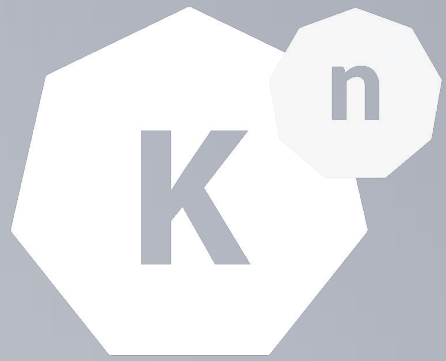
Data Processing at Scale with Knative and Benthos

Mihai Todor
Principal Software Engineer @ Optum

Murugappan Sevugan Chetty
Staff Software Engineer @ Box



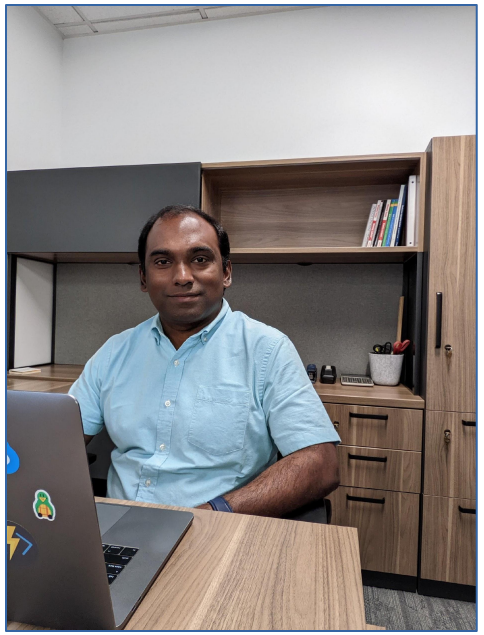
KnativeCon
EUROPE

May 17th, 2022, Valencia, Spain

About Us

Mihai Todor

- Principal SWE @ Optum
- Data Streaming
- Benthos contributor: https://www.benthos.dev/
- GitHub: https://github.com/mihaitodor



Murugappan Chetty

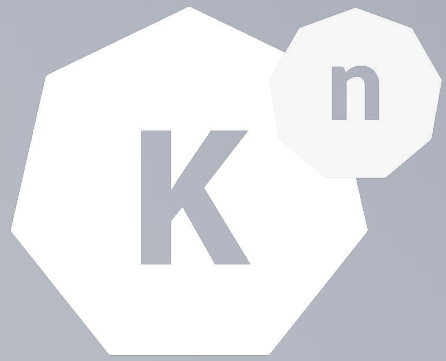
- Staff SWE @ Box
- Container platforms
- Open source contributor
- Knative steering committee member representing end users
- https://itsmurugappan.github.io

Agenda

- Knative Autoscaling
- Benthos
- Benthos + Knative
- Demo

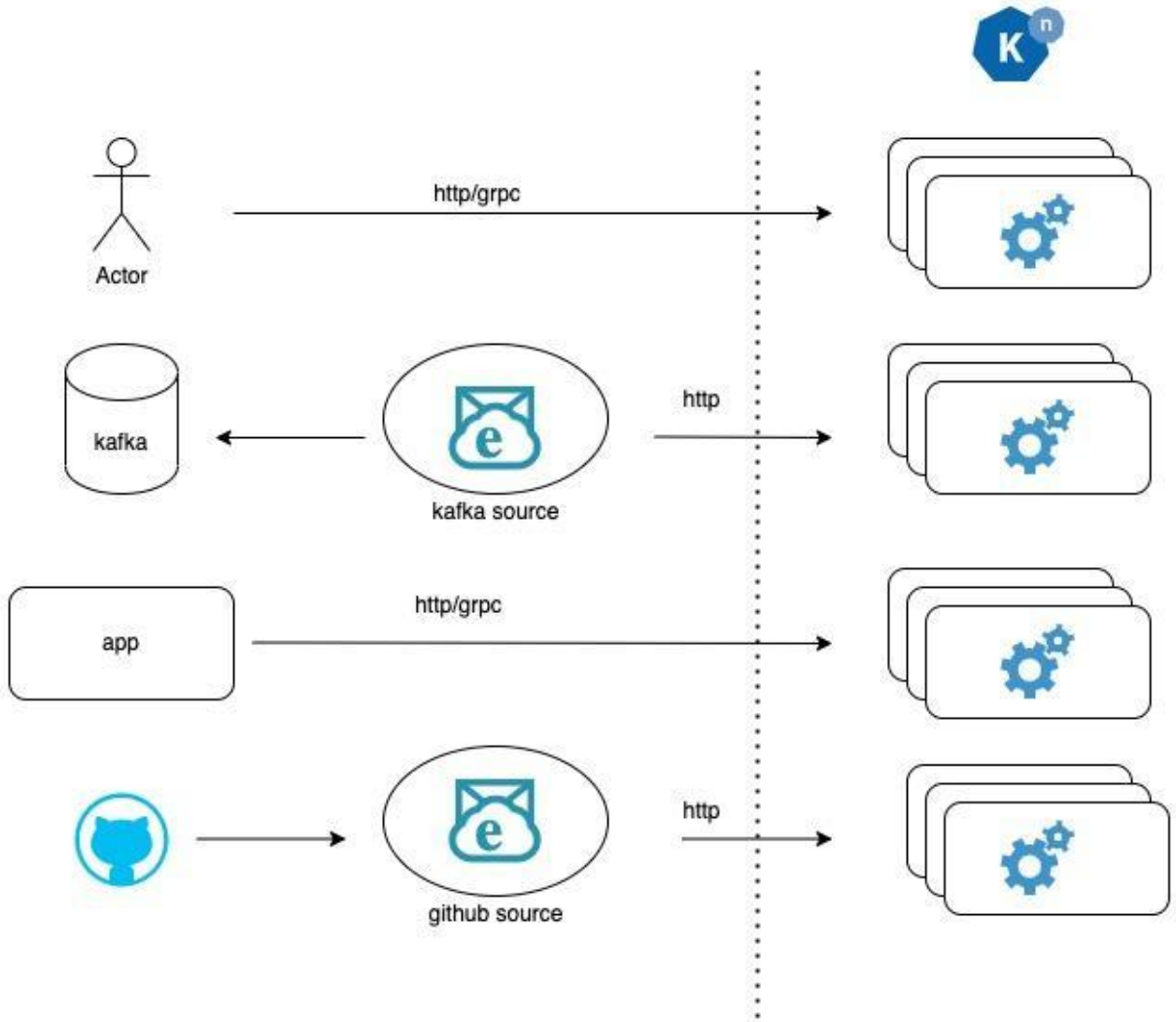
Knative Autoscaling

Murugappan Sevugan Chetty



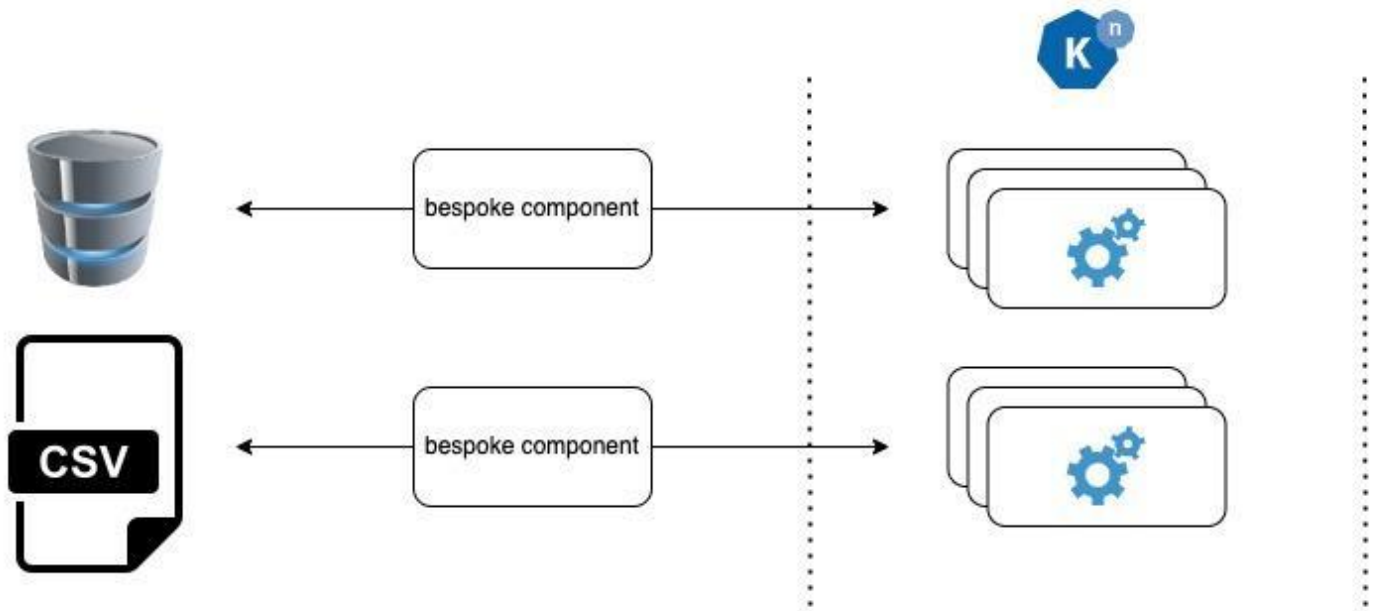
KnativeCon
EUROPE

Knative Autoscaling



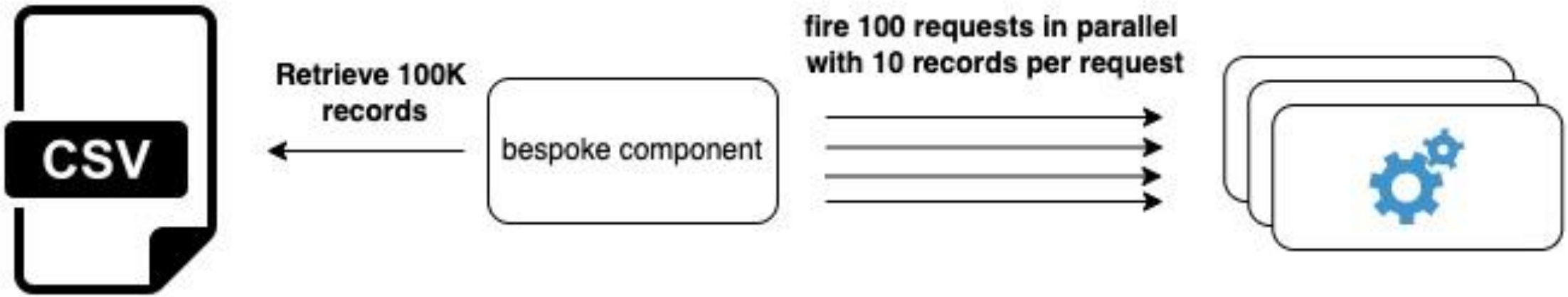
- Push Based
- RPS/Concurrency

Knative Autoscaling



- Pull Based
- Requires bespoke components

Bespoke Component

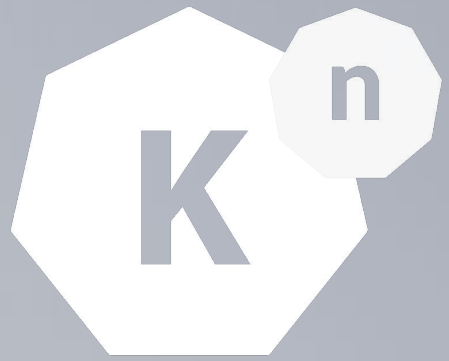


Component that we need

- Configurable
- Integrates with commonly used data sources
- HTTP/gRPC sink option
- Scalable
- Resilient
- Observable

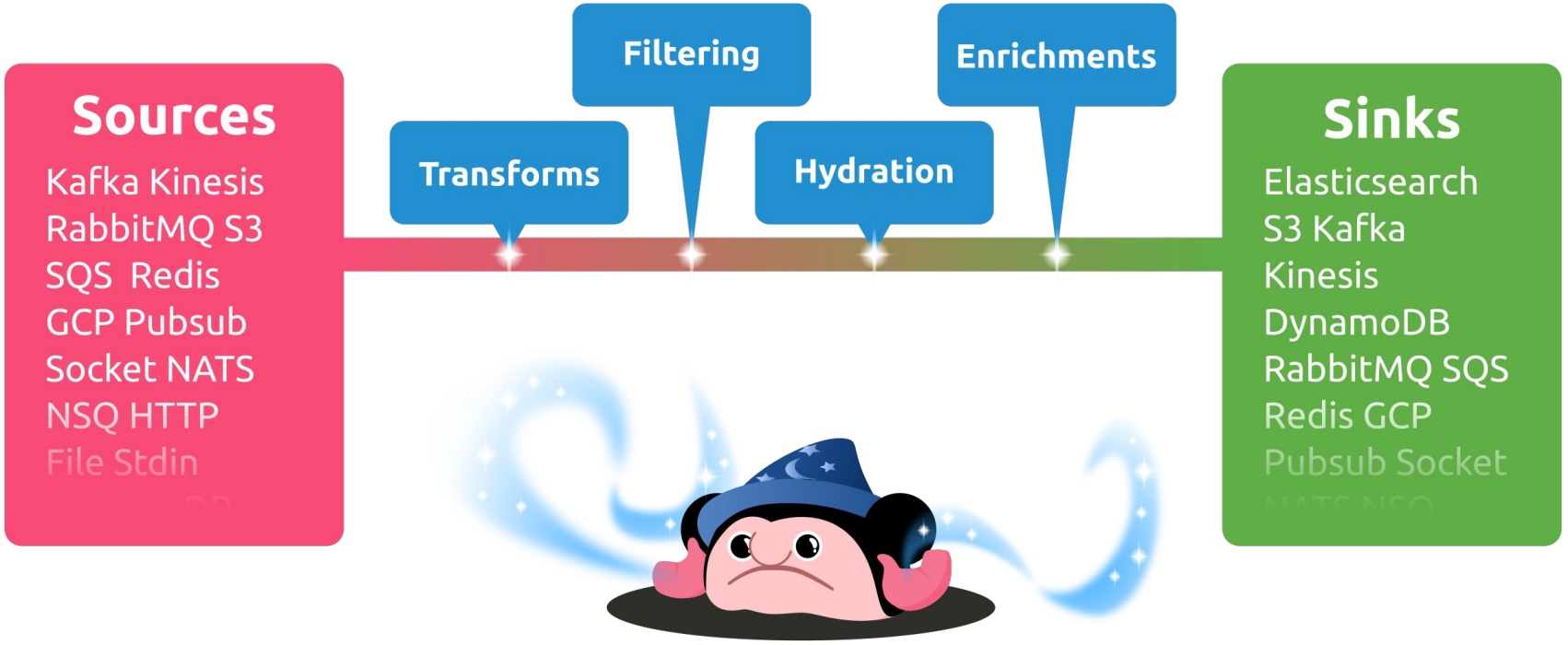
Benthos

Mihai Todor



KnativeCon
EUROPE

What is Benthos?

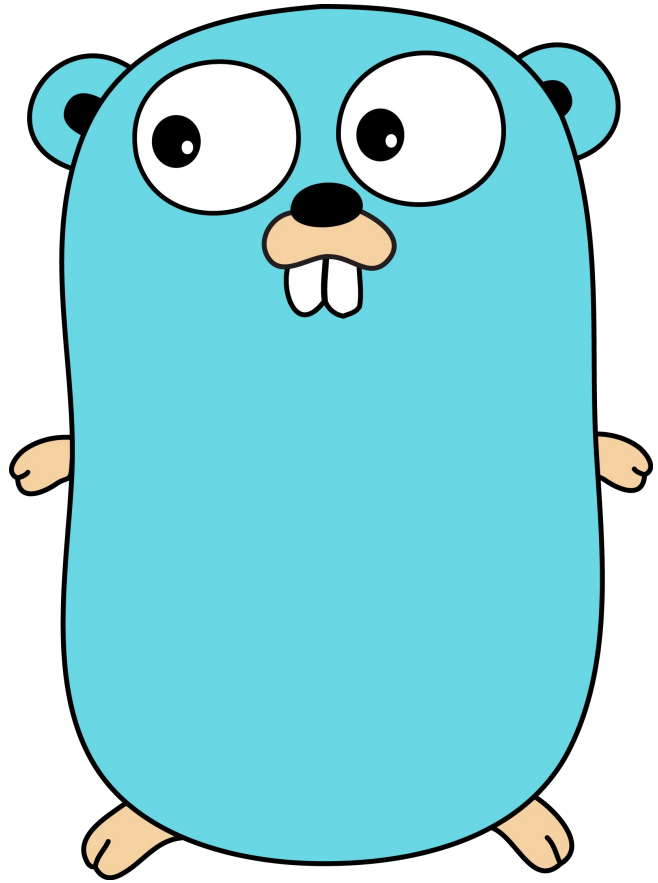


"Fancy stream processing made operationally mundane"

Ashley Jeffs, Benthos creator

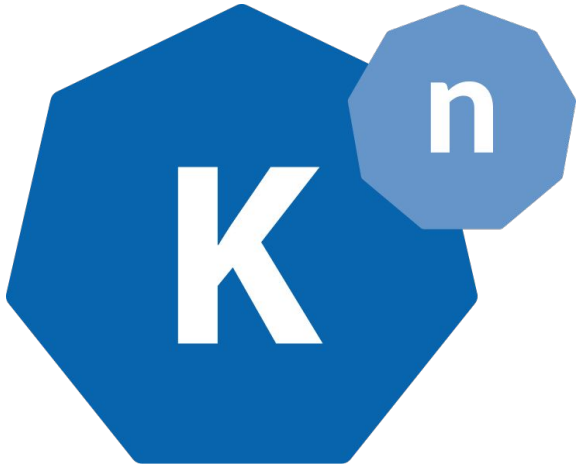
Why Benthos?

- Performant and simple
- YAML / CUE configs
- Stateless
- Extendable

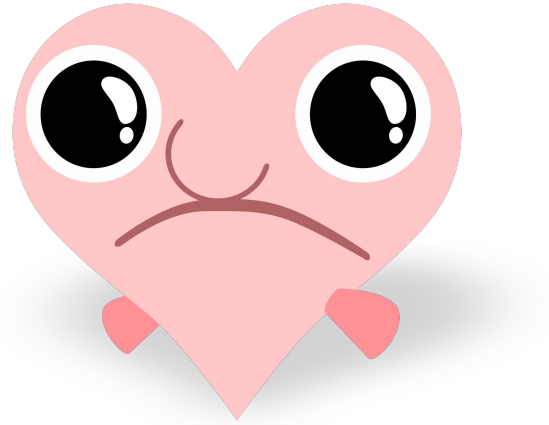


Let’s combine them!

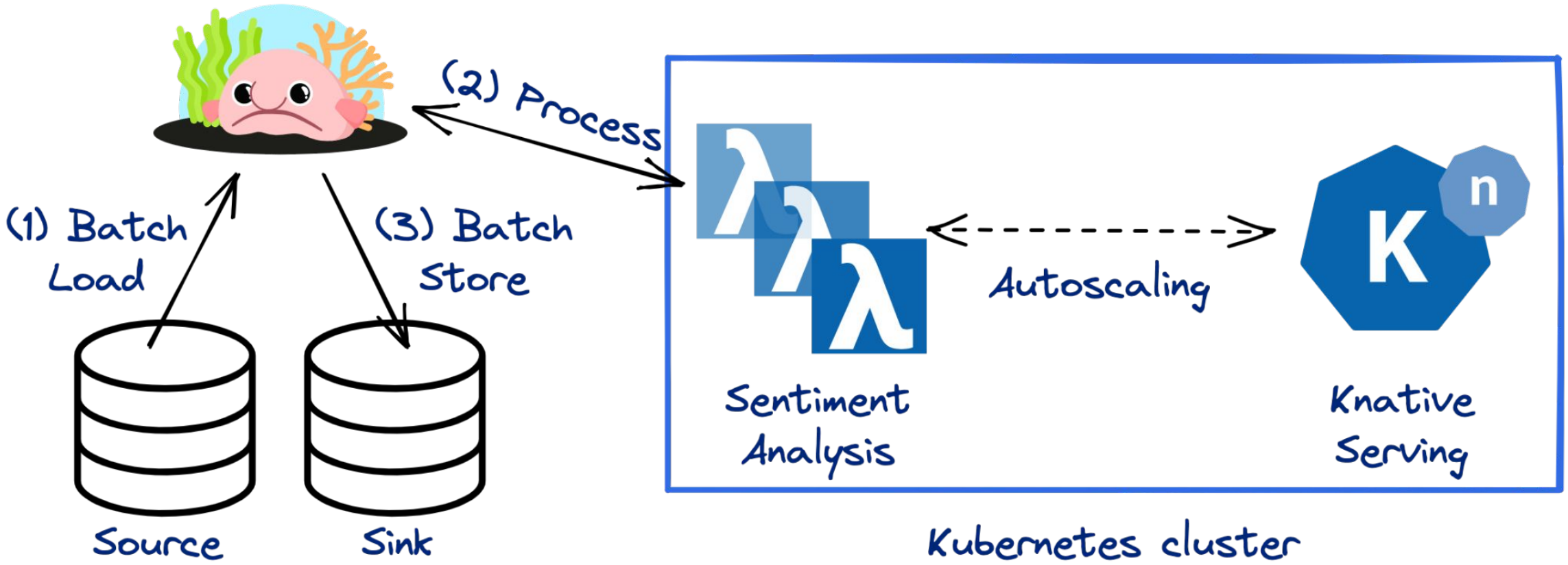
+



=



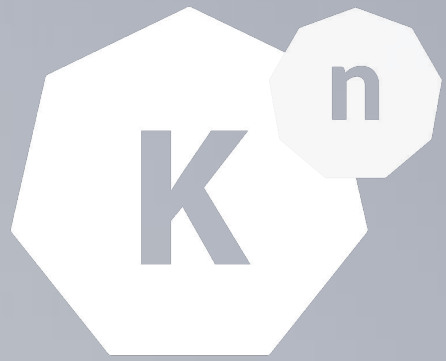
Demo Architecture



Demo

Scalable sentiment analysis on Twitter data

Mihai Todor



KnativeCon
EUROPE

Summary

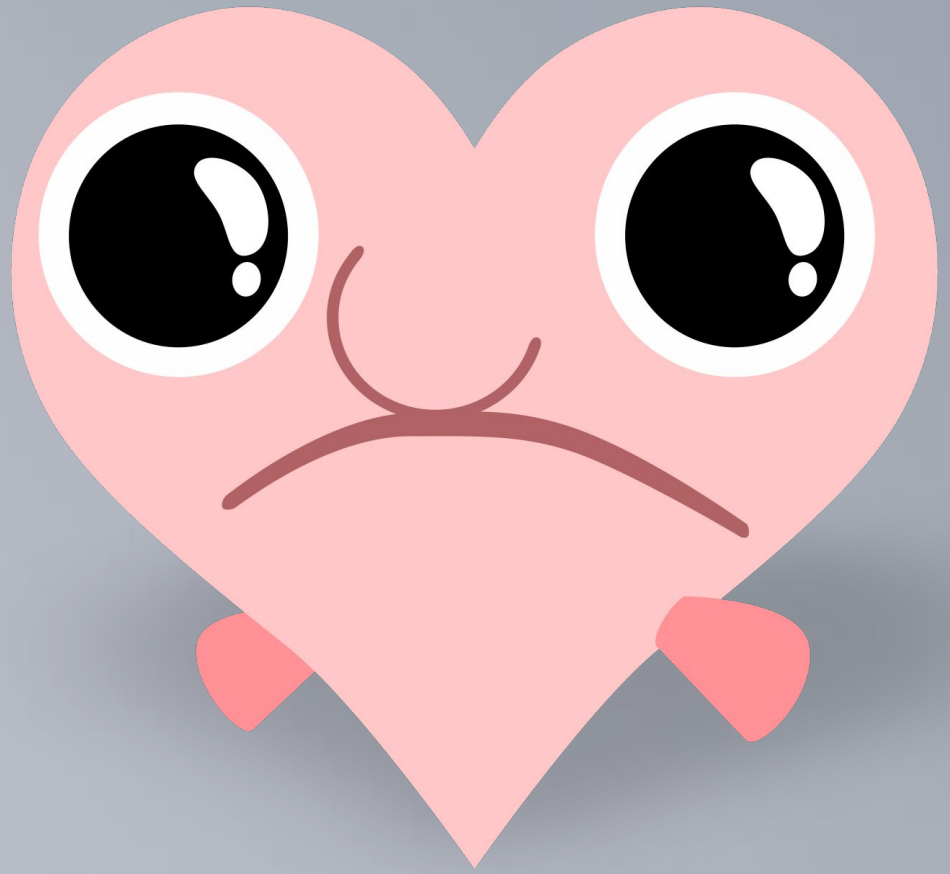
- Knative supports push based autoscaling
- Pull based autoscaling requires bespoke components
- Benthos provides a configurable way to leverage Knative autoscaling

Thank you!

Reach out to us

Mihai: https://www.linkedin.com/in/mtodor/

Muru: https://www.linkedin.com/in/murugappan-chetty/



https://benthos.dev

KnativeCon EUROPE