

# (Open) Hybrid Cloud Vision

Julio Tapia - Red Hat  
Executive Director - Partner Ecosystem & Community Development

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Troy Mangum  
Senior Principal Product Marketing Manager

# Why are we here?

Reduce  
Costs



Create  
Growth

# What is Open?



**OPEN  
24 HOURS**

## Overwhelmed? Please see the CNCF Trail Map. That and the interactive landscape are at [l.cncf.io](https://l.cncf.io)

### Database



### Streaming & Messaging



### Application Definition & Image Build



### Continuous Integration & Delivery



### Platform



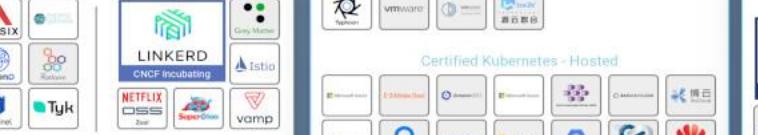
### Observability and Analysis



### App Definition and Development



### Orchestration & Management



### Runtime



### Provisioning



### Cloud



### Special



# Interactive Learning Portal

Our Interactive Learning Scenarios provide you with a pre-configured OpenShift® instance, accessible from your browser without any downloads or configuration. Use it to experiment, learn OpenShift and see how we can help solve real-world problems.

**Foundations of  
OpenShift**

[START COURSE](#)

**Building Applications On  
OpenShift**

[START COURSE](#)

**Subsystems,  
Components, and  
Internals**

[START COURSE](#)

**OpenShift Playgrounds**

[START COURSE](#)

**Service Mesh Workshop  
with Istio**

[START COURSE](#)

**Building Operators on  
OpenShift**

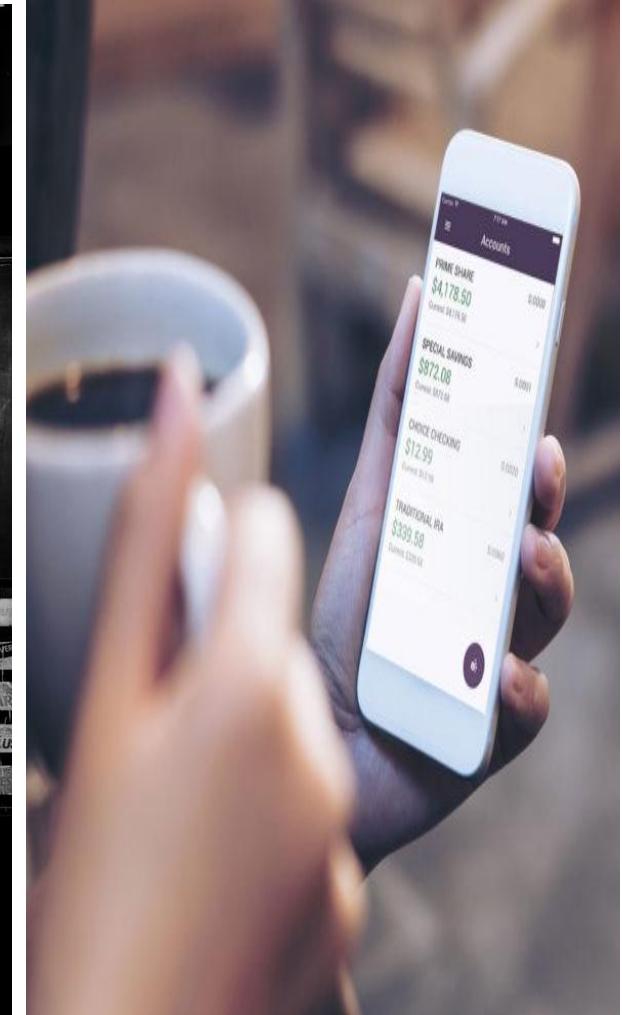
[START COURSE](#)

EXIT



# What is Hybrid?

# Today's Business World is Hybrid



# Today's Business World is Hybrid

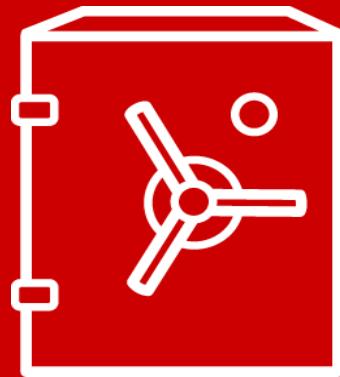


# Today's Business World is Hybrid

OPEN  
MARKETPLACES



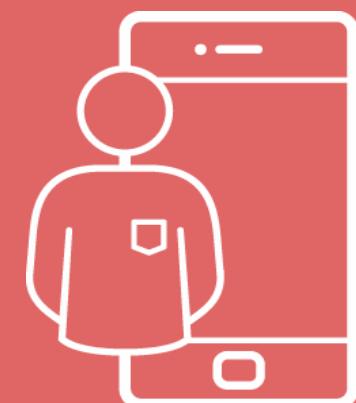
OWNED  
ASSETS



SHARED  
ASSETS



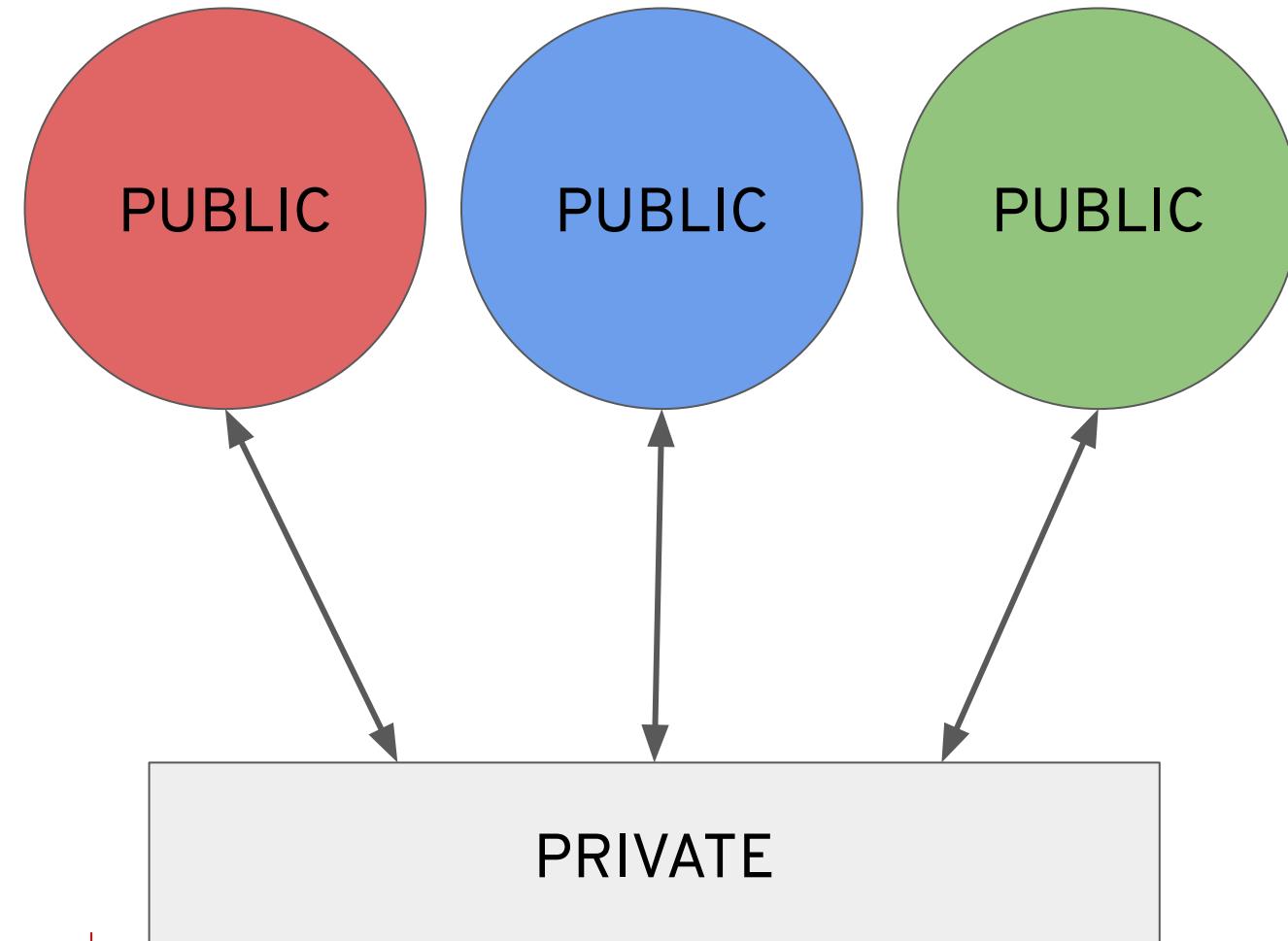
DIGITAL  
RELATIONSHIPS



# What is Cloud?

# What we've Learned about Cloud

## In 5 years of OpenShift experience



- No Public Clouds are the same
- Public Clouds are a different type of vendor (co-operation)
- Enable a broad set of applications
- Enable **community innovation**
- Inconsistency drives up costs
- Inconsistency drives up complexity
- Integrations are costly to maintain
- Onboarding must be simple
- Operations must be simplified
- Must be Secure by default

# Market Expectations for Cloud Platforms

## CLOUD EXPECTATIONS

BROAD APPLICATION SUPPORT

CONTINUOUS SECURITY

ON-DEMAND | AS-A-SERVICE  
MARKETPLACES

STANDARDS | INTEROPERABILITY |  
PORTABILITY

AUTOMATED OPERATIONS

# Market Expectations for Cloud Platforms

## CLOUD EXPECTATIONS

BROAD APPLICATION SUPPORT

CONTINUOUS SECURITY

ON-DEMAND | AS-A-SERVICE  
MARKETPLACES

STANDARDS | INTEROPERABILITY |  
PORTABILITY

AUTOMATED OPERATIONS

## RED HAT OPENSHIFT 4

INTEGRATED  
SCALING  
MONITORING  
LOGGING  
METERING  
CHARGEBACK

AS-A-SERVICE  
APPLICATIONS  
LIFECYCLE  
MANAGEMENT  
BROADEST  
APPLICATION  
SUPPORT

FLEXIBLE  
DEVELOPER  
PRODUCTIVITY  
SERVERLESS

AUTOMATED OPERATIONS AND UPDATES

INDUSTRY STANDARD ENTERPRISE KUBERNETES

SECURE HYBRID CLOUD



# OpenShift Vision

Be the de facto (Open)  
Hybrid Cloud Platform  
For the Enterprise

Adapt to  
Change



Tomorrow'  
s  
Success



Our customers enjoy  
Hybrid/ Multi-Cloud  
flexibility

# Hilton

## HILTON HOTELS REDEFINING THE TRAVEL EXPERIENCE



# Hilton

Hilton's new cloud environment, built on Red Hat technologies, supports the award-winning Hilton Honors mobile application providing its guests with digital check-in and room selection.

## Challenge

Modernize the guest experience to stay competitive.

## Solution

Hilton deployed Red Hat® solutions to build an agile hybrid cloud and computing environment to develop and launch applications faster.

## Why Red Hat

Hilton wanted to empower its teams to make decisions and develop an agile mindset and culture.

## Results

- Increased competitive advantage by offering customers more convenience, choice, and control of their stay through the Hilton Honors mobile application
- Improved time to market by speeding development time from months to days with automated, adaptable, and vendor-agnostic cloud technology
- Enhanced collaboration on new digital amenity features with agile DevOps and continuous integration/continuous delivery (CI/CD) approaches

## Products and services

Red Hat Enterprise Linux®  
Red Hat Satellite

Red Hat OpenShift® Container Platform

# OpenShift Container Platform (OCP) is the multi-cloud/ hybrid cloud standard



## Banco Galicia (financial)

Launch time from month to weeks across multiple clouds

## Deutsche Bank

Move applications between on-prem and public clouds

## Paychex

Avoiding public cloud lock-in was key to their success

## Hilton

70% of compute that run Hilton Honors app run across multiple clouds worldwide

## Bank in France

OCP allowed them to lift and shift legacy apps to public cloud after unsuccessfully trying DIY and native public cloud services for two years

Source:

Banco Galicia: <https://www.redhat.com/en/success-stories/banco-galicia>

DB: <https://youtu.be/-QM6qeDAiE4?t=4841>

Paychex: <https://www.redhat.com/en/success-stories/paychex>

hilton: <https://www.redhat.com/en/success-stories/hilton>



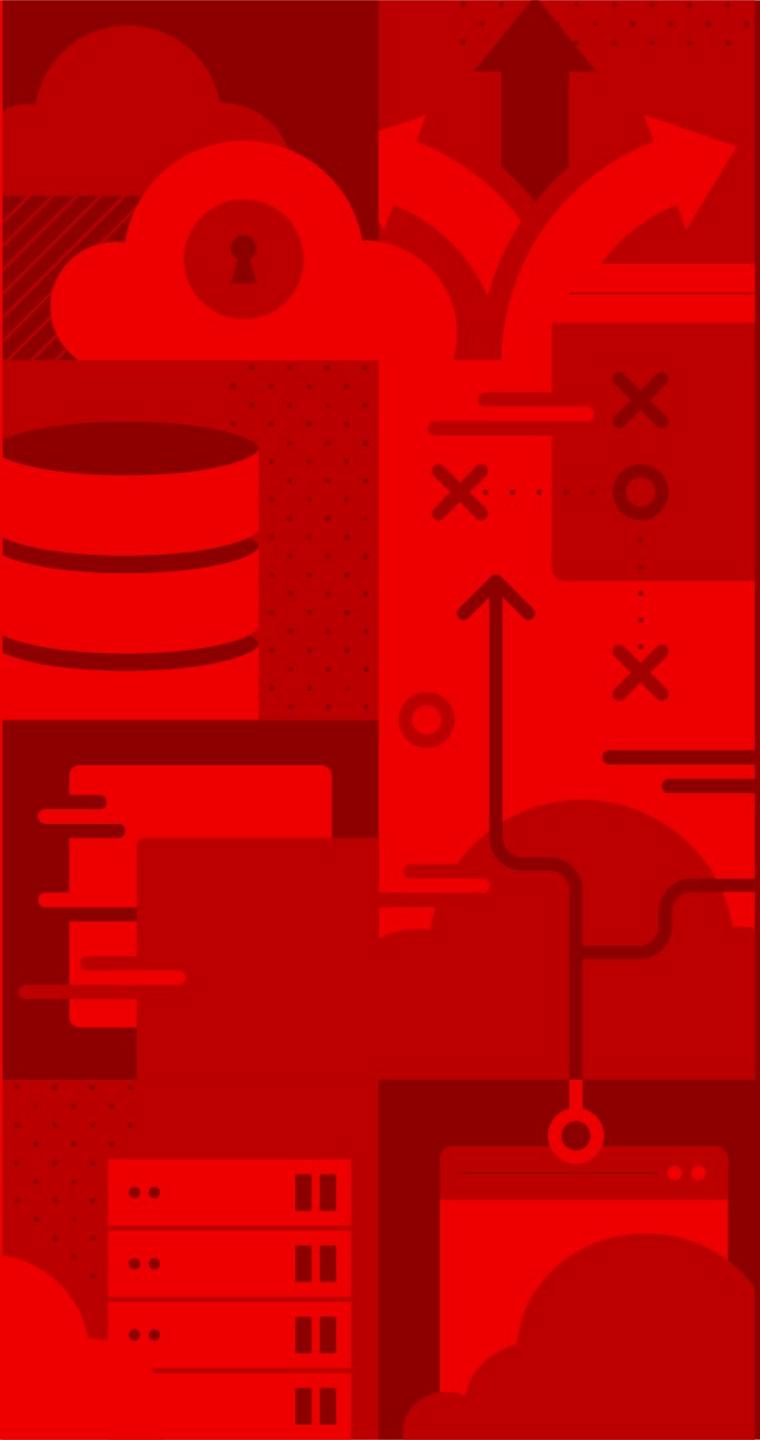
“ ”

## Multi-Cloud Platform

We choose Red Hat OCP for the freedom it gives us on top of different public clouds. We want to maintain a flexible foundation to collaborate with diverse players to provide services our customers want or need.

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**Jose Maria San Jose Juarez**  
CTO/CIO of X by Orange



Our customers are  
delivering more  
applications features,  
faster

“”

## Simpler Developer Experience



We looked at alternatives, but we felt that Red Hat OpenShift Container Platform was simpler than it's competitors, especially in developer experience”

---

**Dr. Nikolas Nehmer**

Head of Helvetia Container Platform, The Helvetia Group

# OpenShift customers development teams are more productive with OpenShift Pipelines



**4X more productive with OCP**

Delivering More Features Faster



**20 to 200 codes changes a day**

Development teams went are 10X more productive with OCP



**20 builds to 165 builds a day**

OCP has provided exponential speed and quality to the development process across 100 developers

Source:

28

Paychex: <https://www.redhat.com/en/success-stories/paychex>

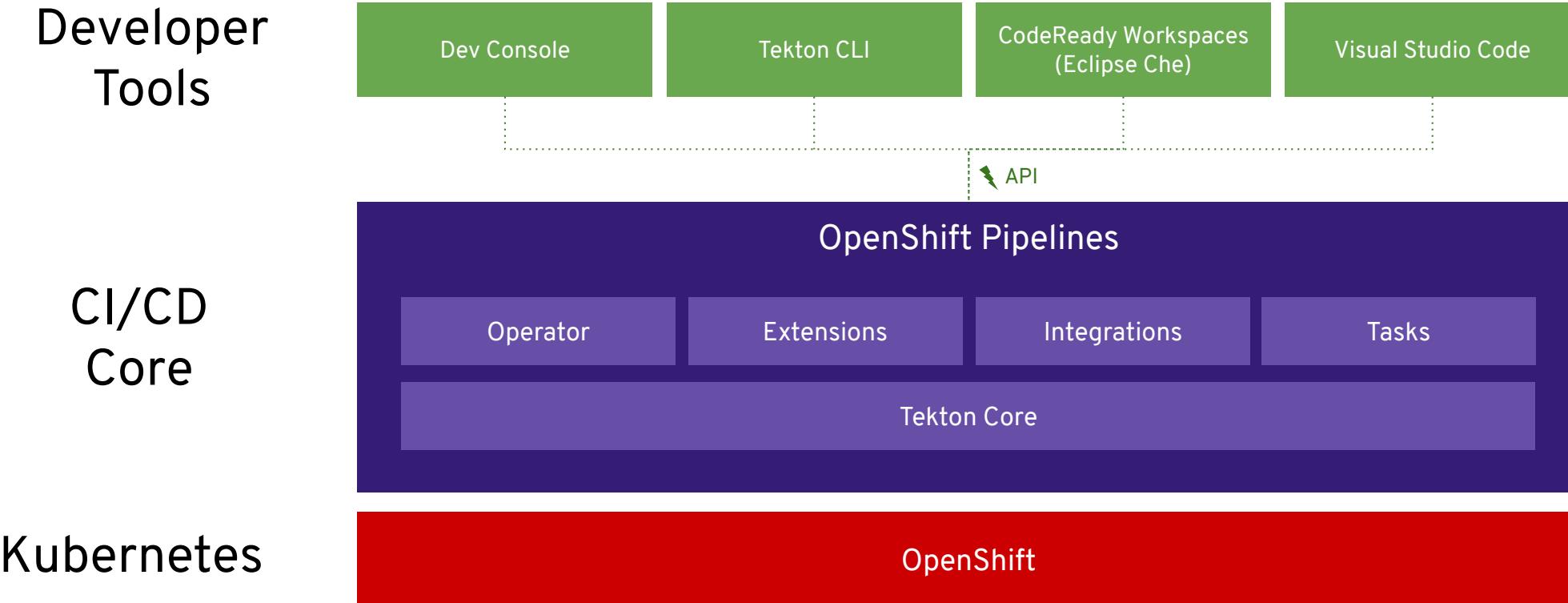
Cathay Pacific: <https://www.redhat.com/en/success-stories/cathay-pacific>

ANZ: <https://www.computerworld.com/article/3468253/anz-expands-devops-process-overhaul-after-fantastic-early-results.html>



# OpenShift Pipelines

Next-Generation CI/CD for Kubernetes



“”

## OpenShift customers stay ahead of competition



With Red Hat OpenShift, we plan and complete a POC in 1-2 weeks, then launch what we've developed into production faster to stay ahead of competition.

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**Anderson Agapito**  
IT manager at Elo

# EMIRATES NBD

Chat Banking

## Banking is just a WhatsApp away

Chatting with your bank is now just as easy as chatting with your friends.

Introducing Emirates NBD Chat Banking via WhatsApp, a **24/7 secure and simple way** to get your banking needs on the go.



**Subscribe through SMS**  
SMS WhatsApp to 4456 with  
your registered mobile number



**Subscribe through  
Mobile/ Online Banking**  
Log into your Mobile or Online  
Banking and click on the  
**Subscribe now** button

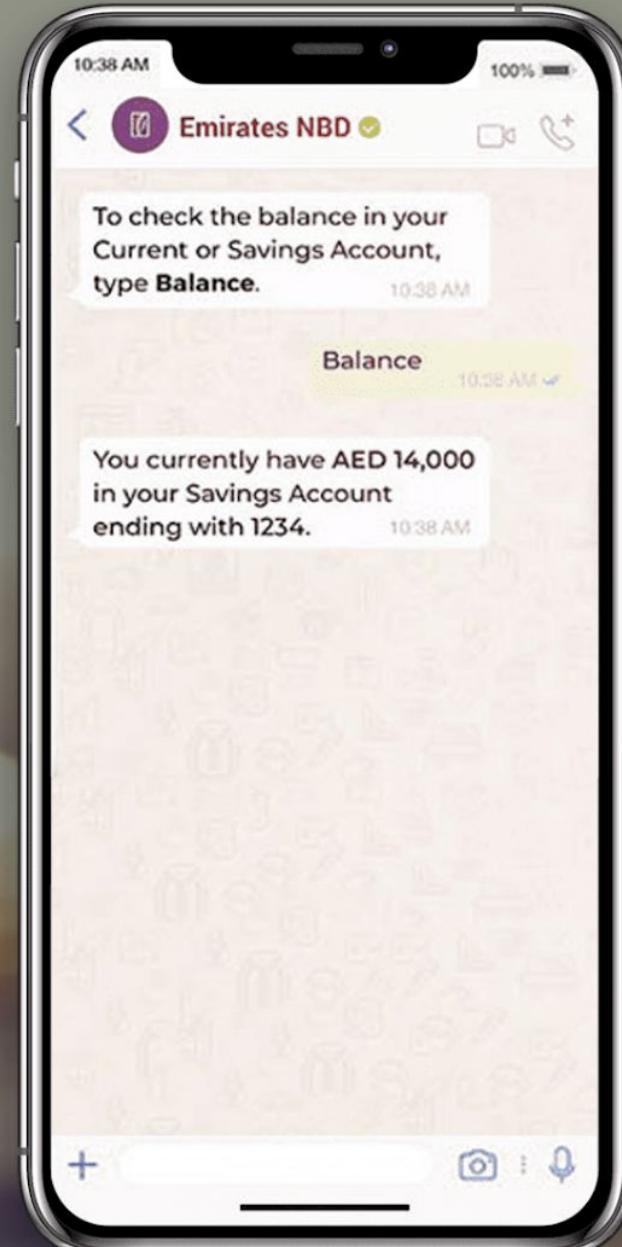


**Chat securely**  
You will never be asked to share  
your personal information, only  
the last 4 digits of your Card or  
Account number may  
be required



**Check for the green badge**  
Check for the green badge next  
to Emirates NBD's name and  
start chatting

[Click here for Digital Banking Services Terms and Conditions](#)



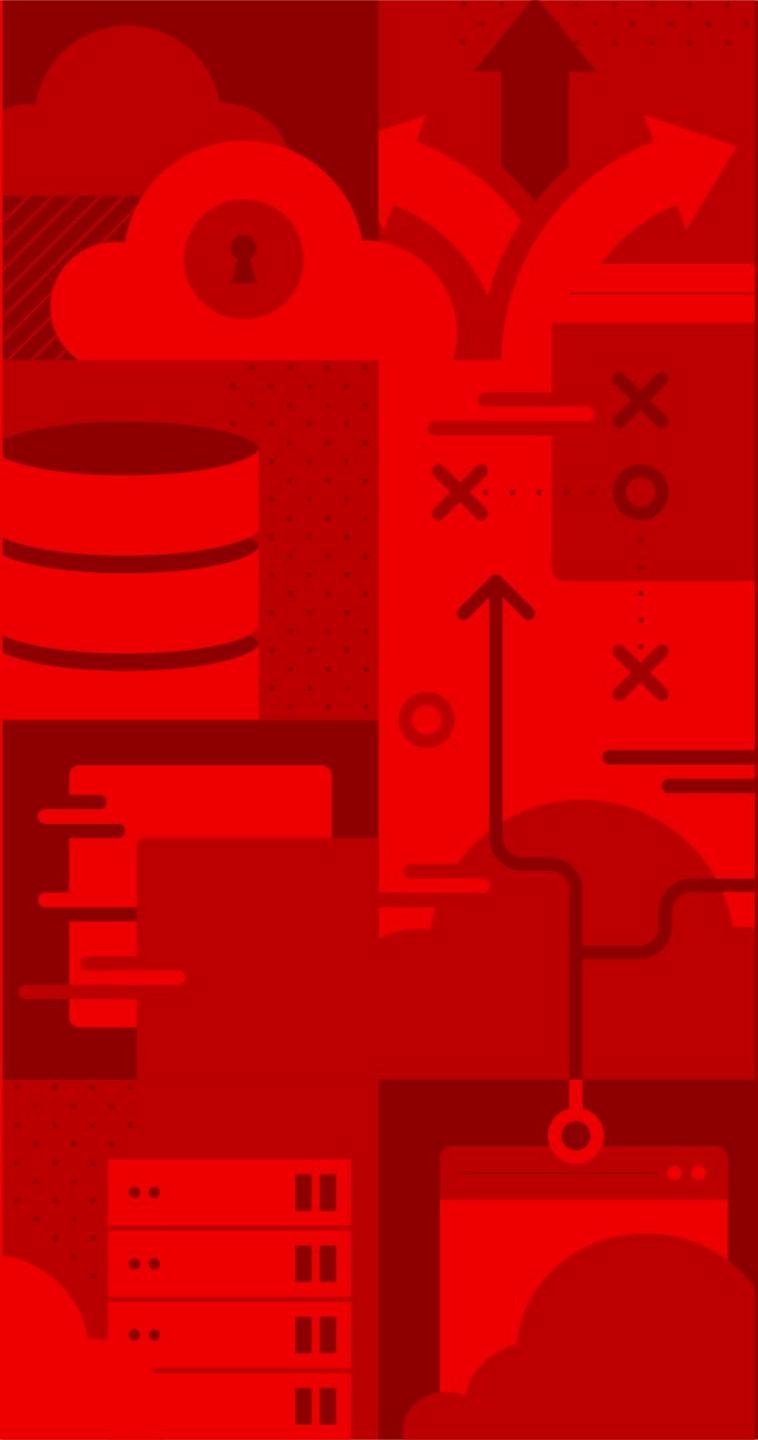


Lufthansa Technik

# The Kubernetes platform for your business

“The moment we have an idea, we can start building the product.”

Tobias Mohr, Head of Technology and Infrastructure, Lufthansa Technik



Our customers are  
streamlining  
operations



"We transformed our traditional system administrators in Operators to DevOps Engineers in less than one year"

## Challenge

Monolithic application architectures, isolated groups and waterfall processes

## Solution

OpenShift 4.X with Operators framework and Ansible

## How they transformed operations with Operators

- Ansible playbooks and roles manage templated custom resources (CR's)
- Manage and extend cluster via built-in Operators
- Built Operators to assist developers with deployments and management of microservices
  - Class 2 Operators (seamless upgrades)
- Modular Ansible Project structure for GitOps
  - Uses git-submodules for logical separation
  - Release infrastructure as any other software projects
  - Infrastructure as Code (IaC), Infrastructure is versioned

## Products and services

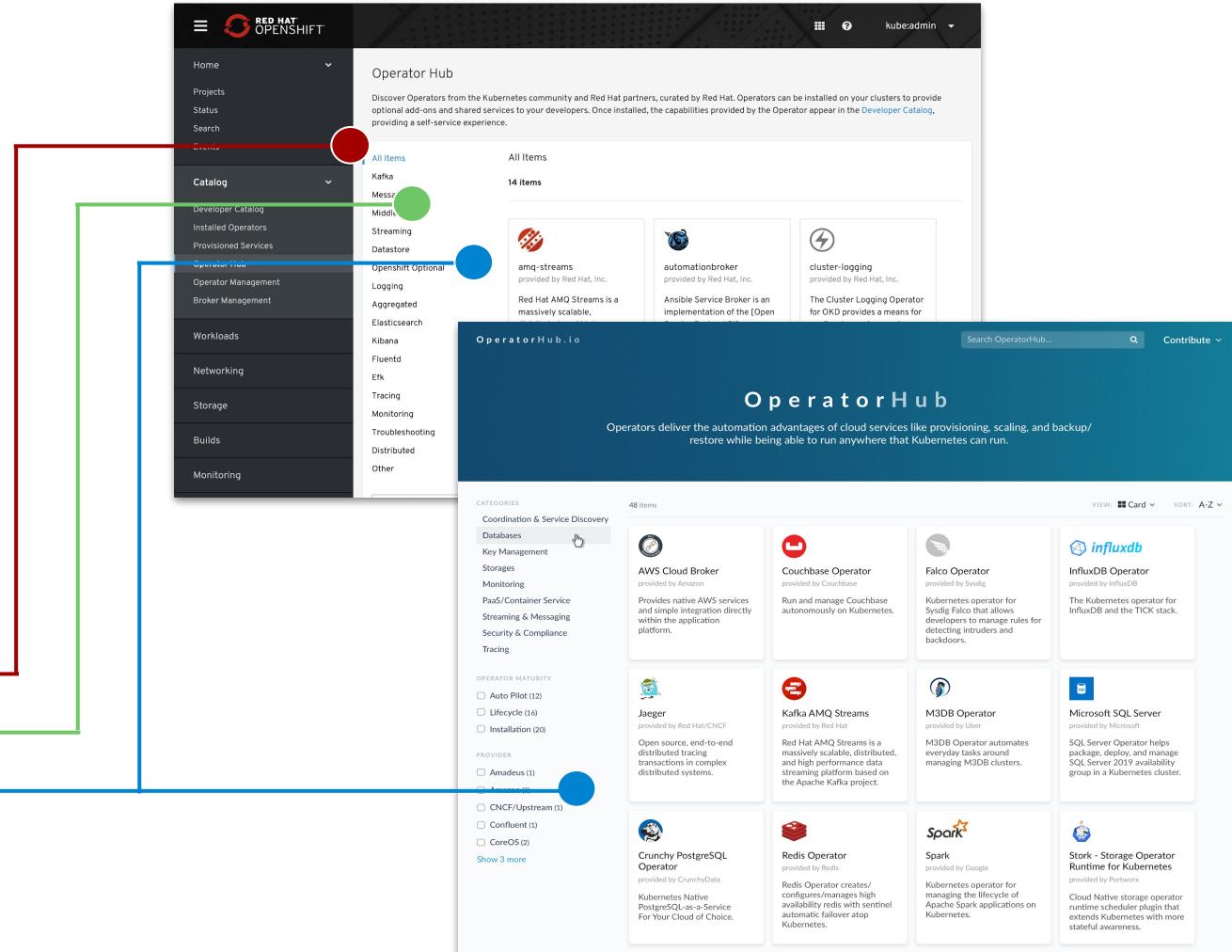
Red Hat OpenShift® Container Platform  
Ansible

# OpenShift Operators and OperatorHub

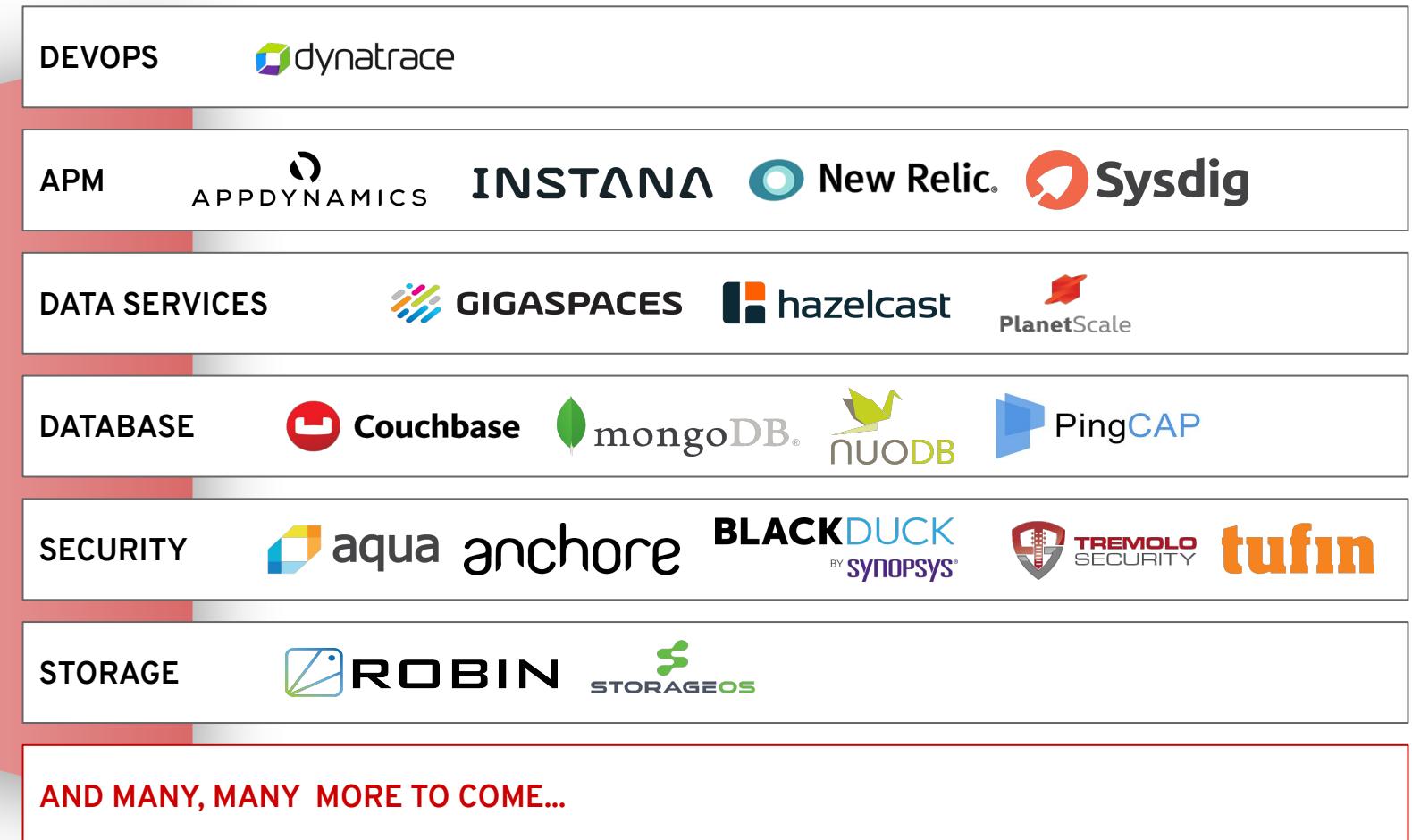
- Launched with AWS, Microsoft, and Google
- Discover and install additional services and apps
- Upstream & downstream content
- Partners support/maintain their own Operators

## TYPES OF OPERATORS

Red Hat products  
ISV partners  
Community



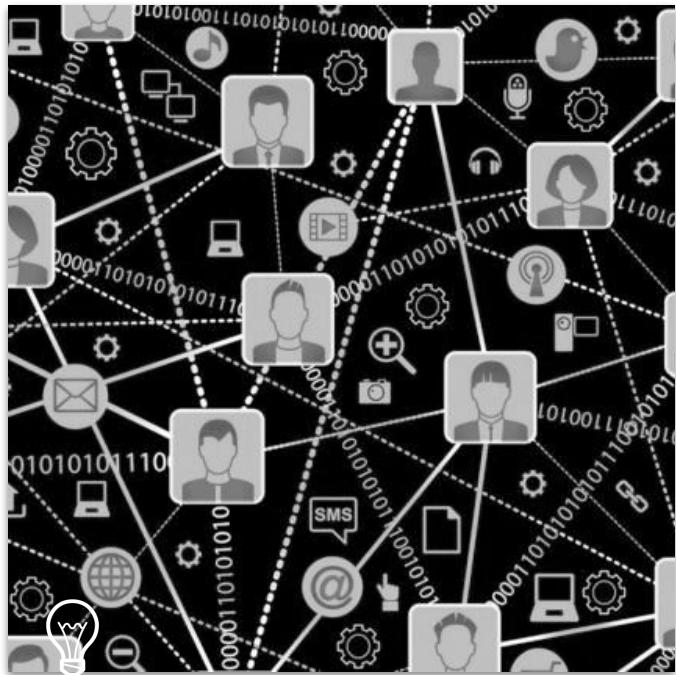
# Operators simplify Complexity





Our customers are  
confident to scale  
kubernetes

# OpenShift Container Platform (OCP) proven in production at scale benefits from Service Mesh



Source:

DB: <https://youtu.be/-QM6qeDAiE4?t=4841>

PayChex: <https://www.redhat.com/en/success-stories/paychex>

Emirates NBD : <https://youtu.be/FUu4kMc0Pl8?t=5104>

BP: <https://youtu.be/iB9MnMTmM Zw?t=5025>

BP: <https://youtu.be/ZO3Z-B3Mb kM?t=54>

## Deutsche Bank

25,000+ containers in production running over 2000 applications with OCP

## ANZ Bank

8000+ containers running across dev/test and production (~1200 containers per OCP cluster)

## Paychex

4000 containers in product with OCP

## Emirates NBD

1200 containers in product with OCP

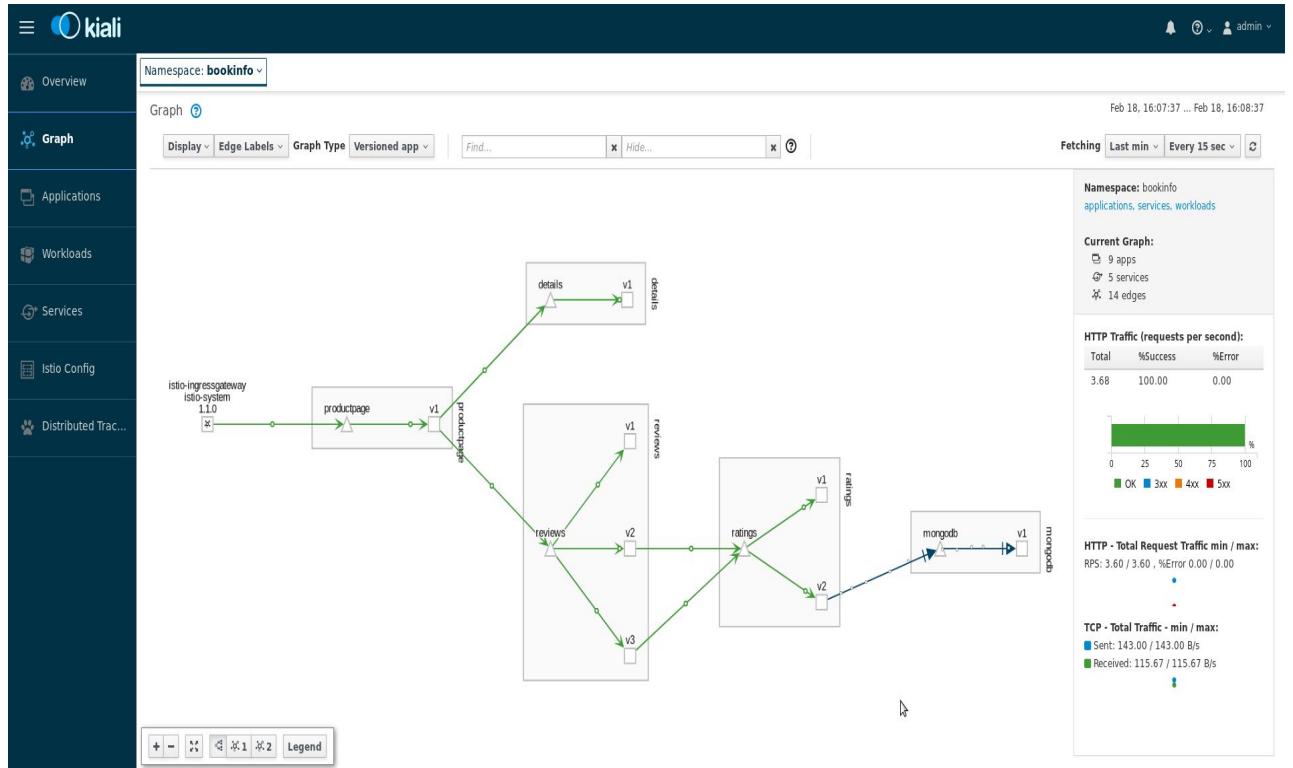
## BP

1000's of microservices managed in production with OCP

# OpenShift Service Mesh

## Key Features

- A dedicated network for service to service communications
- Observability and distributed tracing
- Policy-driven security
- Routing rules & chaos engineering
- Powerful visualization & monitoring
- Will be available via OperatorHub





Connect Drive App runs on OpenShift

**12Mil      300      12,000      1 Bil**

**Cars running Connect Application**

12 Million cars run Connect Drive application. Application is built on OCP. Updates are deployed from OCP

**Microservices**

The application backend consists of 300 microservices.

**Production Containers**

OCP has provided a proven platform to scale on with 12,000 containers running in production on OCP

**Request per Week**

The application growing at 30% year on year. OpenShift is proven in the most demanding production environments

# Thank you

Red Hat is the world's leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.



[linkedin.com/company/red-hat](https://www.linkedin.com/company/red-hat)



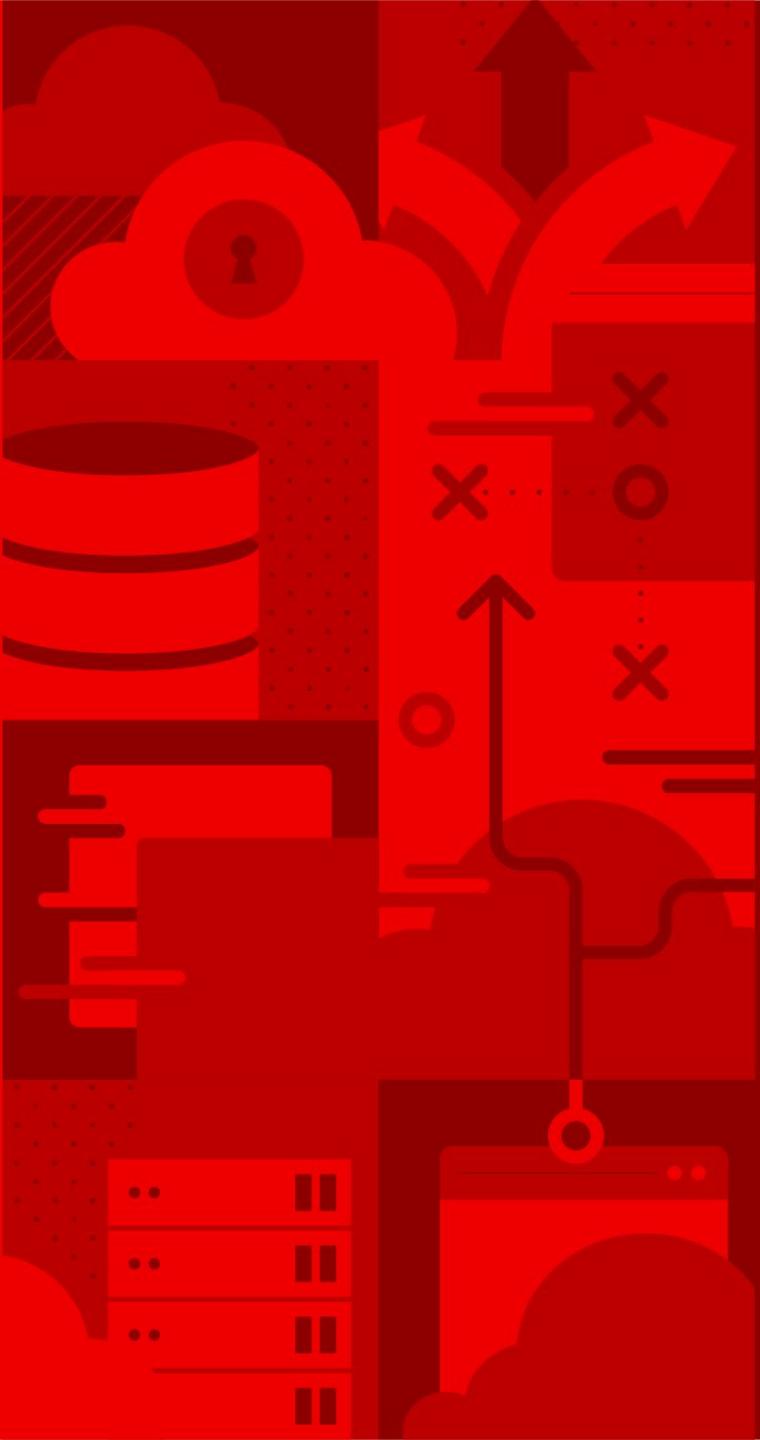
[youtube.com/user/RedHatVideos](https://www.youtube.com/user/RedHatVideos)



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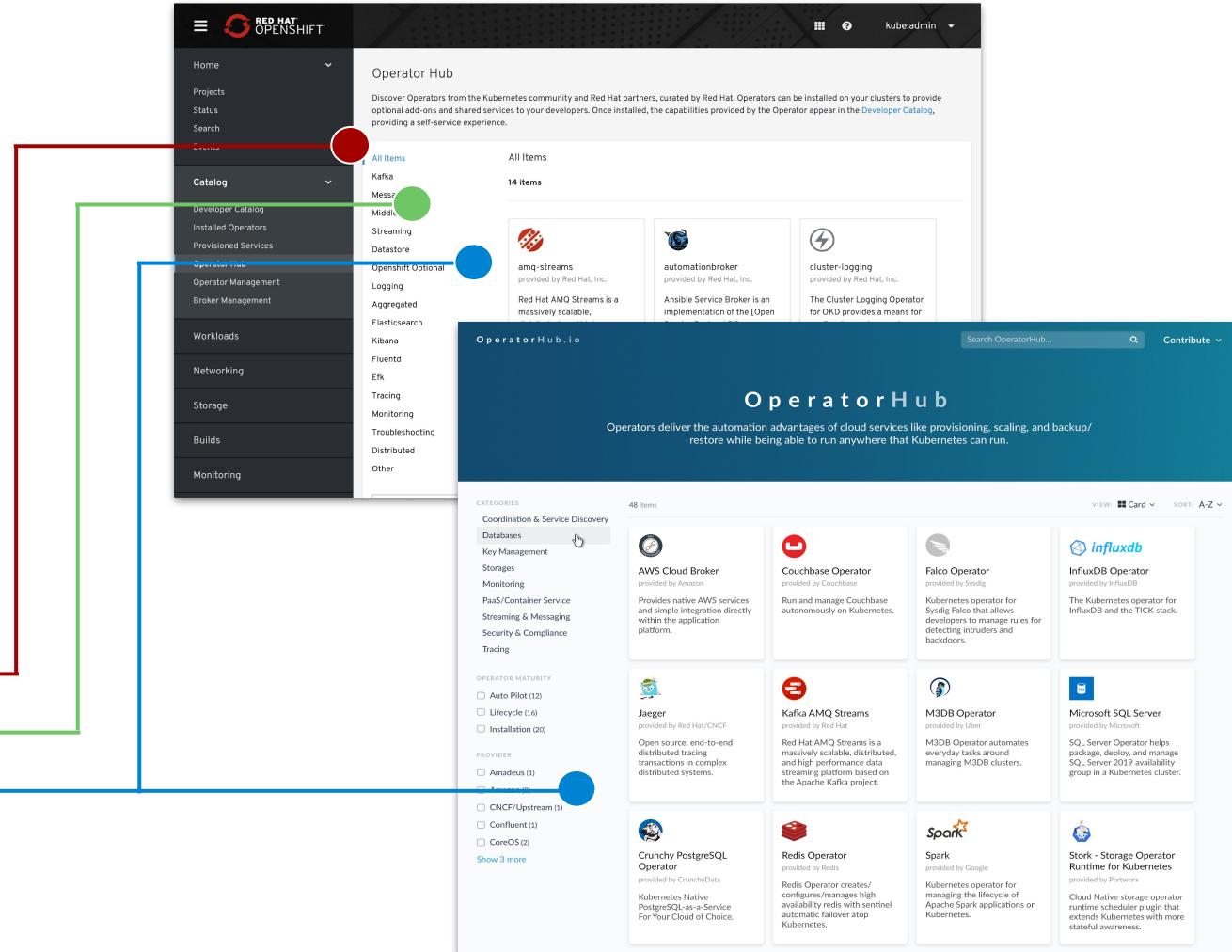
Deliver a Hybrid  
cloud experience  
to both Dev and  
Ops

# OpenShift Operators and OperatorHub

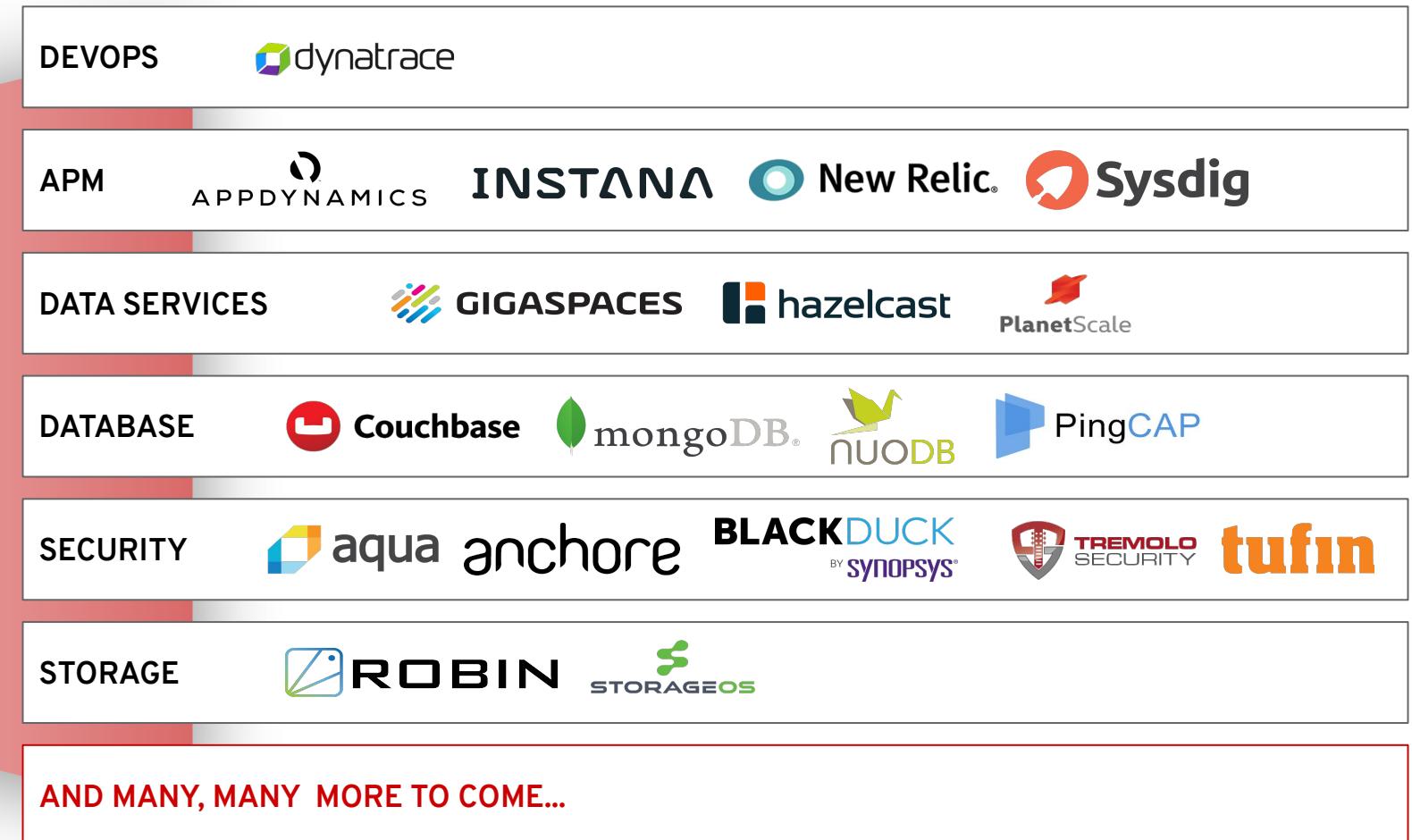
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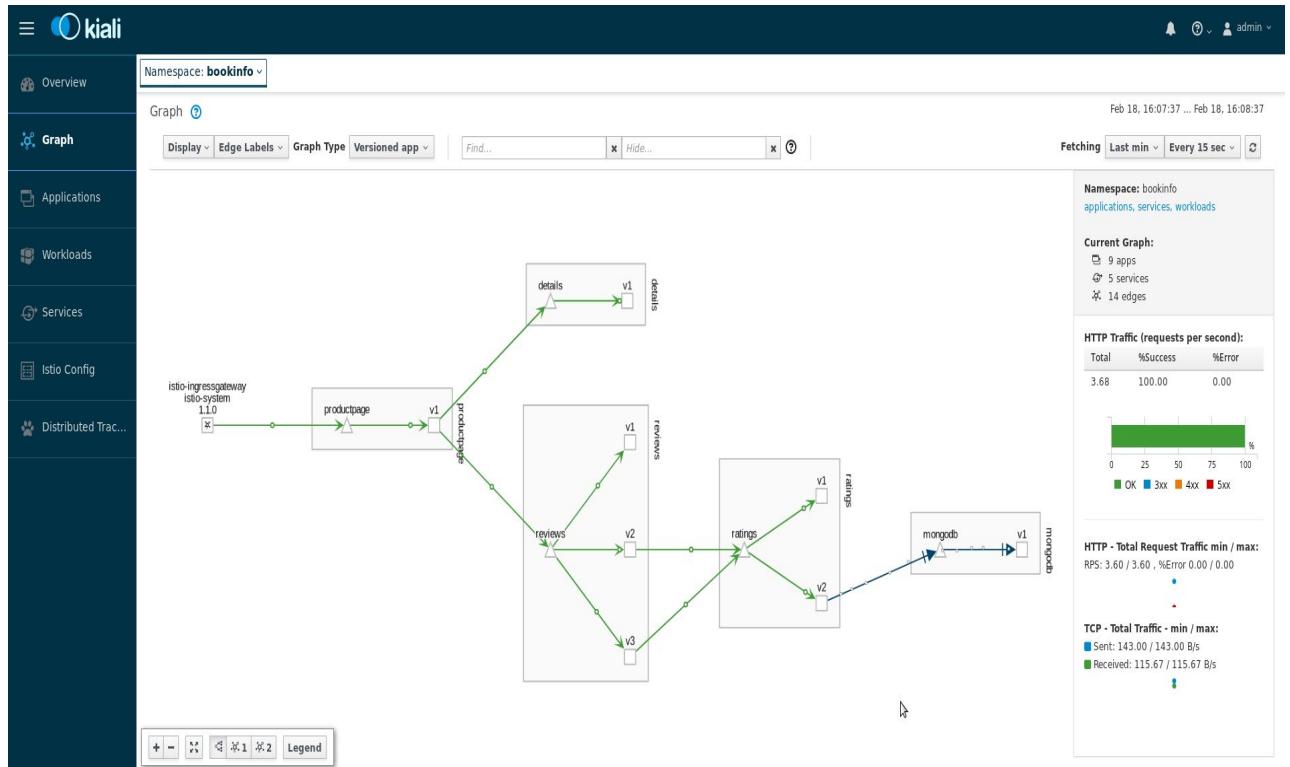
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# OpenShift Serverless

## Key Features

- Familiar to Kubernetes users. Native.
- Scale to 0 and autoscale to N based on demand
- Applications and functions. Any container workload.
- Powerful eventing model with multiple event sources.
- Operator available via OperatorHub
- Knative v0.6 (v1beta1 APIs)
- No vendor lock in

## Learn more

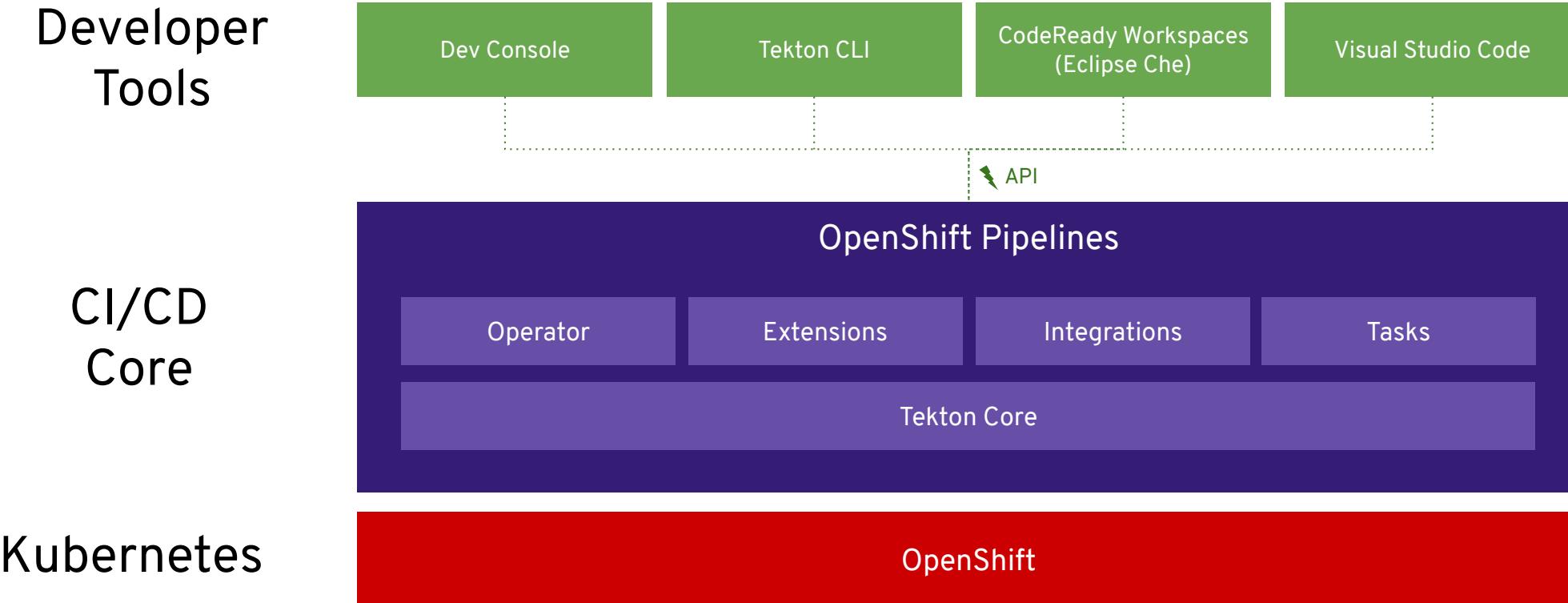
<https://openshift.com/learn/topics/knative>  
<http://bit.ly/knative-tutorial>

The screenshot shows the Red Hat OpenShift Container Platform interface. On the left, there's a sidebar with 'Catalog' expanded, showing 'Developer Catalog' and 'Installed Operators'. Under 'Installed Operators', the 'Knative Serving Operator' is listed with a status of 'Installed'. To the right, there's a main content area for the 'openshift-operators' project. It includes sections for 'Cloud Provider', 'Database', 'Developer Tools', 'Integration & Delivery', 'Logging & Tracing', 'Monitoring', 'Networking', 'OpenShift Optional', 'Security', 'Storage', and 'Streaming & Messaging'. At the bottom, there are two cards: 'Knative Serving Operator' (highlighted with a red box) and 'Operator METERING'. Each card has a 'Community' tab and a brief description. Below the cards are two charts: 'Incoming Request Traffic' and 'Outgoing Request Traffic', both showing minimal activity.



# OpenShift Pipelines

Next-Generation CI/CD for Kubernetes





Provide great services  
to empower  
Developers

# The Red Hat CodeReady Portfolio

**Goal:** Help developers find the tools to get the most out of our platforms.

**Red Hat CodeReady Workspaces** (supported Eclipse Che)

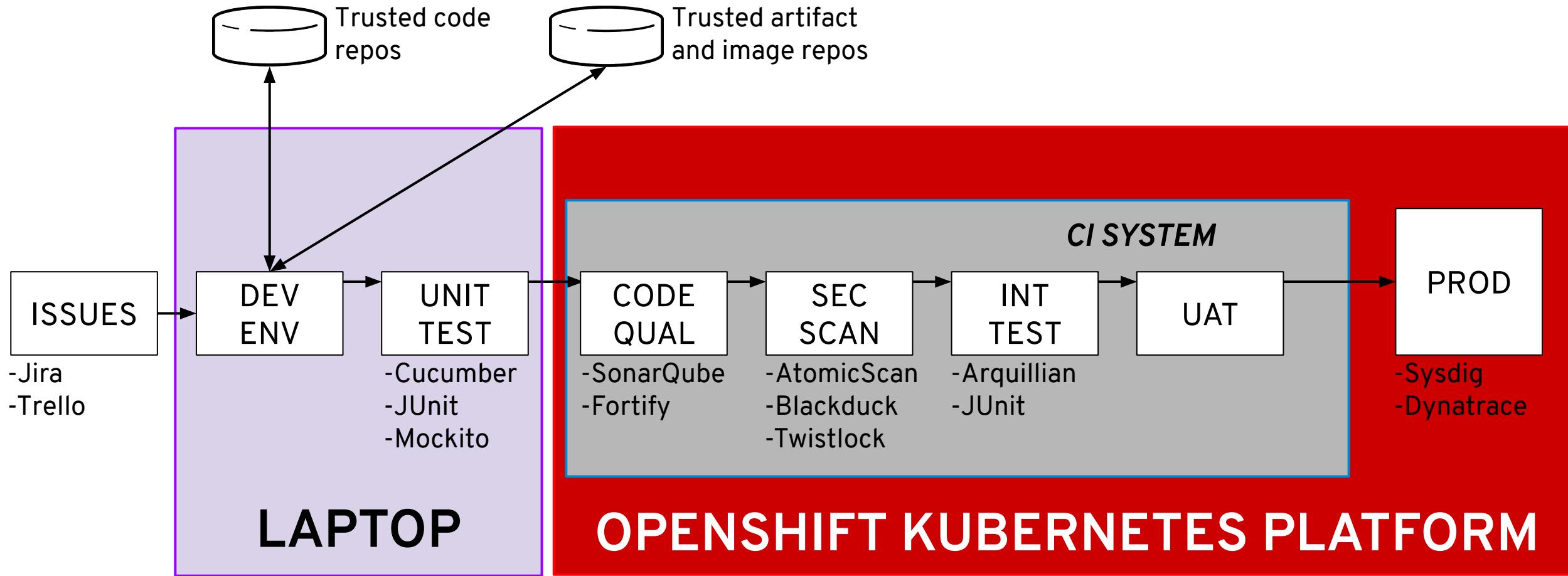
**Red Hat CodeReady Containers** (local laptop install of OpenShift 4)

**Red Hat CodeReady Studio** (ex-DevStudio)

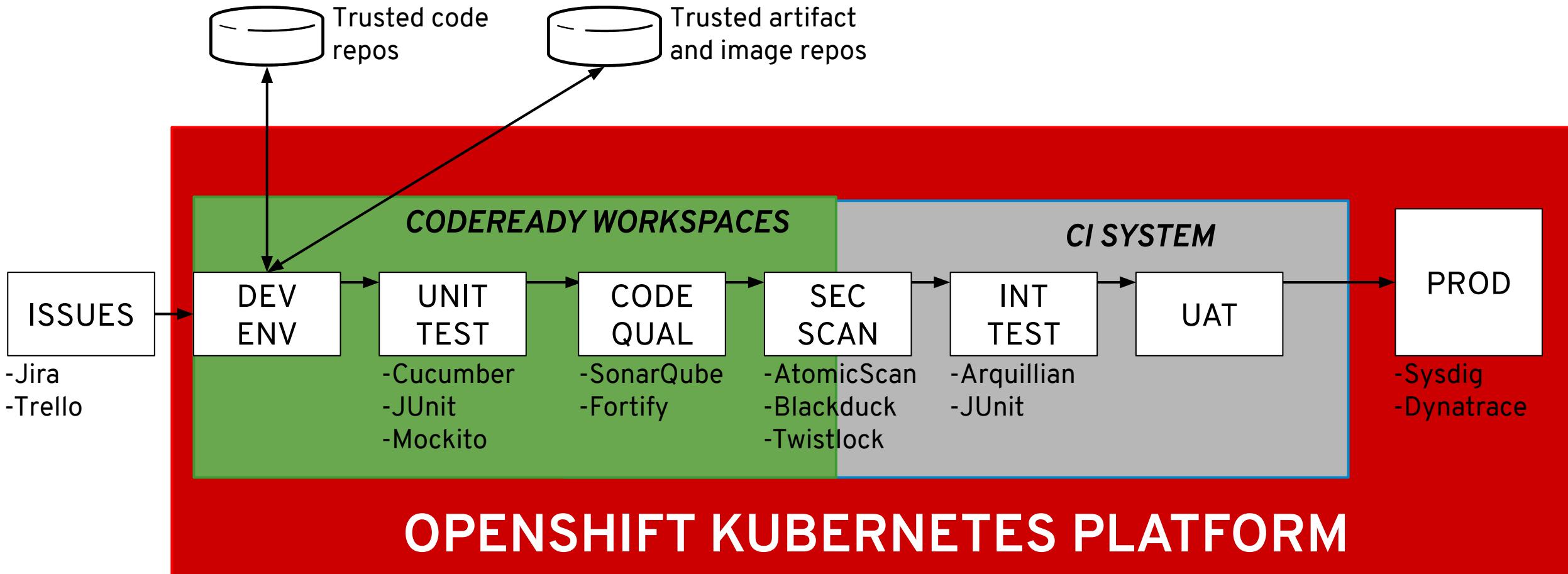
**Red Hat CodeReady Builder** (tools for building on RHEL)

**Red Hat CodeReady Toolchain** (a hybrid cloud devops toolchain)

# Developing with Red Hat OpenShift



# Developing On Red Hat OpenShift



 Red Hat  
OpenShift Container Platform

Home Catalog Workloads Networking Storage Builds Monitoring Compute Administration

Project: brie ▾

## OperatorHub

Discover Operators from the Kubernetes community and Red Hat partners, curated by Red Hat. Operators can extend your cluster with new services to your developers. Once installed, the capabilities provided by the Operator appear in the Developer console.

All Items All Items 63 items

Category	Operator Name	Description
Red Hat Applications	AMQ Streams	Red Hat AMQ Streams is a massively scalable, distributed, and high performance message processing system.
	Anchore Engine Operator	Anchore Engine - container image scanning service for policy-based security, best-practice and compliance.
3rd Party Applications	Aqua Security Operator	The Aqua Security Operator runs within a Openshift cluster and provides a means to deploy and manage Aqua Security products.
	Kafka	Kafka
Customer Applications	Mongo	Mongo
	Application 1	Application 1
AppDynamics	AppDynamics	
Business Automation Operator	Business Automation Operator	
Camel K Operator	Camel K Operator	
Cert Utils Operator	Cert Utils Operator	
OpenShift ServiceMesh	OpenShift ServiceMesh	
Red Hat 3 Scale	Red Hat 3 Scale	
Red Hat Fuse	Red Hat Fuse	
SkyDive	SkyDive	

Filter by keyword... INSTALL STATE

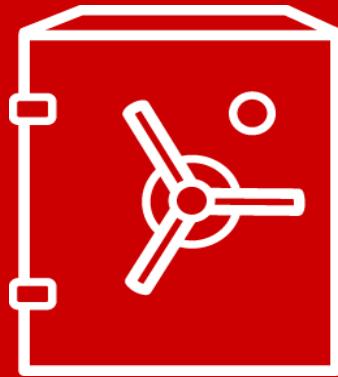


# Today's Cloud World is Hybrid

OPEN  
MARKETPLACES



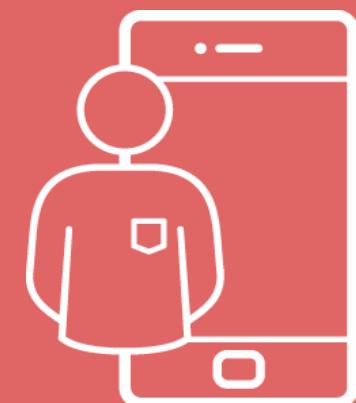
OWNED  
ASSETS



SHARED  
ASSETS



DIGITAL  
RELATIONSHIPS







# Thank you

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OPENSHIFT  
COMMONS  
GATHERING

## OpenShift 4 Release Update and Road Map

Duncan Hardie - Red Hat

Jan Kleinert - Red Hat

*Co-Host sponsor*

