

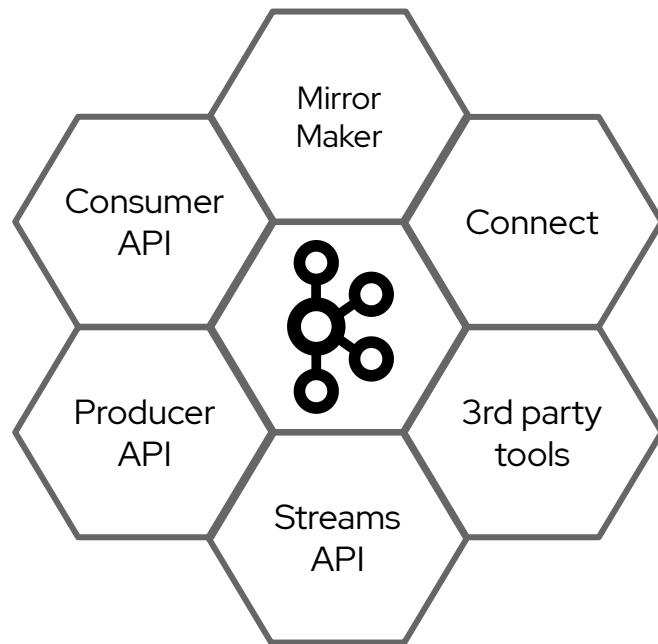
Introduction to Strimzi: Apache Kafka on Kubernetes

KubeCon + CloudNativeCon Europe 2020

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Apache Kafka

- Open Source project originally created by LinkedIn
 - publish/subscribe messaging system
 - data-streaming platform
 - distributed commit log
- Broader ecosystem more than just the broker
- Details on <http://kafka.apache.org>



Why running on Kubernetes

- Apache Kafka
 - distributed by nature
 - workloads using Apache Kafka are also distributed and scalable
- Kubernetes
 - great abstraction for running software everywhere
 - enables cloud-native development
- Why not using the Kubernetes knowledge to run Apache Kafka?

Strimzi

- Open source project licensed under Apache License 2.0
- Focuses on running Apache Kafka on Kubernetes
 - Container images for Apache Kafka, Apache ZooKeeper and other components
 - Operators for deploying, managing and configuring Kafka clusters
- Provides a Kubernetes-native experience
 - Not only Kafka clusters, but also users, topics and the rest of Kafka ecosystem
- CNCF sandbox project since September 2019

Kafka Custom Resources

- Kafka is a Kubernetes native resource
- ... as well as the other components
 - KafkaUser and KafkaTopic for handling users and topics
 - KafkaConnect and KafkaConnector for handling a Kafka Connect deployment
 - KafkaBridge for enabling HTTP access to the cluster
 - KafkaMirrorMaker and KafkaMirrorMaker2 for mirroring data across clusters
 - KafkaRebalance for rebalancing the cluster through Cruise Control

Demo

- Operator Installation
- Kafka cluster
- Kafka topic and user
- Hello World application

Introduction to Strimzi: Apache Kafka on Kubernetes

OAuth

Cruise Control

Prometheus

Scale Up

Off cluster access

Storage

HA

OPA

Labels

Affinity

Tolerations

Metrics

Annotations

Mirroring

CPU and
RAM

Encryption

Upgrades

Users

Healthchecks

Logging

Configuration

Secrets

Authentication

Authorization

Kafka
Connect

Pod Disruption
Budgets

Scale
Down

Topic

Grafana

Source2Image

ACLs

HTTP
Bridge

Network
Policies

ImagePullSecrets

ZooKeeper

JVM
Configuration



kubernetes



JAEGER



Prometheus

KEDA



OPENTRACING



fluentd



Open Policy Agent





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<https://github.com/strimzi>



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#strimzi on the <https://slack.cncf.io>



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Thank you