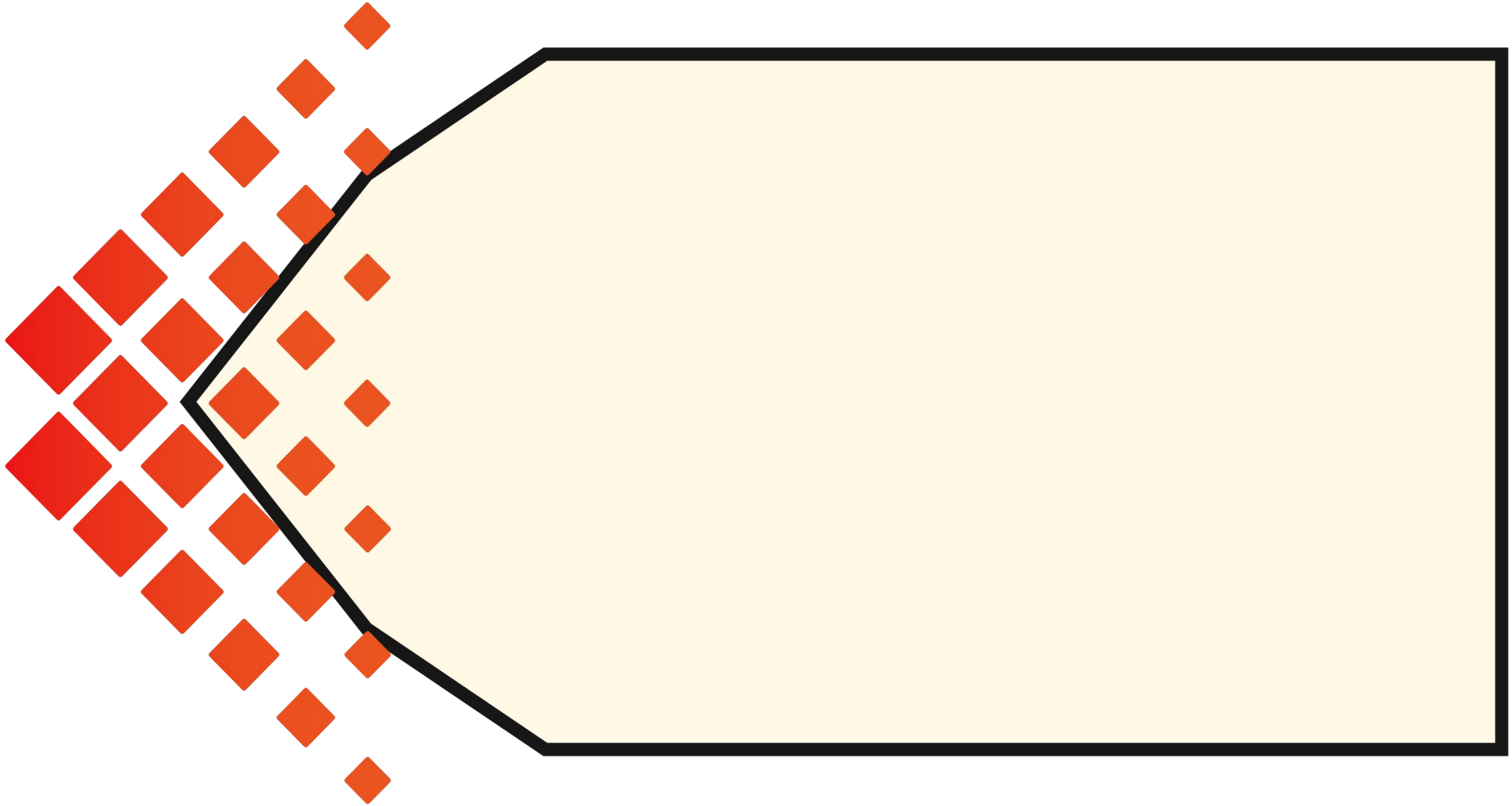

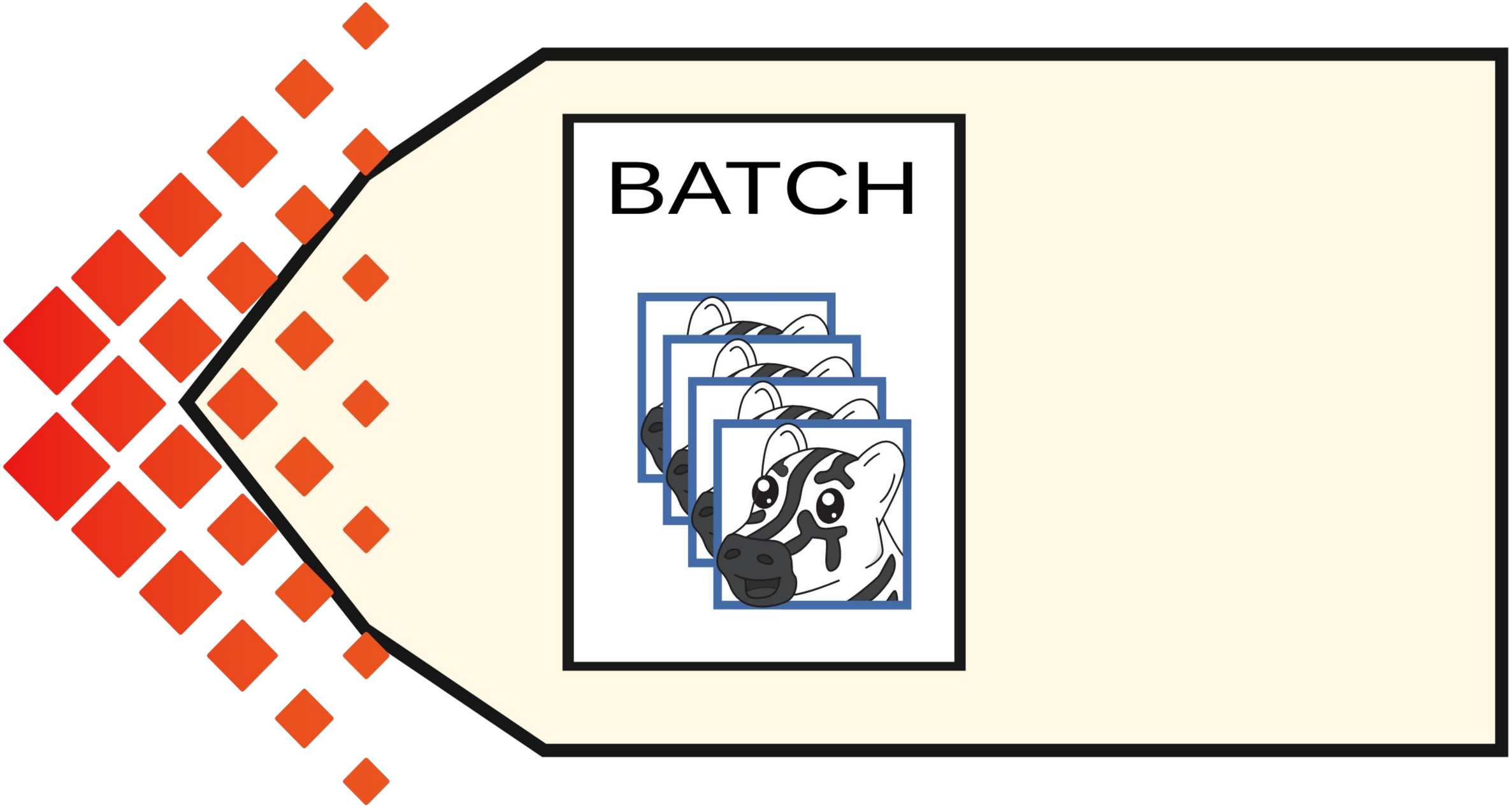
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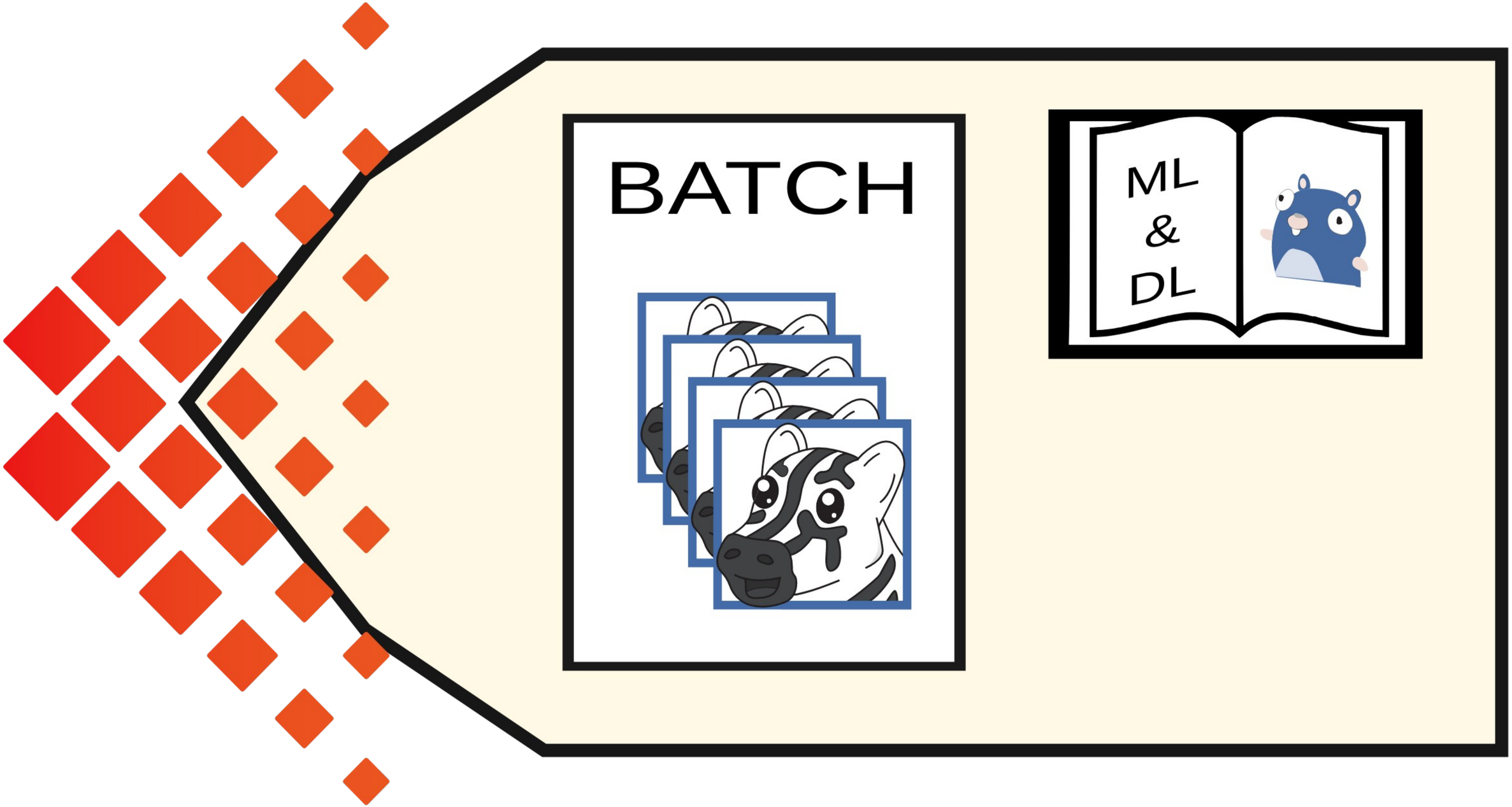
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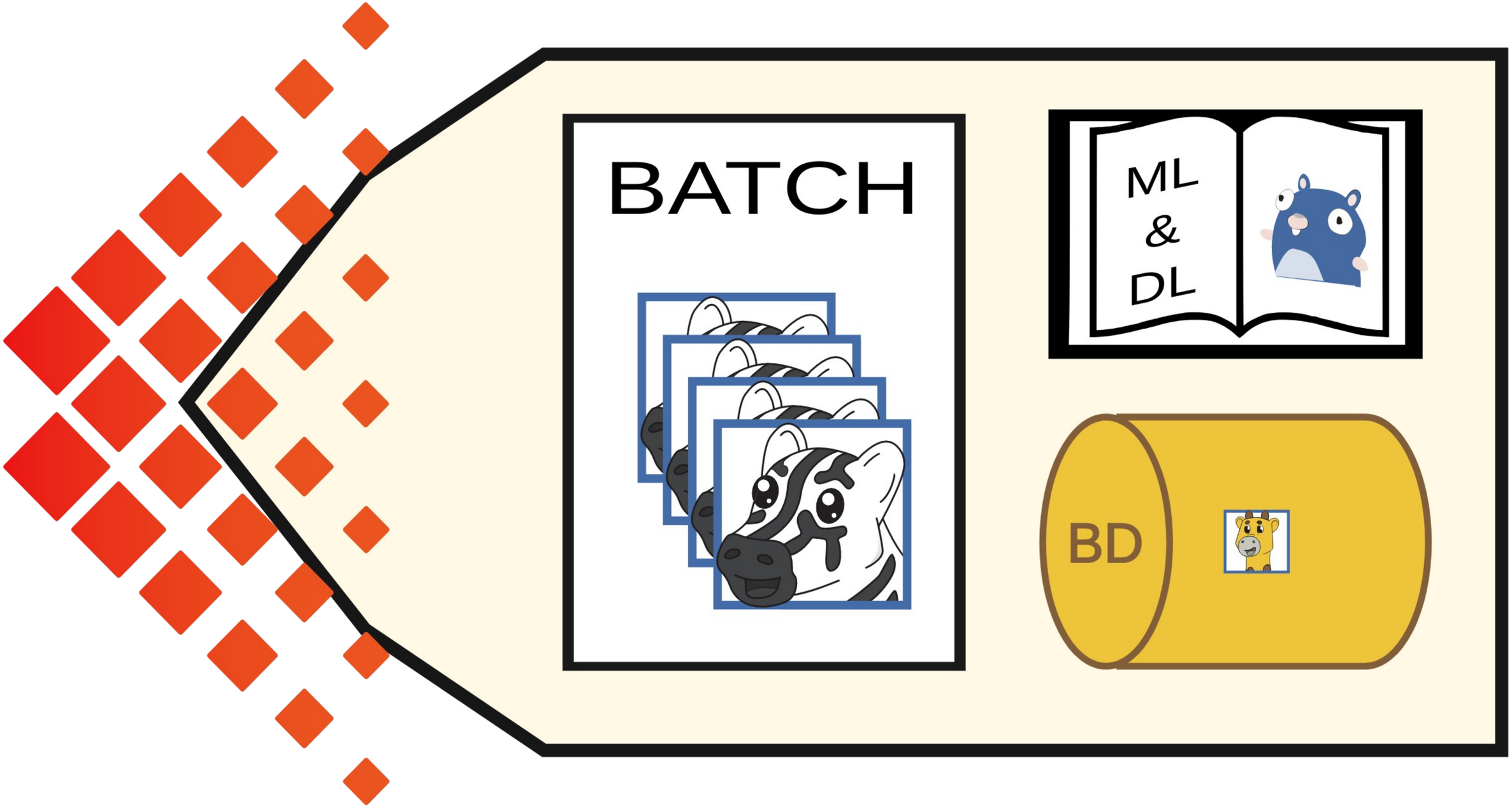
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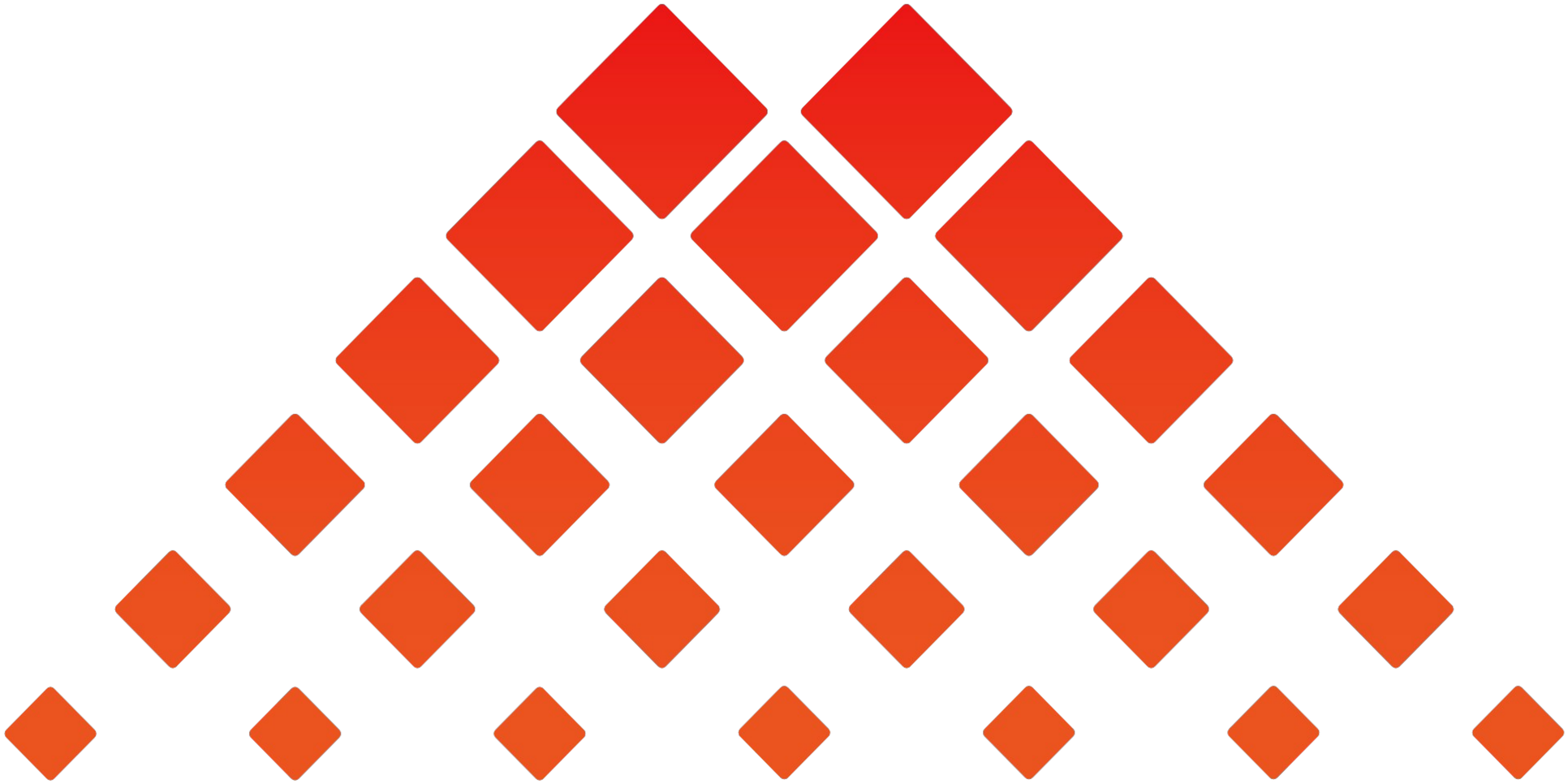

VOLCANO

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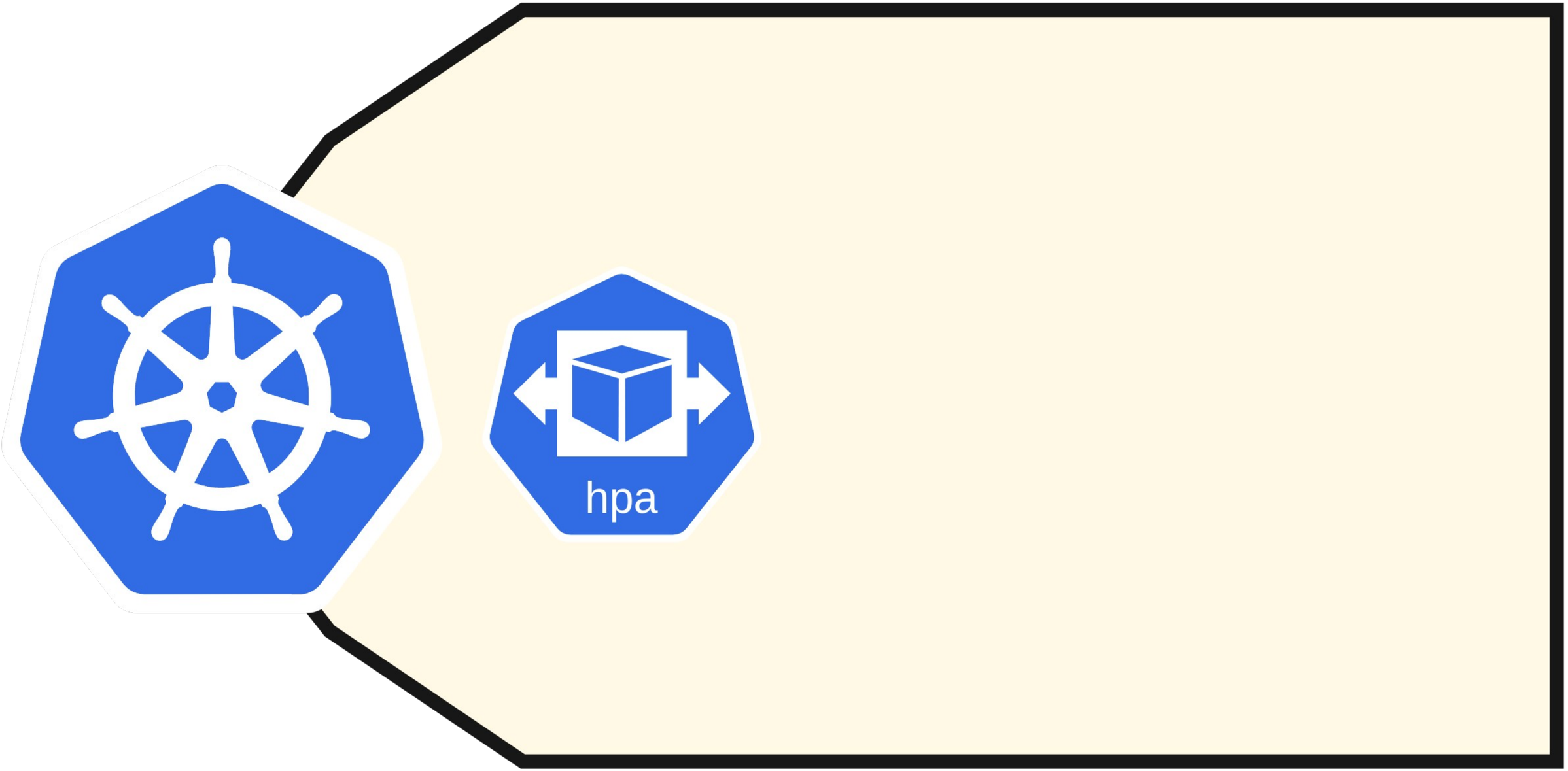
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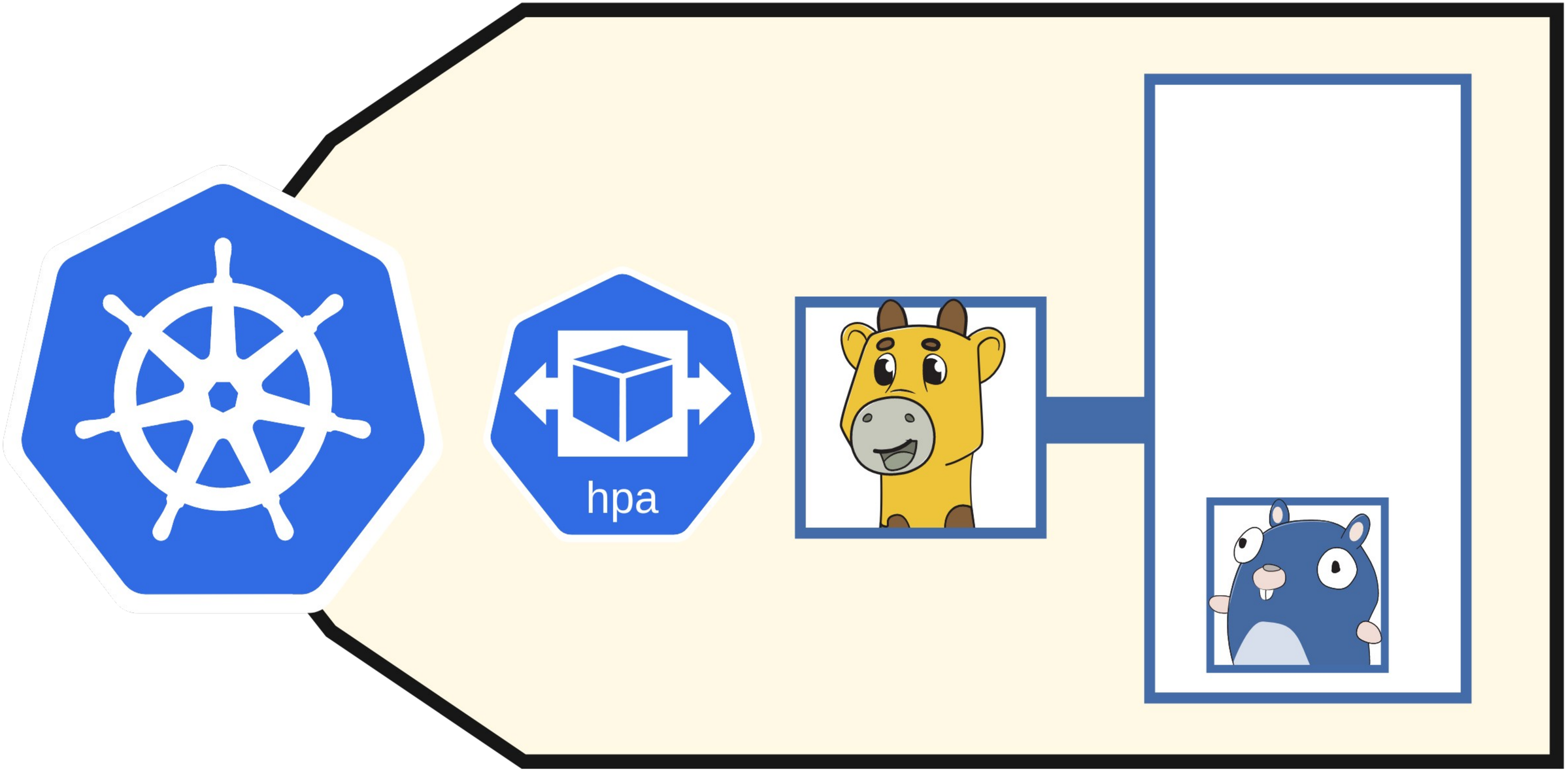
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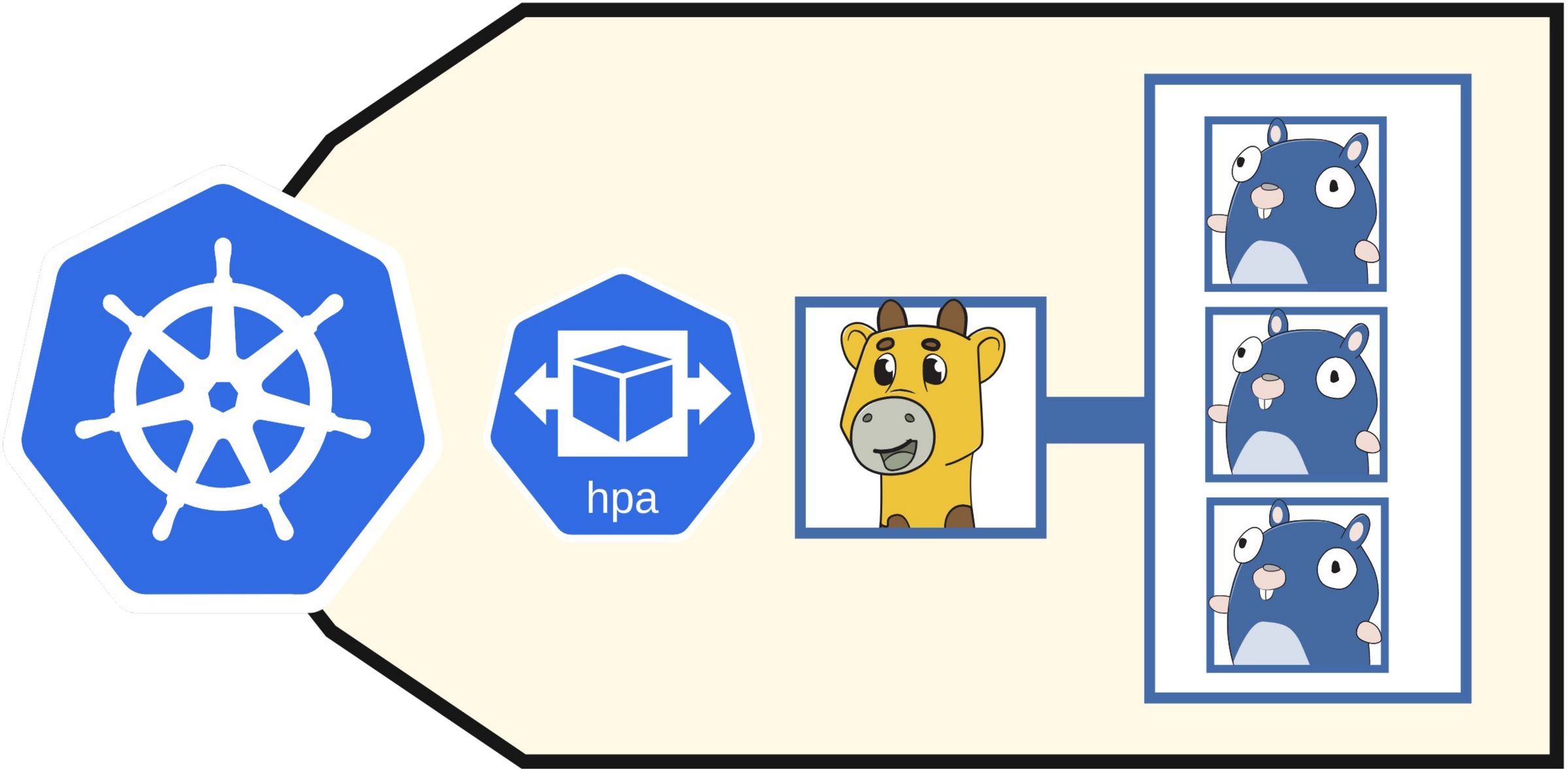
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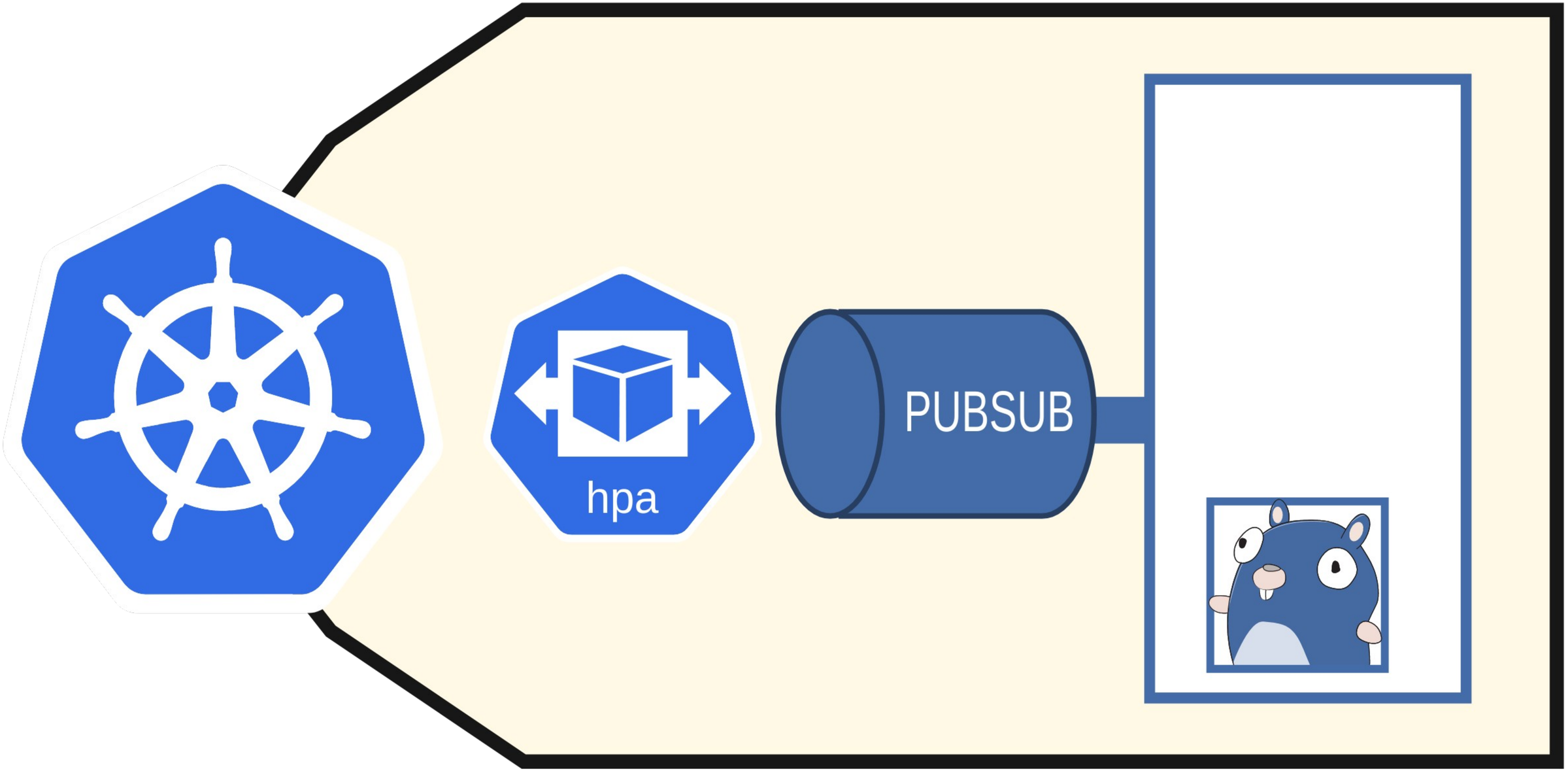
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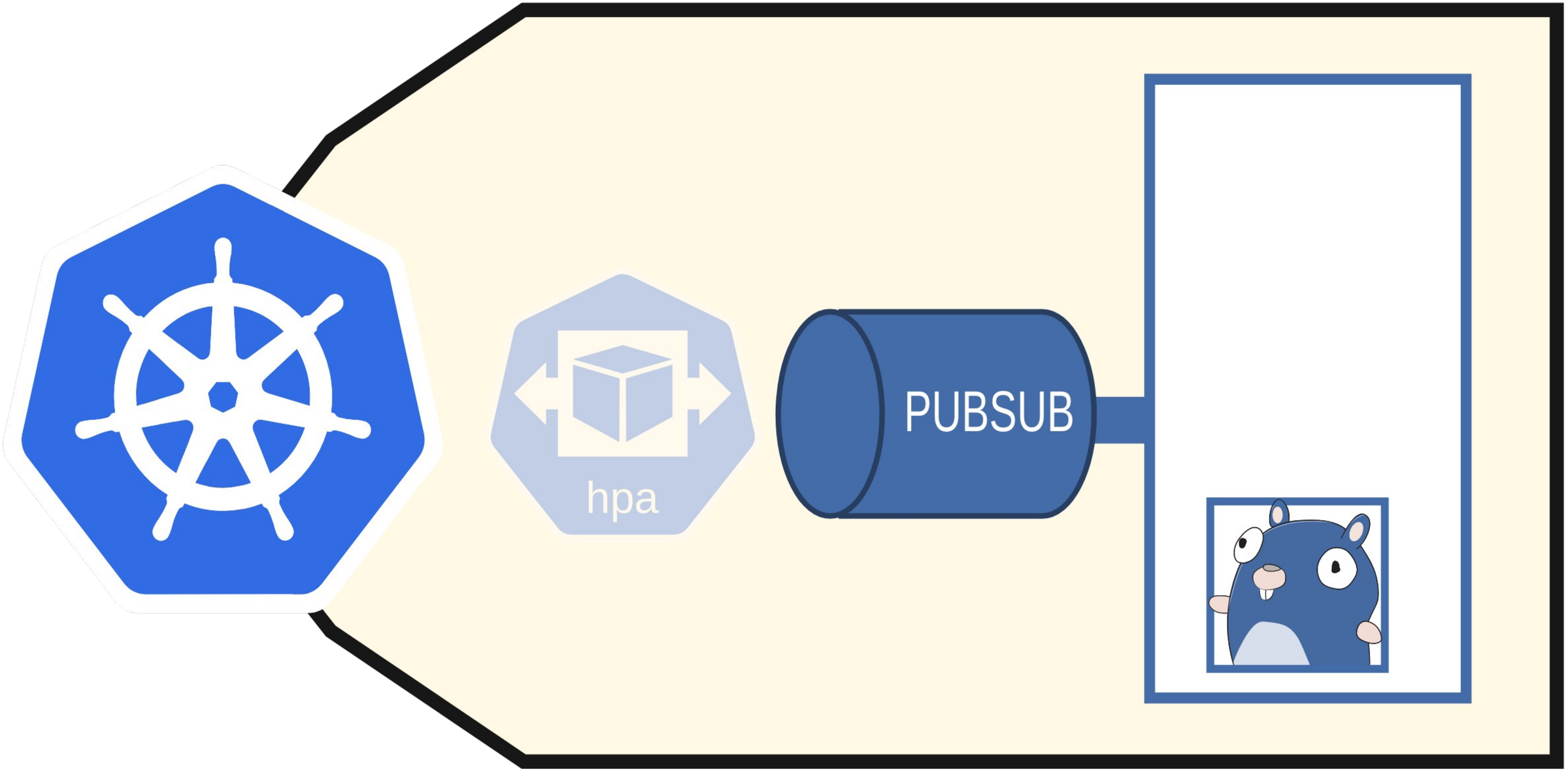
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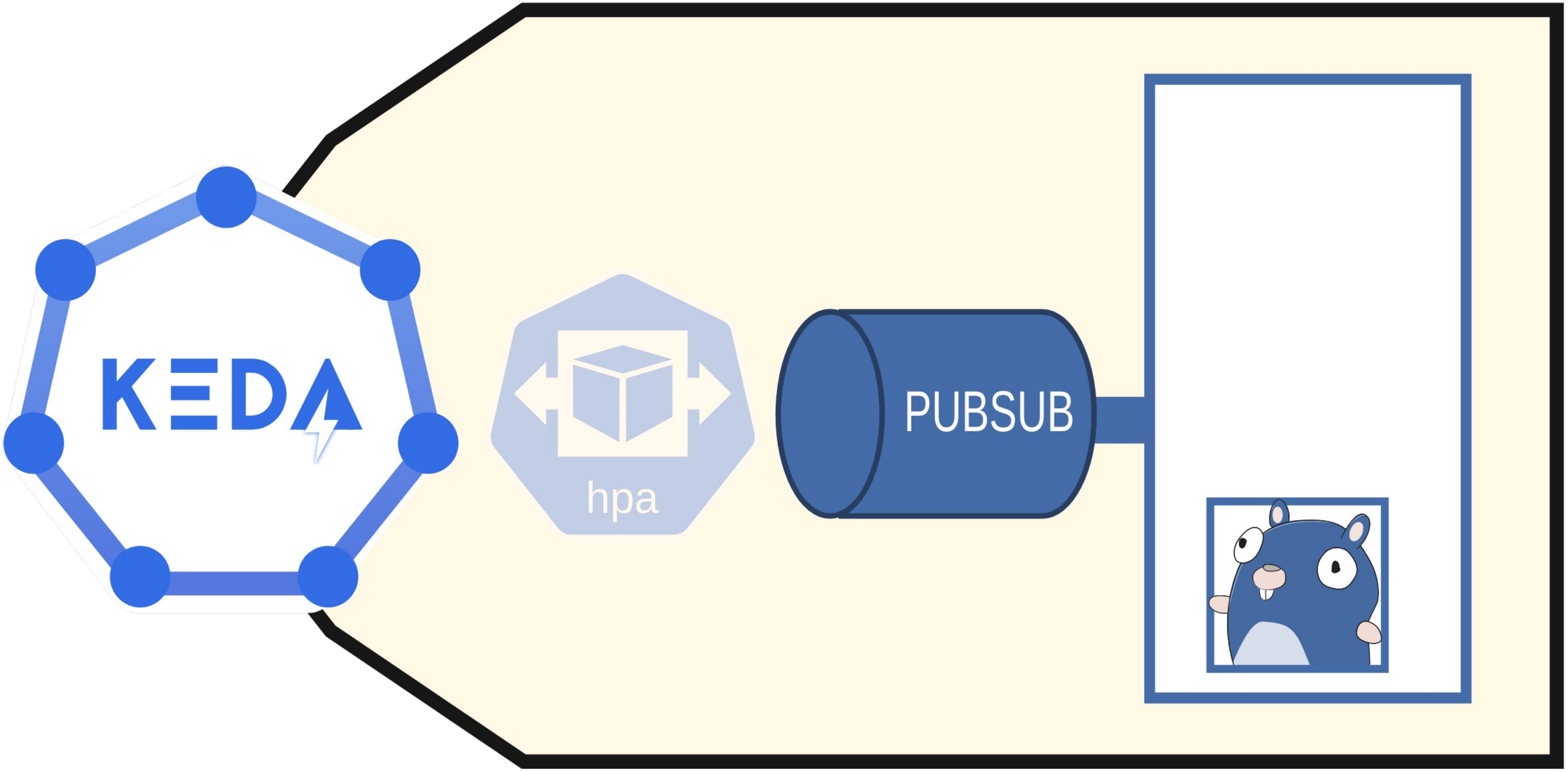
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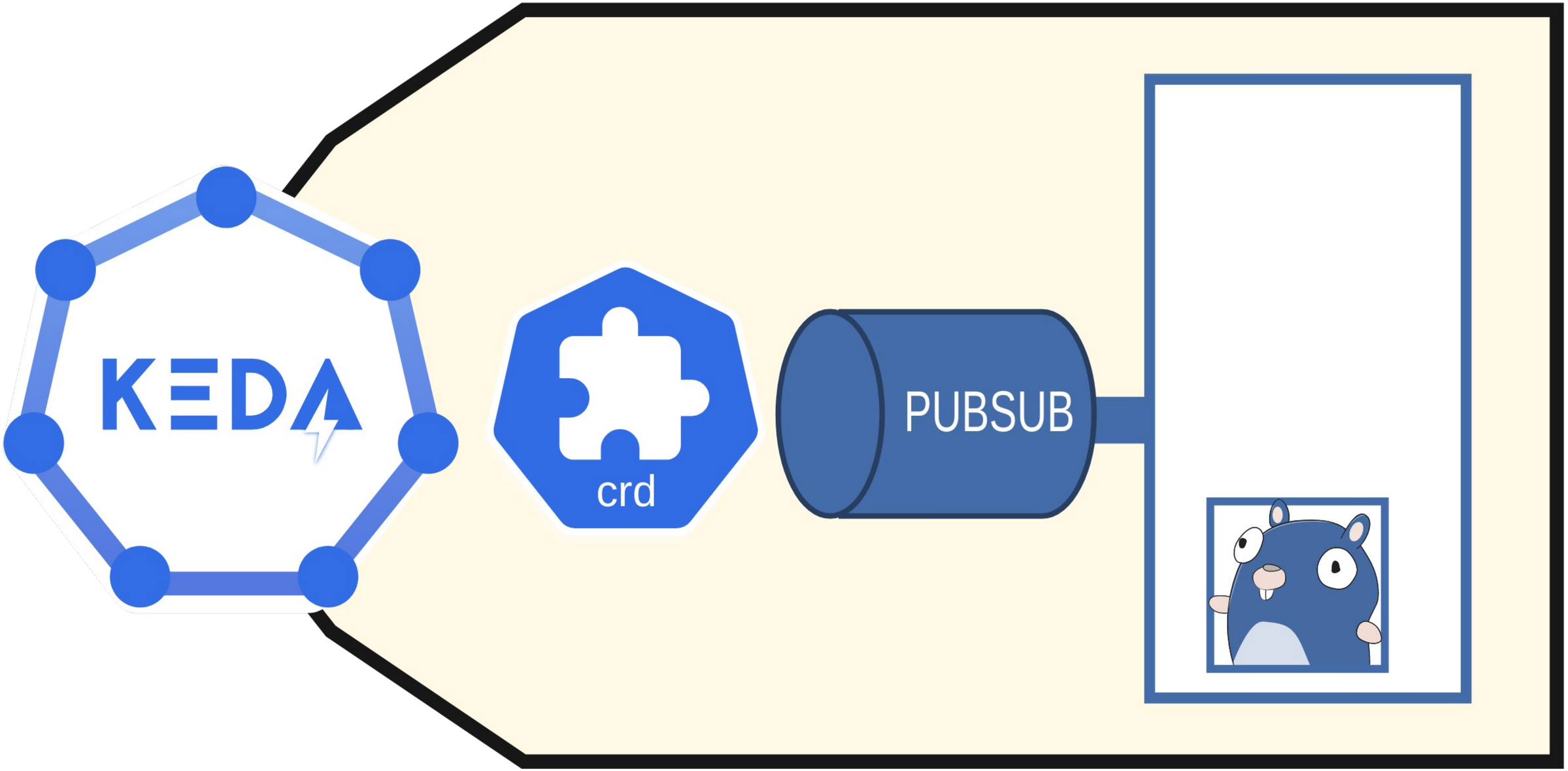
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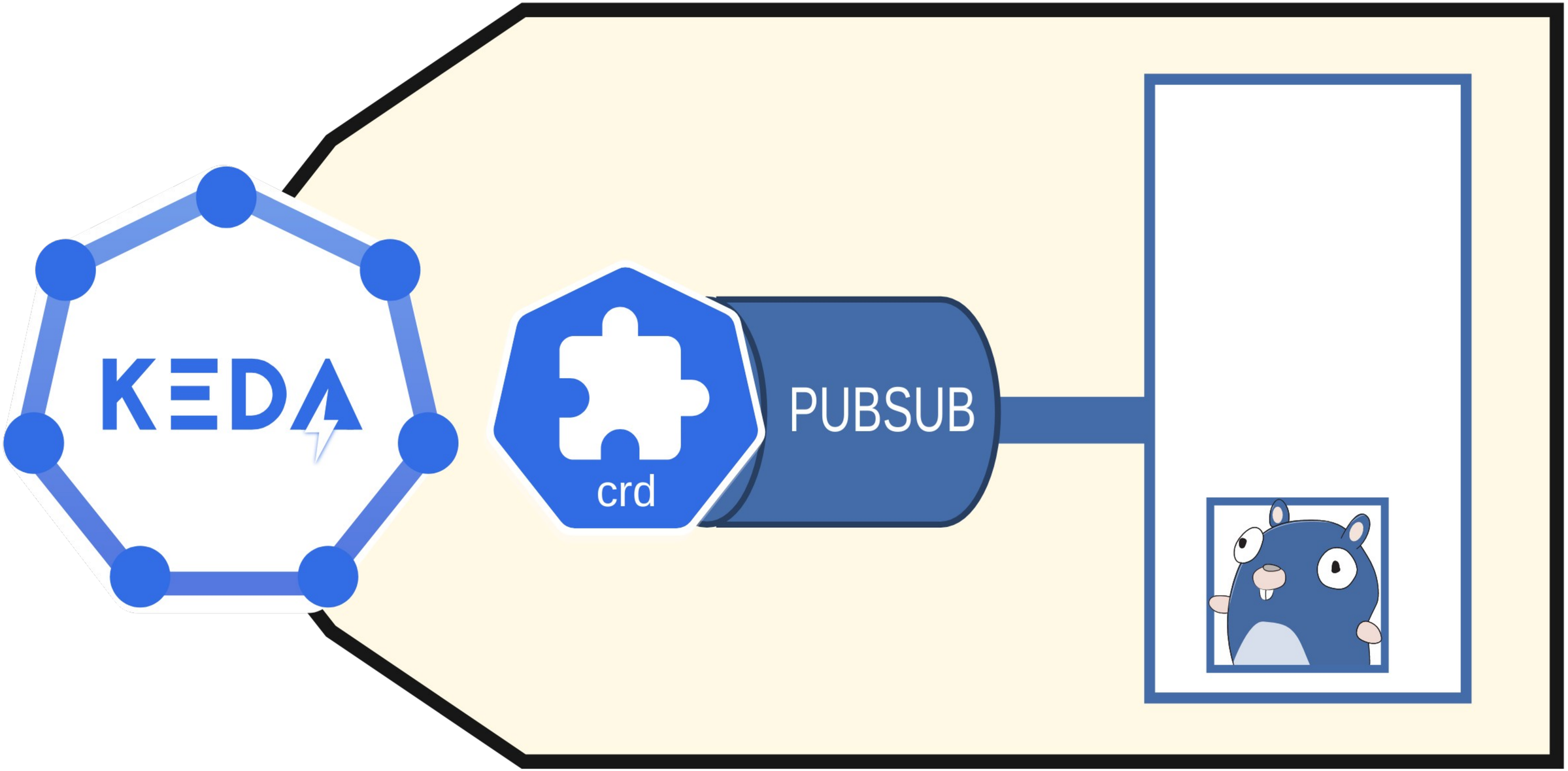
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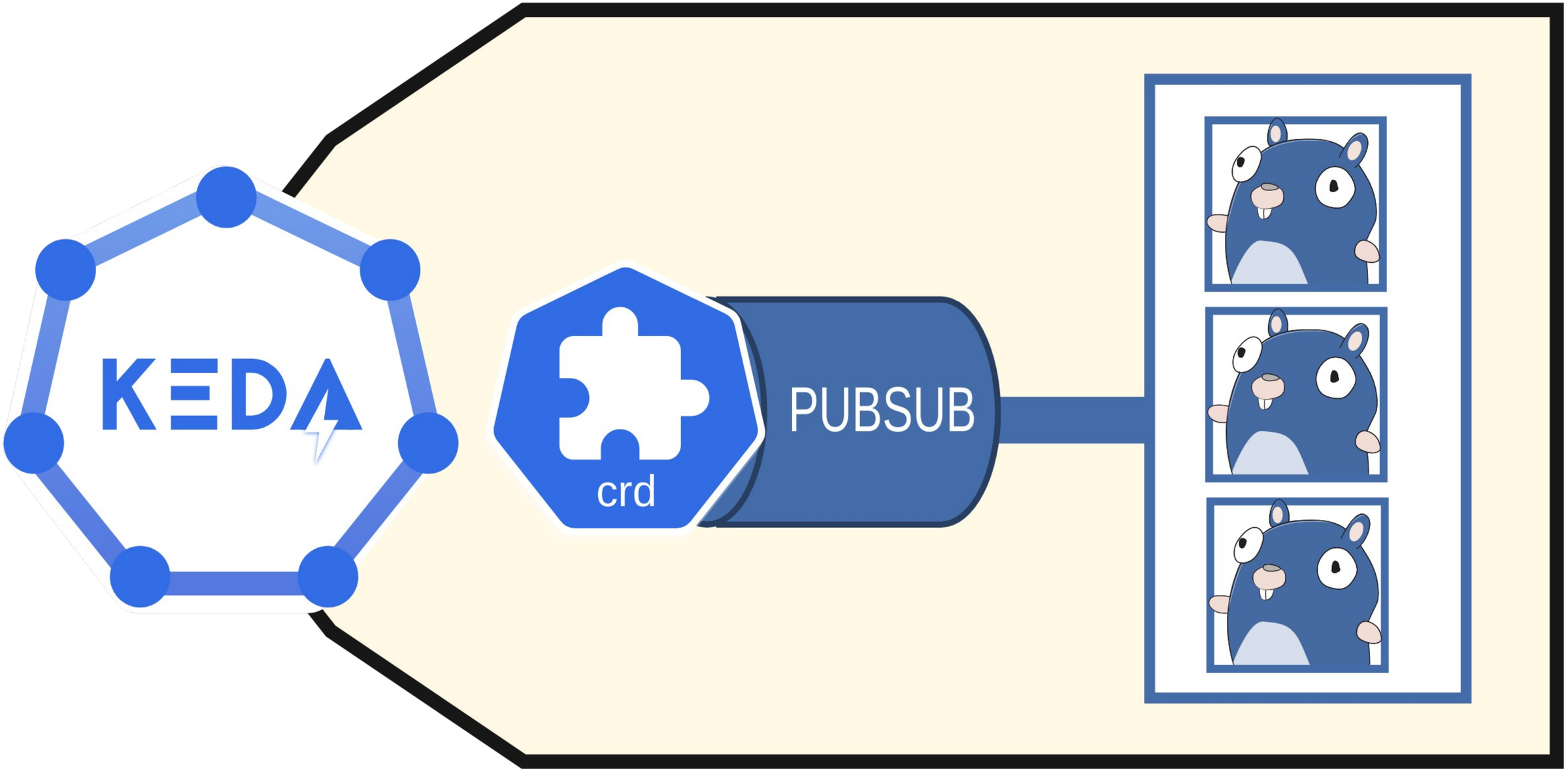
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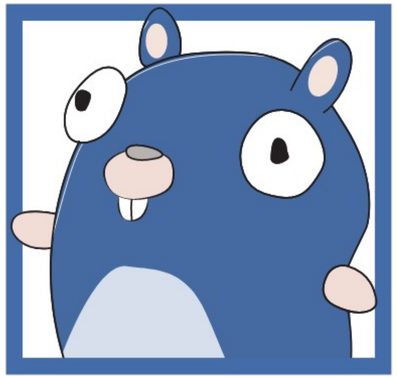
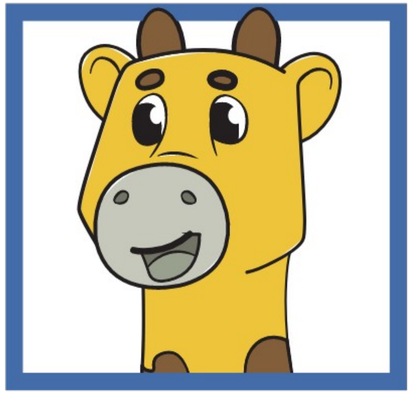
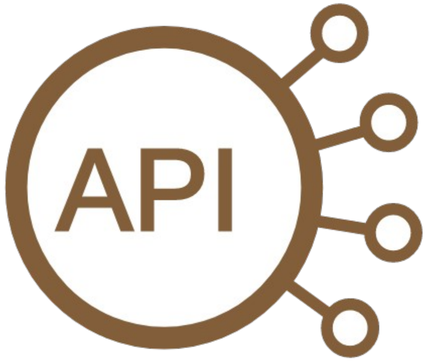
Backstage






API

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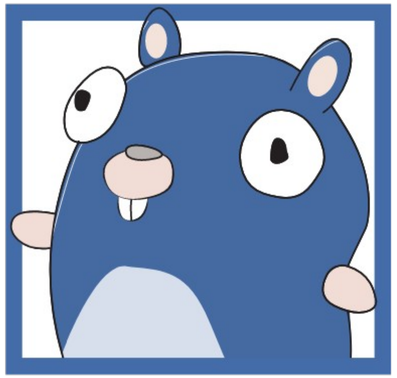

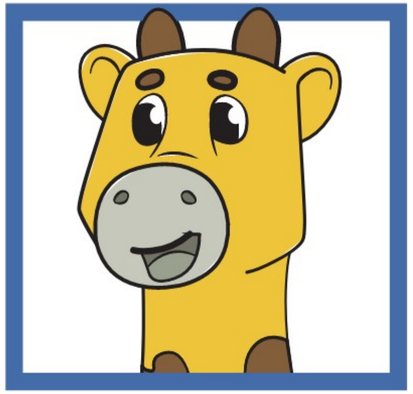

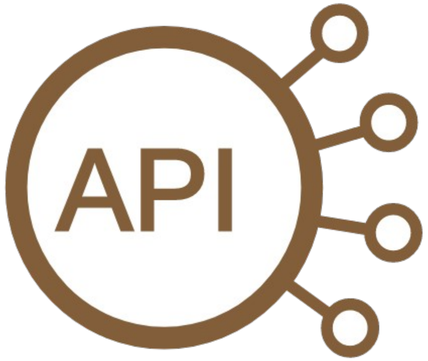
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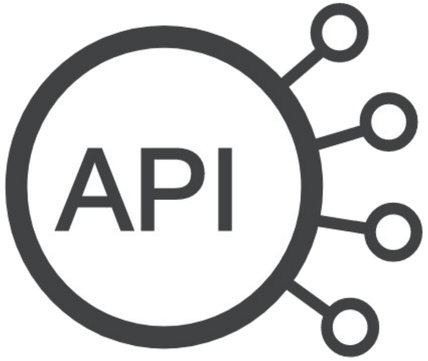
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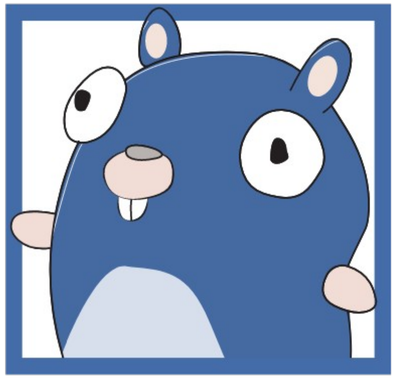

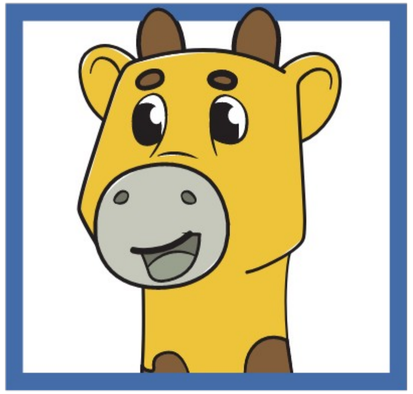

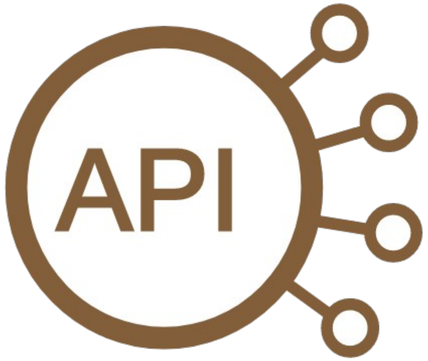
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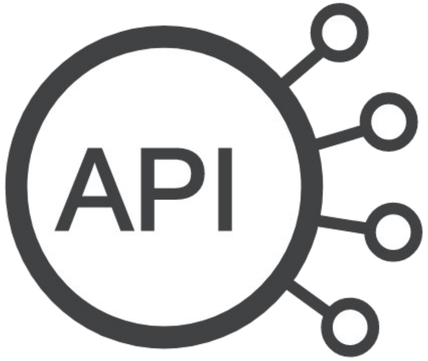
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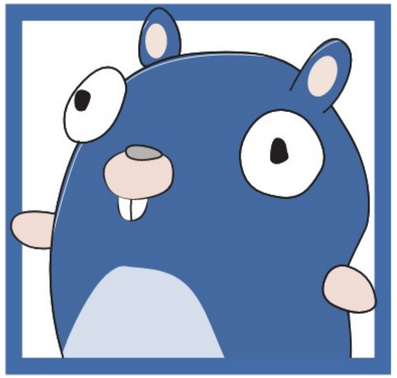

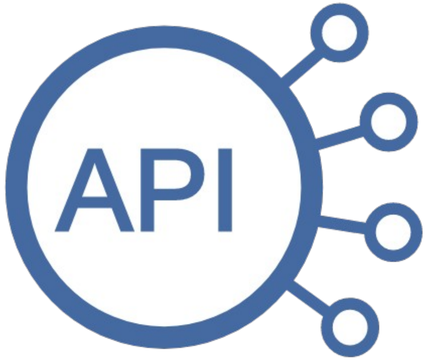
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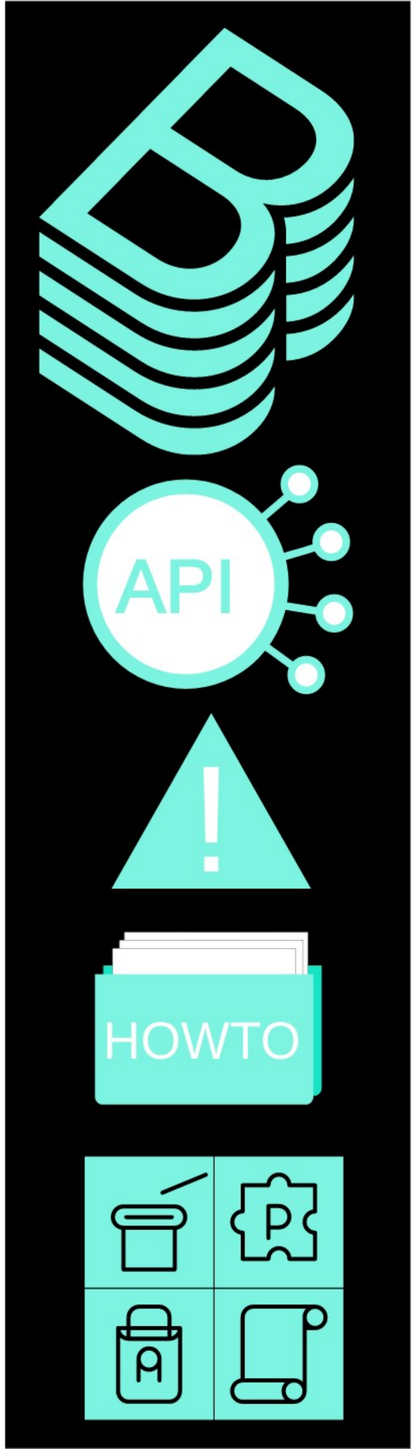
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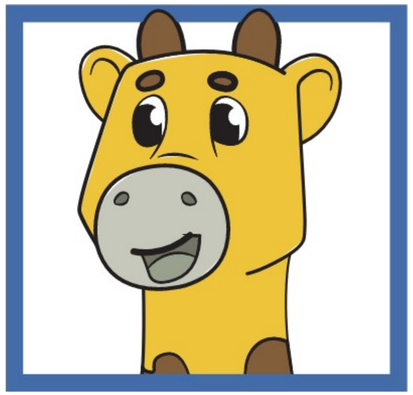

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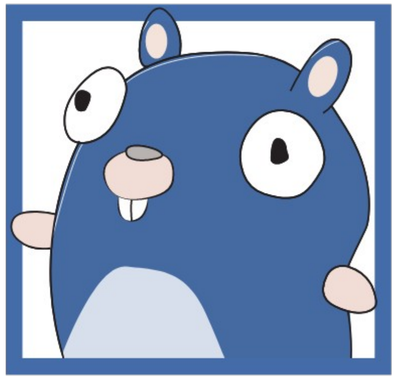

Goldie

Backstage

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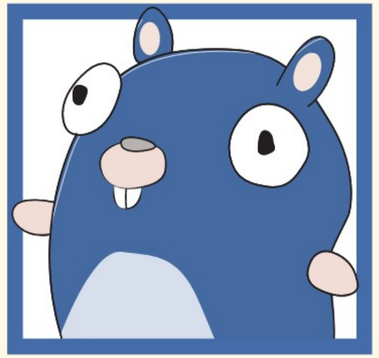

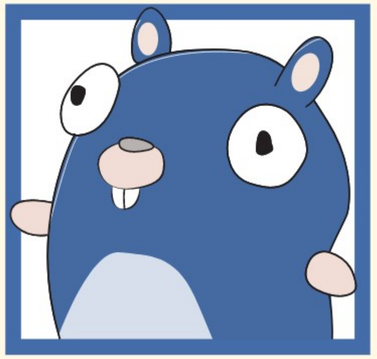

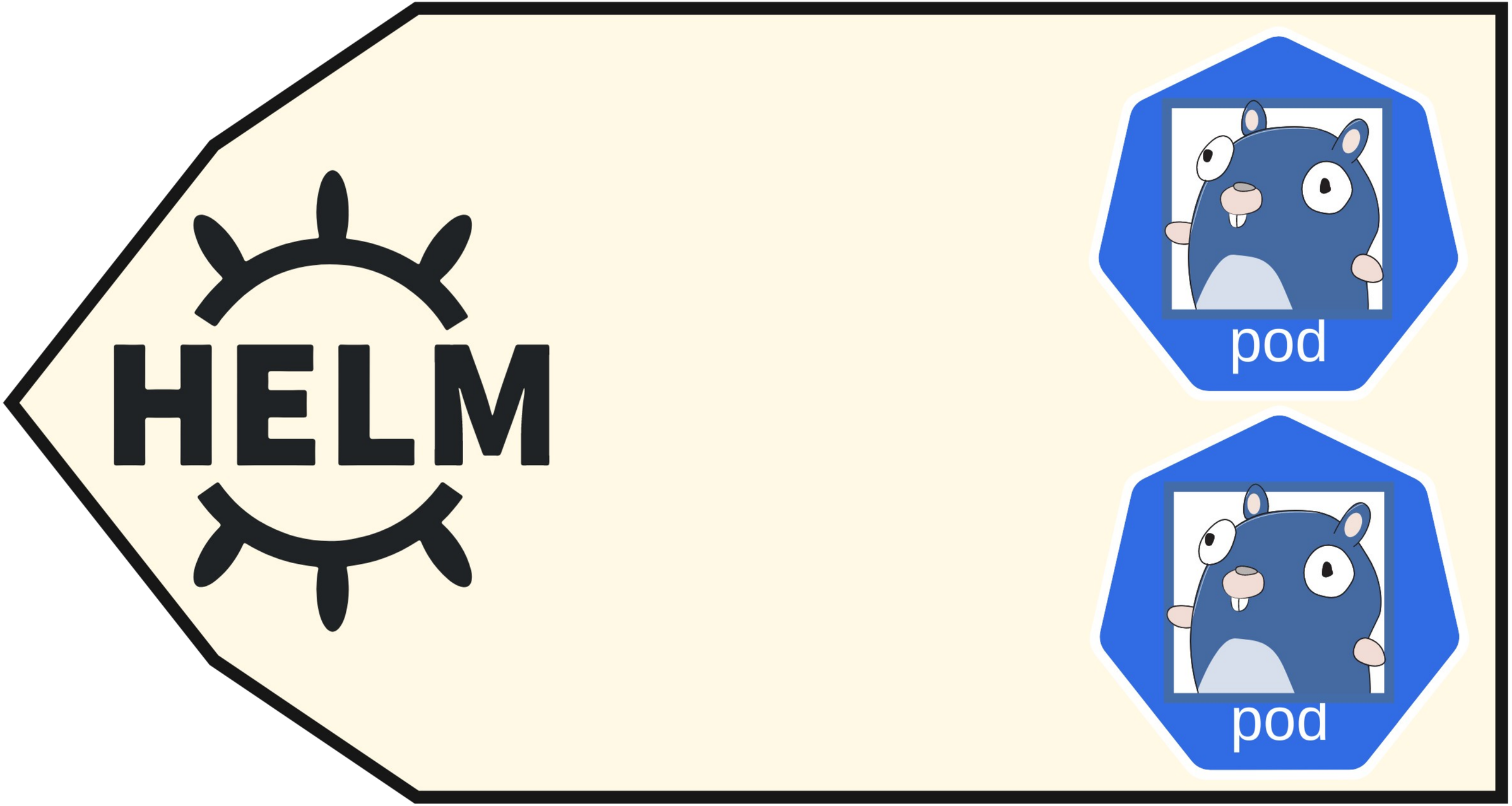
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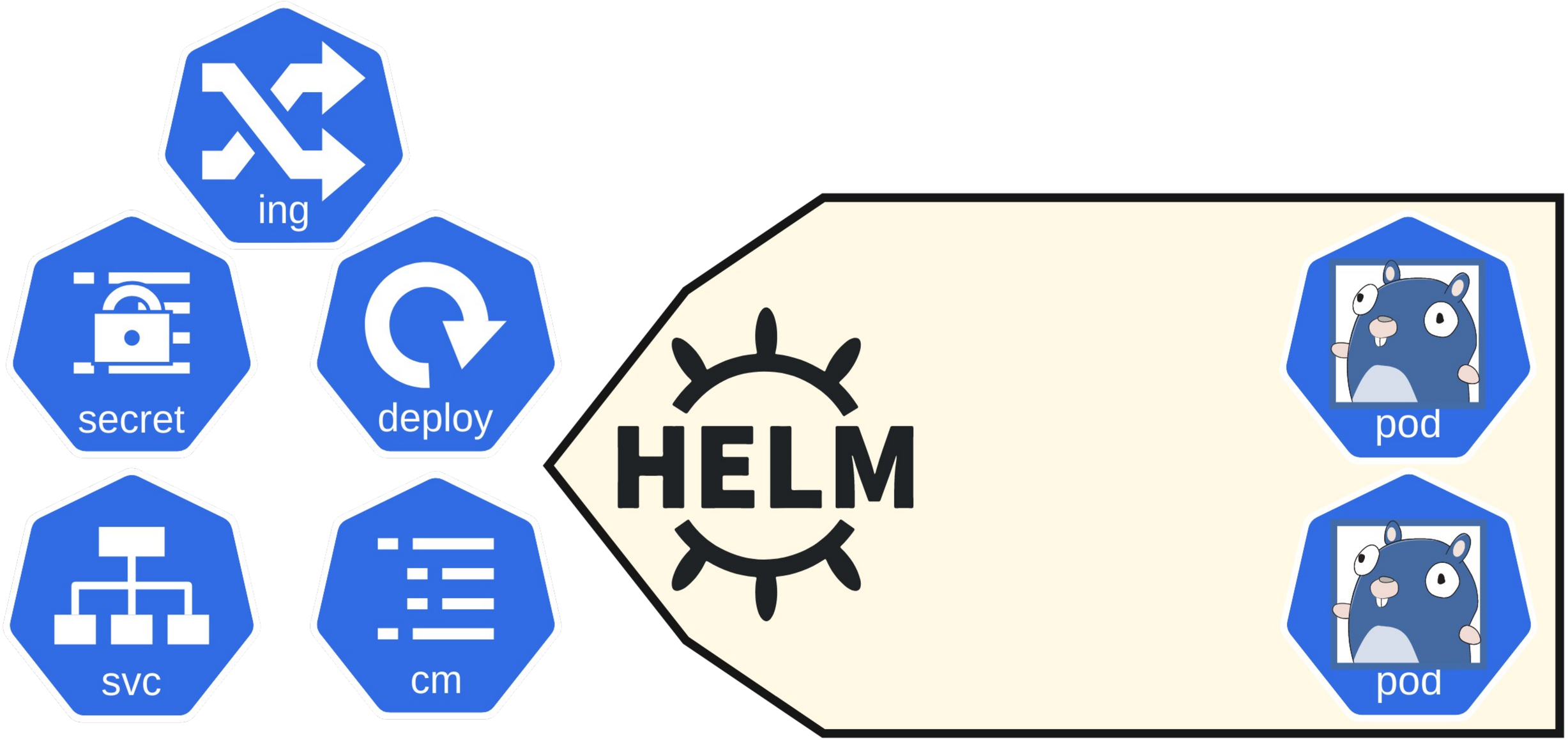
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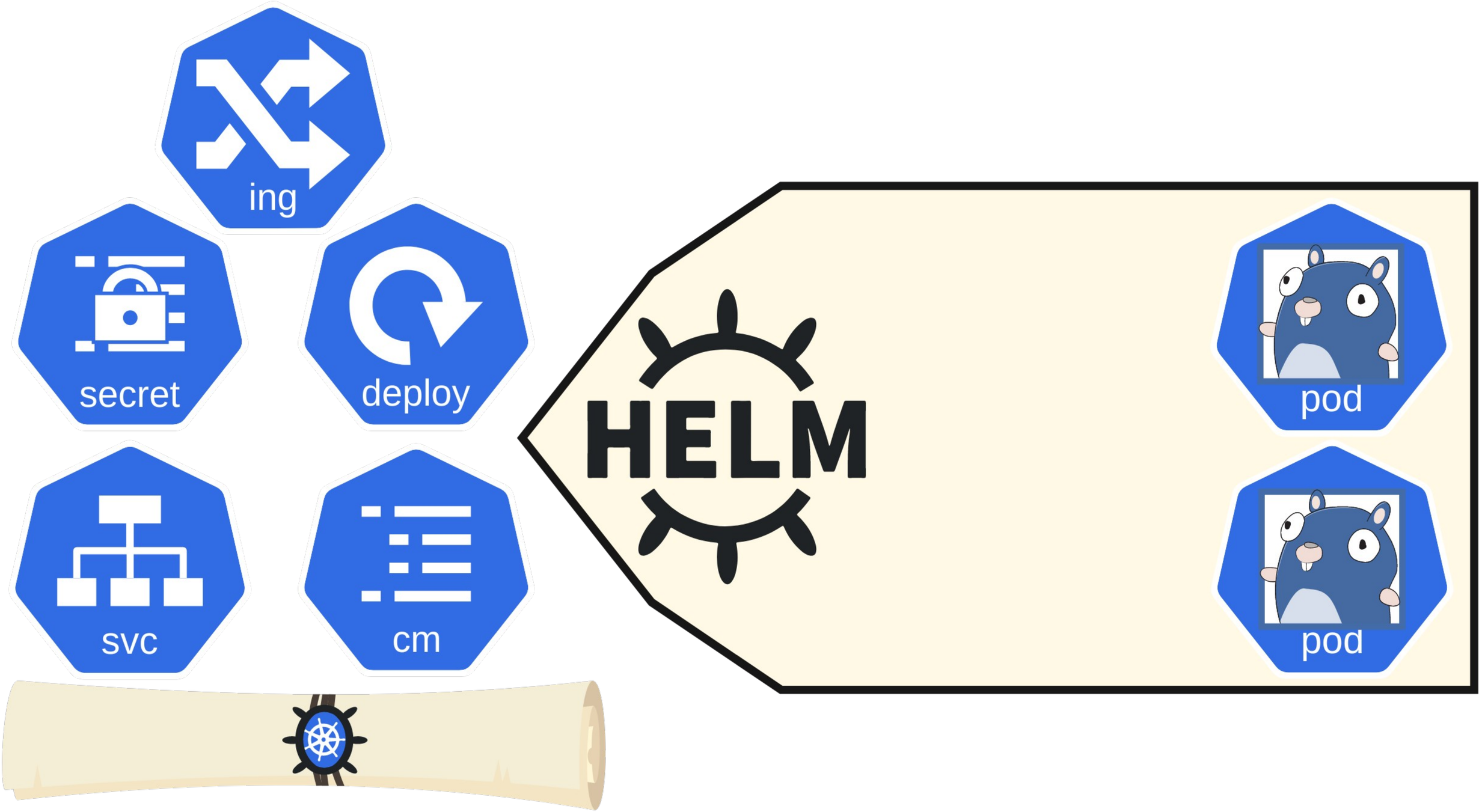
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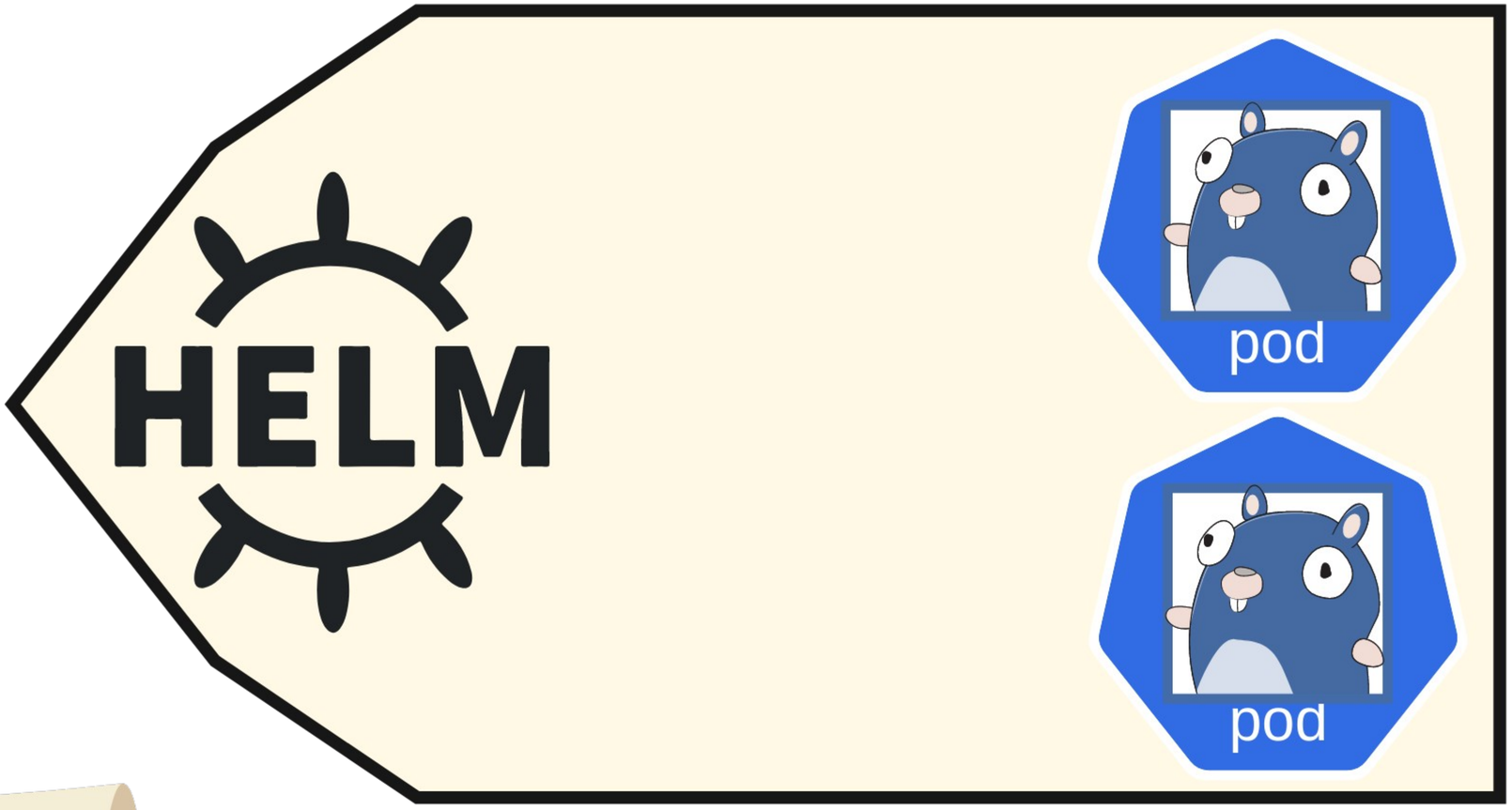
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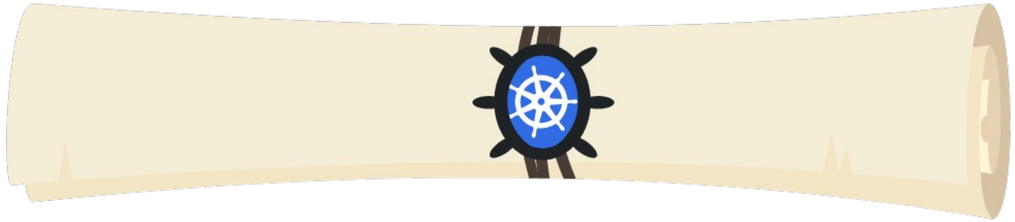

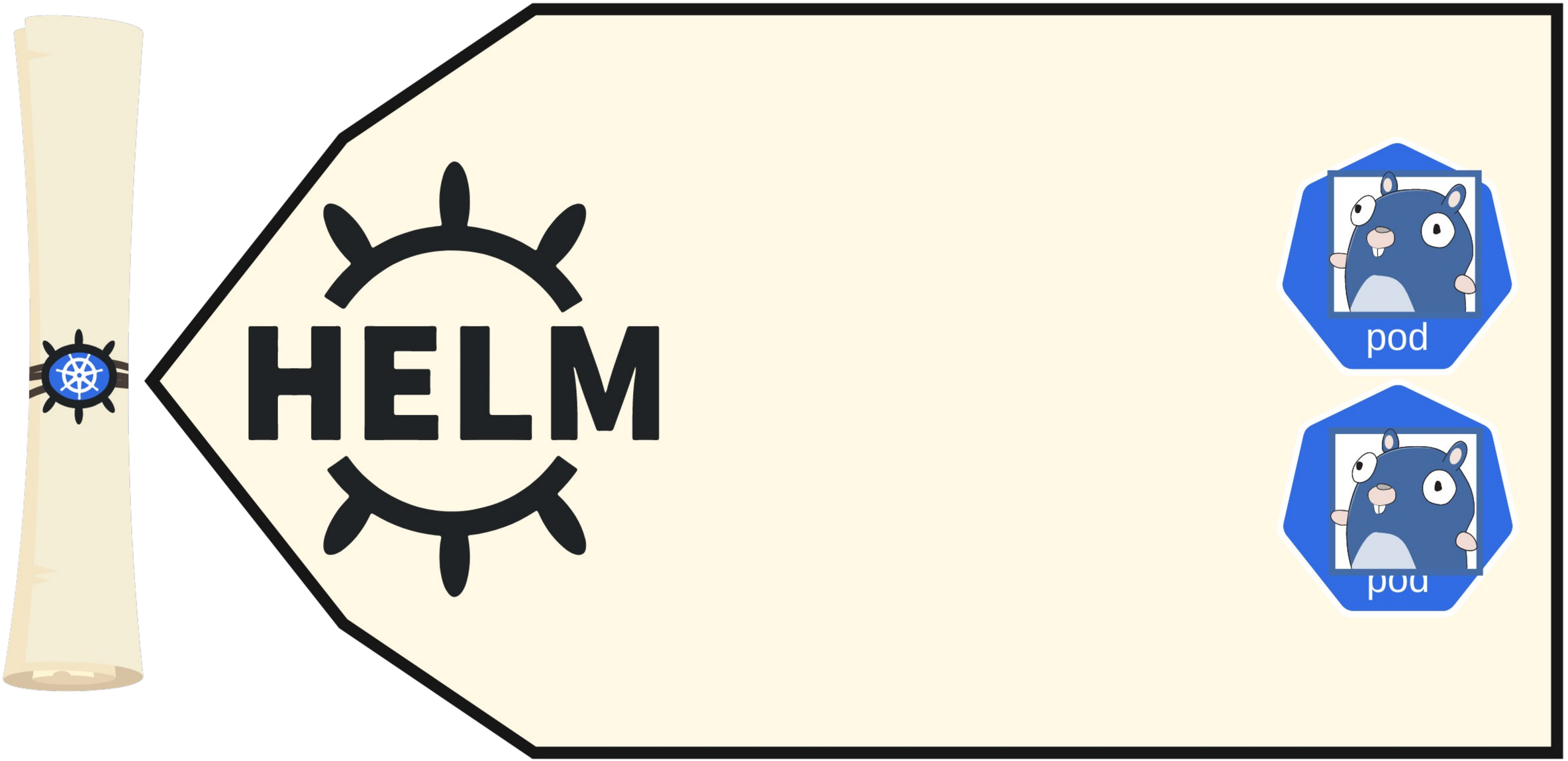
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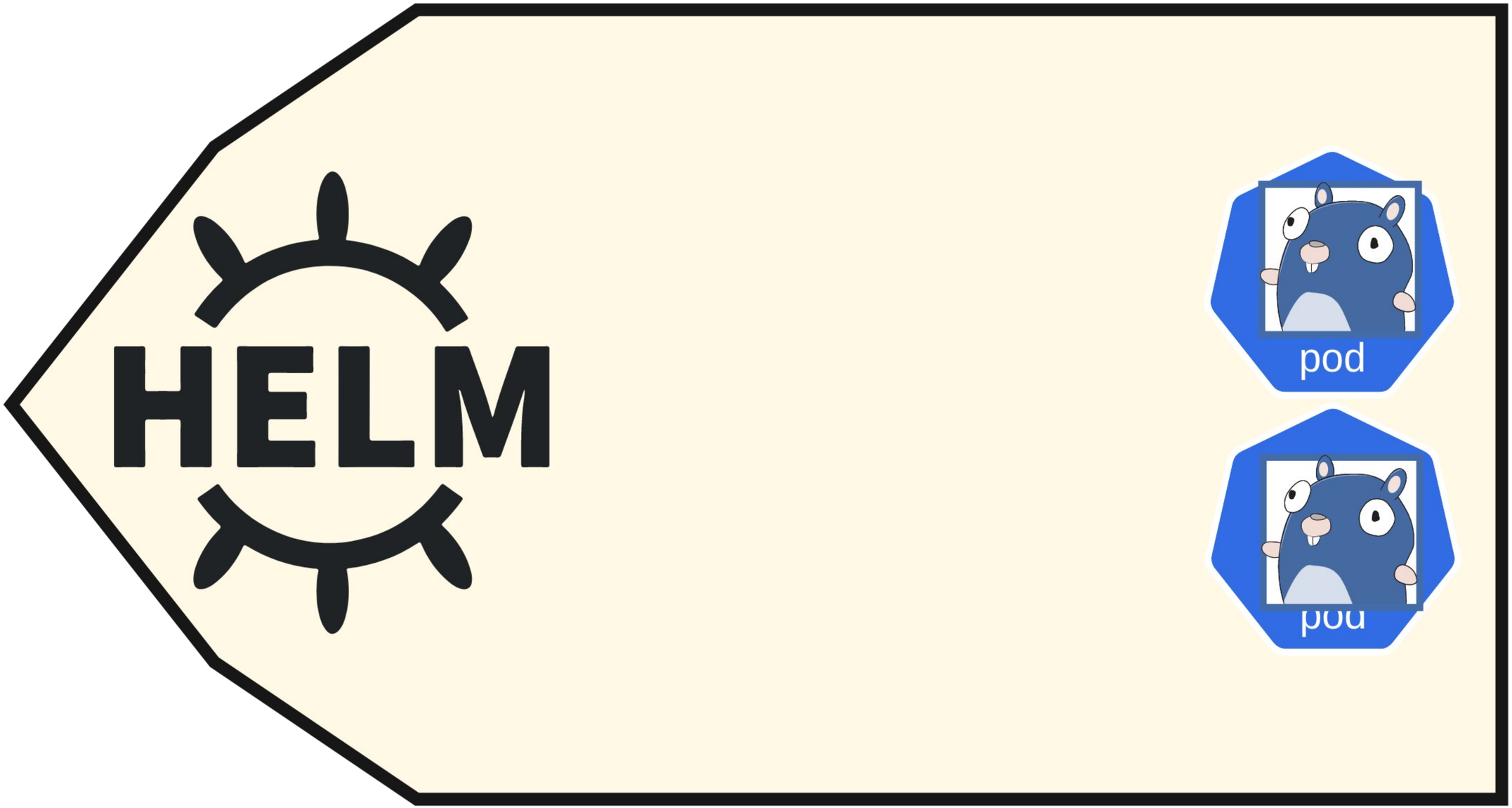
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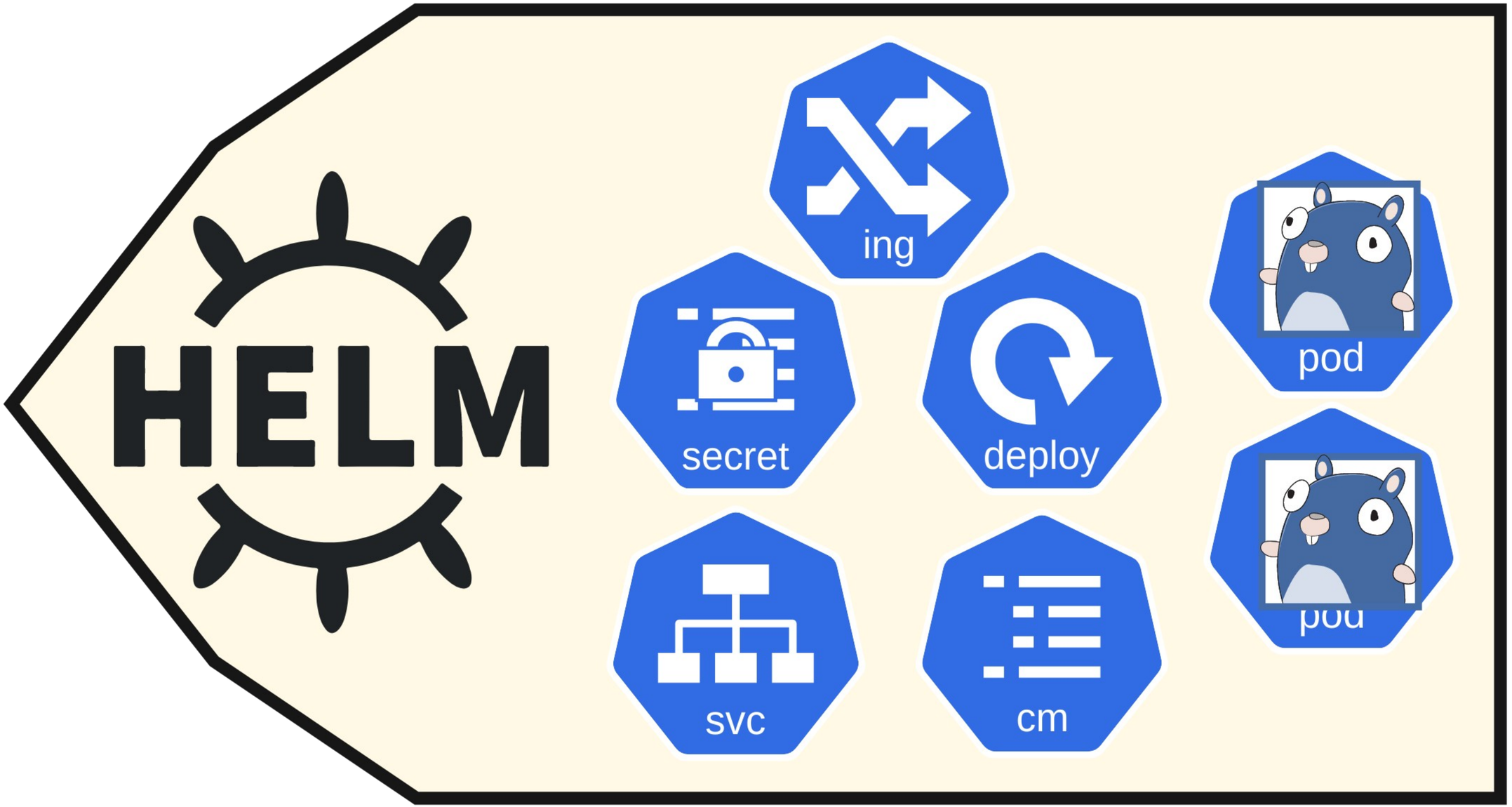
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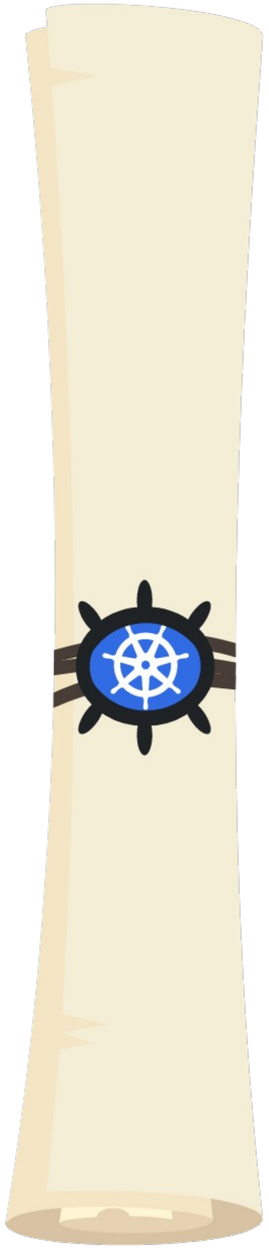

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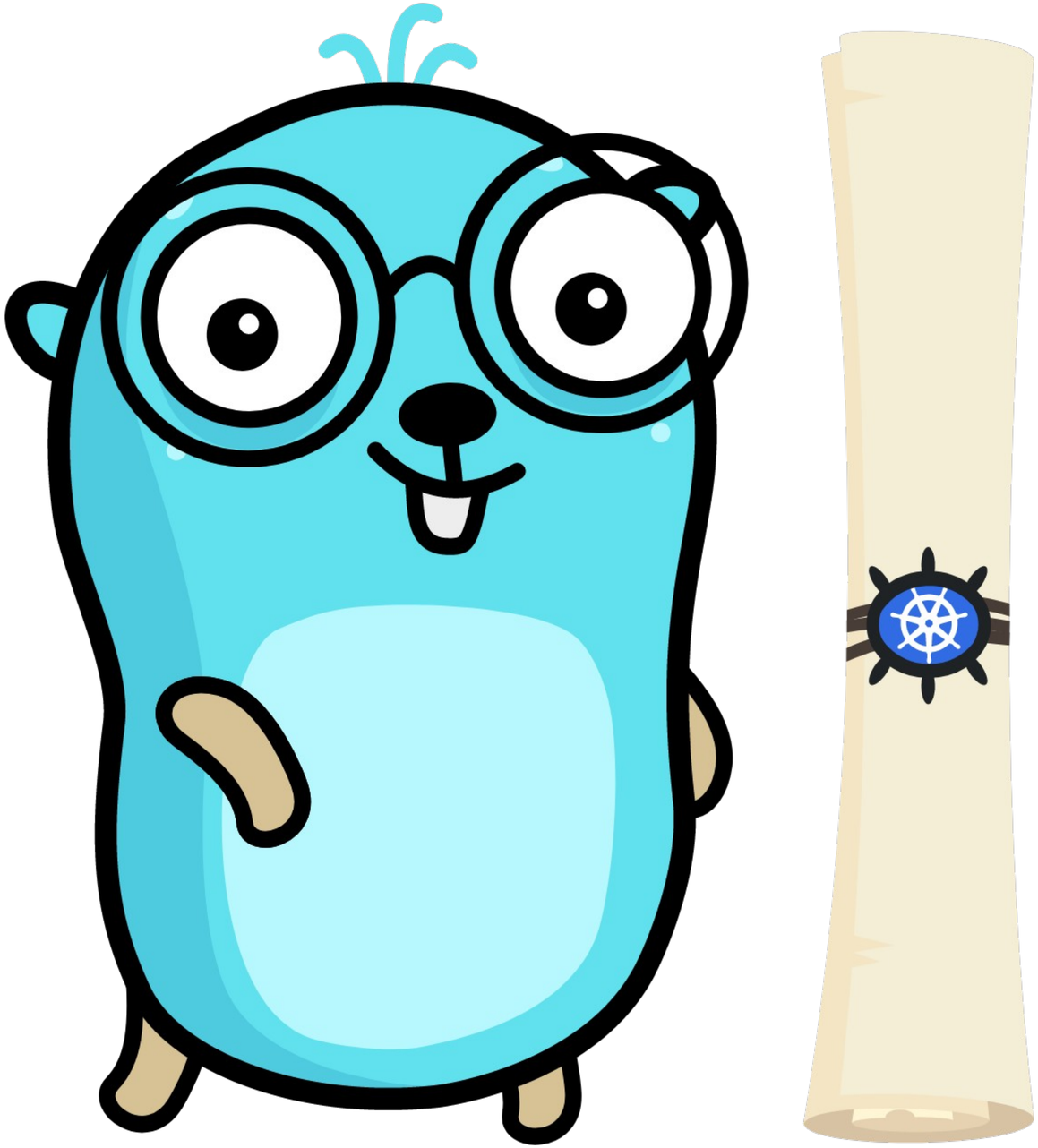

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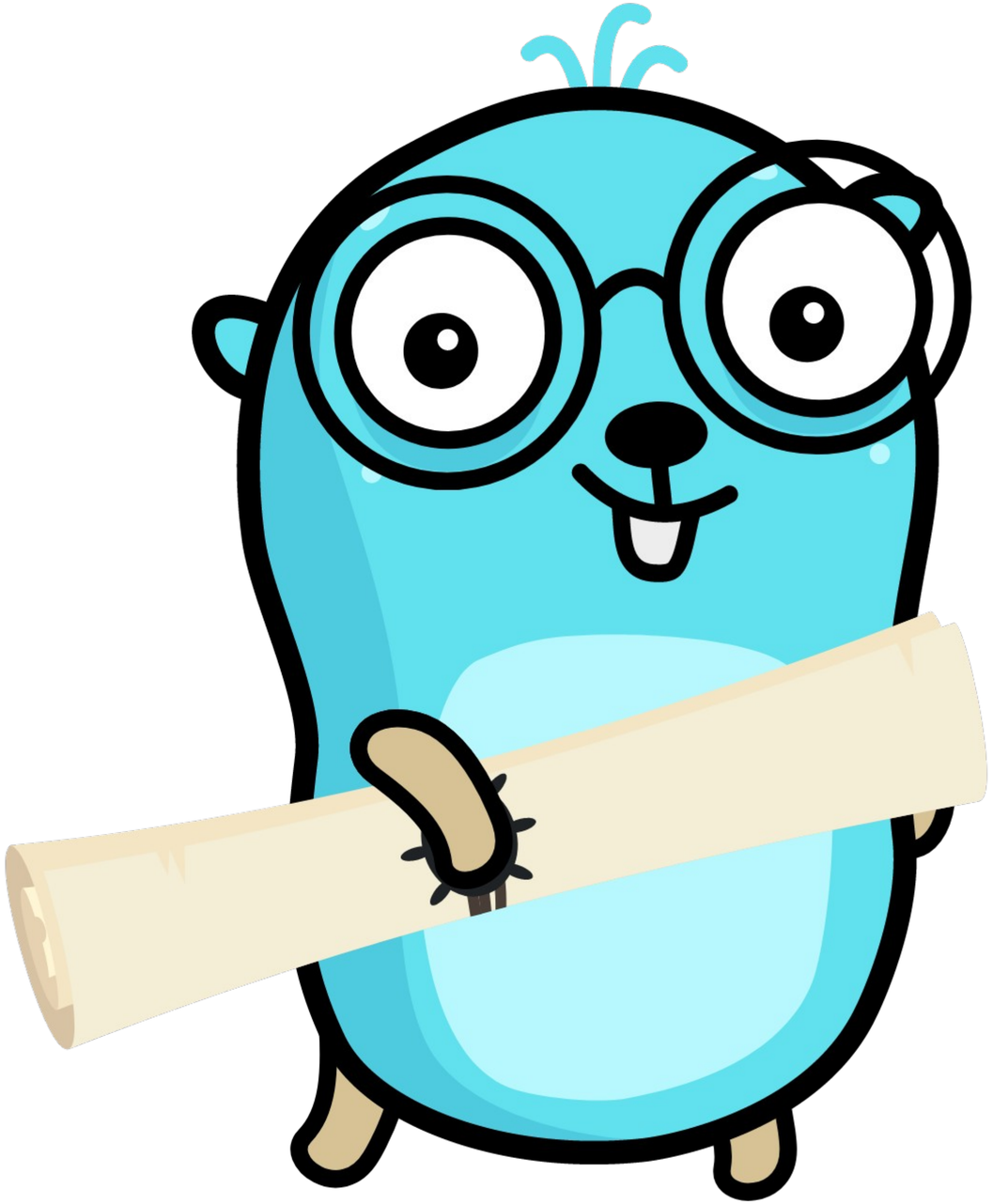

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HELM

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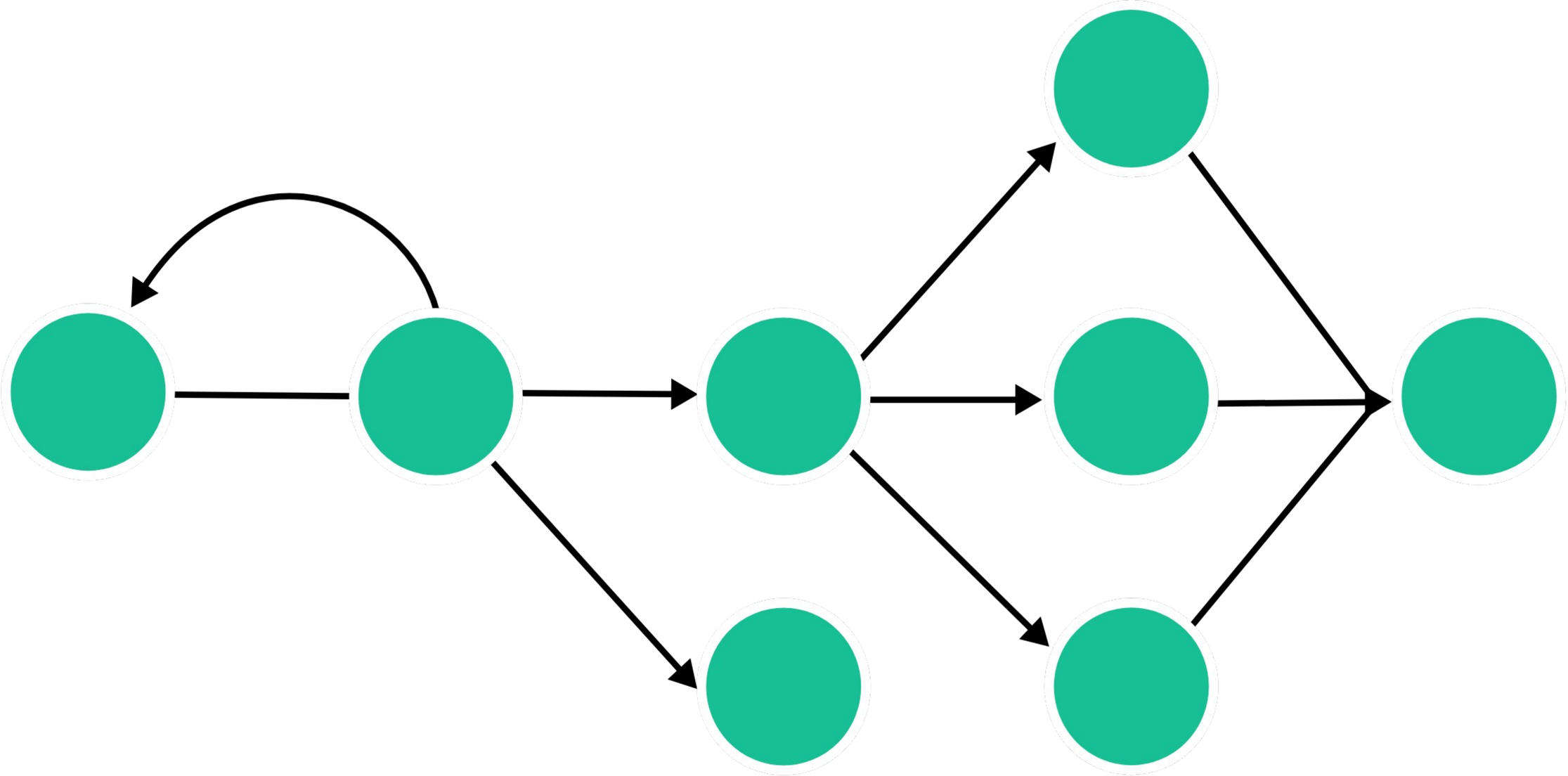
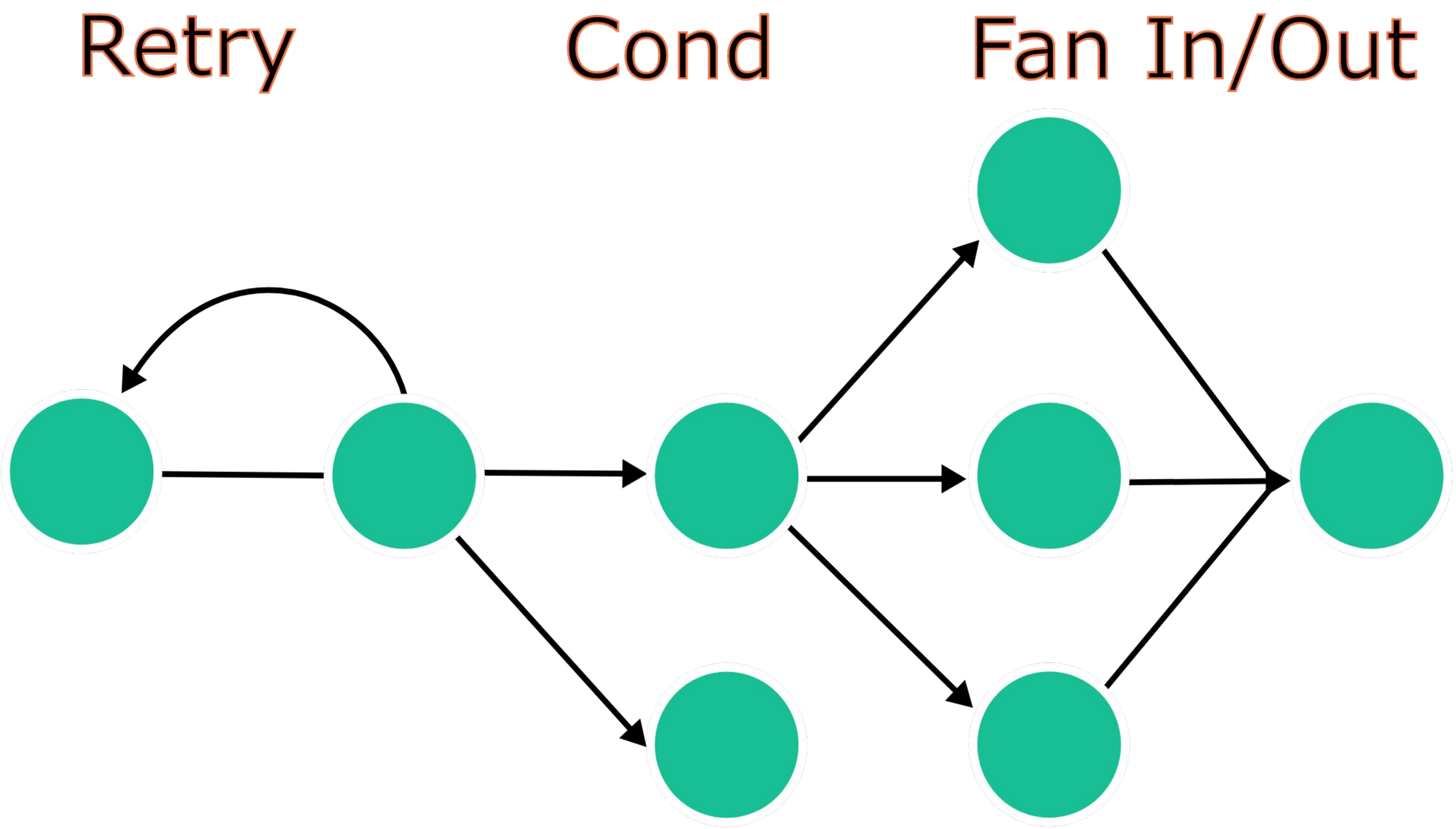
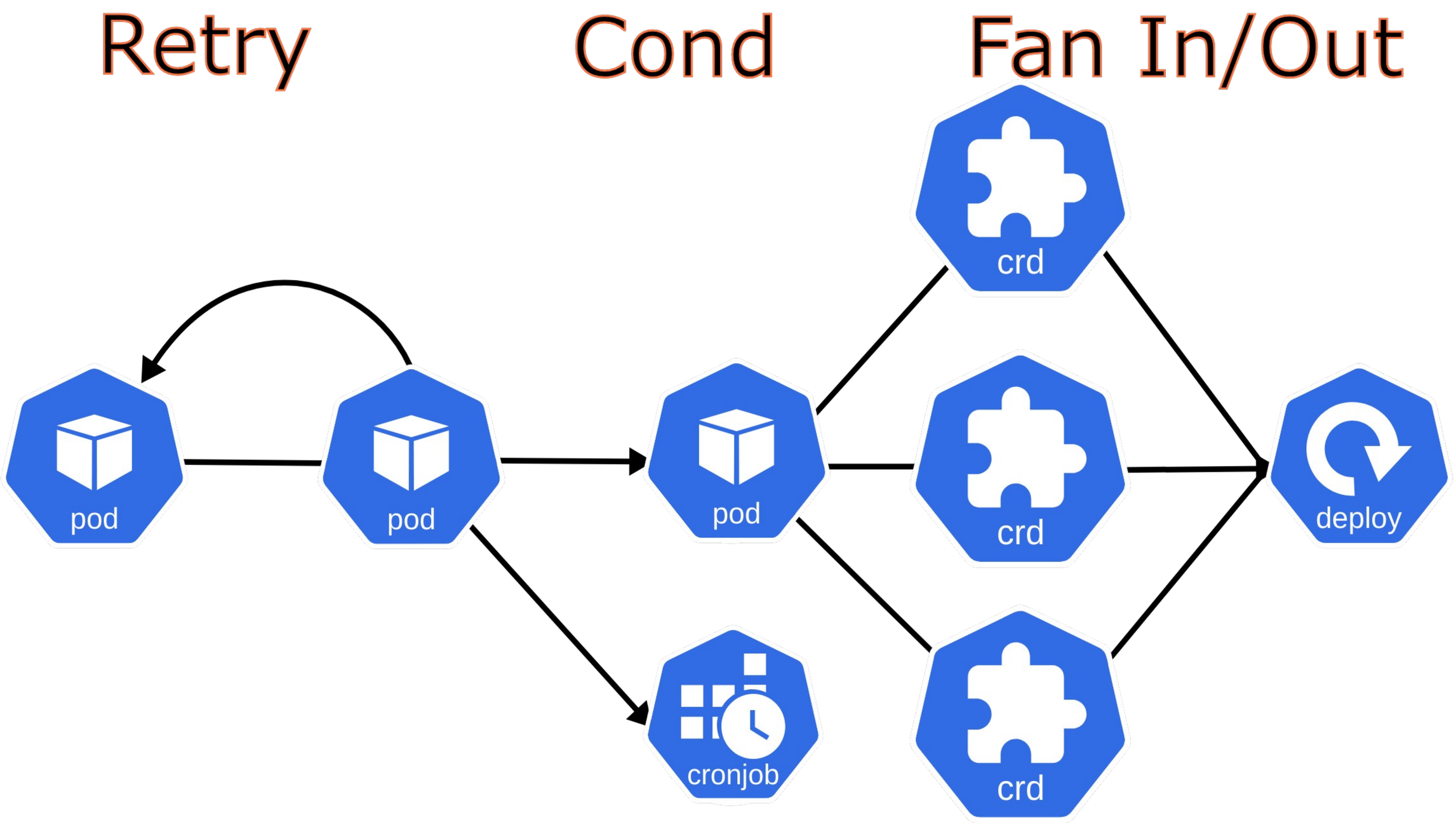
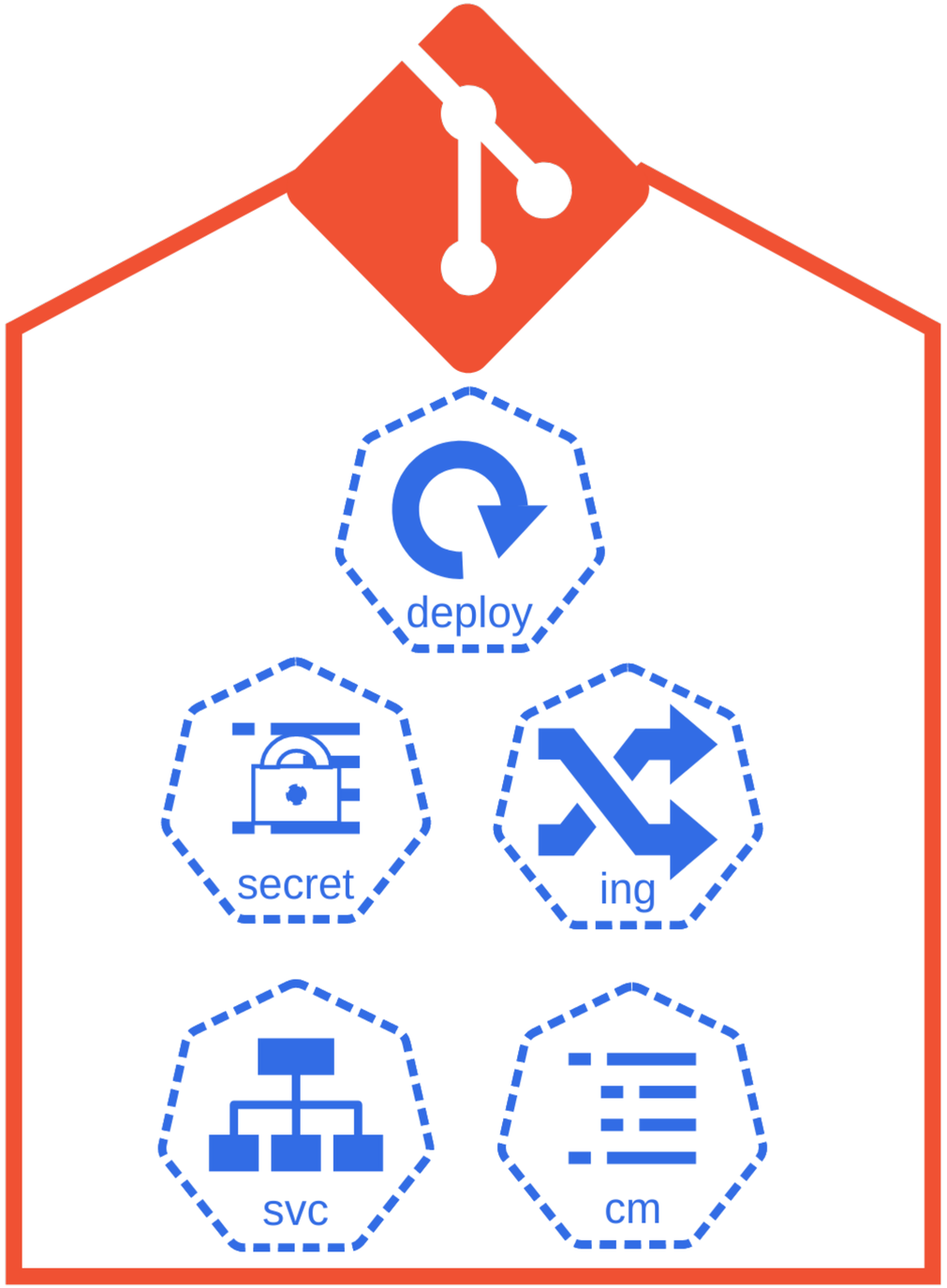



Retry
Cond
Fan In/Out


Retry
Cond
Fan In/Out
pod
pod
pod
cronjob
crd
crd
crd
deploy

argo

flux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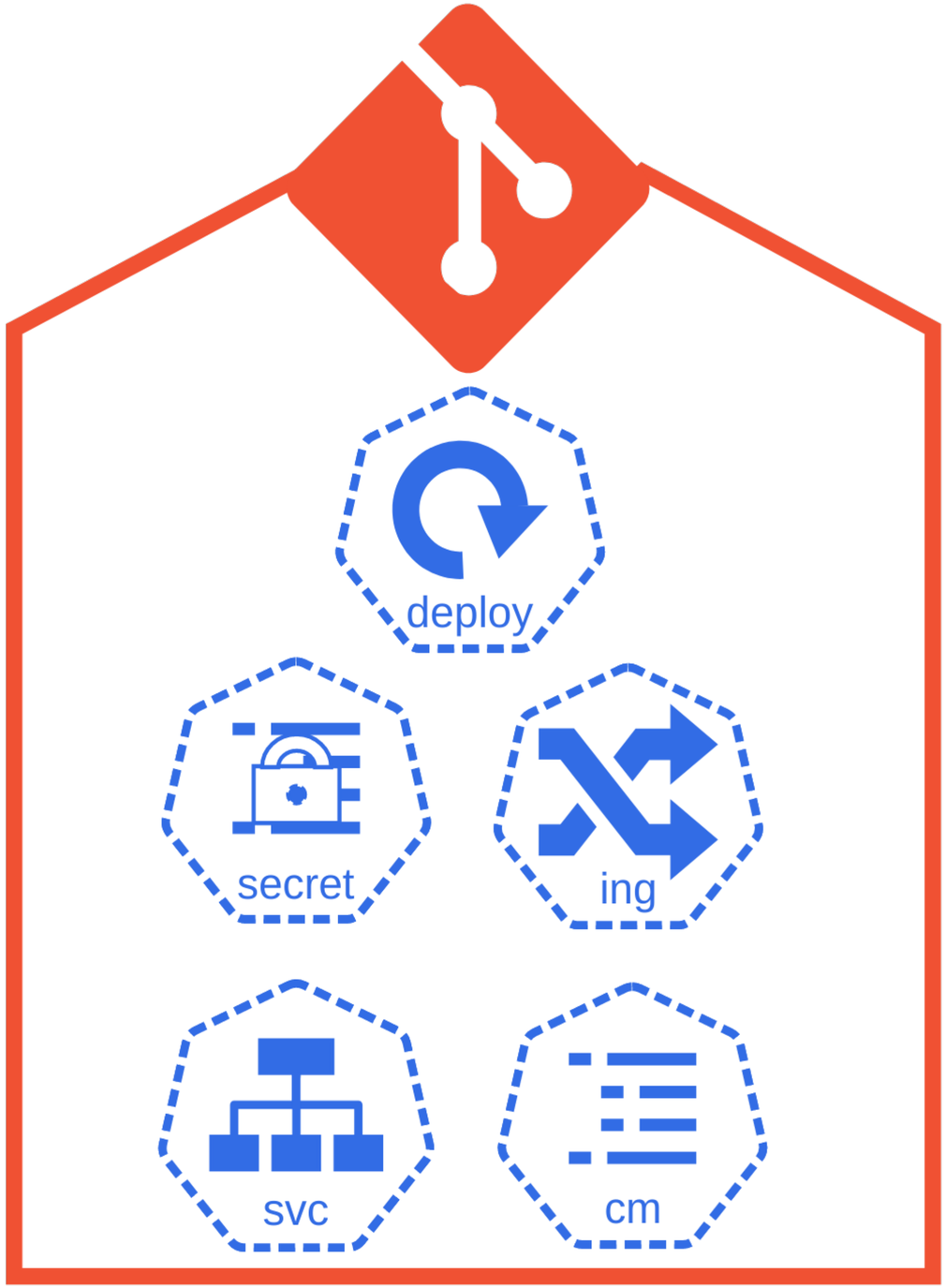
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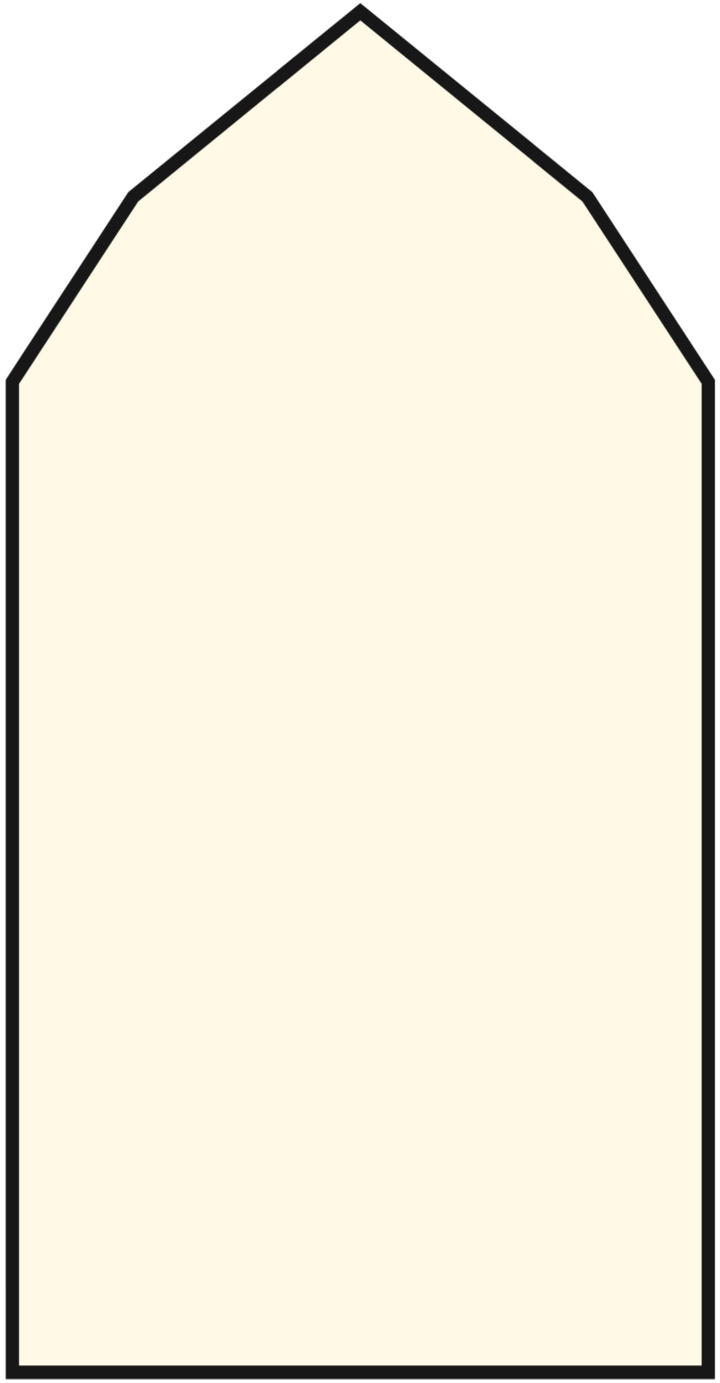

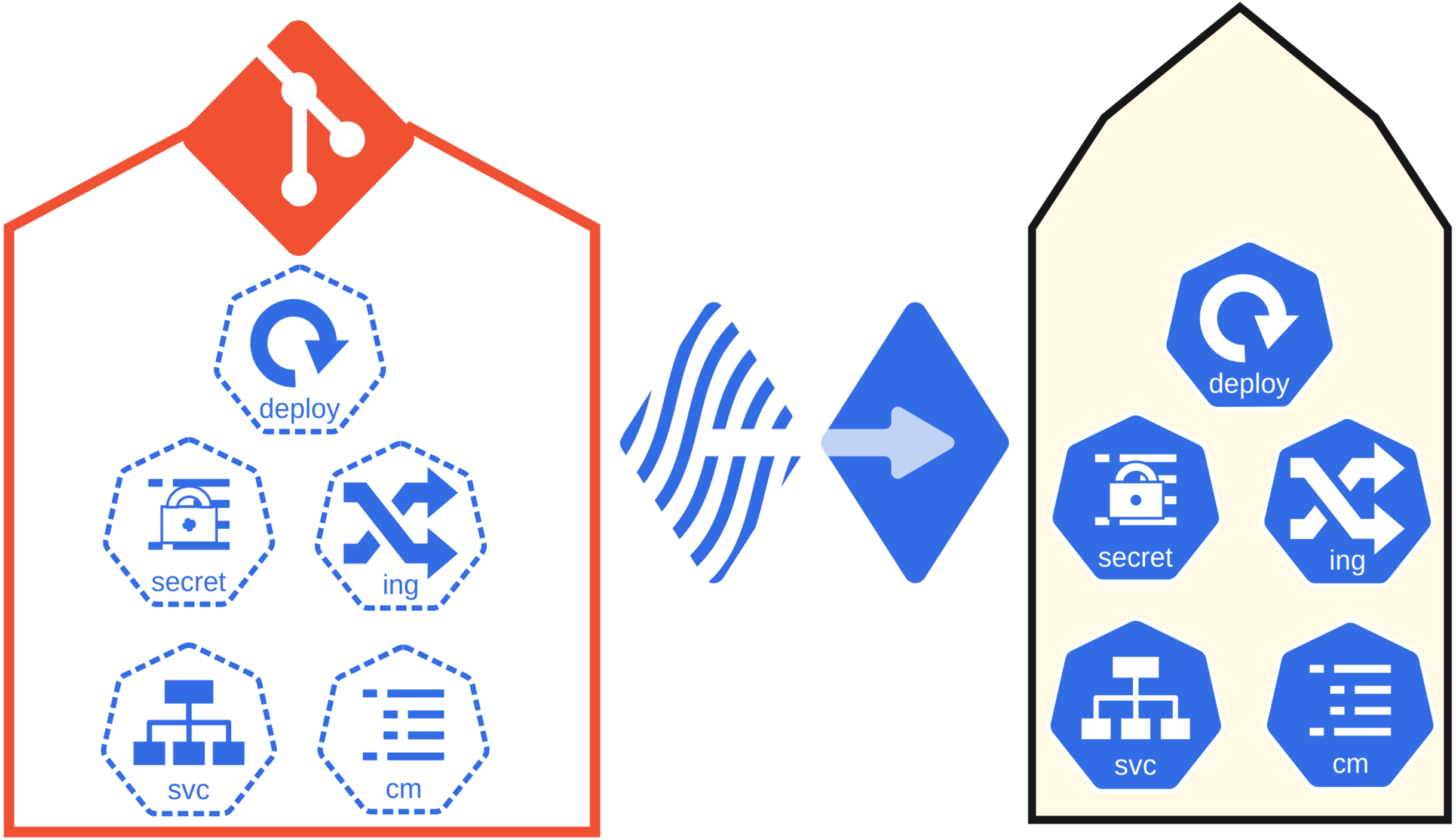
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ing
svc
cm
deploy
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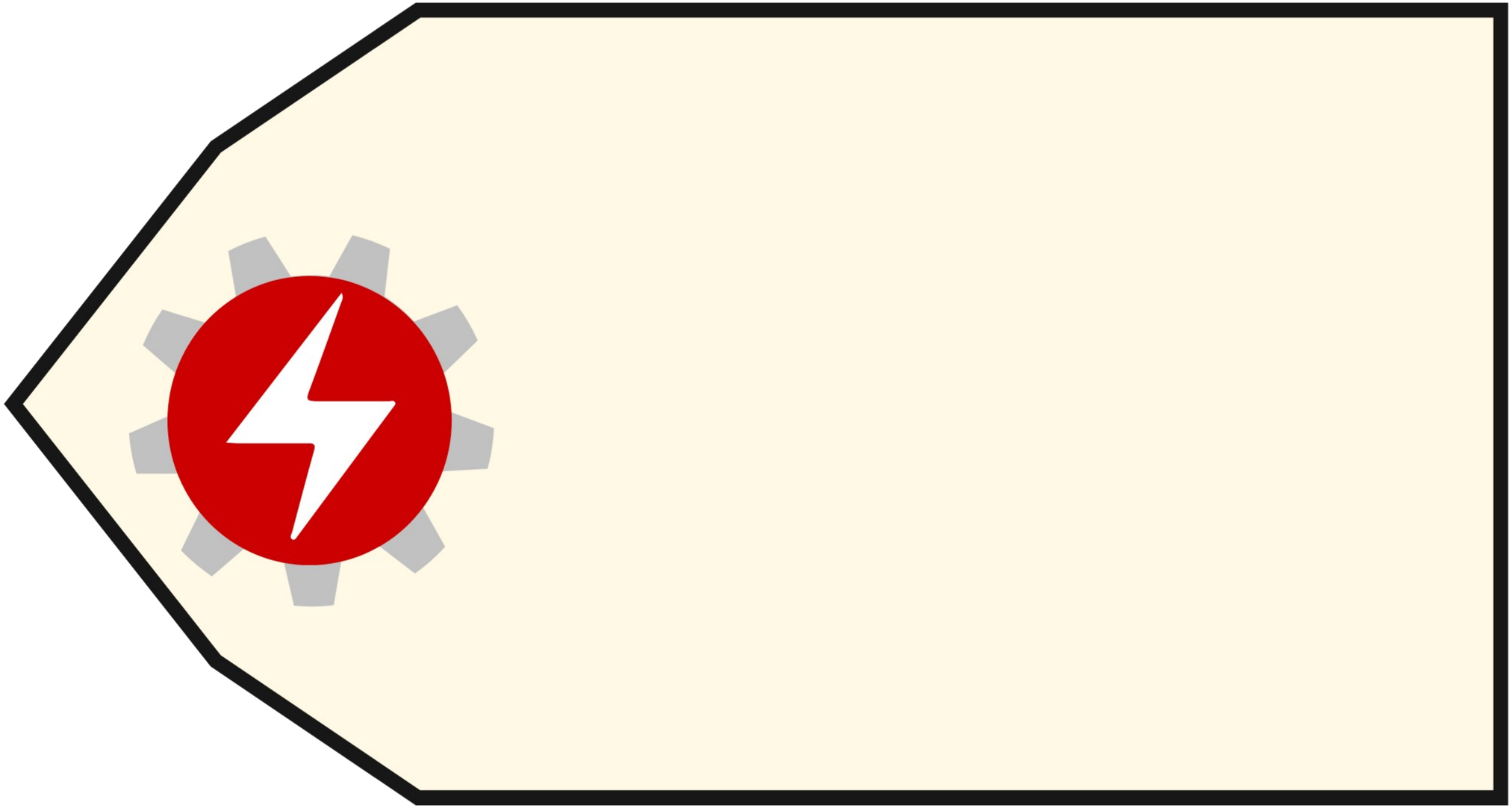
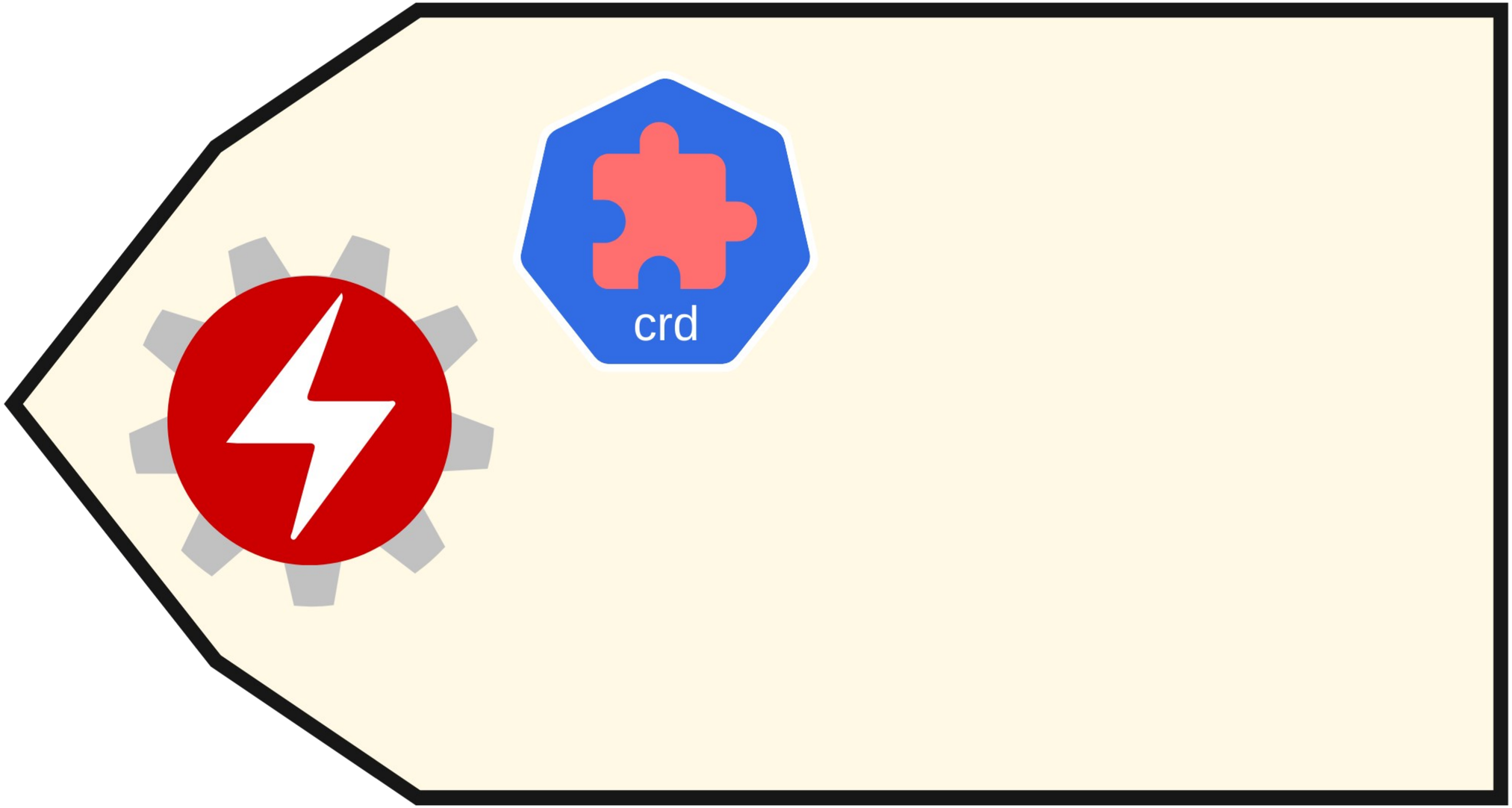
ing
svc
cm

flux

OPERATOR FRAMEWORK

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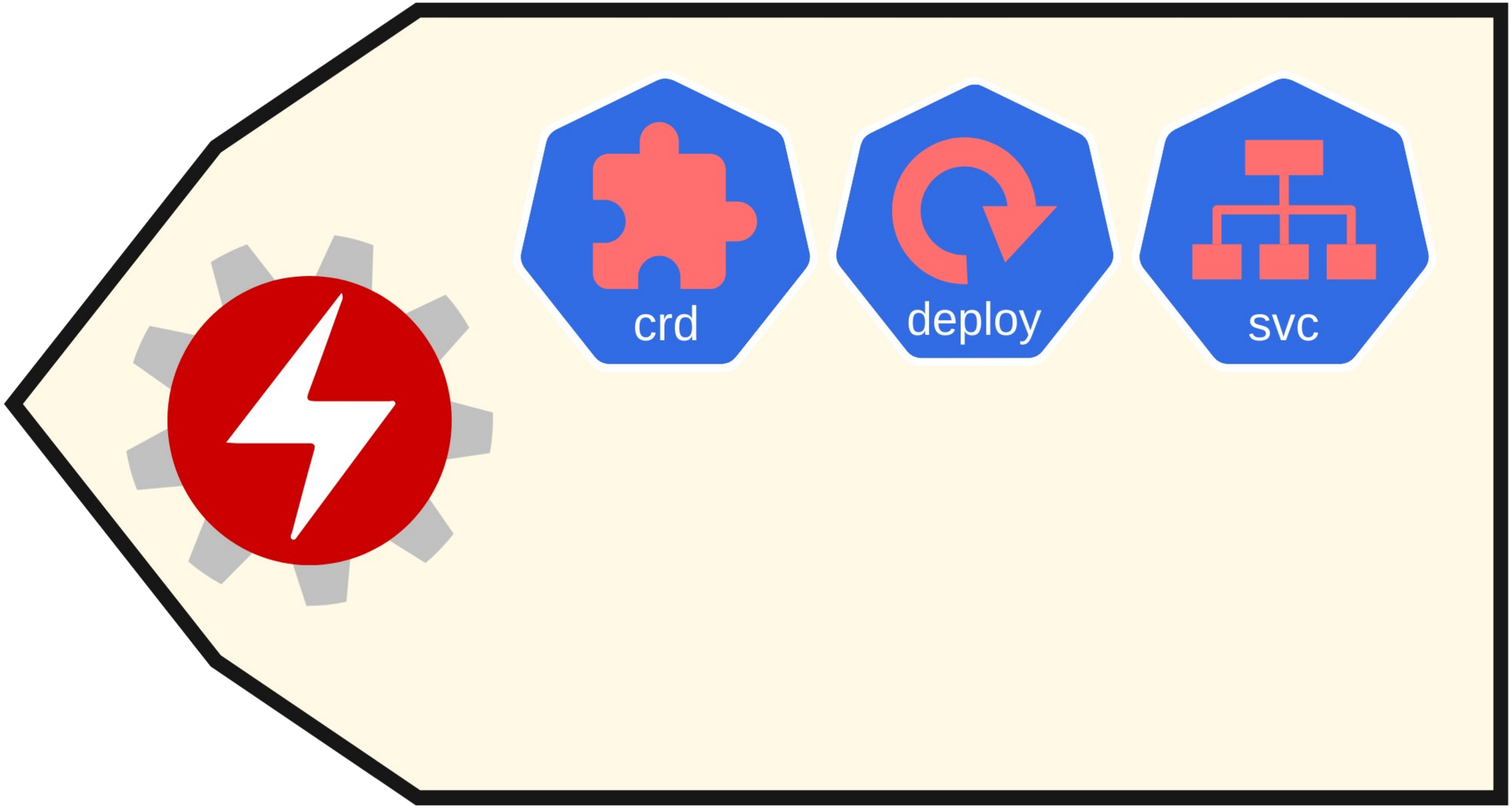
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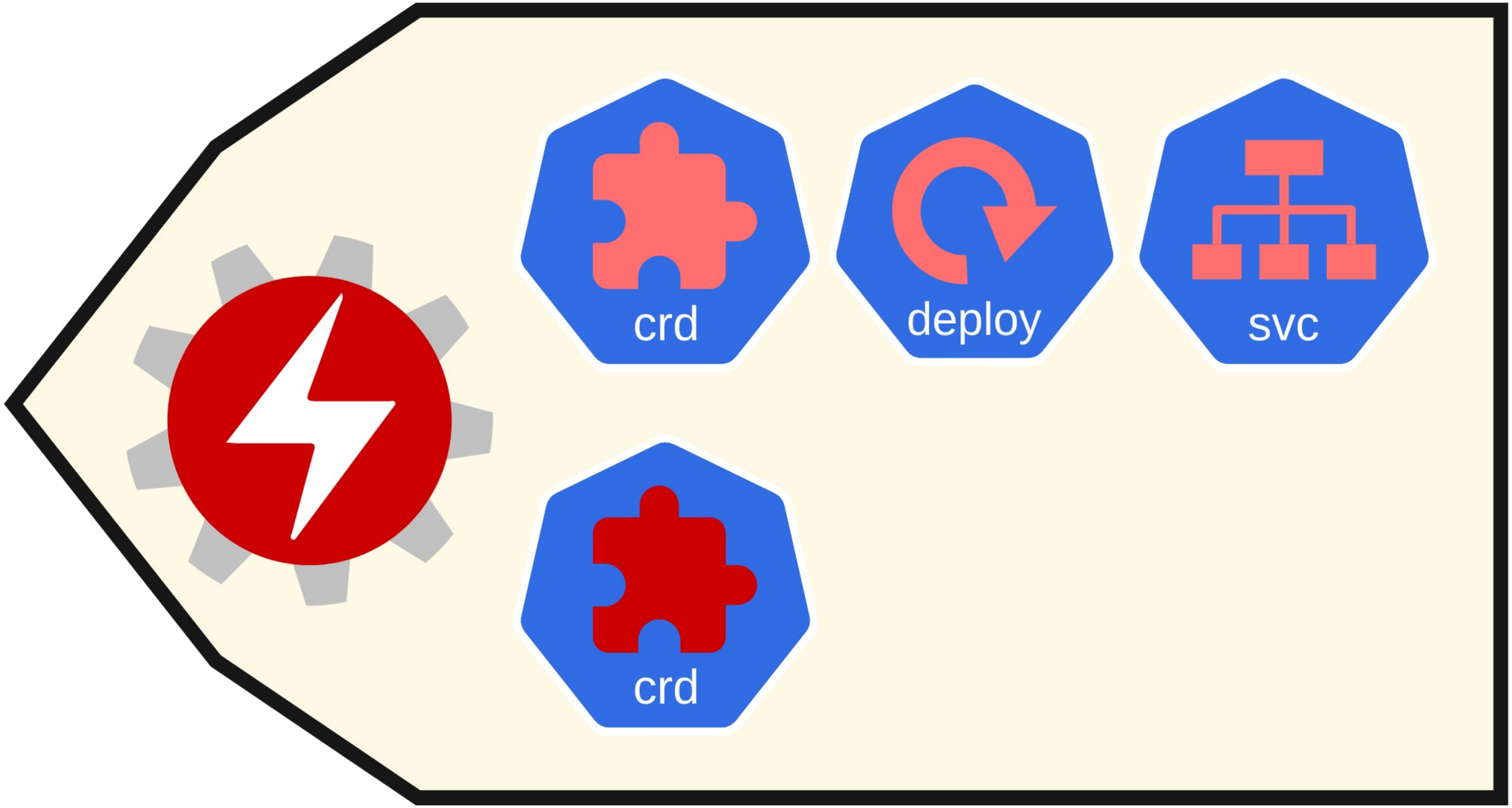
deploy
svc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svc
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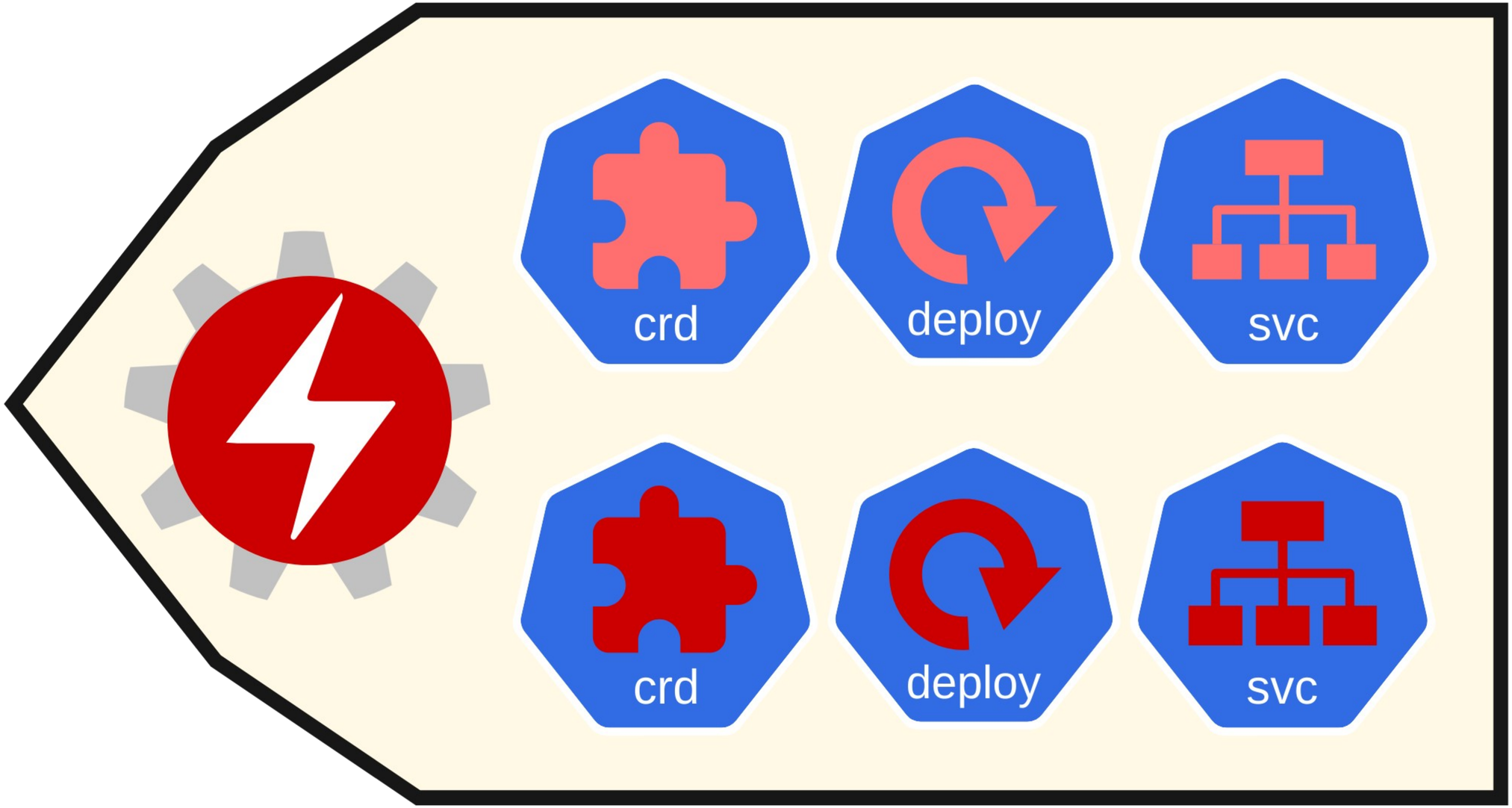
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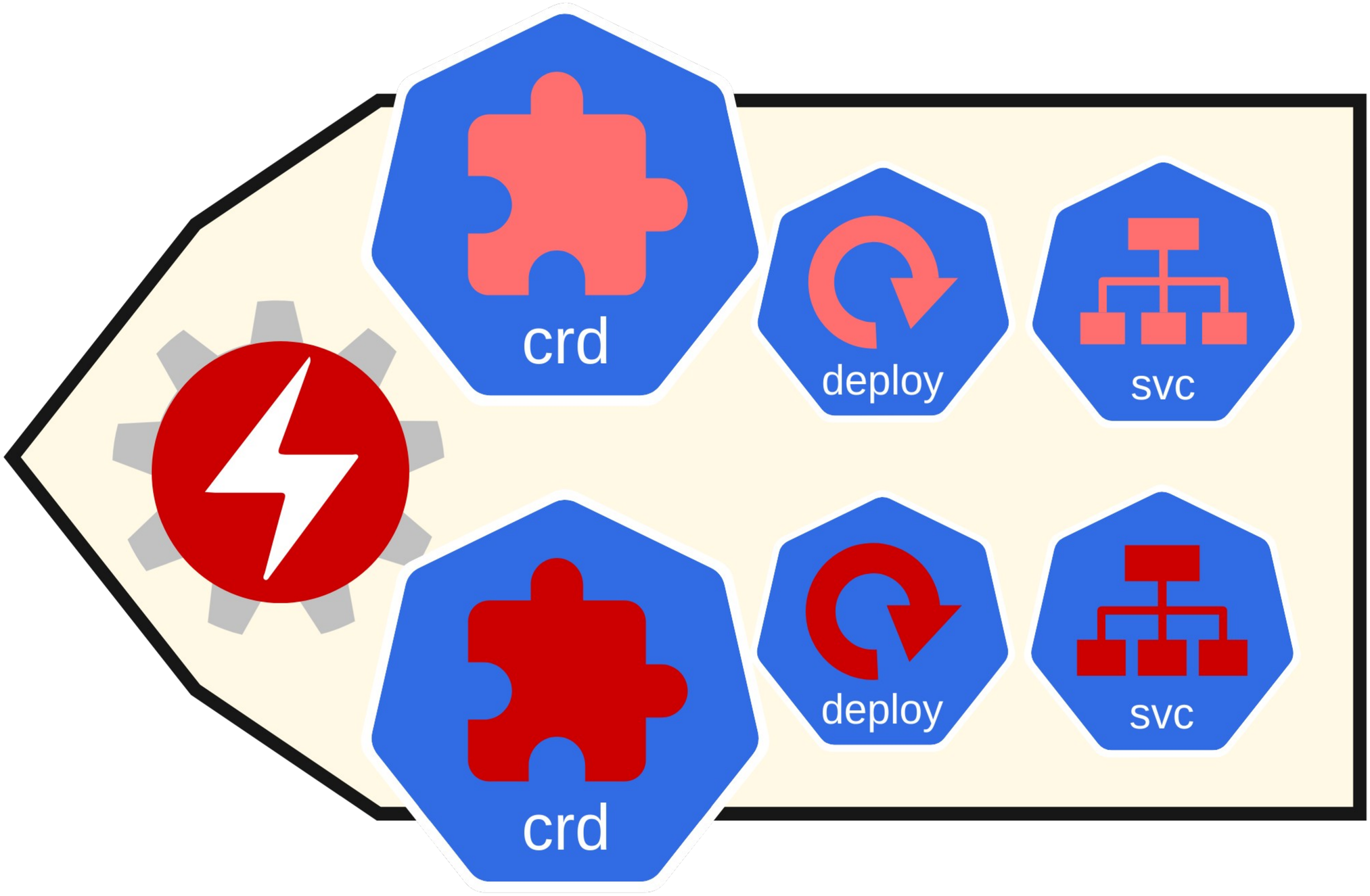
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deploy
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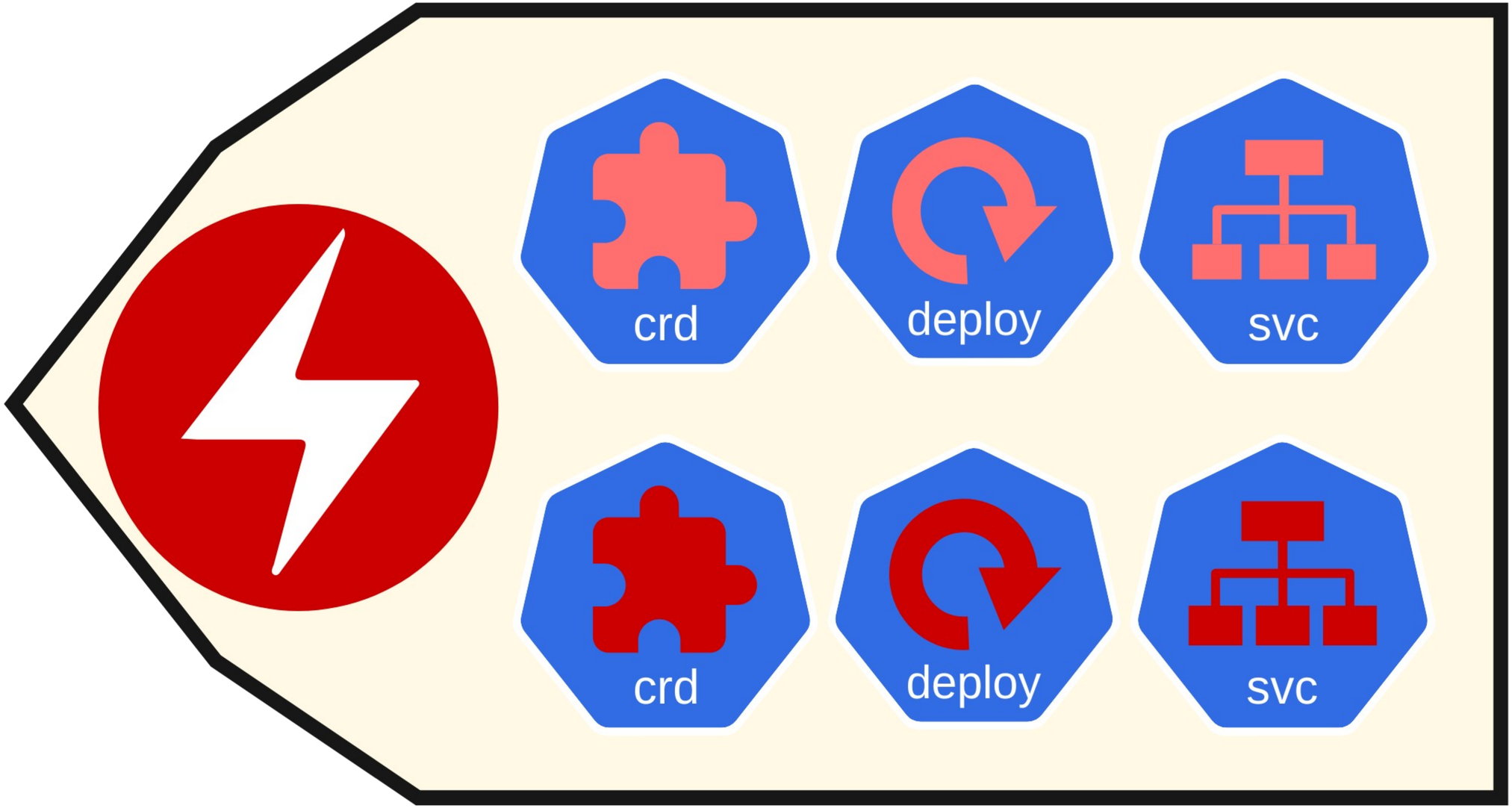
svc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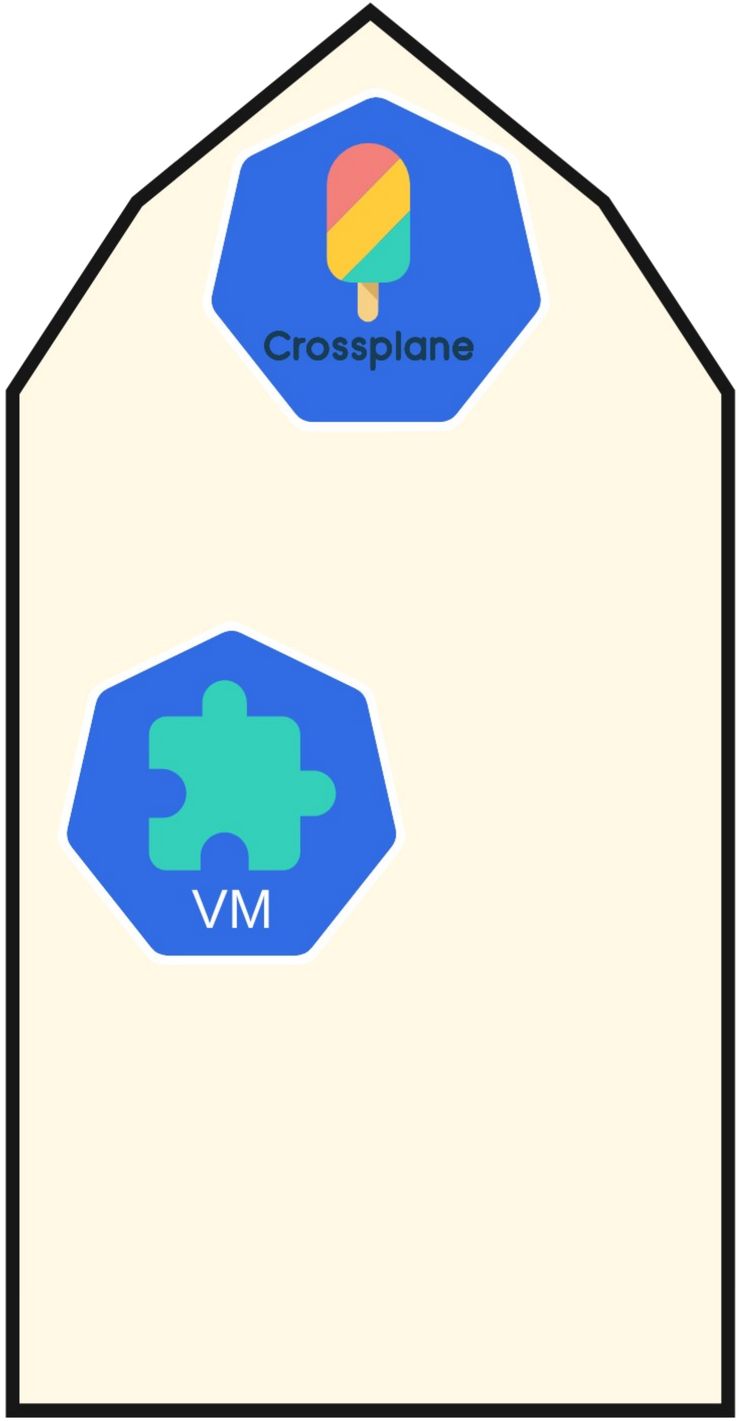
deploy
svc
crd
deploy
svc

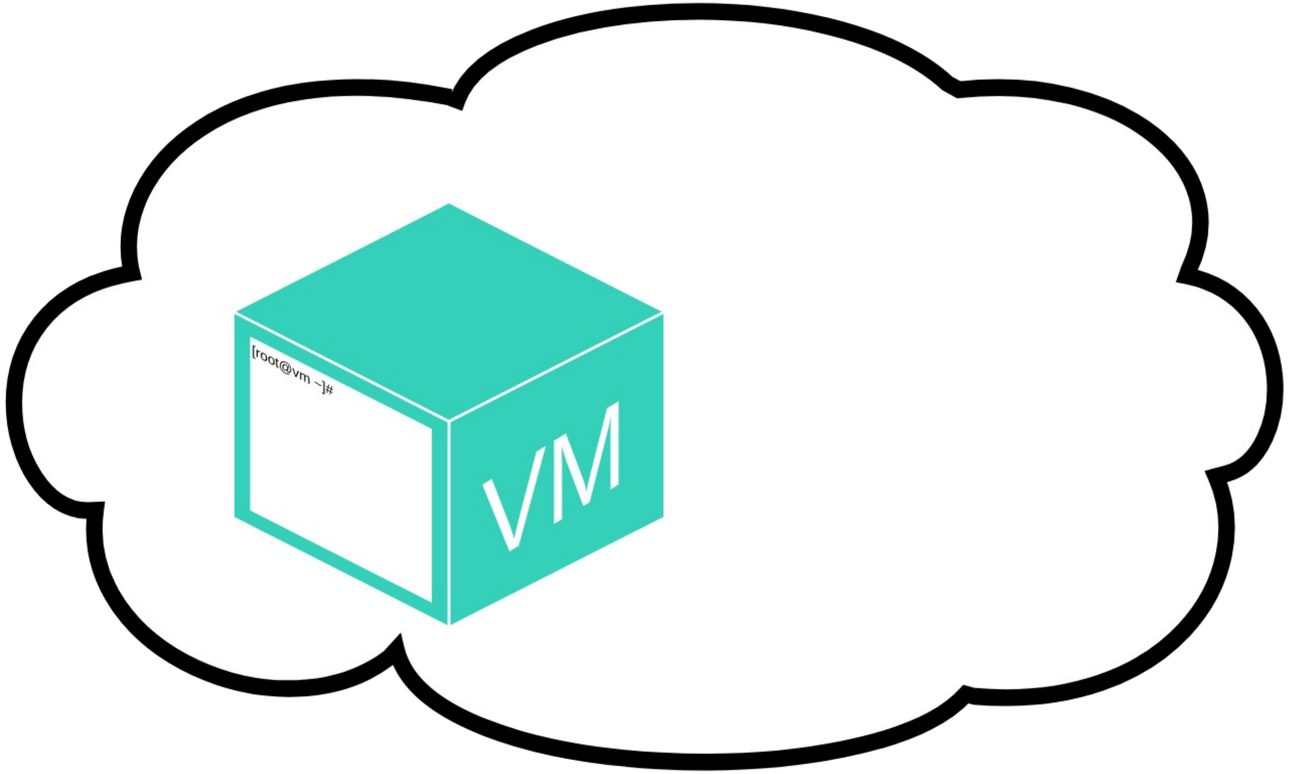
OPERATOR FRAMEWORK

Crossplane

Crossplane

Crossplane


Crossplane
VM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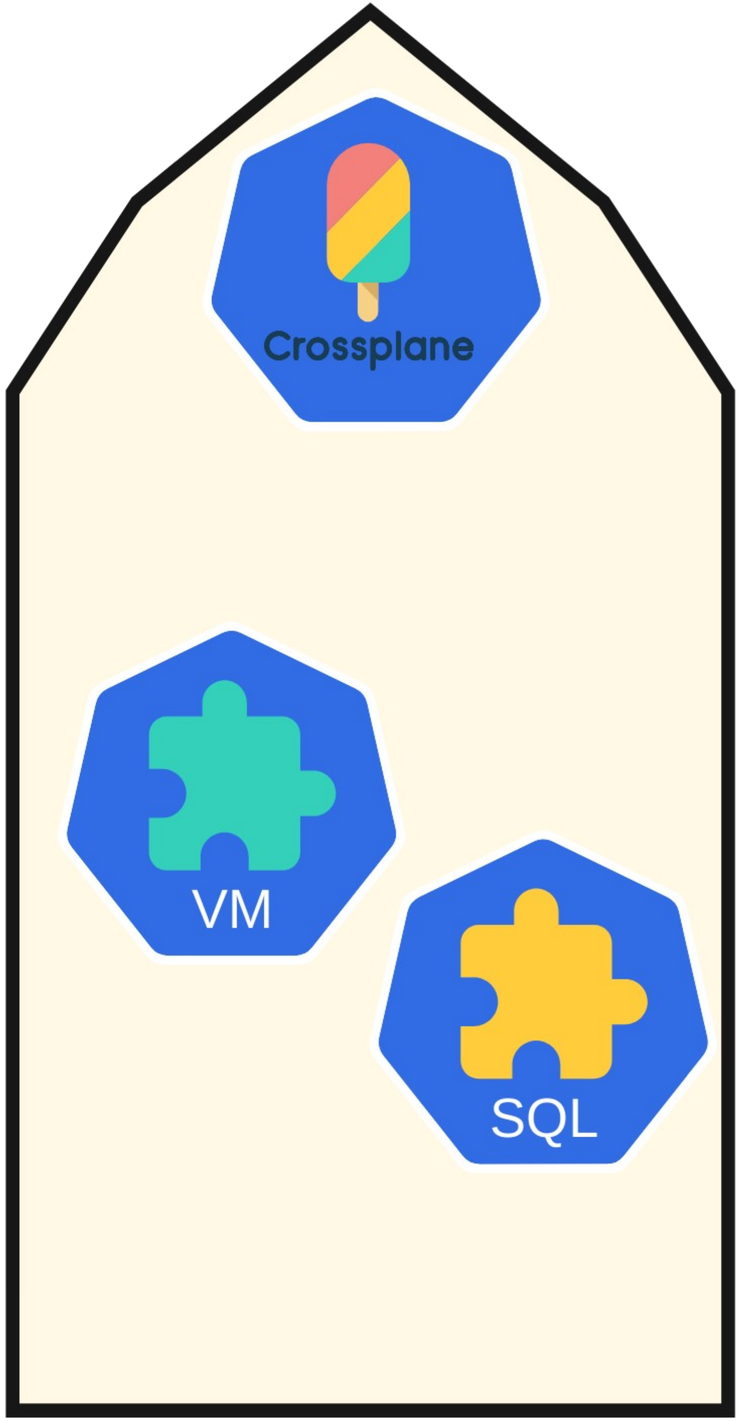
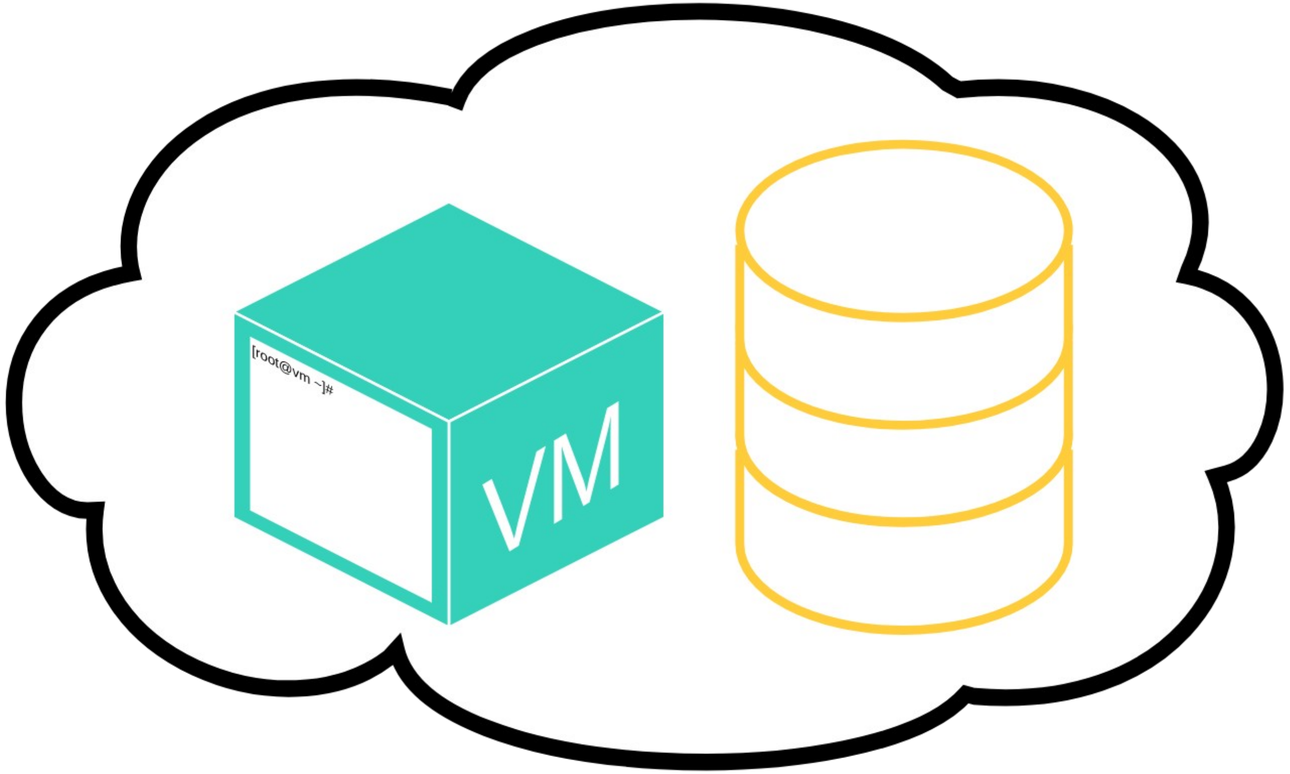
VM


Crossplane
VM
SQL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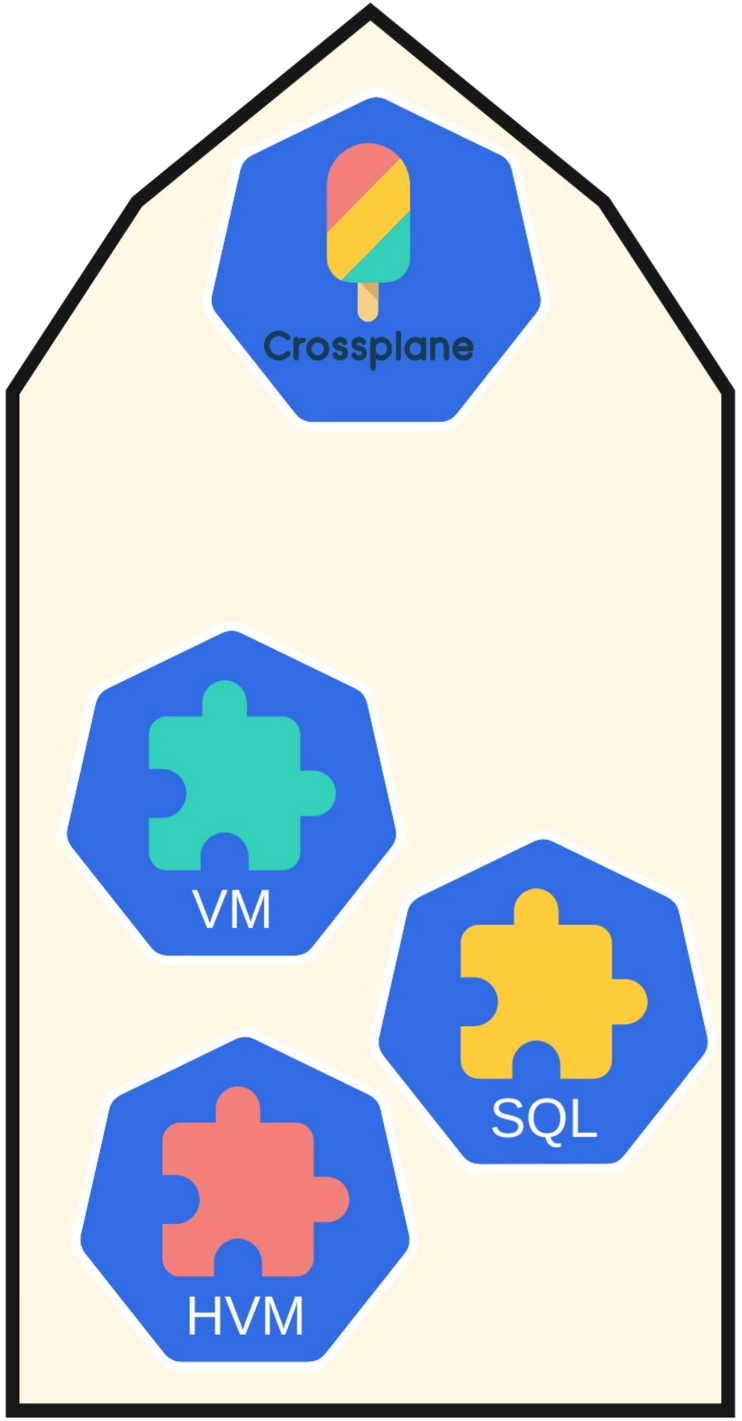
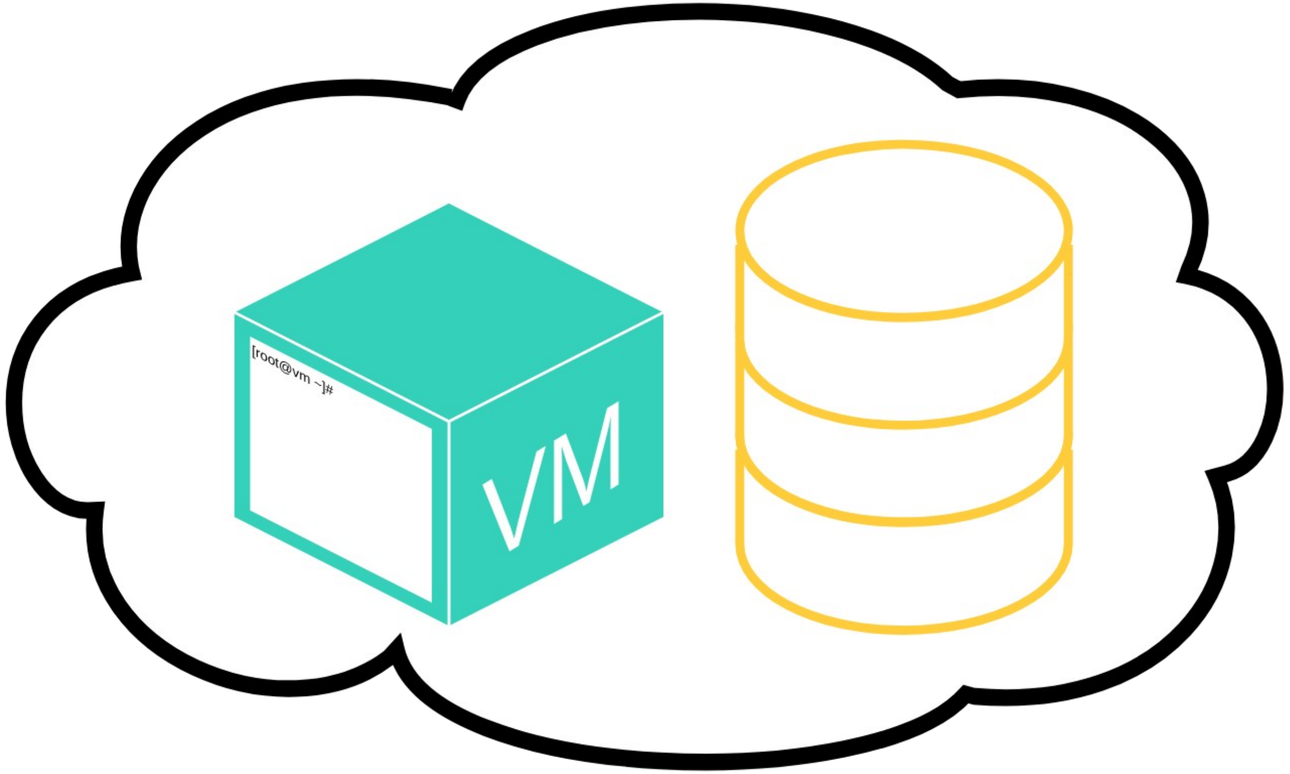

Crossplane
VM
SQL
HVM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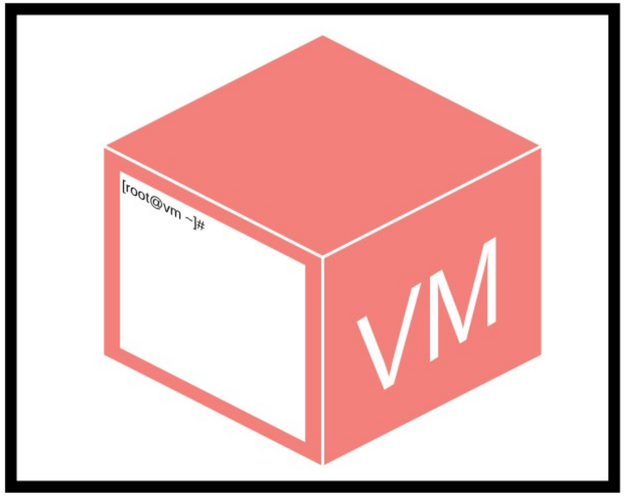
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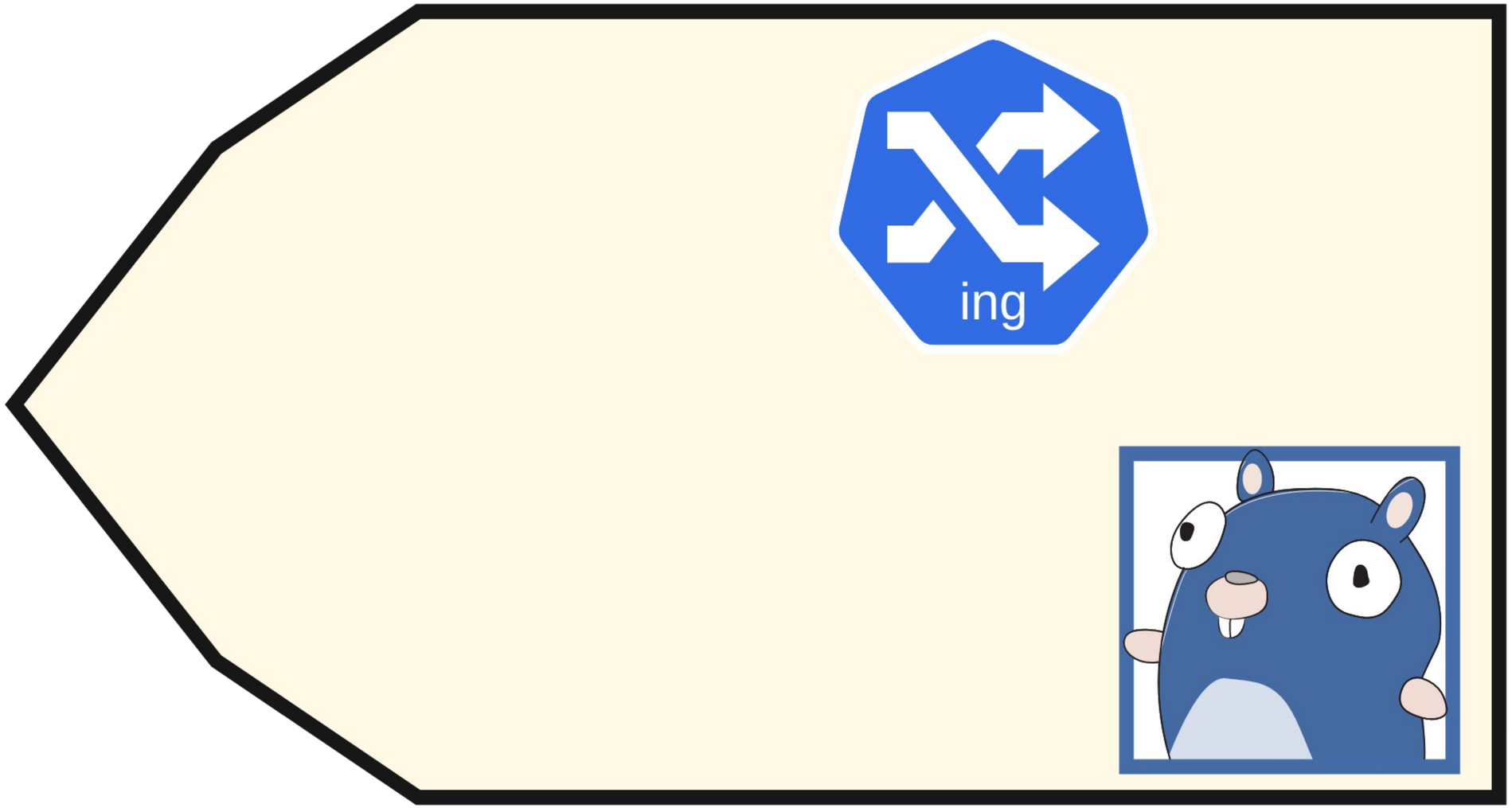
VM

Crossplane

EMISSARY
INGRESS

CONTOUR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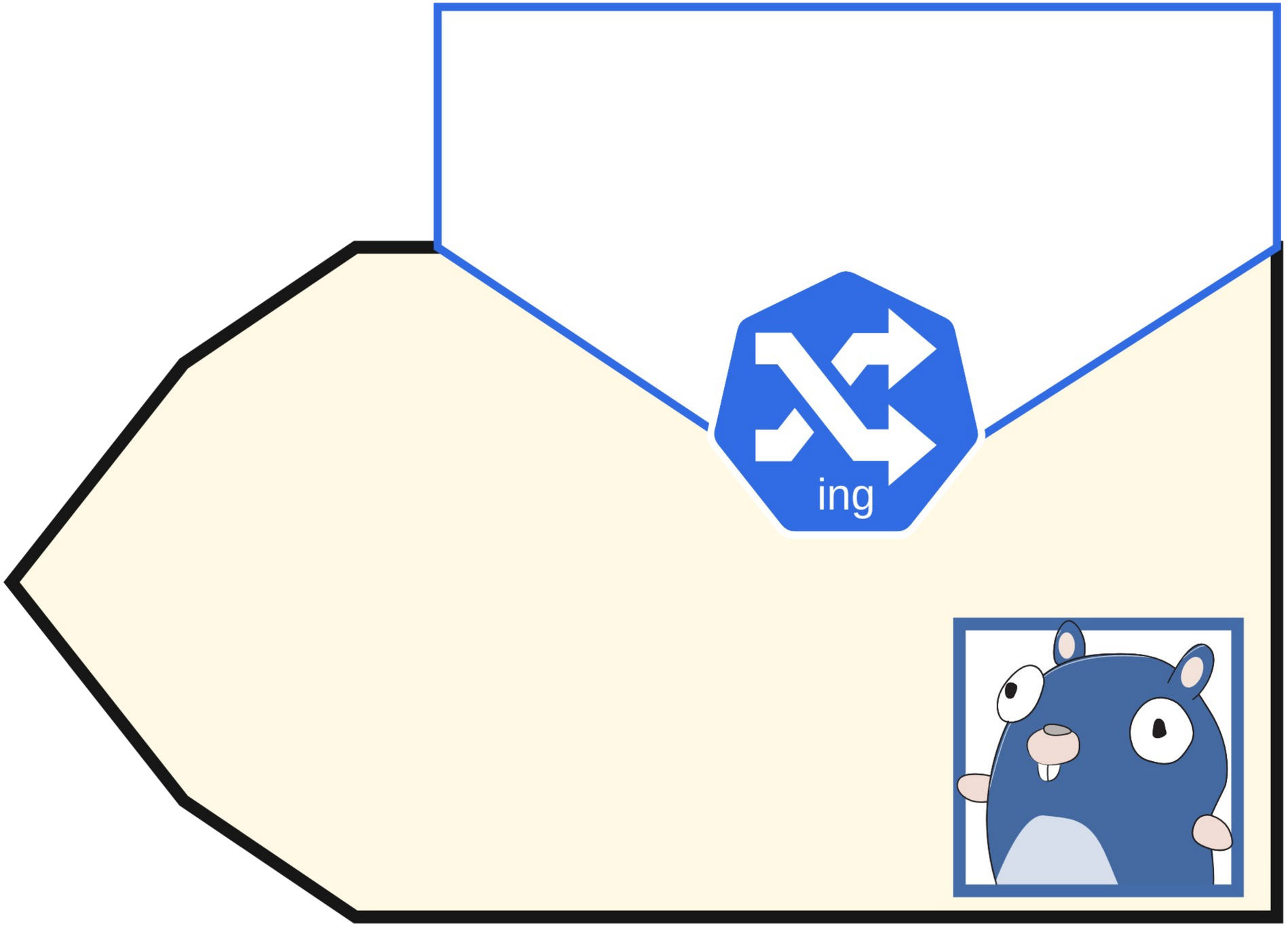
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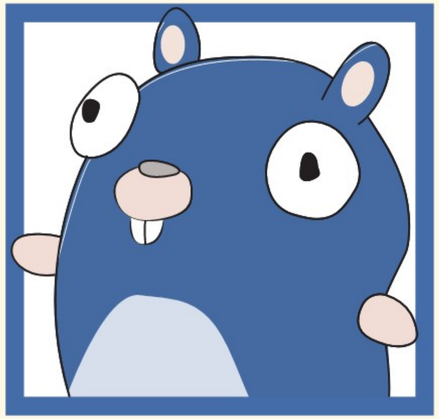

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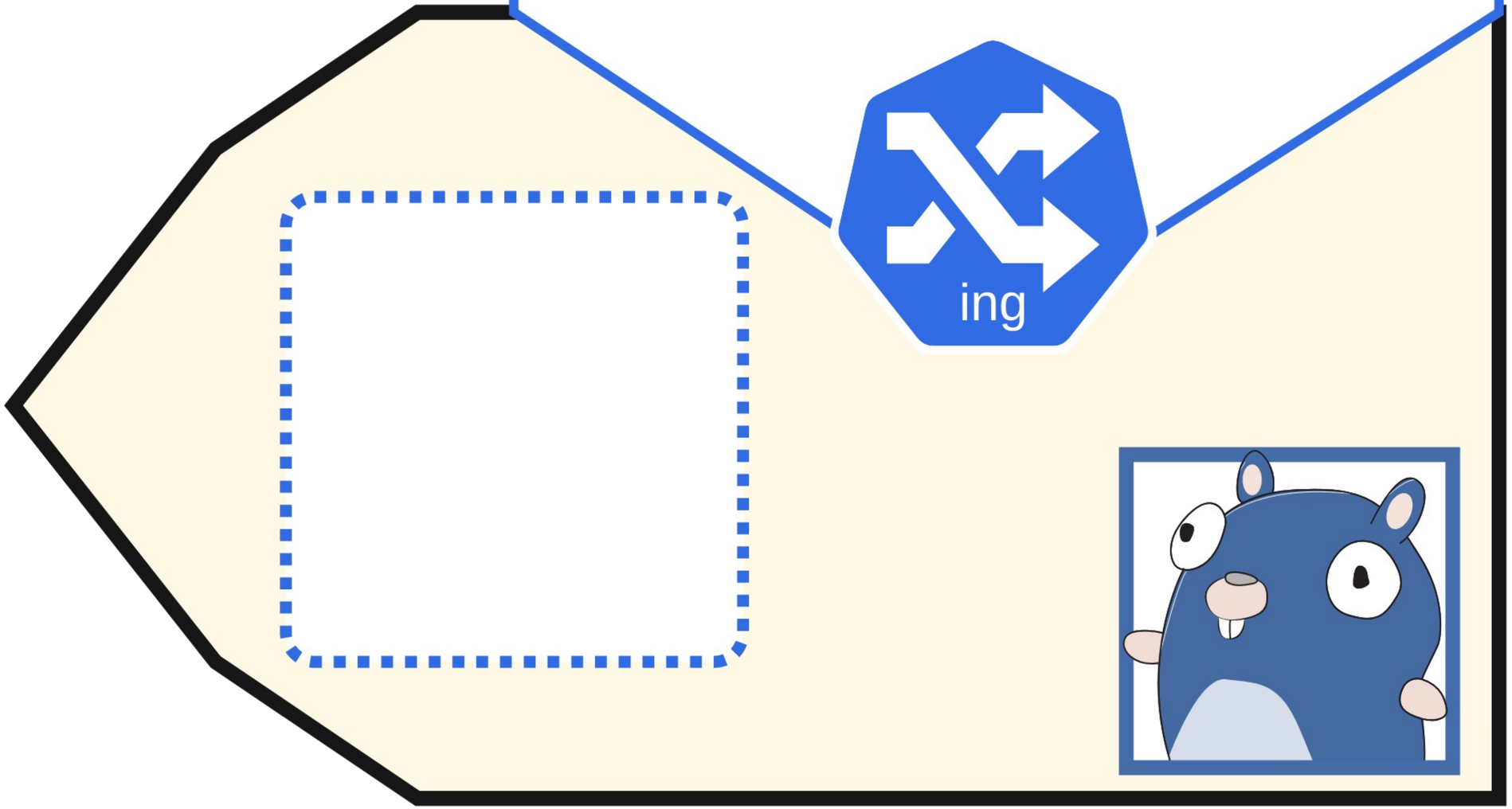

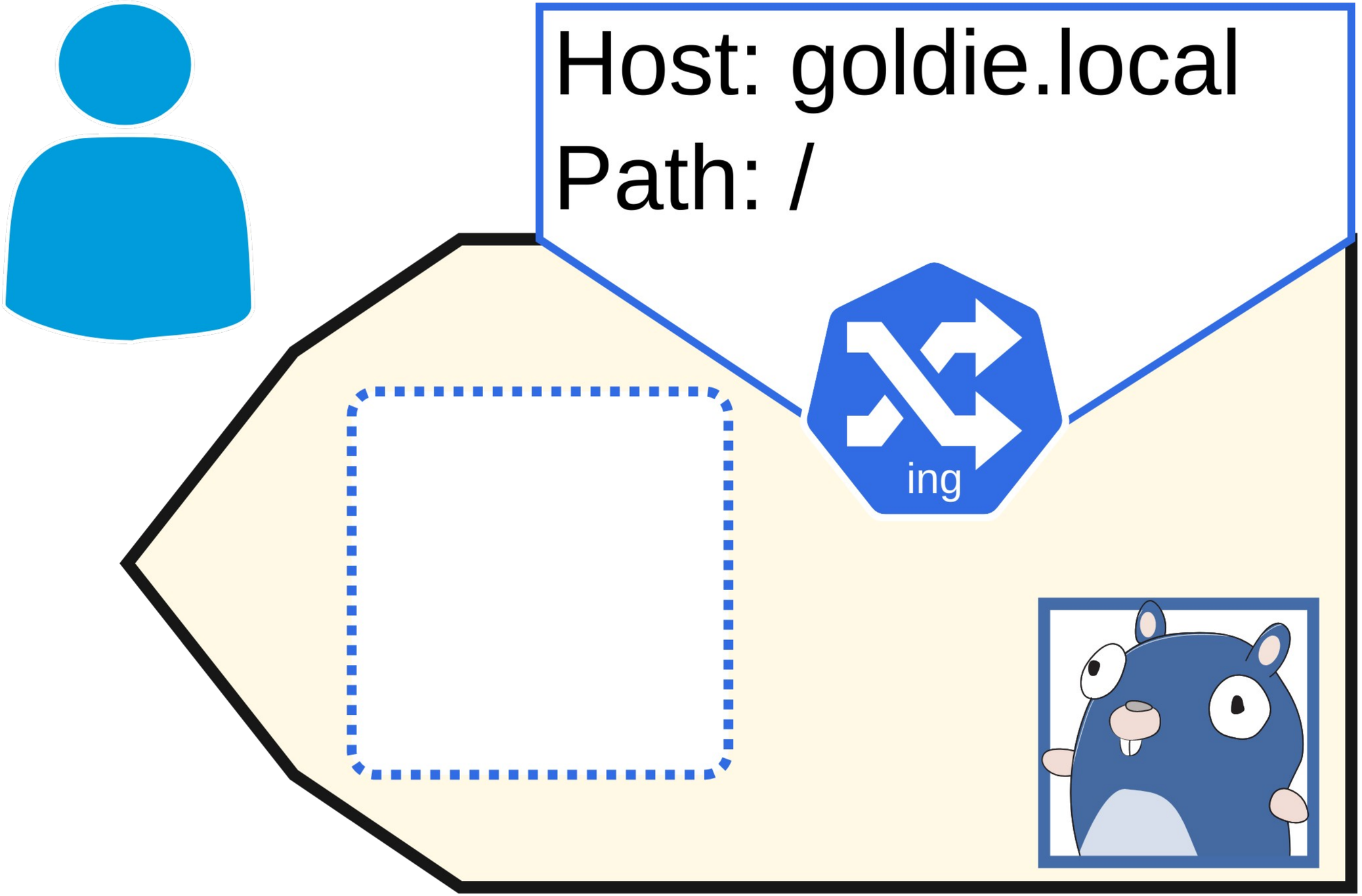
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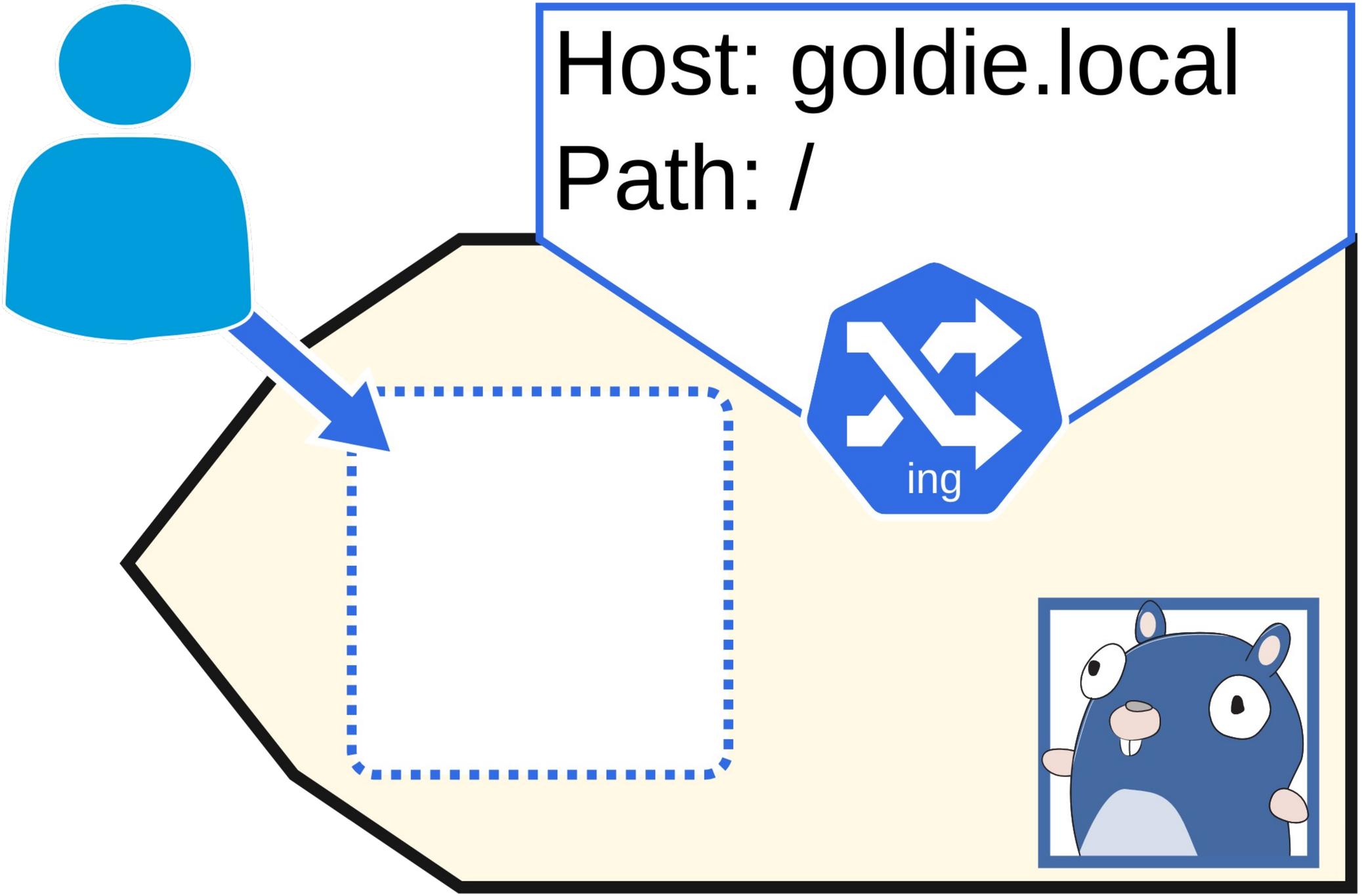
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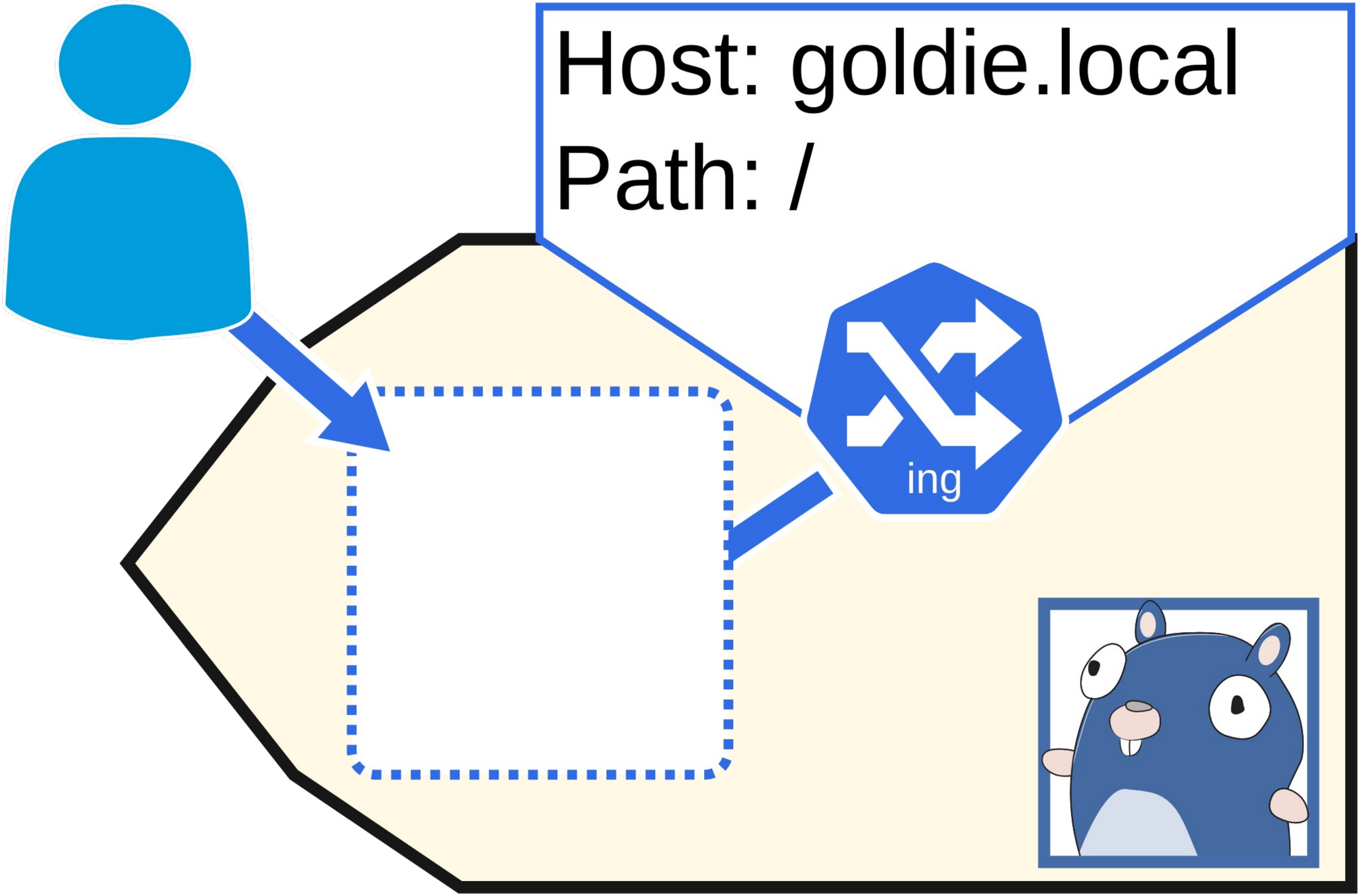
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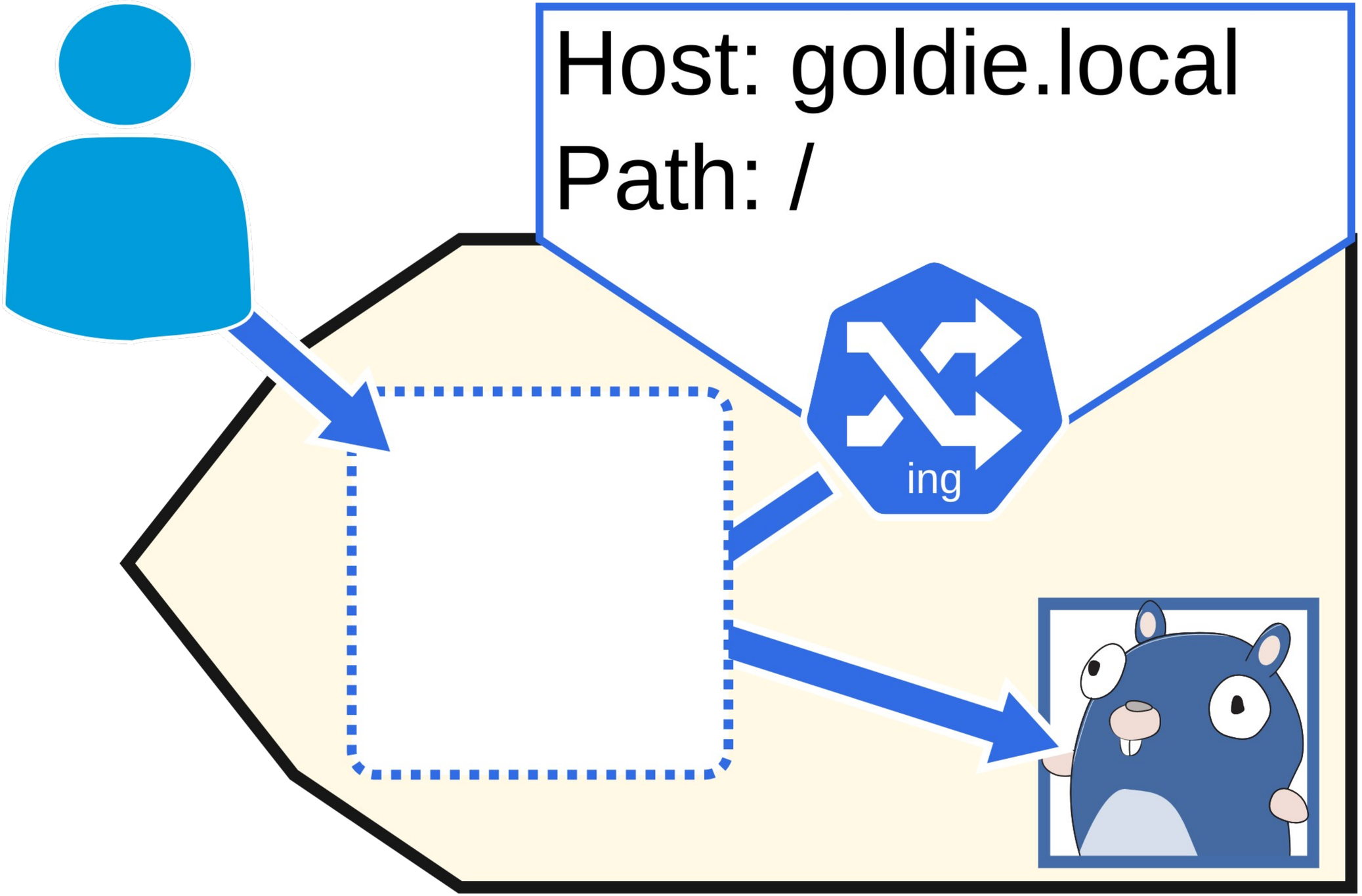
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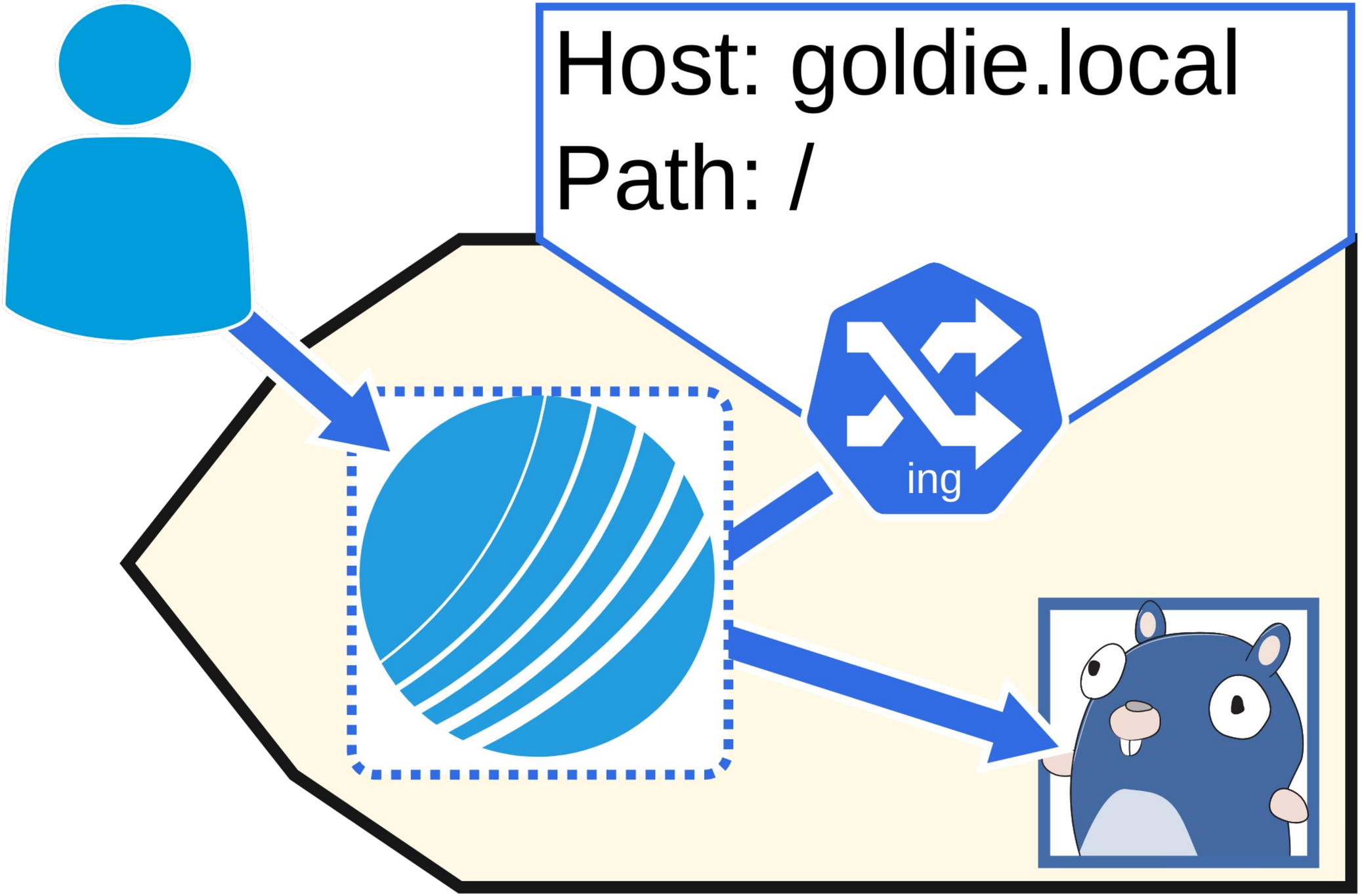
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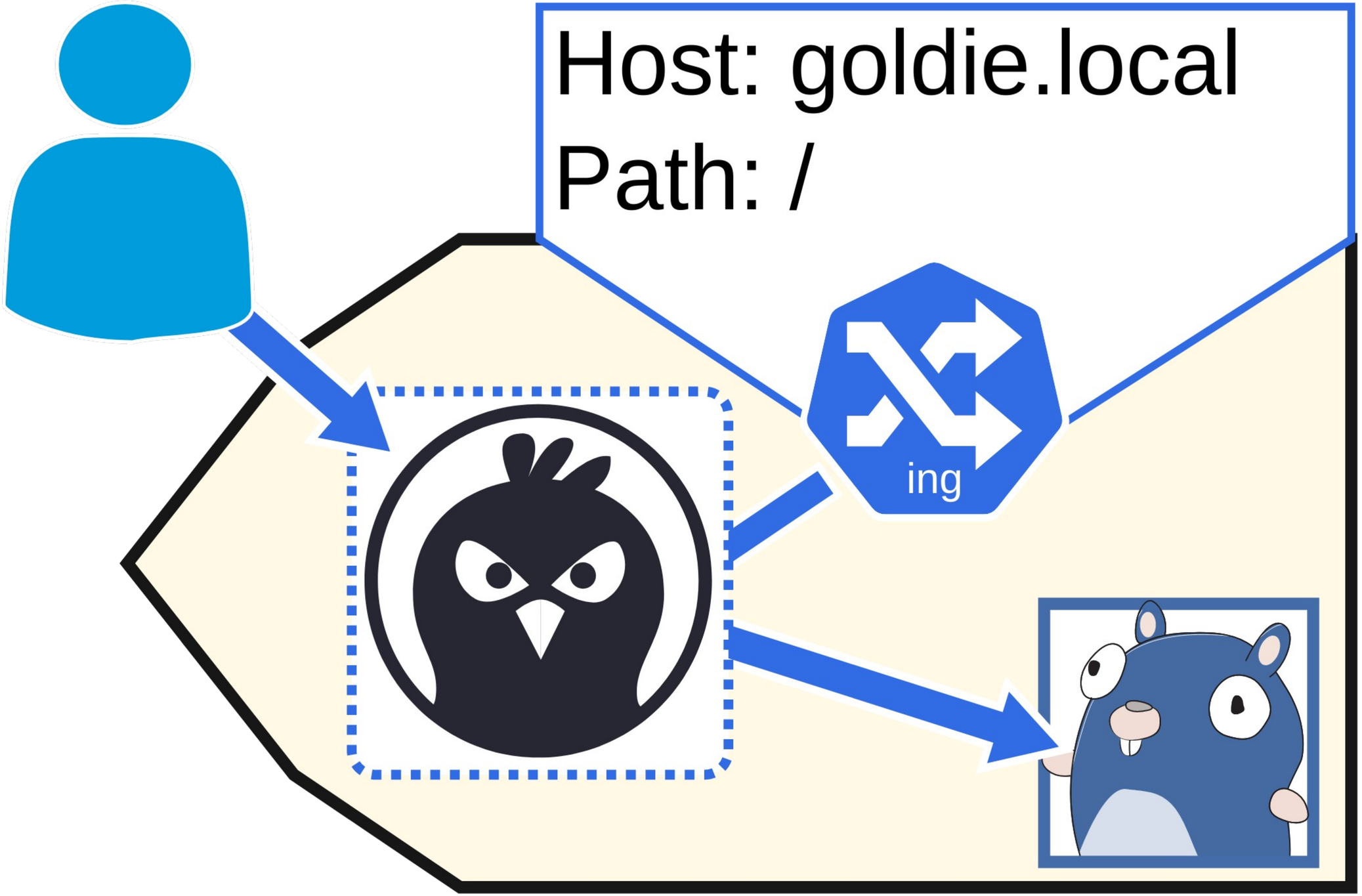
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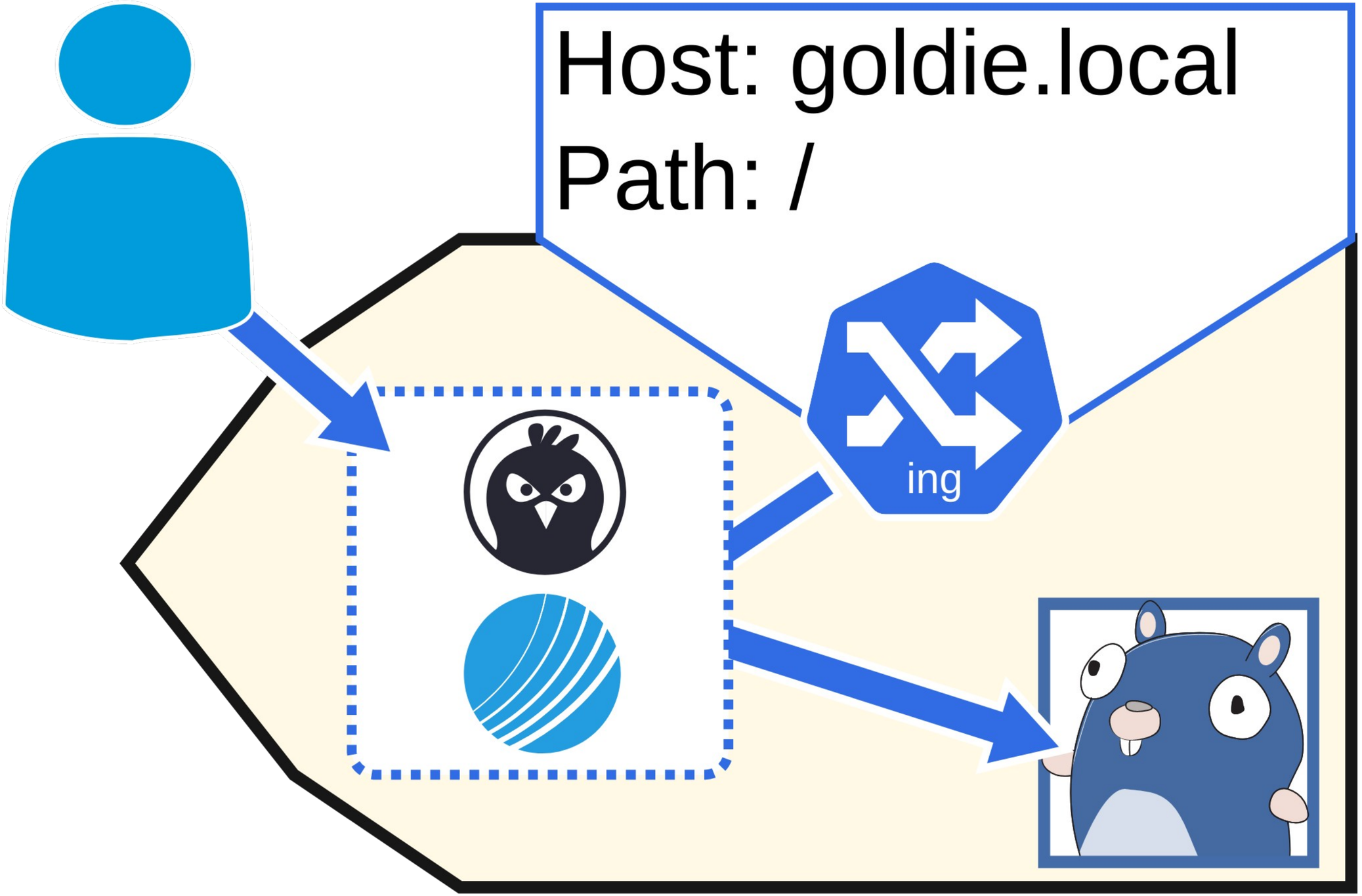
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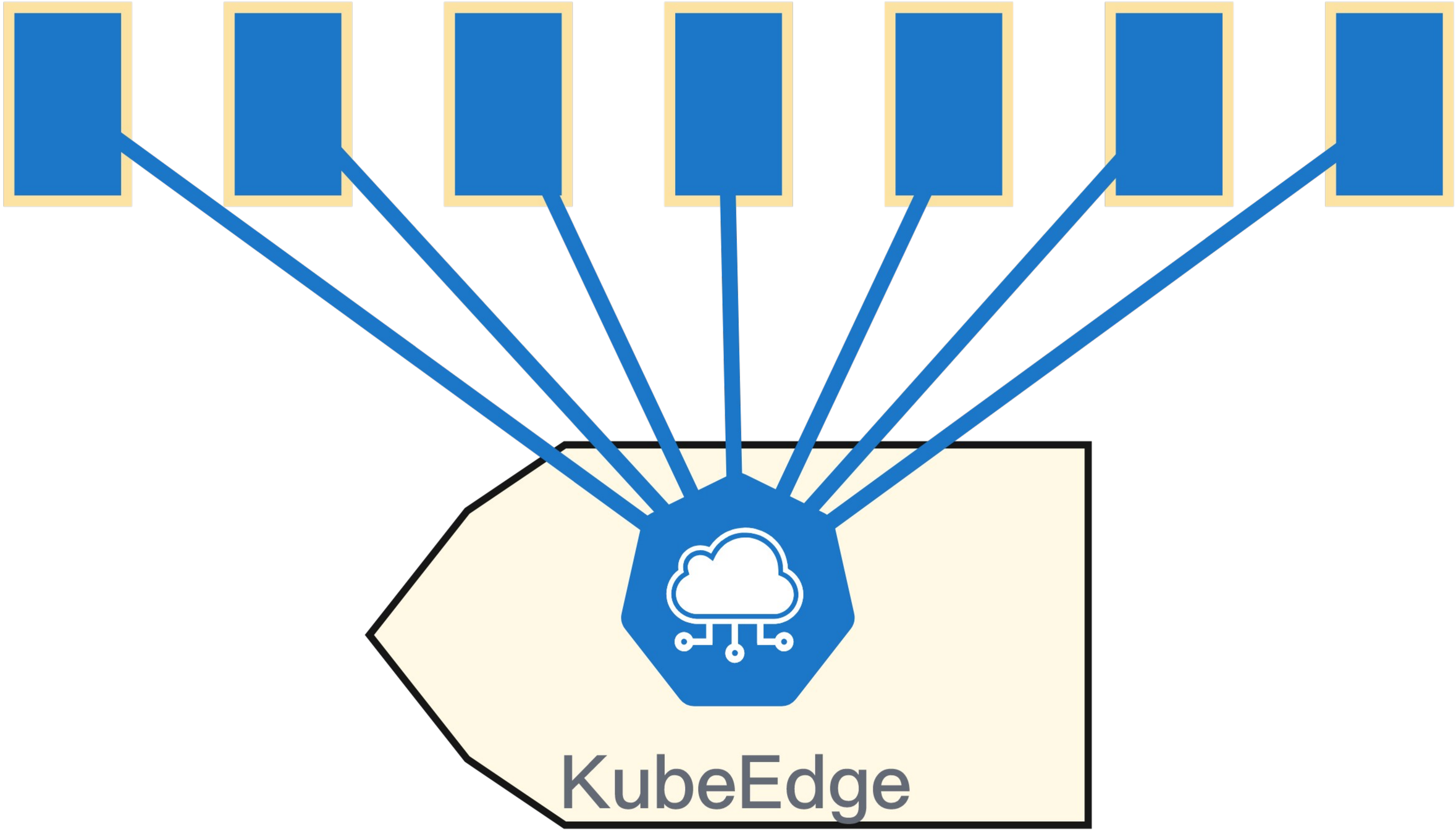
EMISSARY
INGRESS

CONTOUR

KubeEdge

KubeEdge

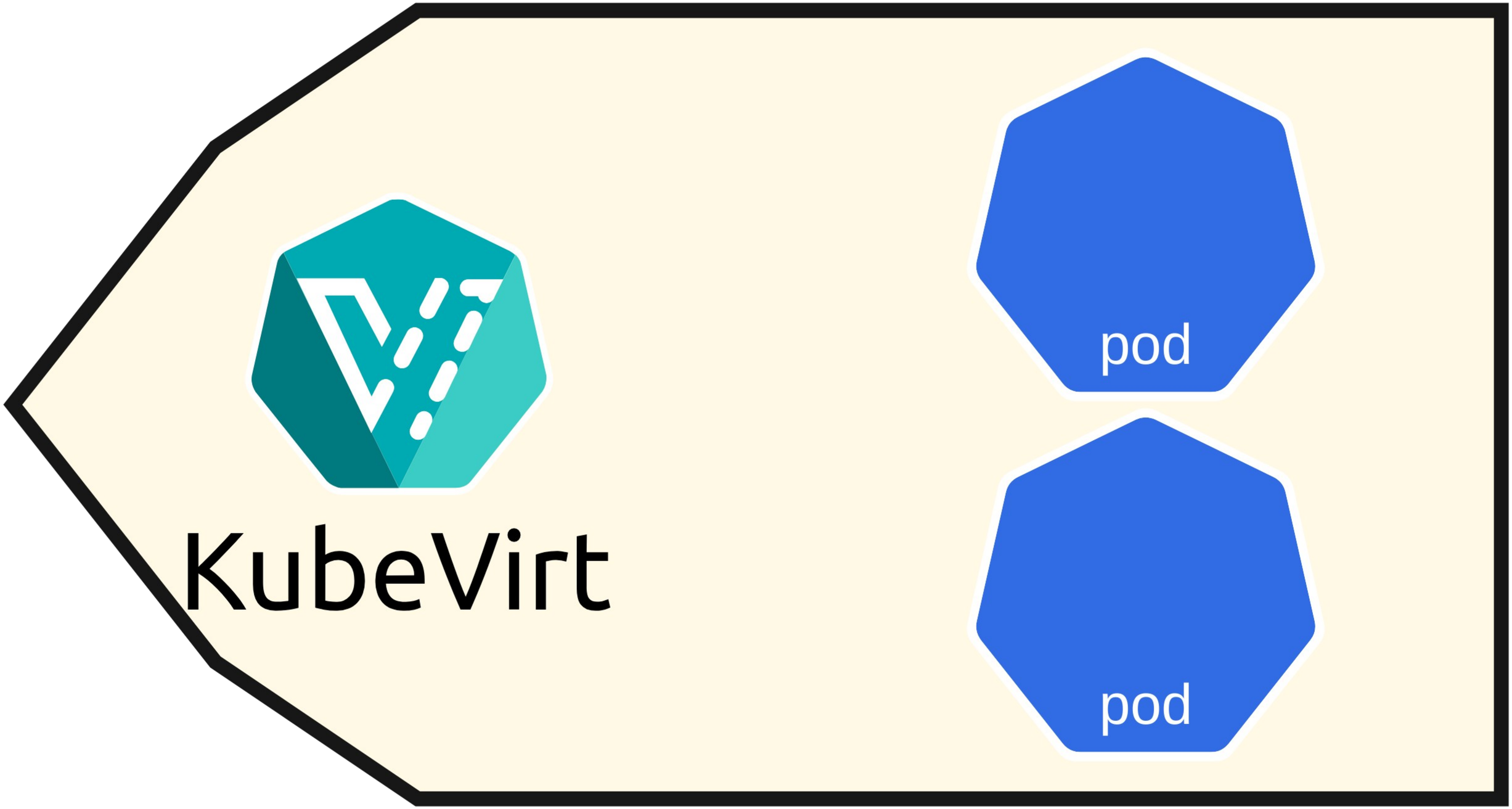
KubeEdge


KubeEdge

KubeEdge

KubeVirt

KubeVirt


KubeVirt
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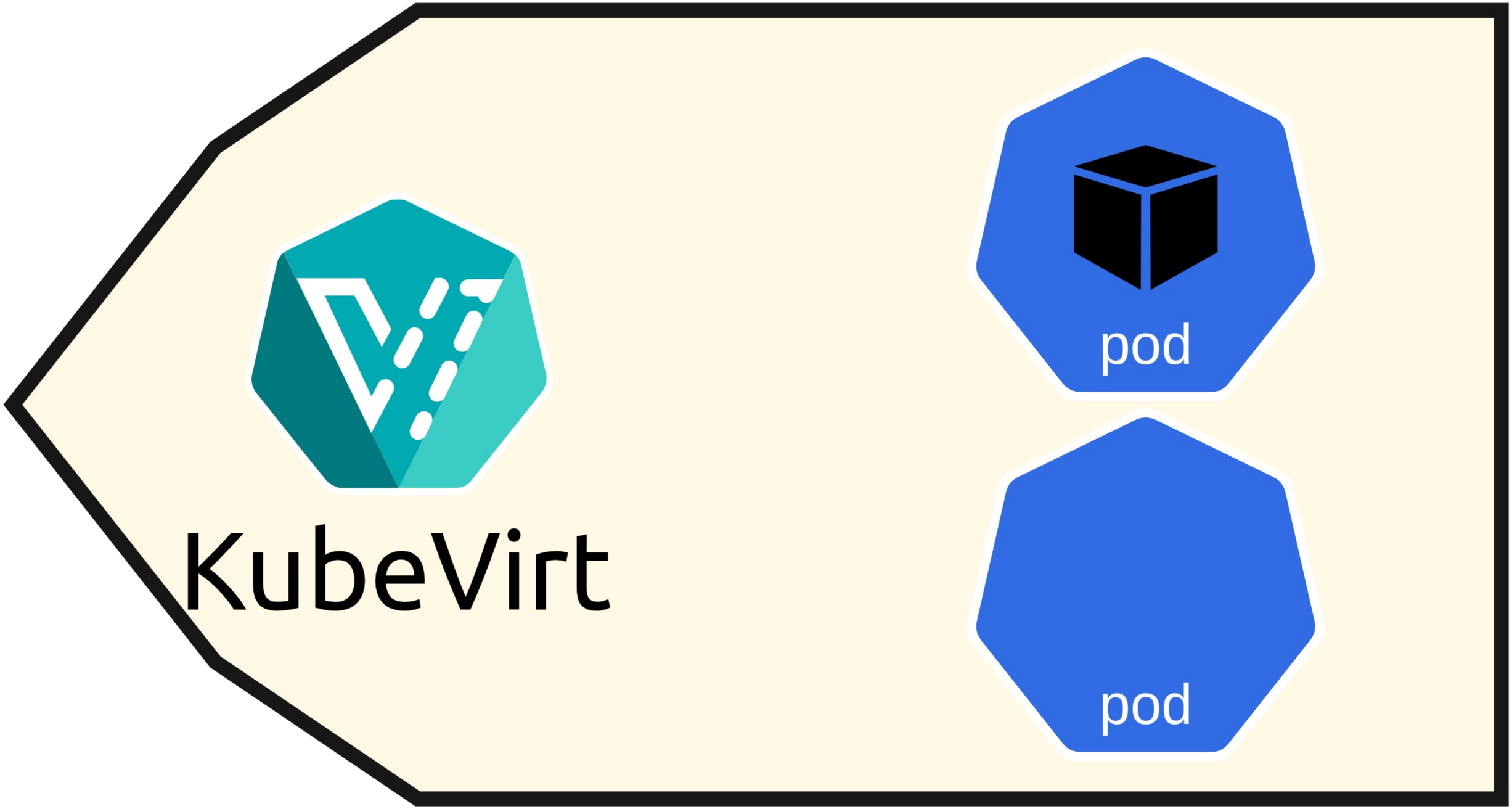
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pod
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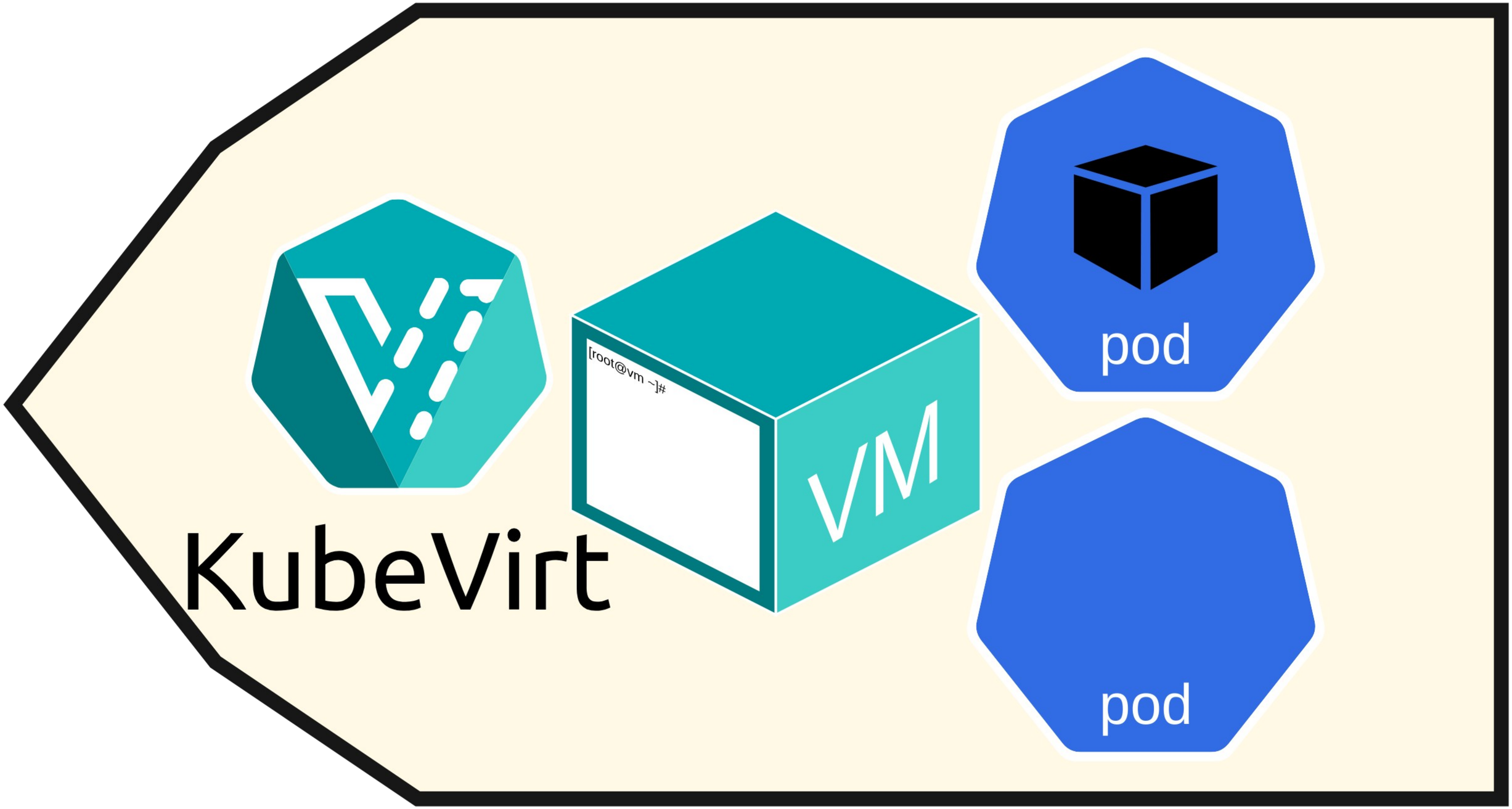
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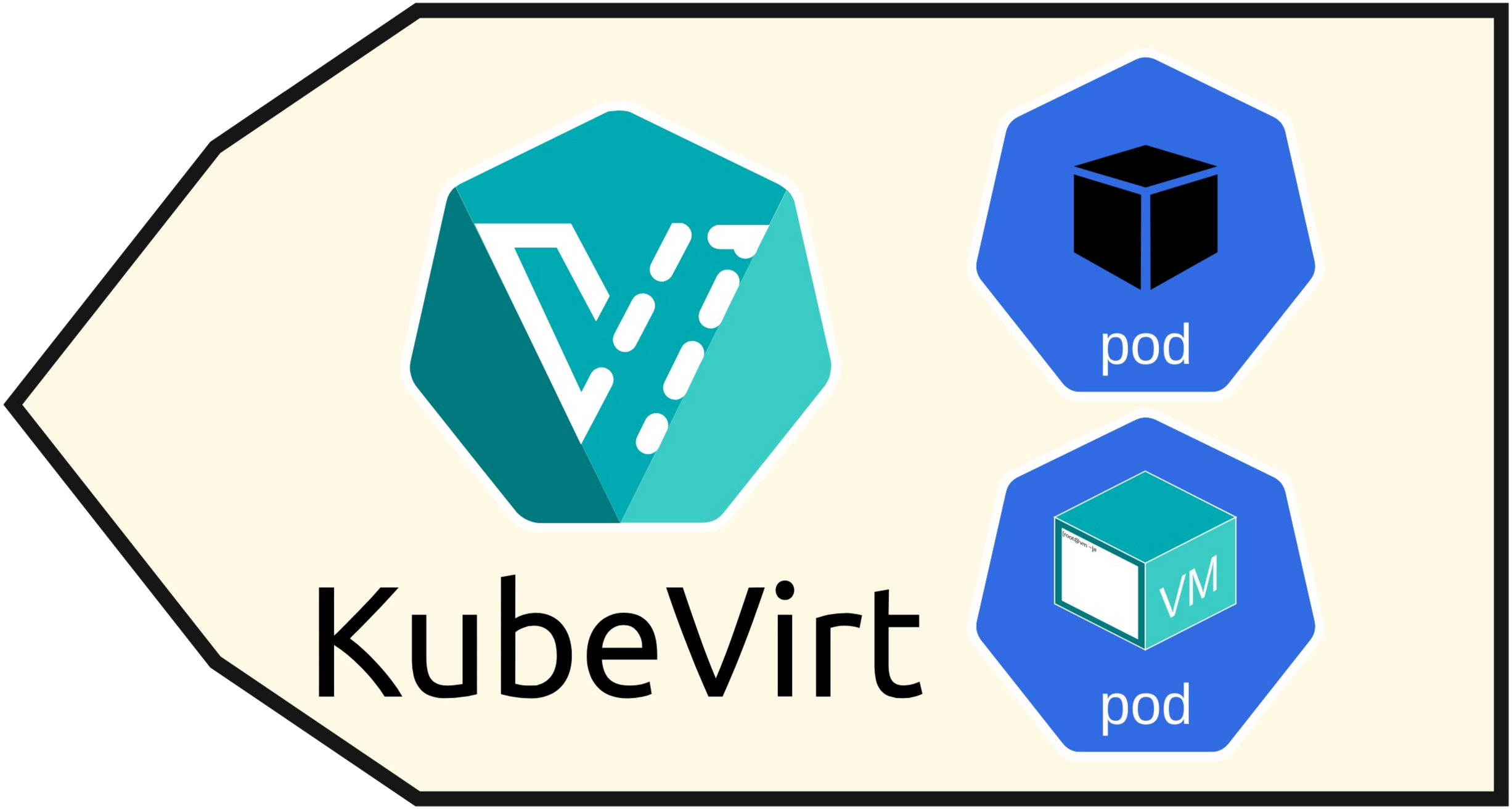
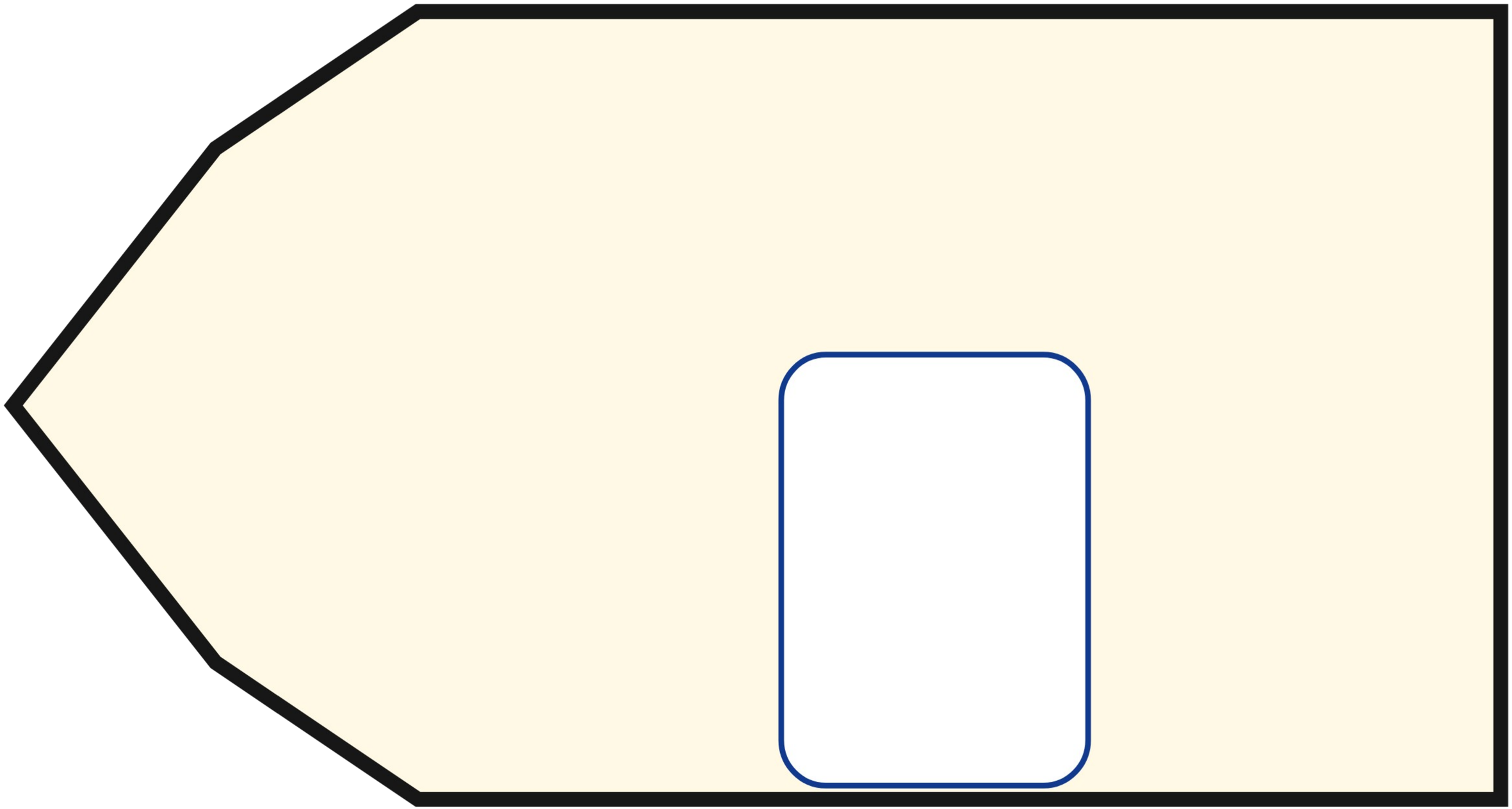
pod

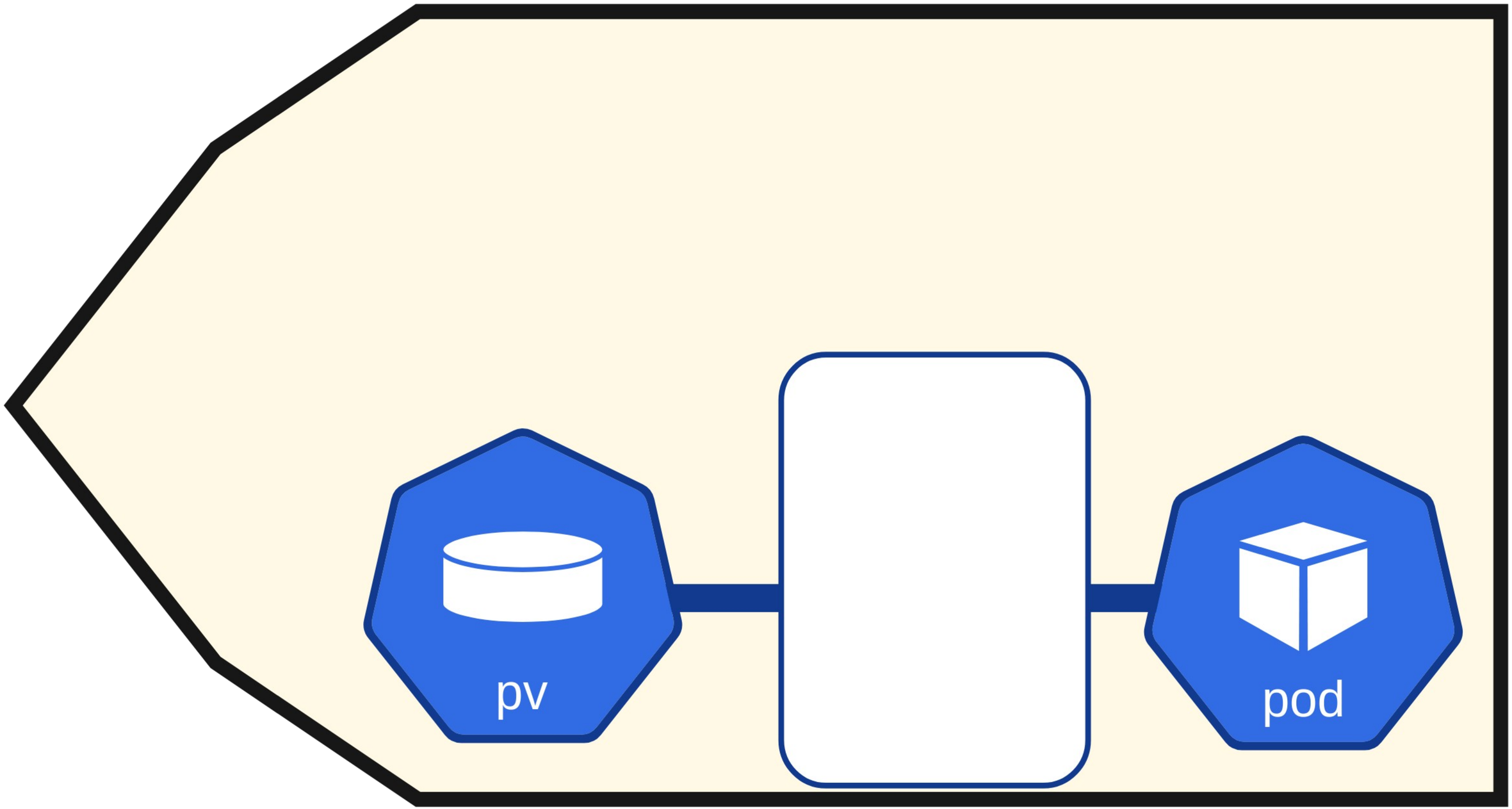

KubeVirt
pod
VM
pod

KubeVirt

ROOK

LONGHORN

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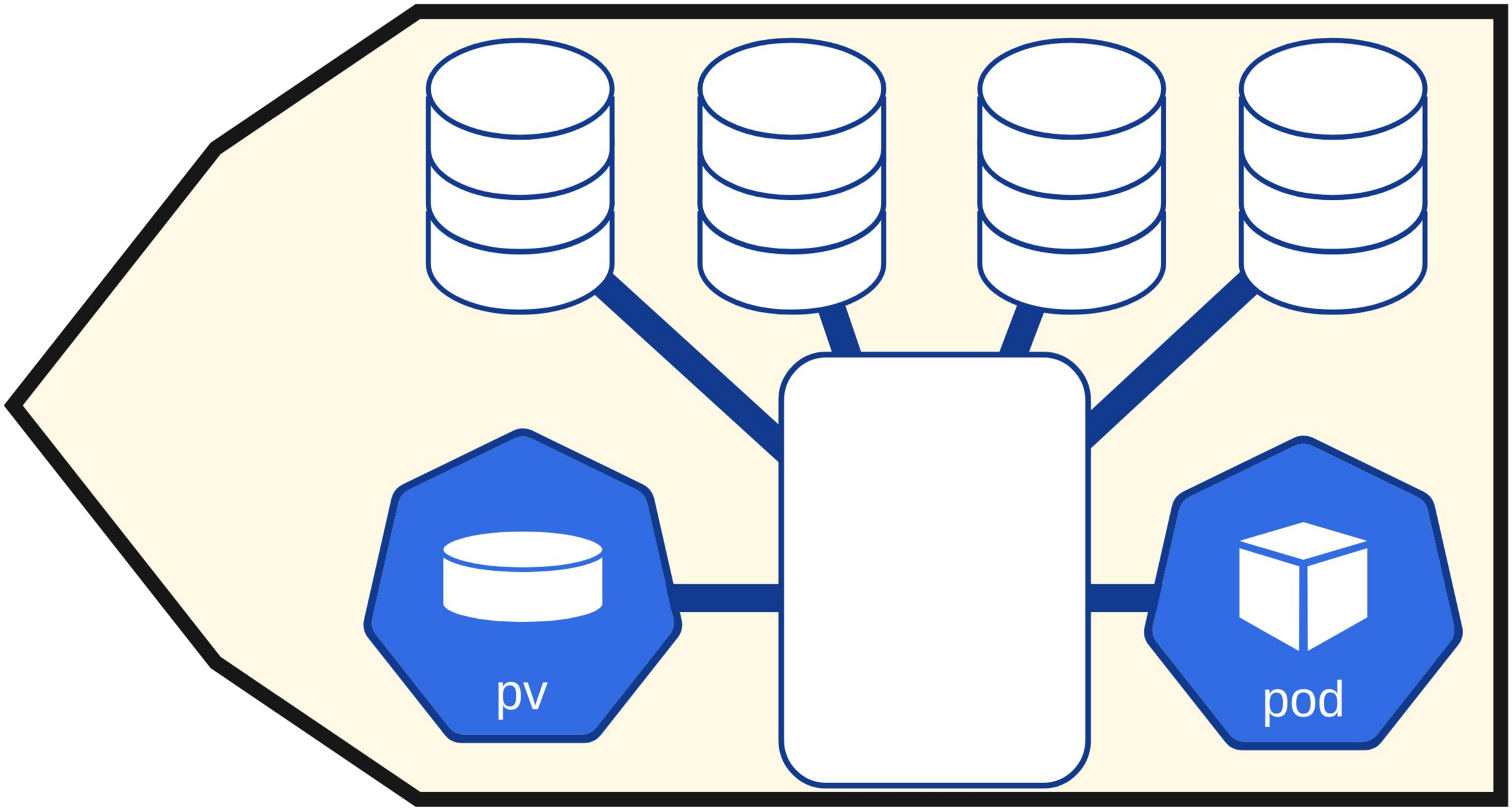
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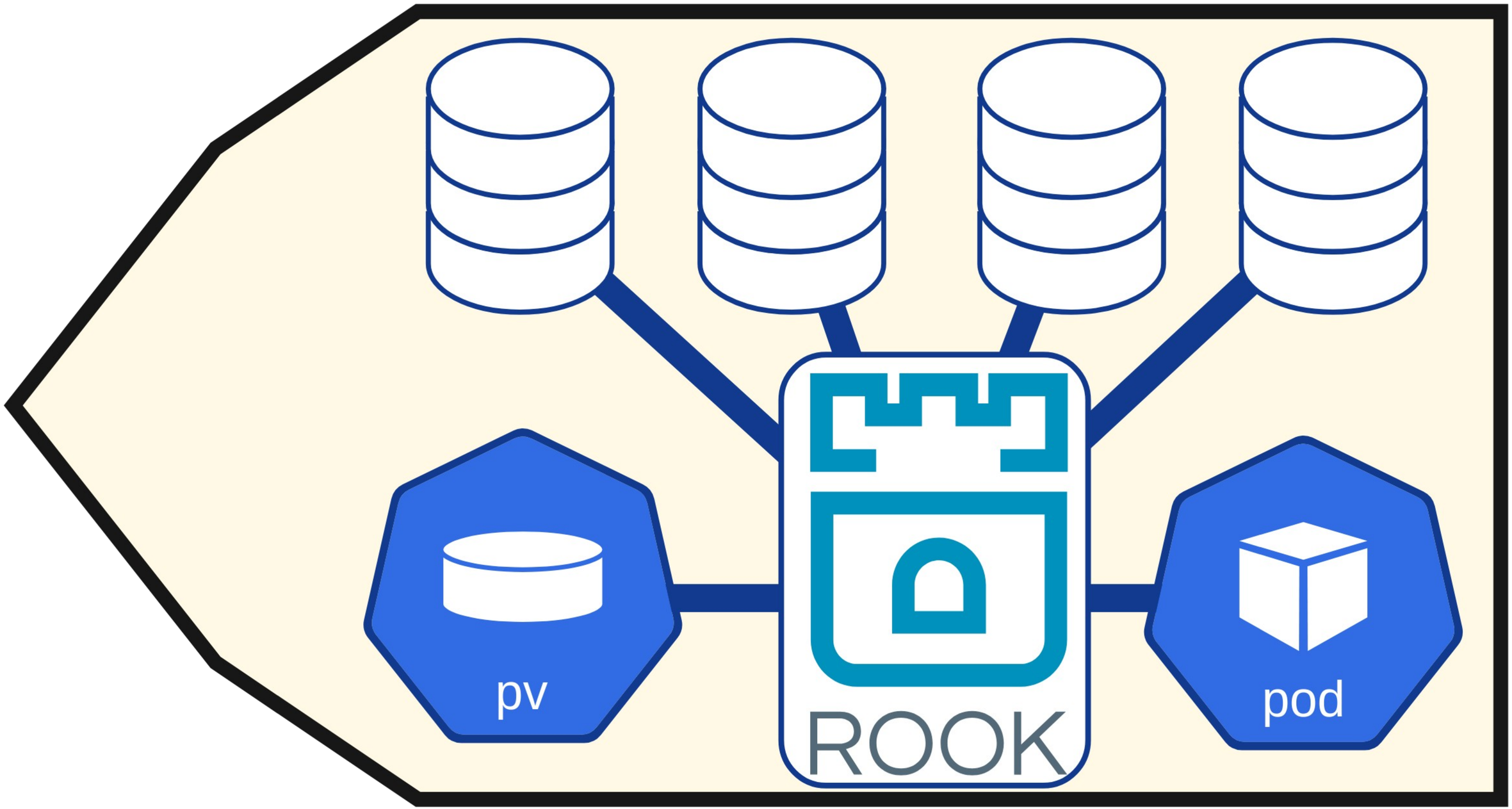
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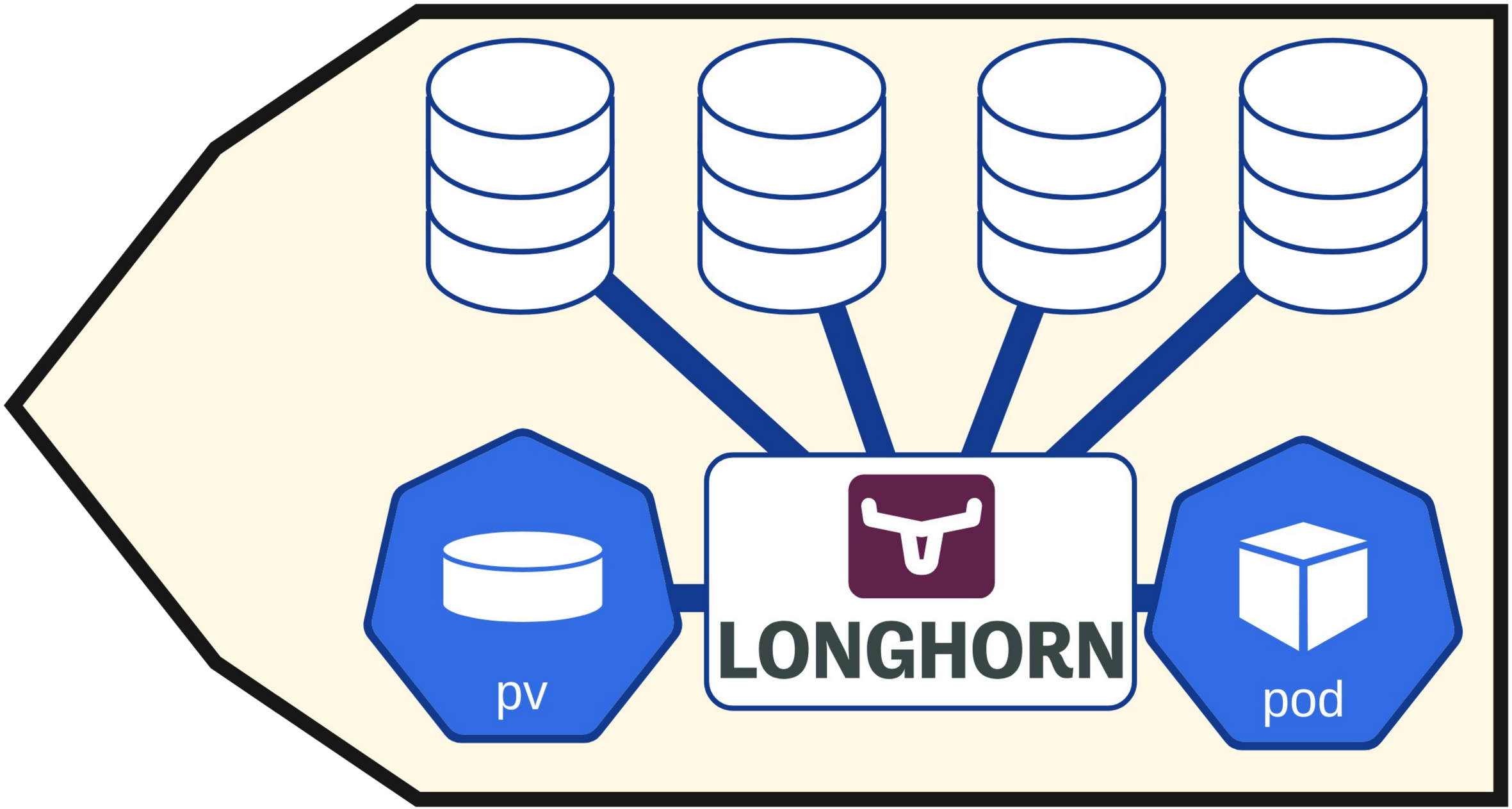
ROOK
pod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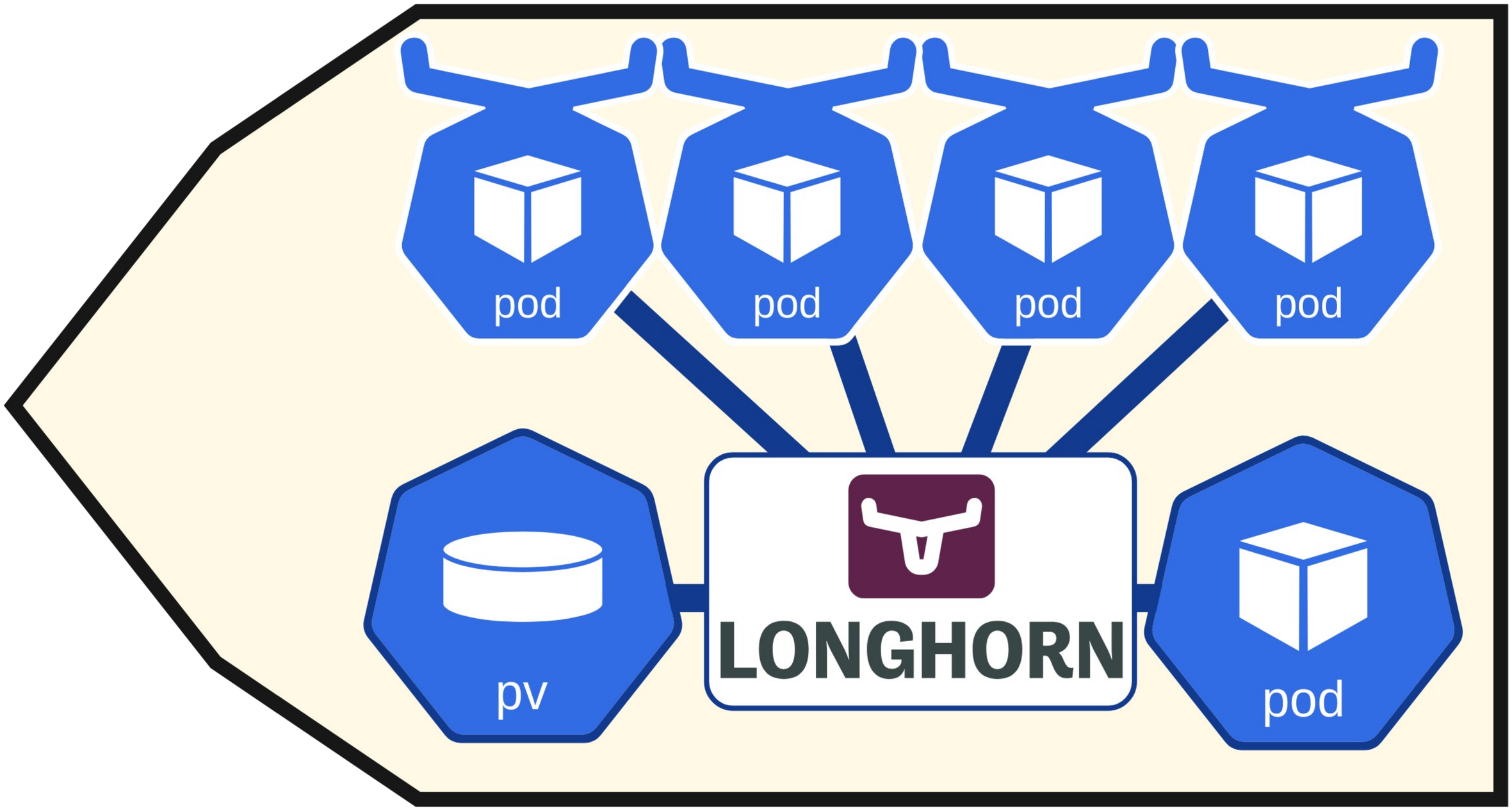
pod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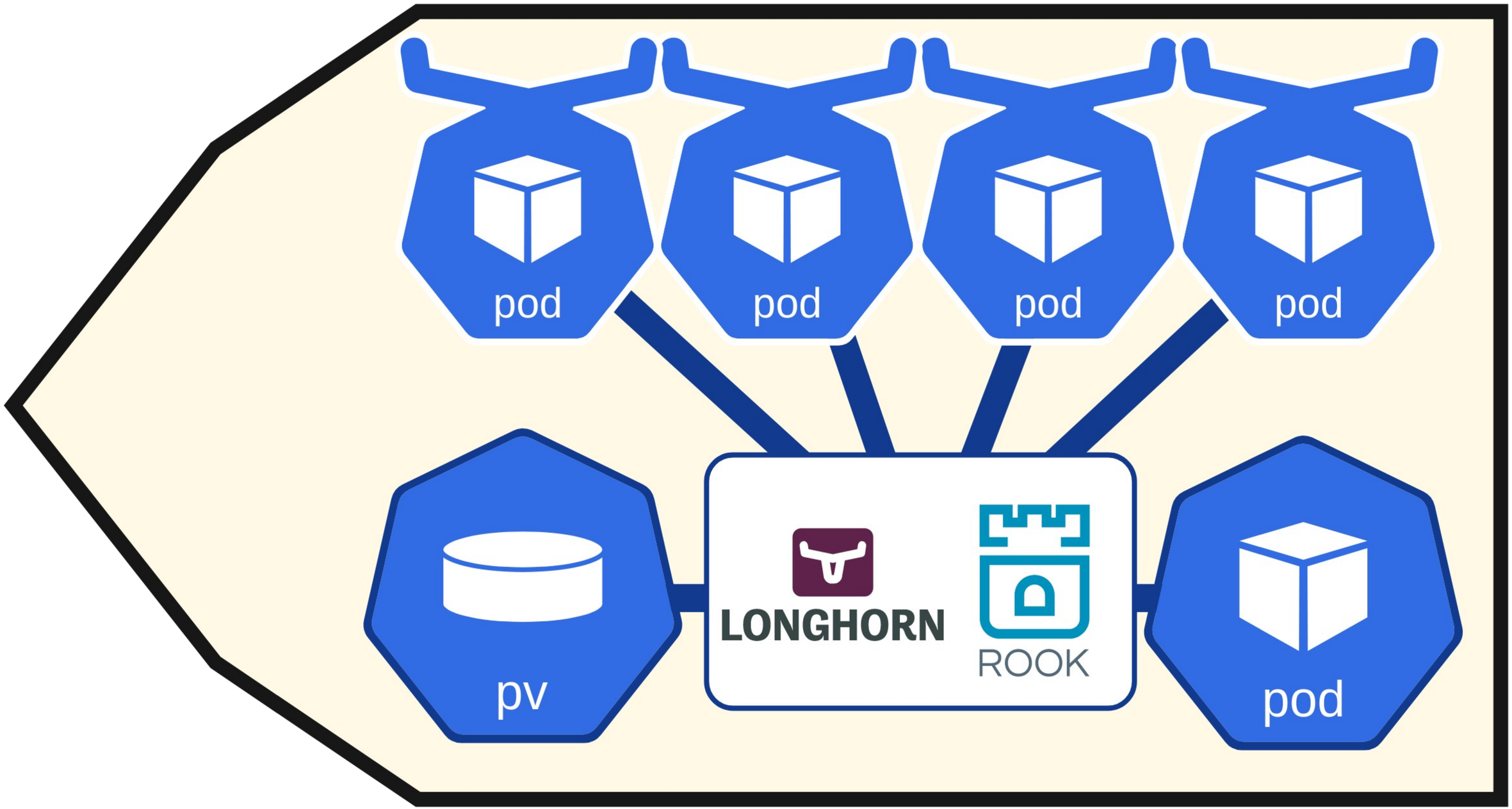
LONGHORN
pod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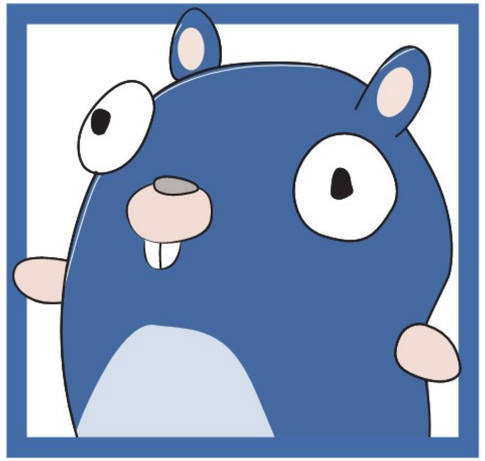
pv
LONGHORN
ROOK
pod

LONGHORN

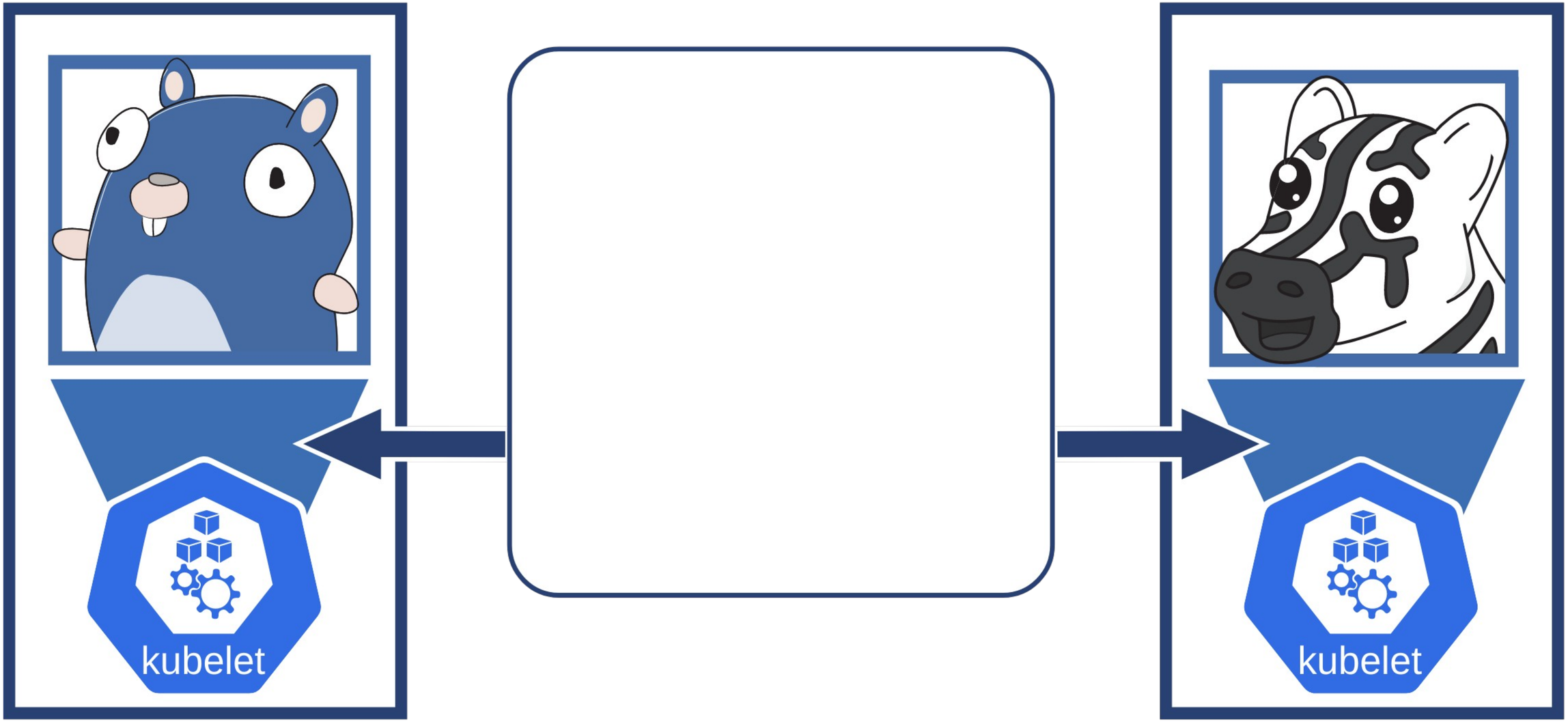
ROOK

cri-o



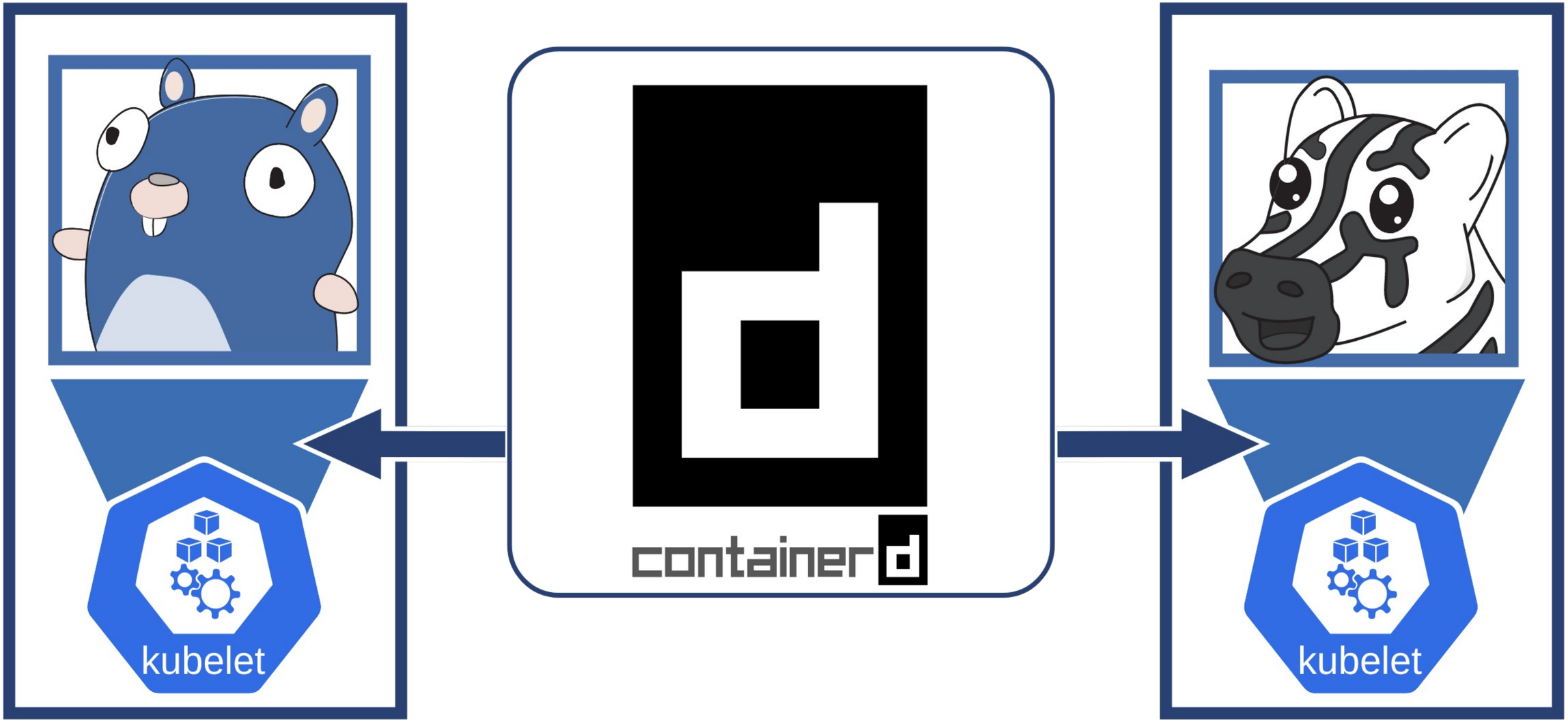
kubelet

kubelet


kubelet
kubelet

kubelet
kubelet

CRI
kubelet
kubelet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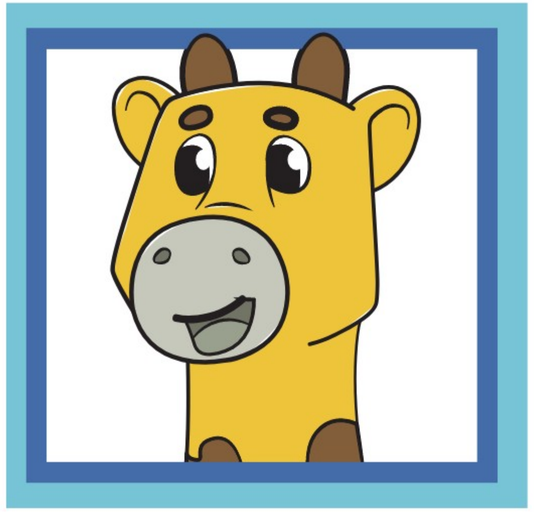
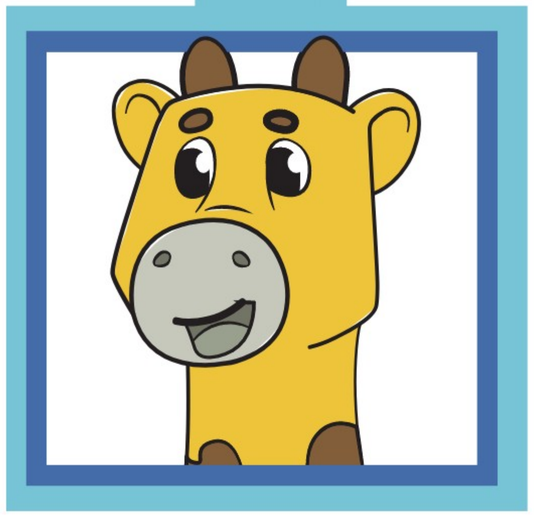
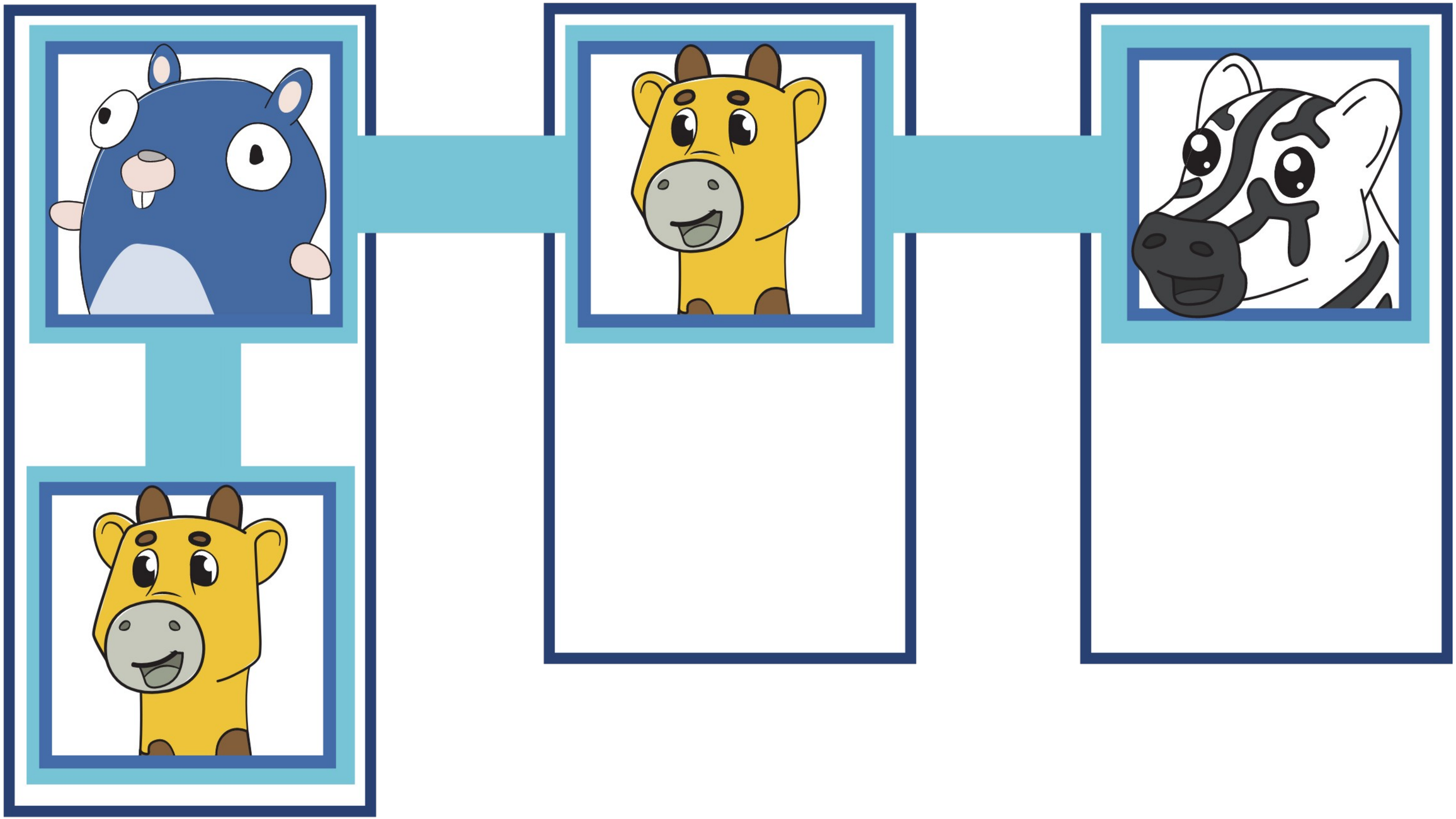
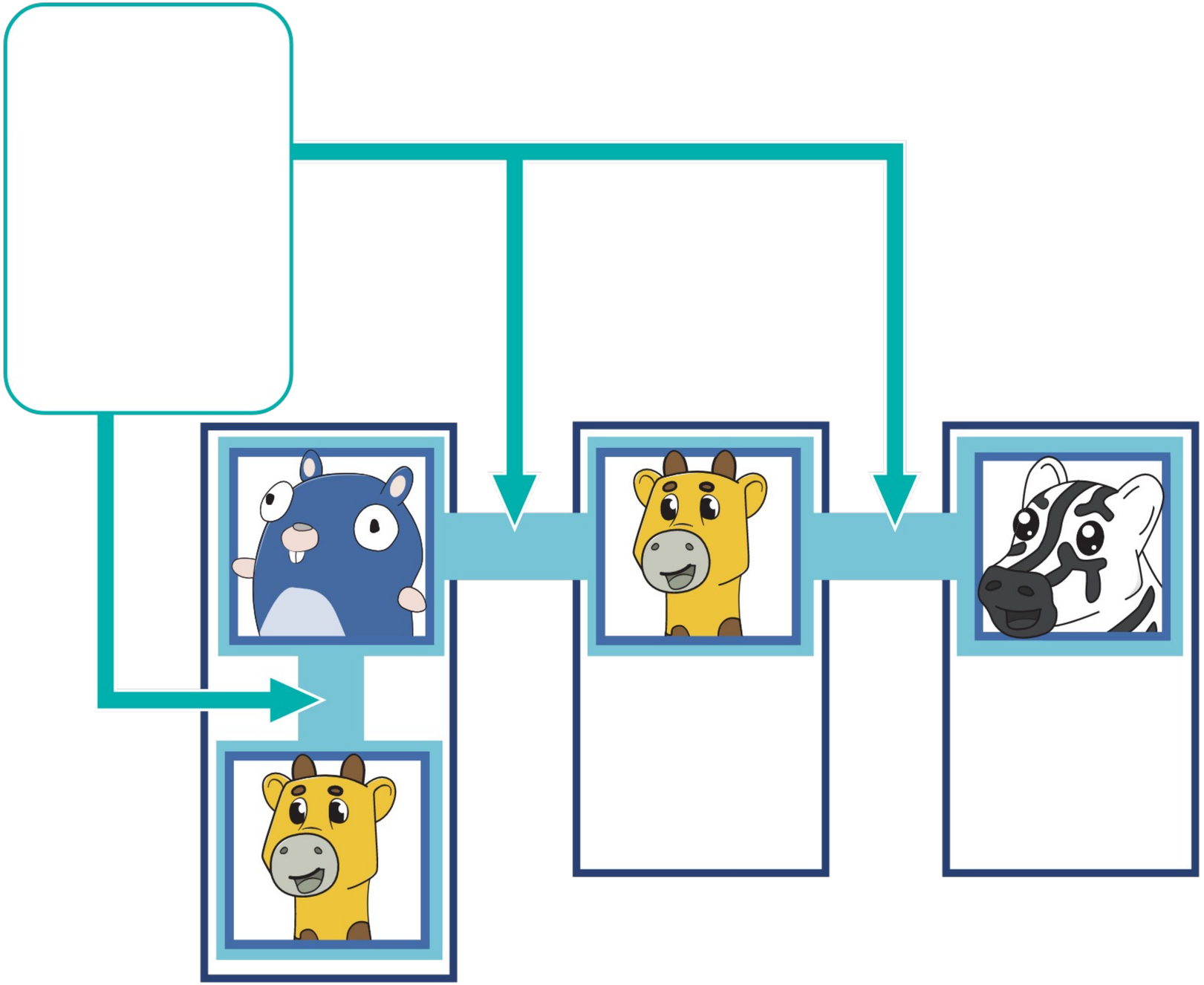
cri-o

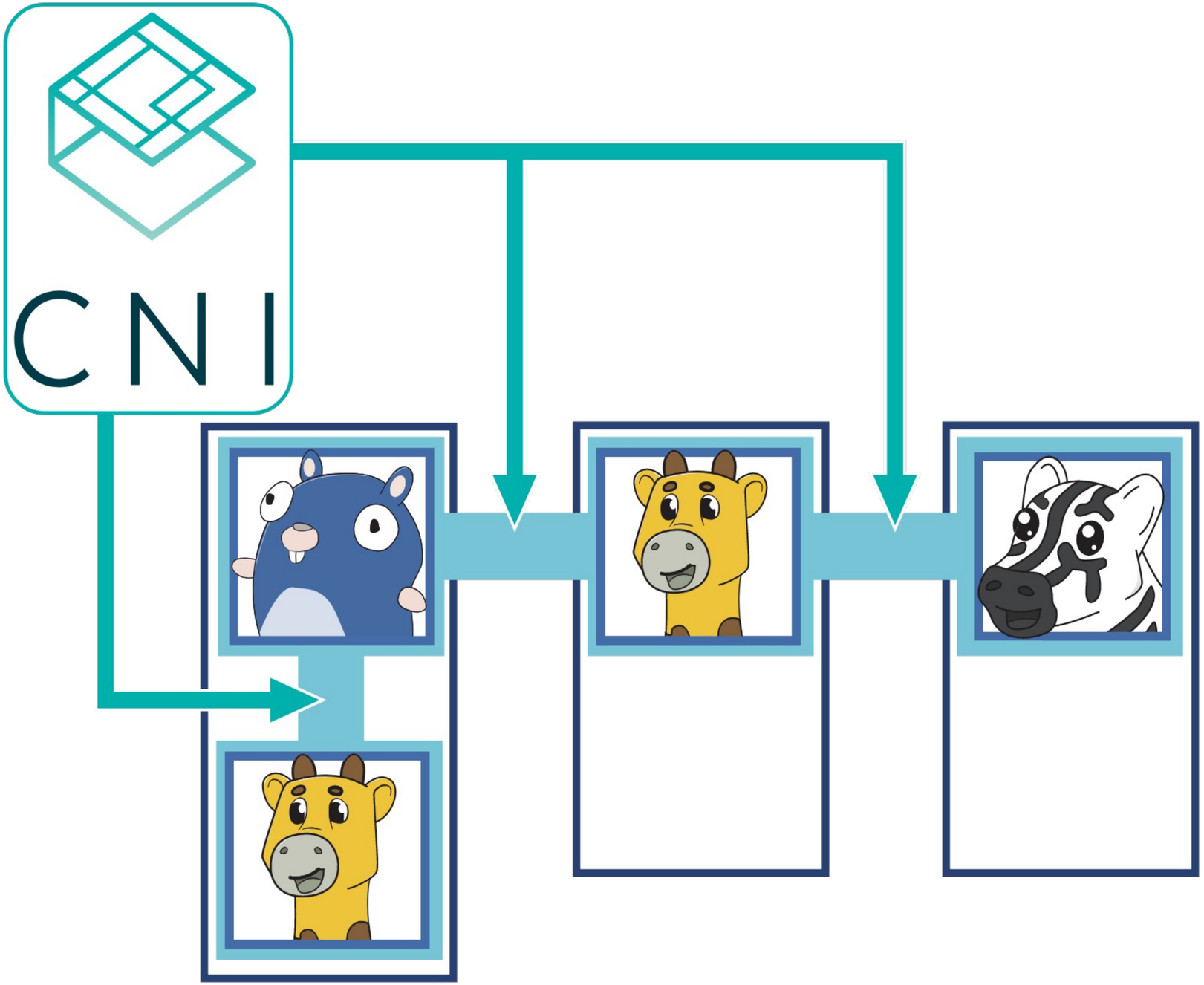
CNI





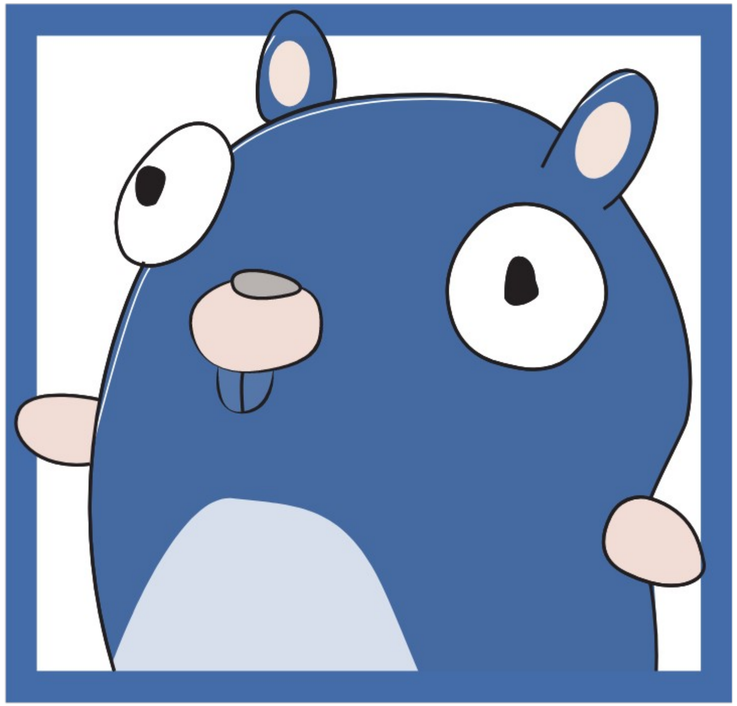


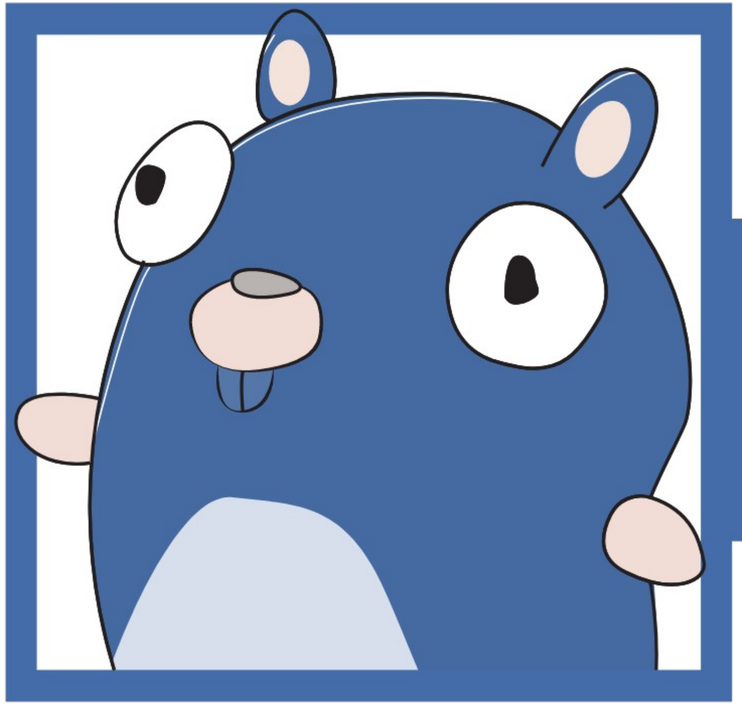



CNI

CNI

gRPC





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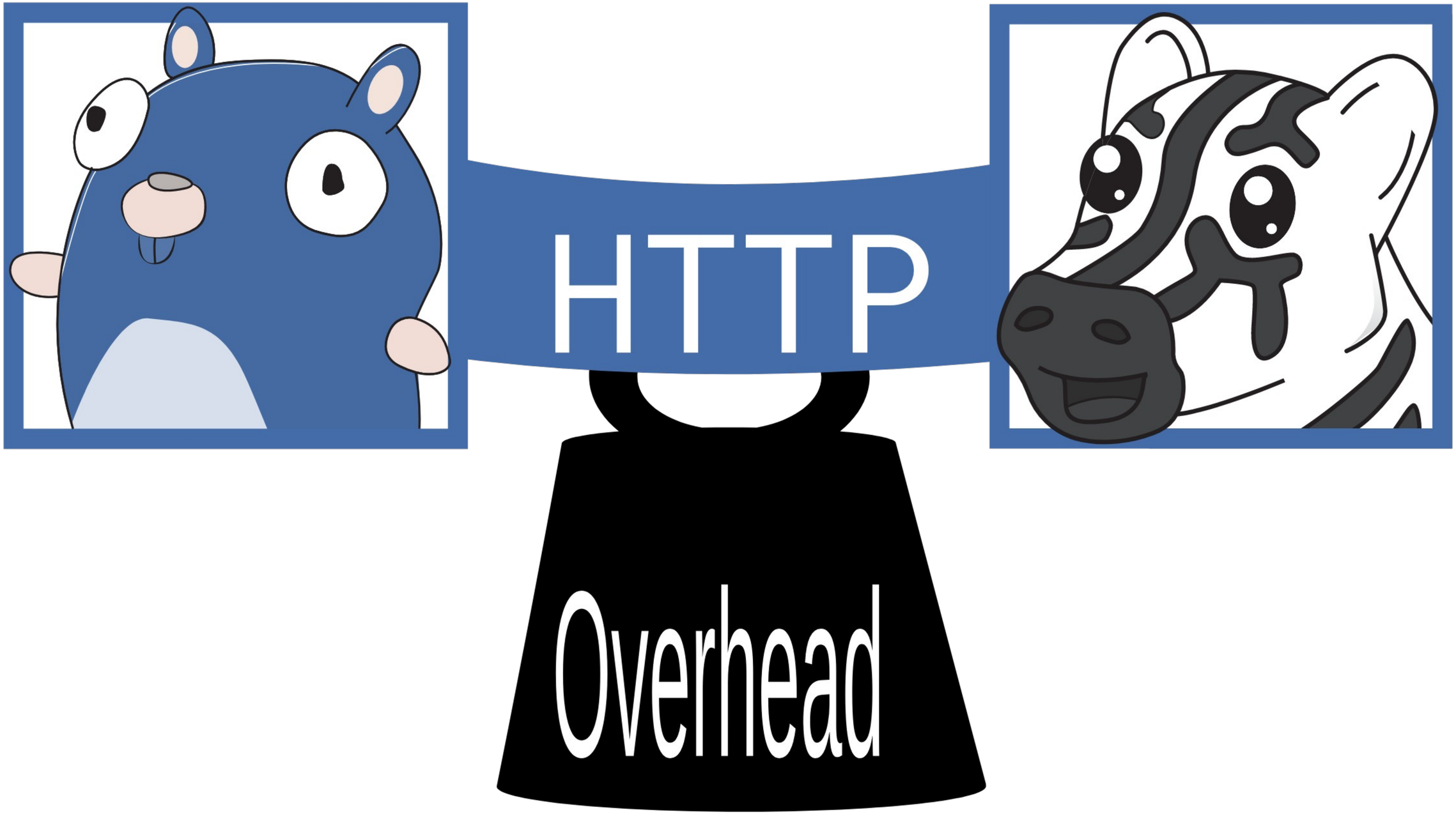
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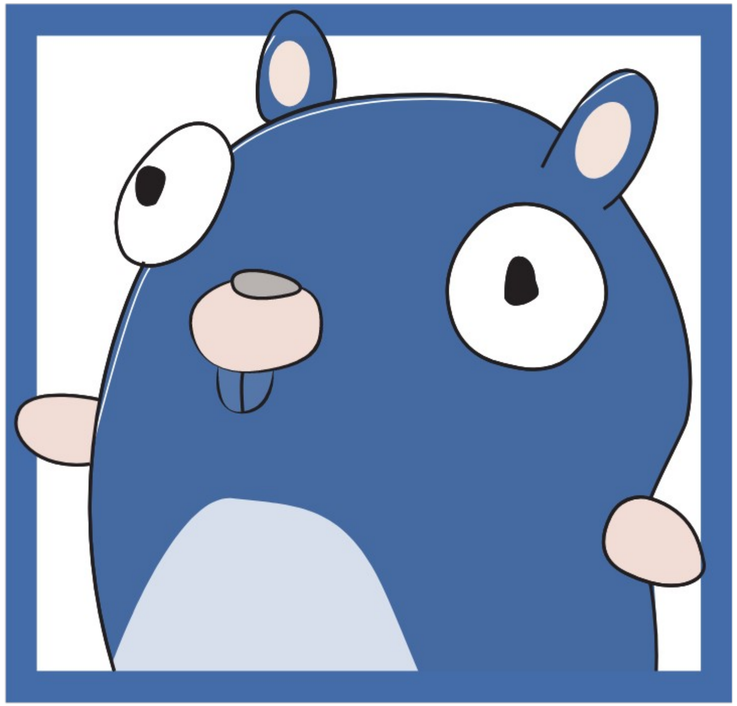

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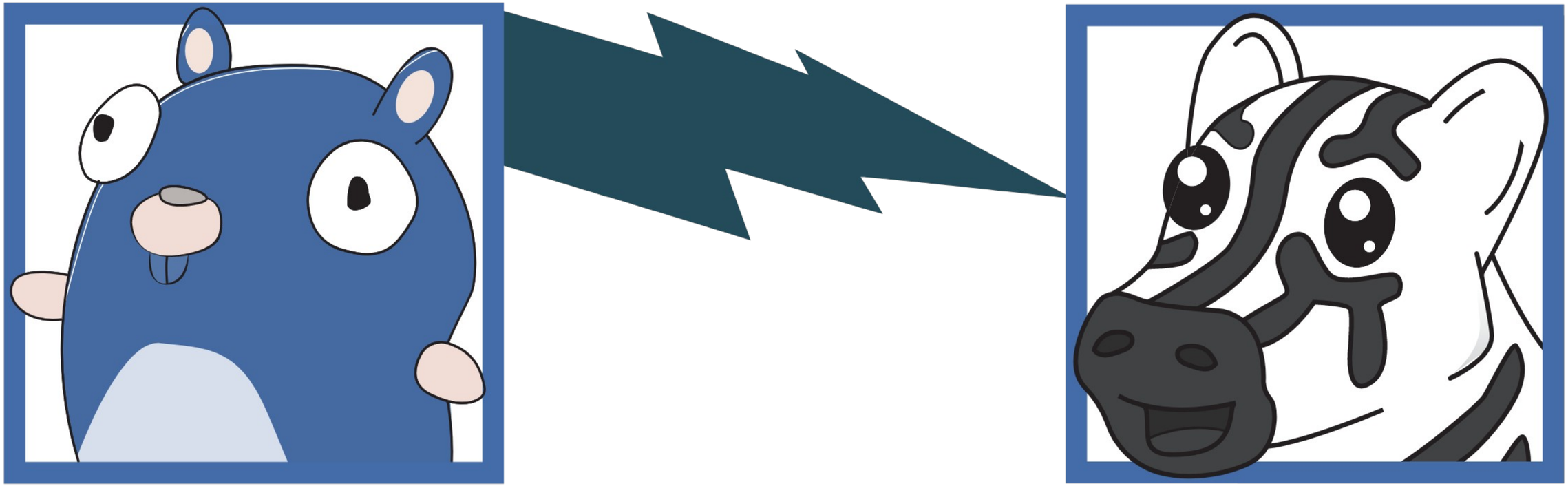

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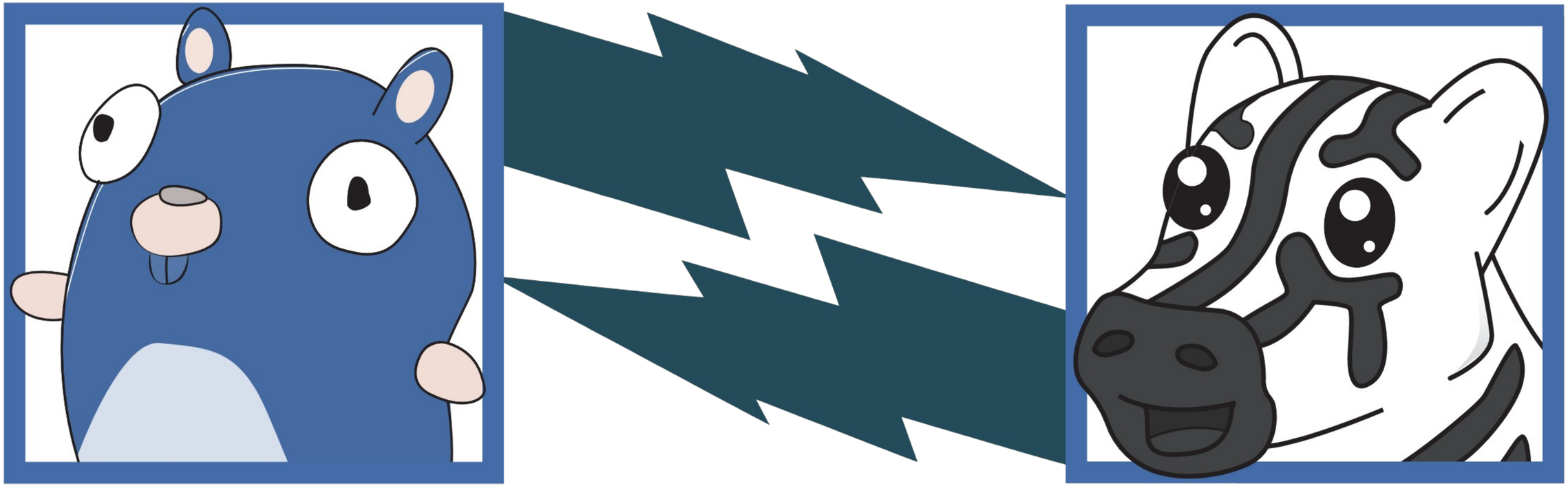
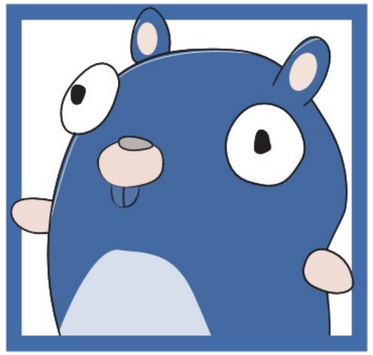
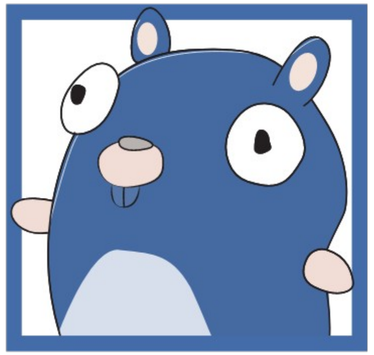
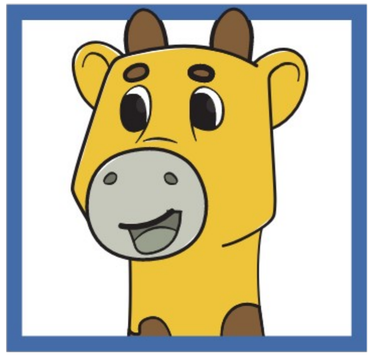
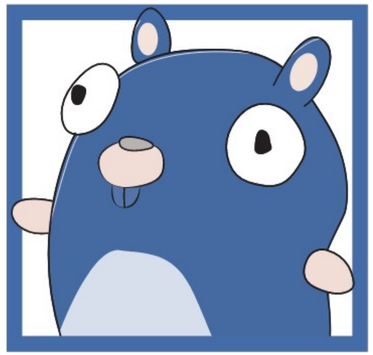
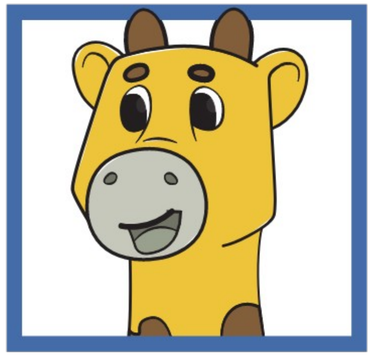


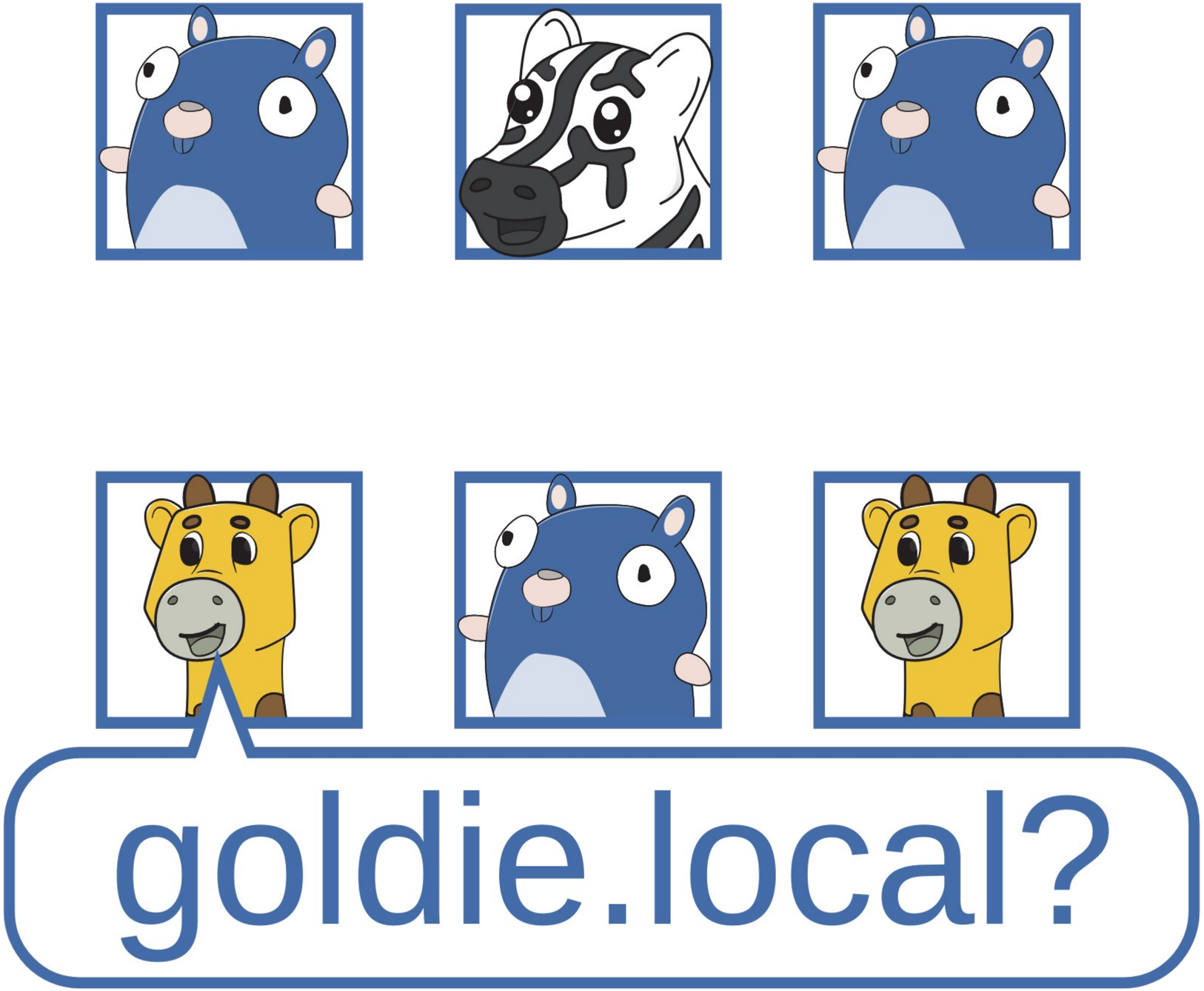
gRPC

gRPC

CoreDNS

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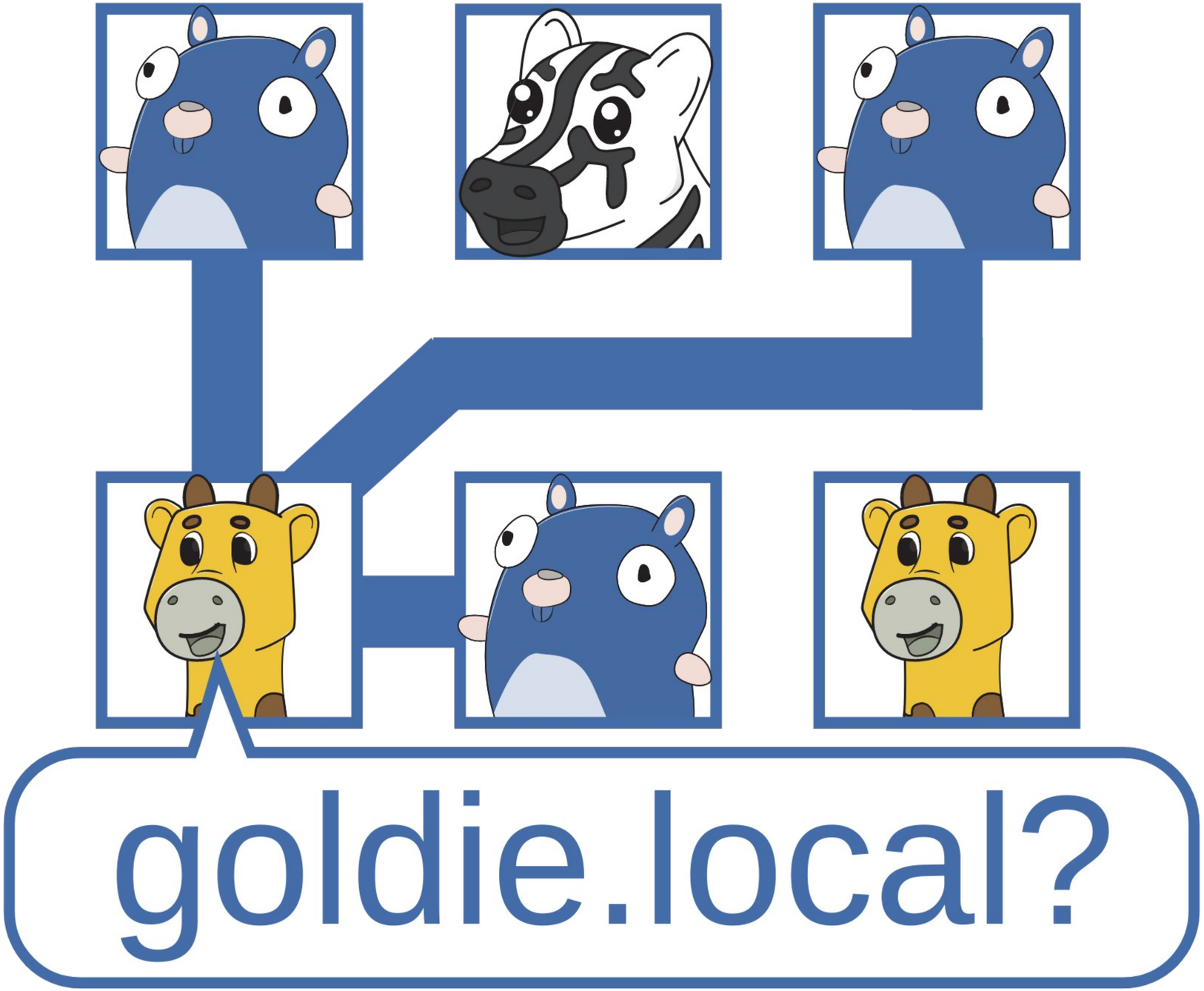
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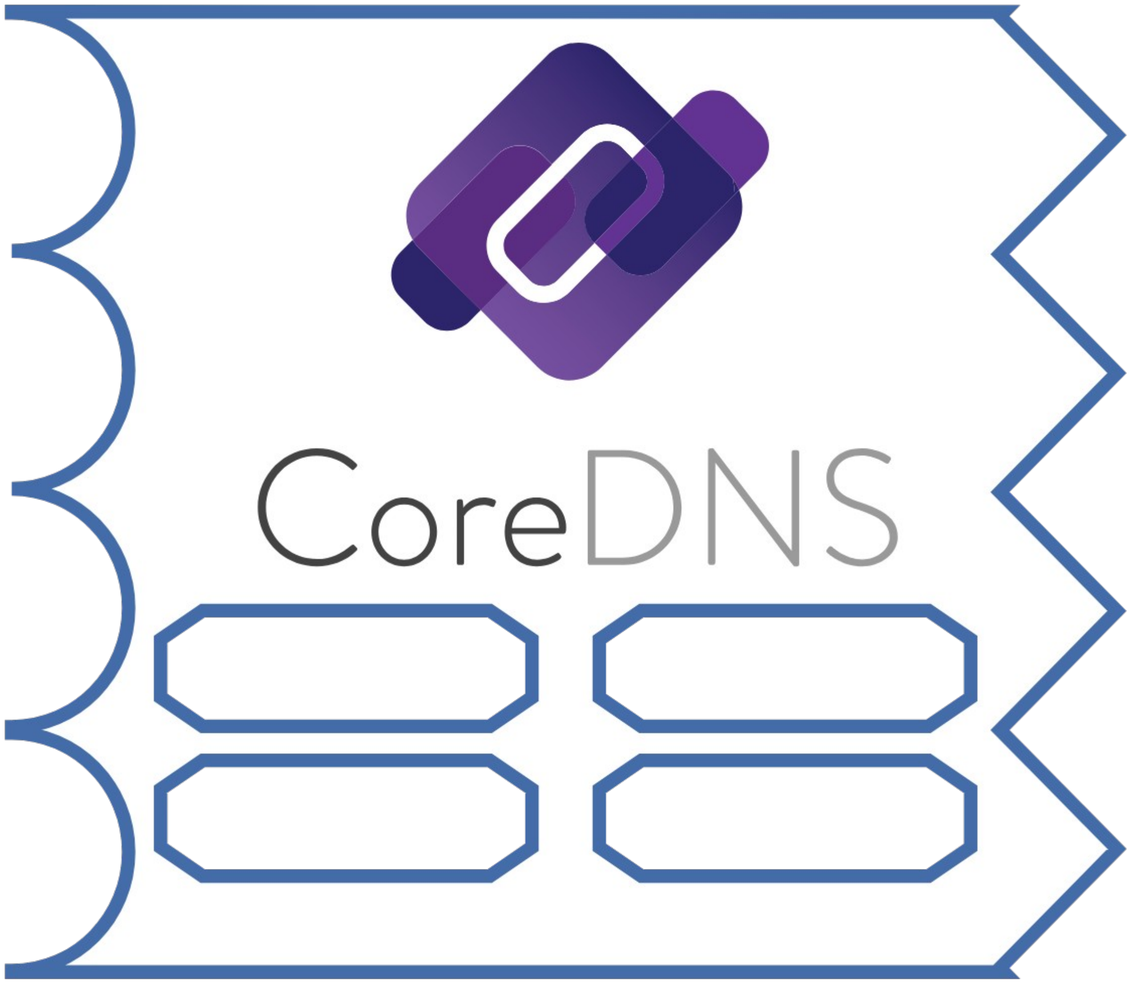
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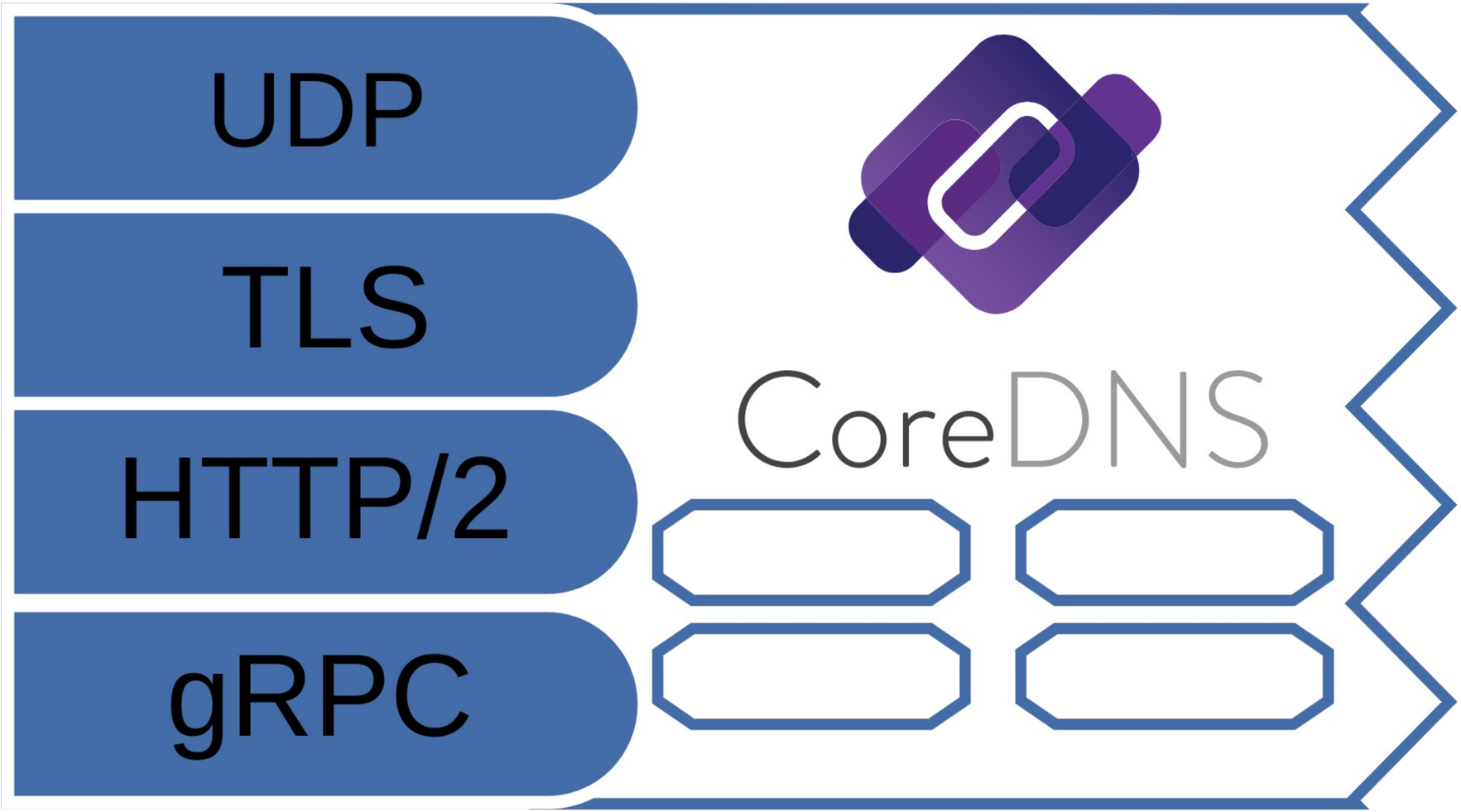
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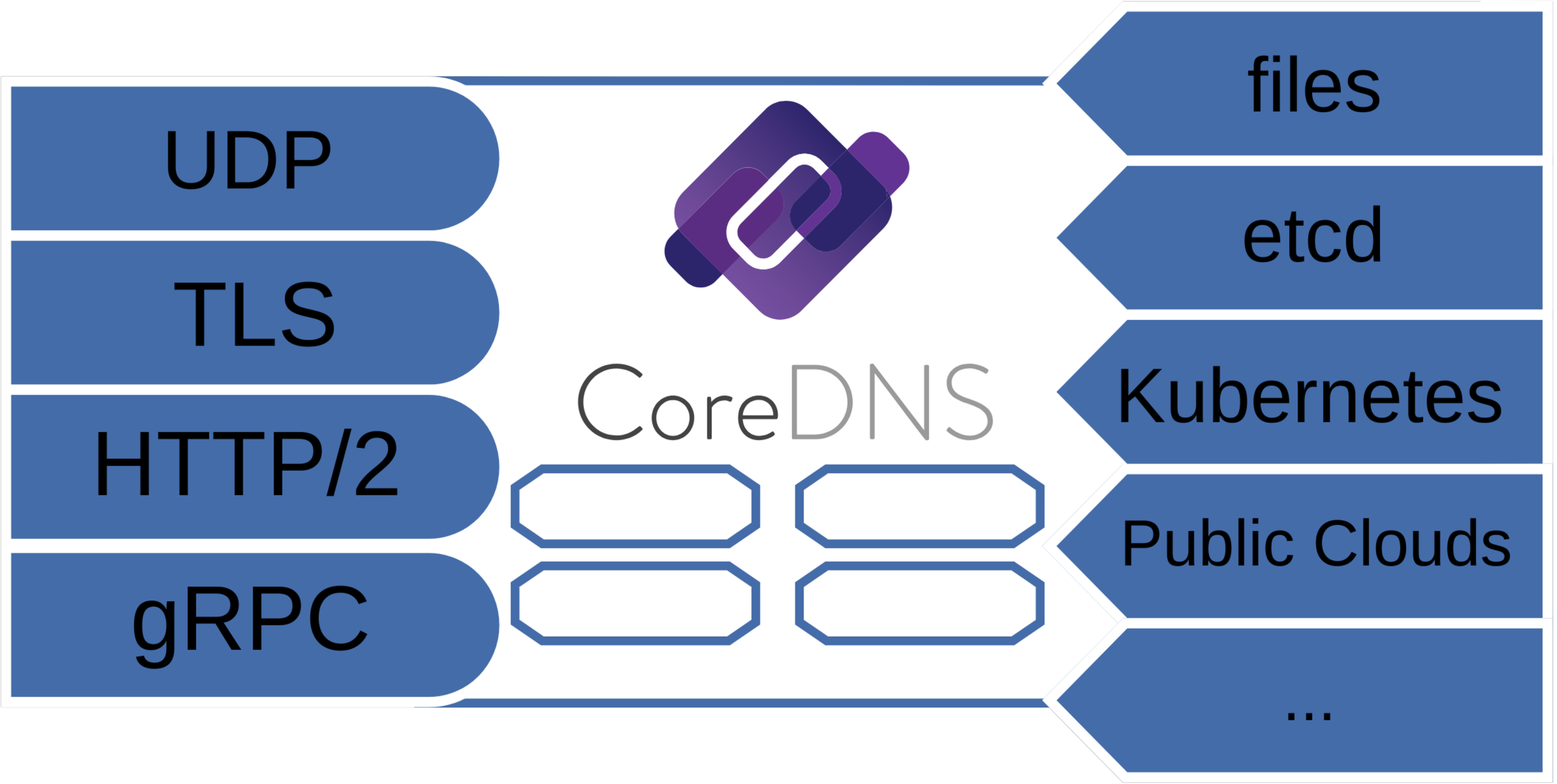
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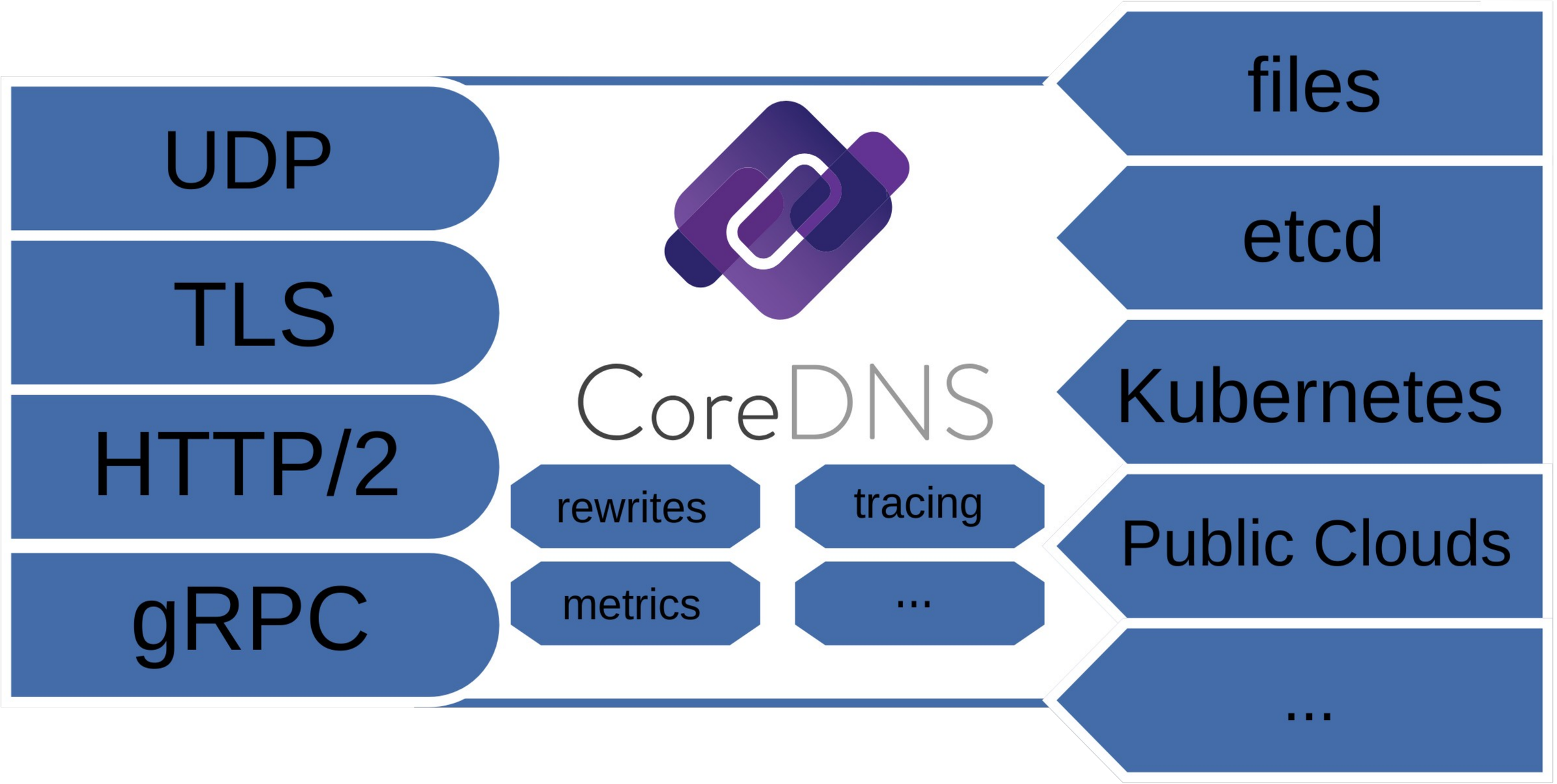
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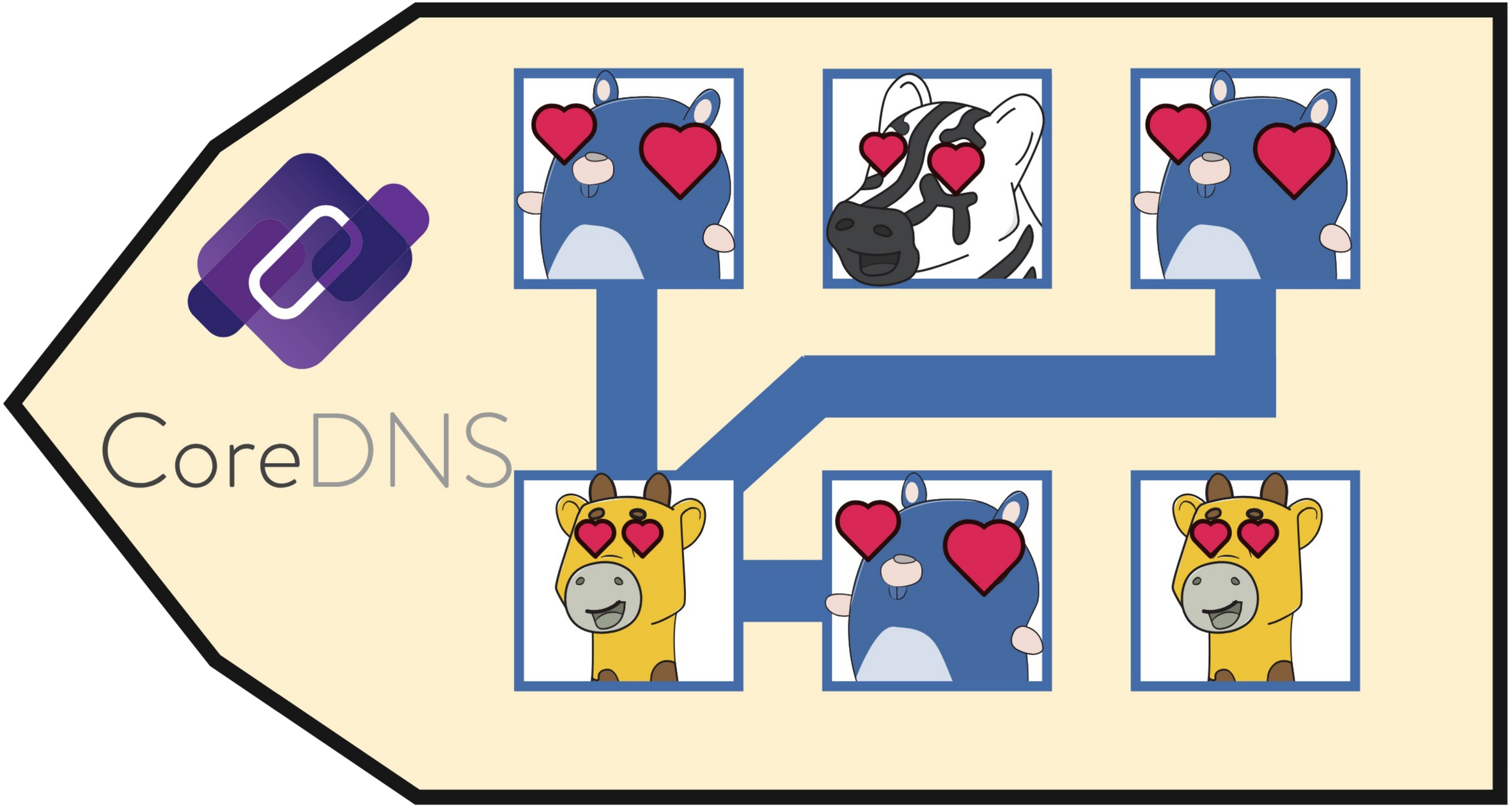
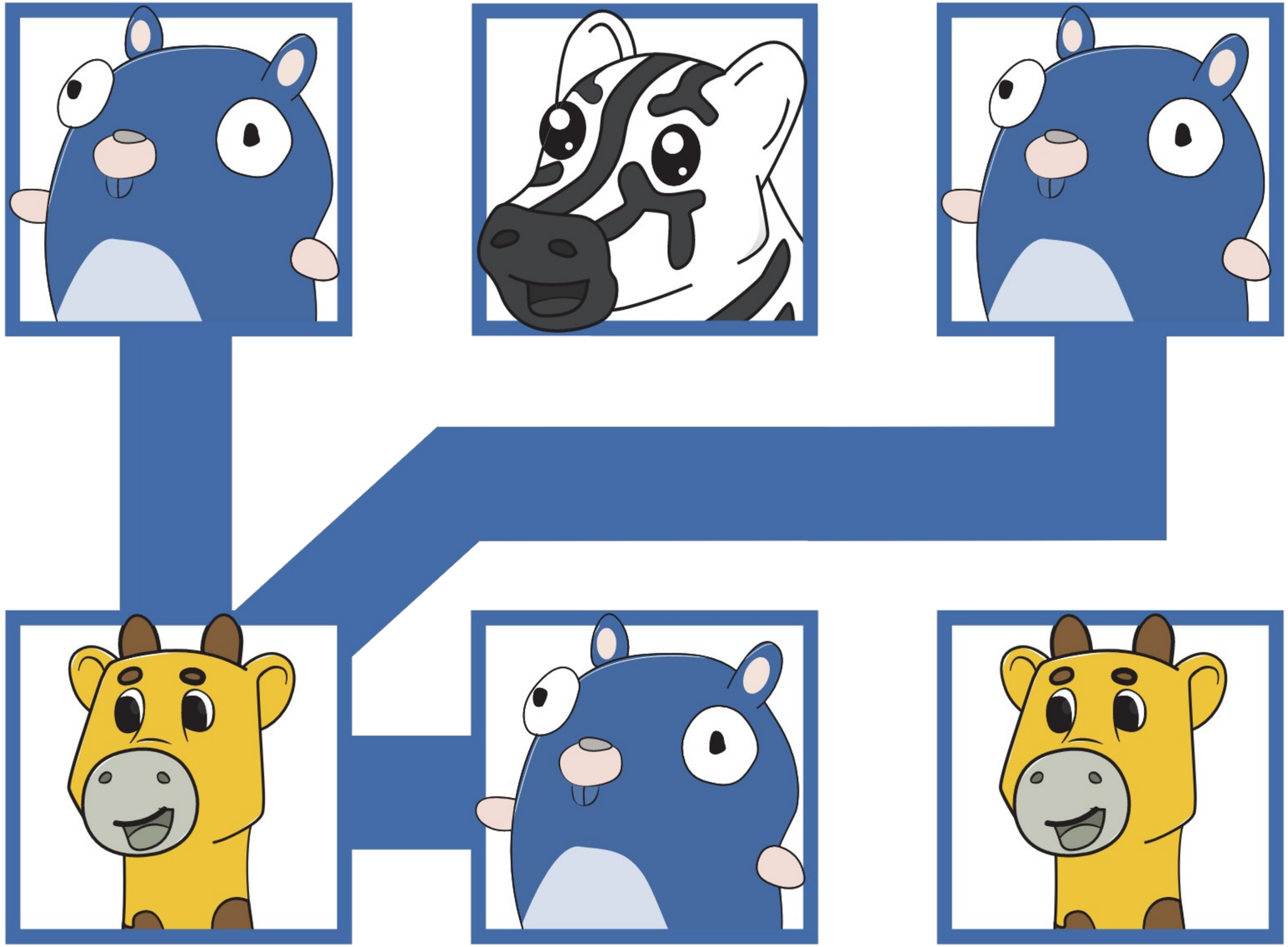
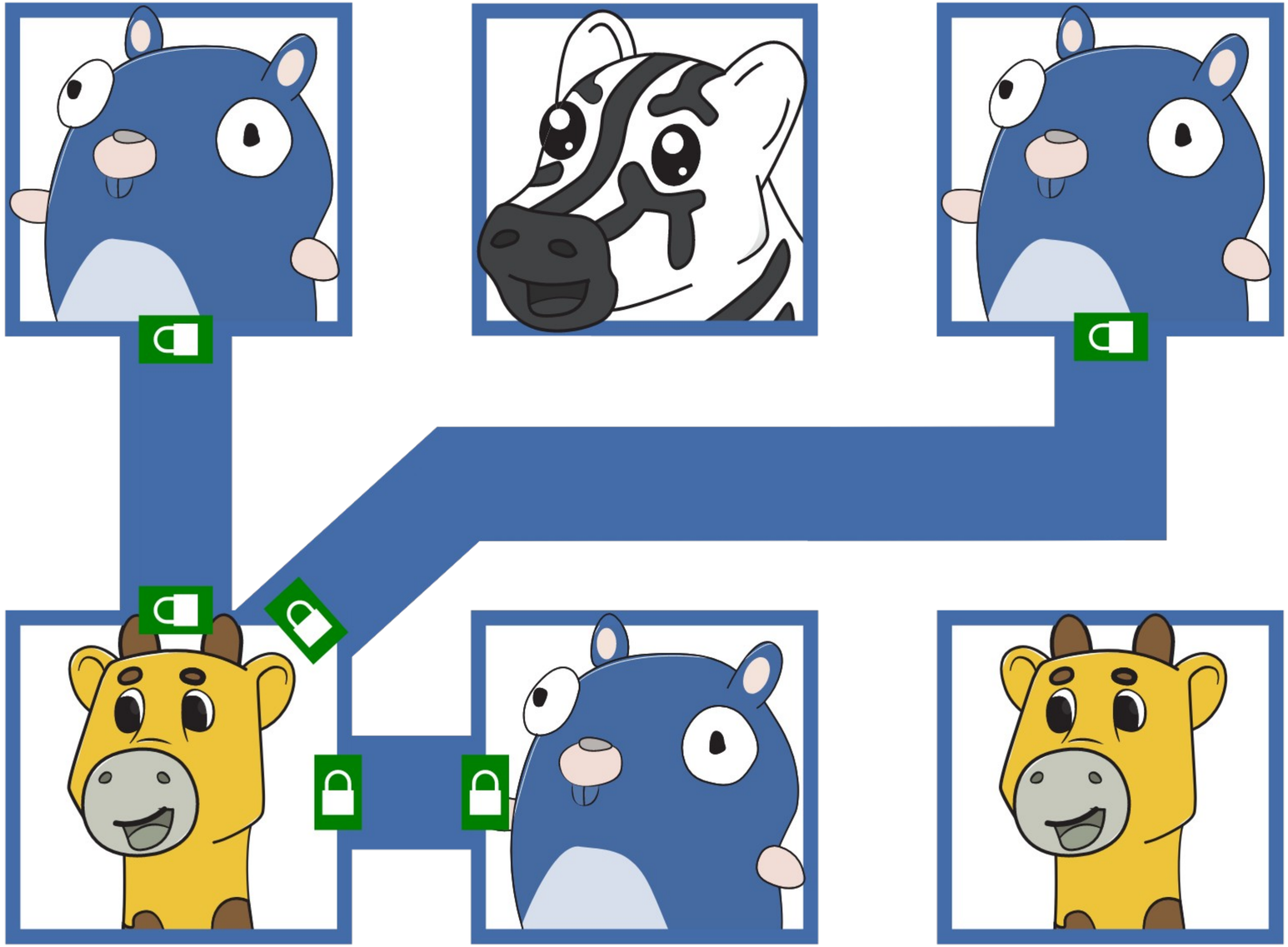
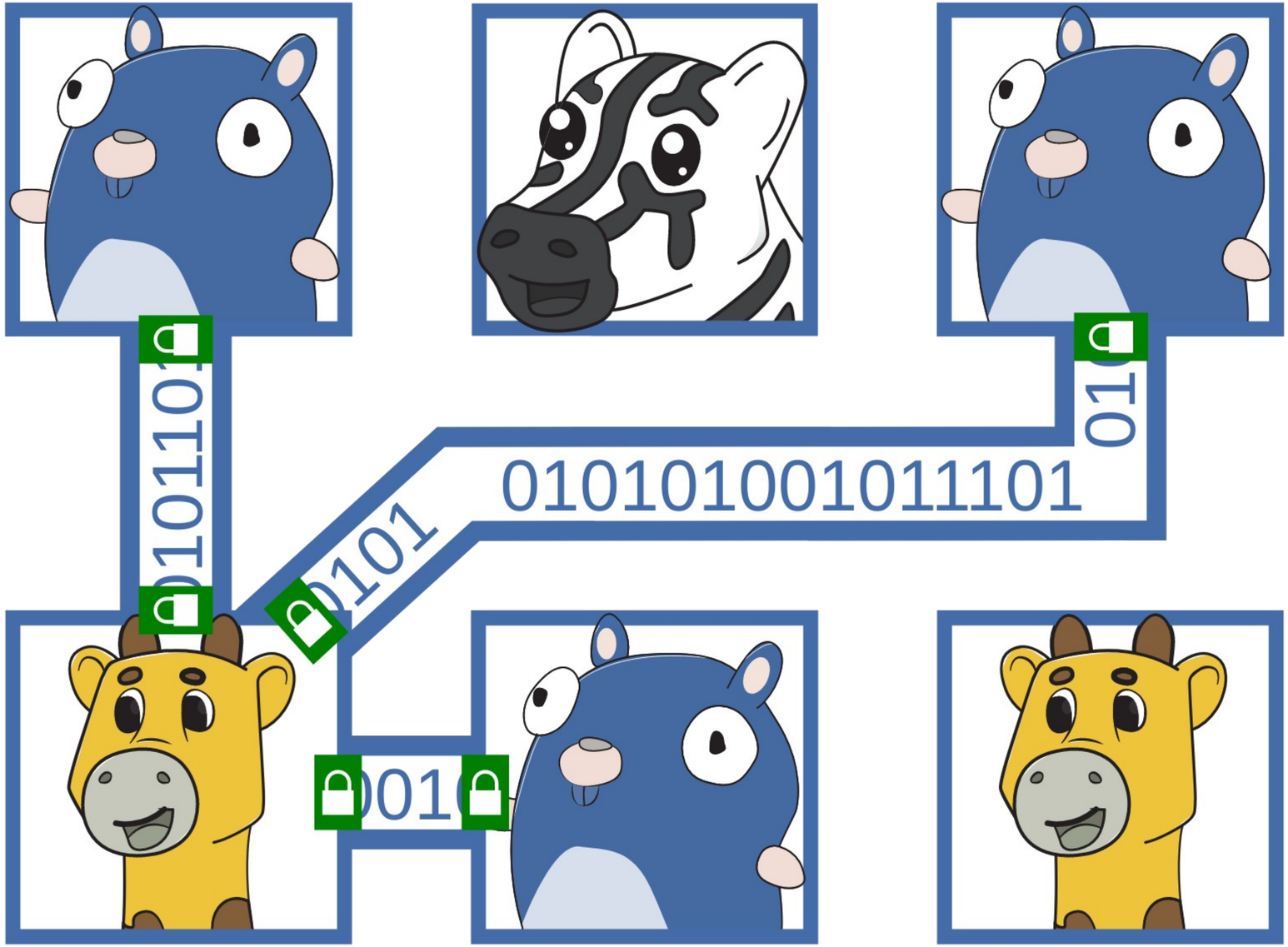

CoreDNS

CoreDNS

Service Mesh



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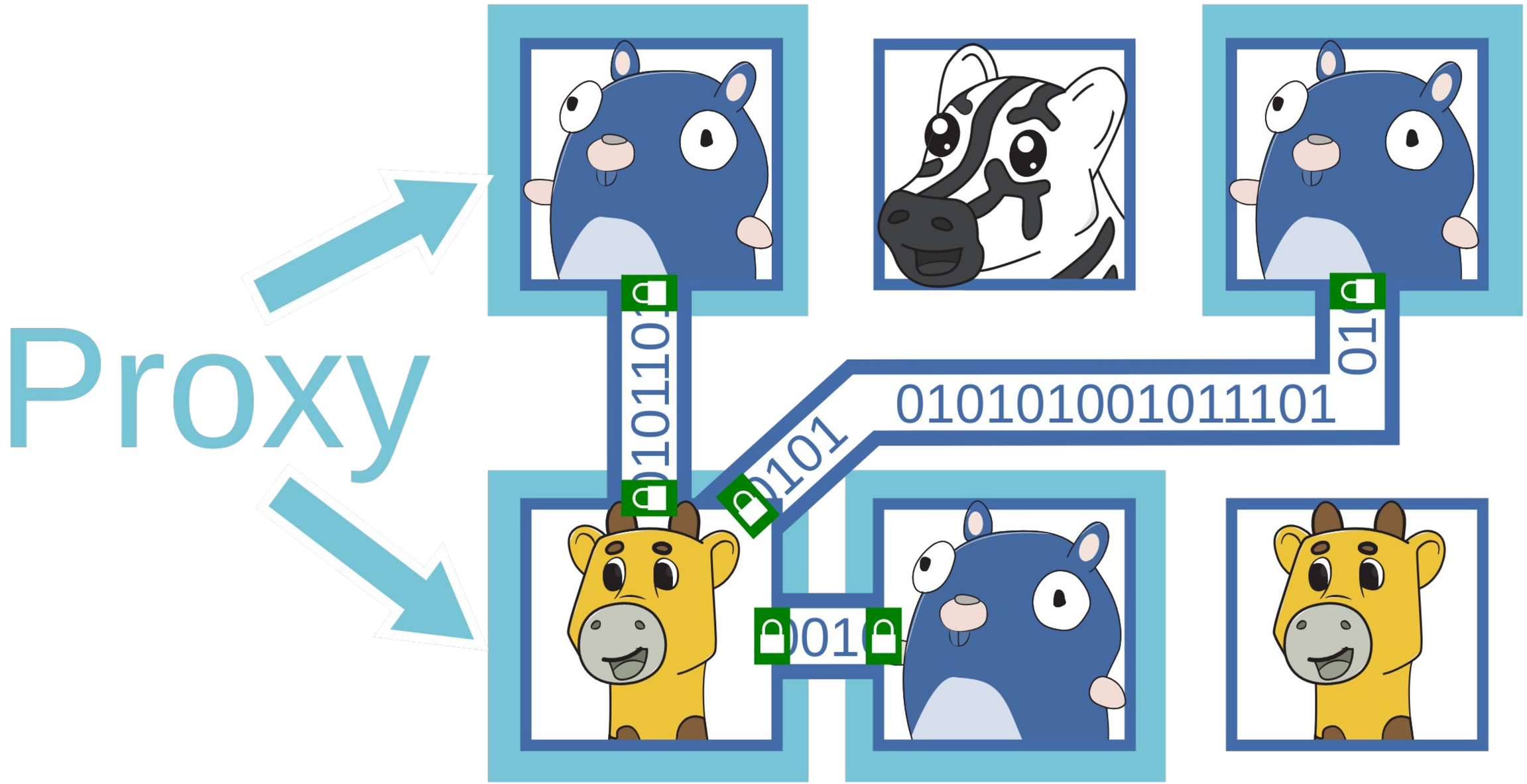
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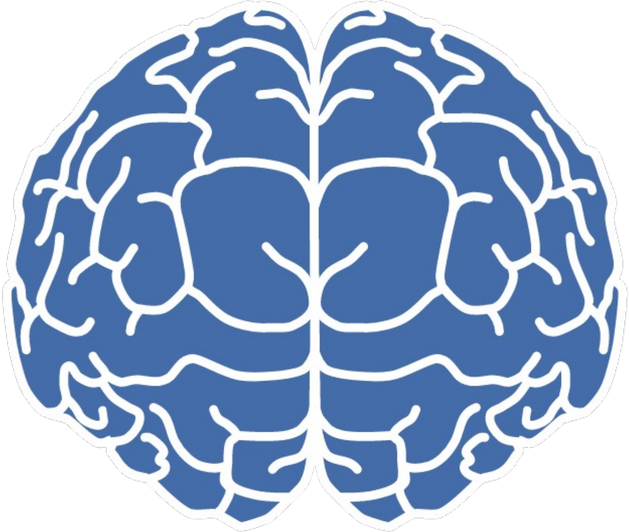

Control Plane

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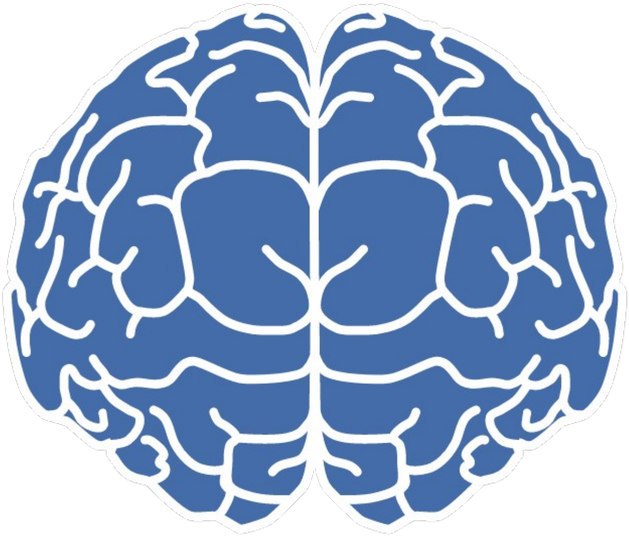

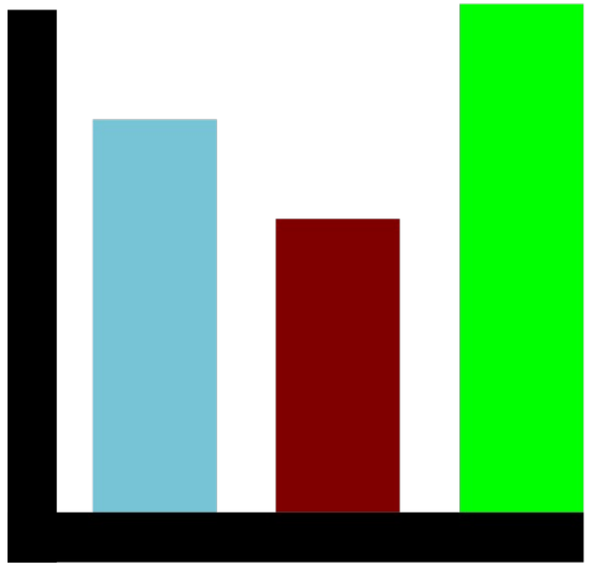

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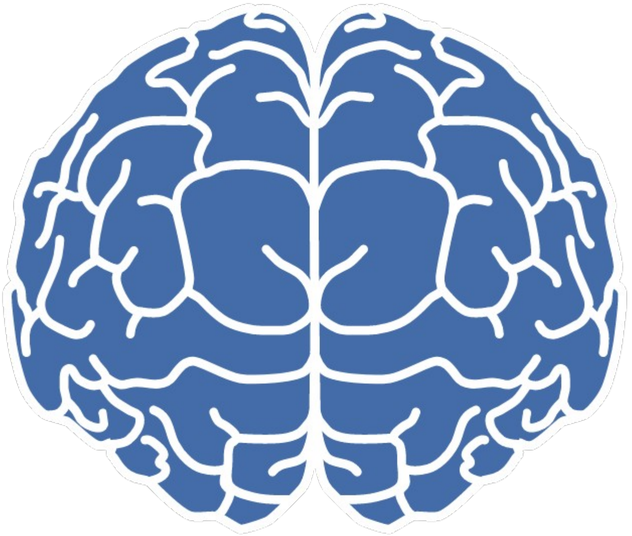

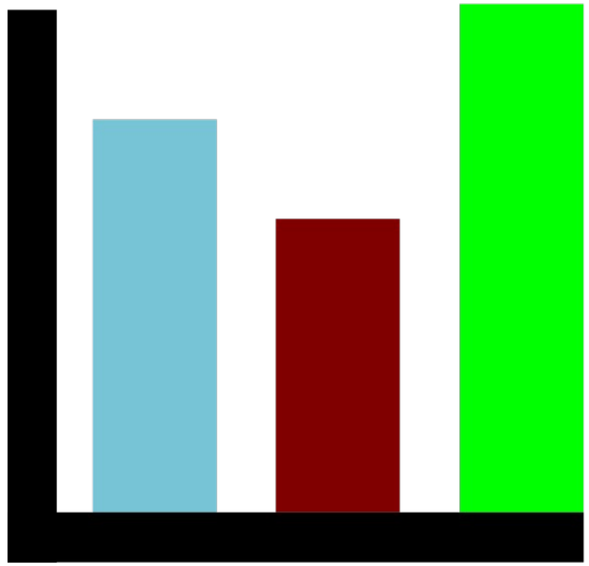

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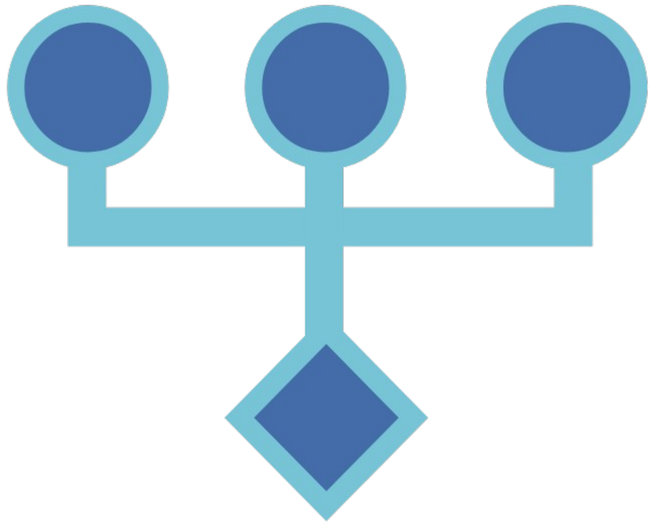

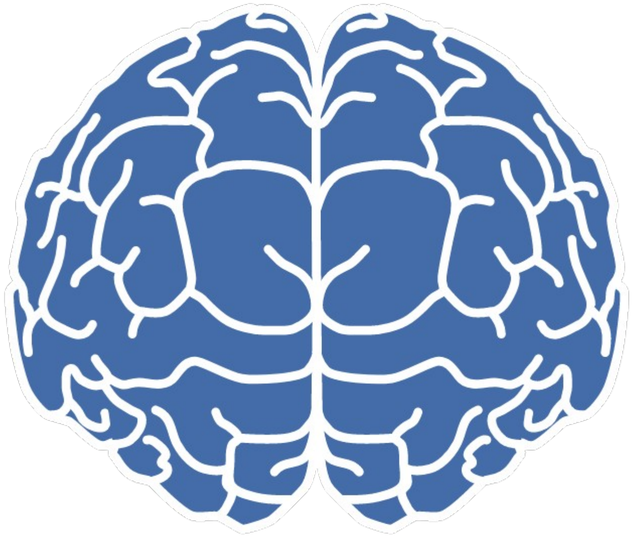

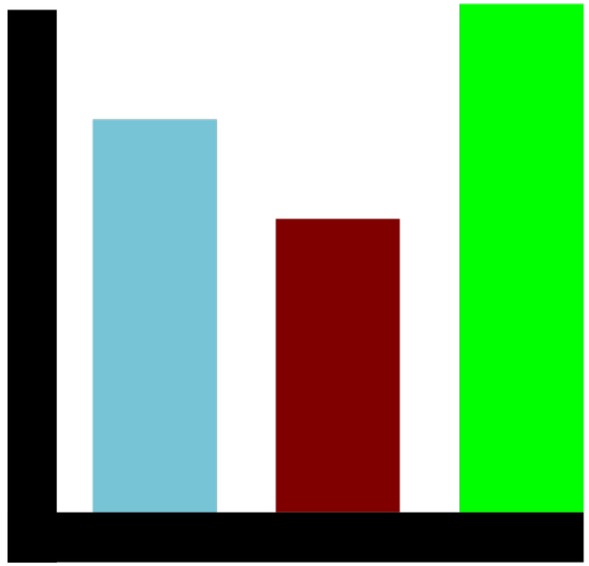

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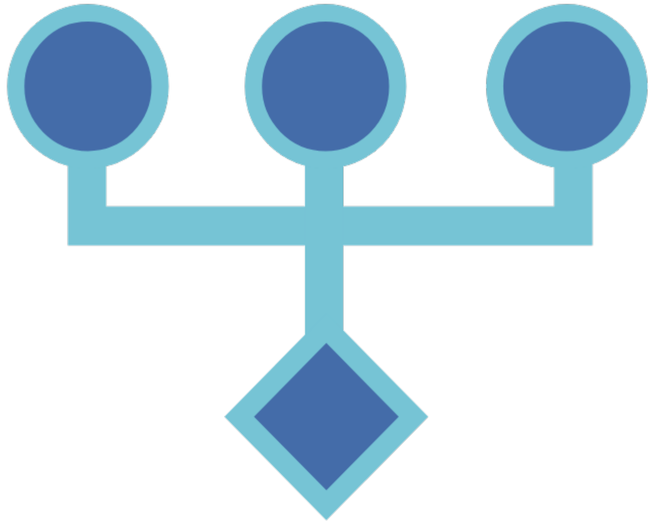

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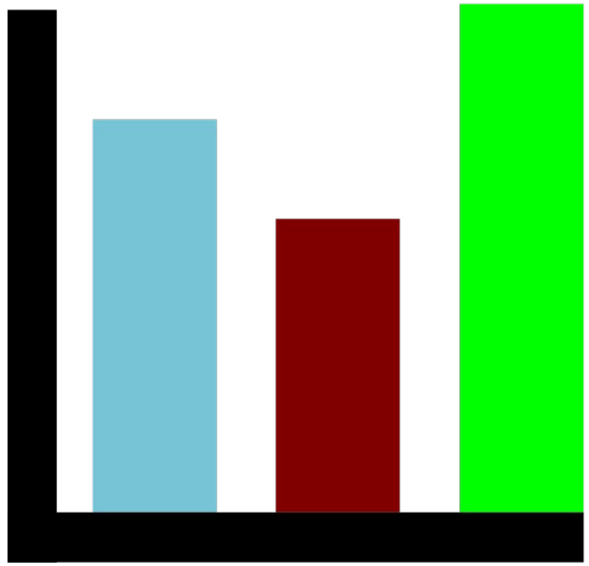

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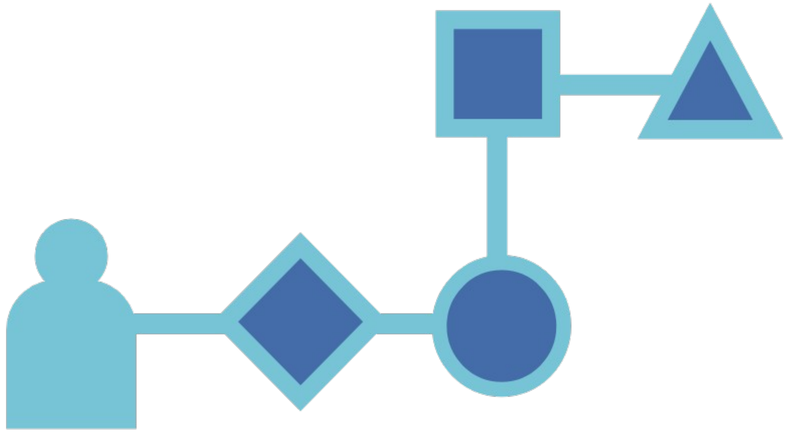

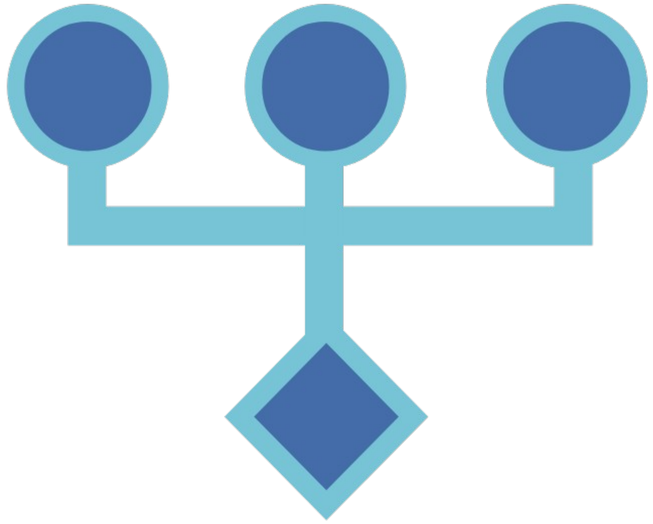

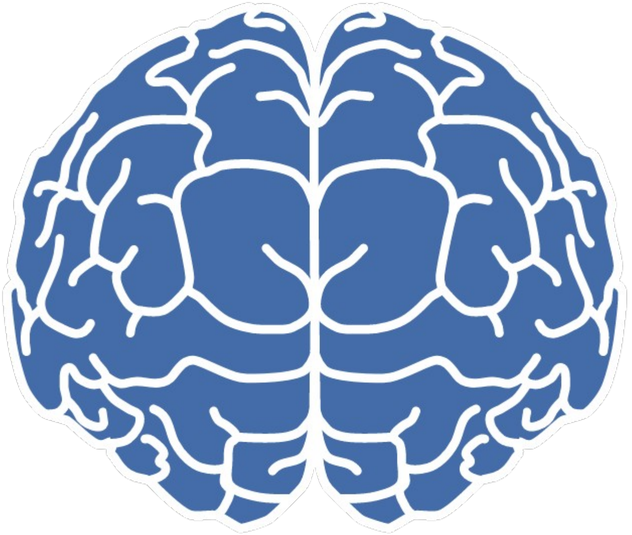

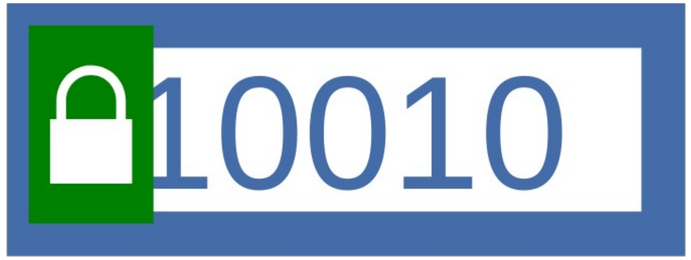
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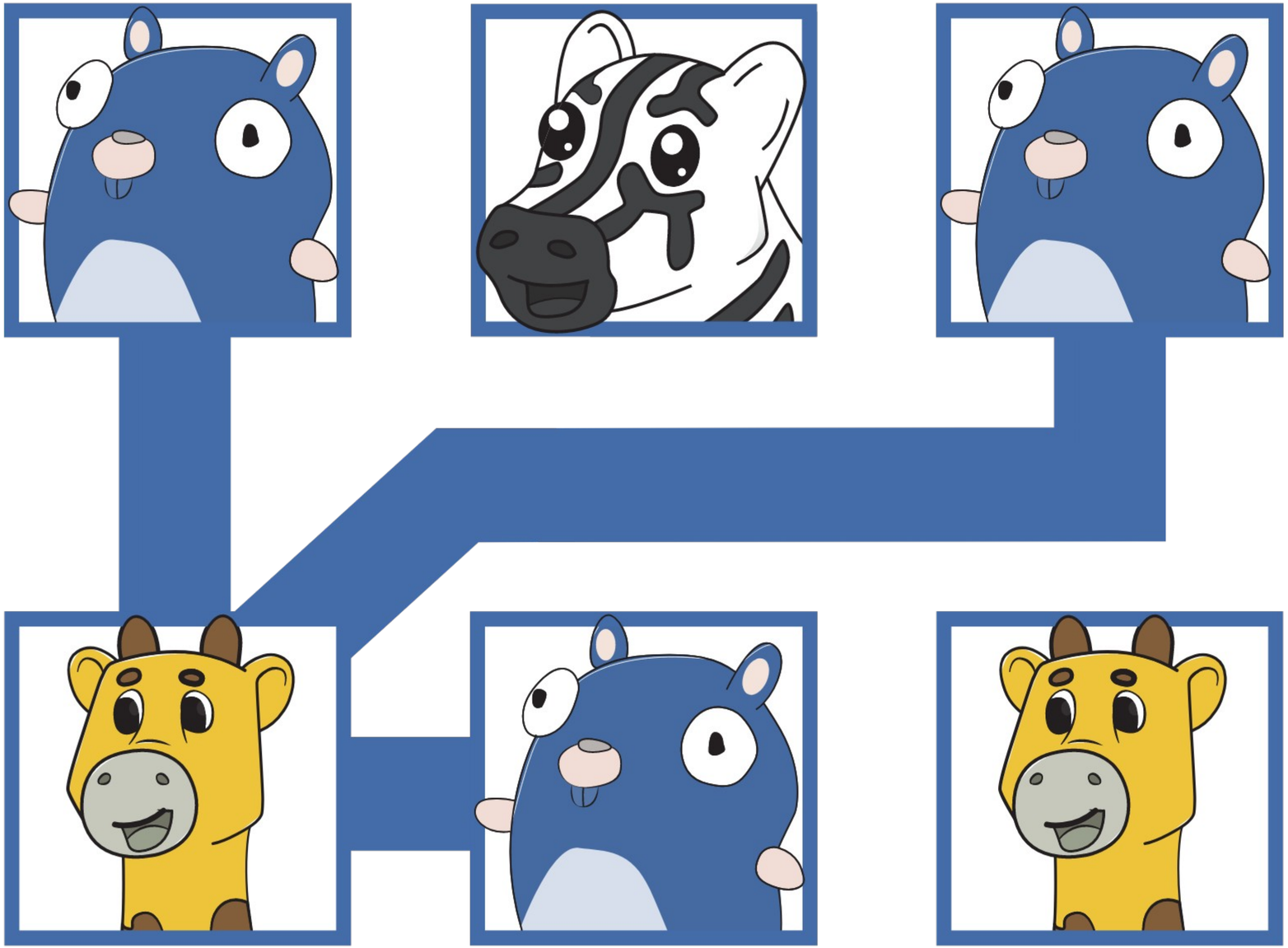

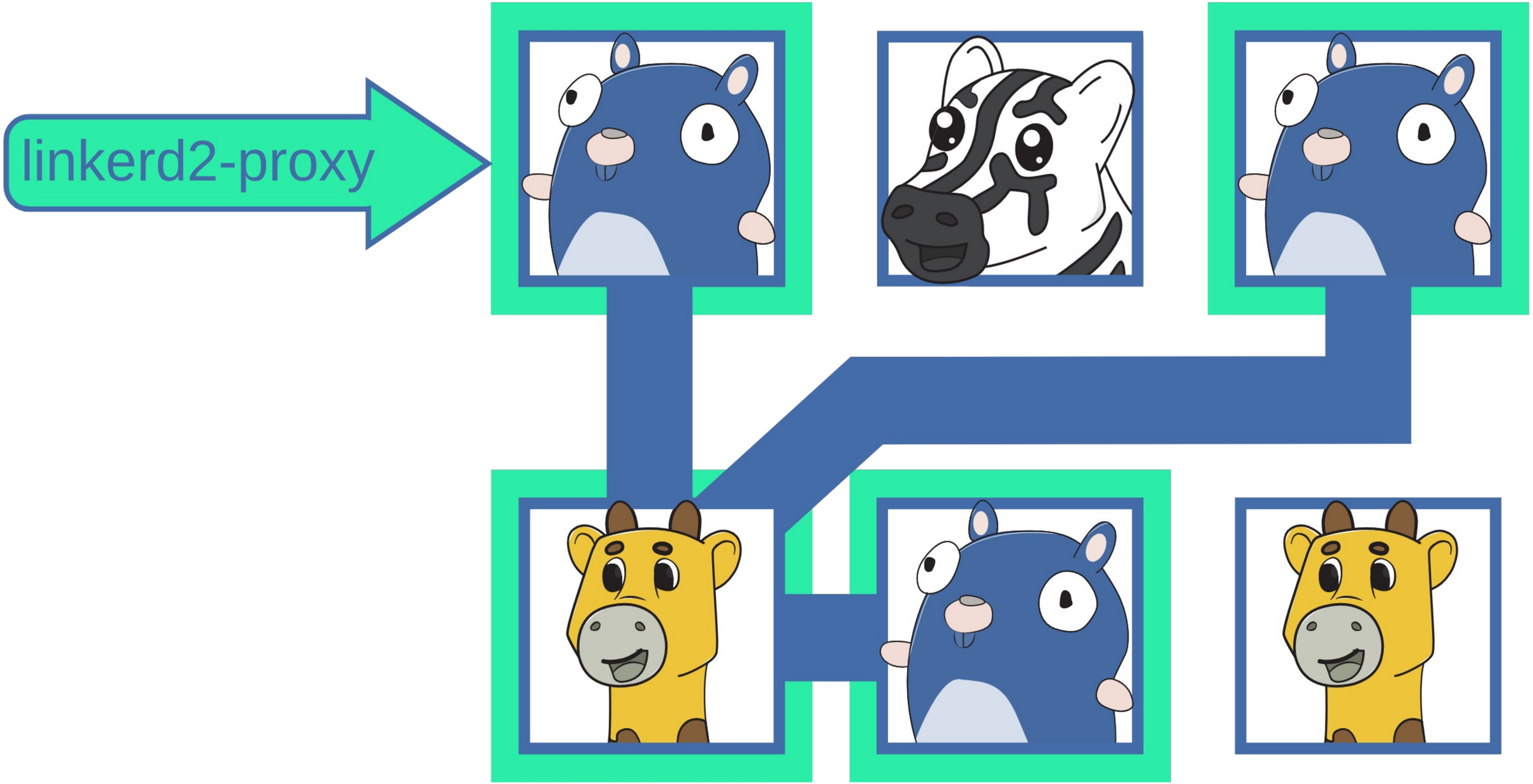
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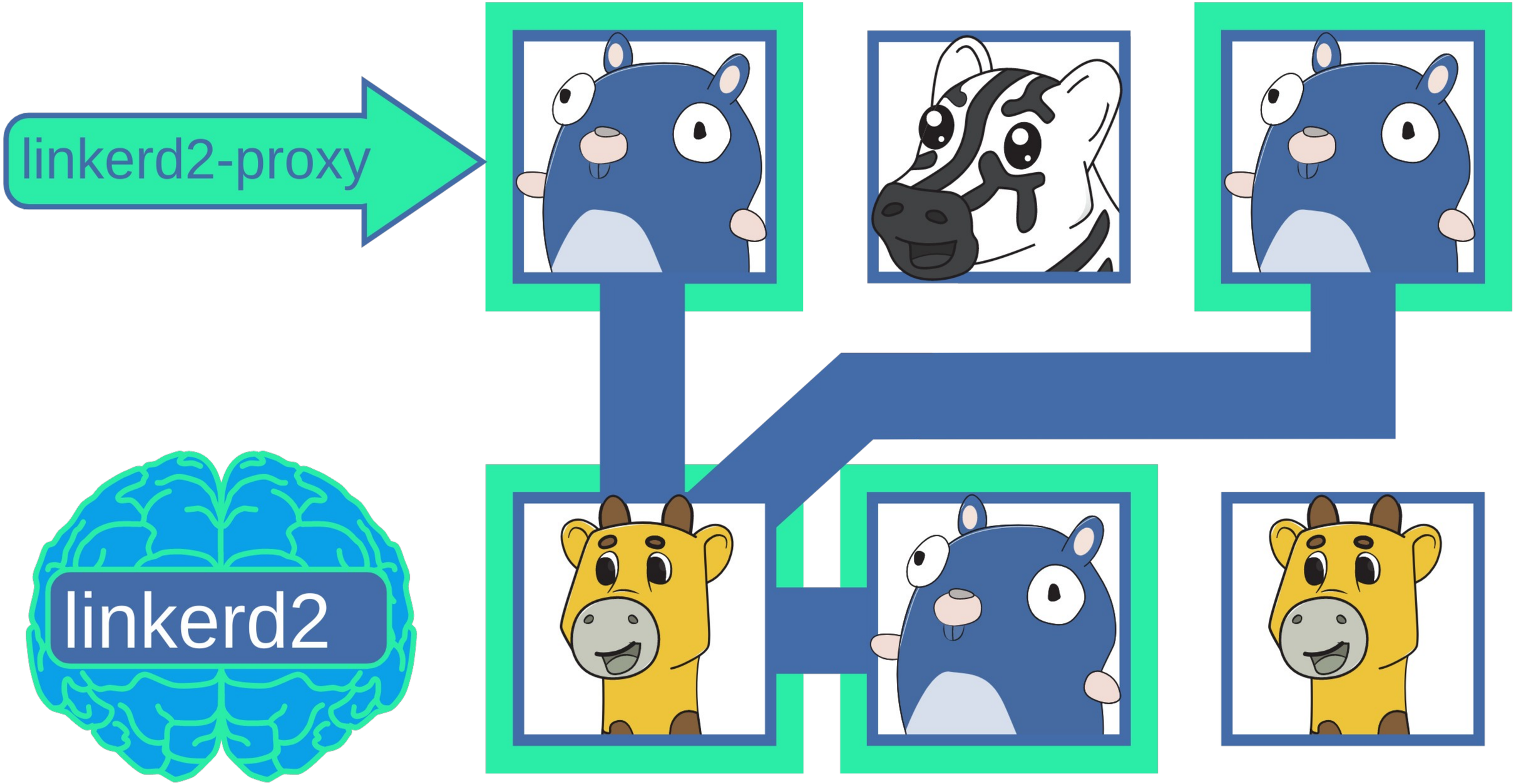
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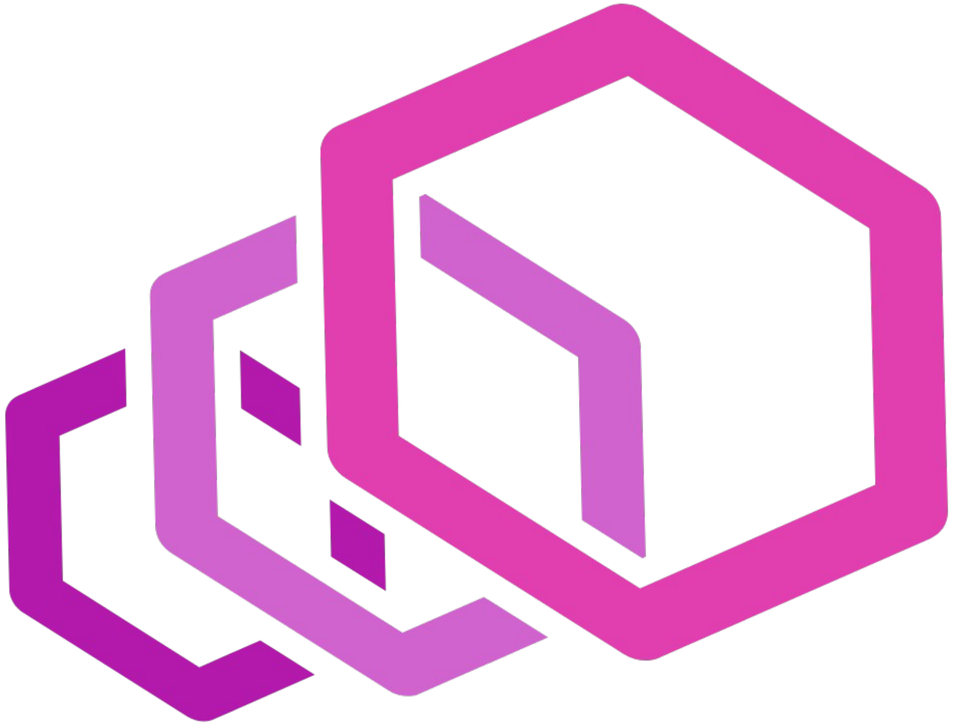
LINKERD



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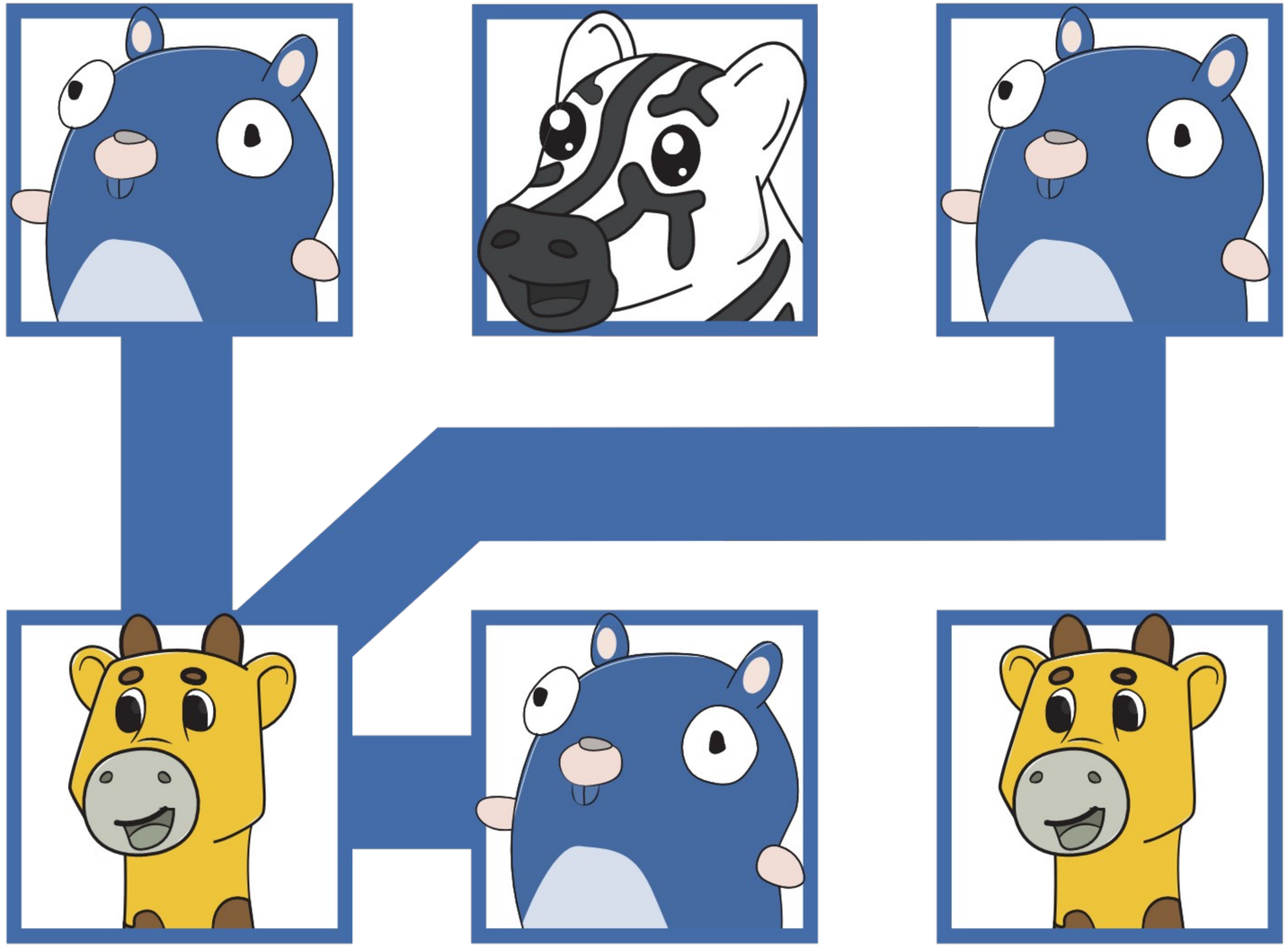

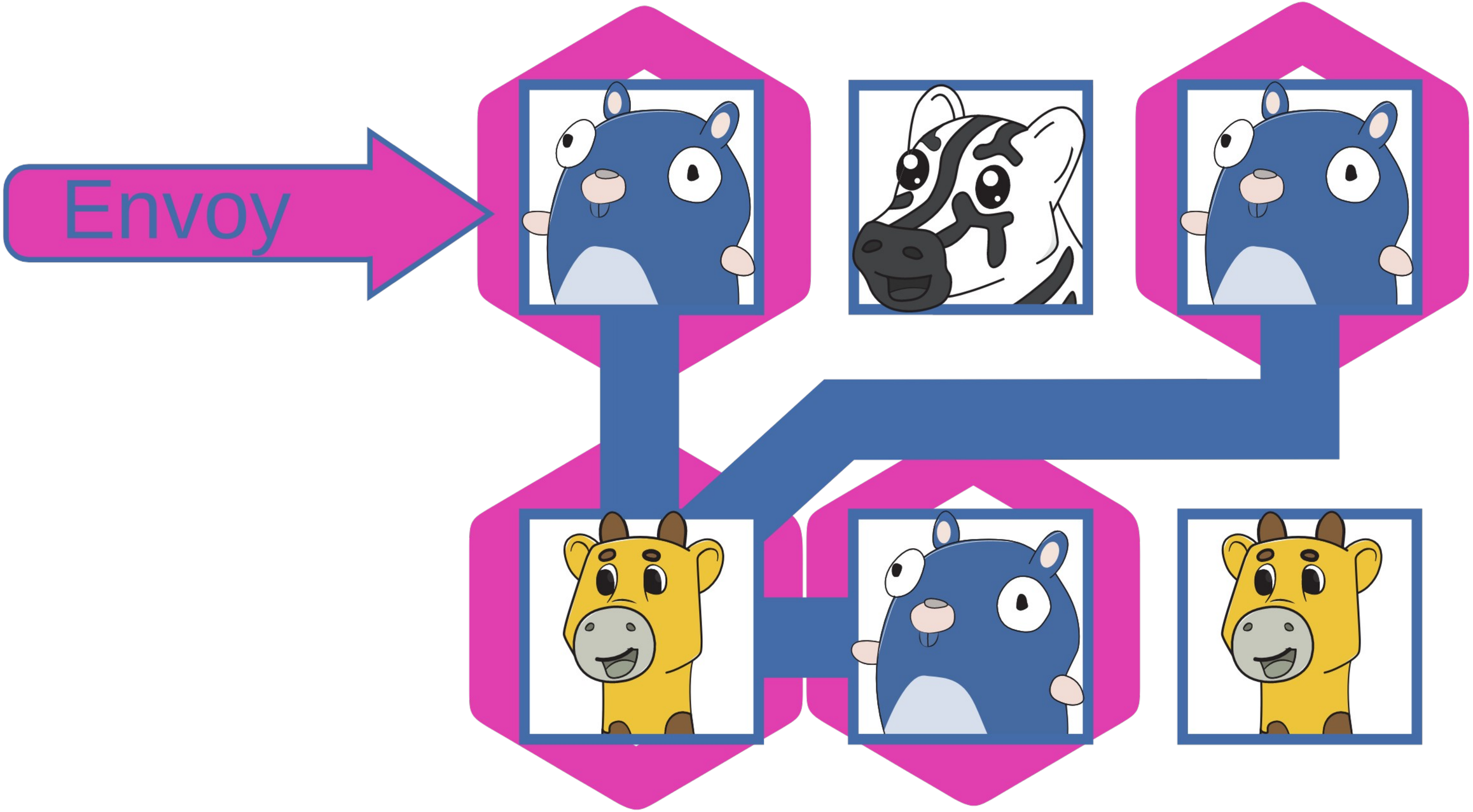
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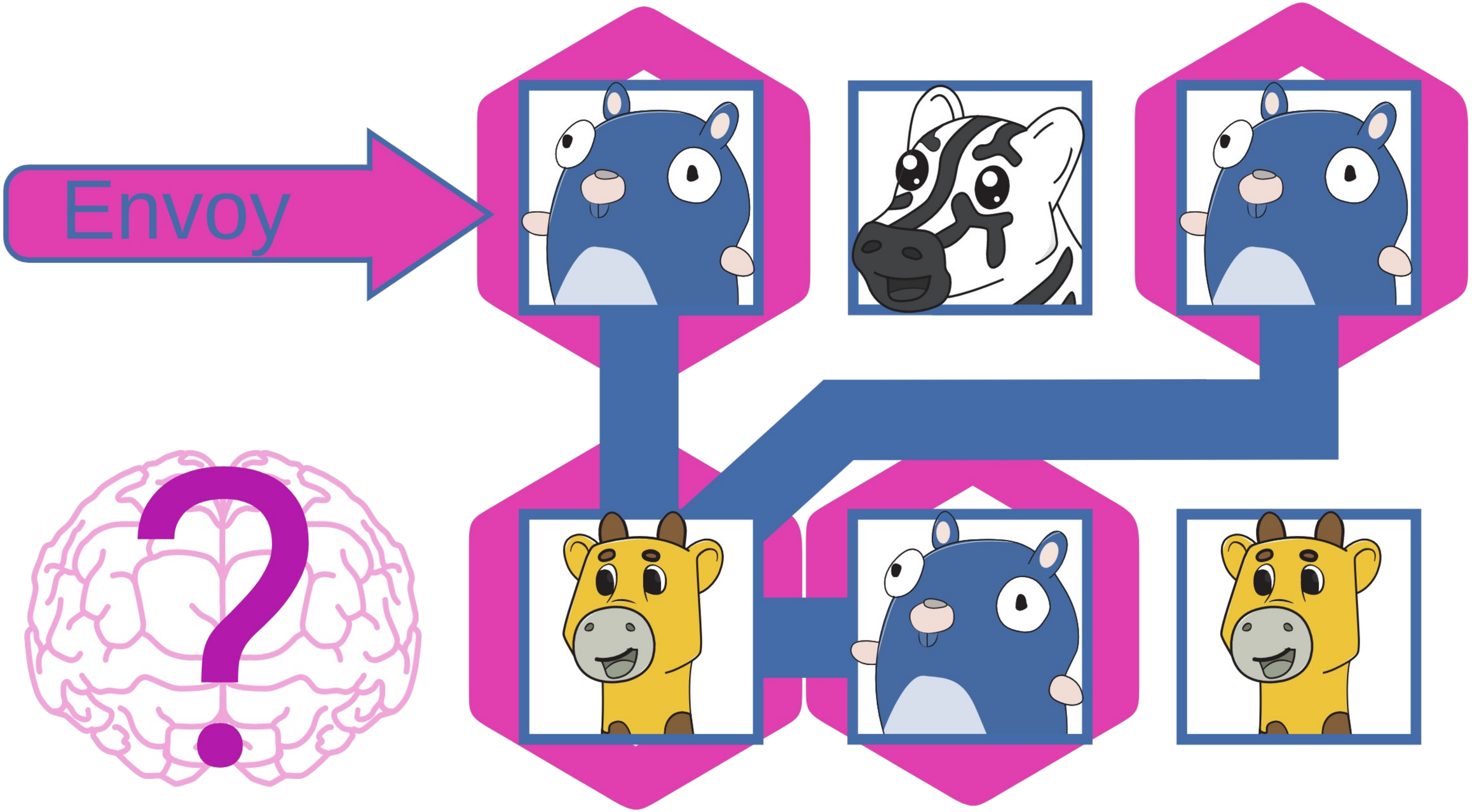
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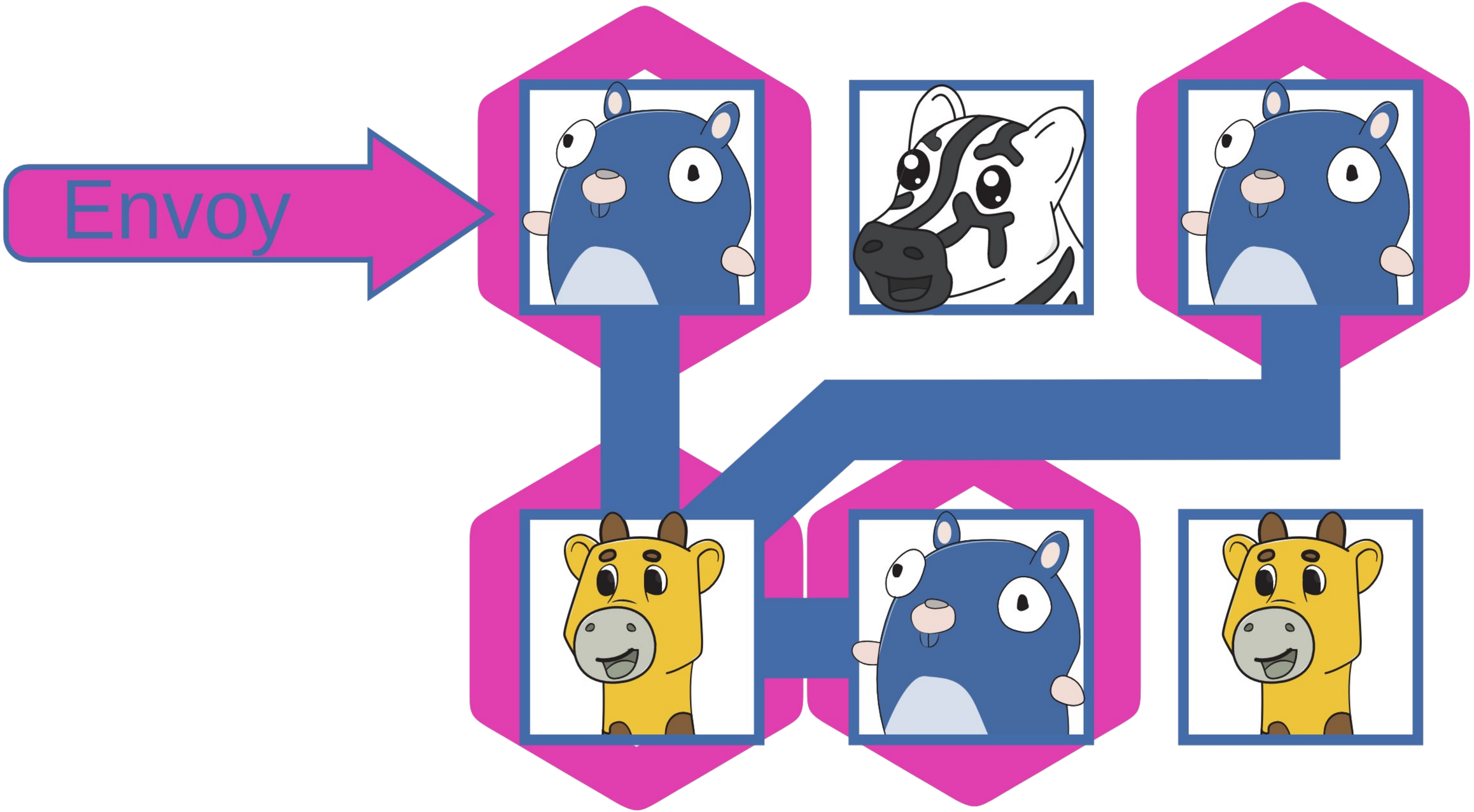
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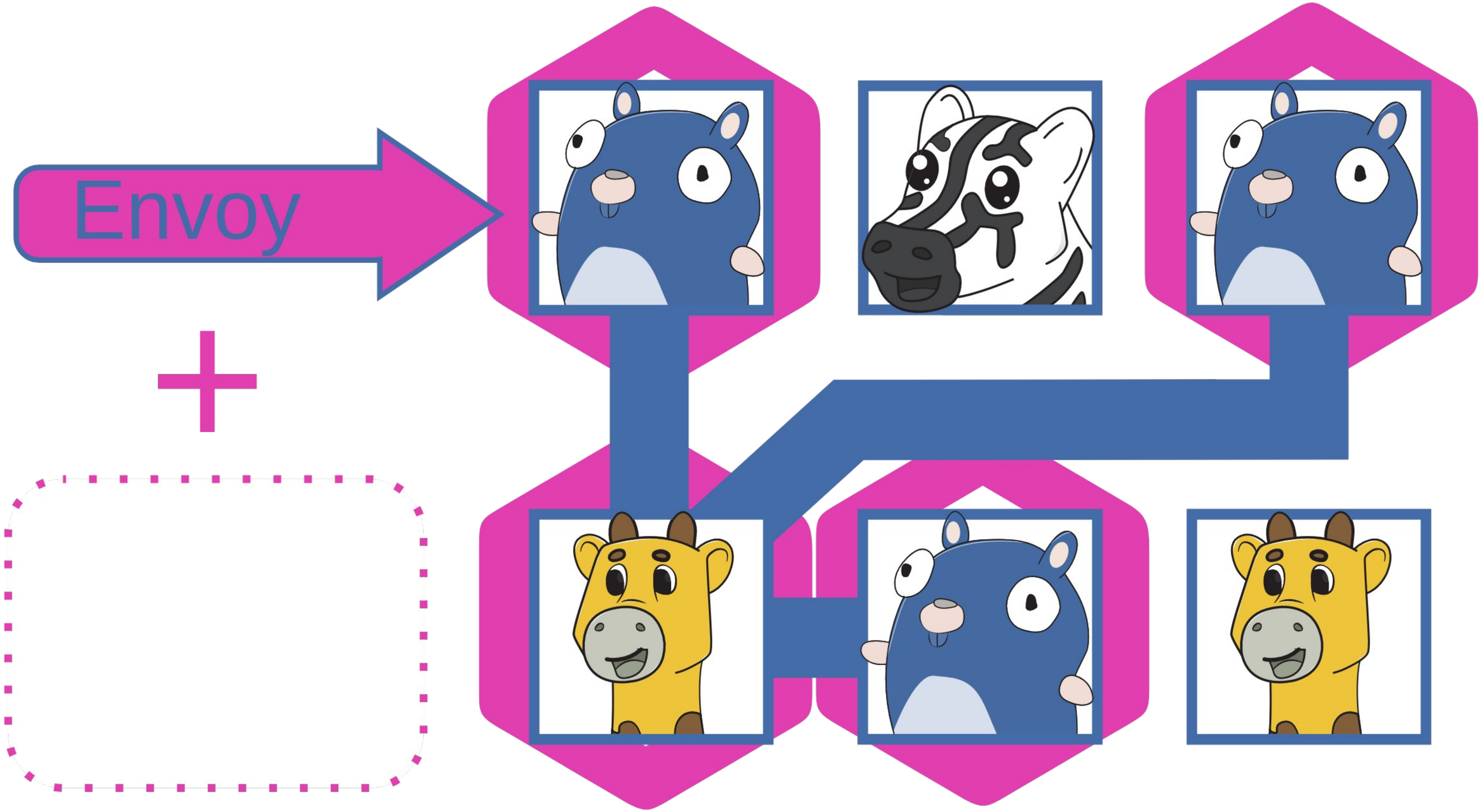
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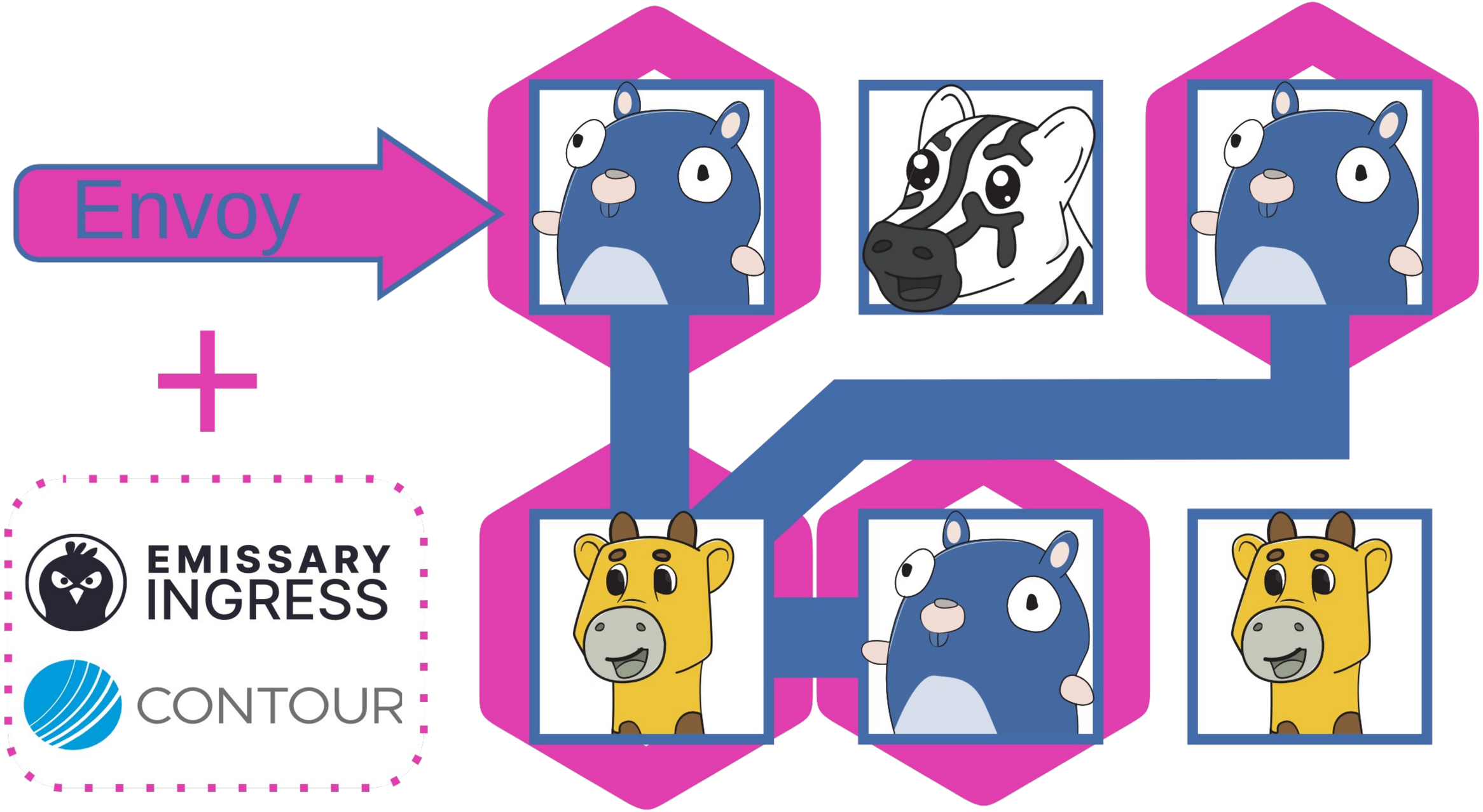
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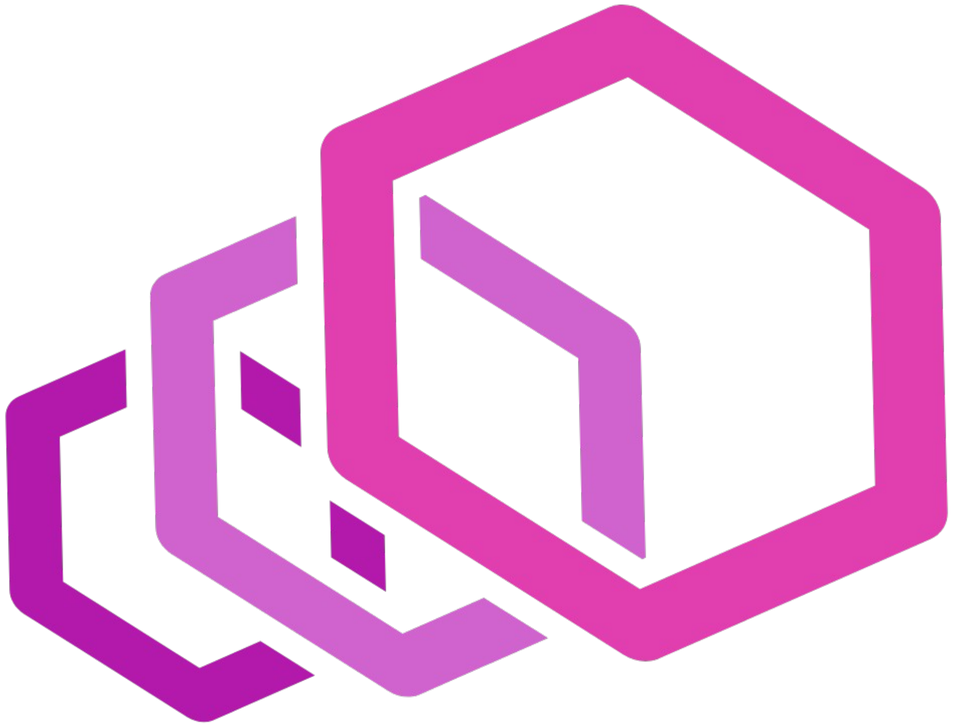

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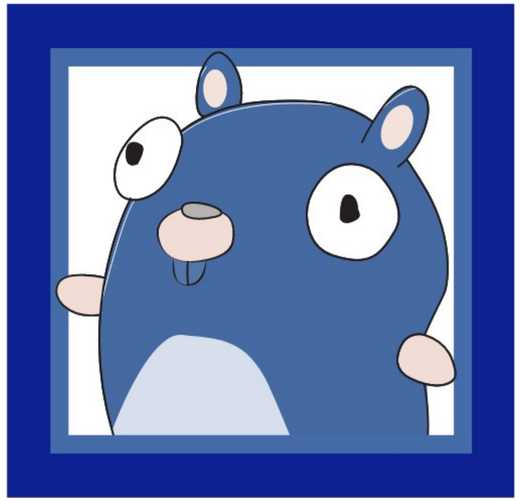

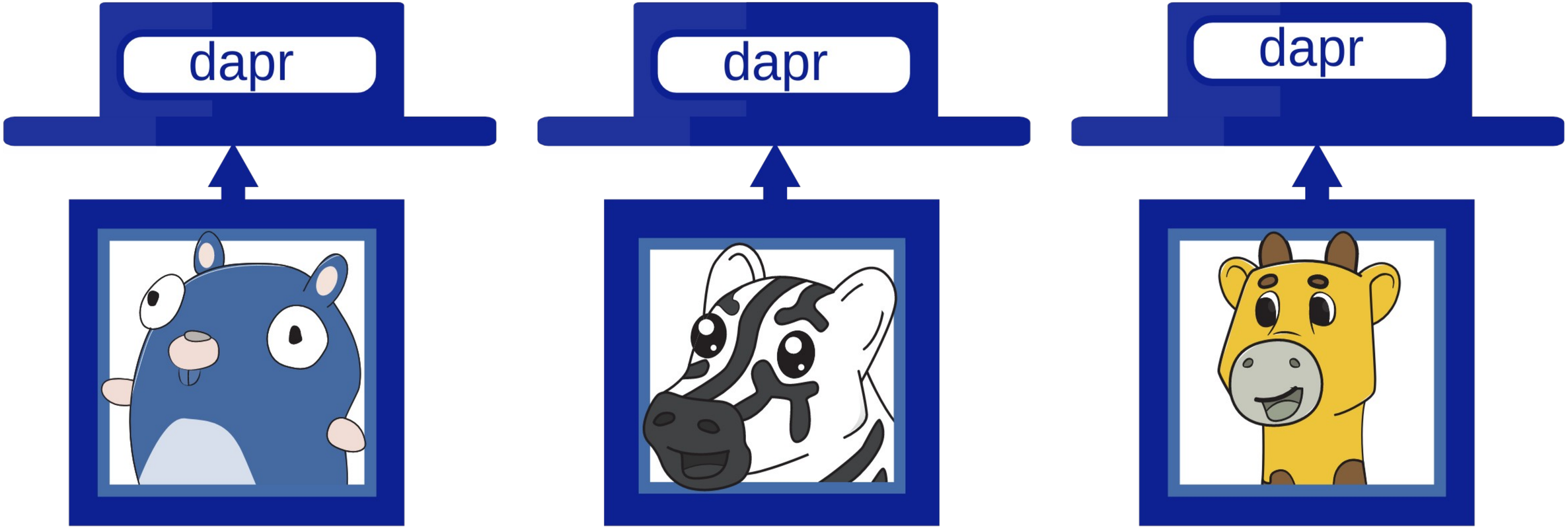
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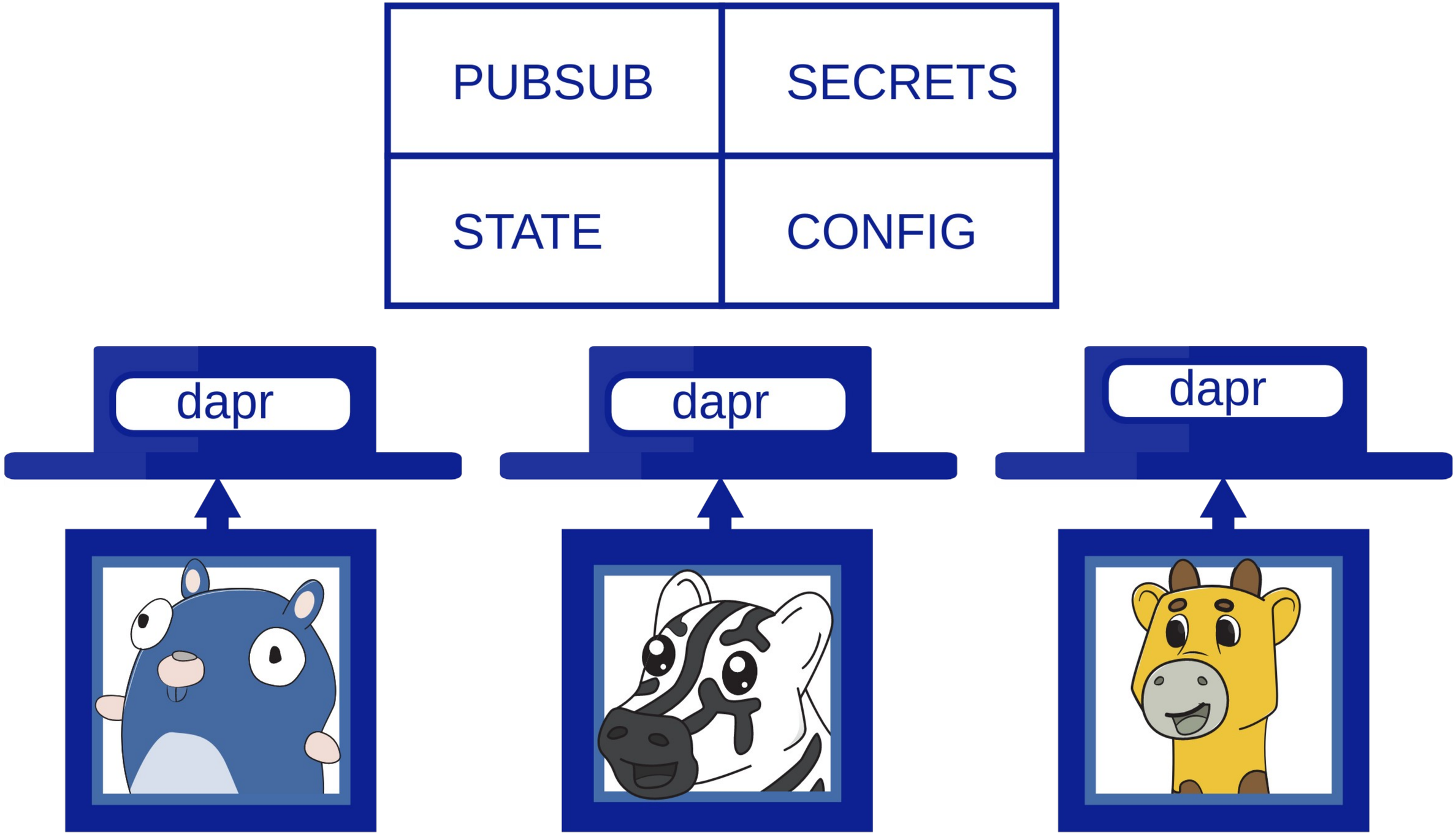
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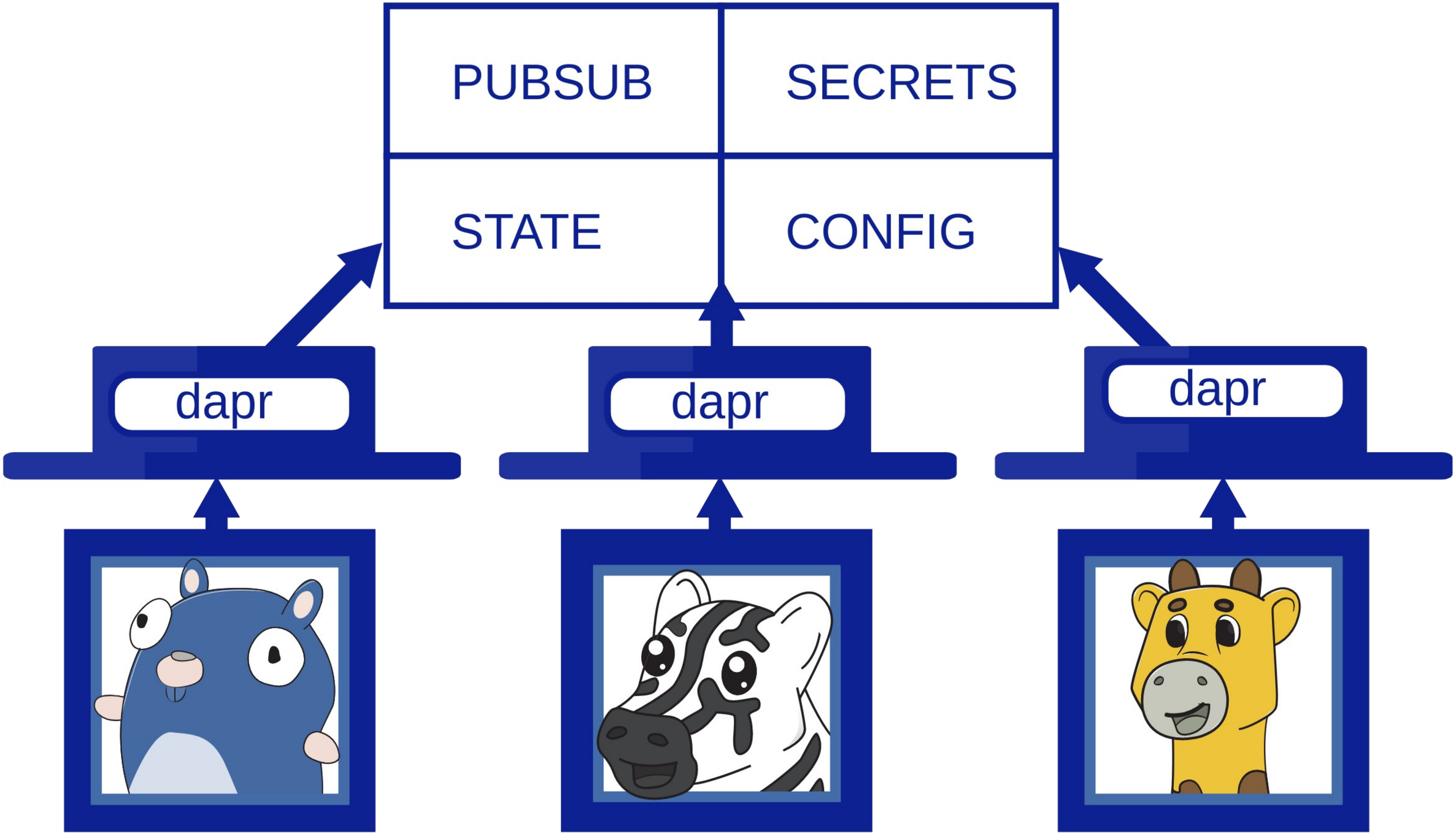
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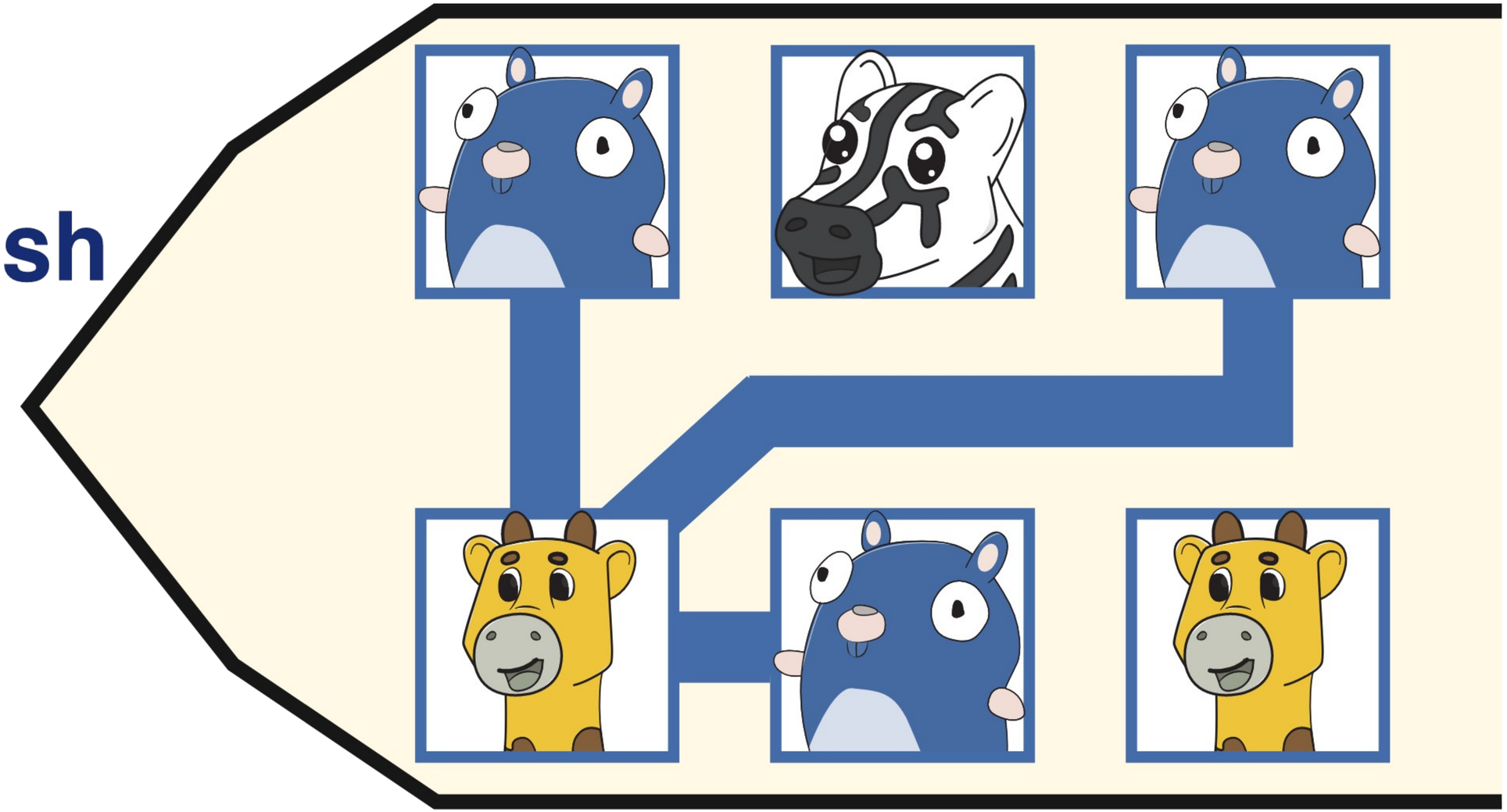
Chaos Mesh

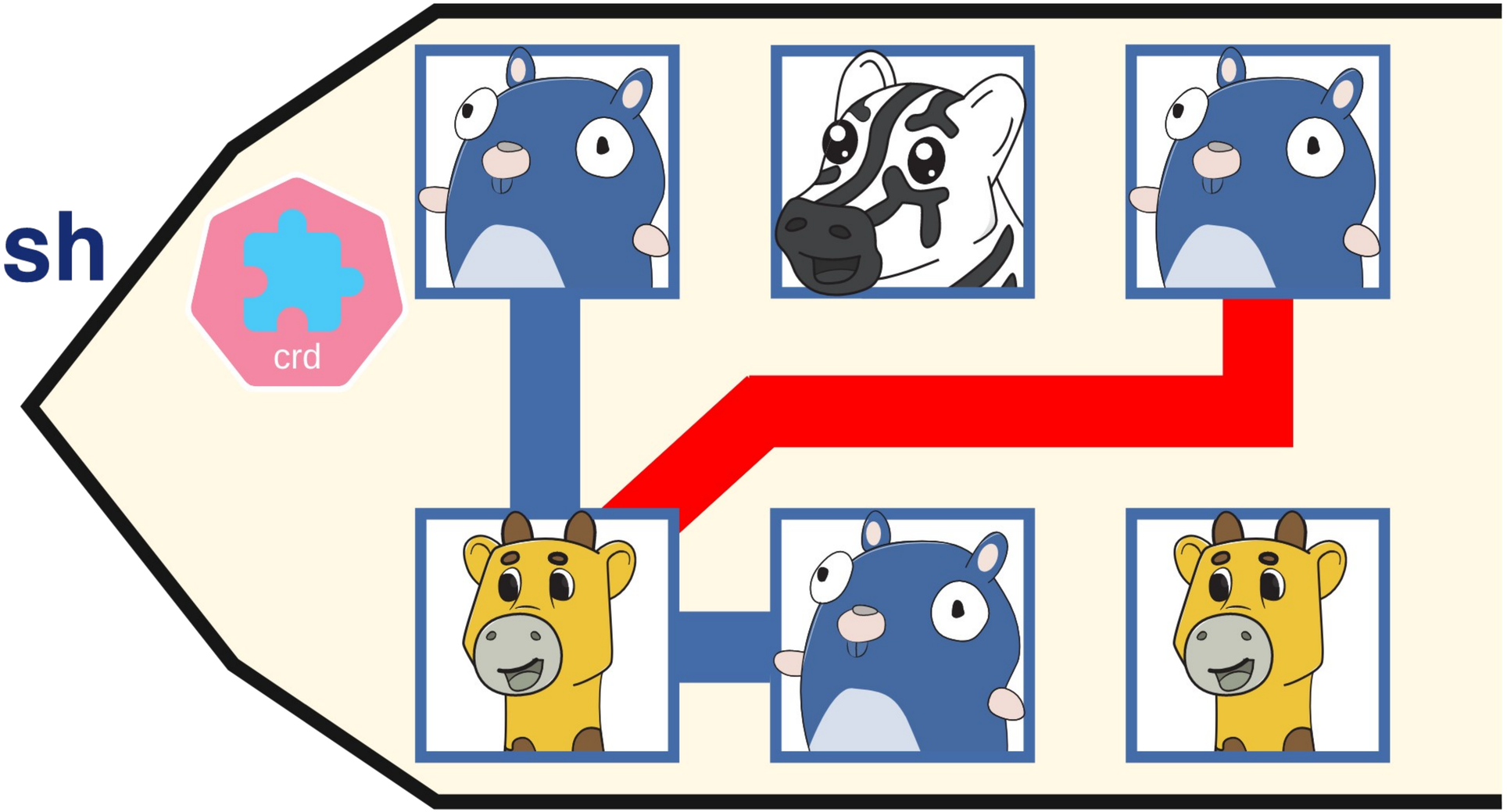
Litmus

Chaos Mesh



Litmus

Chaos Mesh



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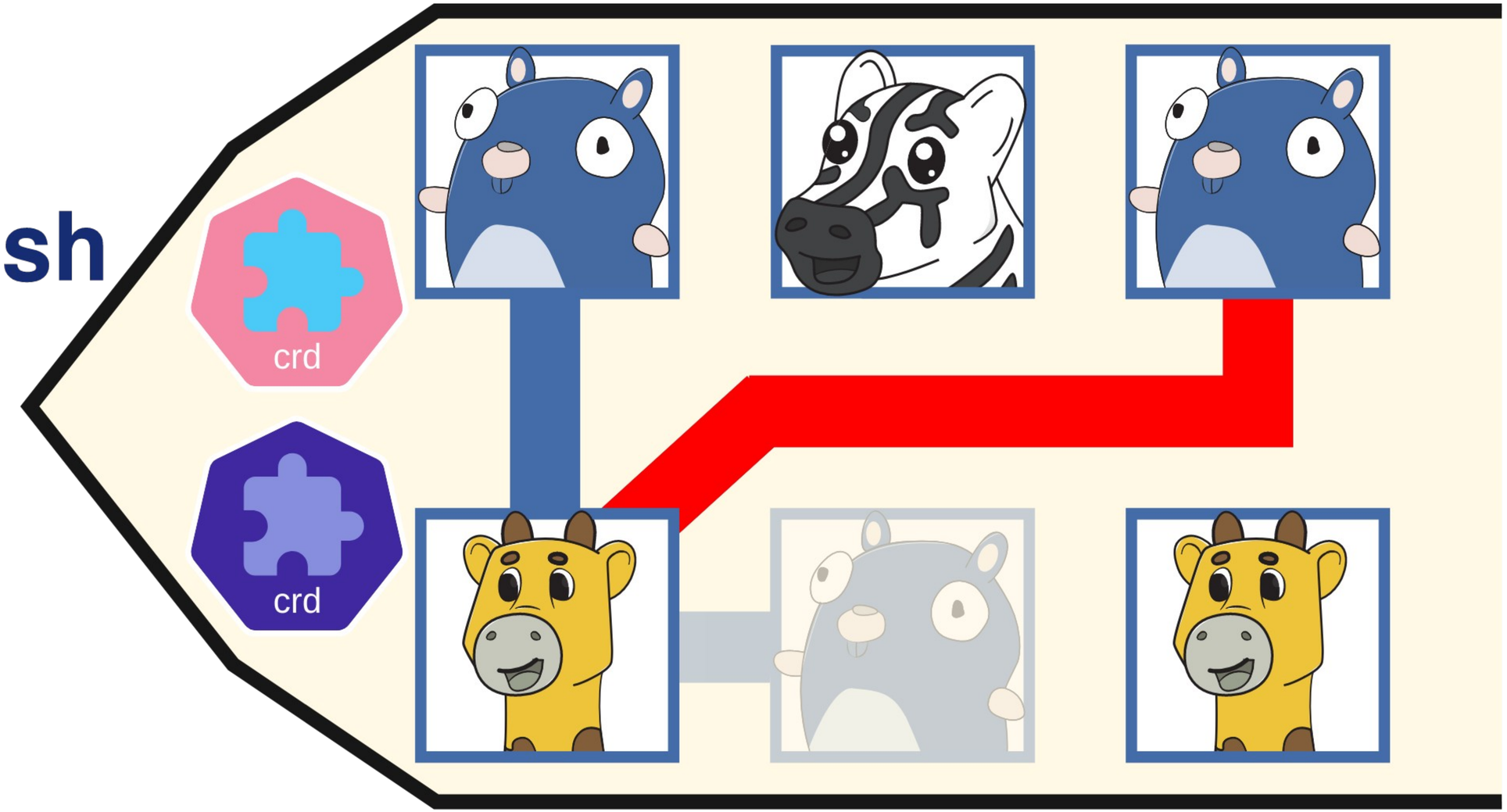
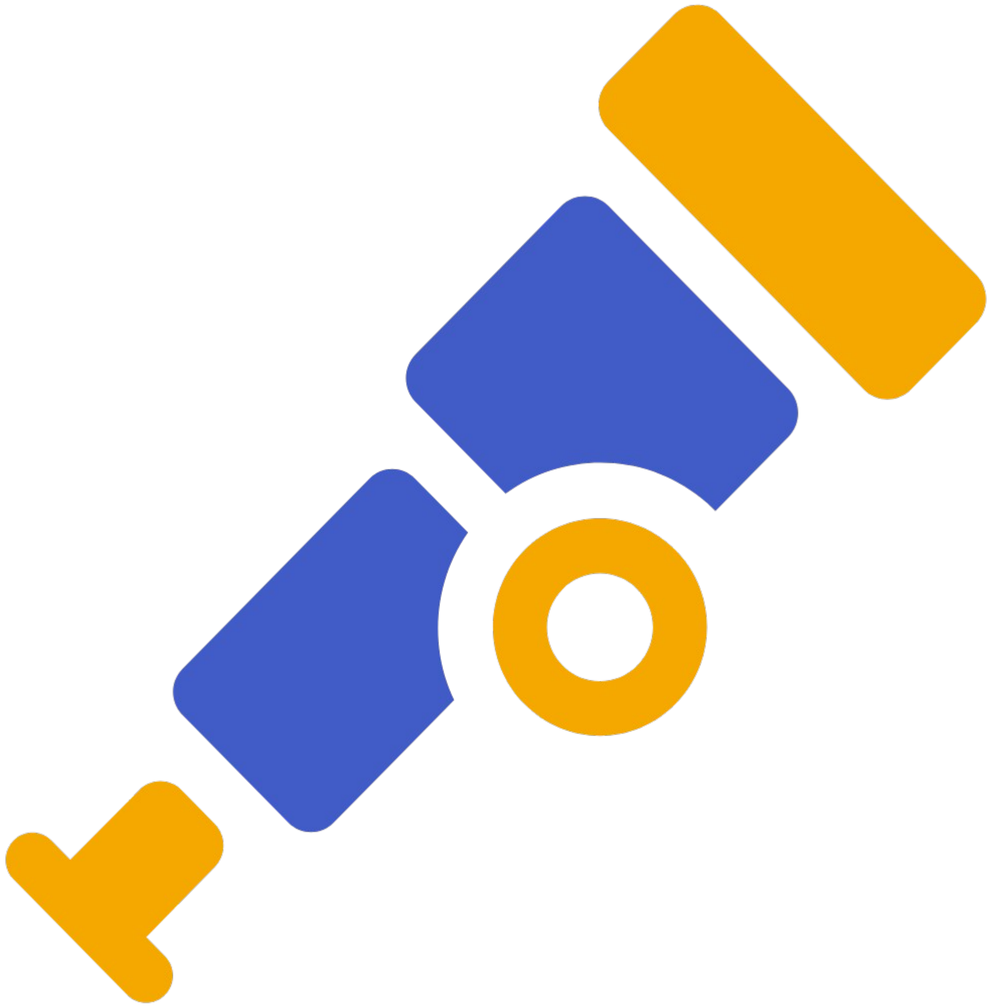


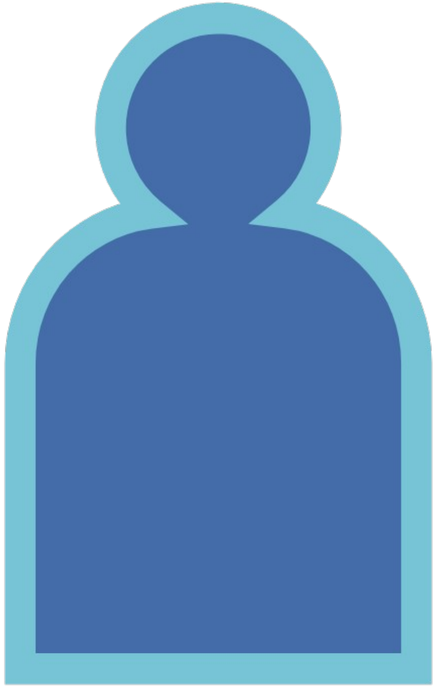
Litmus

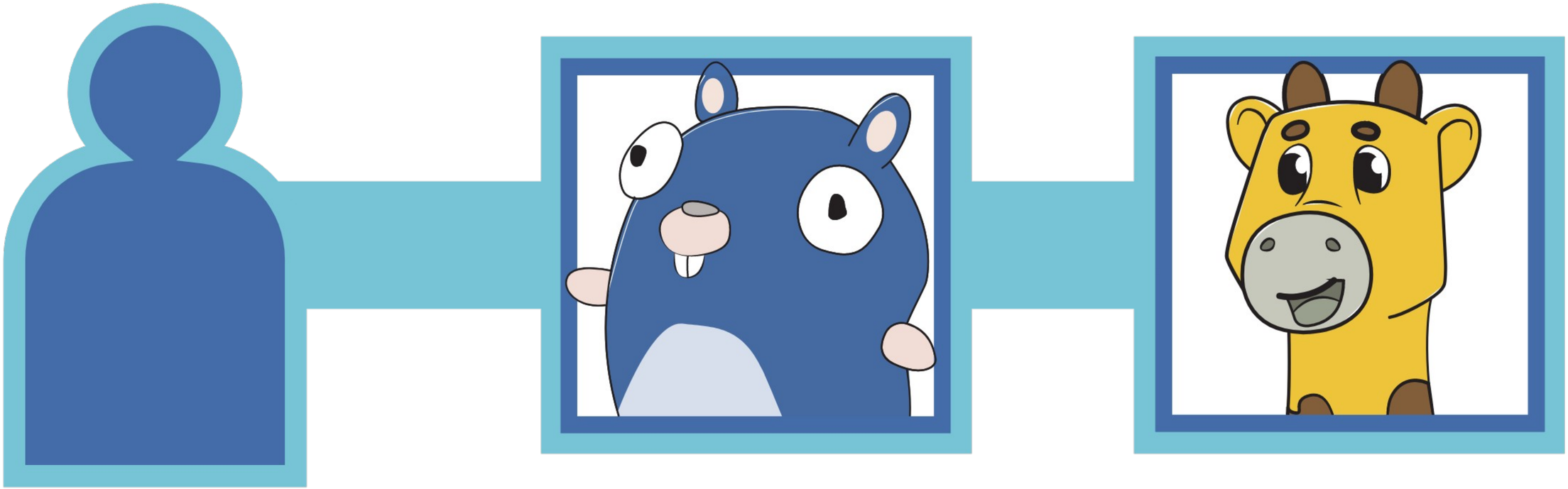
Chaos Mesh

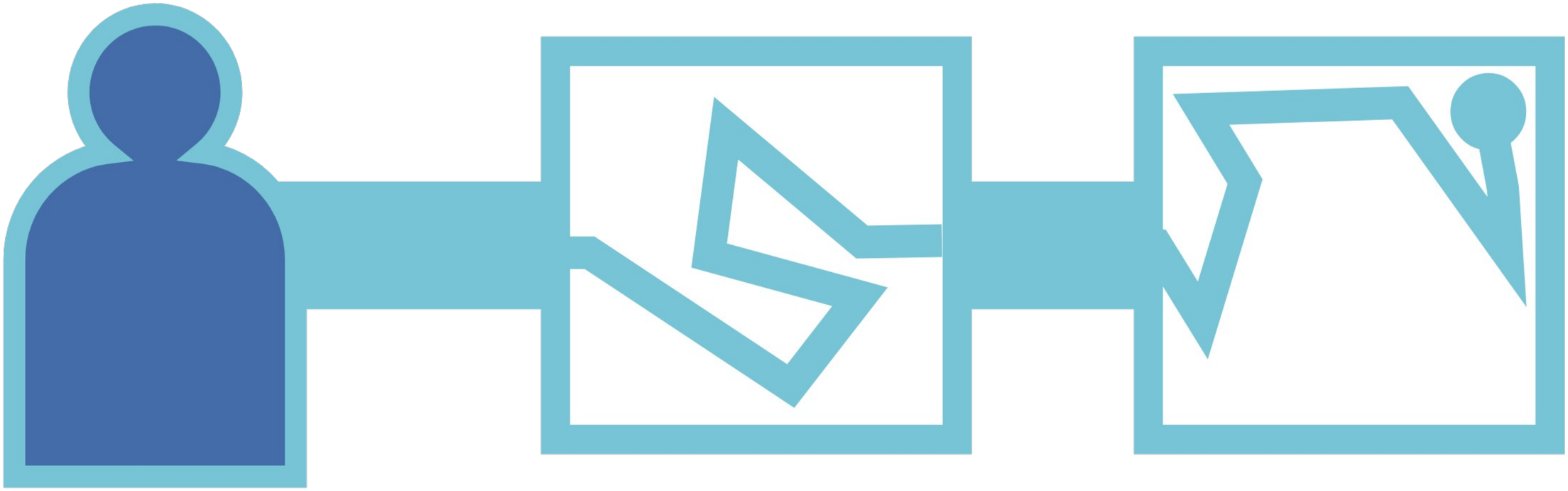
Litmus

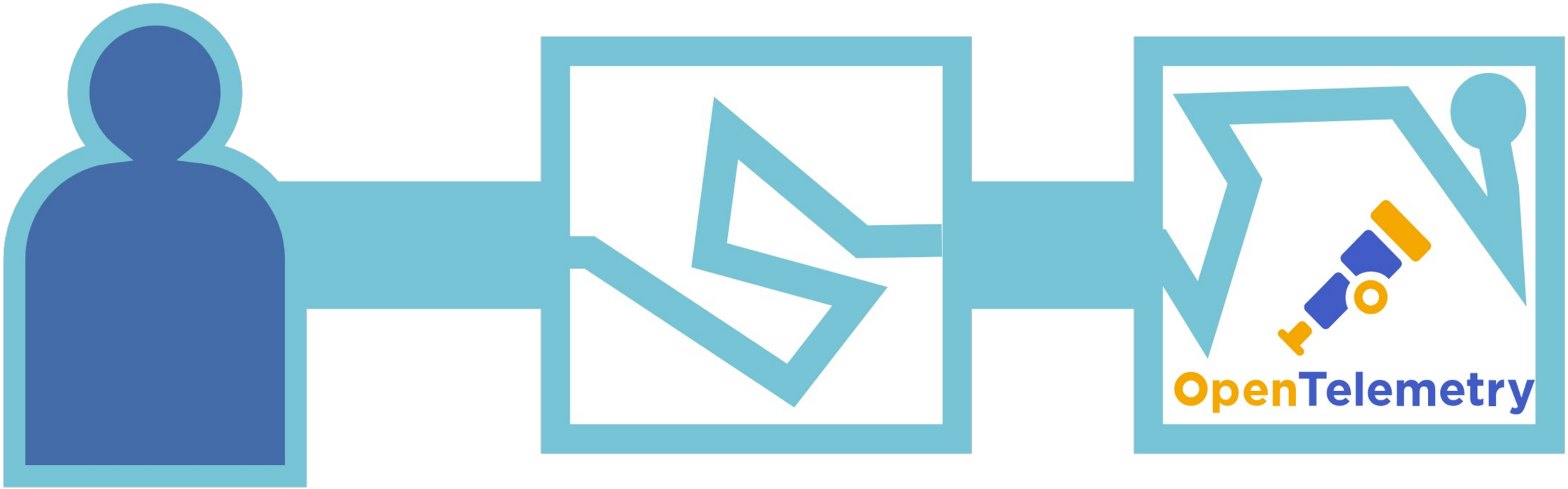


OpenTelemetry





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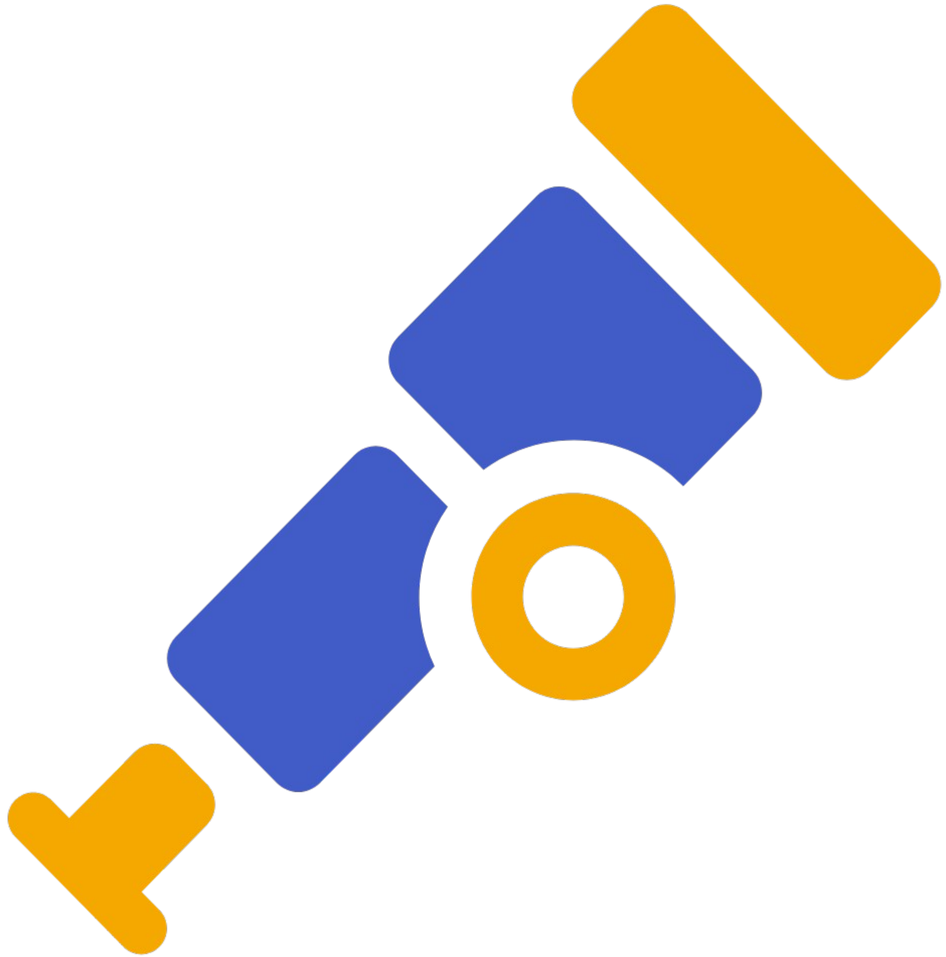
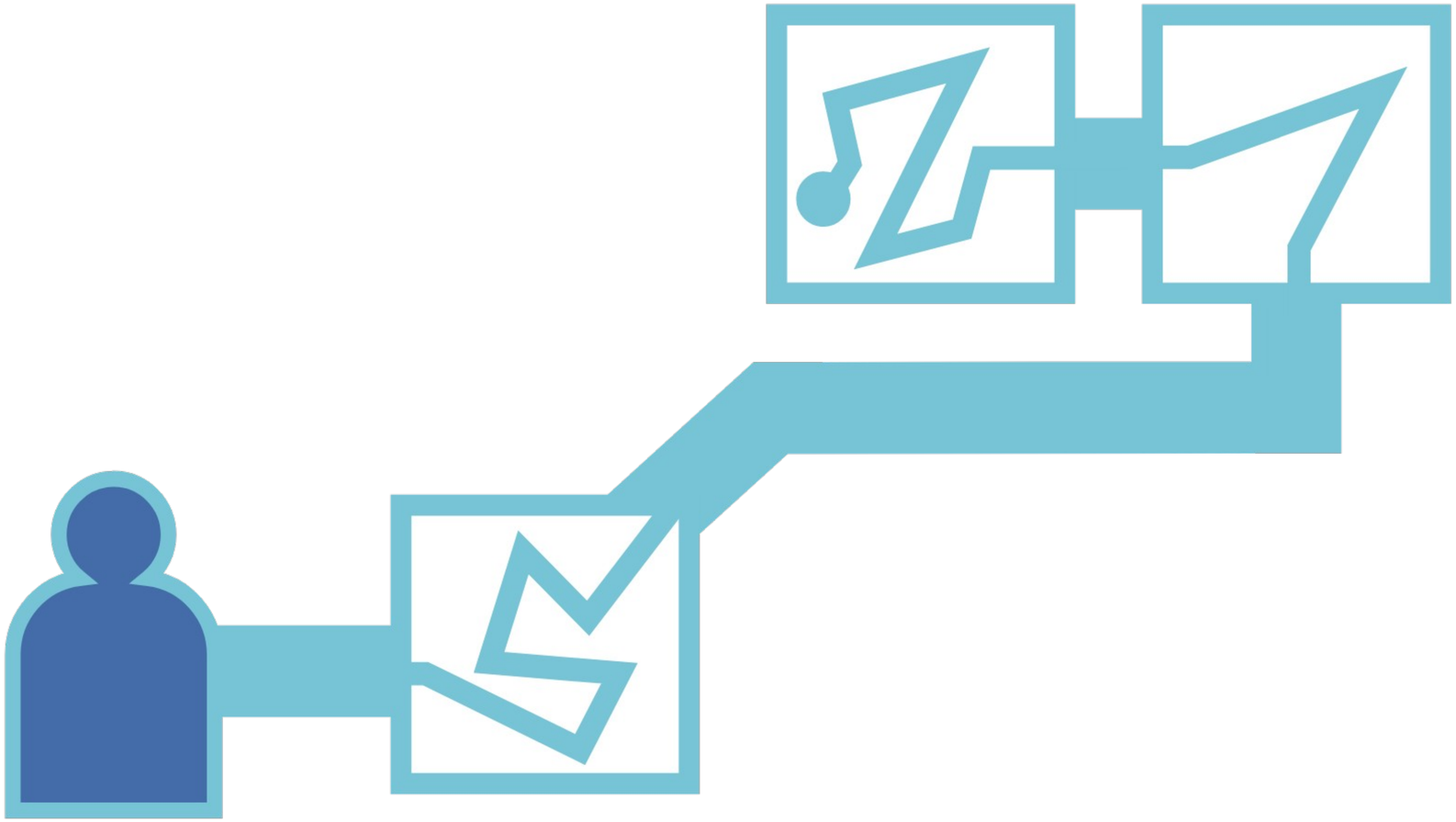
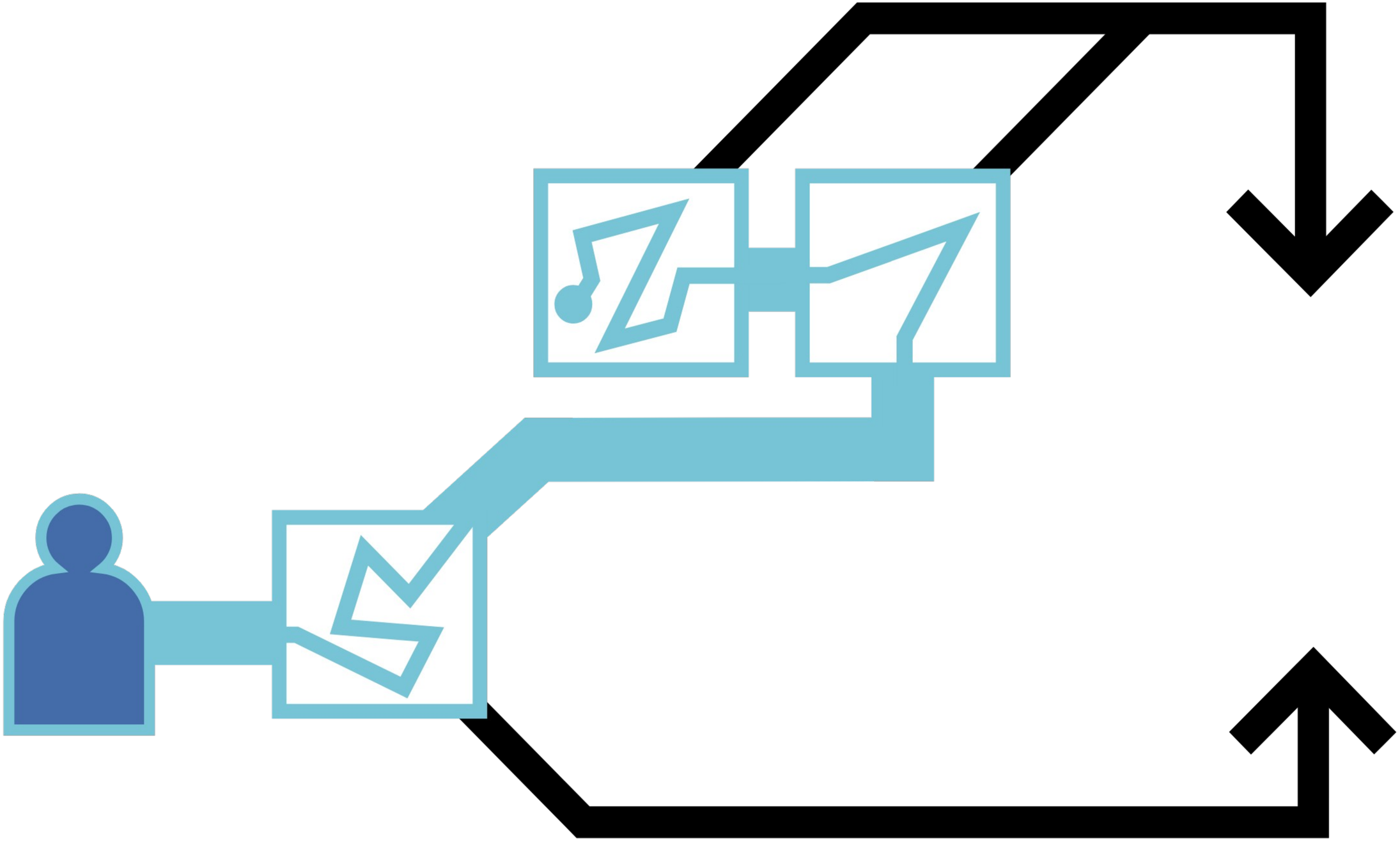
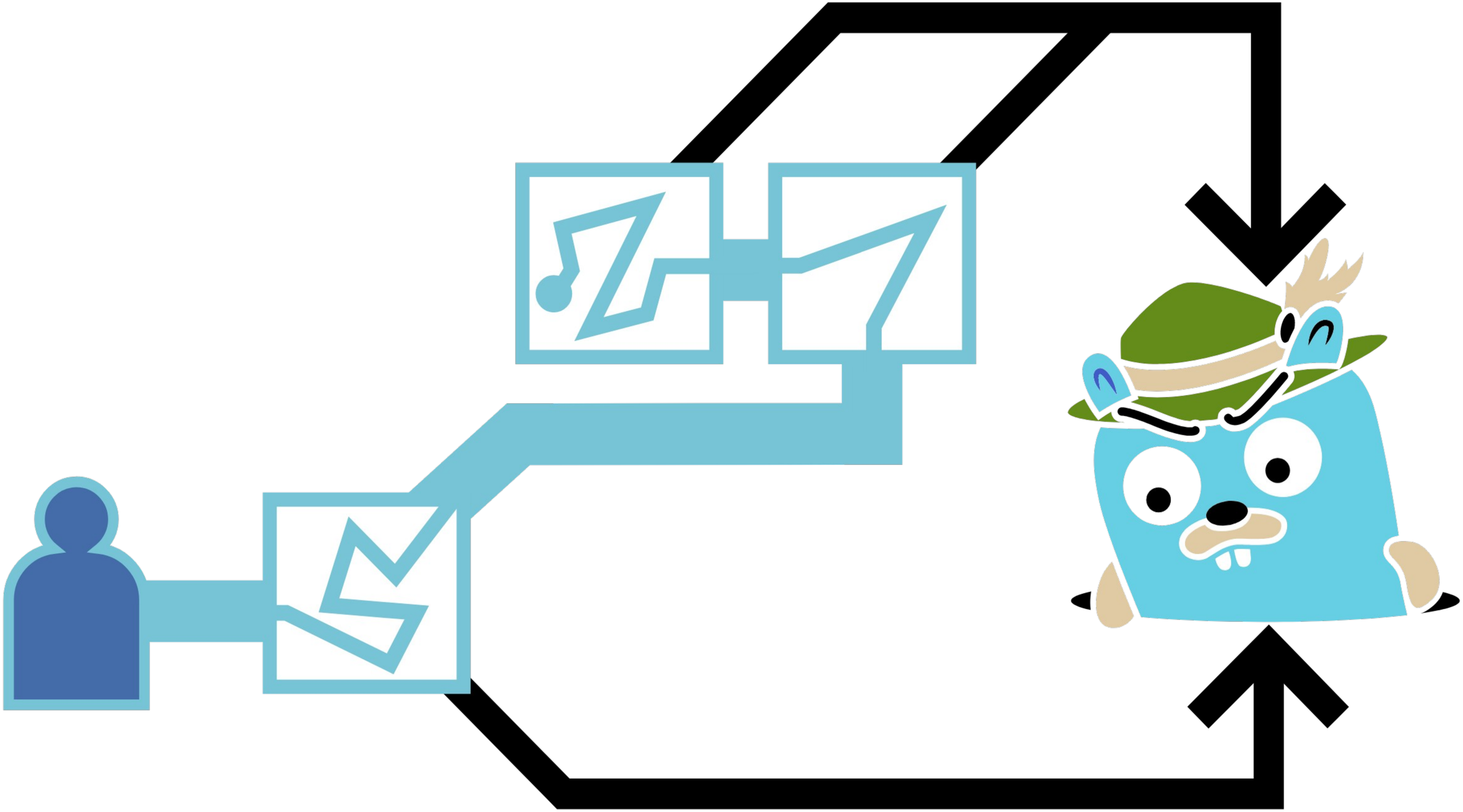


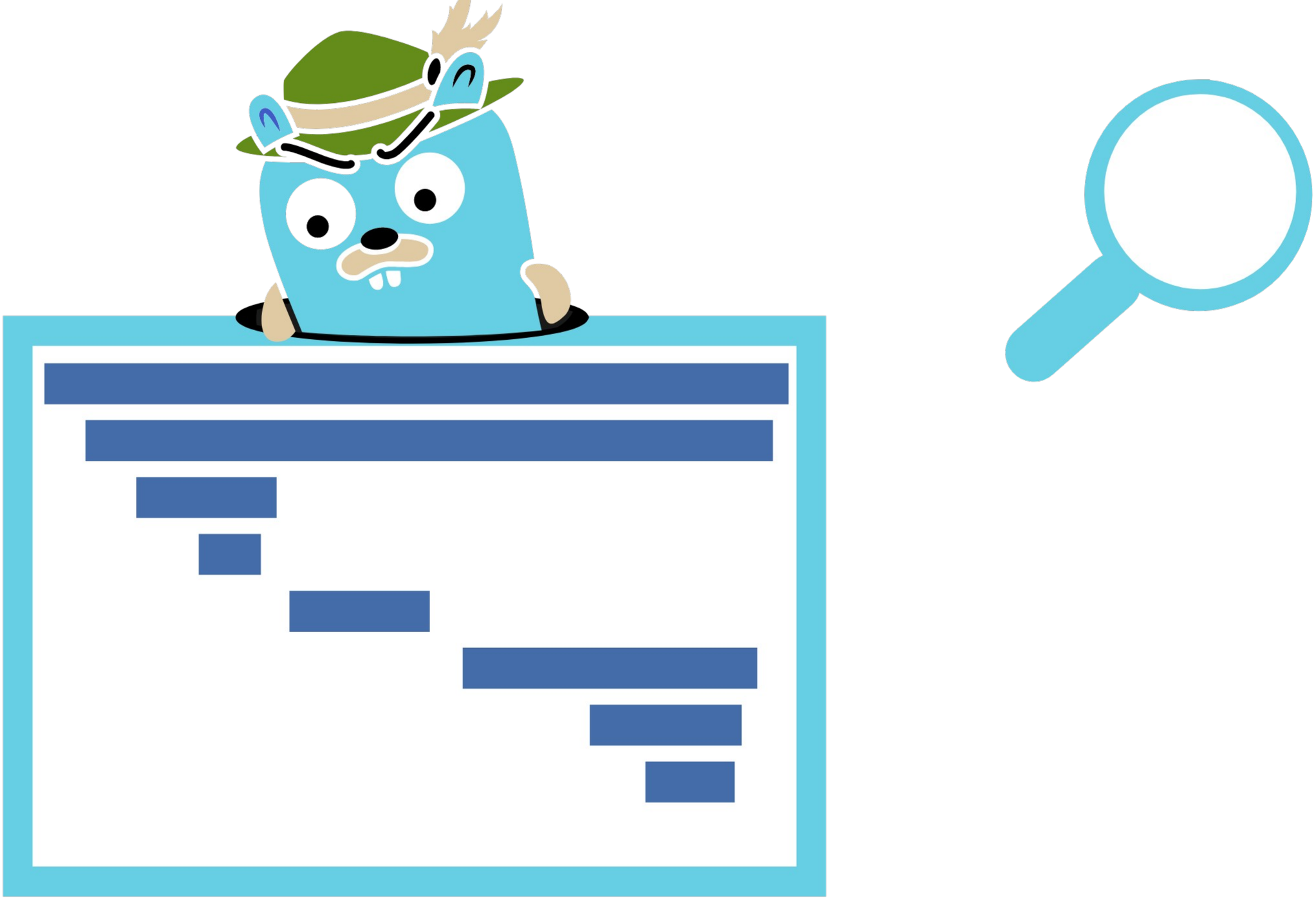
OpenTelemetry

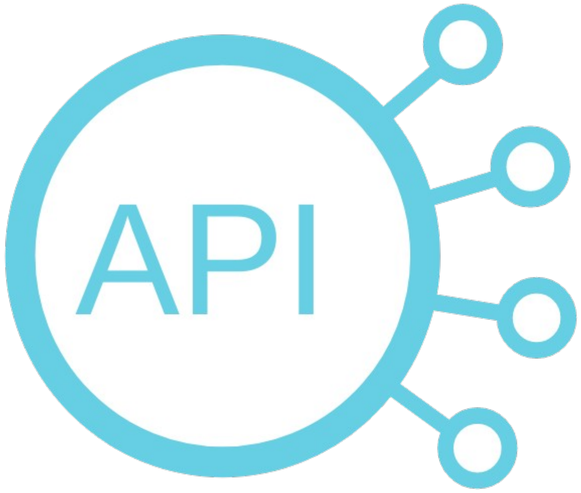
JAEGER

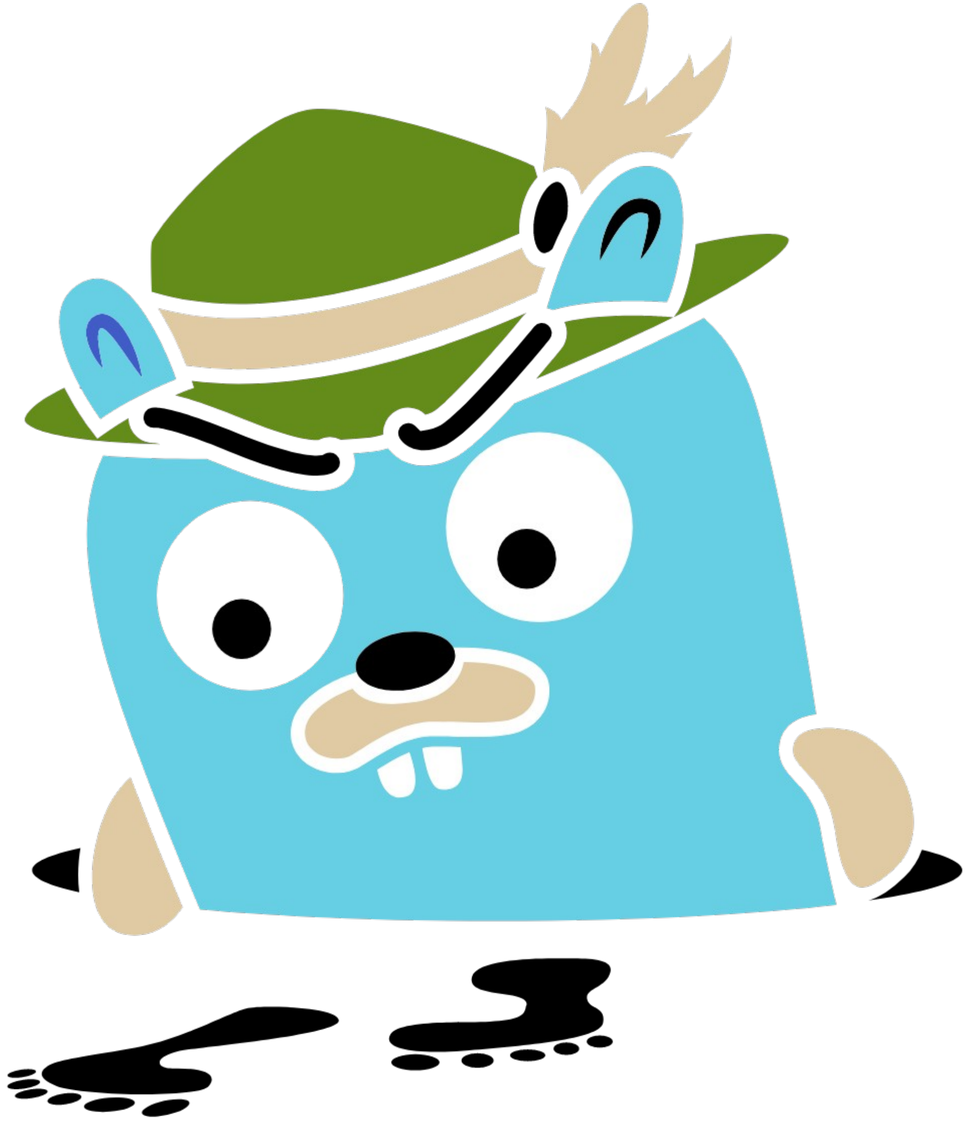






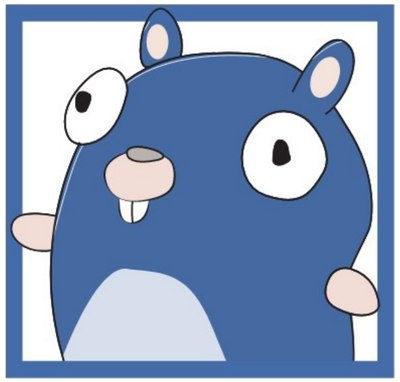


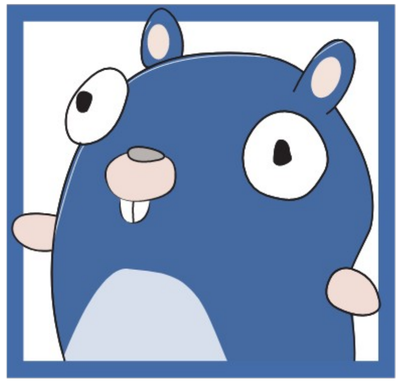
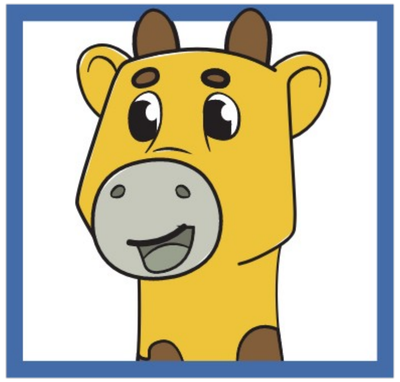
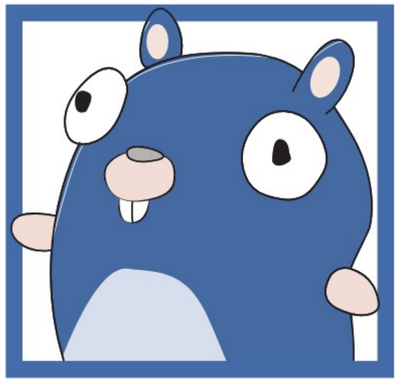

API

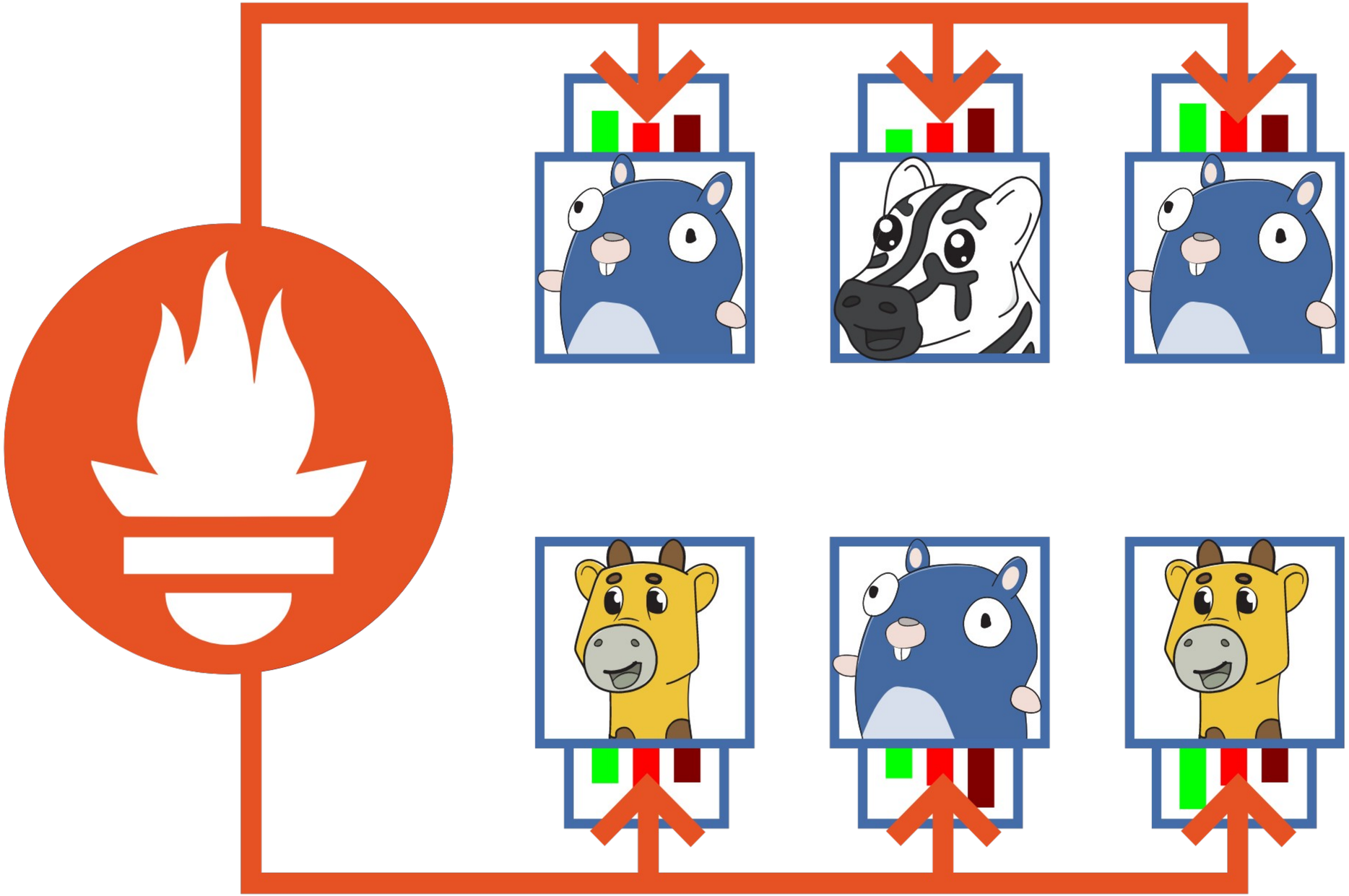


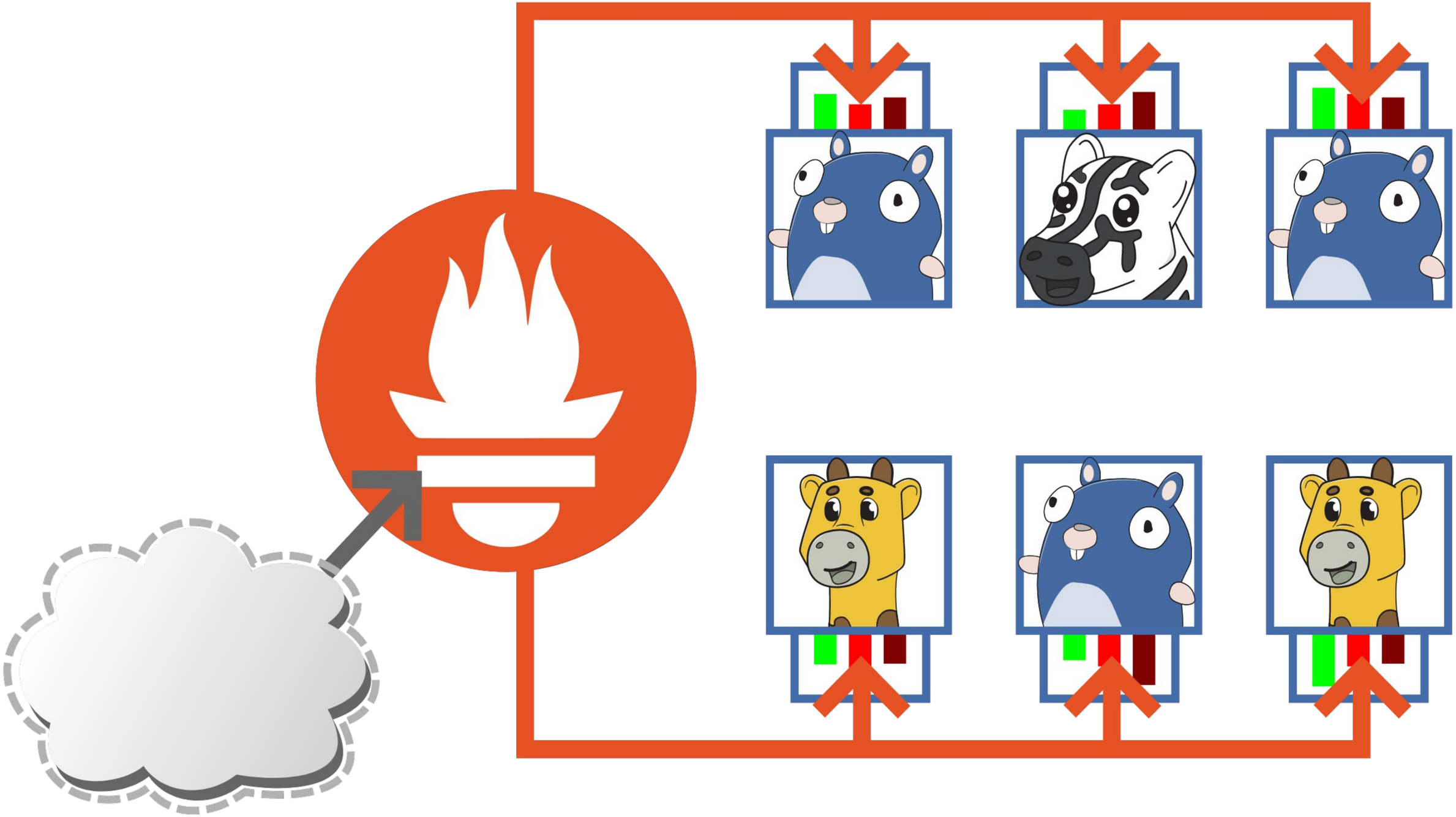
JAEGER

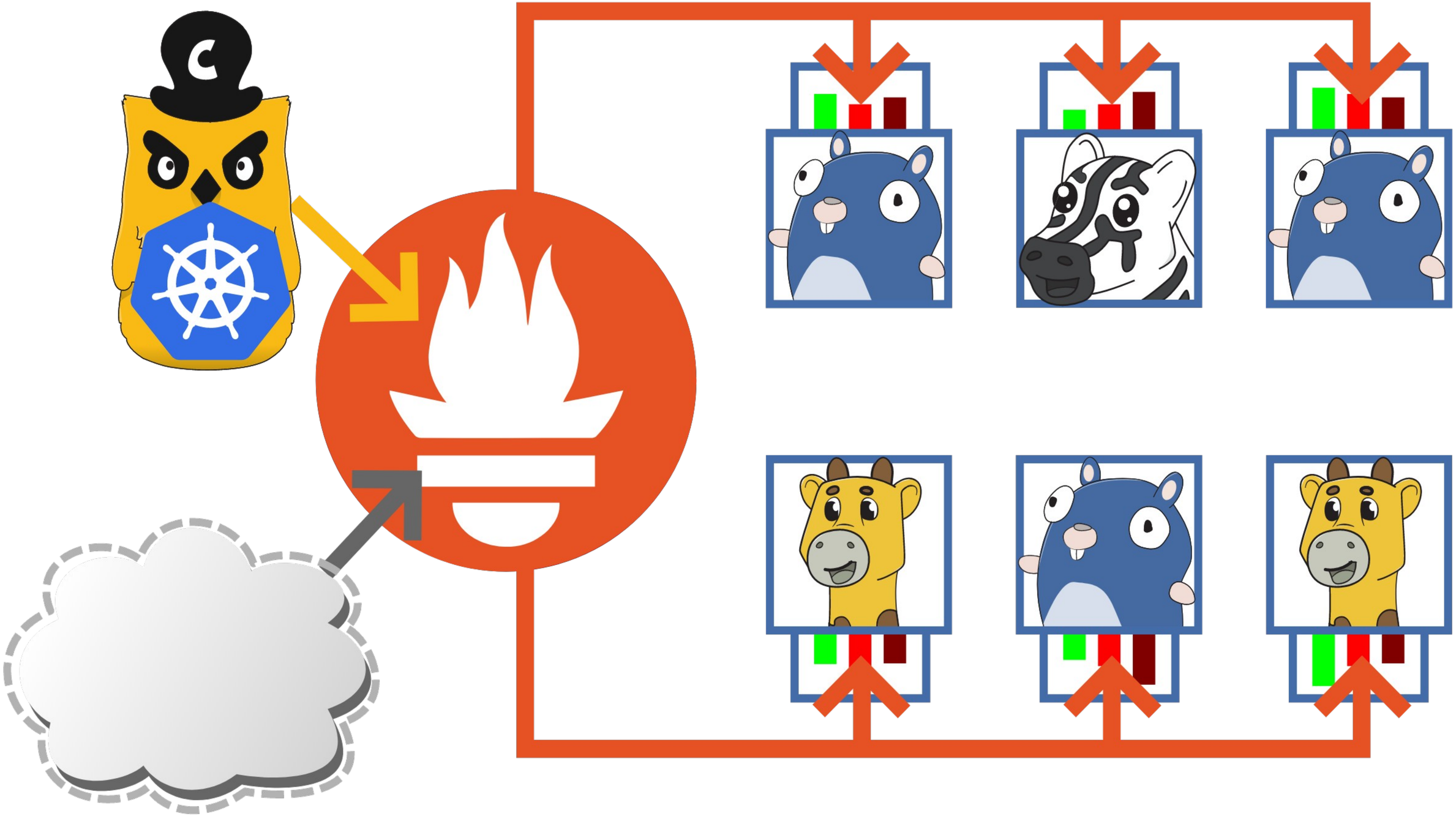
Prometheus

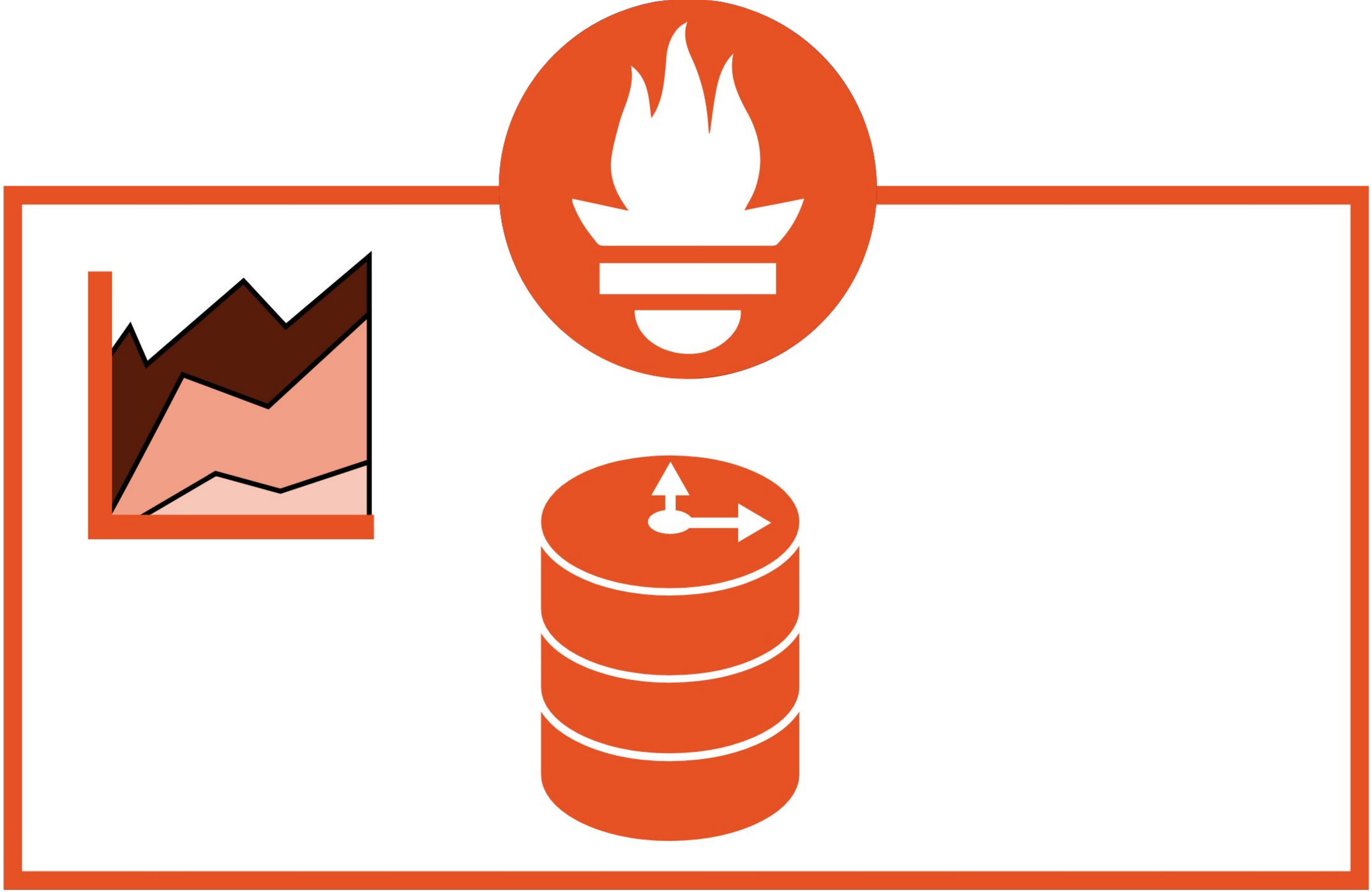


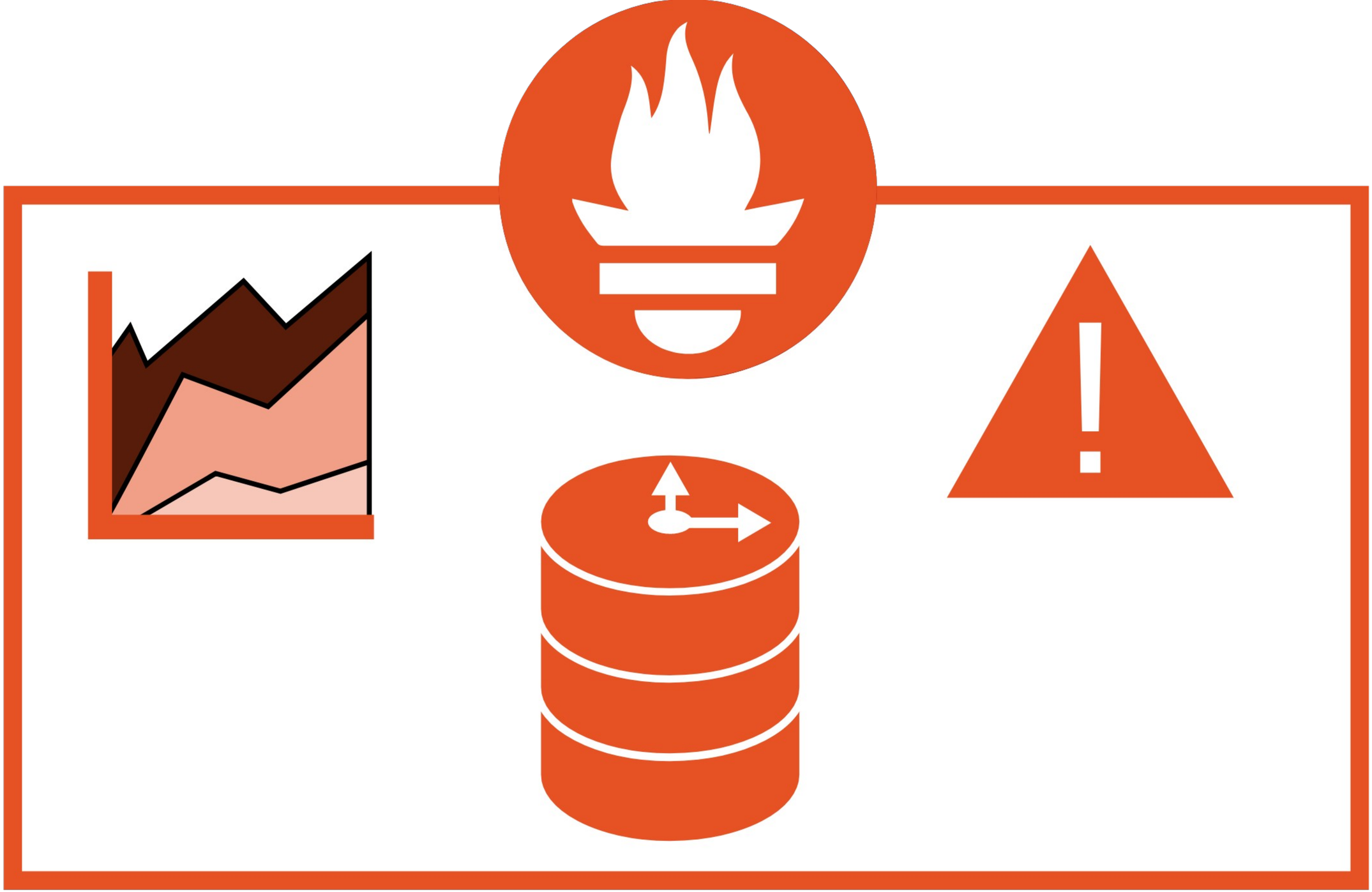




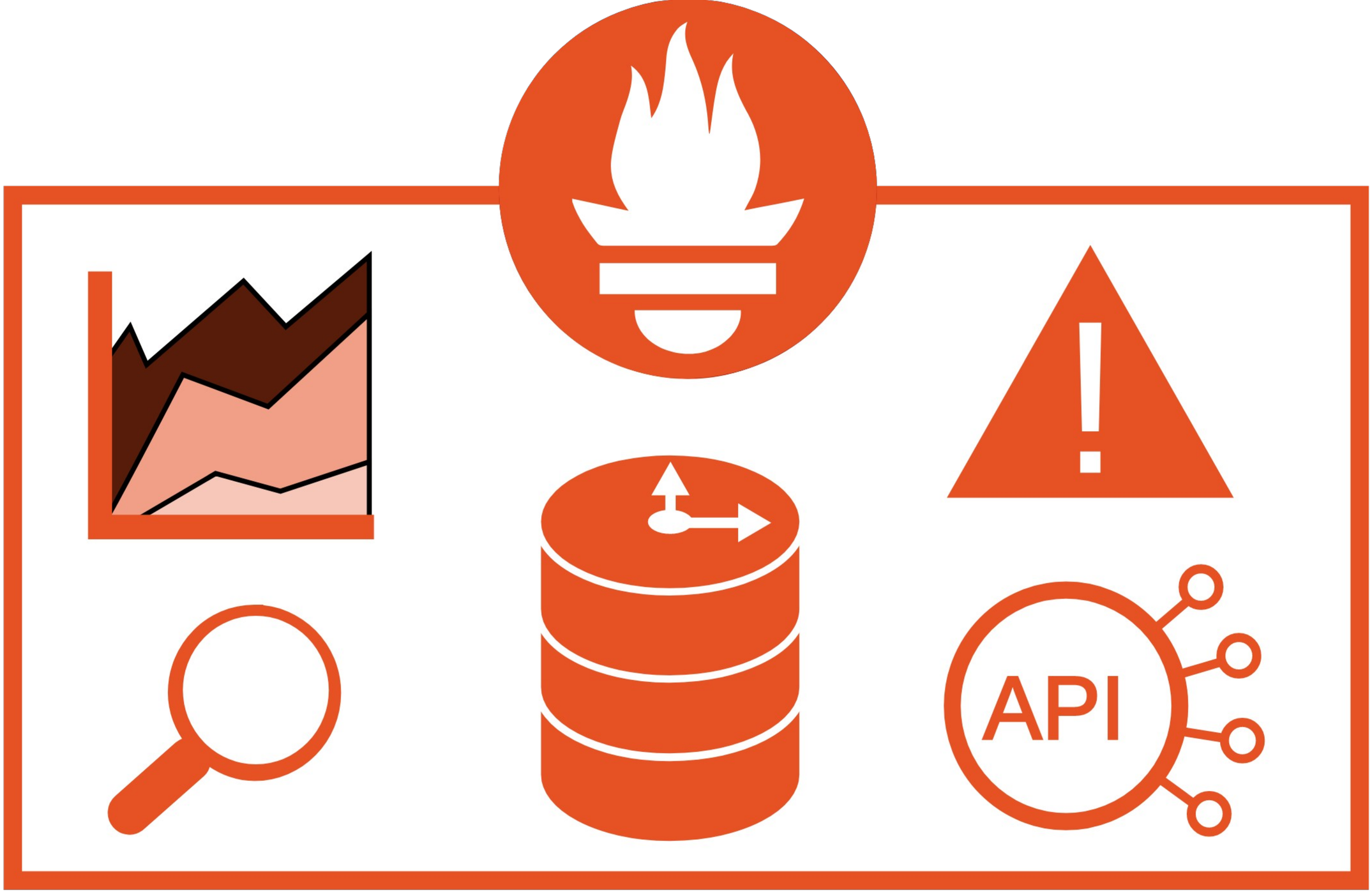






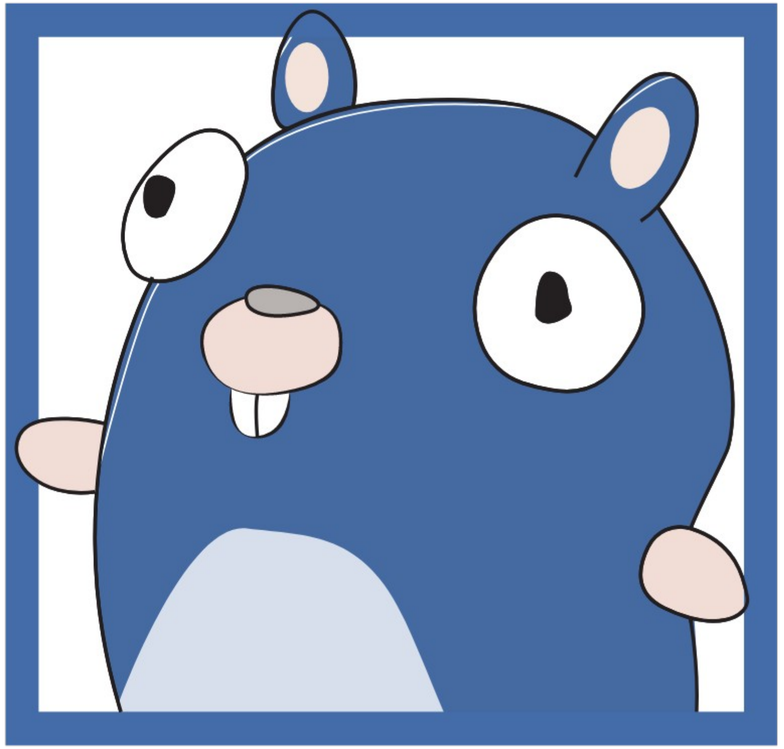


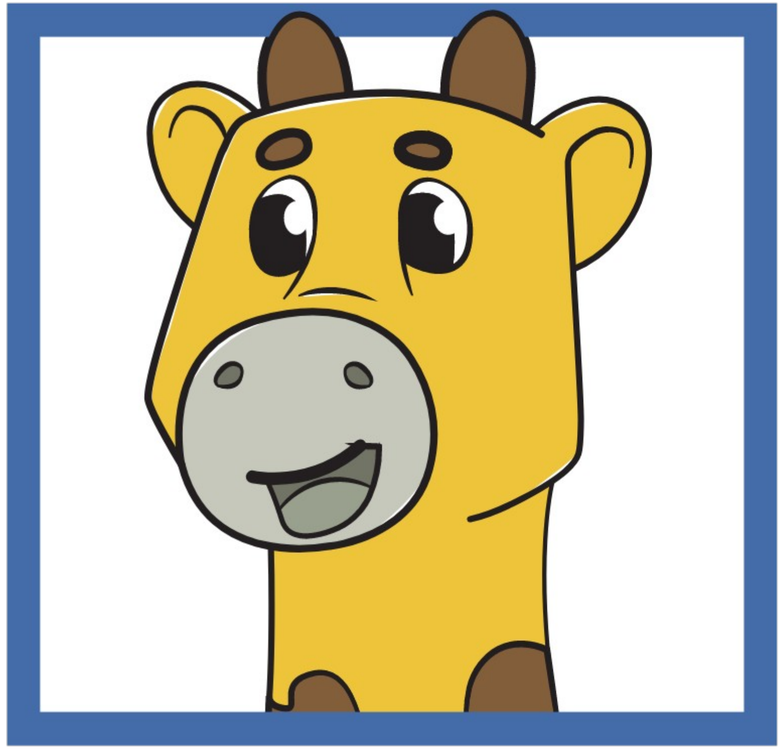



API

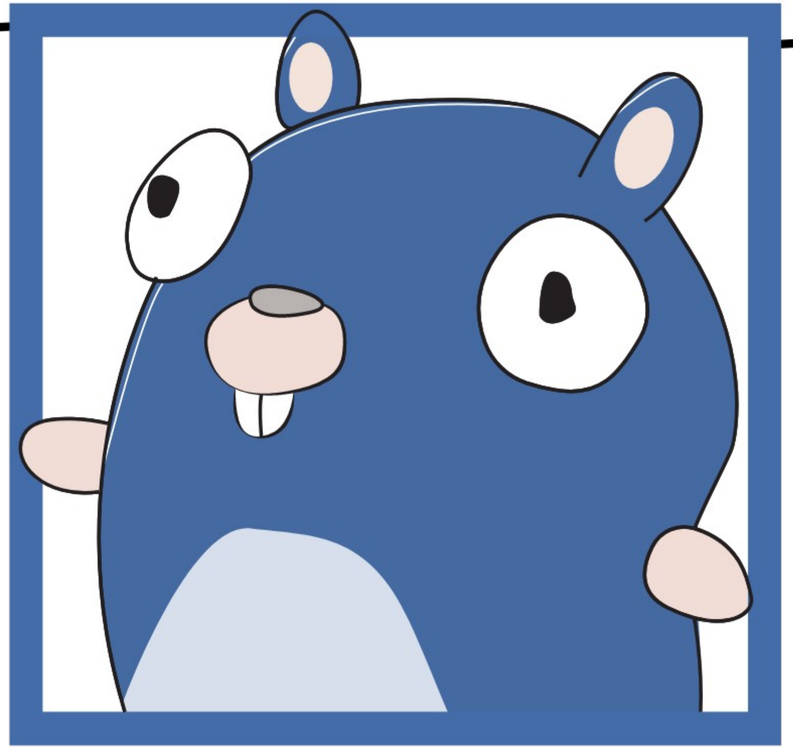
Prometheus

OPENMETRICS





```
# HELP metric_a A a sample metric
# TYPE metric_a counter
metric_a{kind="alpha"} 1027 1395066363000
metric_a{kind="beta"}    3 1395066363000
```



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# HELP metric_b Another sample metric
# TYPE metric_b counter
metric_b{kind="alpha"} 1027 1395066363000
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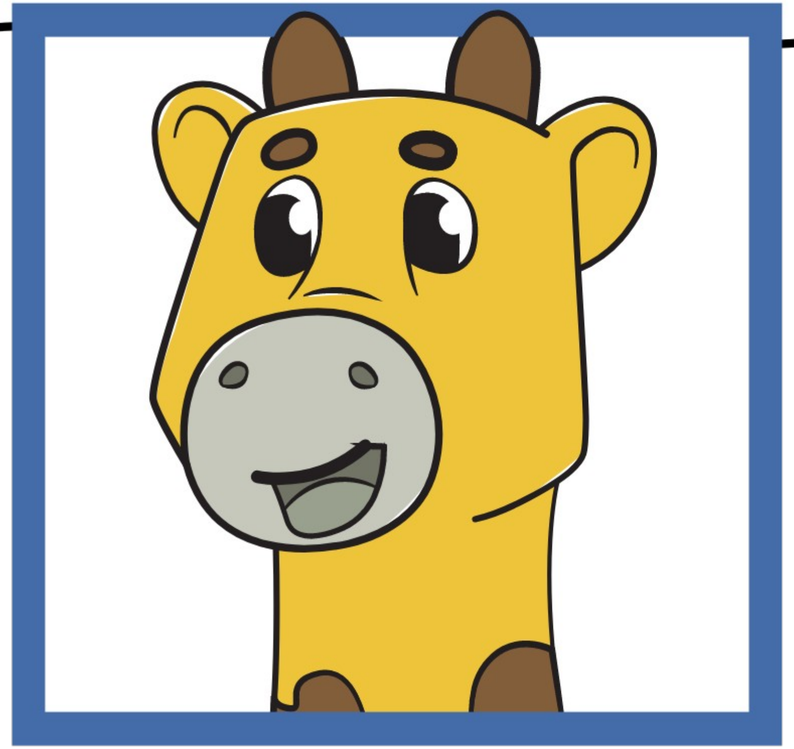
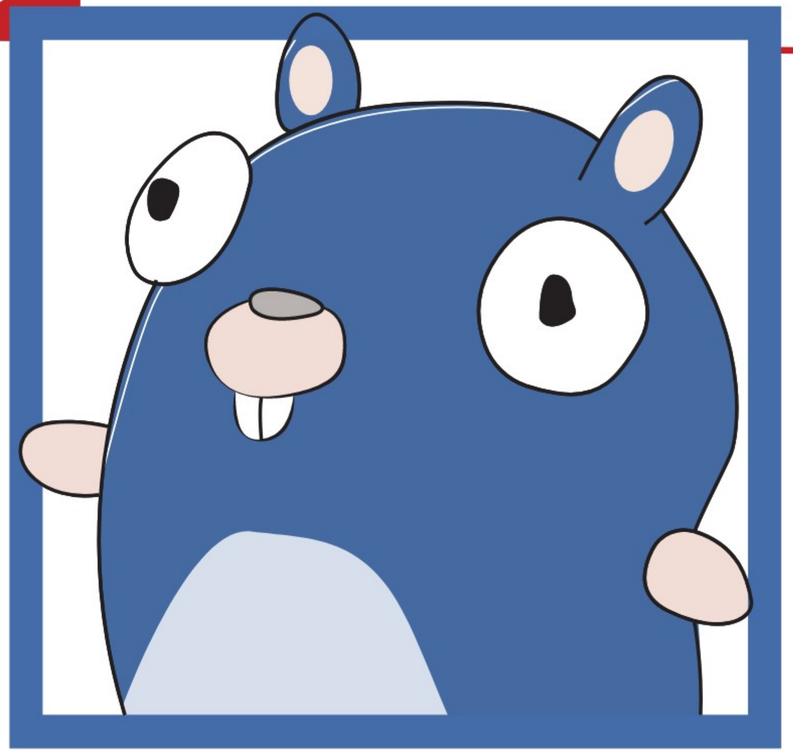


```
# HELP metric_a A a sample metric
# TYPE metric_a counter
# UNIT metric_a seconds
metric_a_total{kind="alpha"} 1027 1395066363000
metric_a_total{kind="beta"}    3 1395066363000
metric_a_created
```




```
# HELP metric_a A a sample metric
# TYPE metric_a counter
# UNIT metric_a seconds
metric_a_total{kind="alpha"} 1027 1395066363000
metric_a_total{kind="beta"}    3 1395066363000
metric_a_created
```

openmetrics_data_model.proto

```
syntax = "proto3";

// The OpenMetrics protobuf schema which defines the protobuf wire format.
// Ensure to interpret "required" as semantically required for a valid message.
// All string fields MUST be UTF-8 encoded strings.
package openmetrics;
```

```
# HELP metric_a A a sample metric
# TYPE metric_a counter
# UNIT metric_a seconds
metric_a_total{kind="alpha"} 1027 1395066363000
metric_a_total{kind="beta"}    3 1395066363000
metric_a_created
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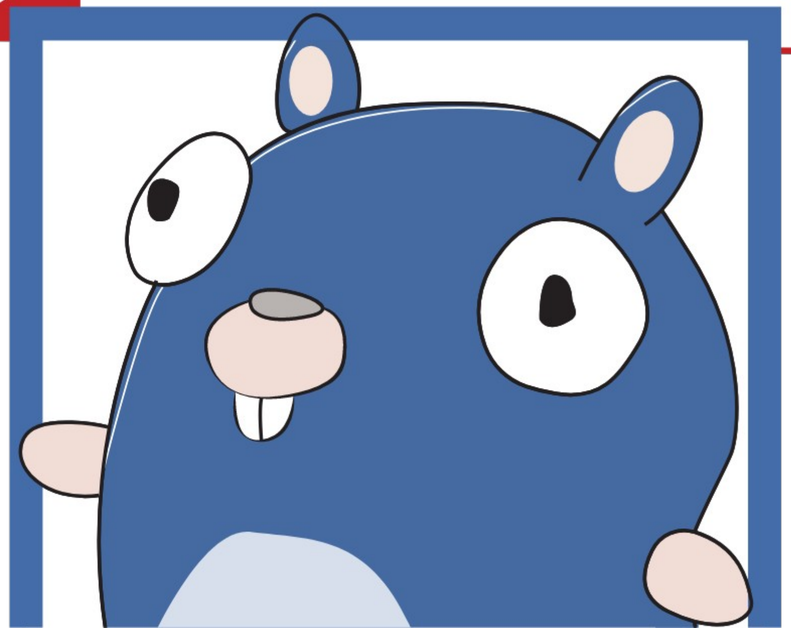

```
# HELP metric_a A a sample metric
# TYPE metric_a counter
# UNIT metric_a seconds
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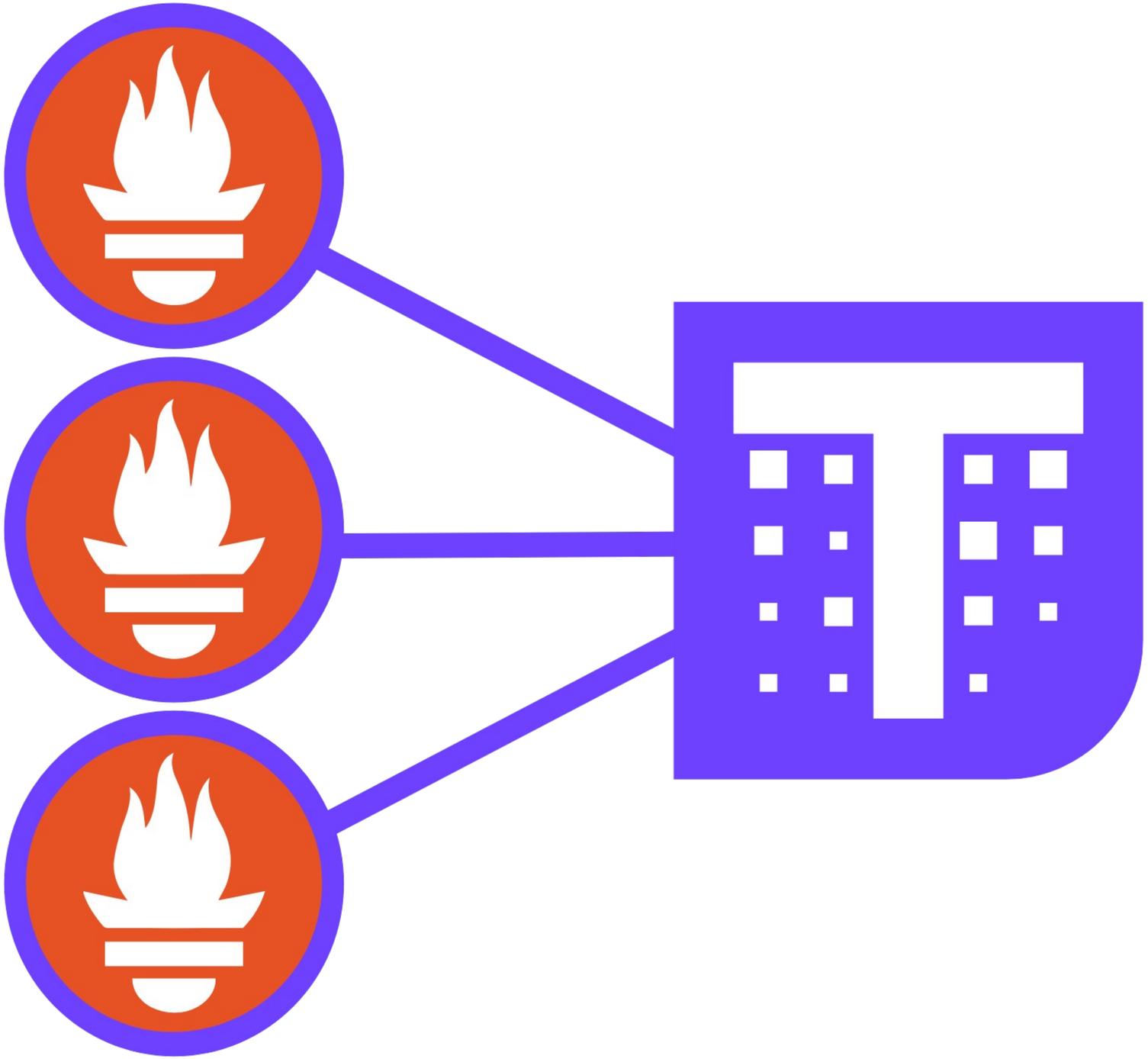
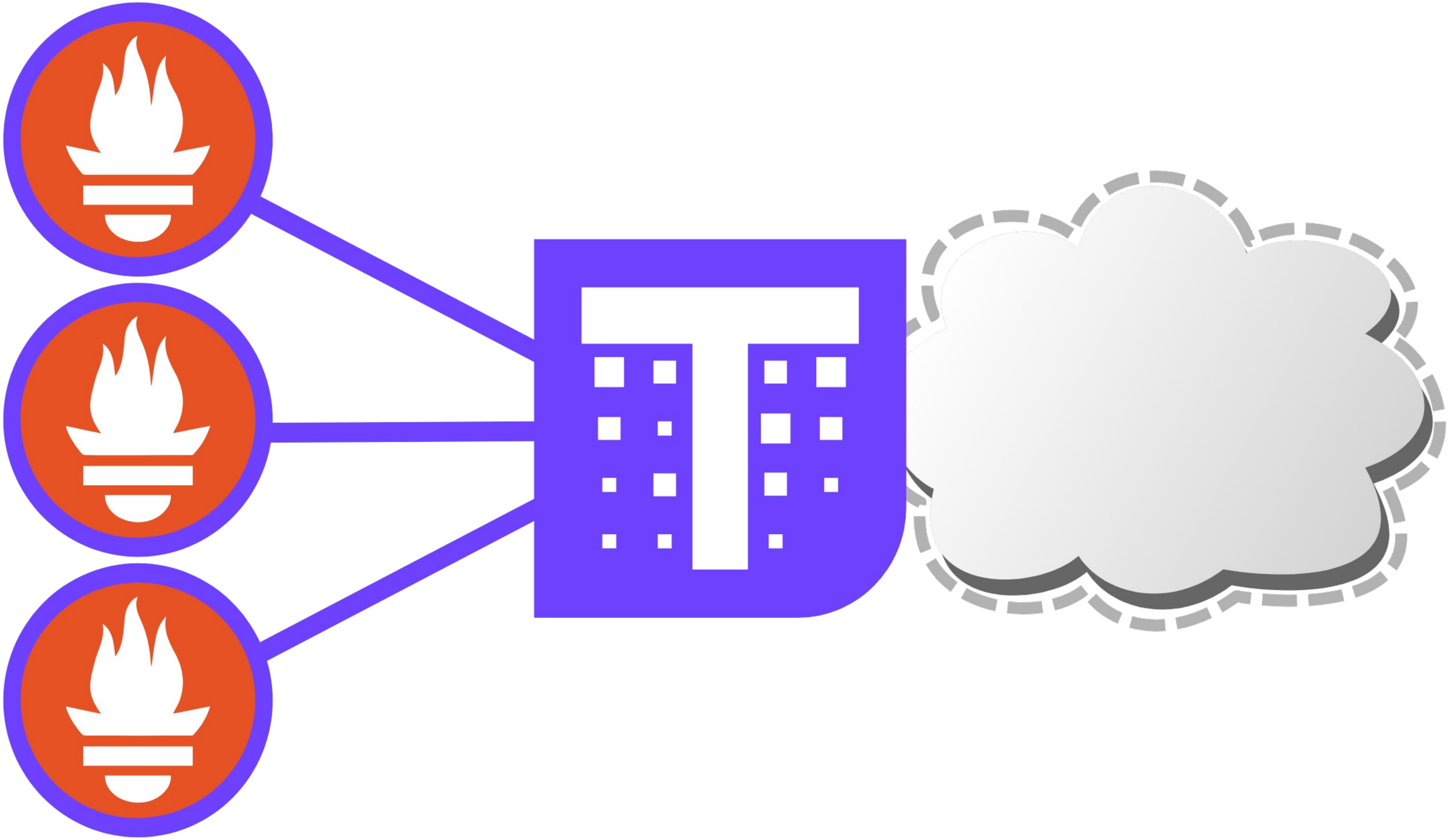
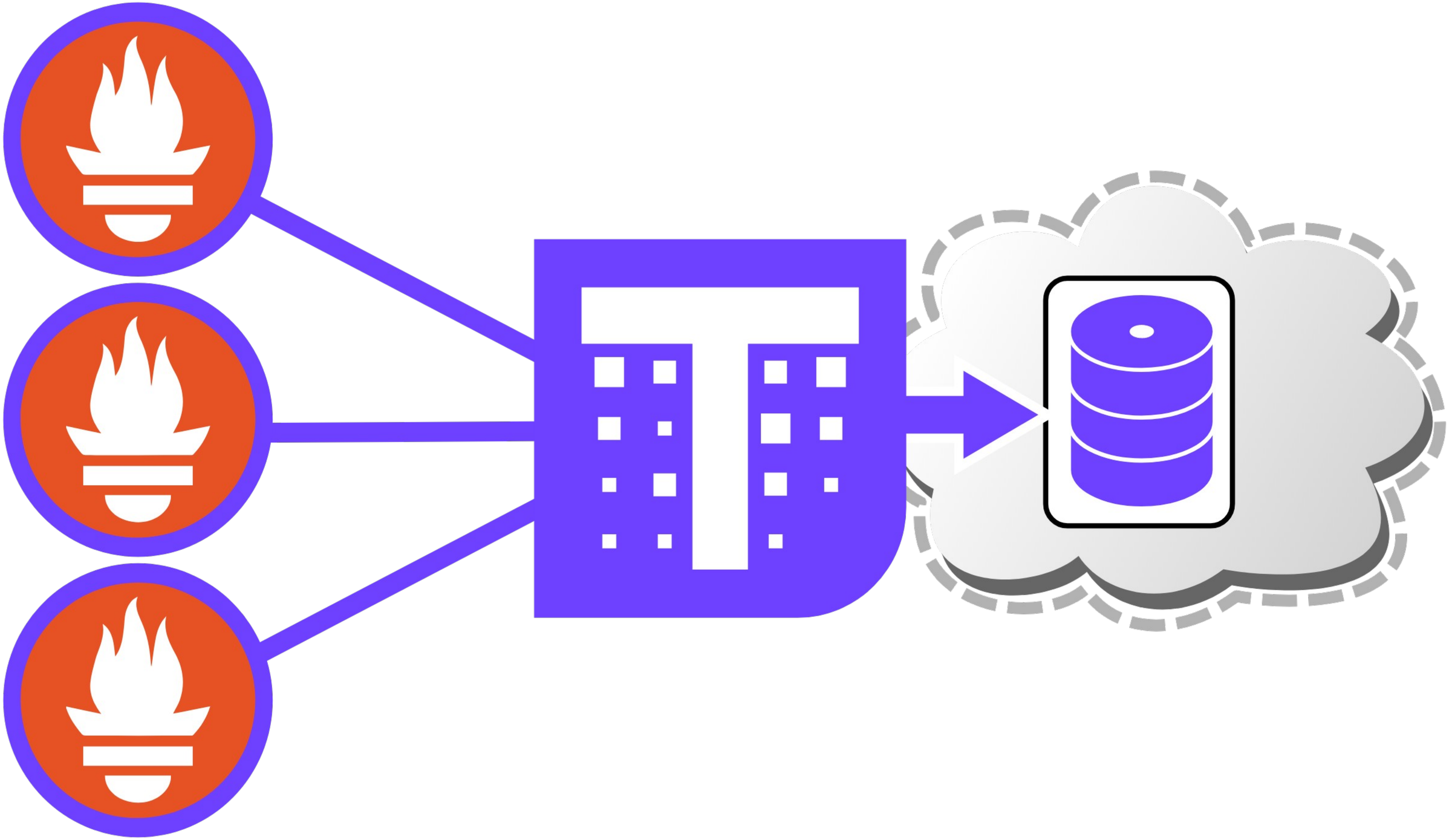
metric_a_total{kind="beta"}    3 1395066363000
metric_a_created
```

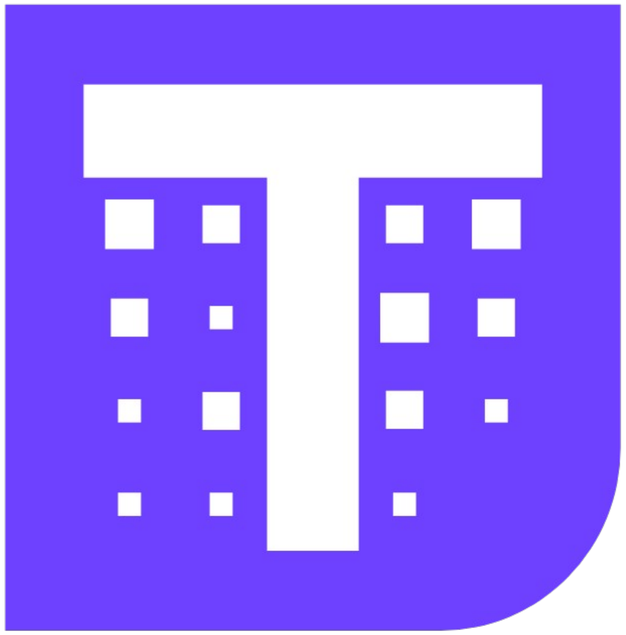
OPENMETRICS

Thanos









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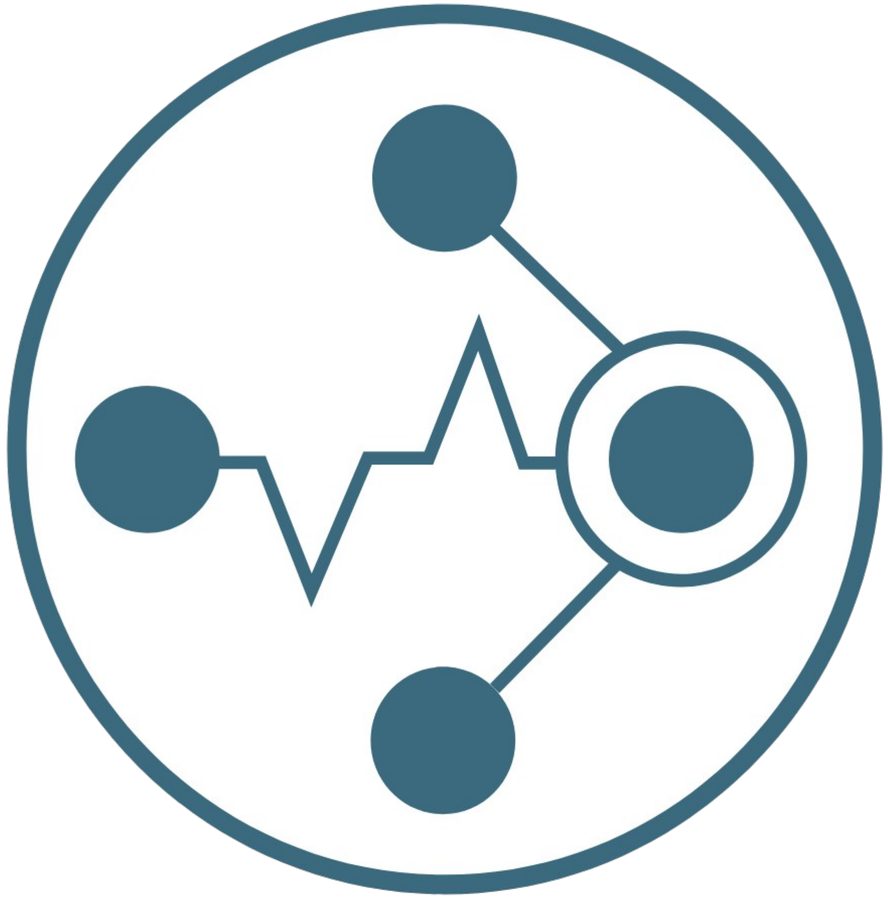
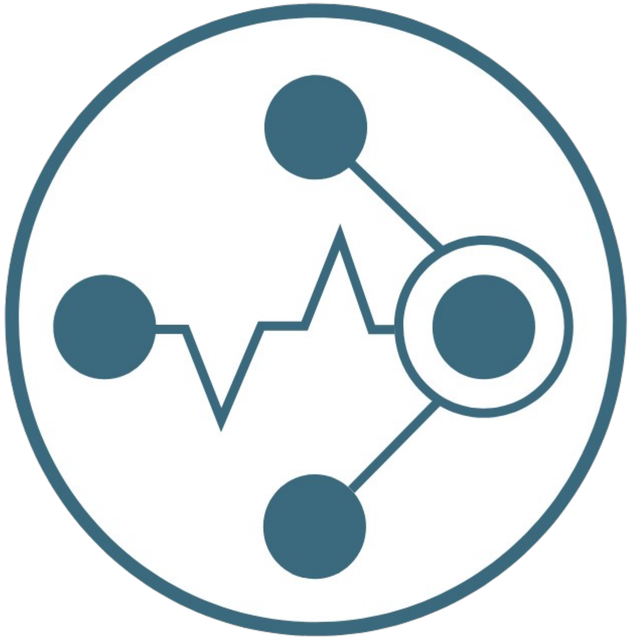
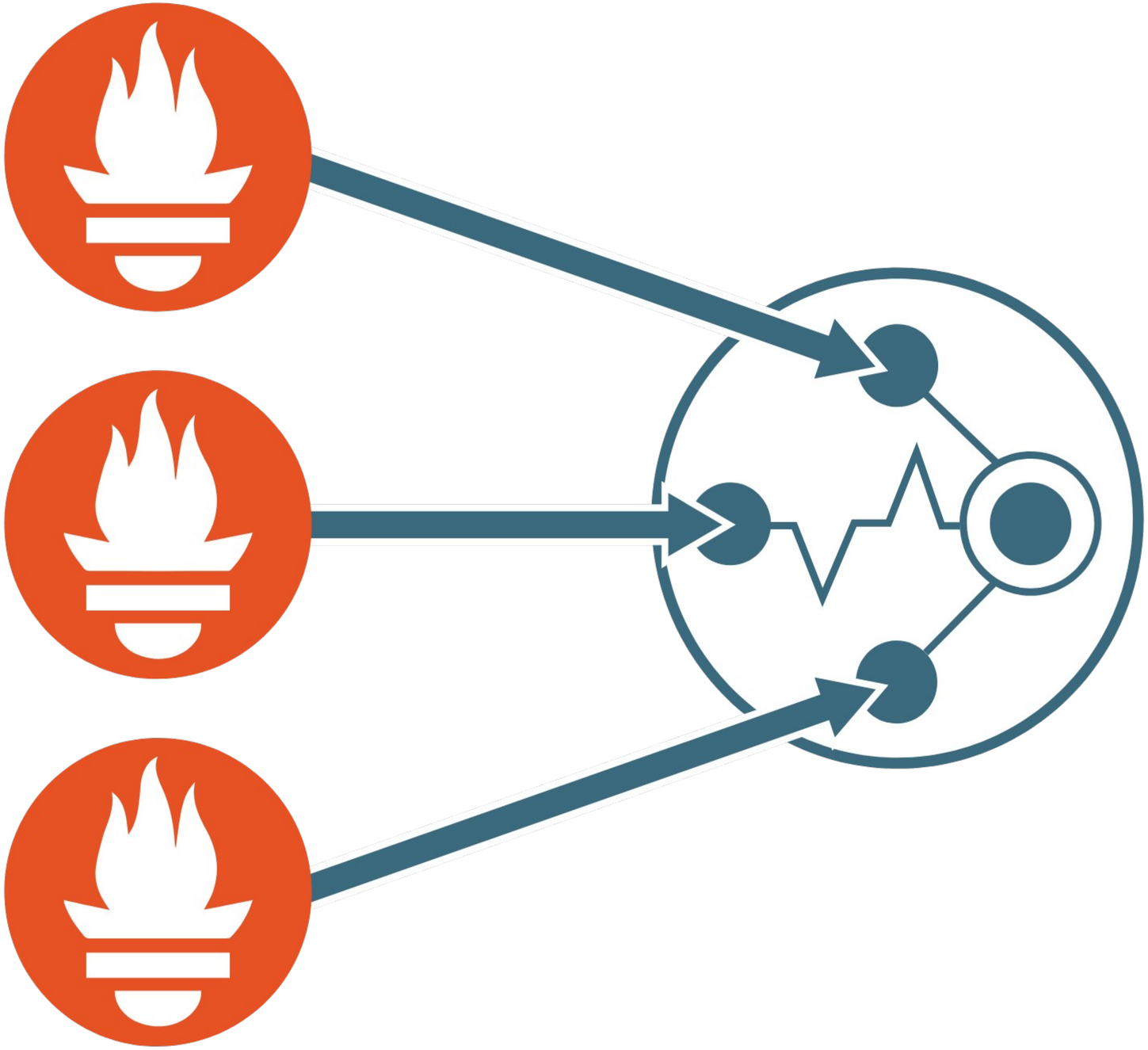
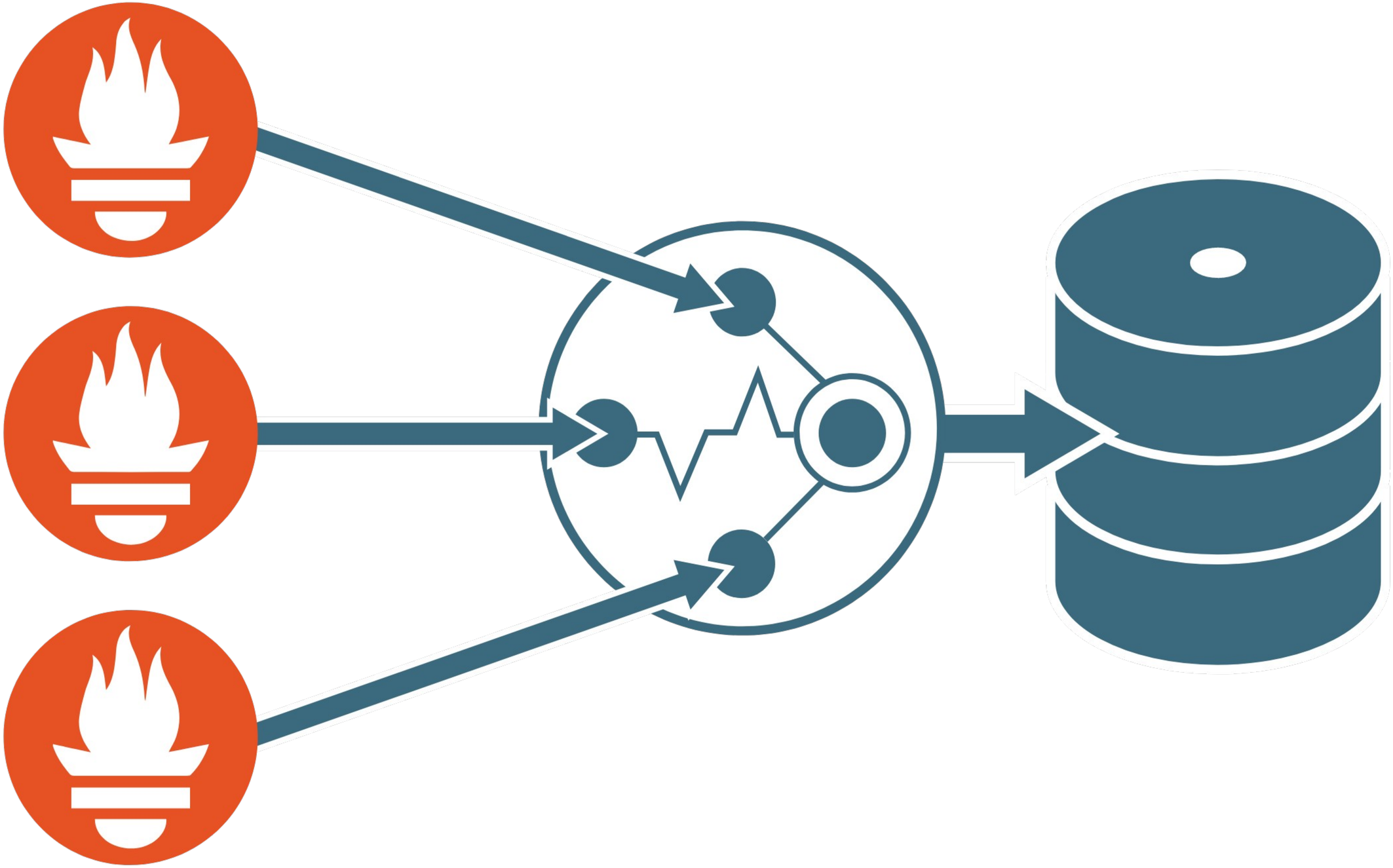
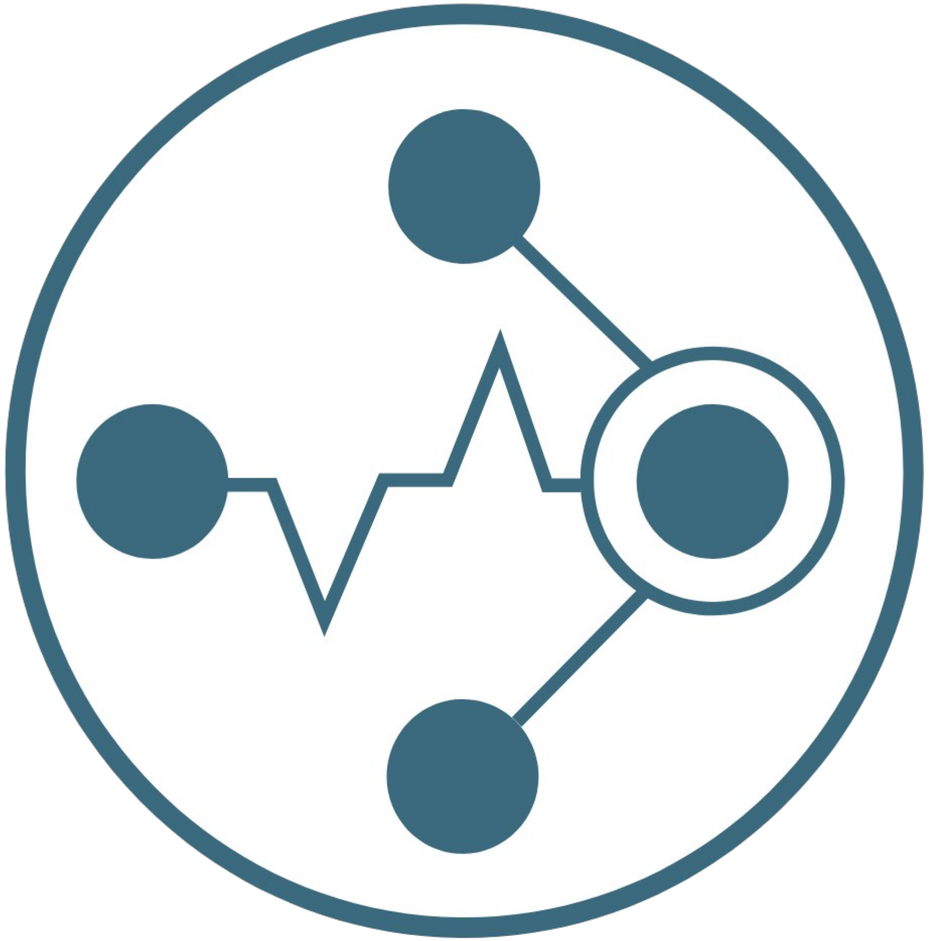


cortex







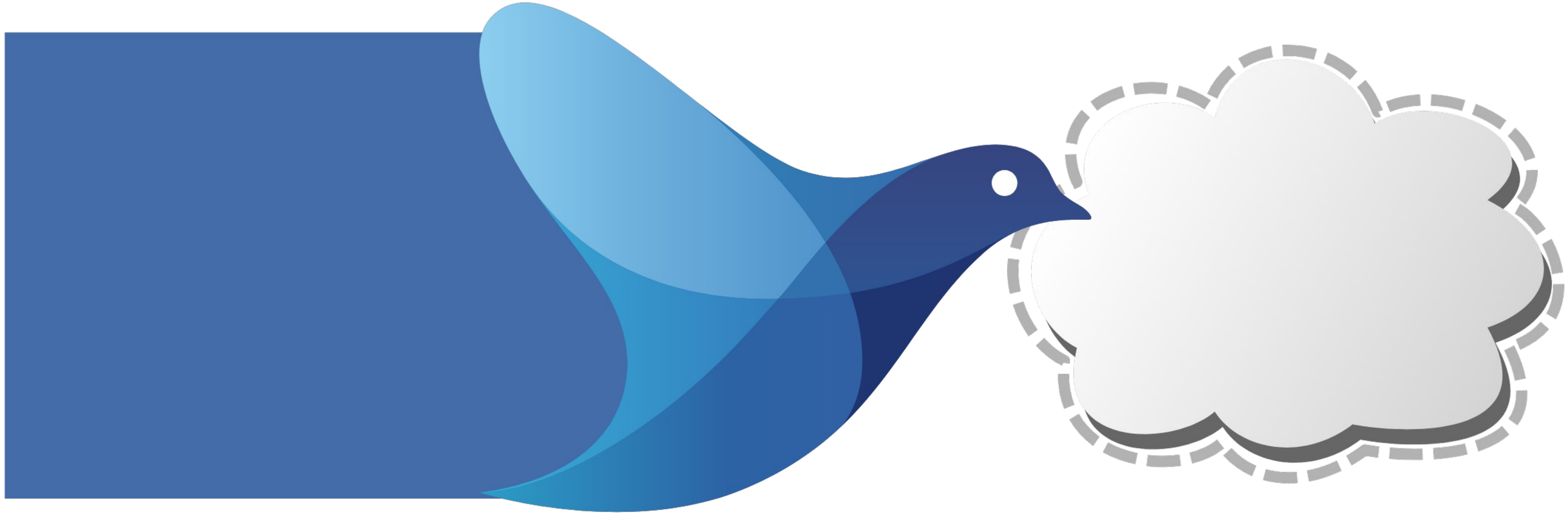


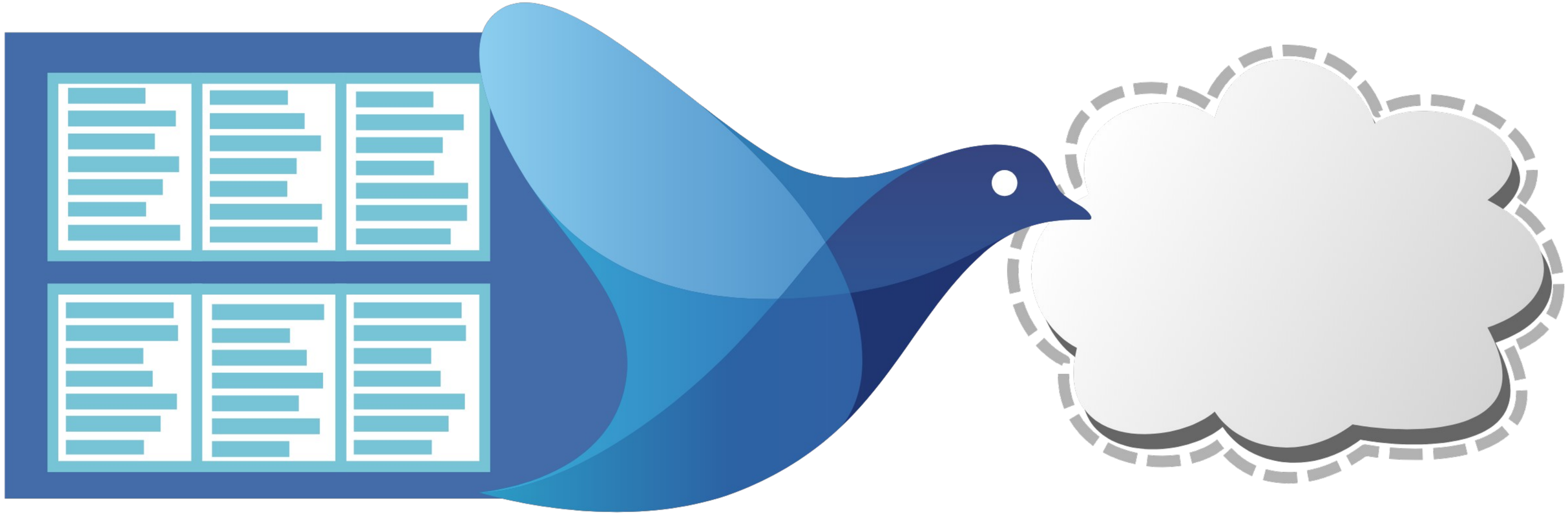
cortex

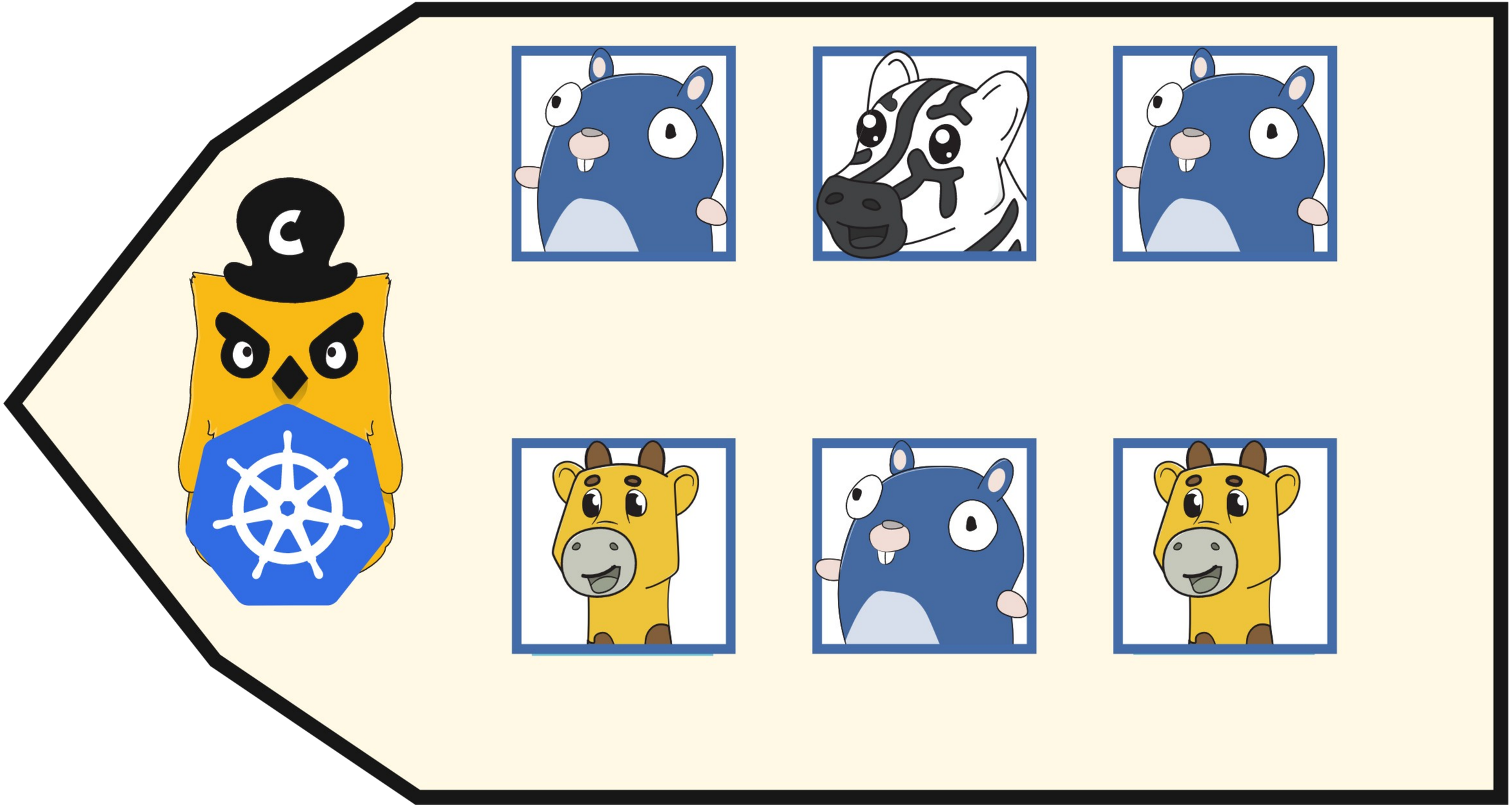
Thanos

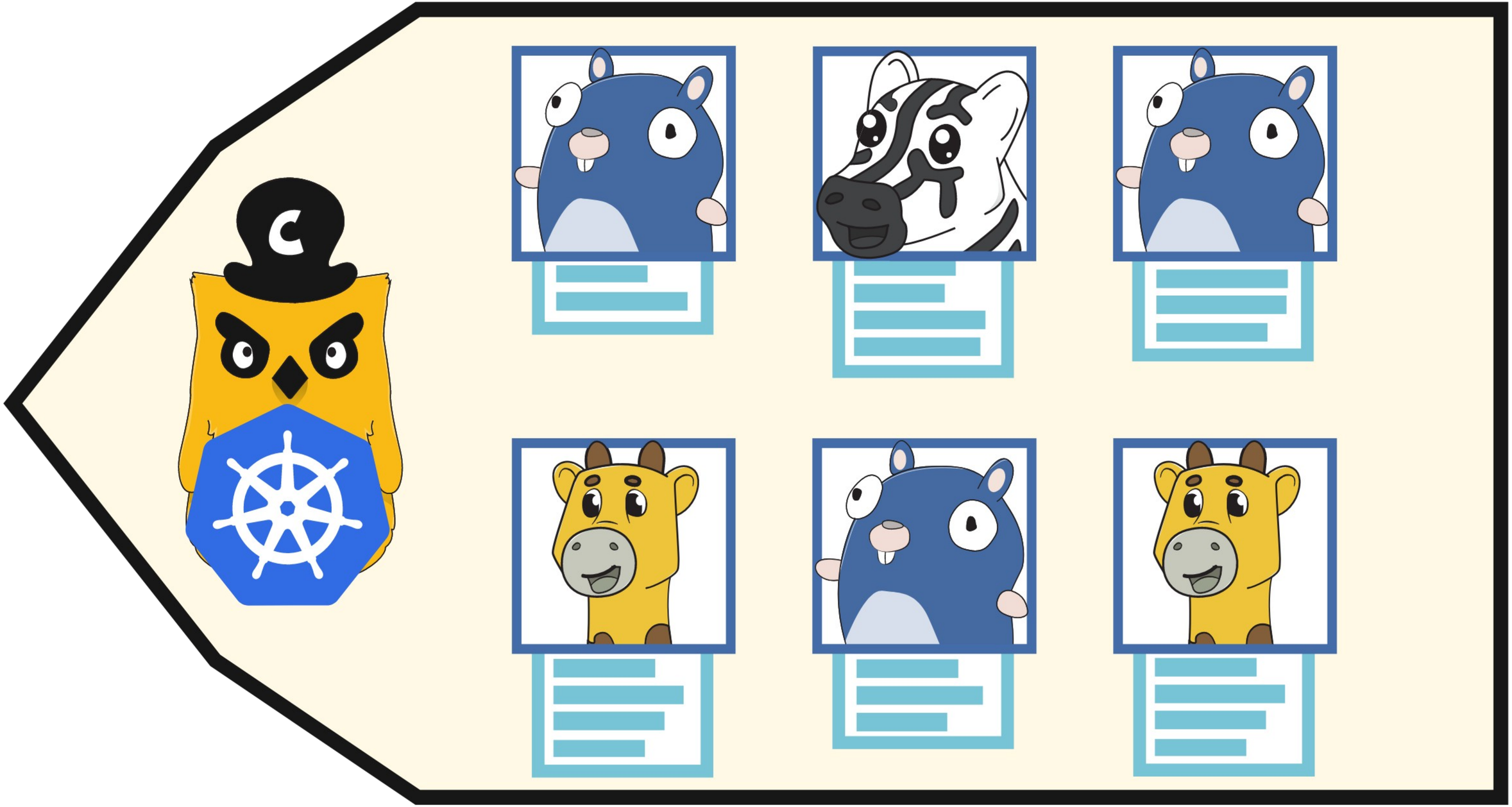
cortex

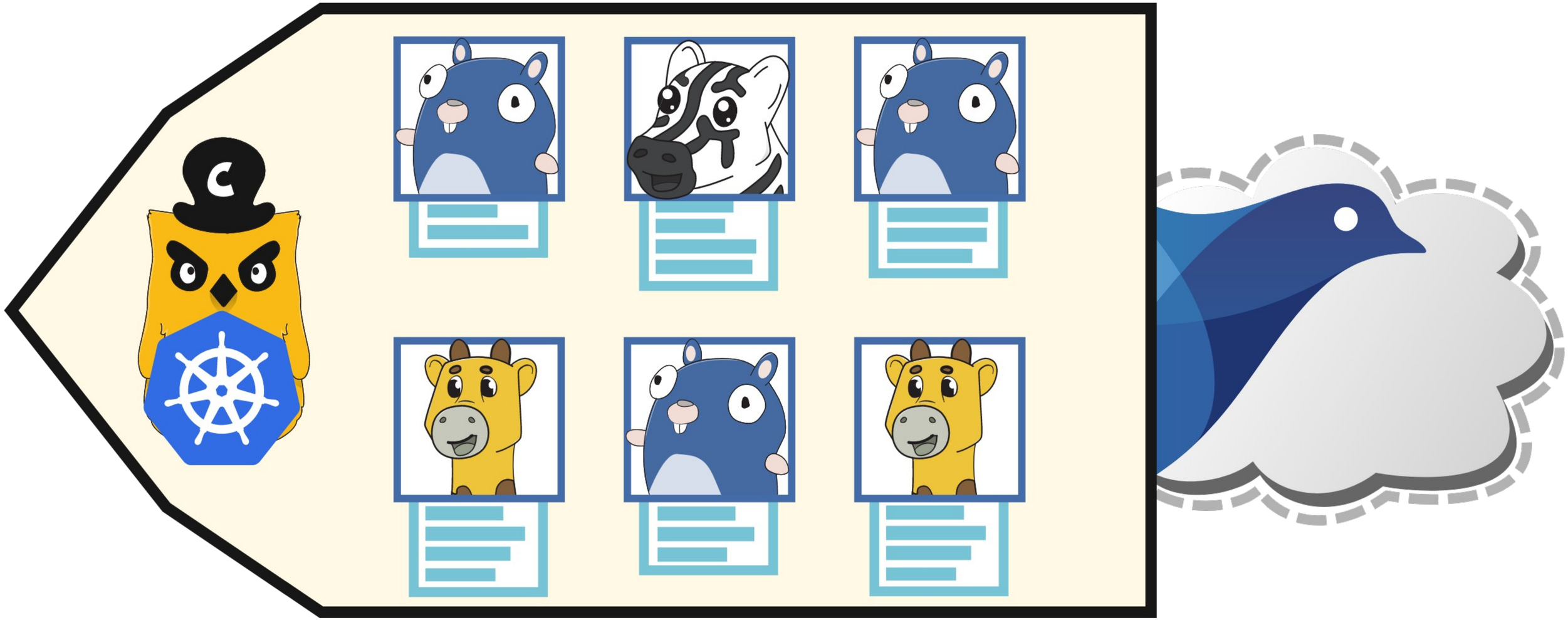
fluentd

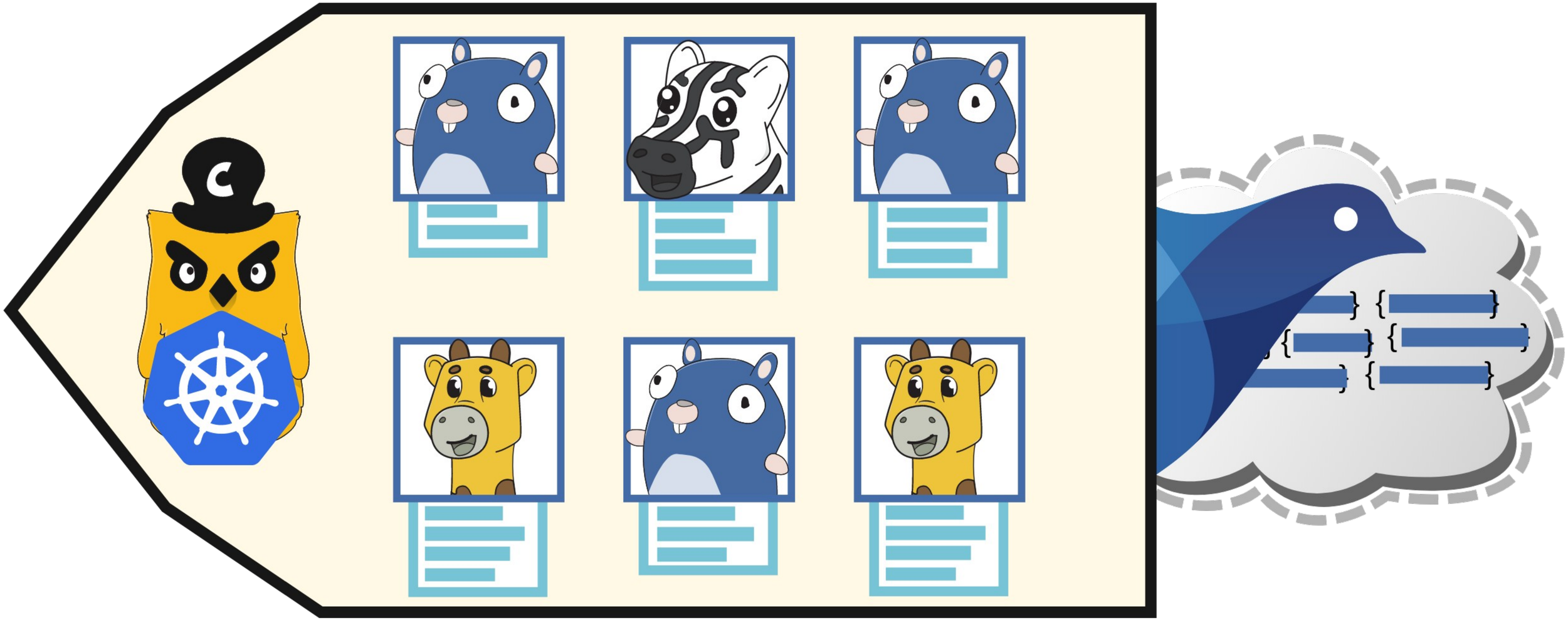






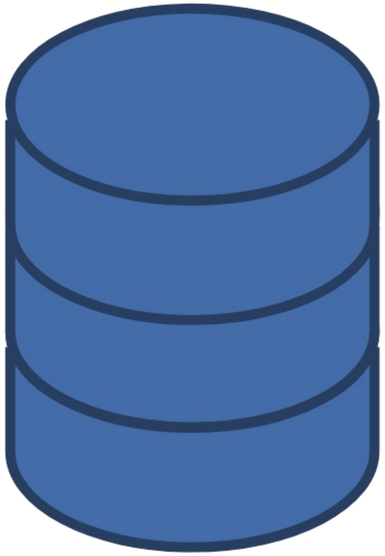


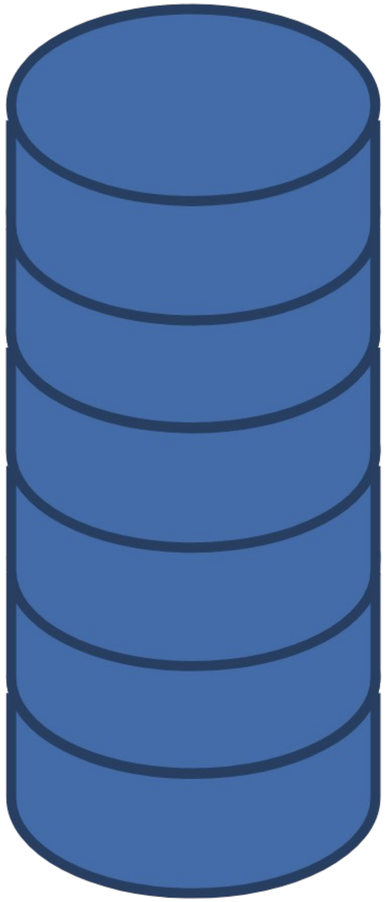


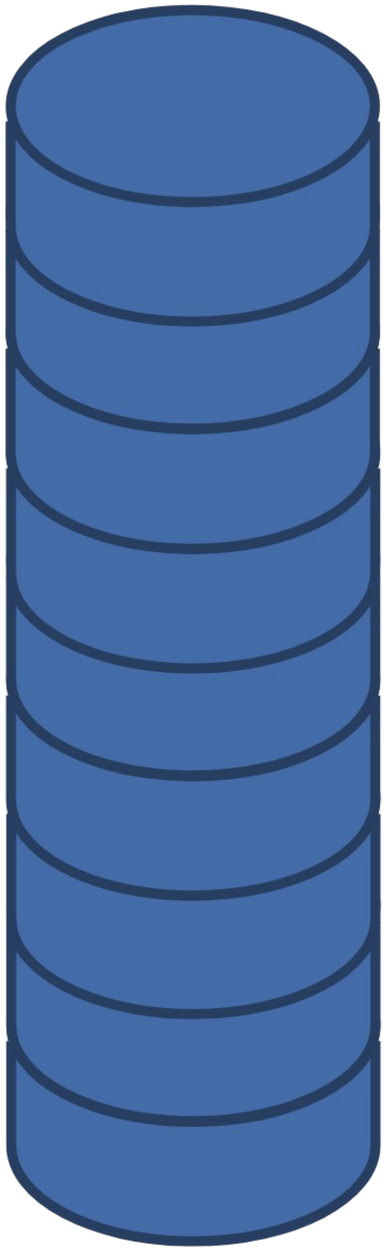


fluentd

Vitess



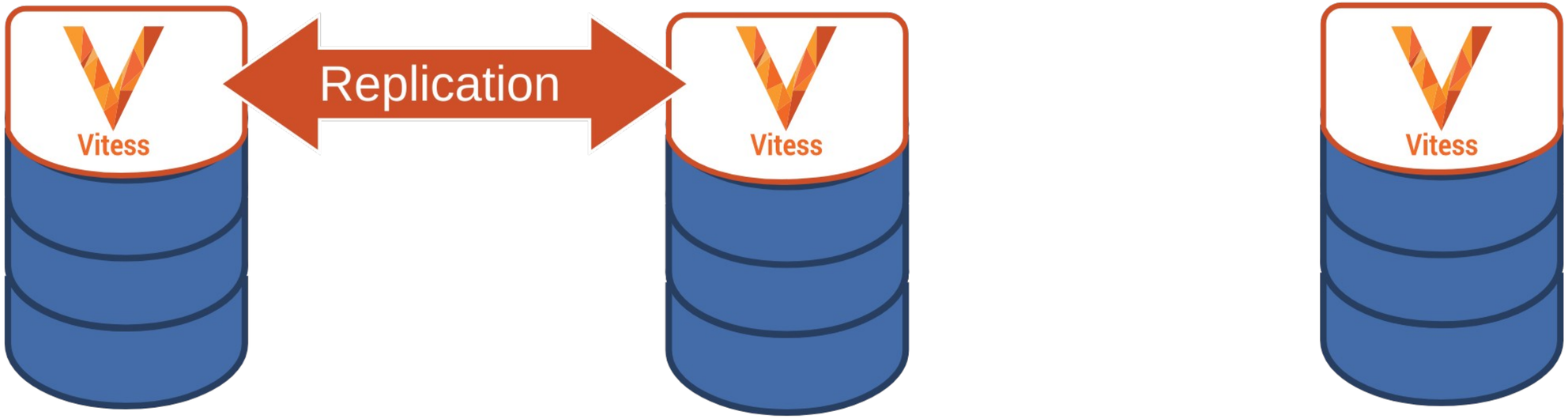




Vitess

Vitess

Vitess



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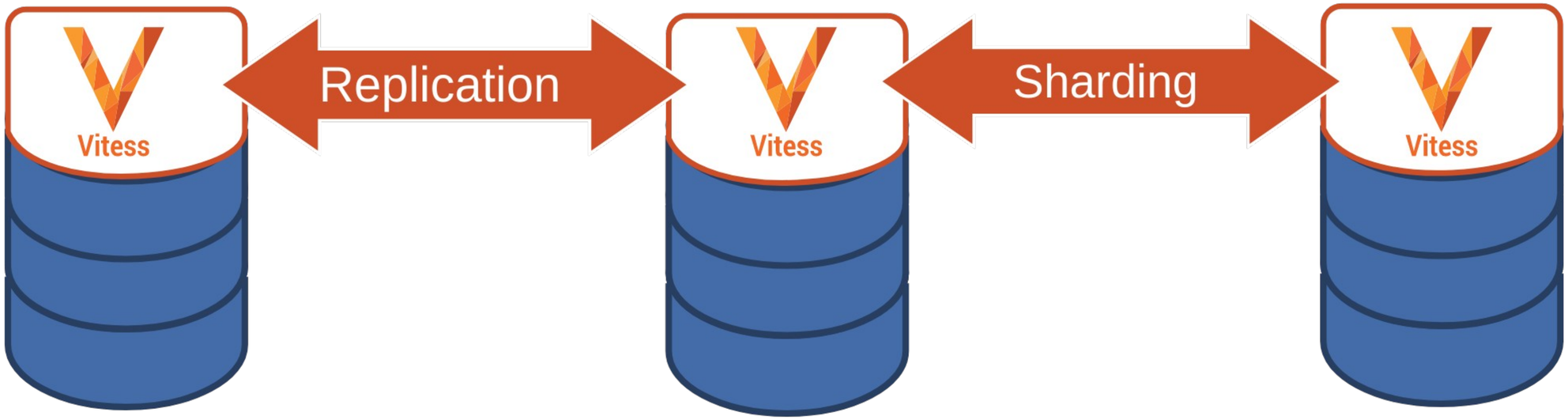

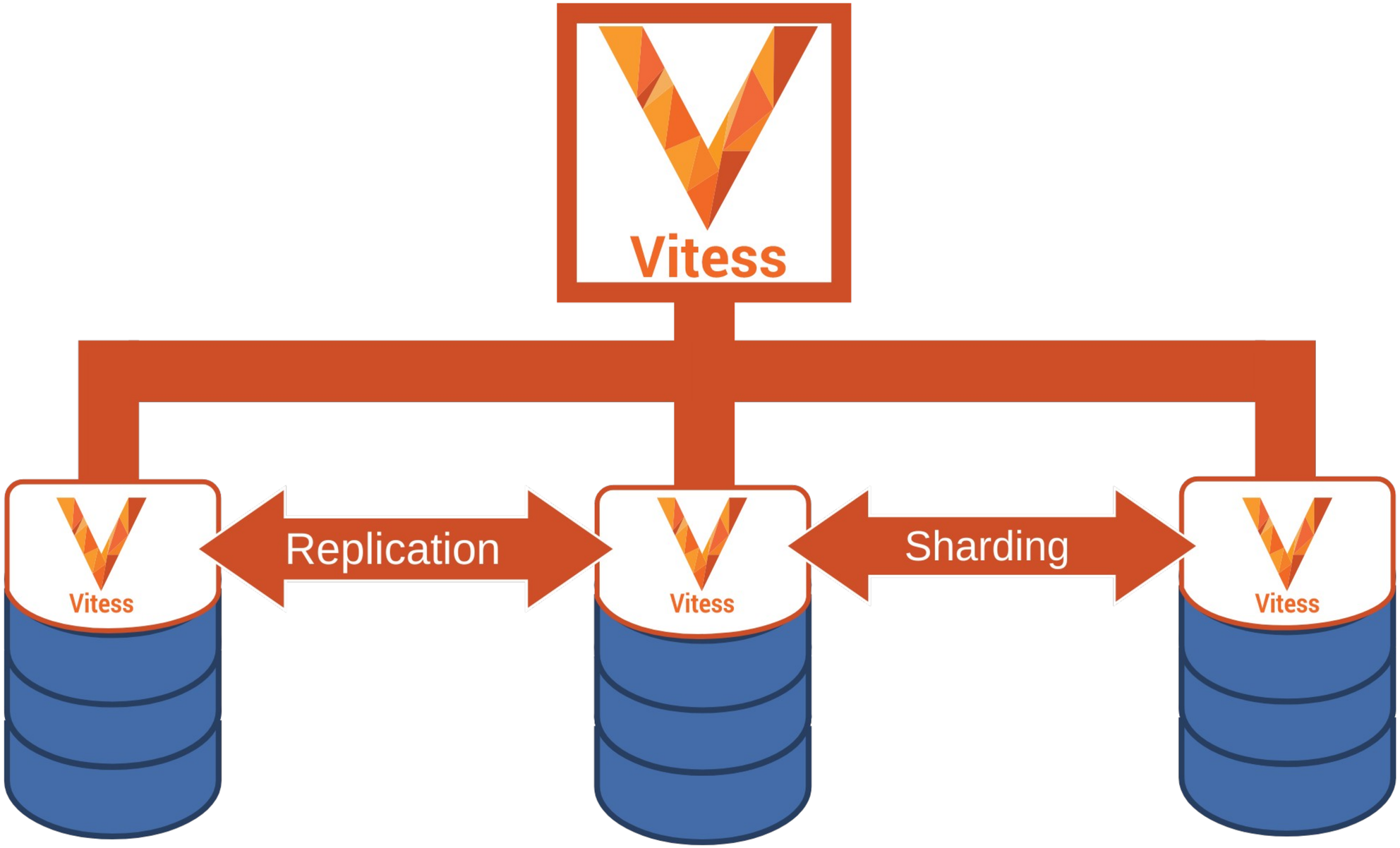
Vitess
Vitess
Replication
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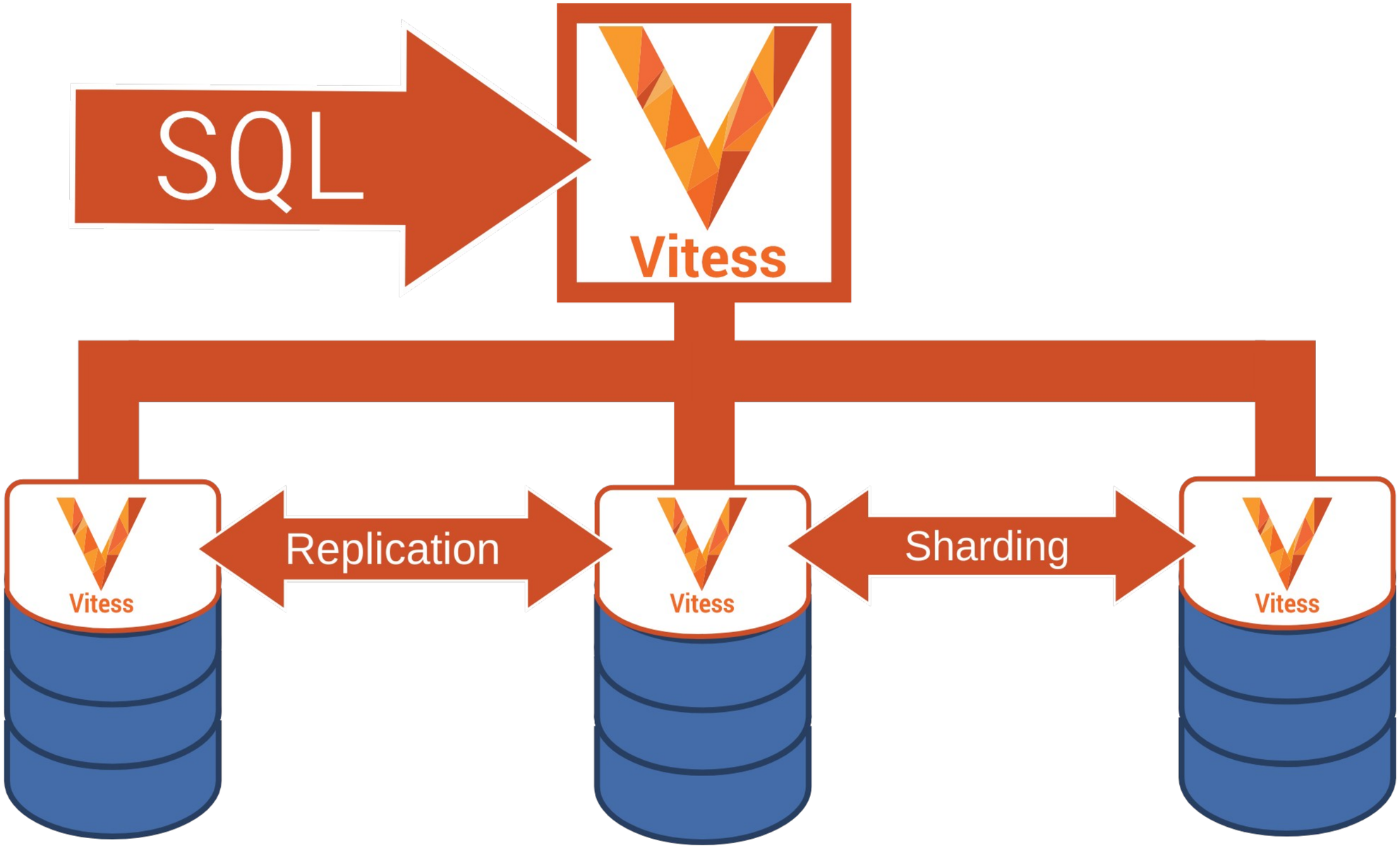
Sharding
Vitess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Vitess
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Replication
Vitess
Sharding
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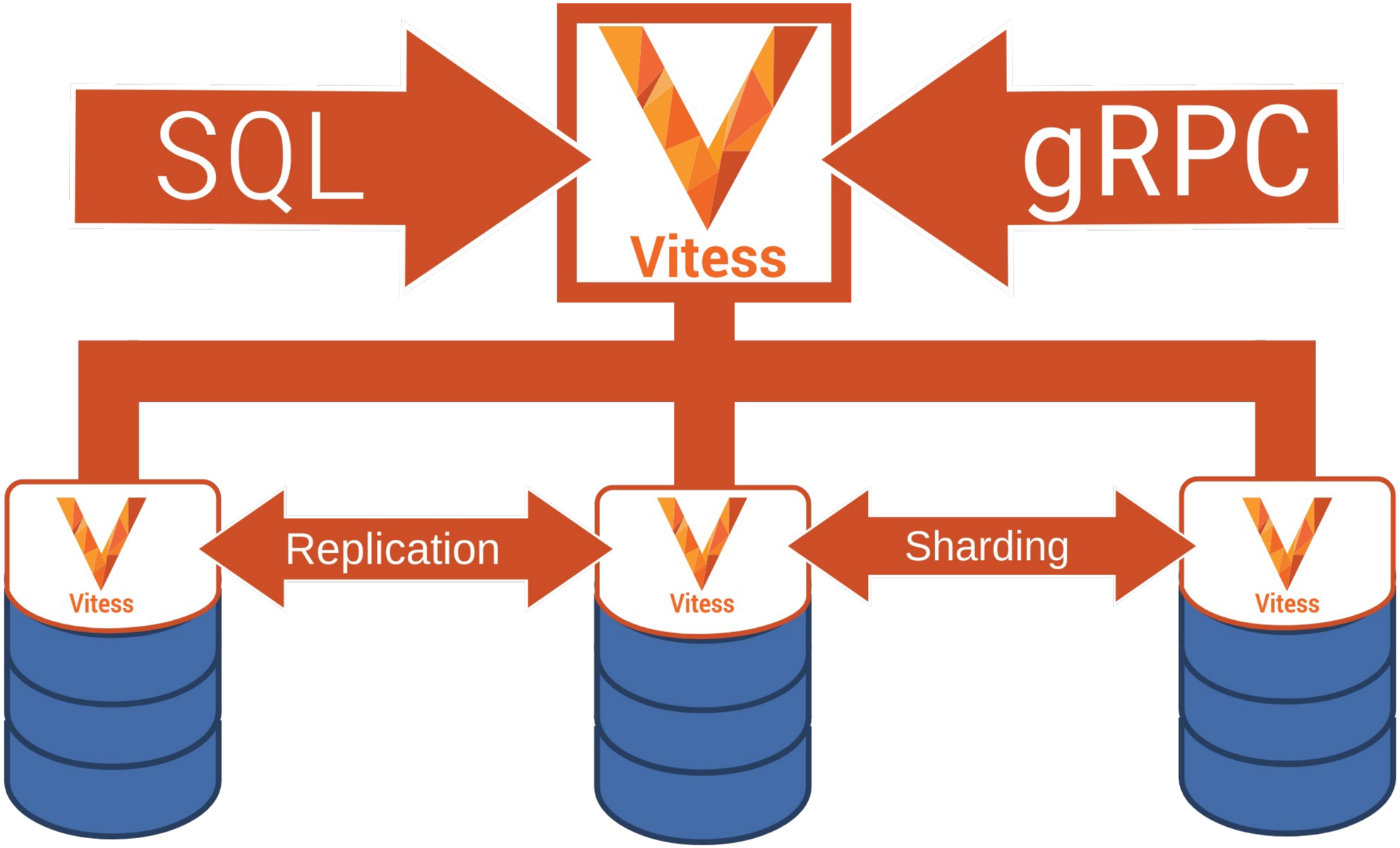
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Vitess
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Replication
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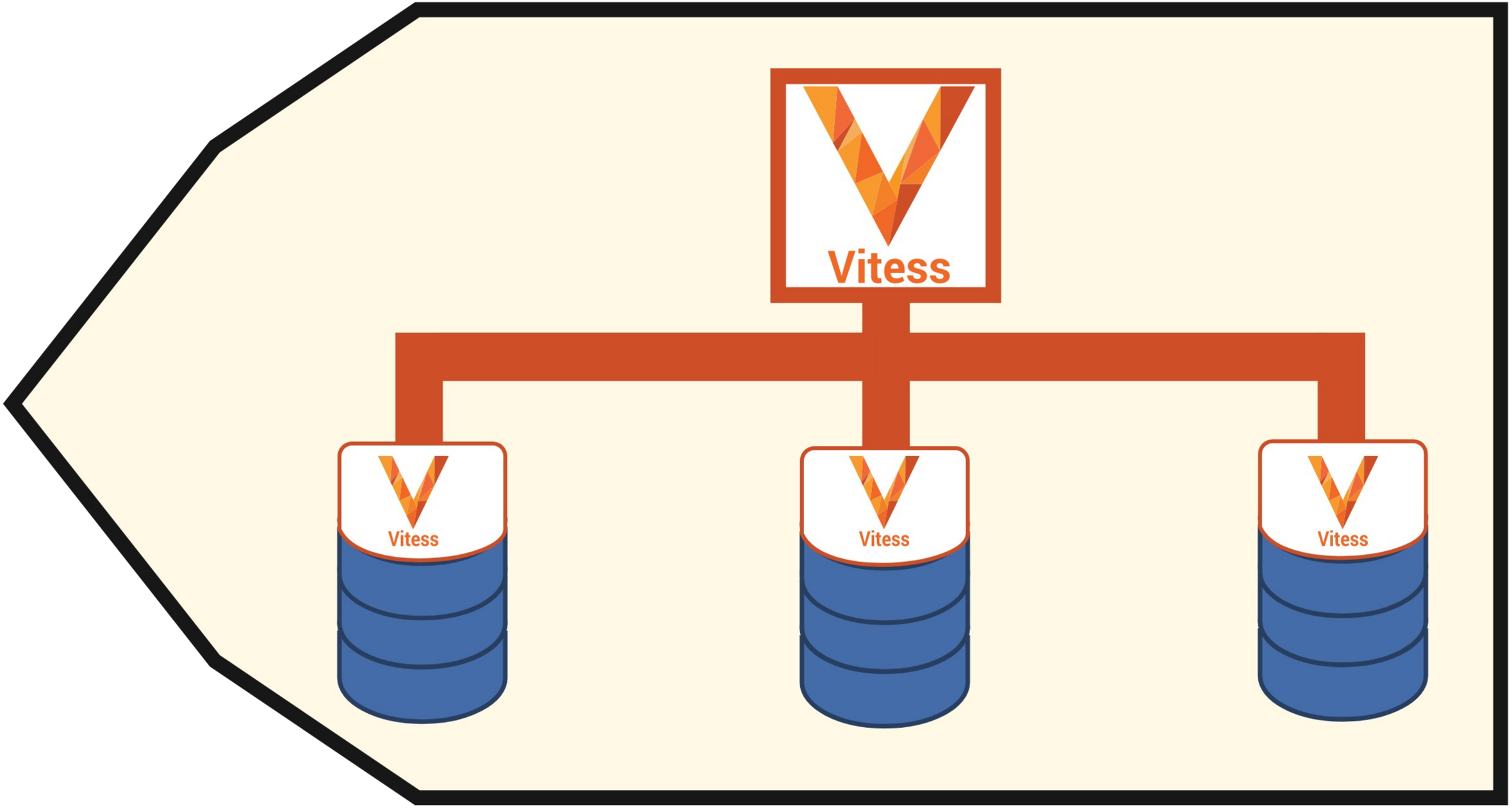
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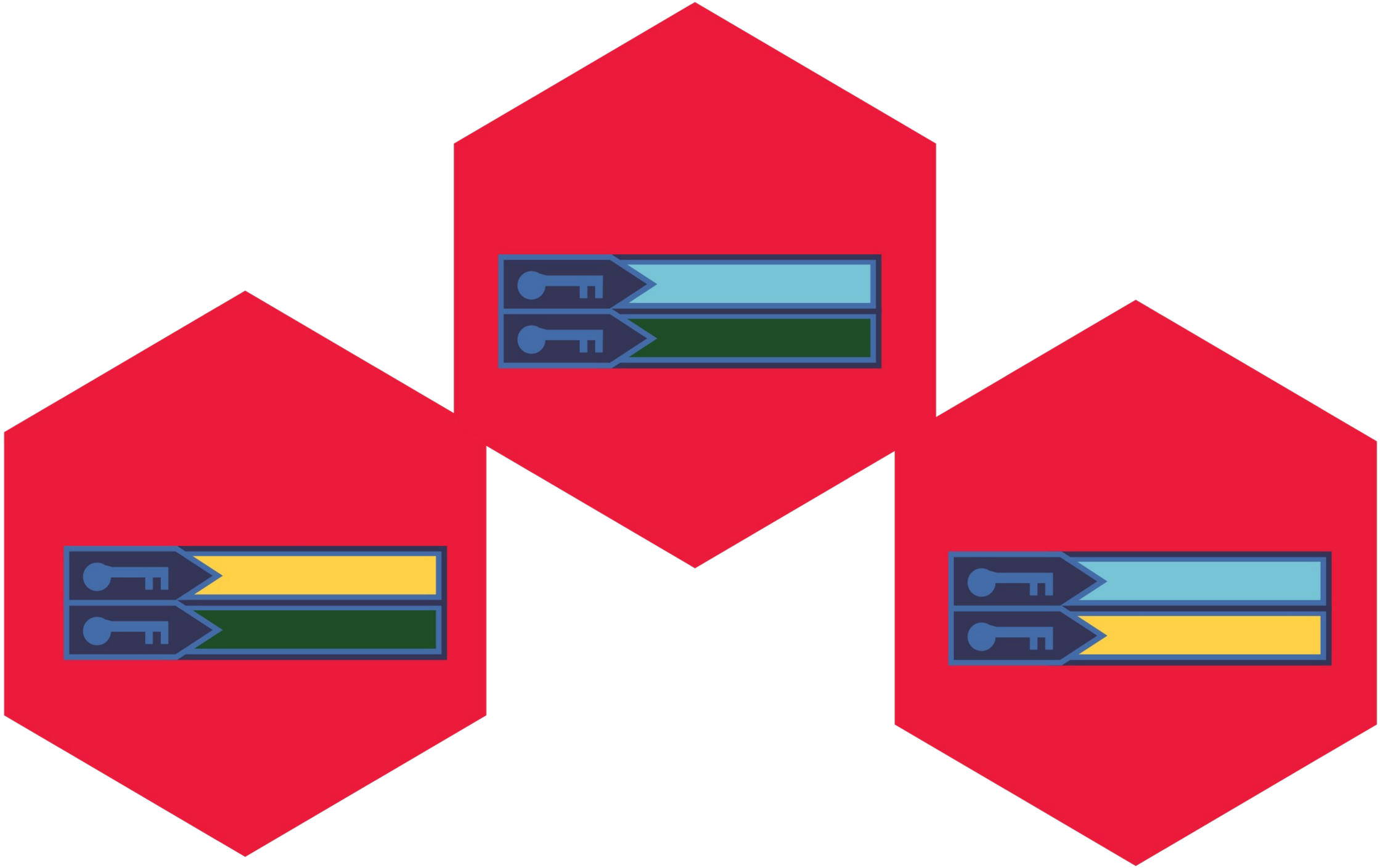

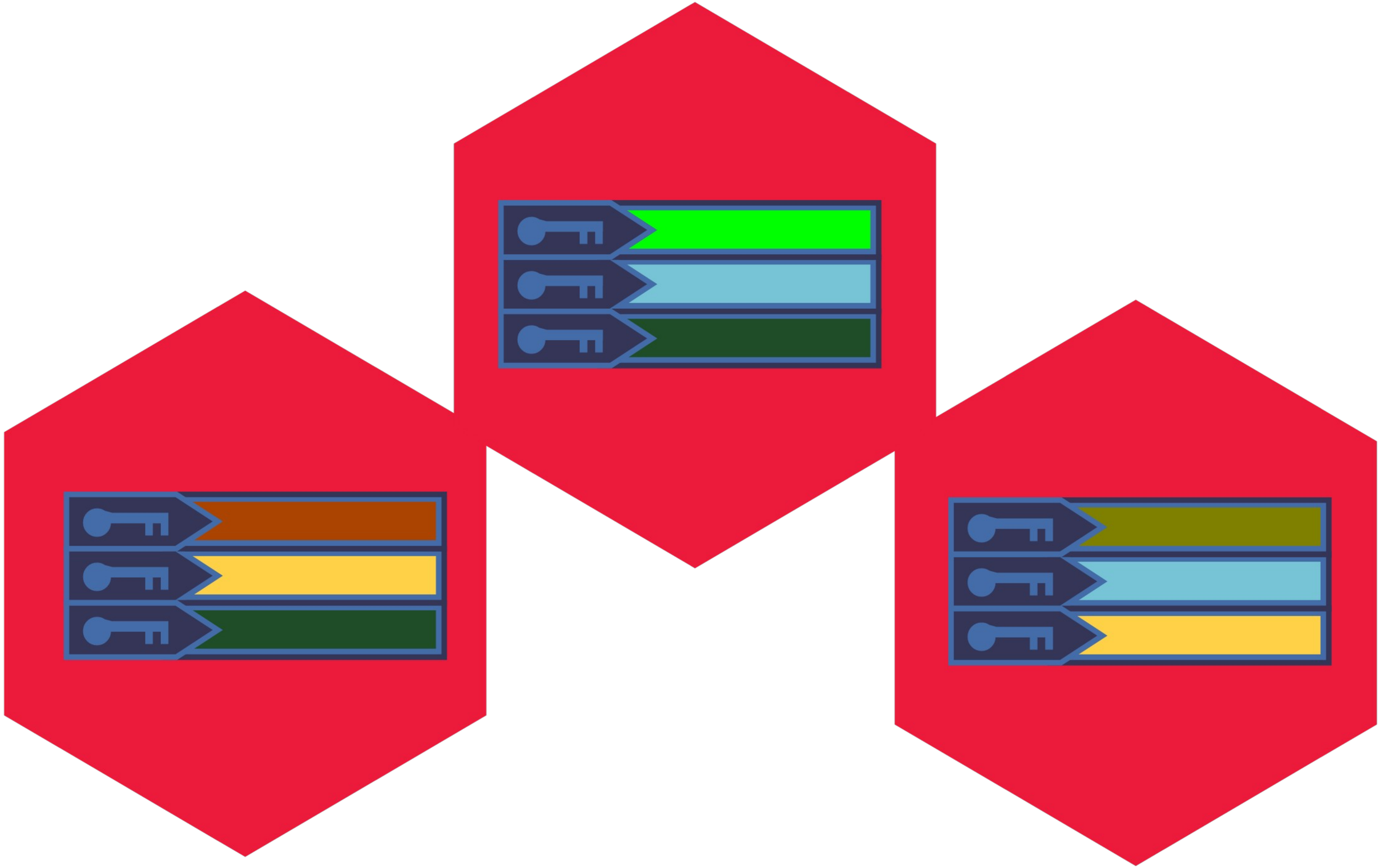

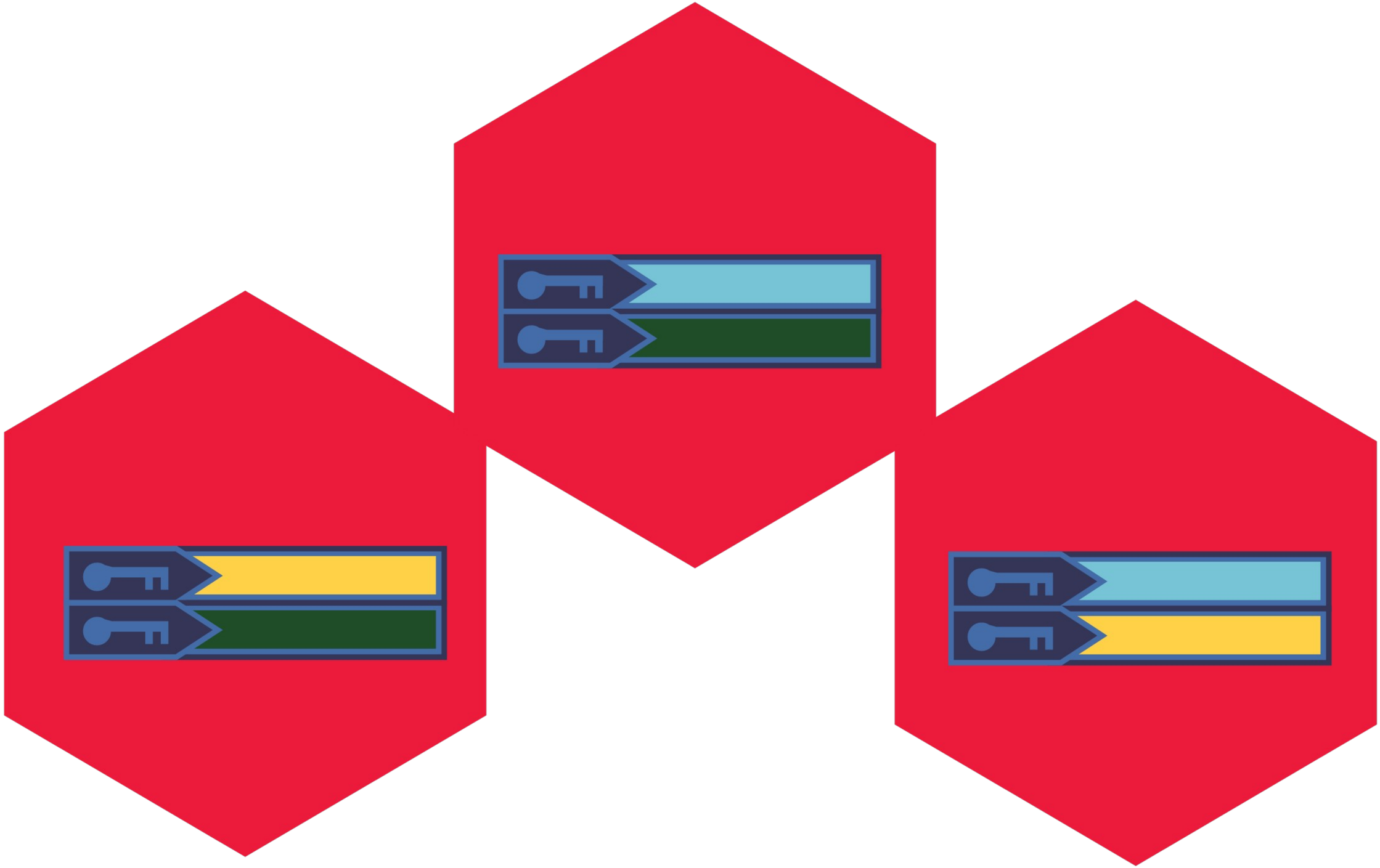

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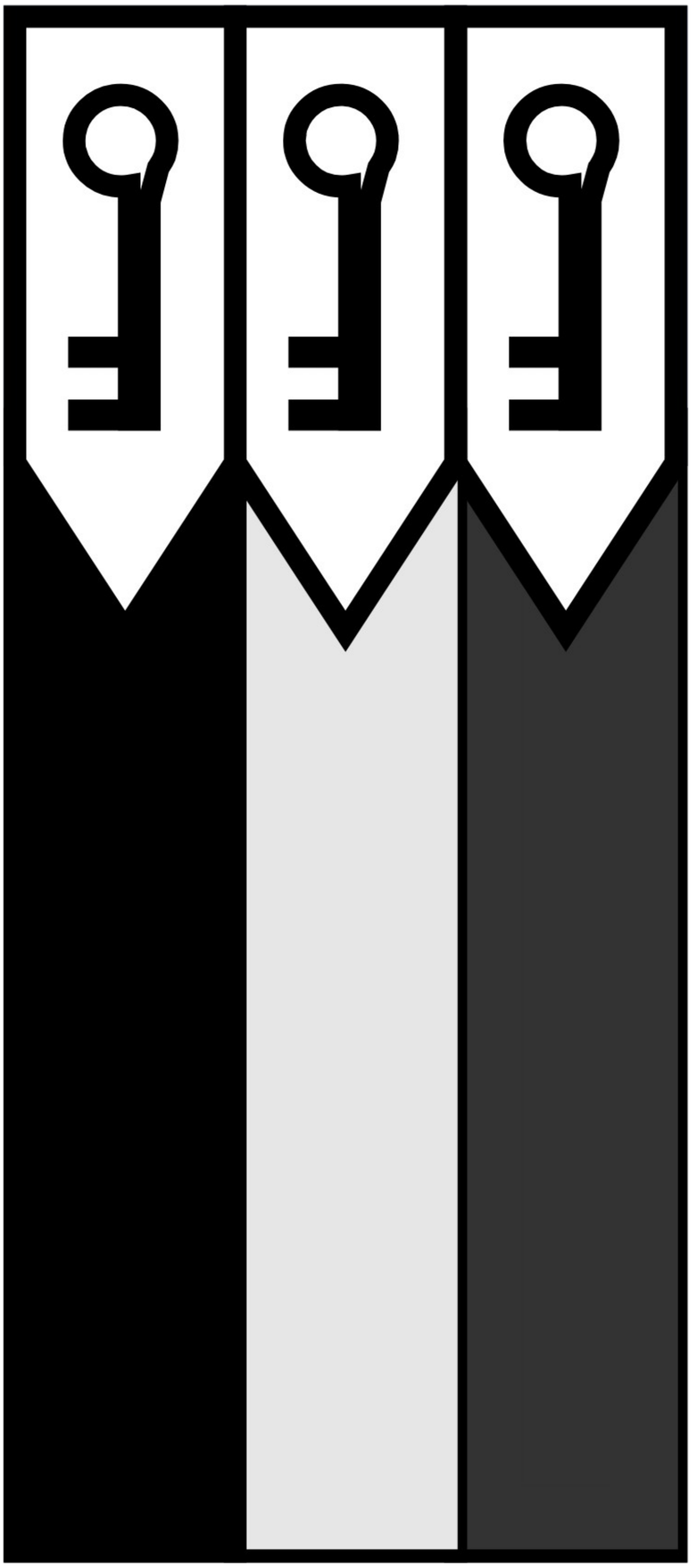

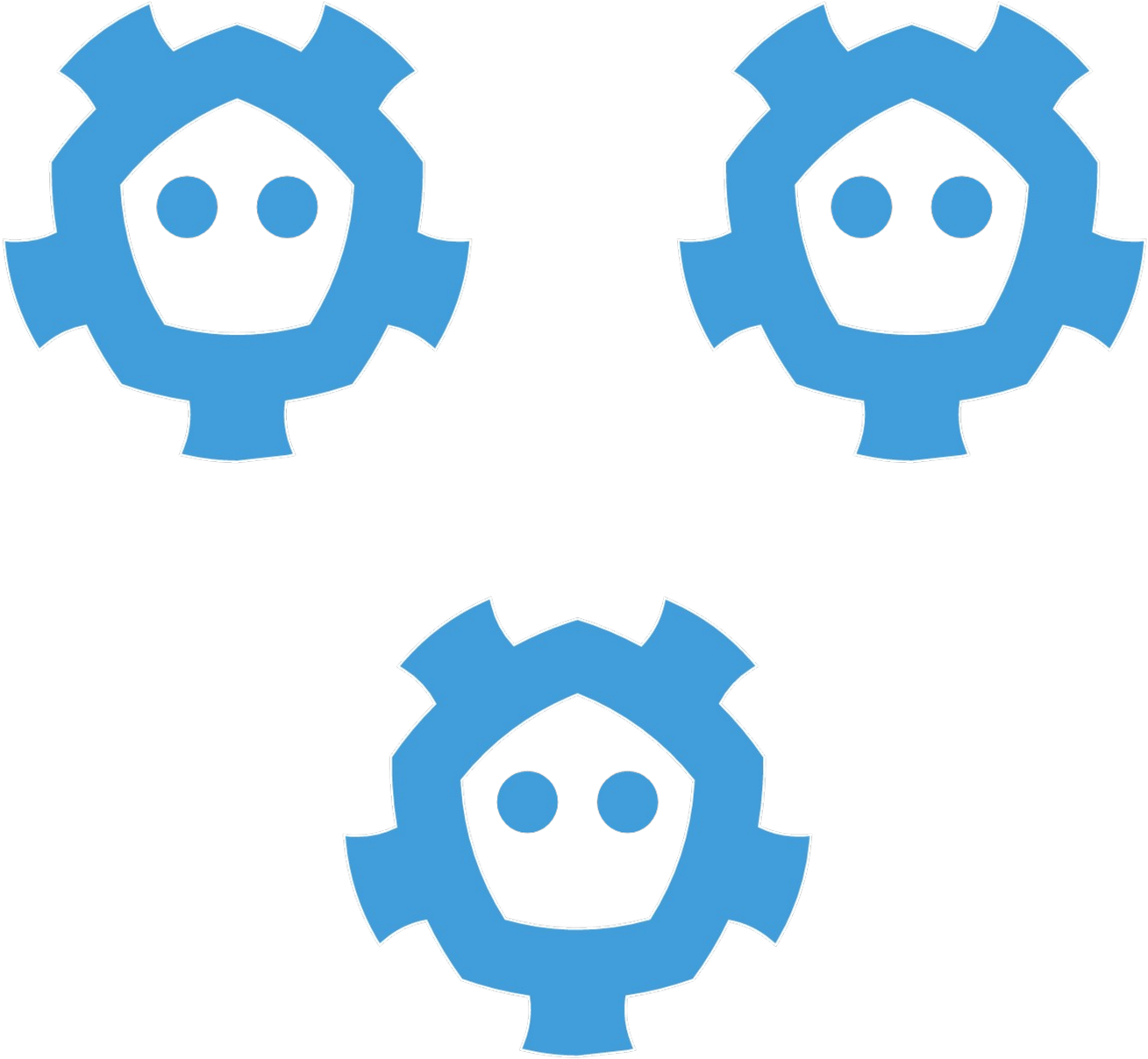

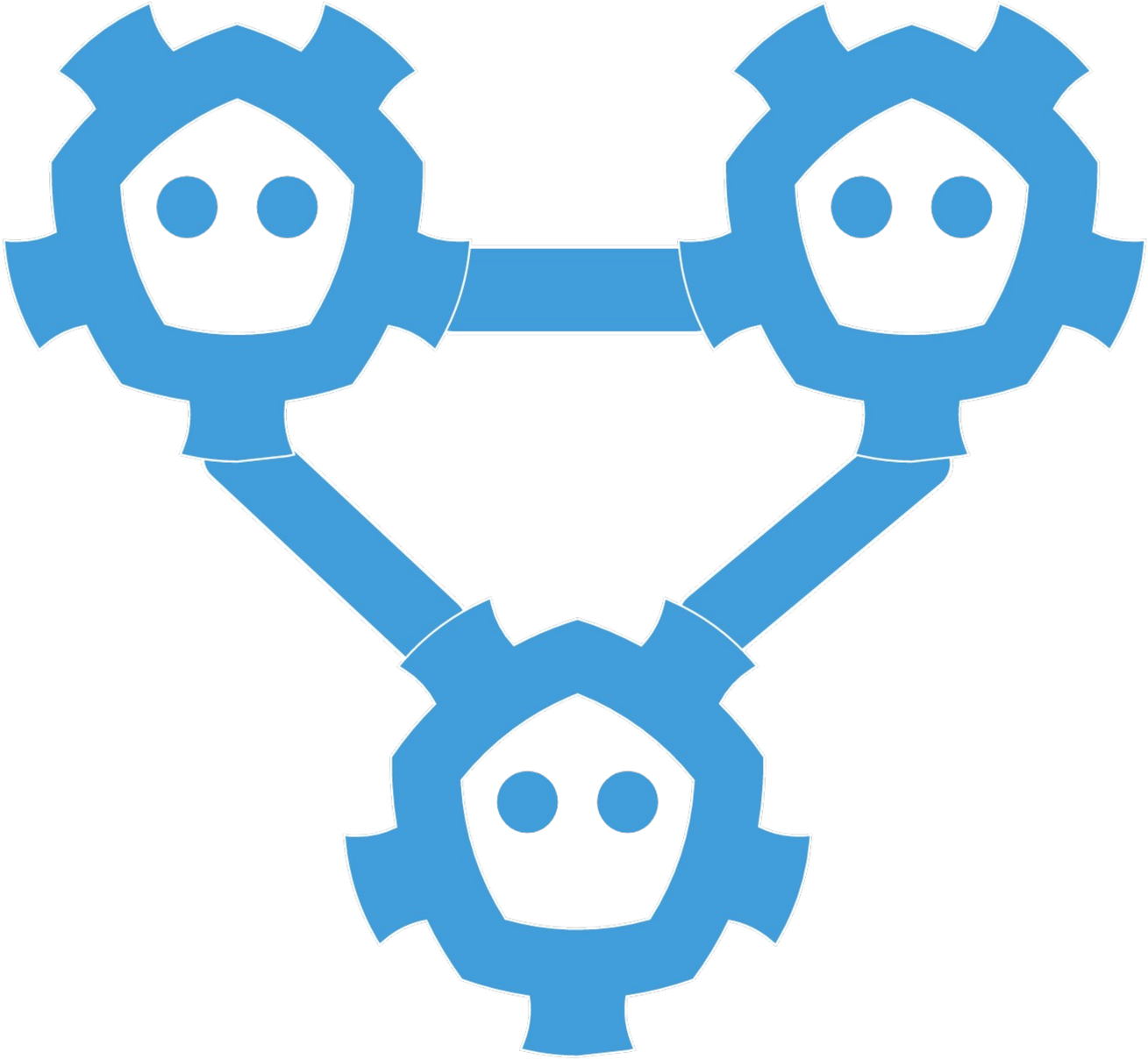

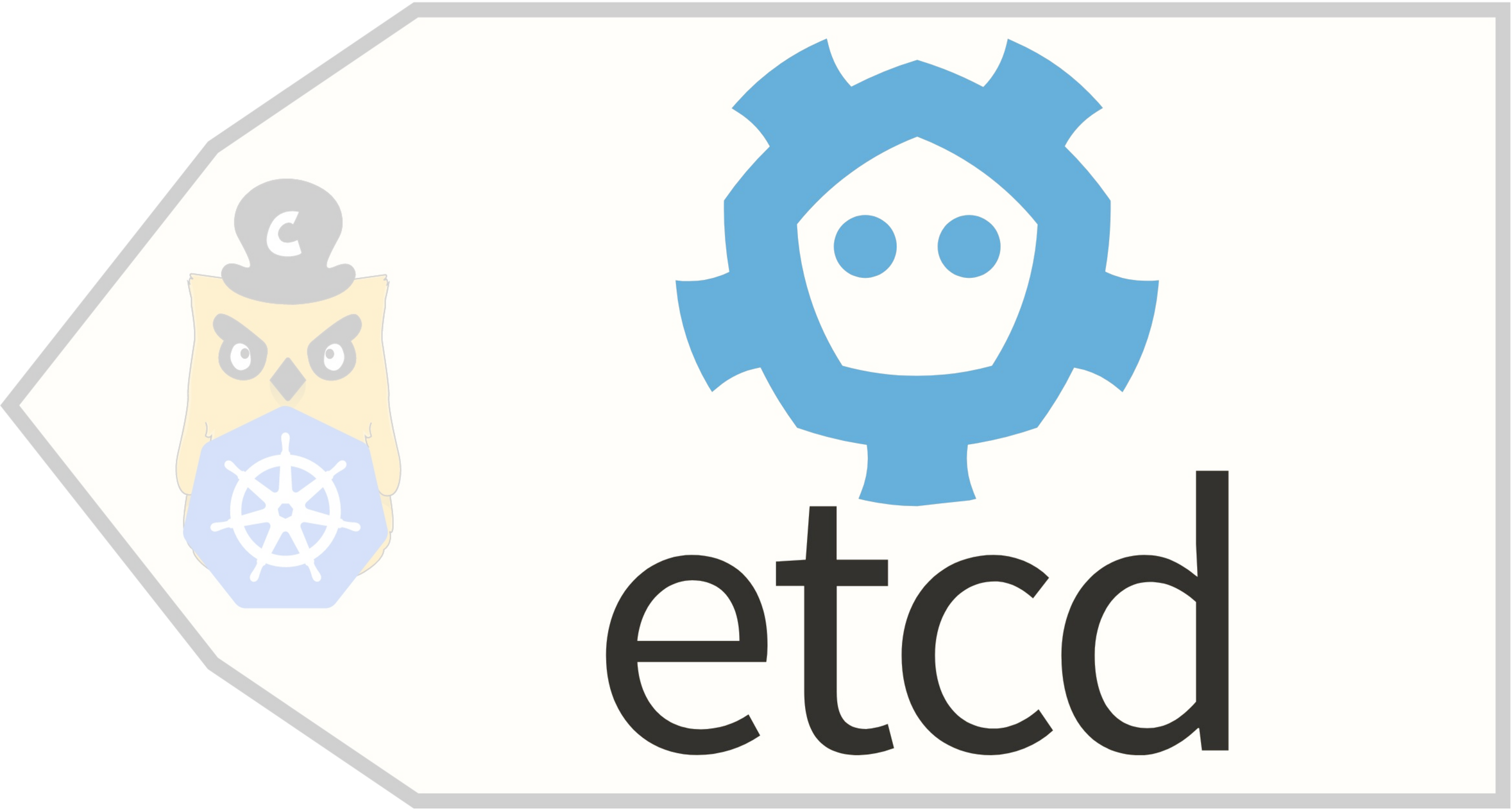
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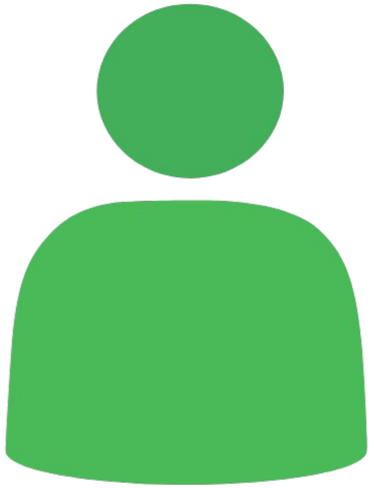

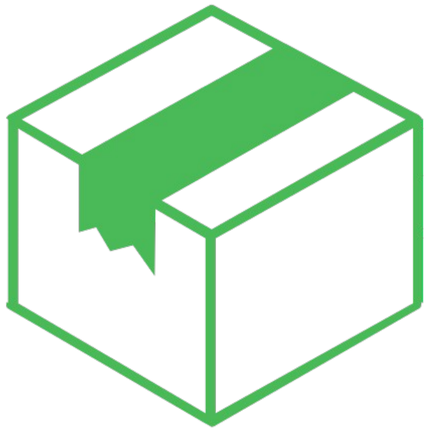

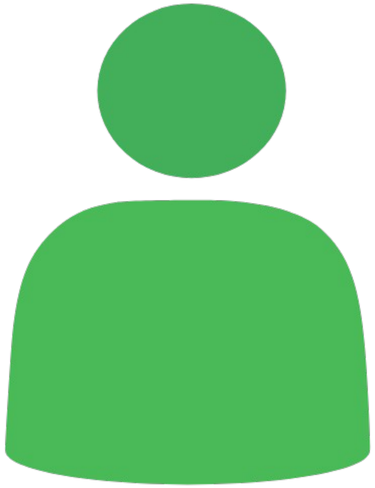

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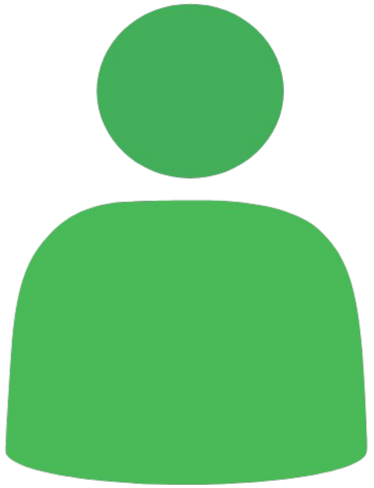

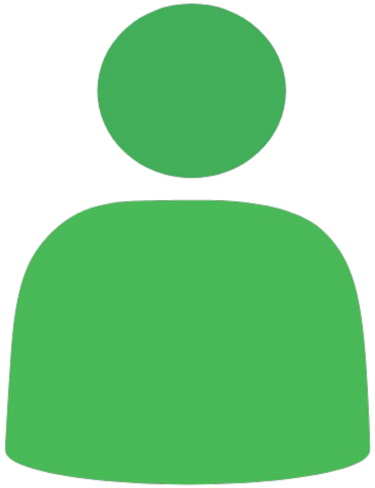

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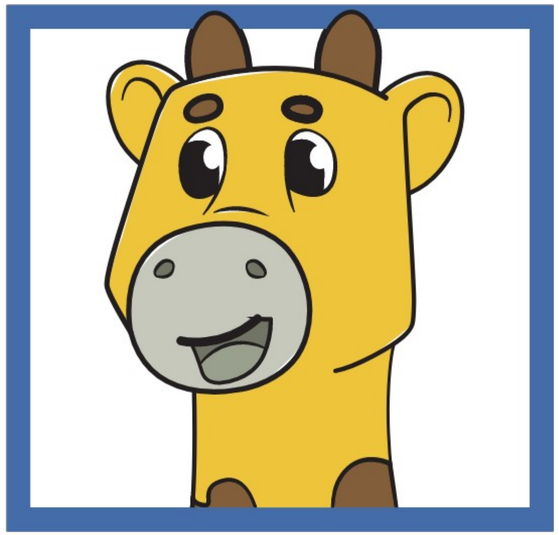

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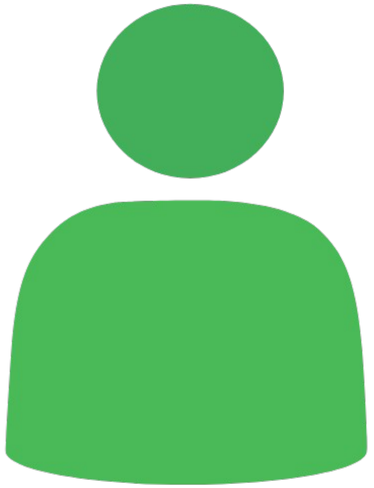

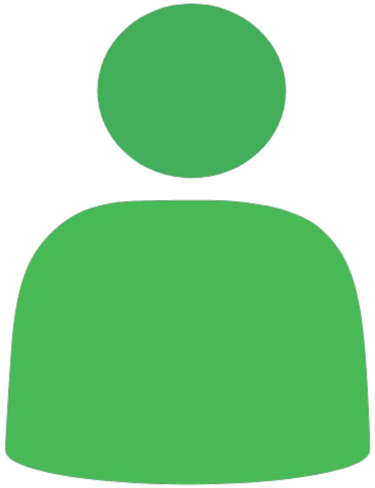

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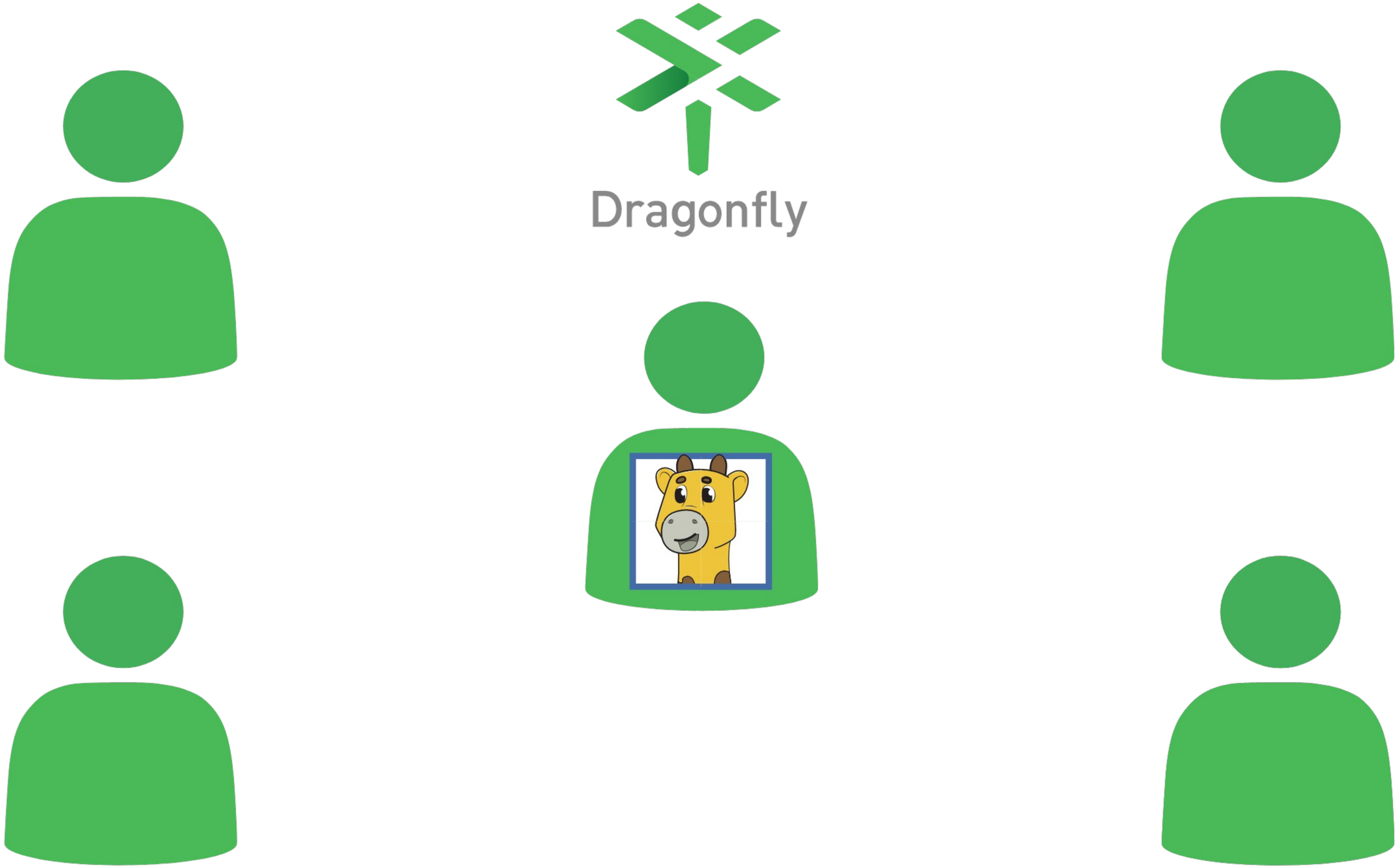
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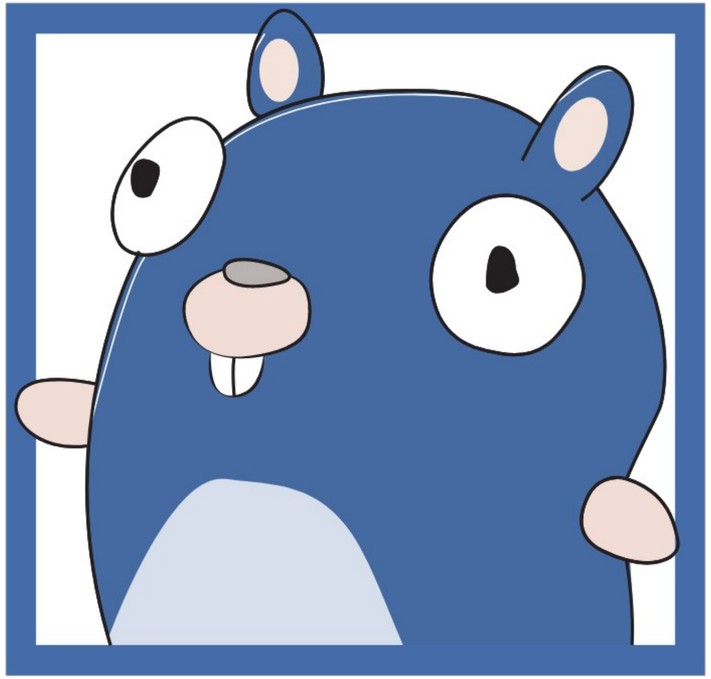

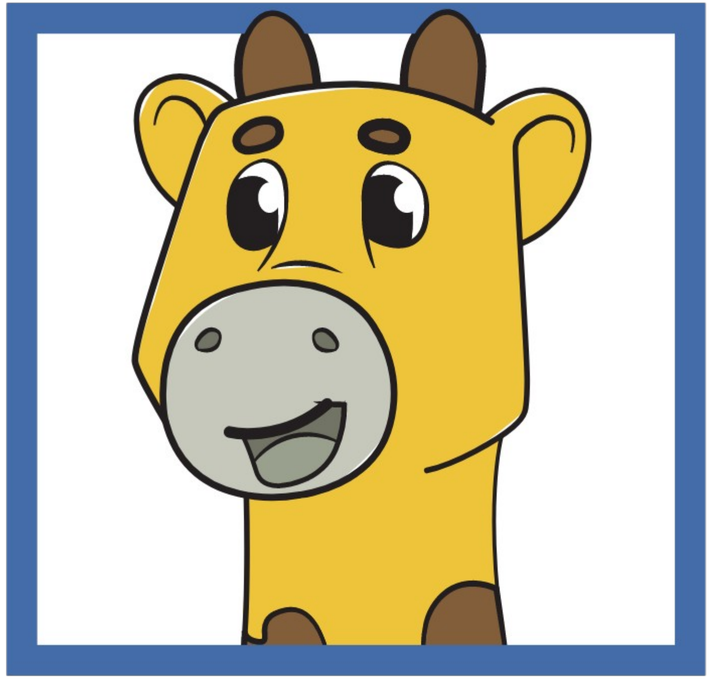

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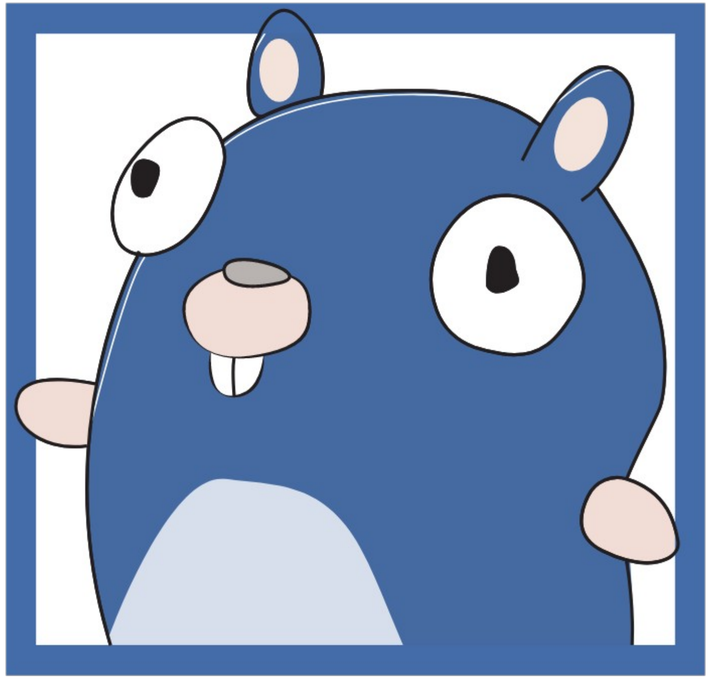

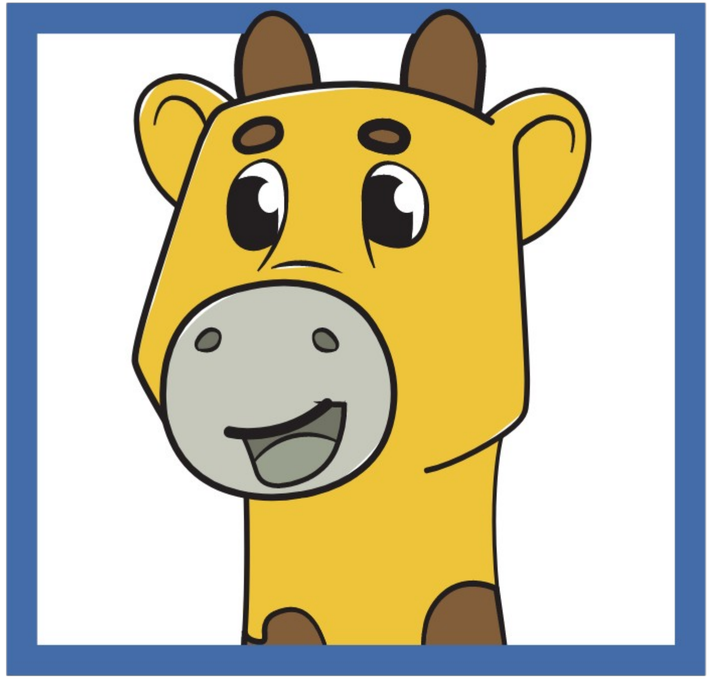

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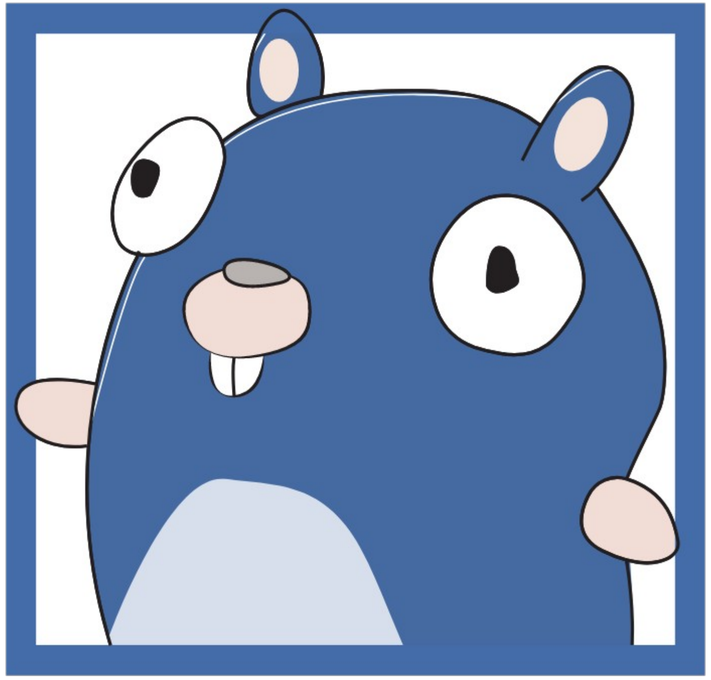

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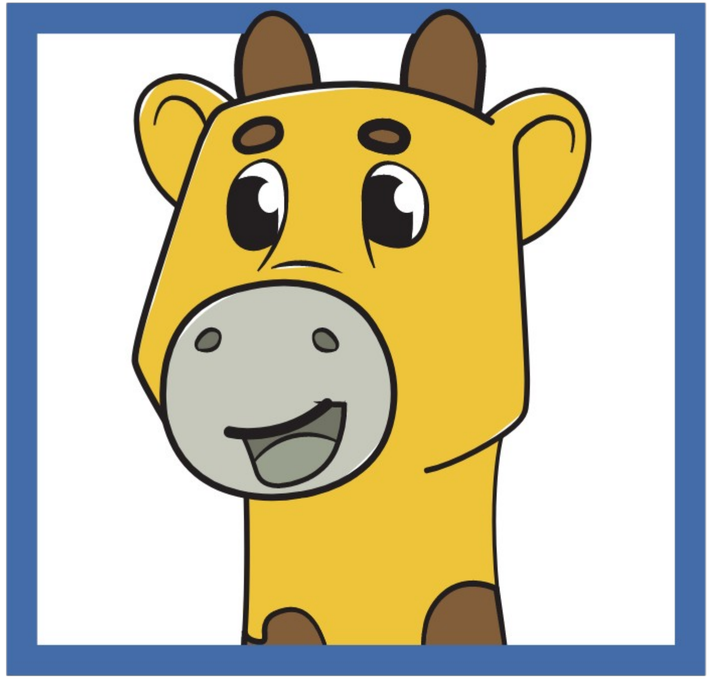

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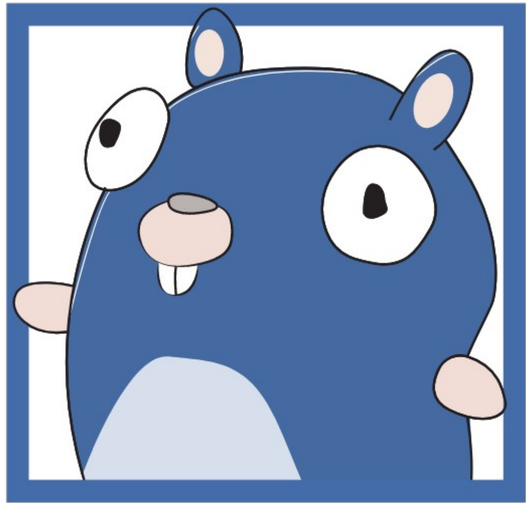
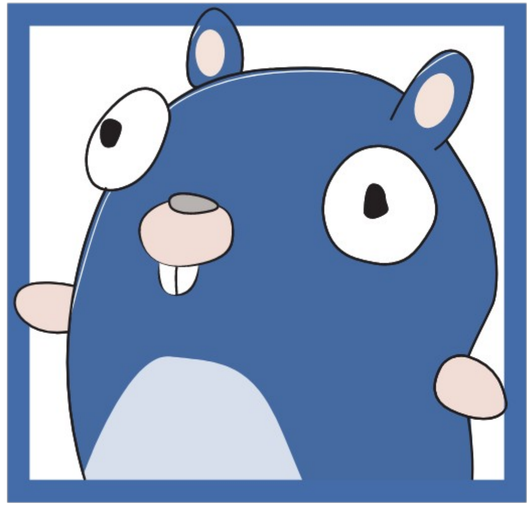

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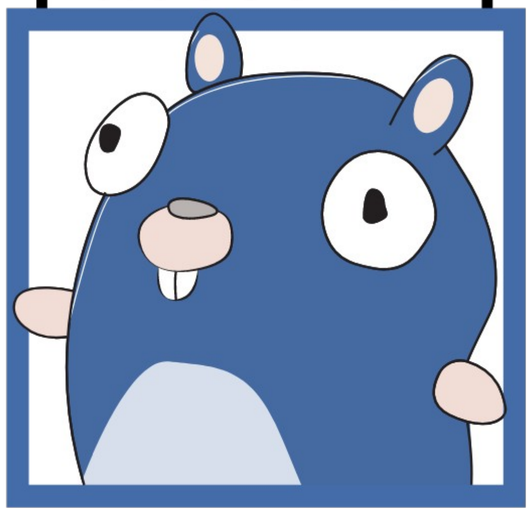

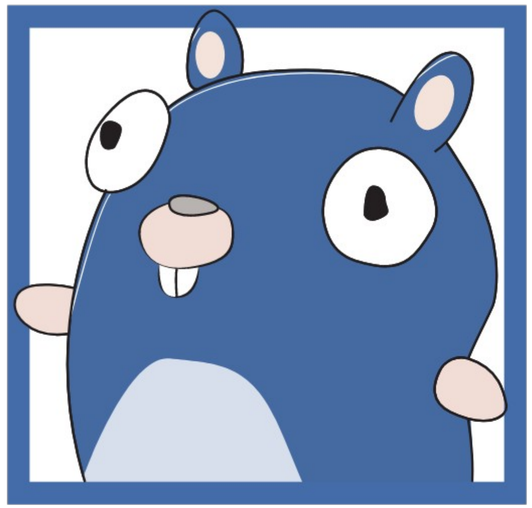

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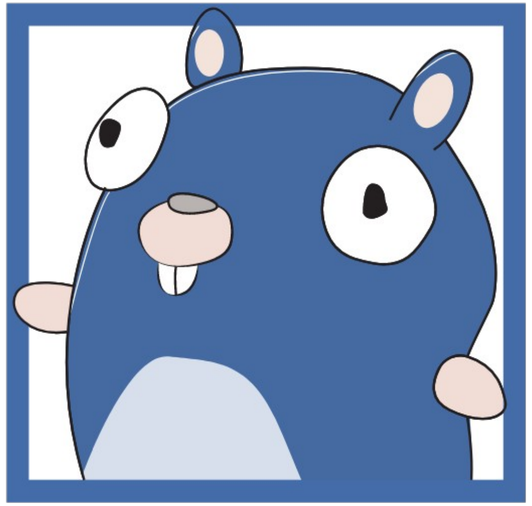

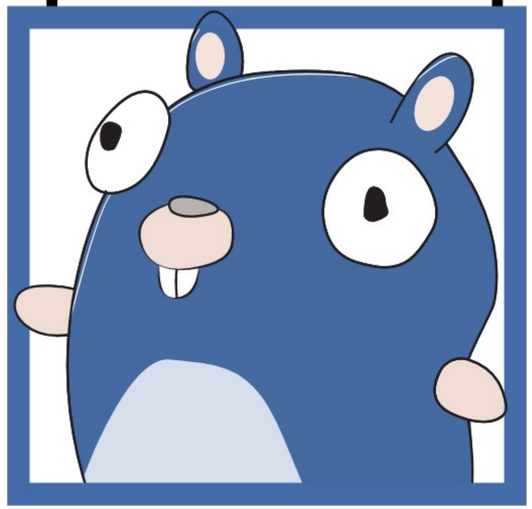

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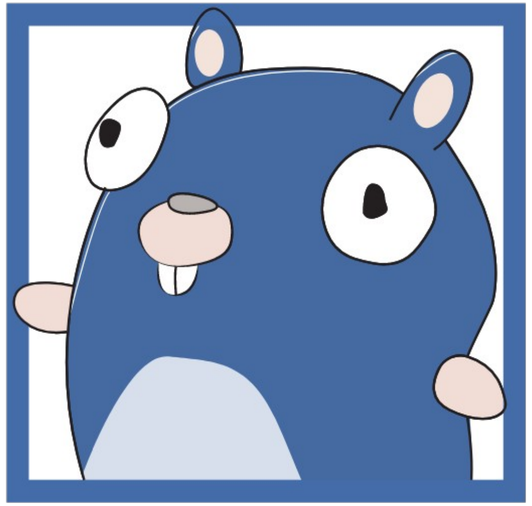
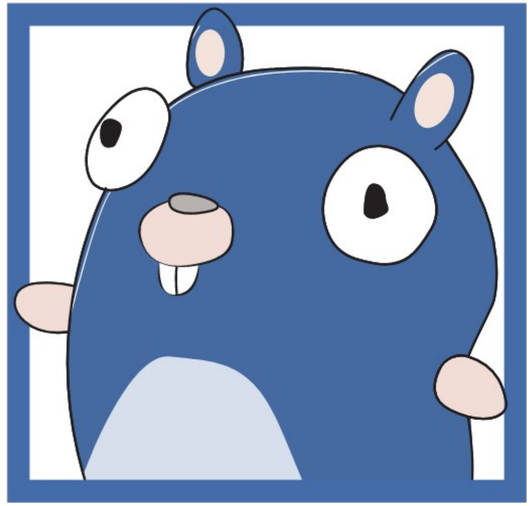

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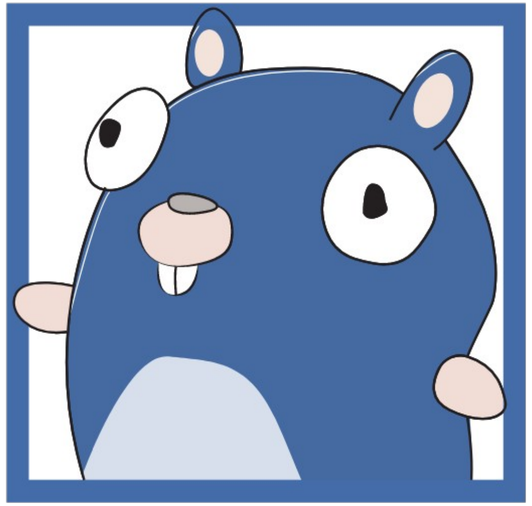

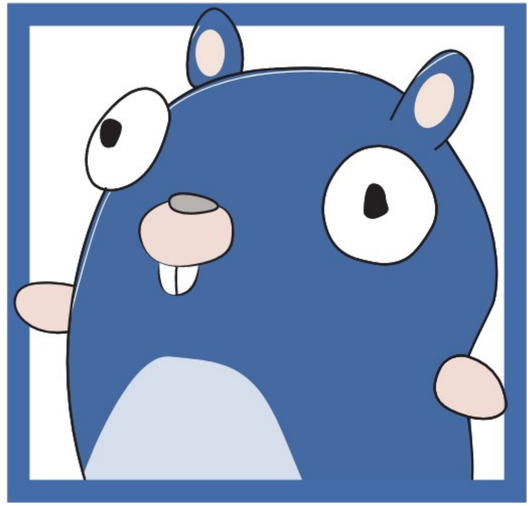

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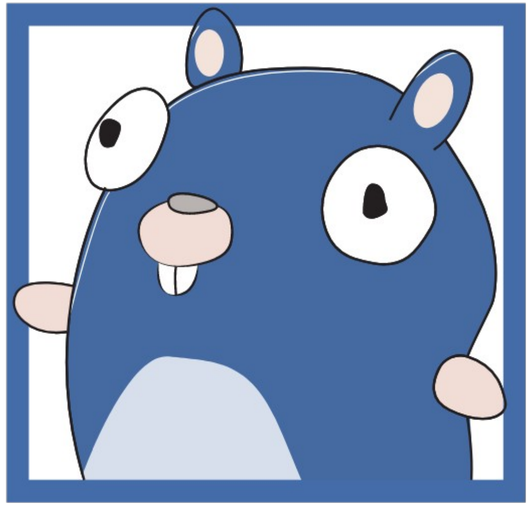

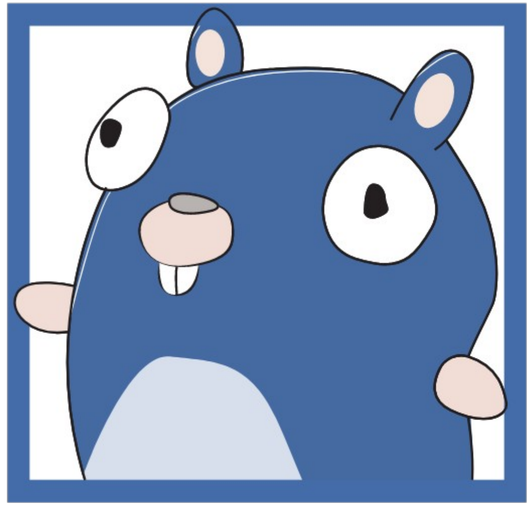

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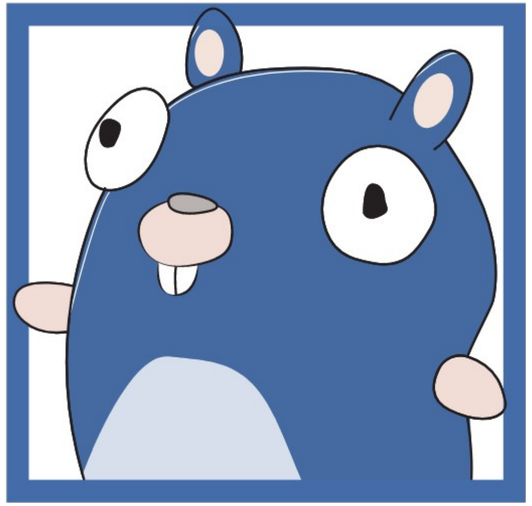
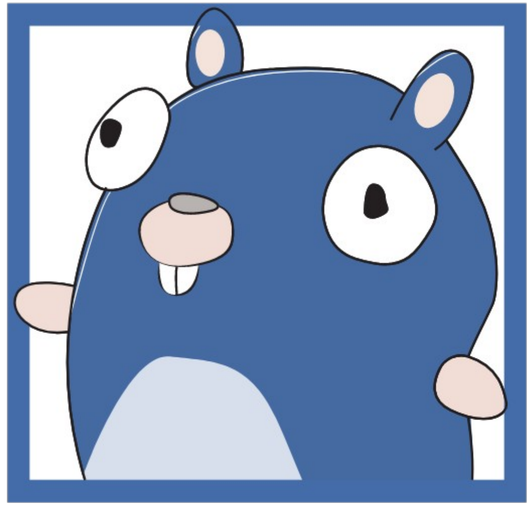

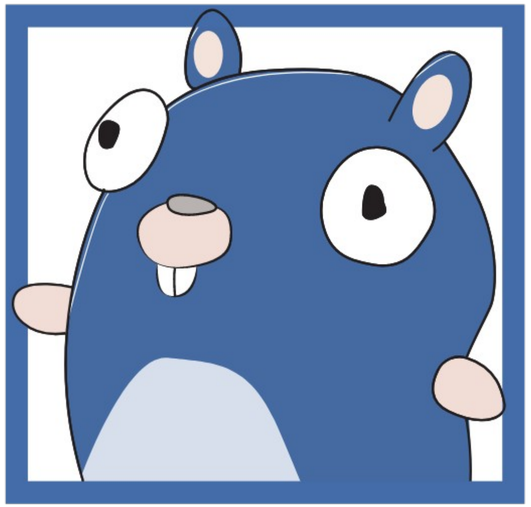

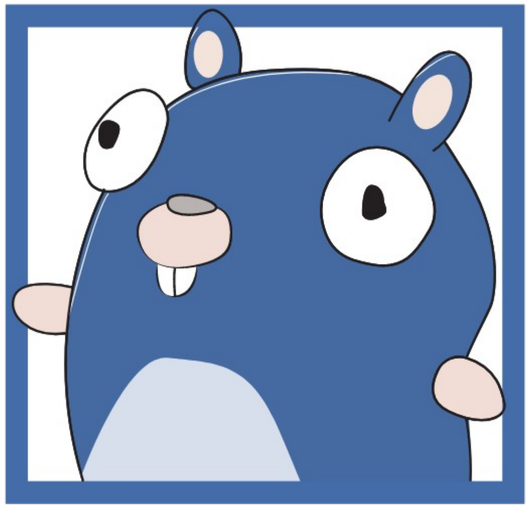

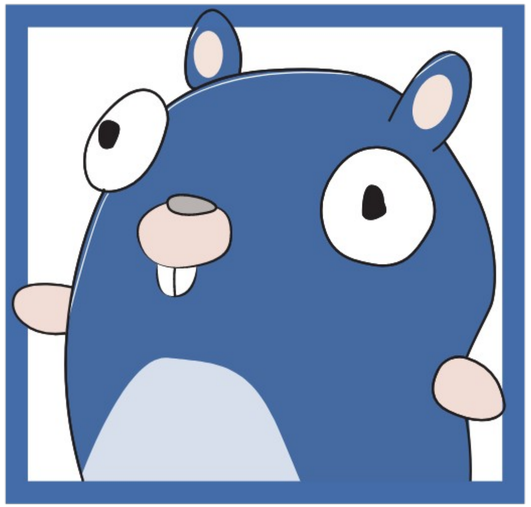

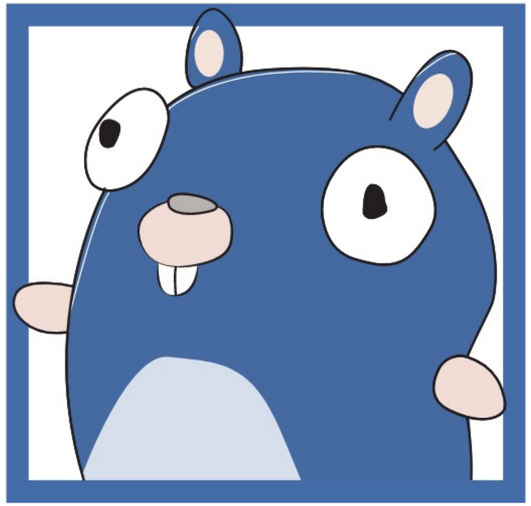

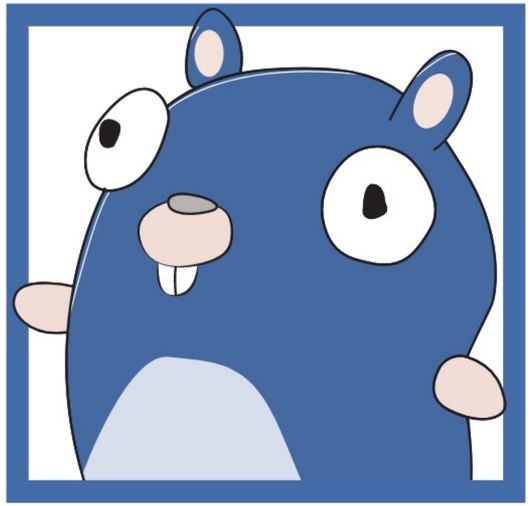

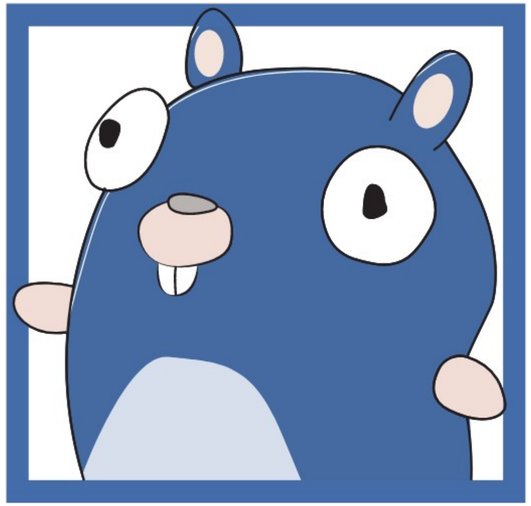

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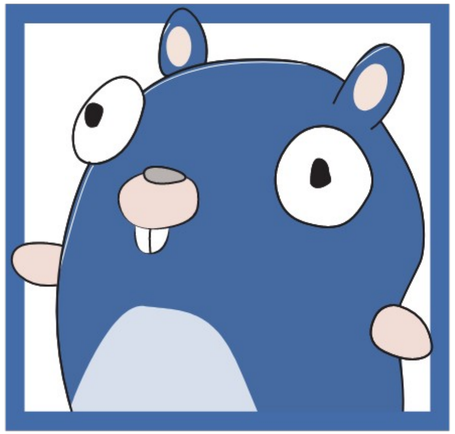

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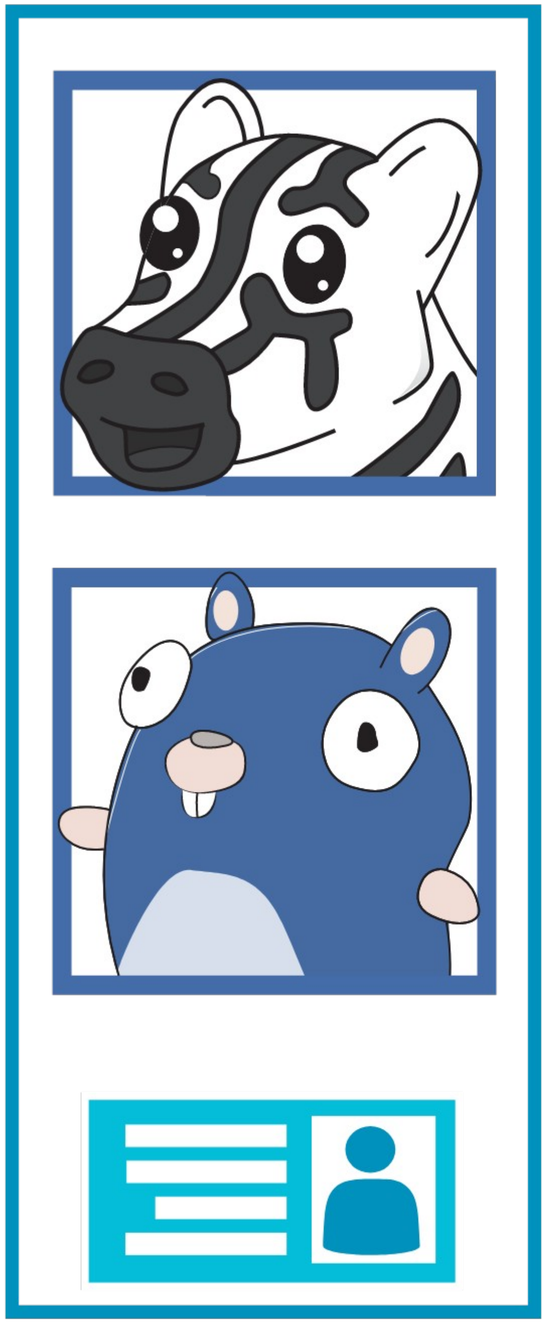

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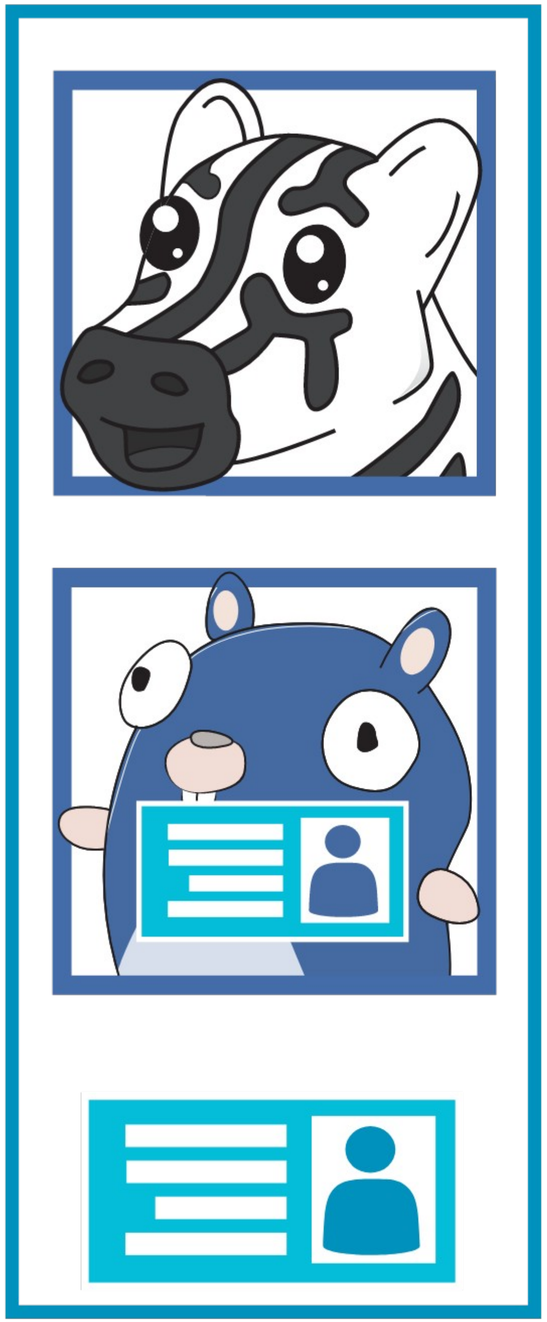

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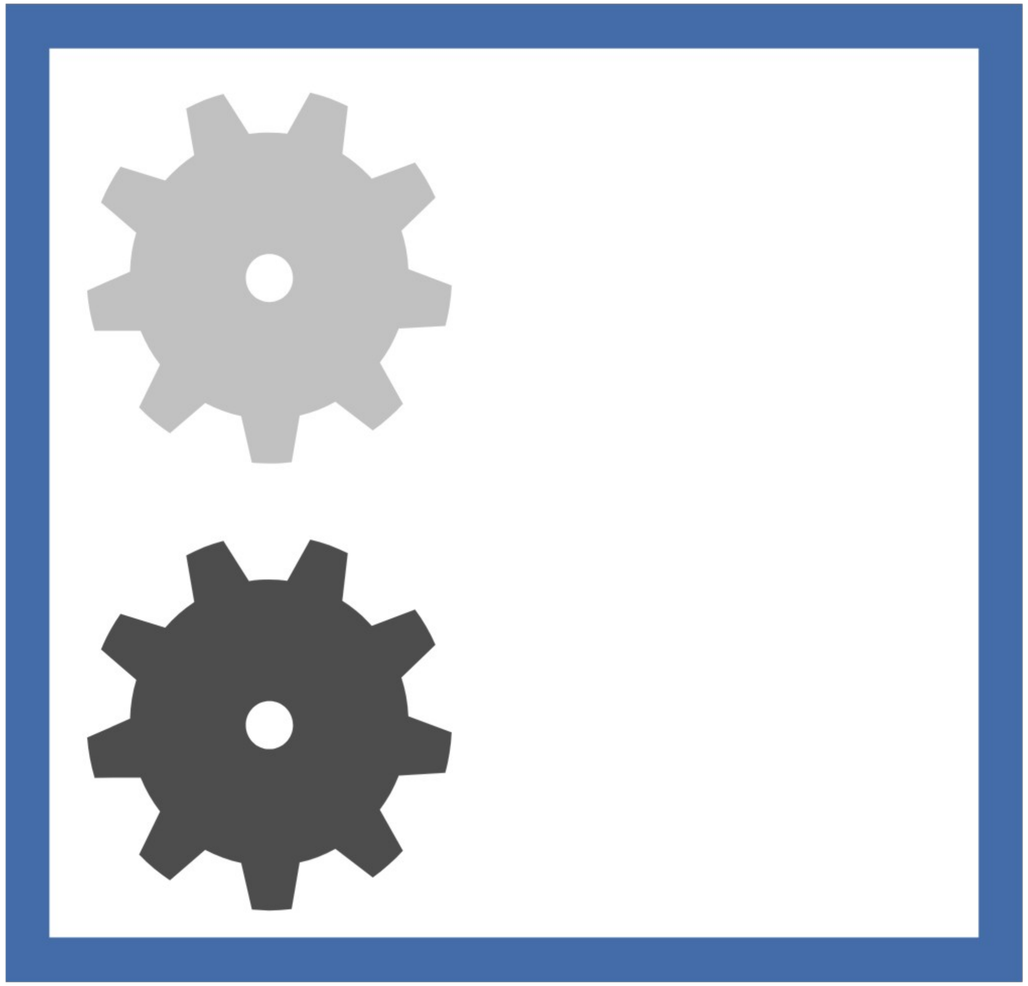

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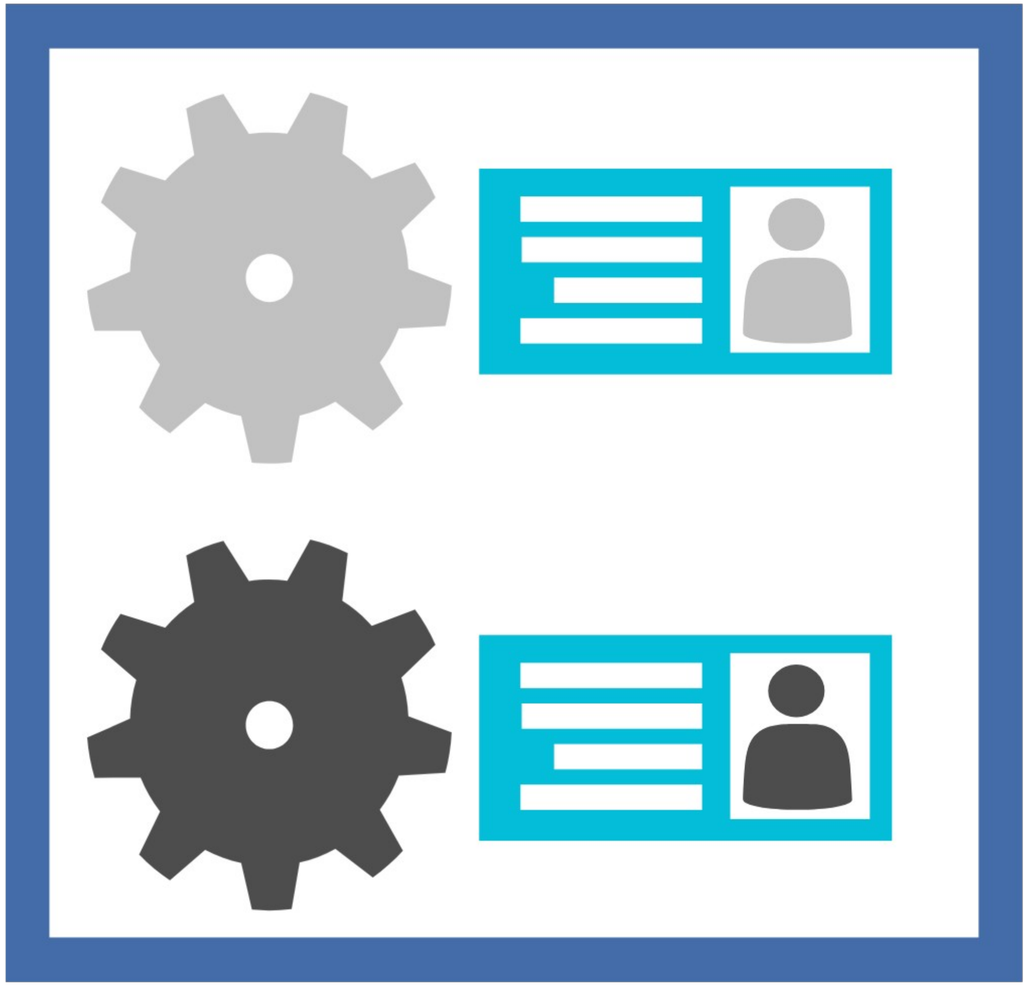

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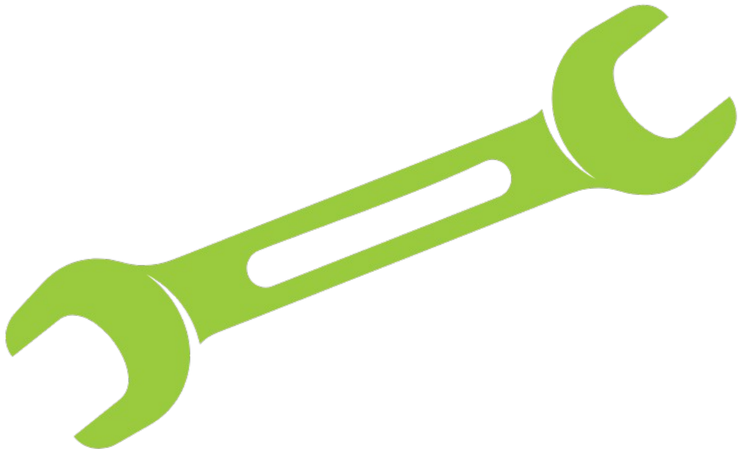

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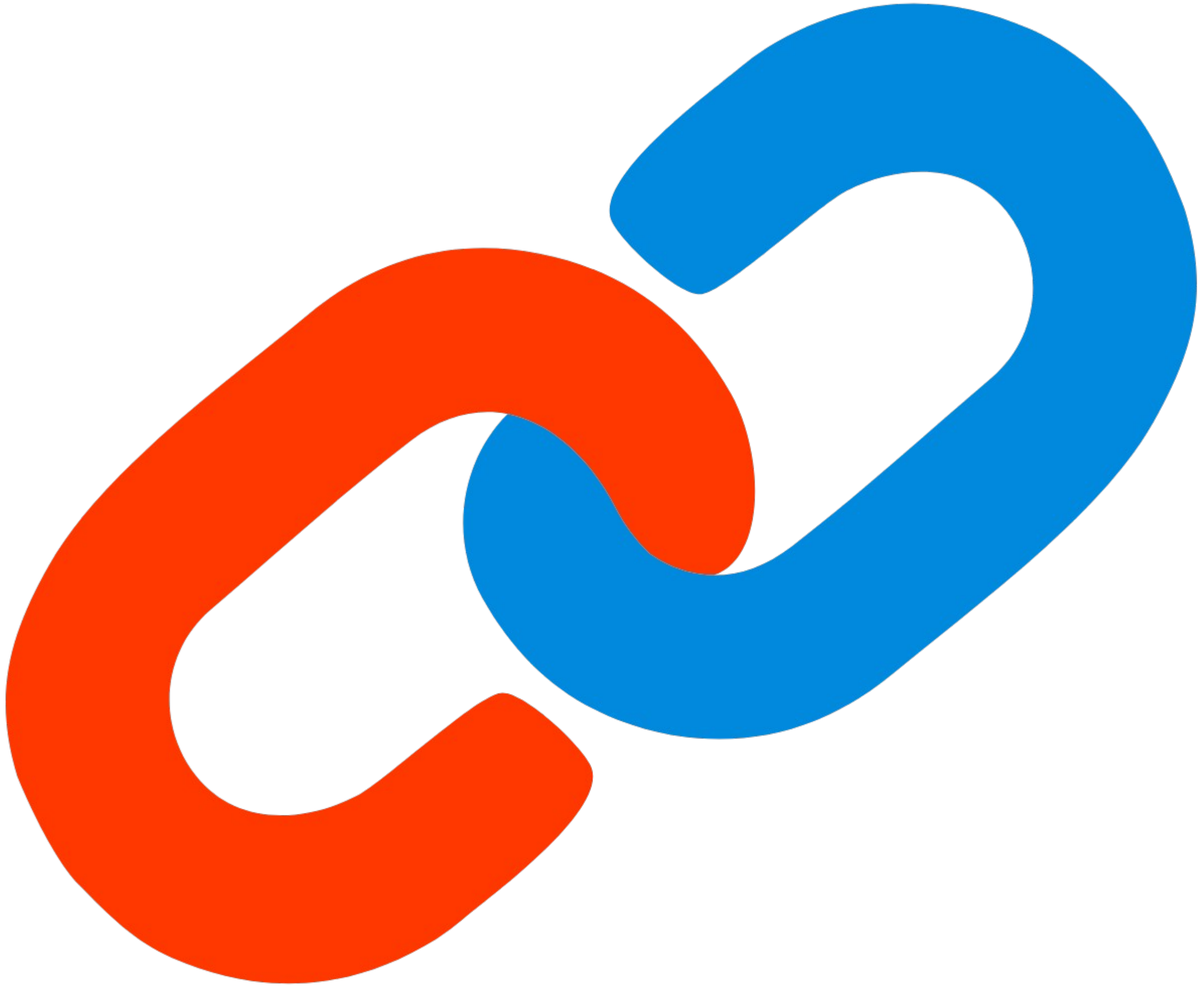

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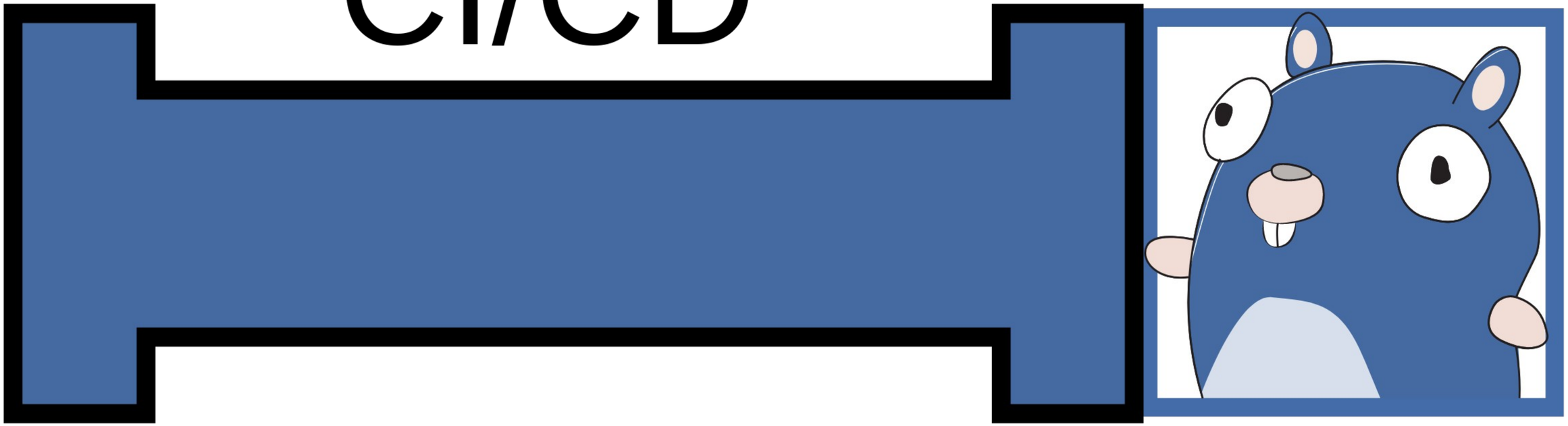

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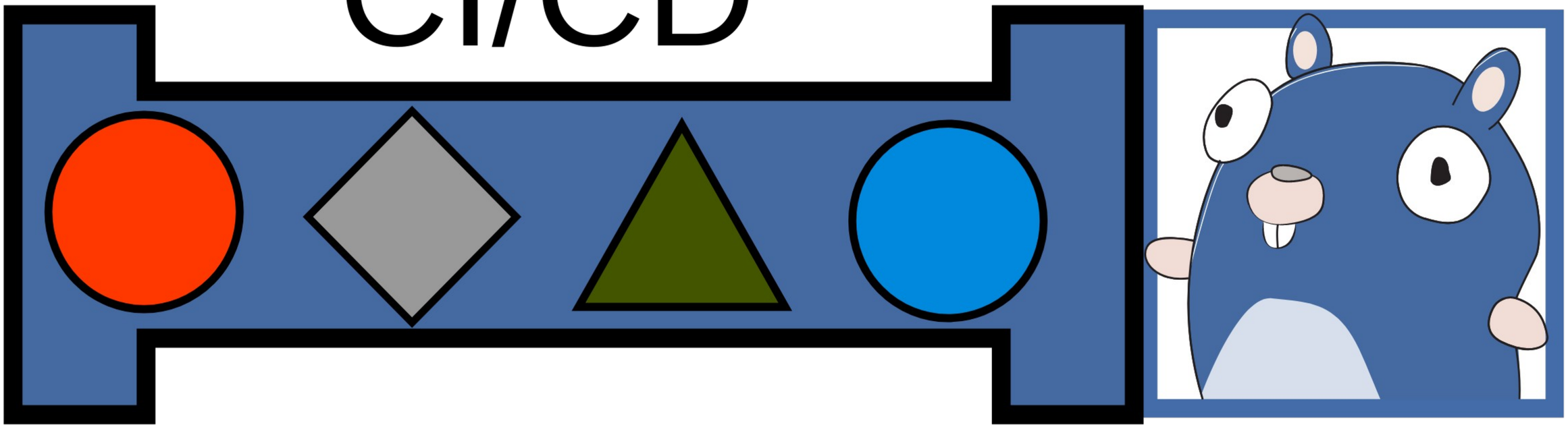

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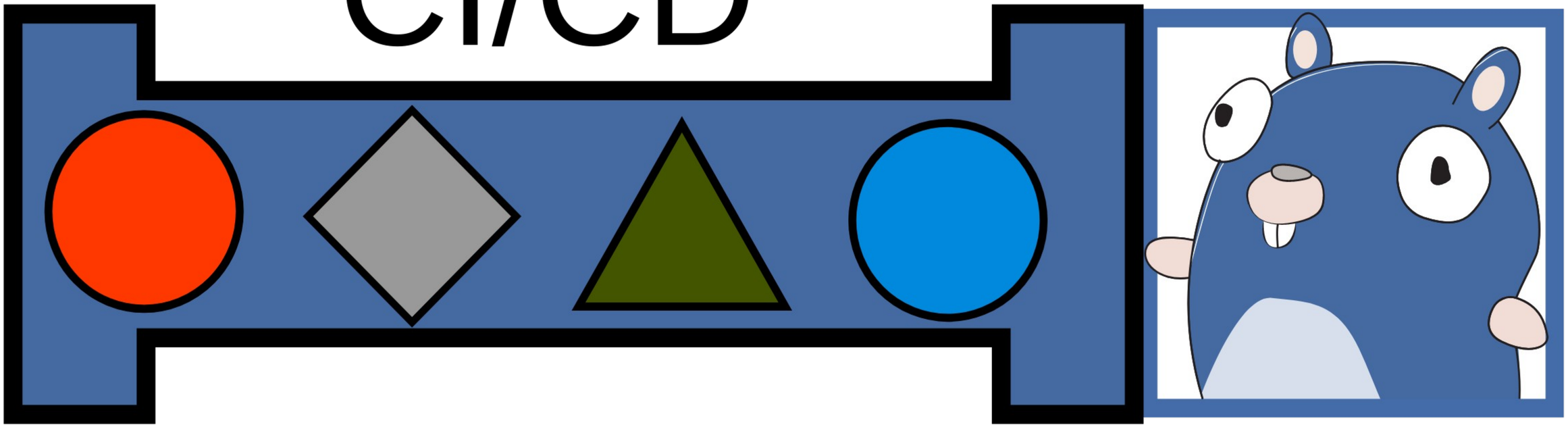

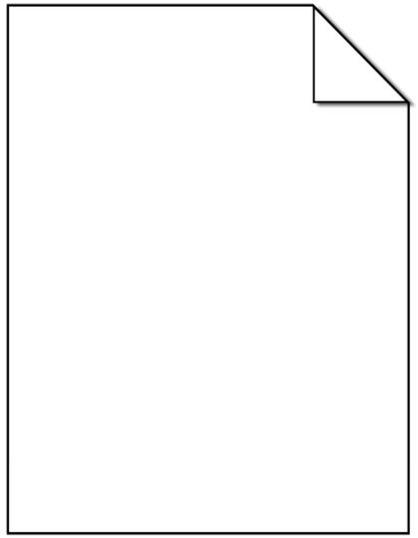

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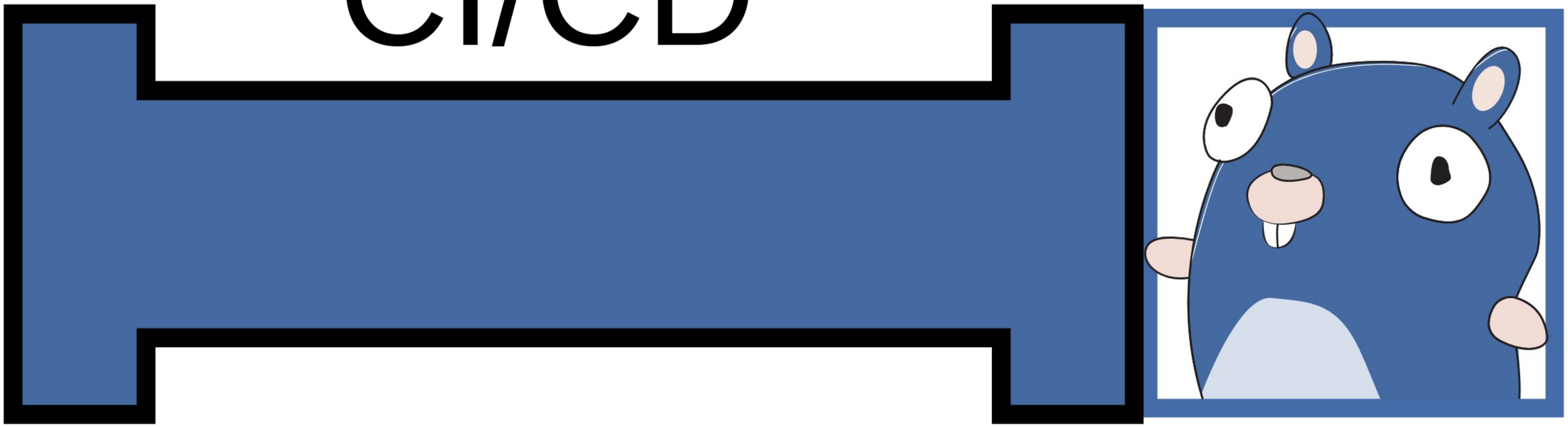
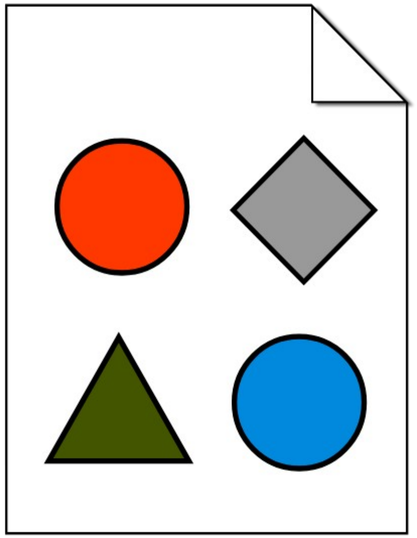
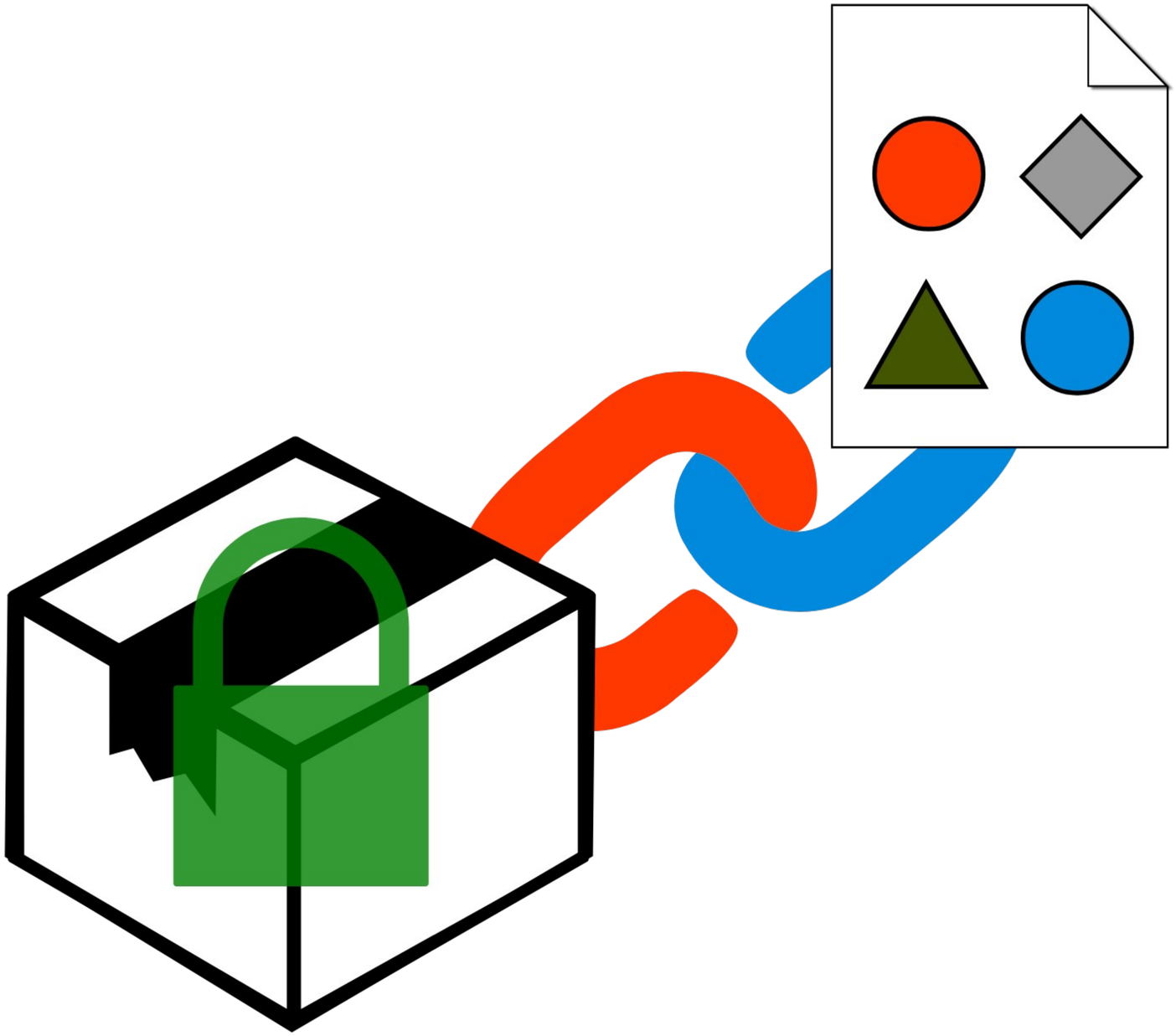
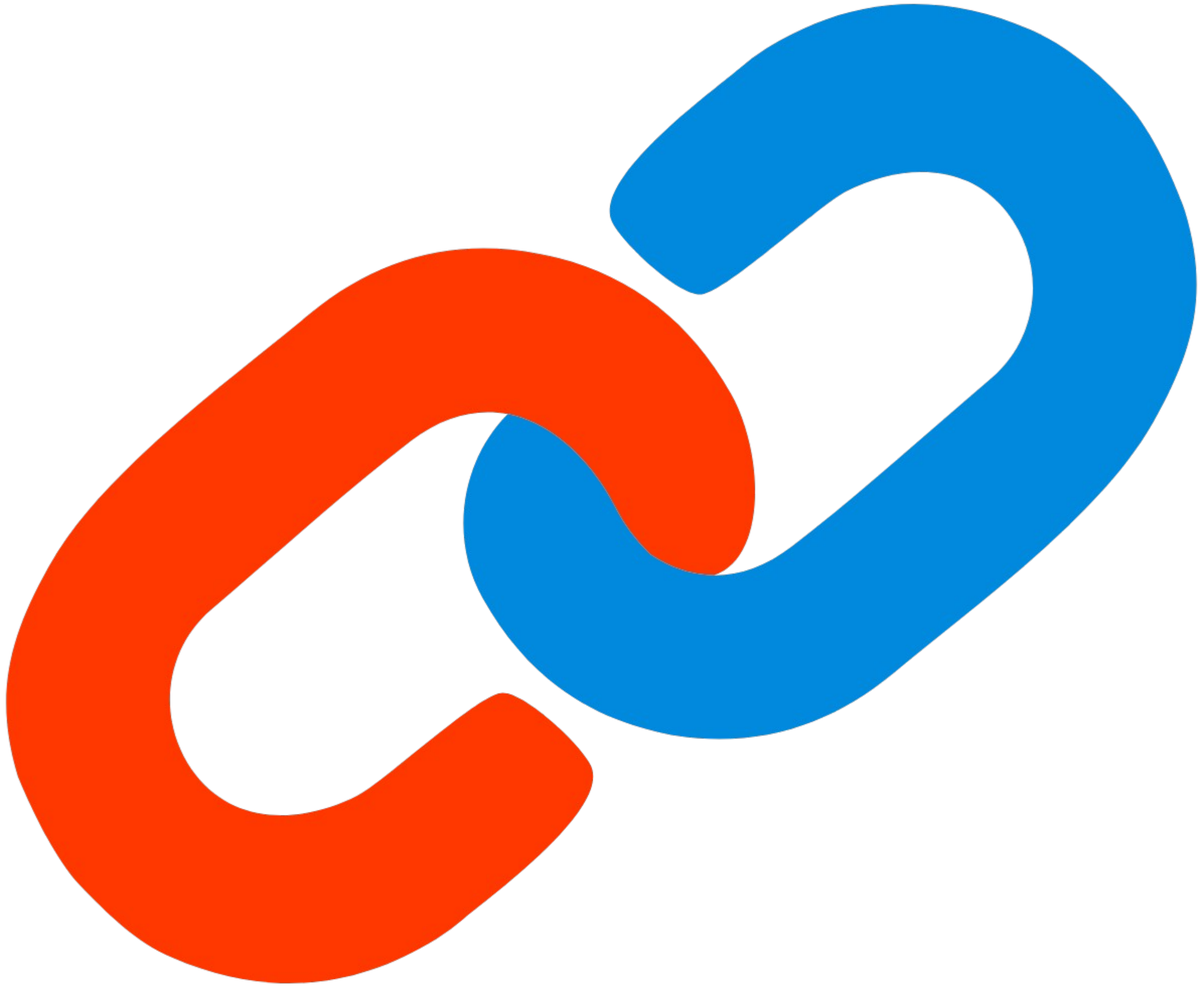


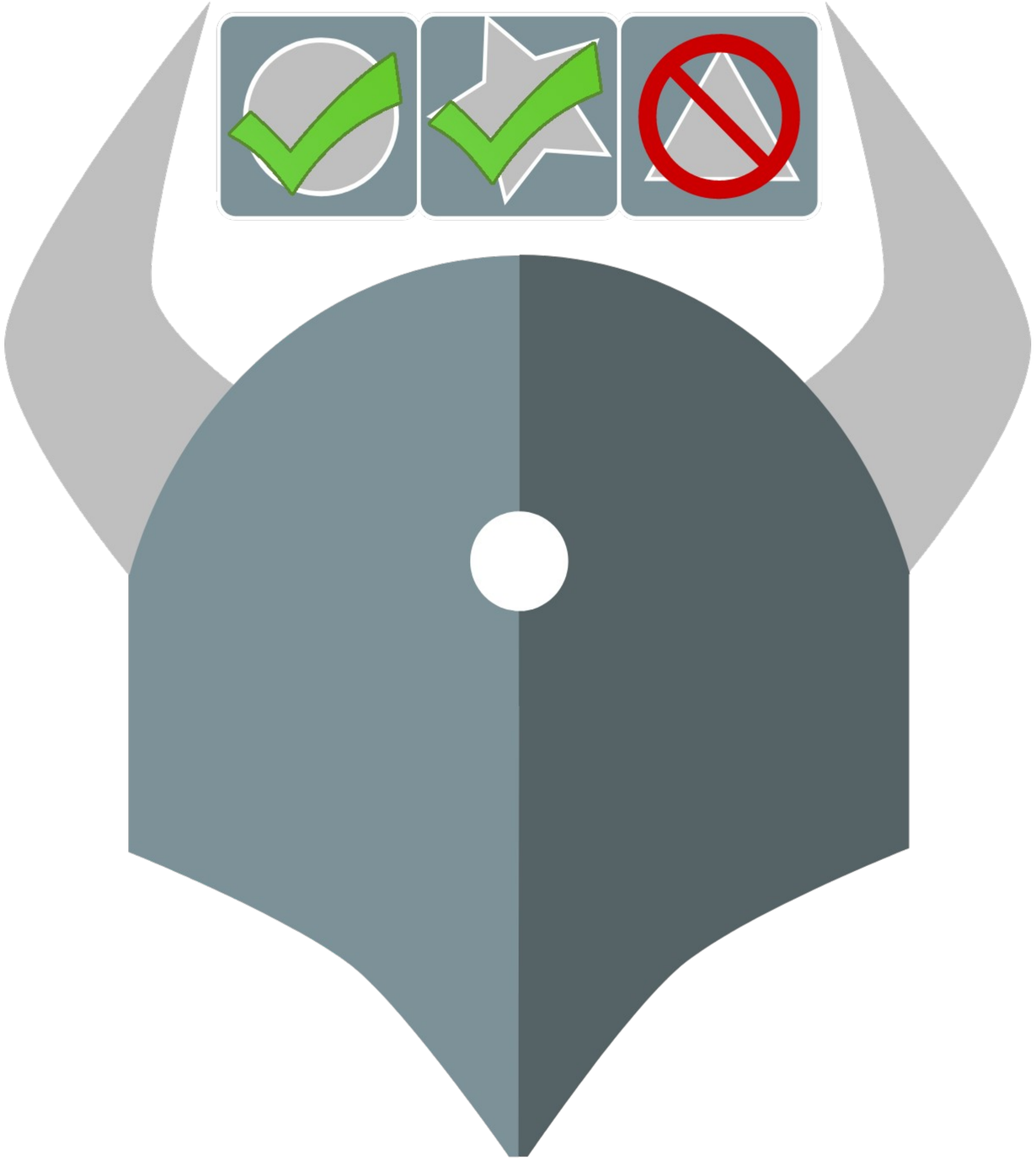


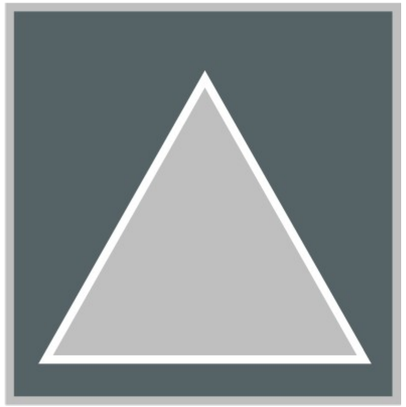


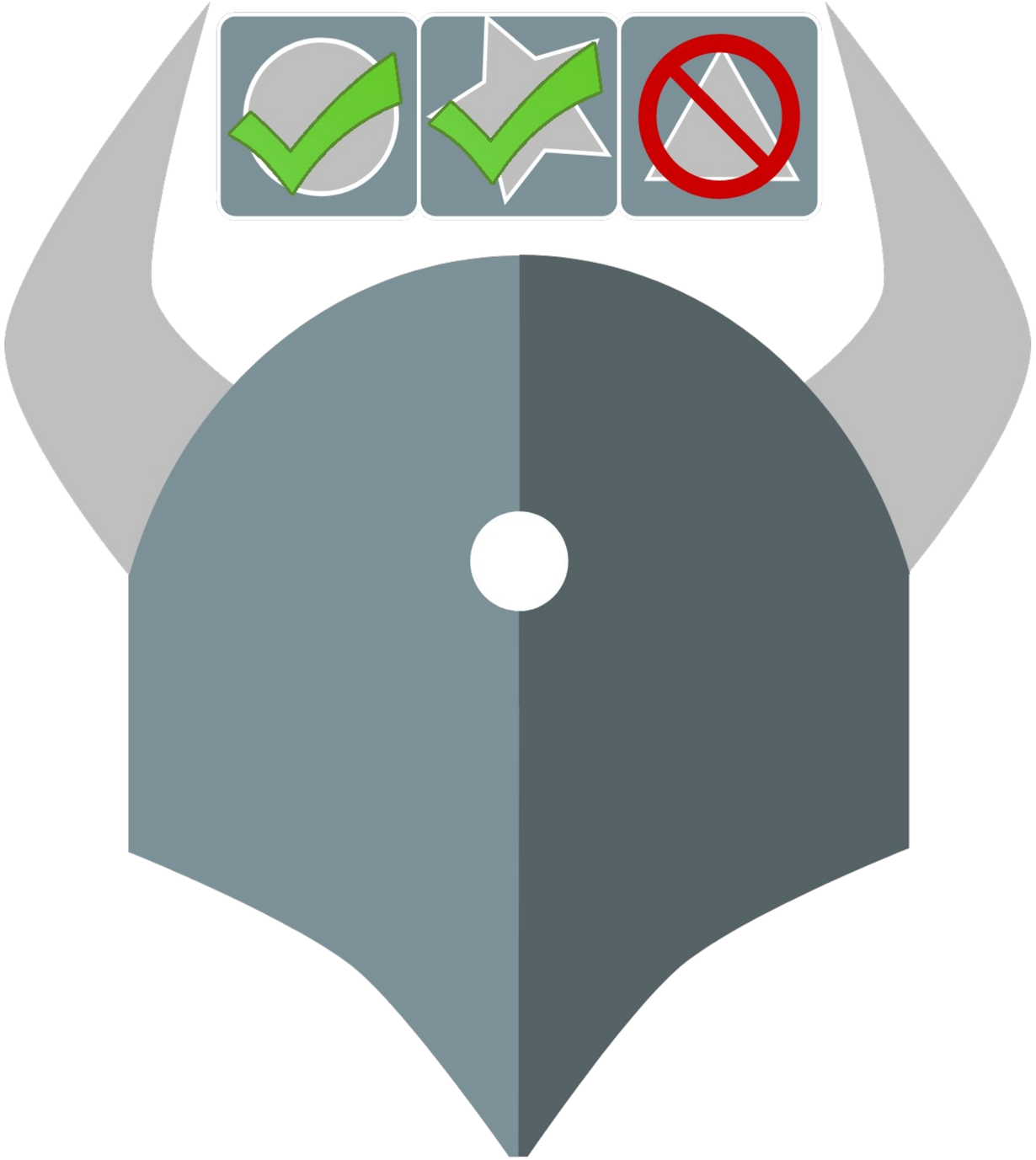


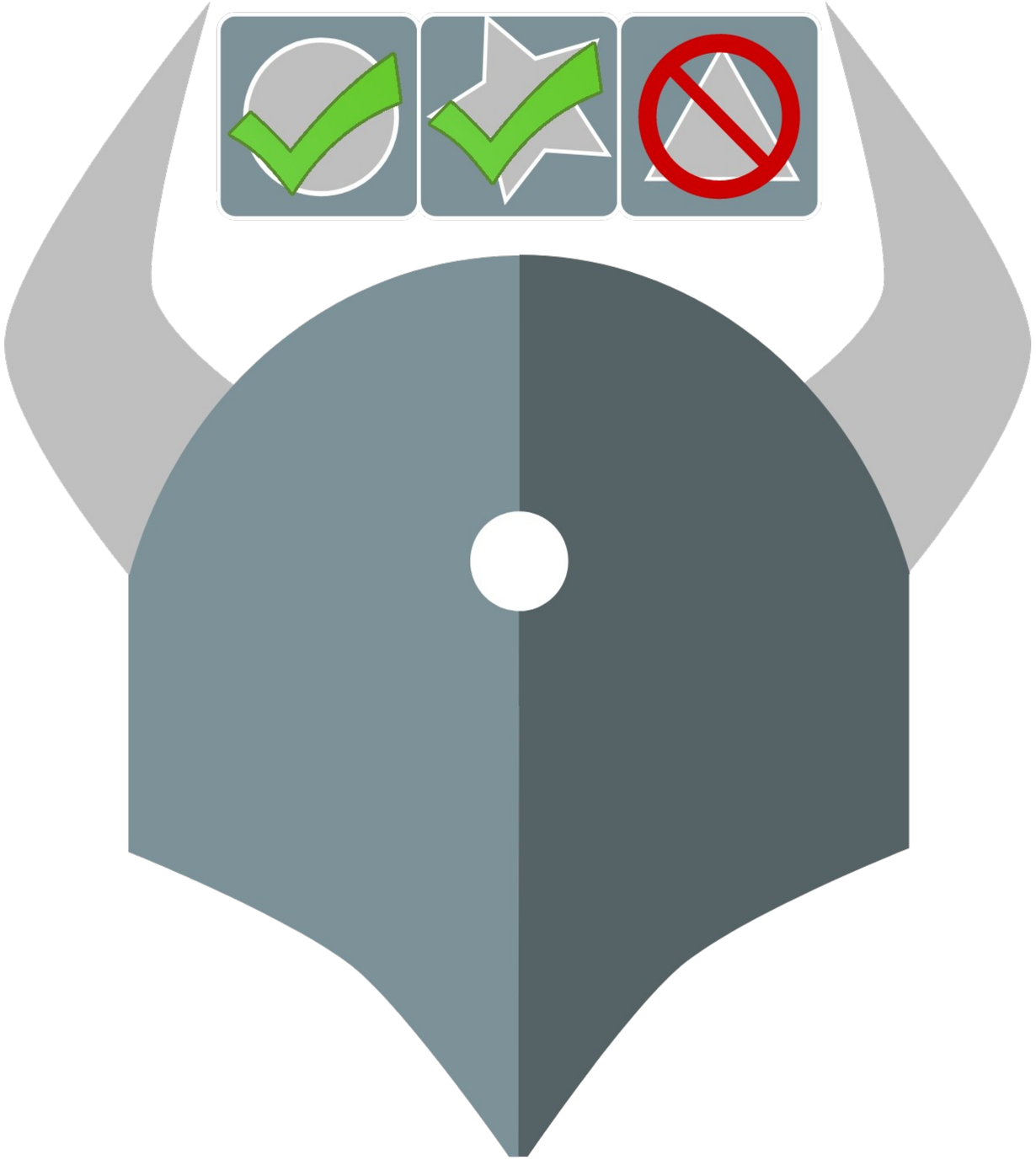
in-toto

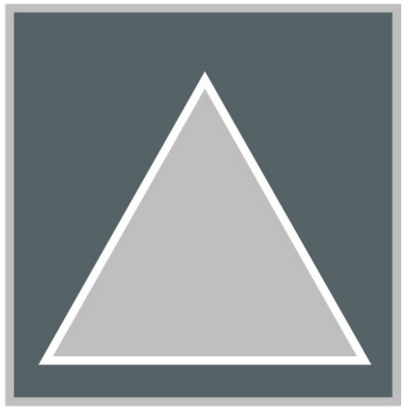
Open Policy Agent

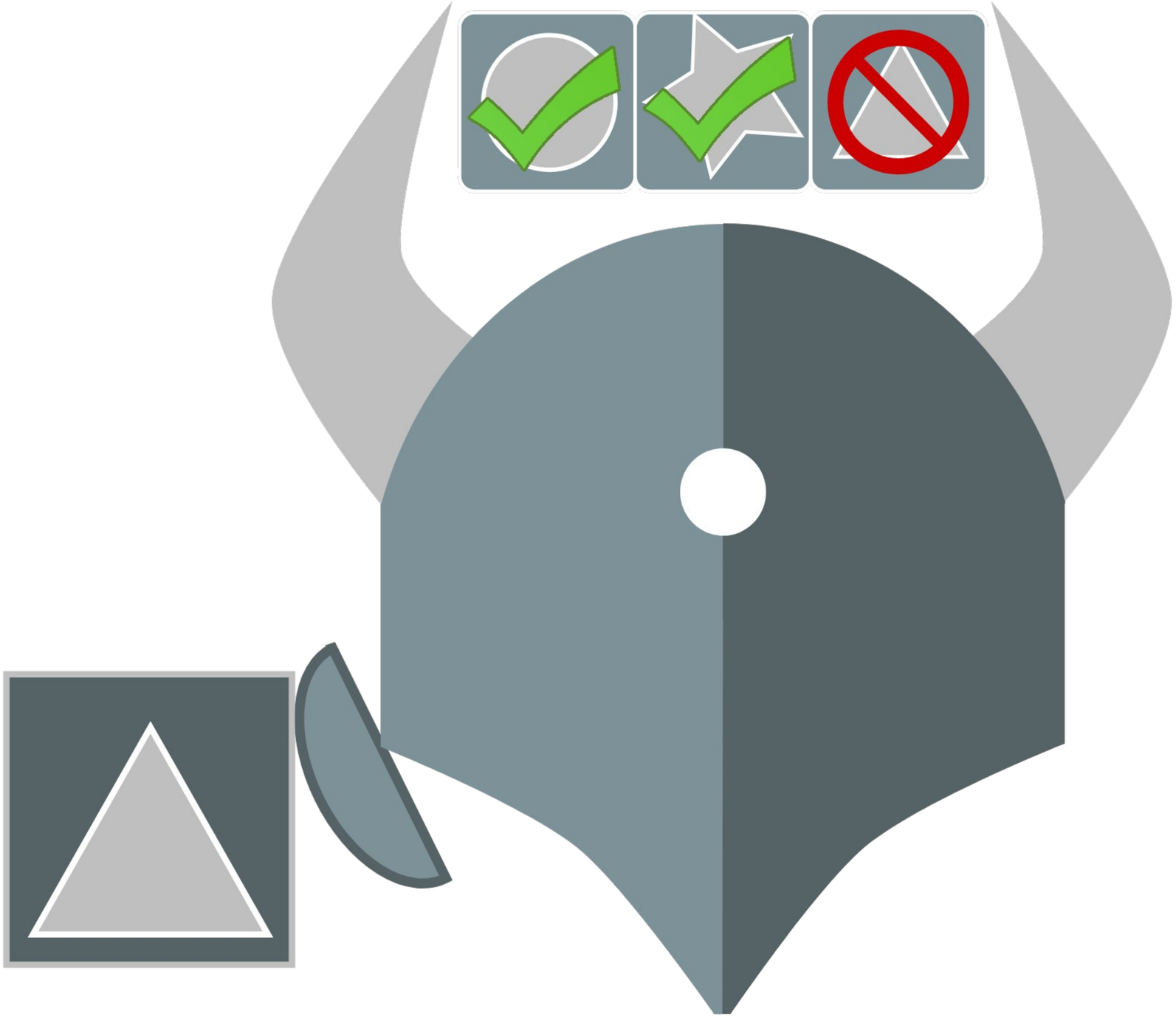


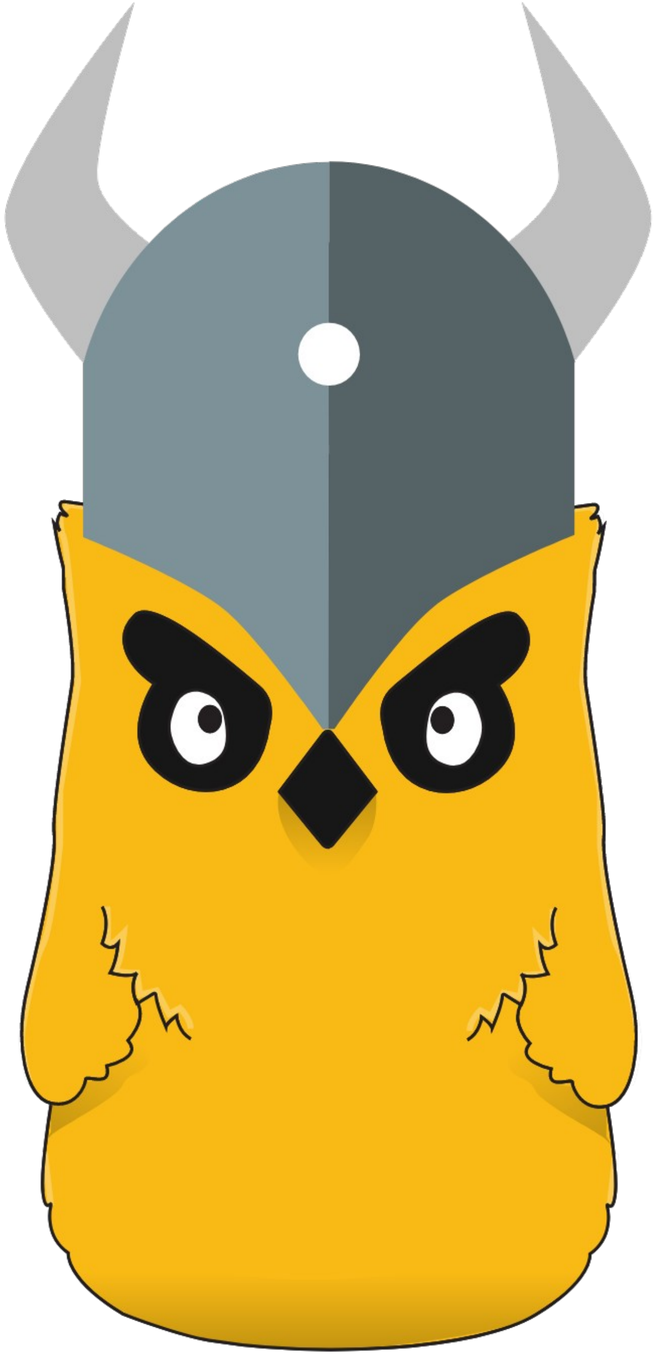






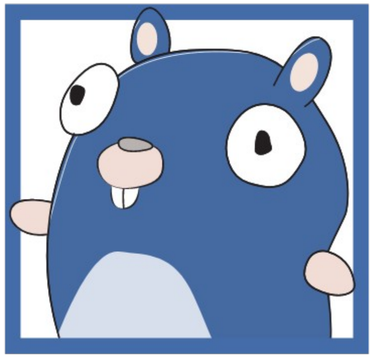


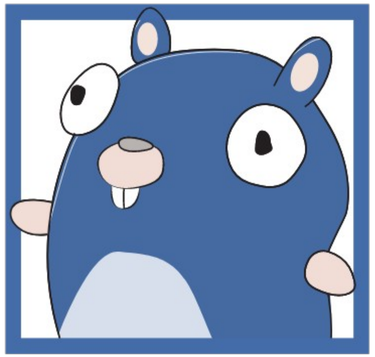




Open Policy Agent

falco





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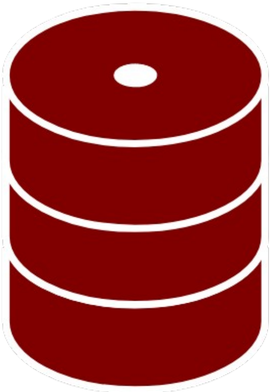

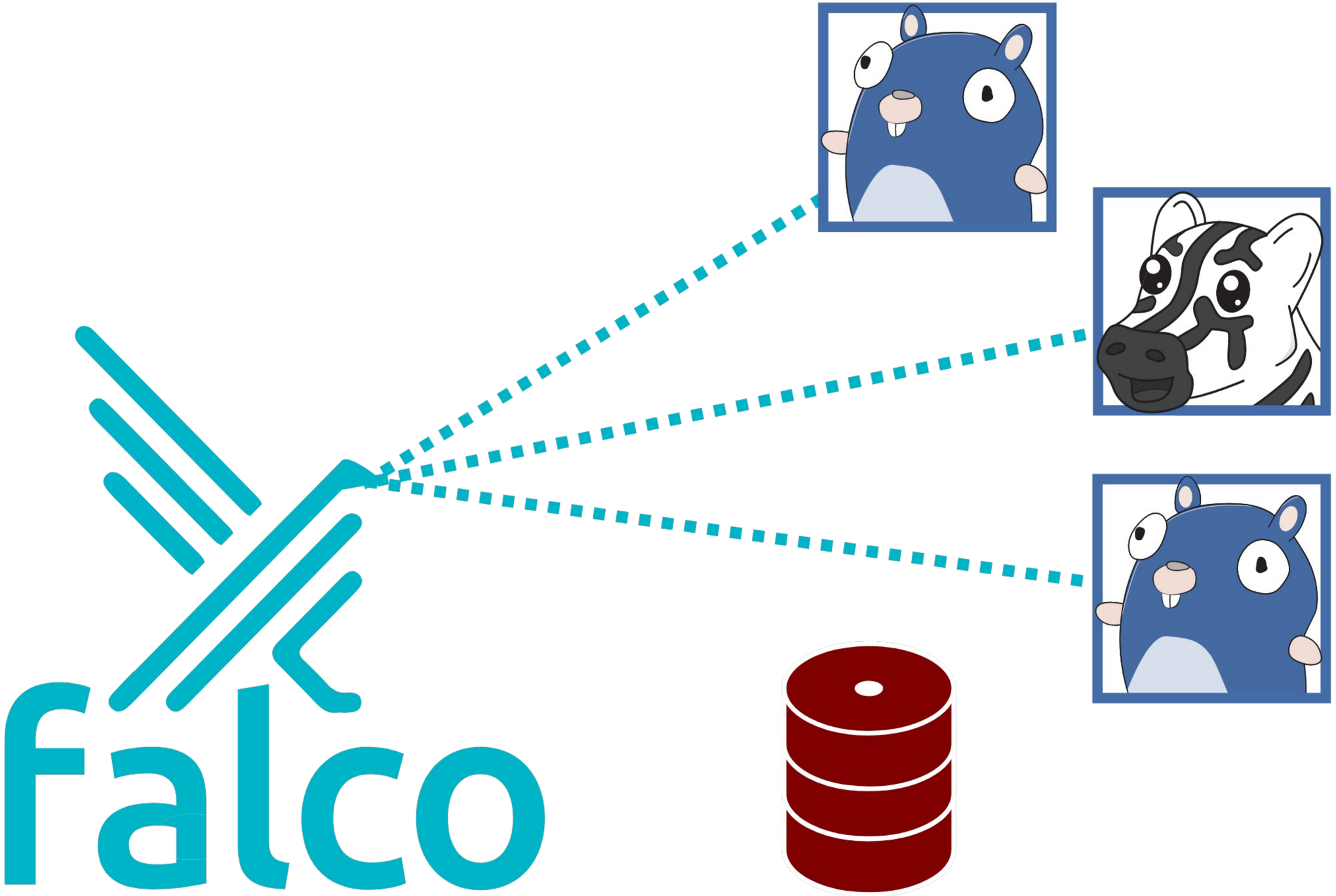
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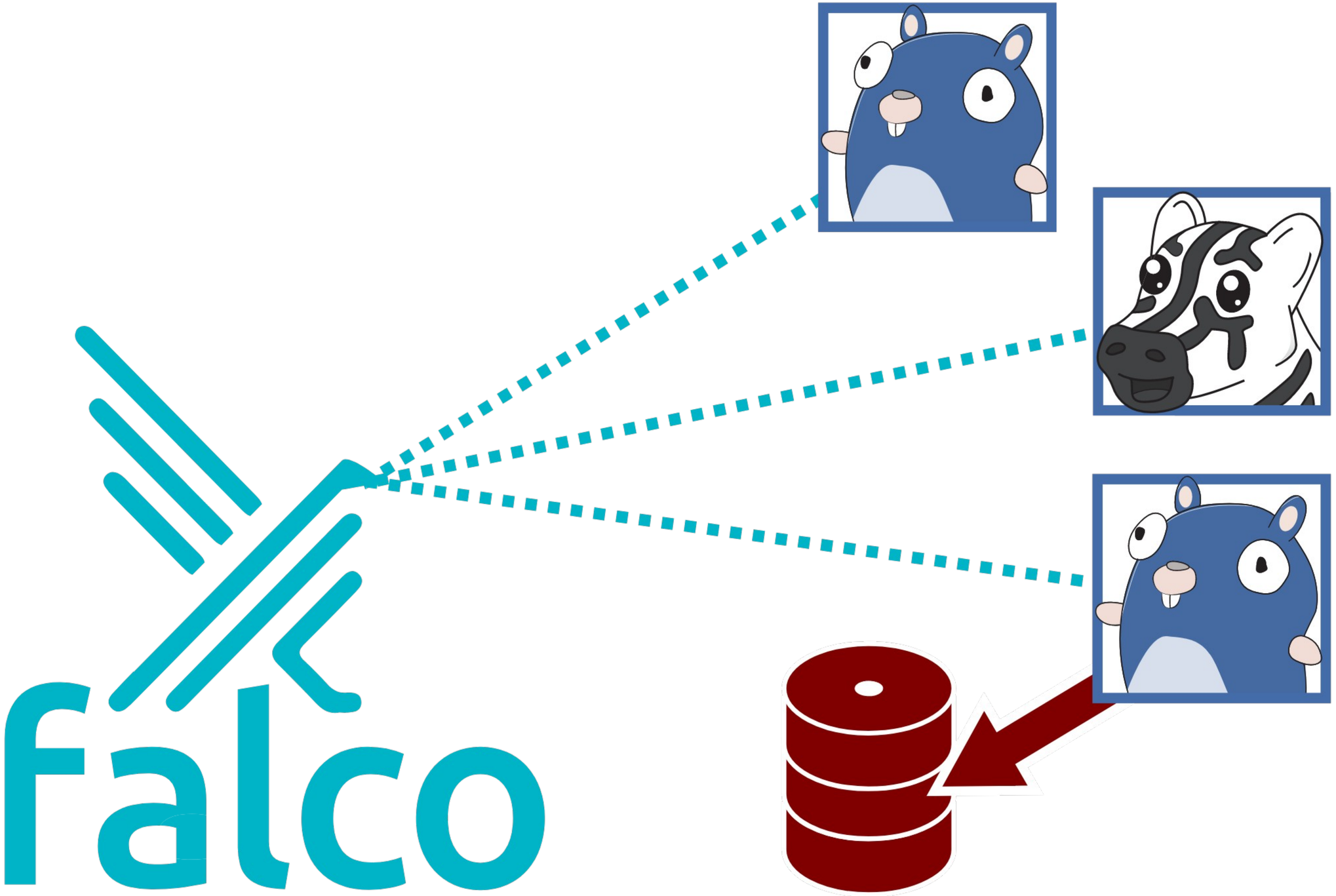
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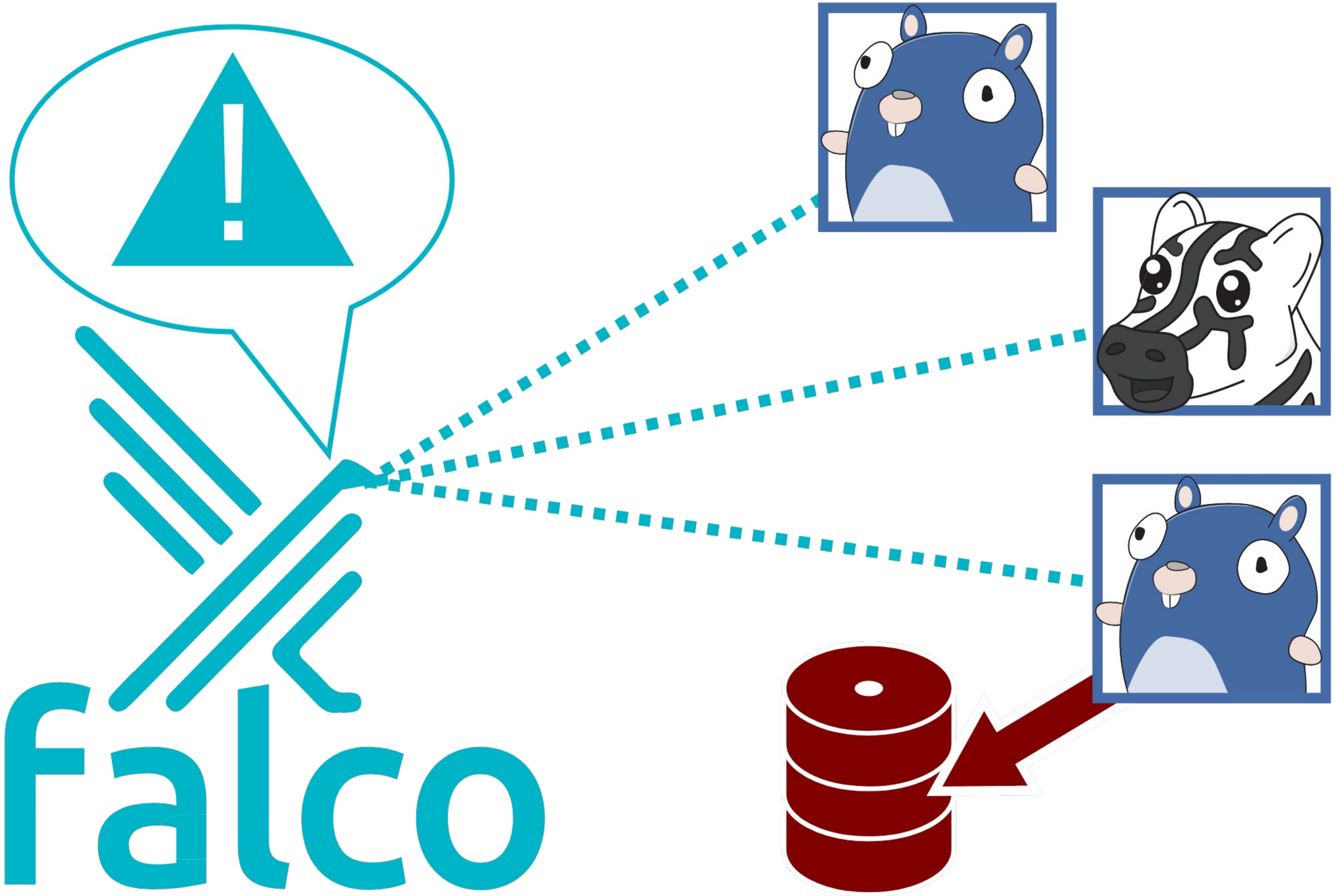
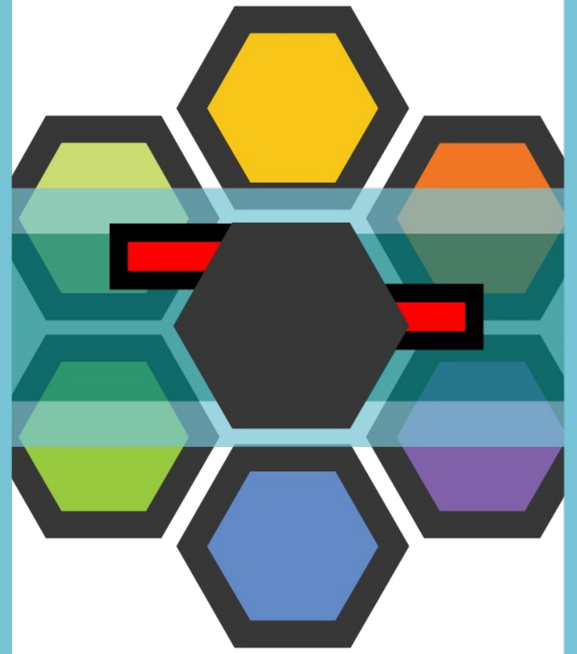

falco

falco

cilium

cilium



cilium

cilium

CNCF Graduated Projects (16)

containerd
Cloud Native Computing Foundation (CNCF) Funding: $3M

CoreDNS
Cloud Native Computing Foundation (CNCF) Funding: $3M

Envoy
Cloud Native Computing Foundation (CNCF) Funding: $3M

etcd
Cloud Native Computing Foundation (CNCF) Funding: $3M

Fluentd
Cloud Native Computing Foundation (CNCF) Funding: $3M

Harbor
Cloud Native Computing Foundation (CNCF) Funding: $3M

Helm
Cloud Native Computing Foundation (CNCF) Funding: $3M

Jaeger
Cloud Native Computing Foundation (CNCF) Funding: $3M

Kubernetes
Cloud Native Computing Foundation (CNCF) Funding: $3M

Linkerd
Cloud Native Computing Foundation (CNCF) Funding: $3M

Open Policy Agent (OPA)
Cloud Native Computing Foundation (CNCF) Funding: $3M

Prometheus
Cloud Native Computing Foundation (CNCF) Funding: $3M

Rook
Cloud Native Computing Foundation (CNCF) Funding: $3M

The Update Framework (TUF)
Cloud Native Computing Foundation (CNCF) Funding: $3M

TiKV
Cloud Native Computing Foundation (CNCF) Funding: $3M

Vitess
Cloud Native Computing Foundation (CNCF) Funding: $3M

CNCF Incubating Projects (33)

Argo
Cloud Native Computing Foundation (CNCF) Funding: $3M

Backstage
Cloud Native Computing Foundation (CNCF) Funding: $3M

Buildpacks
Cloud Native Computing Foundation (CNCF) Funding: $3M

Chaos Mesh
Cloud Native Computing Foundation (CNCF) Funding: $3M

Cilium
Cloud Native Computing Foundation (CNCF) Funding: $3M

CloudEvents
Cloud Native Computing Foundation (CNCF) Funding: $3M

Container Network Interface (CNI)
Cloud Native Computing Foundation (CNCF) Funding: $3M

Contour
Cloud Native Computing Foundation (CNCF) Funding: $3M

Cortex
Cloud Native Computing Foundation (CNCF) Funding: $3M

CRI-O
Cloud Native Computing Foundation (CNCF) Funding: $3M

Crossplane
Cloud Native Computing Foundation (CNCF) Funding: $3M

Dapr
Cloud Native Computing Foundation (CNCF) Funding: $3M

Dragonfly
Cloud Native Computing Foundation (CNCF) Funding: $3M

Emissary-Ingress
Cloud Native Computing Foundation (CNCF) Funding: $3M

Falco
Cloud Native Computing Foundation (CNCF) Funding: $3M

Flux
Cloud Native Computing Foundation (CNCF) Funding: $3M

gRPC
Cloud Native Computing Foundation (CNCF) Funding: $3M

in-toto
Cloud Native Computing Foundation (CNCF) Funding: $3M

Keda
Cloud Native Computing Foundation (CNCF) Funding: $3M

Knative
Cloud Native Computing Foundation (CNCF) Funding: $3M

KubeEdge
Cloud Native Computing Foundation (CNCF) Funding: $3M

KubeVirt
Cloud Native Computing Foundation (CNCF) Funding: $3M

Litmus
Cloud Native Computing Foundation (CNCF) Funding: $3M

Longhorn
Cloud Native Computing Foundation (CNCF) Funding: $3M

NATS
Cloud Native Computing Foundation (CNCF) Funding: $3M

Notary
Cloud Native Computing Foundation (CNCF) Funding: $3M

OpenMetrics
Cloud Native Computing Foundation (CNCF) Funding: $3M

OpenTelemetry
Cloud Native Computing Foundation (CNCF) Funding: $3M

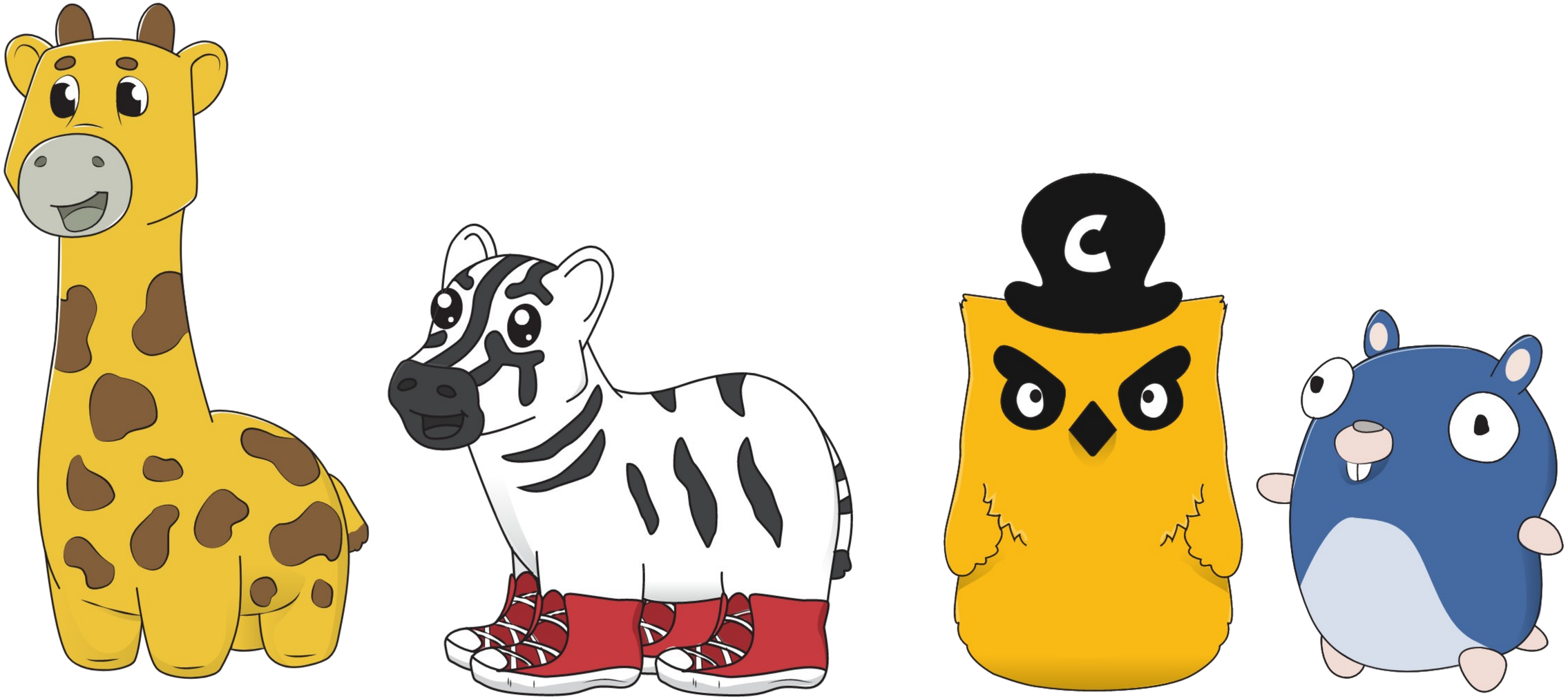
Operator Framework
Cloud Native Computing Foundation (CNCF) Funding: $3M

SPIFFE
Cloud Native Computing Foundation (CNCF) Funding: $3M

SPIRE
Cloud Native Computing Foundation (CNCF) Funding: $3M

Thanos
Cloud Native Computing Foundation (CNCF) Funding: $3M

Volcano
Cloud Native Computing Foundation (CNCF) Funding: $3M



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