https://juju.is/
https://github.com/juju

Introduction to Juju and Charmed Operators
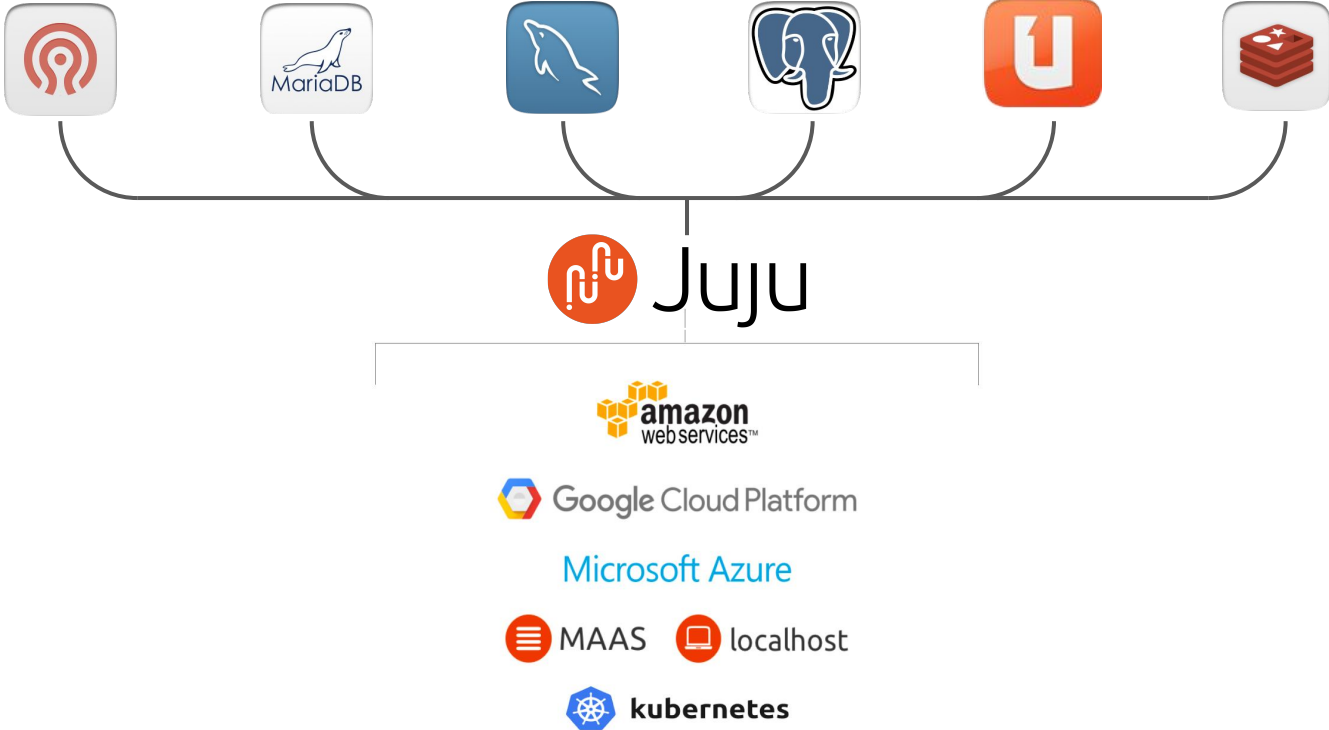
Open Source @ Siemens Event
May 17th 2022, Zug, CH
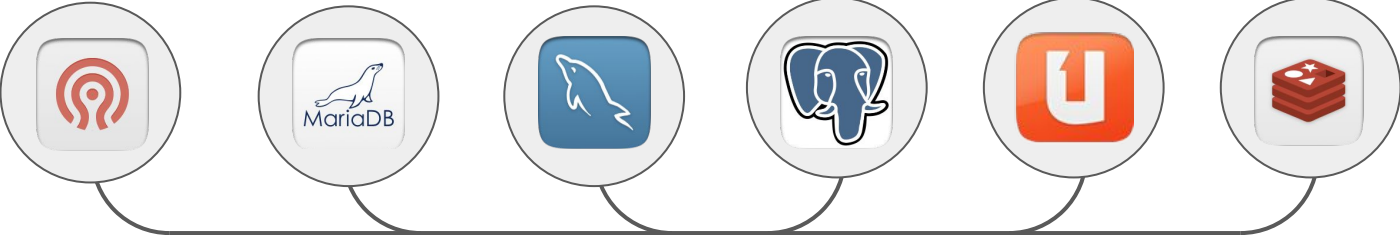Speaker: michael.jaeger@canonical.com

Canonical Ubuntu

Intro

Intro

Charmed Operator

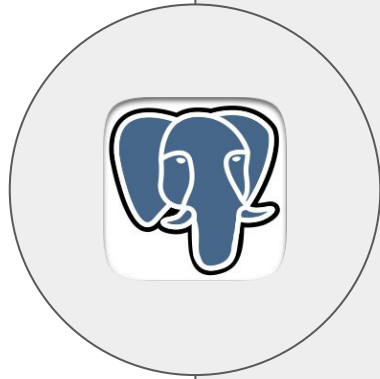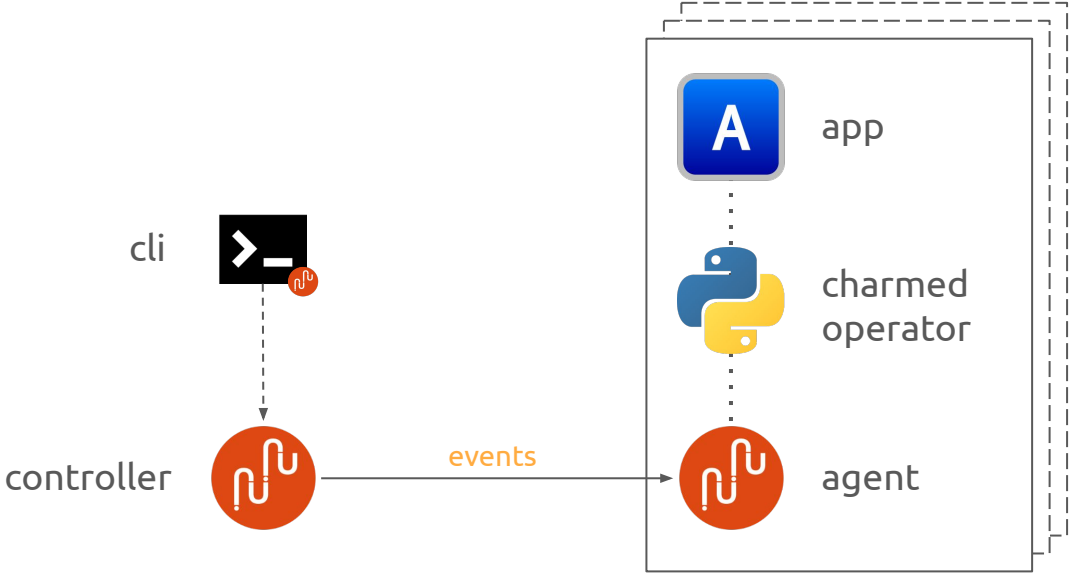| Operator	Workflows and Actions	Relations
- install - config - update - remove - scale	"action: backup" "action: restore" "action: scan-viruses" "action: health-check" "action: add-repo" "action: …" "action: …"	- relate-mysql - relate-ldap - relate-proxy - relate-cos - relate-cache

How does it work?

cli

controller

events

app

charmed operator

agent
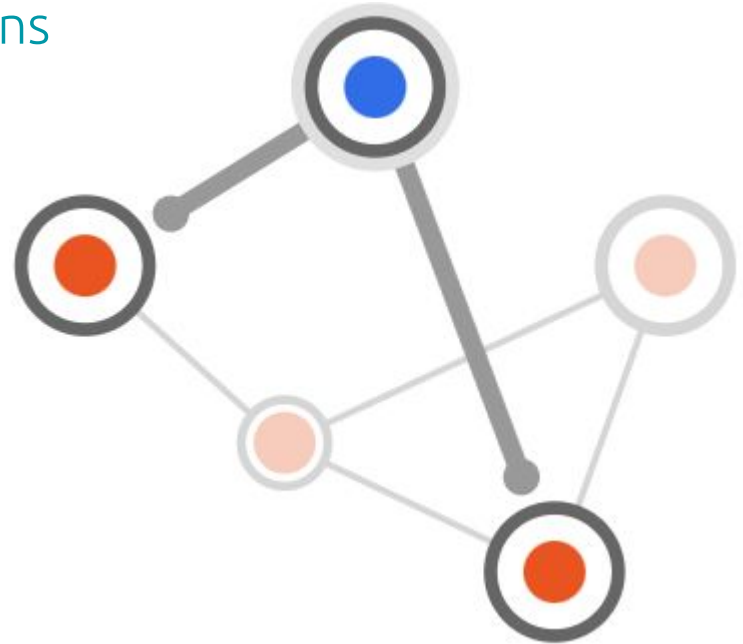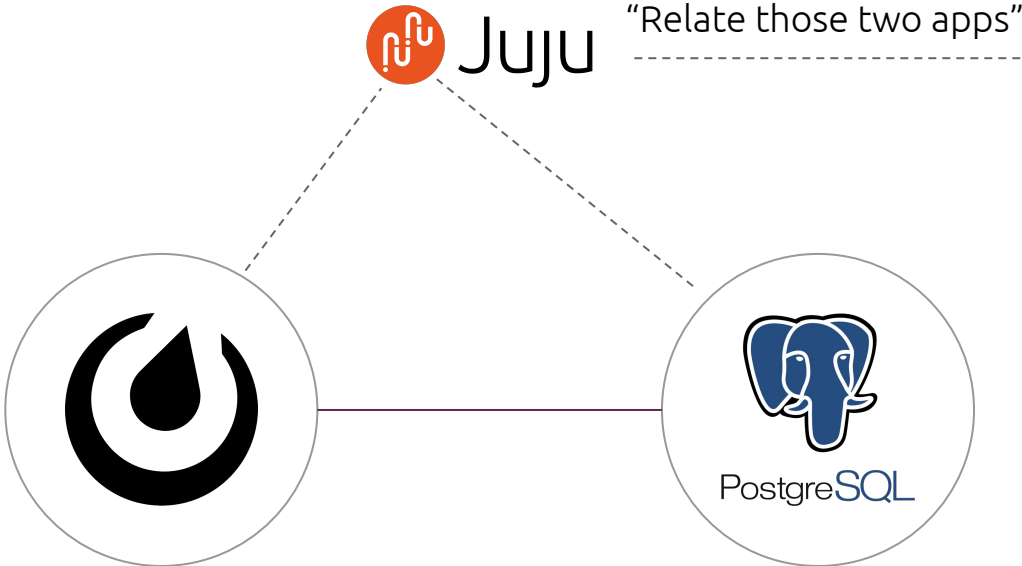
How do we use applications today?

Modern applications are composed applications

- Web servers and databases

- Caching, observability, authorization, user management
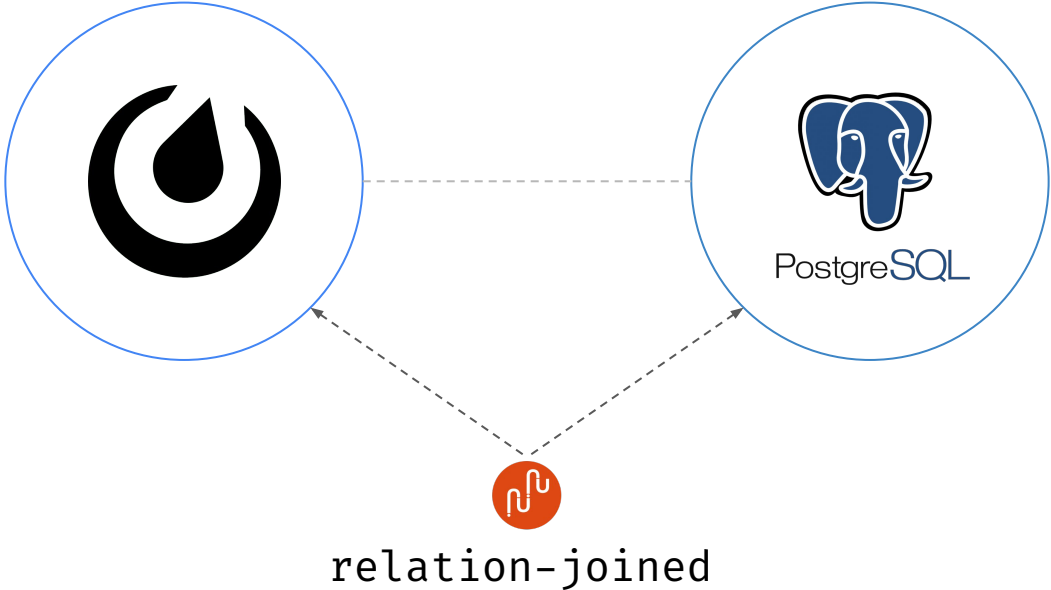
- All elements demand their operations

Relations

Juju — "Relate those two apps"

Relations

requires: pgsql

provides: pgsql

```
juju relate mattermost postgresql
```

Relations

relation-joined

Collection of Operators on Charmhub.io

charmhub.io

Why an app store?

- **Ecosystem in one place -** find the operators you want

- **Duplicate operators are minimized -** and consolidated as their functionality is integrated into the best charm

- **Easy Access -** Juju connects with Charmhub.io directly

- **Quality indicator clarity -** It's easier to cover quality from a central place

Quality?

- **Expert community -** A merit-based open community.

- **Open source preferred -** Transparency for collaboration and security.

- **Tested -** Consistent, systematic quality standards with testing.

- **Consistent -** Conventions for documentation, naming, config, actions, integrations and usage simplify adoption.

Top Tip:
Create one operator per application

- The software operator approach is a design pattern

- Enables composable applications

- Ensures a "Consistent operator UX"

- Ensures people share and collaborate on operators

One operator per application:
For the integration case

Revisited: modern applications are composed applications

- Collection on Charmhub.io with available operators

- Combine existing operators covered with applications with Juju

Composition through models

Create as many models as you need.

- Tailored models: different exchangeable application elements

  - For example, for low footprint

- Focus on composition, reuse individual applications

Inference/Edge   Desktop   AI Training

Kubeflow topologies for different scenarios

Demo
deploy mattermost

Getting started

Introductions

1

/sdk

Get set up!

2

/sdk/dev-setup

Hello, World!

3

/sdk/hello-world

juju.is/docs

Join the charming community

Charmhub	Forum	Chat
charmhub.io	discourse.charmhub.io	chat.charmhub.io

Thank you. Questions?