∅cast

DATA STREAMING AT SCALE WITH BENTHOS

8th November 2021 3:30 PM IST & 11 AM IRELAND TIME

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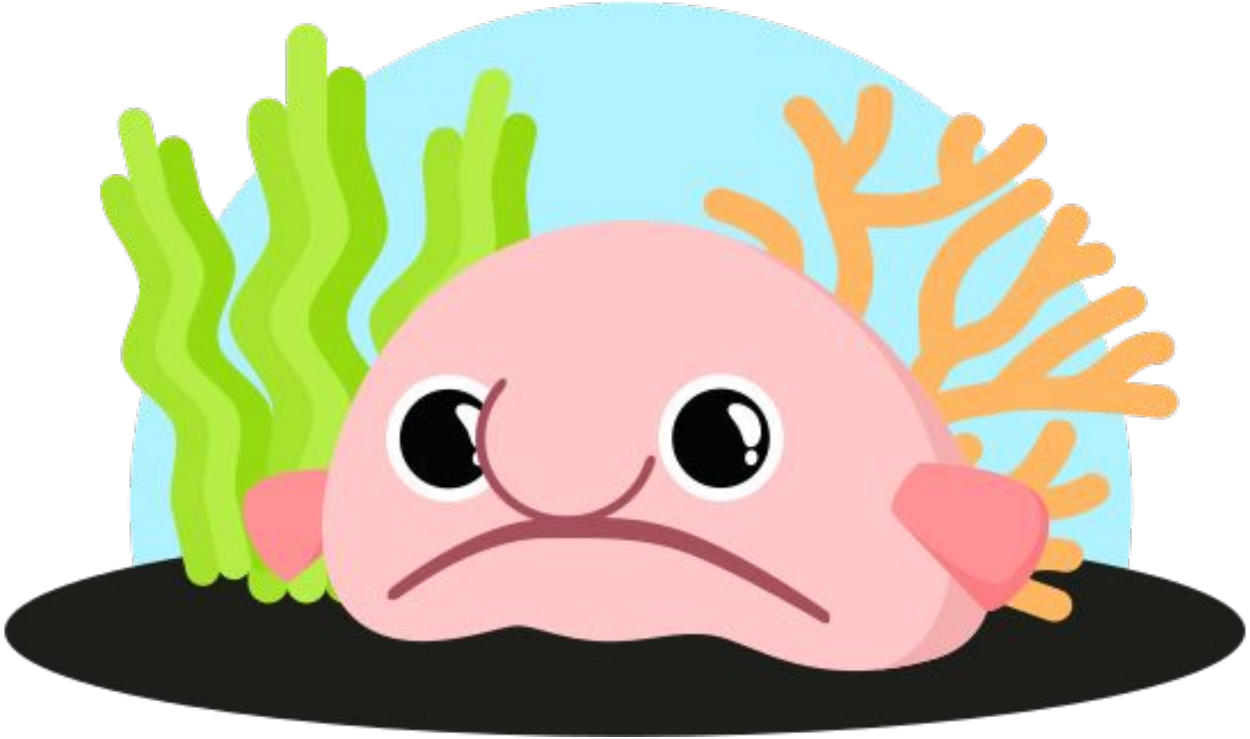
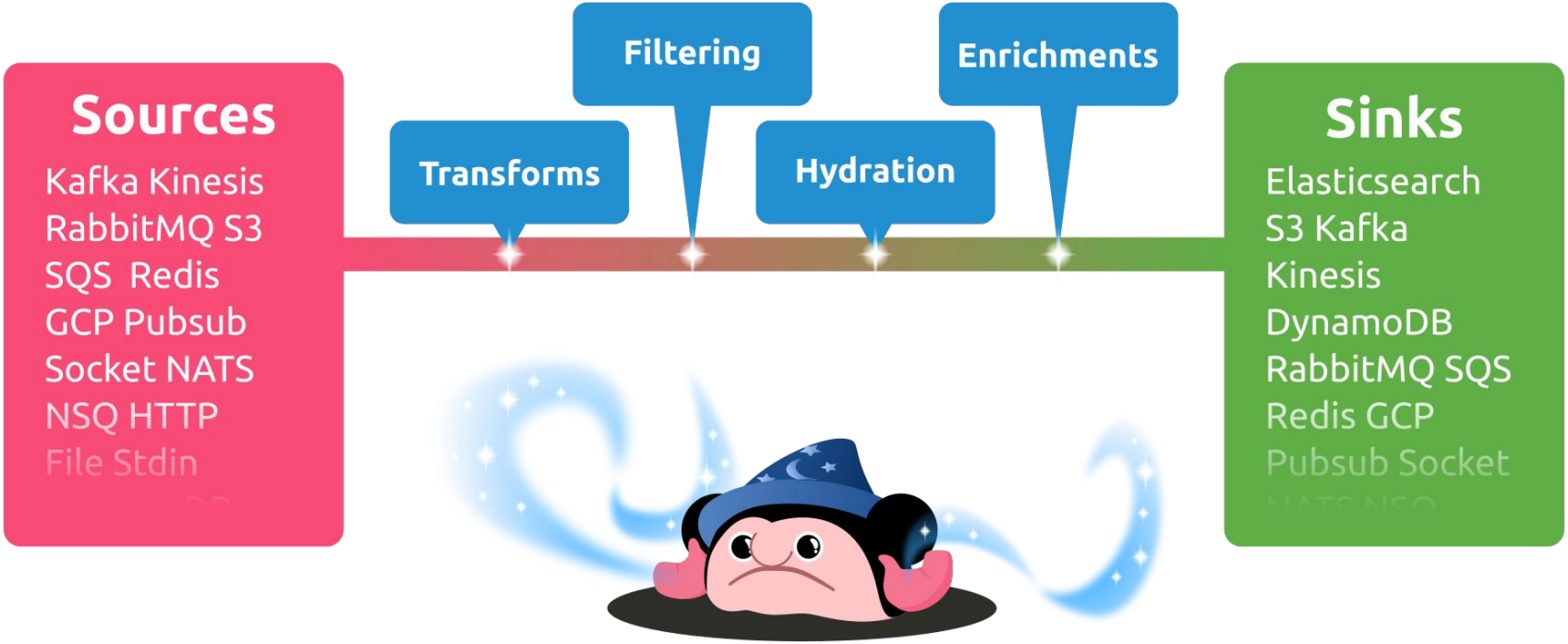
nullcast.dev

What is Benthos? https://www.benthos.dev/



Hint: It has nothing to do with deep sea fish, except for the logo

What is Benthos for?



“Fancy stream processing made operationally mundane” - Ash Jeffs

What is Data Streaming?

- Go Time Podcast episode #192: https://changelog.com/gotime/192
- Realtime ingestion and transformation of (small) data records from one or multiple sources in parallel
- Batch processing of large volumes of data records
- Event sourcing blurry lines

Data engineering

- The Data Stack Show Podcast episode #60: https://datastackshow.com/podcast/architecting-a-boring-stream-processing-tool-with-ashley-jeffs-of-benthos/
- Project history
- Origins of the awesome logo

Boringly easy to use

```
# Install
curl -Lsf https://sh.benthos.dev | bash

# Make a config
benthos create nats/protobuf/aws_sqs > ./config.yaml

# Run
benthos -c ./config.yaml
```

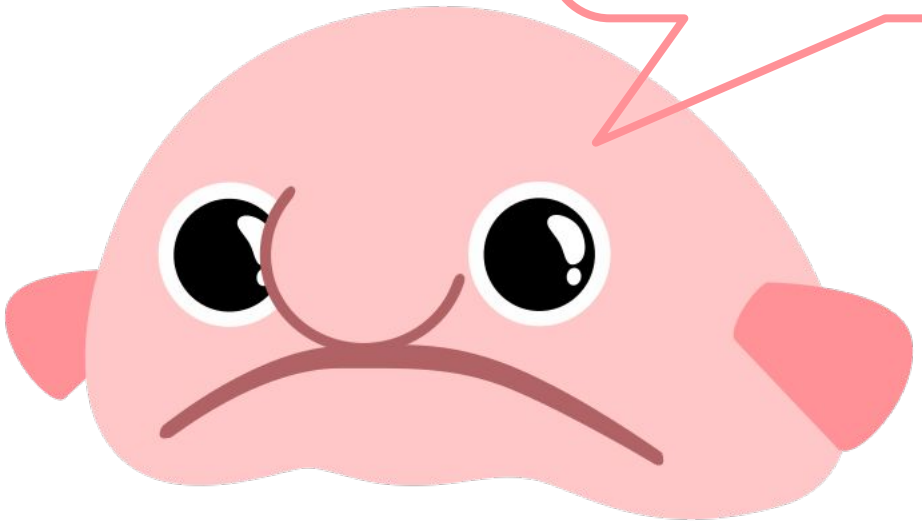
Features

- Declarative YAML-based configuration
- Single message transforms
- Stateless
- At least once delivery
- Metrics and logging
- Custom Plugins
- Written in Go

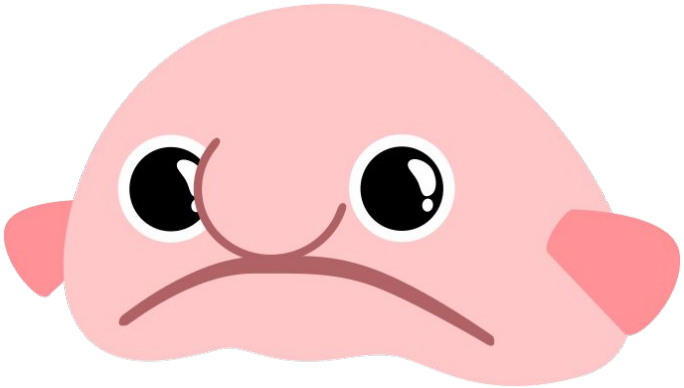
Bloblang

Custom DSL for arbitrary data transforms

```
root.new_doc = match {
    this.doc.type == "article" => this.doc.article
    this.doc.type == "comment" => this.doc.comment
}
```



Deployment models



Standalone CLI app

Serverless

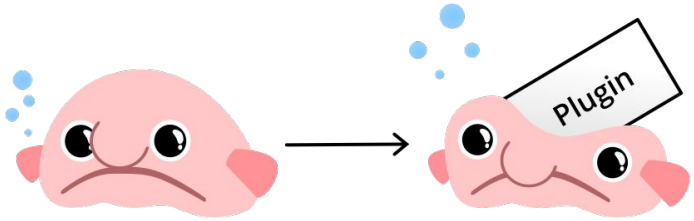
Kubernetes

Importing Benthos as a library

> go get github.com/Jeffail/benthos/v3/public/components/all

```
package main

import (
   "context"

   "github.com/Jeffail/benthos/v3/public/service"

   // Import all standard Benthos components
   _ "github.com/Jeffail/benthos/v3/public/components/all"
)

func main() {
   service.RunCLI(context.Background())
}
```

Writing a custom Benthos plugin




```go
type processor struct{}

func (r *processor) Process(ctx context.Context, m *service.Message) (service.MessageBatch, error) {
   println("foobar")
   return nil, nil
}

func (r *processor) Close(ctx context.Context) error { return nil }

func init() {
   _ = service.RegisterProcessor("foobar",
       service.NewConfigSpec(),
       func(conf *service.ParsedConfig, mgr *service.Resources) (service.Processor, error) {
           return &processor{}, nil
       },
   )
}
// go run main.go create stdin/foobar/stdout > config.yaml
// go run main.go -c config.yaml
```

Future enhancements

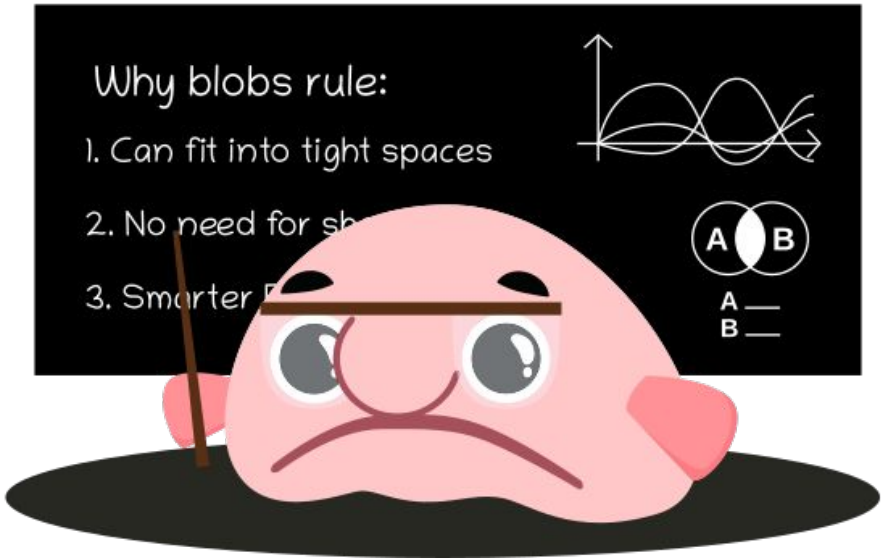
More adapters

Custom plugins

Project S

Why Open Source?

- Built on the shoulders of giants
- Community-driven features, enhancements and bug fixes
- High quality standards enforced uniformly
- Open issue tracker and permanent change history
- Avoids vendor-driven lock-in

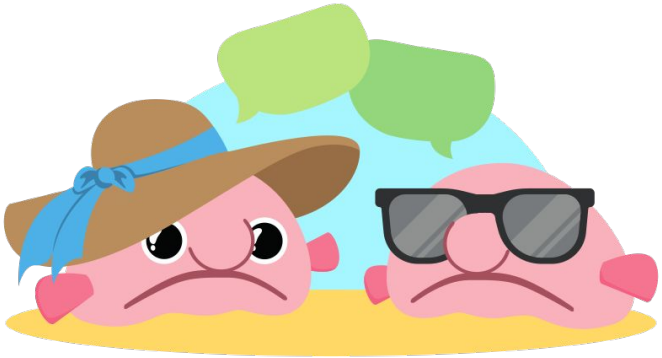


Open Source Needs You!

Community https://www.benthos.dev/community

Discord

https://discord.gg/6VaWjzP



slack

https://invite.slack.golangbridge.org

#benthos channel

Thank you!

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- https://twitter.com/MihaiTodor
- https://github.com/mihaitodor