


Any application in any system must be
installed, configured, managed and
upgraded over time

Patching is critical to security

A close-up photograph showing a person's hands working on a mechanical component, likely a door hinge or latch, on a light-colored metal structure. The person is wearing a dark shirt and a watch on their left wrist. The background is dark and out of focus. A semi-transparent dark grey box with white text is overlaid on the upper part of the image.

**“Anything that isn’t
automated is slowing you
down”**

Deploying a database is **easy**

```
$ kubectl create deployment db --image=quay.io/my/db
```

Running a database **over time** is harder

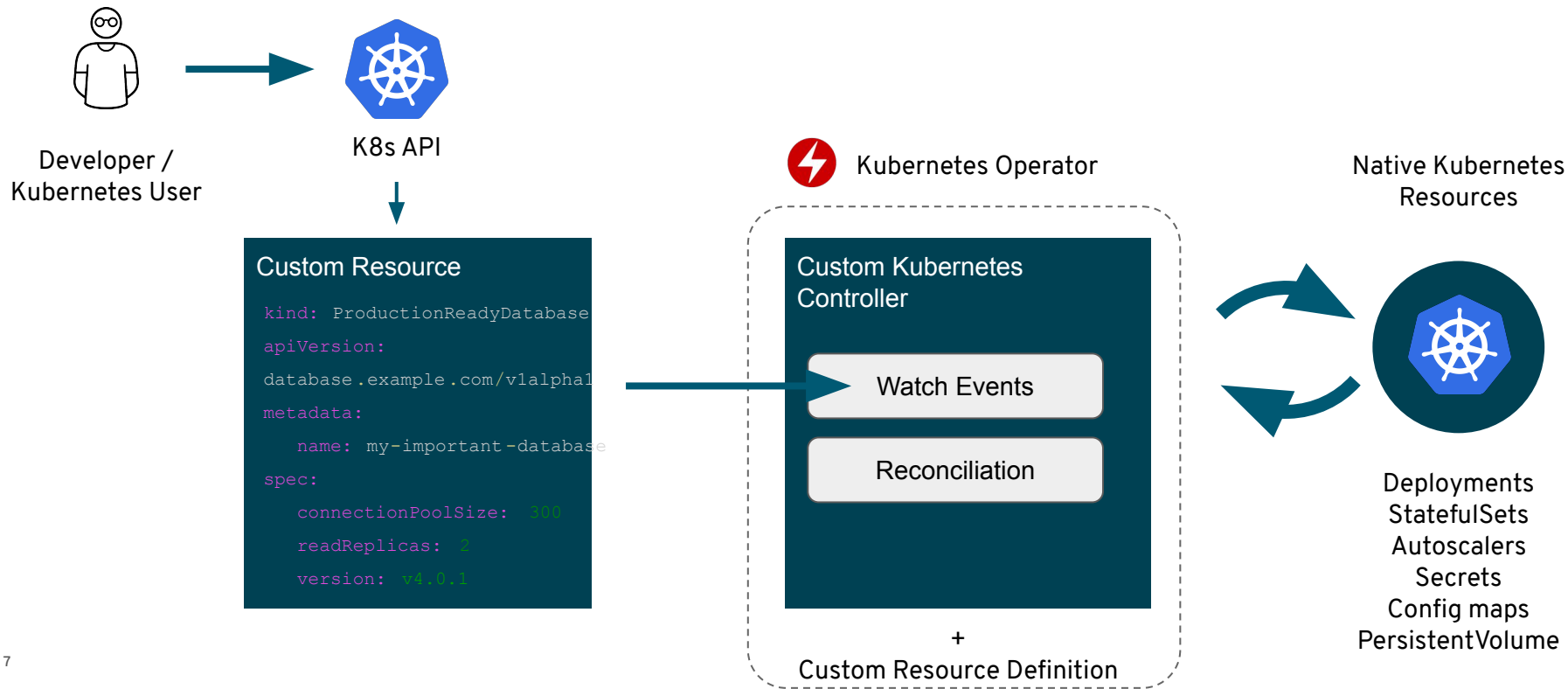
Resize/Upgrade

Reconfigure

Backup

Healing





Custom Resource (CR)

```
kind: ProductionReadyDatabase
apiVersion: database.example.com/v1alpha1
metadata:
  name: my-production-ready-database
spec:
  clusterSize: 3
  readReplicas: 2
  version: v4.0.1
[...]
```


Operators are **automated software managers** that manage the entire lifecycle of Kubernetes applications

Value of Operators



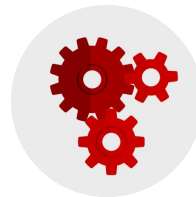
**Embed best practices
from the experts – you
– into the Operator**



**Minimize software upgrade
risk and associated
operational costs**



**Provide a cloud-like
"As a Service"
experience**



**Improve the "time to
first value" for your
customers**

OPERATOR LIFECYCLE MANAGER: The Operator Operator

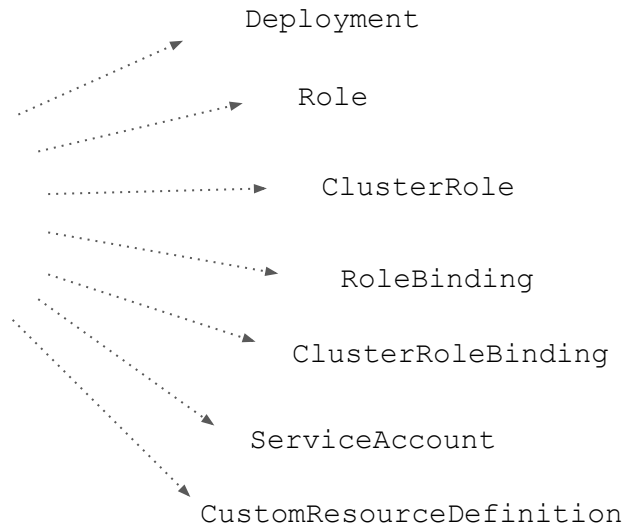


YourOperator v1.1.2
Bundle

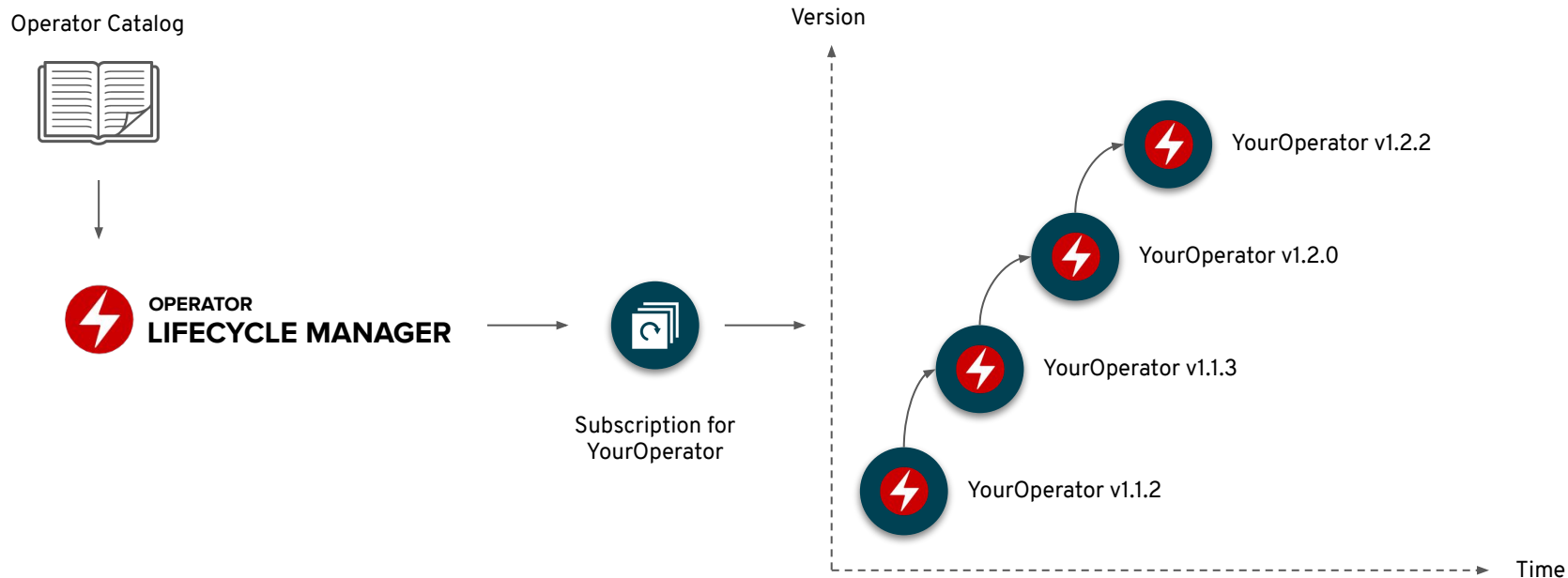


**OPERATOR
LIFECYCLE MANAGER**

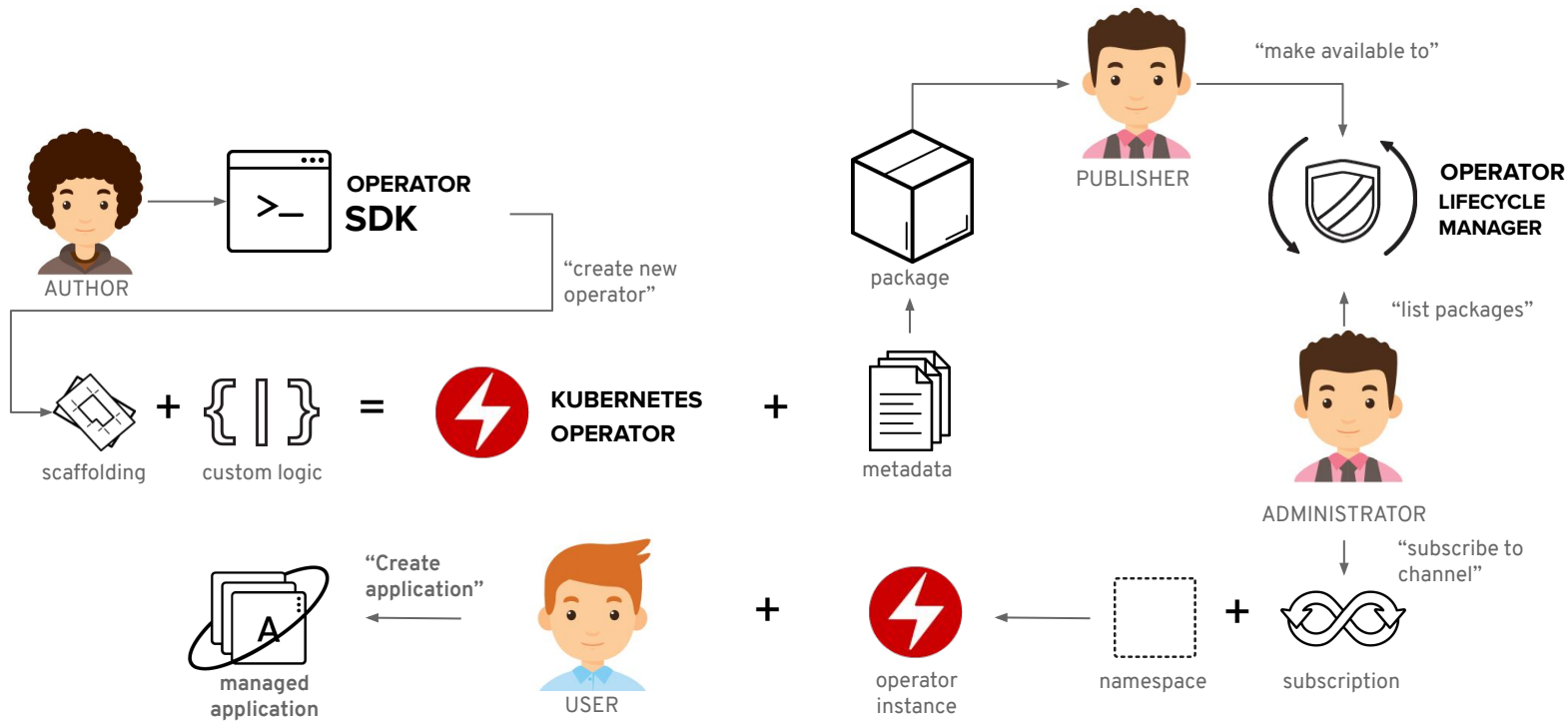
Operator Deployment
Custom Resource
Definitions
RBAC
API Dependencies
Update Path
Metadata



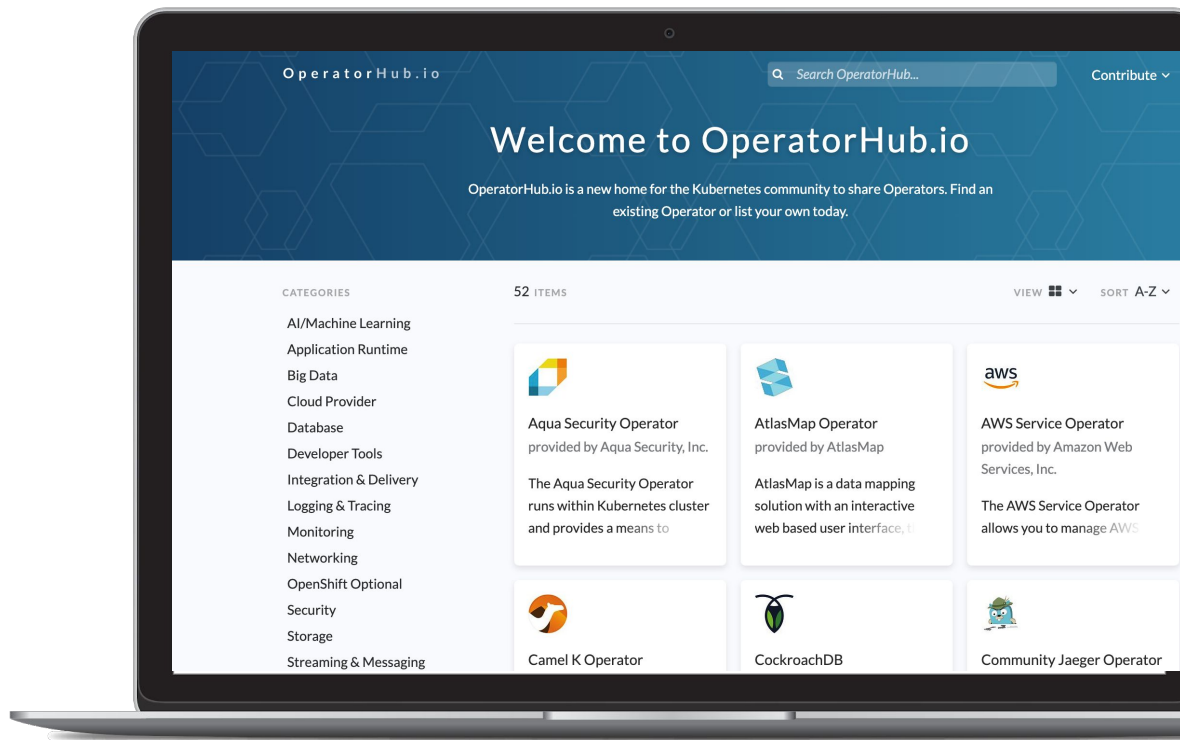
OPERATOR LIFECYCLE MANAGEMENT



SERVICE INSTANTIATION



Use Operators Today

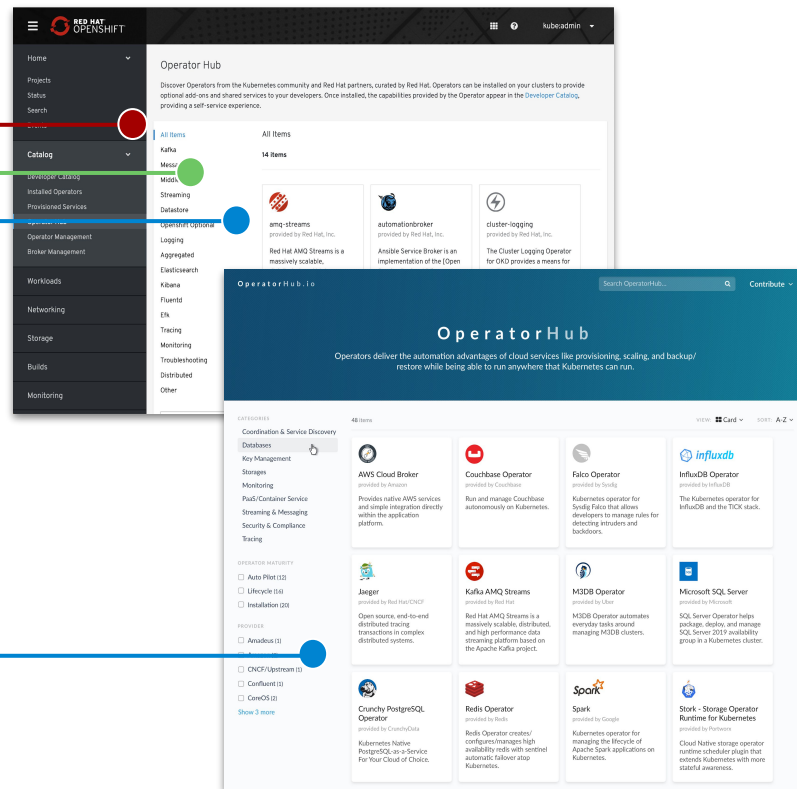


OPERATOR HUB

Operator Hub - Allows administrators to selectively make operators available from curated sources to users in the cluster.

TYPES OF OPERATORS

Red Hat Products
ISV Partners
Community

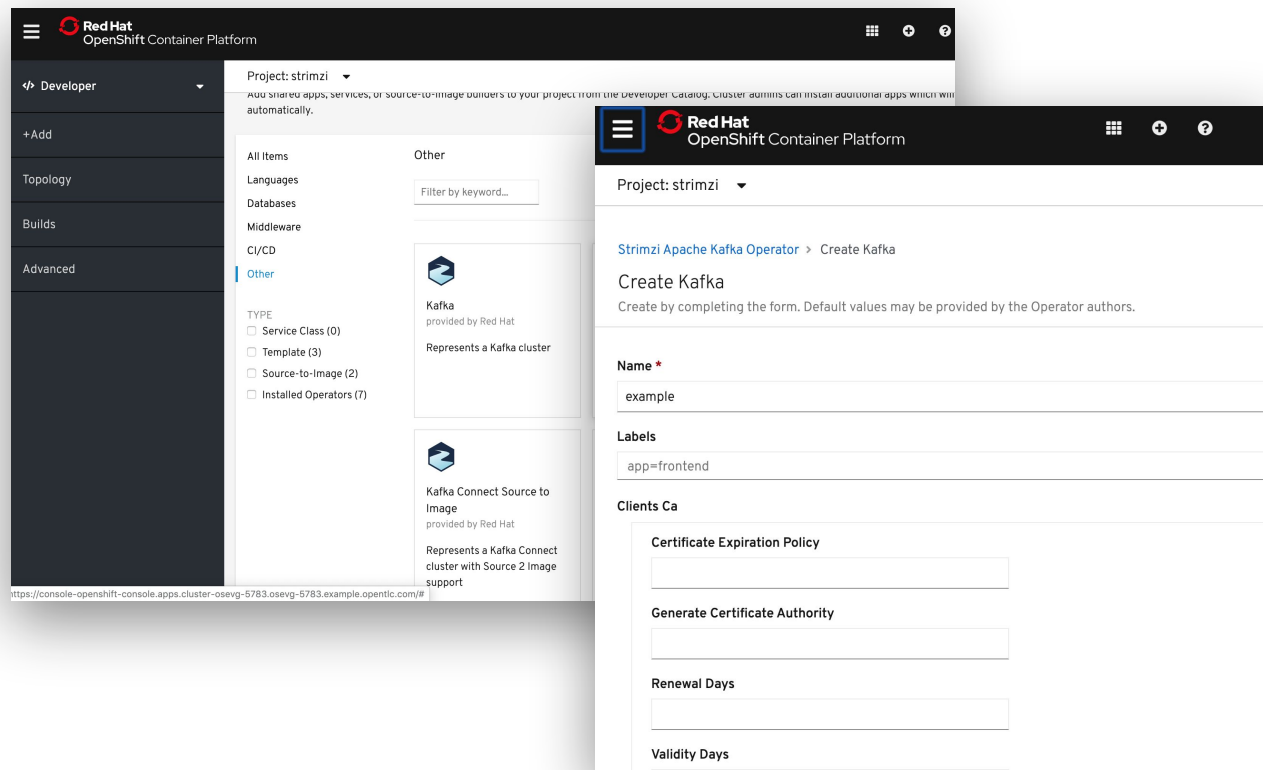




Easy self service of Operator-backed Services

Reduce friction for deploying operator backed applications

- Rich UI for creating and mutating the app instances



OPERATORS ACROSS THE INDUSTRY



...and many more

Operator Maturity Model

