



Red Hat



Open hybrid cloud connection roadshow

AGENDA

Technical sessions (13.30 - 15.30)

Build a Multi Cloud container platform with OpenShift 13.30 - 14.00

Natale Vinto, EMEA Senior Specialist Solution Architect

Rinaldo Bergamini, Senior Solution Architect

Cloud Native Architecture, Service Mesh and Microservices 14.00 - 14.30

Natale Vinto, EMEA Senior Specialist Solution Architect

Giuseppe Bonocore, Senior Solution Architect

How to automate a Hybrid environment with Ansible 14.30 - 15.00

Rinaldo Bergamini, Senior Solution Architect

Agile Integration 15.00 - 15.30

Giuseppe Bonocore, Senior Solution Architect



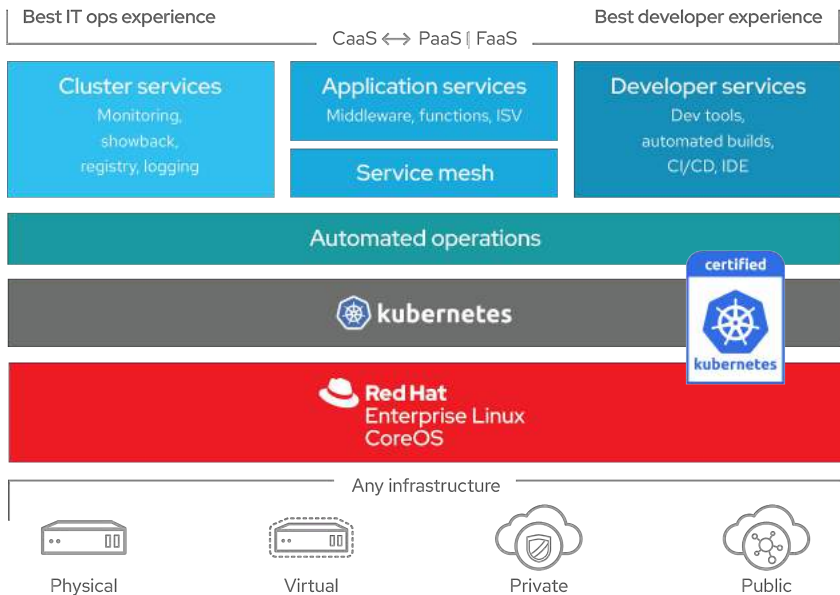
Build a multi-cloud container platform with OpenShift 4

OPEN HYBRID CLOUD CONNECTION ROADSHOW

Natale Vinto - Red Hat
EMEA Senior Specialist Solution Architect

Rinaldo Bergamini - Red Hat
Senior Solution Architect

OpenShift - A smarter Kubernetes platform



Automated, full-stack installation from the container host to application services

Seamless Kubernetes deployment to any cloud or on-premises environment

Autoscaling of cloud resources

One-click updates for platform, services, and applications



Hybrid Cloud Experience:
cloud.redhat.com

Trusted **enterprise Kubernetes**

- 100% Kubernetes *
- Full Stack Automated Install
- Over the Air Updates & Day 2 Operations

A cloud-like experience, everywhere

- **Hybrid**, Multi-Cluster Management
- Operator Framework
- Operator Hub & Certified ISVs

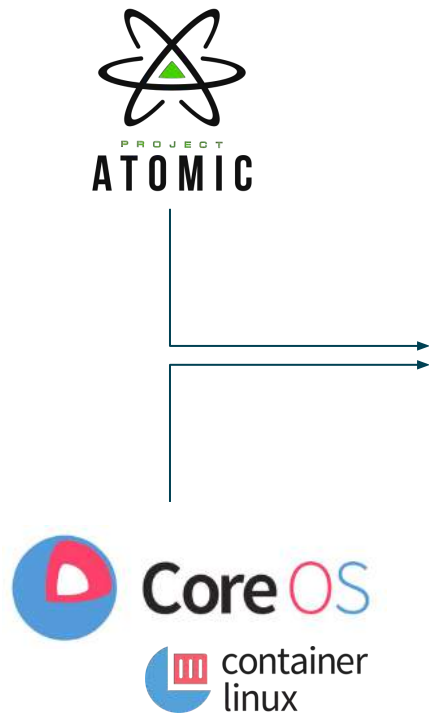
Empowering developers to innovate

- Service Mesh (Istio)
- Serverless (Knative)
- CodeReady Workspaces (Eclipse Che)

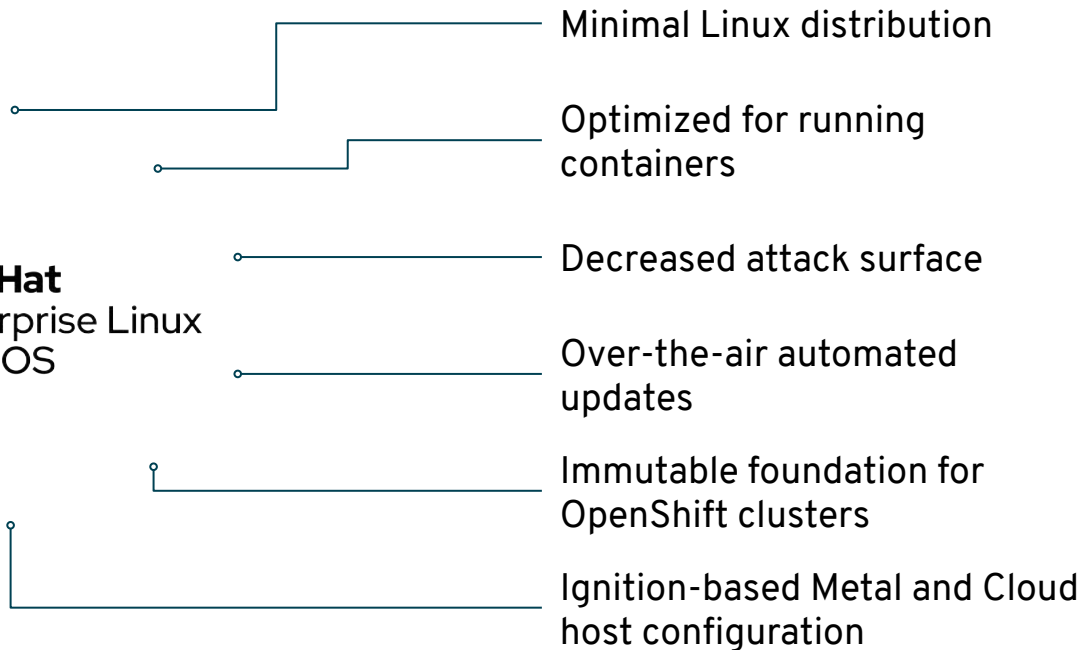
* Check out and repeat the conformance test on your own OpenShift install at
<https://github.com/cncf/k8s-conformance/tree/master/v1.11/openshift>



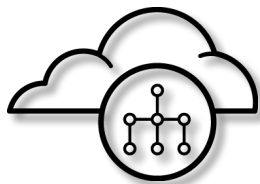
RHEL CoreOS



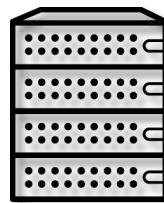
Red Hat
Enterprise Linux
CoreOS



OpenShift Installation Experiences

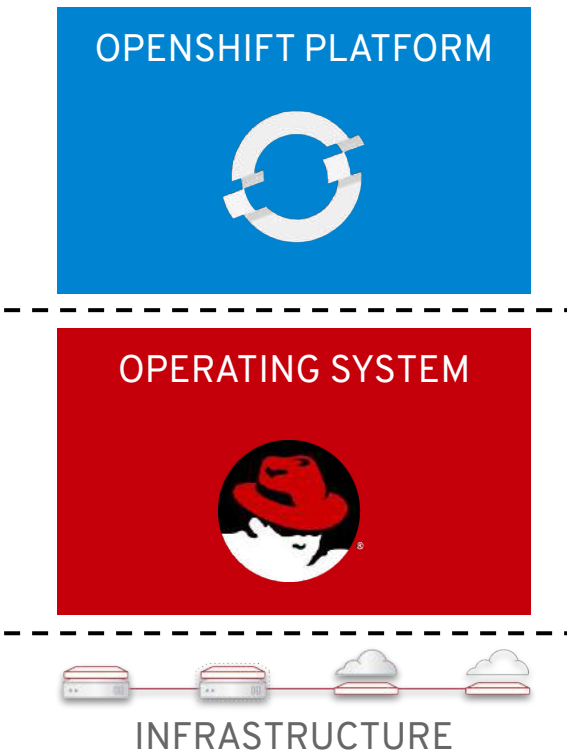


Full Stack Automated
Simplified opinionated
“Best Practices”
single cluster provisioning

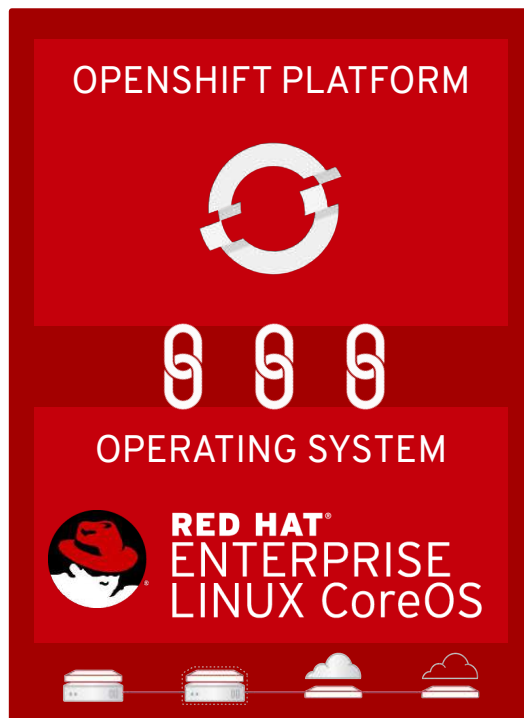


**Pre Existing
Infrastructure**
Customer managed
resources & infrastructure
single cluster provisioning

OPENSIFT 3



OPENSIFT 4



Smarter Software Updates (Over the Air)

No downtime

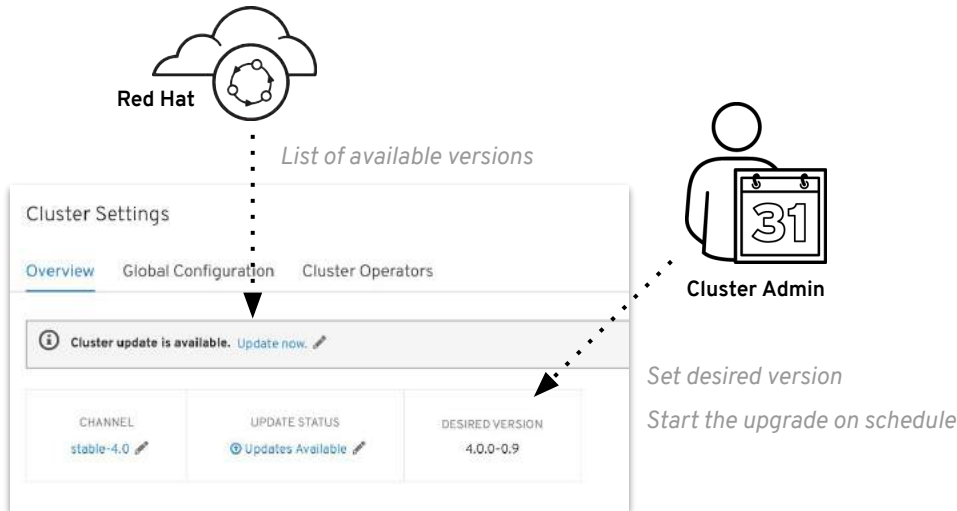
Applications with multiple replicas
Node Pools with more than one worker

Upgrade runs completely on the cluster

No more long running processes on a workstation

Constant health checking from each Operator

Operators are constantly looking for incompatibilities and issues that might arise



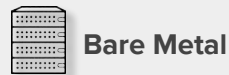
OpenShift 4.1 Supported Providers

Full Stack Automated



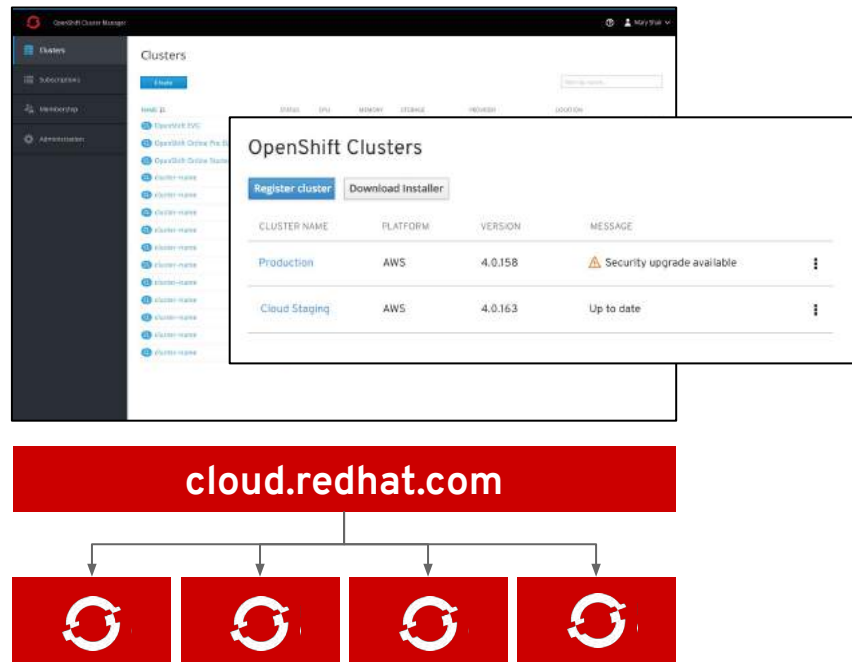
* Coming soon !

Pre-existing Infrastructure



Delivering Kubernetes everywhere

- **Manage** multiple OpenShift clusters, across multiple cloud and on-premises environments
- Install and update OpenShift **across all** your cloud environments
- **Centrally** manage policy and deployments
- Freedom of **choice**: You can opt out
- Soon available on prem too !

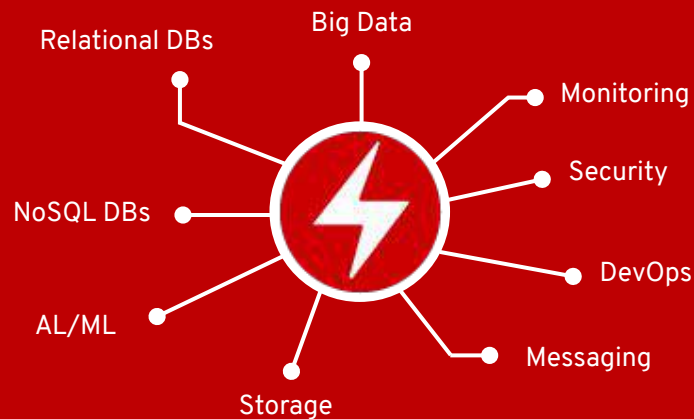


Demo

Fully Automated
Provisioning and Upgrades

A broad ecosystem of workloads

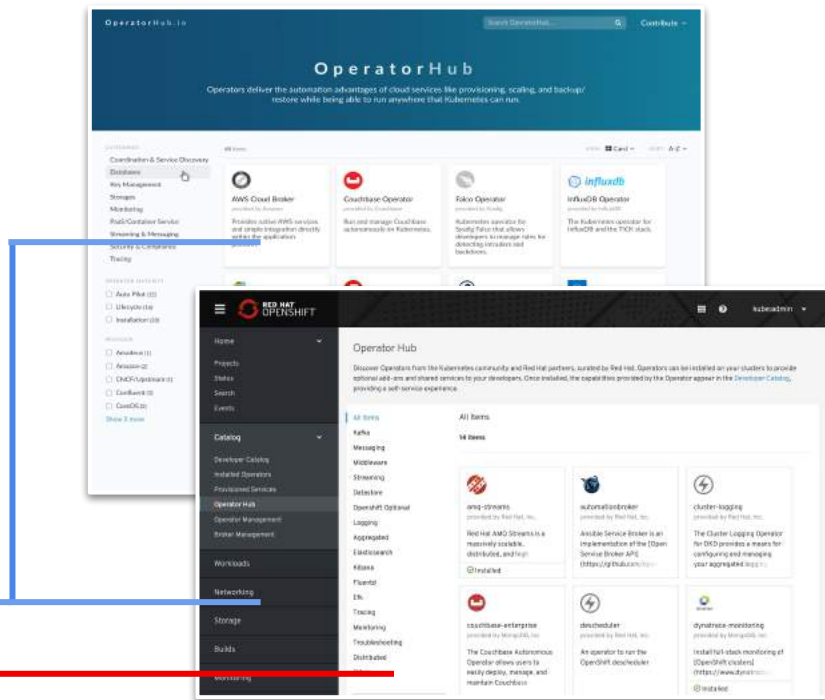
Operator-backed services allow for a
SaaS experience on your own infrastructure



OperatorHub and certified Operators

- OperatorHub.io launched by Red Hat, AWS, Microsoft and Google
- OpenShift Operator Certification
- OperatorHub integrated into OpenShift 4

COMMUNITY OPERATORS
OPENSHIFT CERTIFIED OPERATORS



Red Hat Certified Operators

DEVOPS



APM



DATA SERVICES



DATABASE



SECURITY



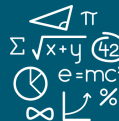
STORAGE



Kubernetes-native day 2 management



Flexible app
architectures



No reinvention
of core concepts



Uniform deploy
and debug



Truly hybrid

Operators codify operational knowledge and workflows to automate life-cycle management of containerized applications with Kubernetes

Demo

Operator

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



youtube.com/user/RedHatVideos



facebook.com/redhatinc



twitter.com/RedHat



Cloud Native Architecture, Service Mesh and MicroServices

OPEN HYBRID CLOUD CONNECTION ROADSHOW

Natale Vinto - Red Hat
EMEA Senior Specialist Solution Architect

Giuseppe Bonocore - Red Hat
Senior Solution Architect



NEWS FOR DEVELOPERS

Greenfield

&

Brownfield



Greenfield

&

Brownfield

A landscape photograph showing a stark contrast between two types of land. The left side is a vibrant green field, likely a greenfield, while the right side is a brown, tilled field, likely a brownfield. Two large, leafy trees stand on the horizon line, one on each side of the split. A small figure of a person is visible on the far left horizon. The sky is a pale blue with soft, wispy clouds.

You must do both!

Cloud Native applications

Serverless

Stateful'ish applications

Microservices

Quarkus

PHP

Java EE

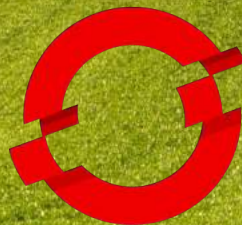
Bash

Reactive

Microprofile

Monoliths

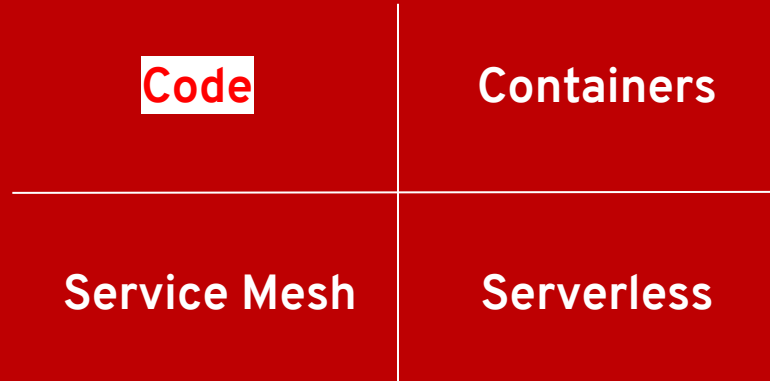
Tomcat



Red Hat OpenShift

Next wave of developer tools

OpenShift has all of the latest tools to make
your devs more productive



Visual Studio Code Extensions

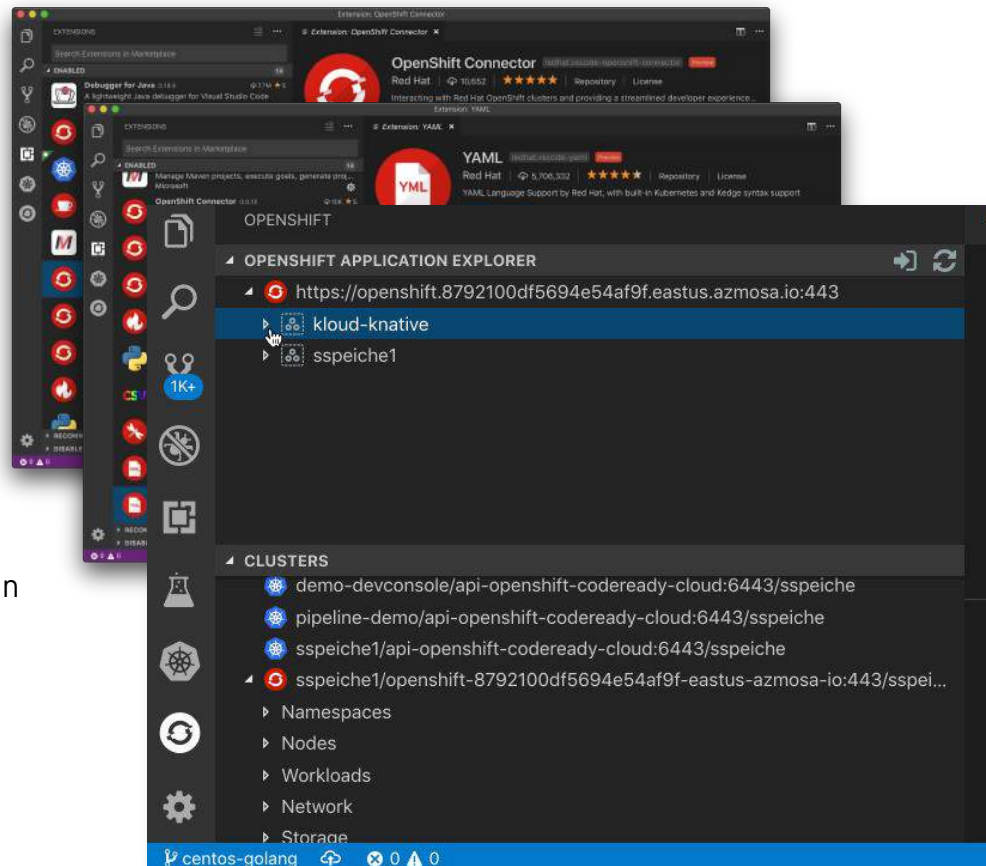
Extremely popular plugins

Our first extension, Language Support for Java™ by Red Hat, was published in Sept., 2016 as an experiment.

Over 50 releases later, it's been downloaded nearly 16 million times by over 2.5 Million developers!

More coming soon

We've been adding more extensions to help developers using VS Code have a fantastic experience when coding in Java, XML, Yaml, etc., or when working with OpenShift or other technologies where Red Hat is the expert.



odo: OpenShift's Dev-focused CLI

A developer-focused command-line tool for rapid development iterations on OpenShift.

Available for download from Web Console or:

<https://github.com/openshift/odo>

```
$ odo create php frontend
Component 'frontend' was created.
To push source code to the component run 'odo push'

$ odo push
Pushing changes to component: frontend

$ odo url create
frontend - http://frontend-myapp.192.168.99.100.nip.io

$ odo watch
Waiting for something to change in /dev/frontend
```

odo - Developer-focused CLI for OpenShift

Tech Preview

OpenShift Do (odo) is a fast, iterative, and straightforward CLI tool for developers who write, build, and deploy applications on OpenShift.

odo abstracts away complex Kubernetes and OpenShift concepts, thus allowing developers to focus on what is most important to them: code.

[Download odo](#)

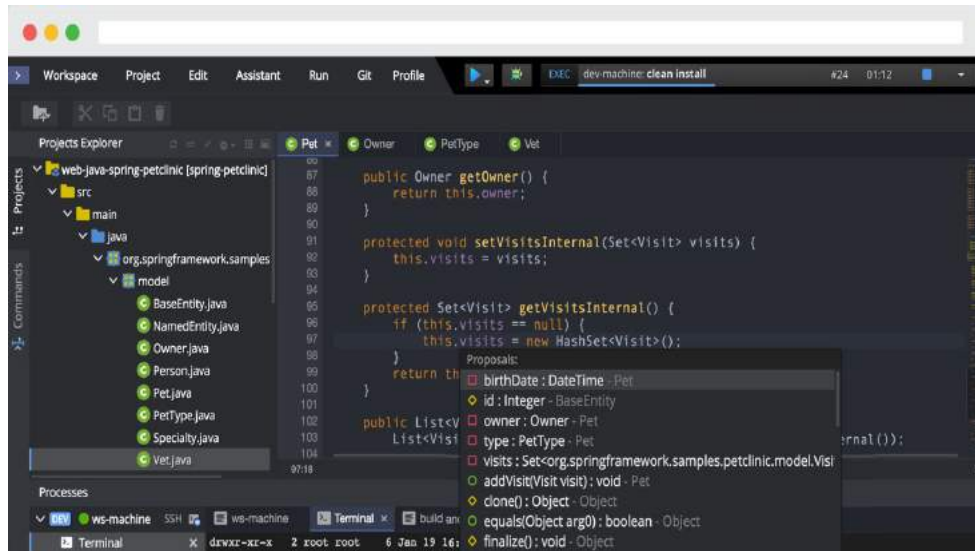
Use It To: Enable the 'git push' flow developers love, but with OpenShift Kubernetes.

Tech Preview



CodeReady Workspaces

- Browser-based Web IDE + Dev Environment in pods
- Red Hat supported Eclipse Che
- Bundled with OCP SKU
- Enabled via an operator
- RHEL 8-based stacks (tools and runtimes)



Eclipse Che



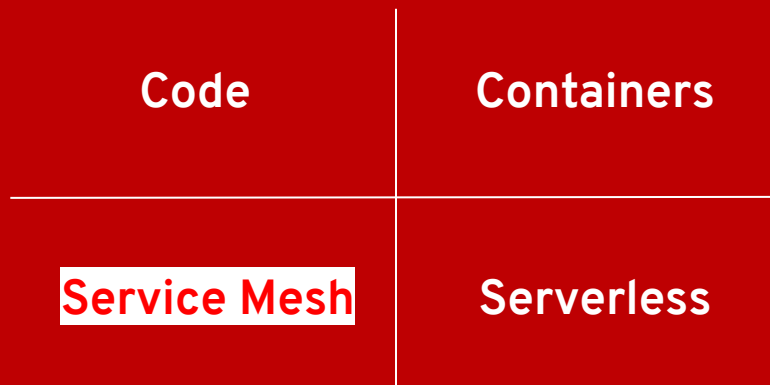


Demo

CodeReady Workspaces

Next wave of developer tools

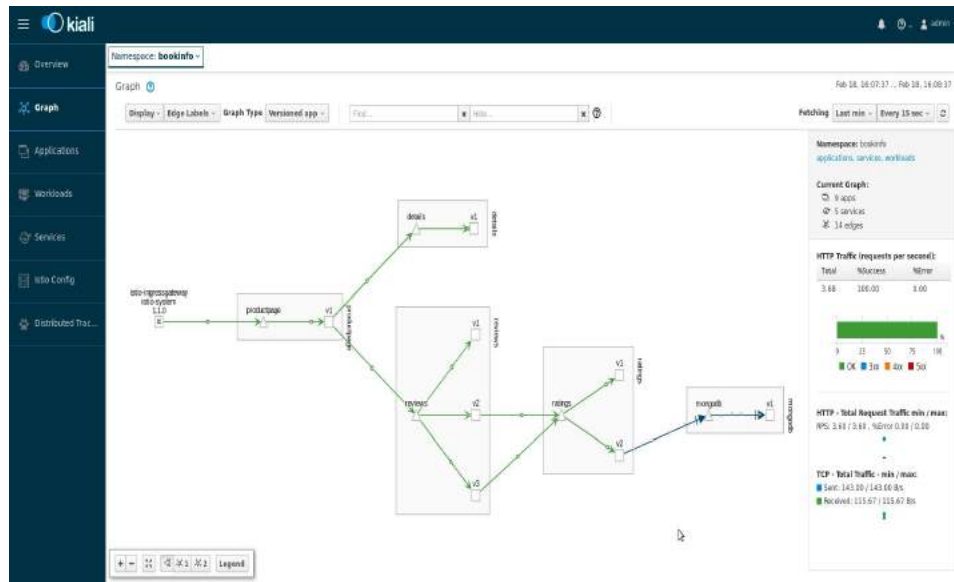
OpenShift has all of the latest tools to make
your devs more productive



Red Hat 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



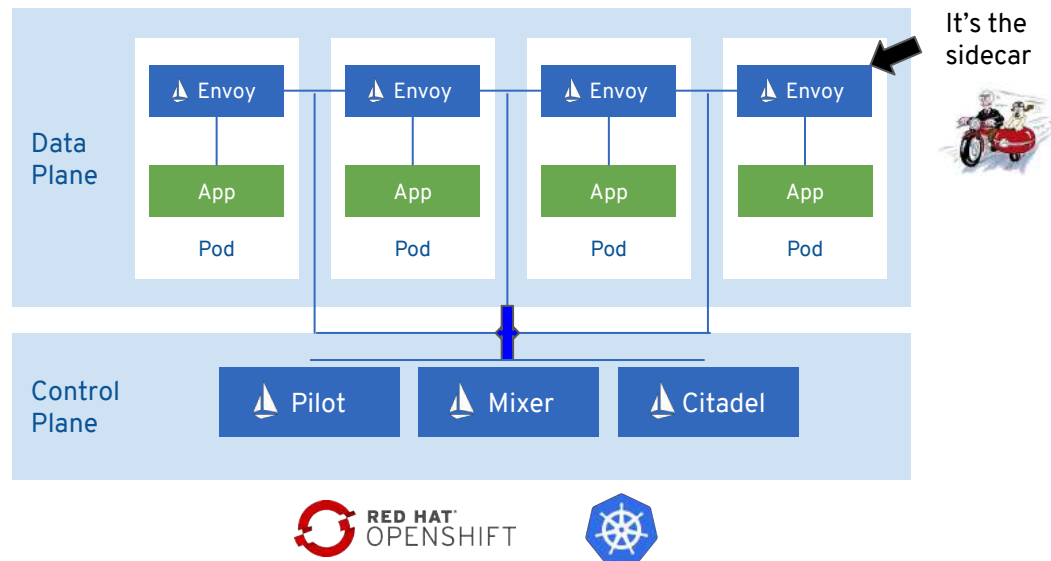
Istio Components

Envoy, originally from Lyft - it's an intelligent proxy. Highly parallel non-blocking, network filtering, service discovery, health checking, dynamically configurable.

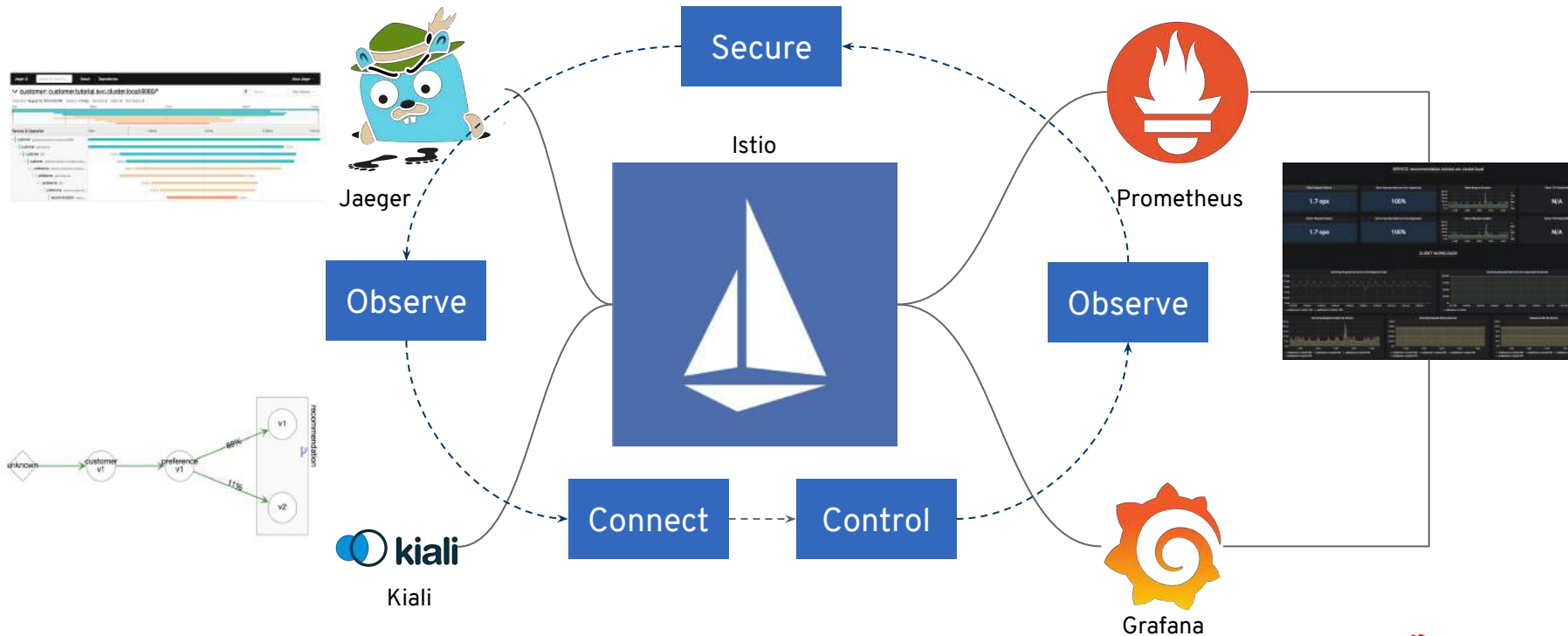
Pilot, the component responsible for managing a distributed deployment of Envoy proxies in the service mesh. Intelligent routing, traffic mgmt, resiliency

Mixer, which provides the policy and access control mechanisms within the service mesh. Monitoring, reporting, quotas - plugin-based.

Citadel, control service-service traffic based on origin and user. Key mgmt certificate authority.

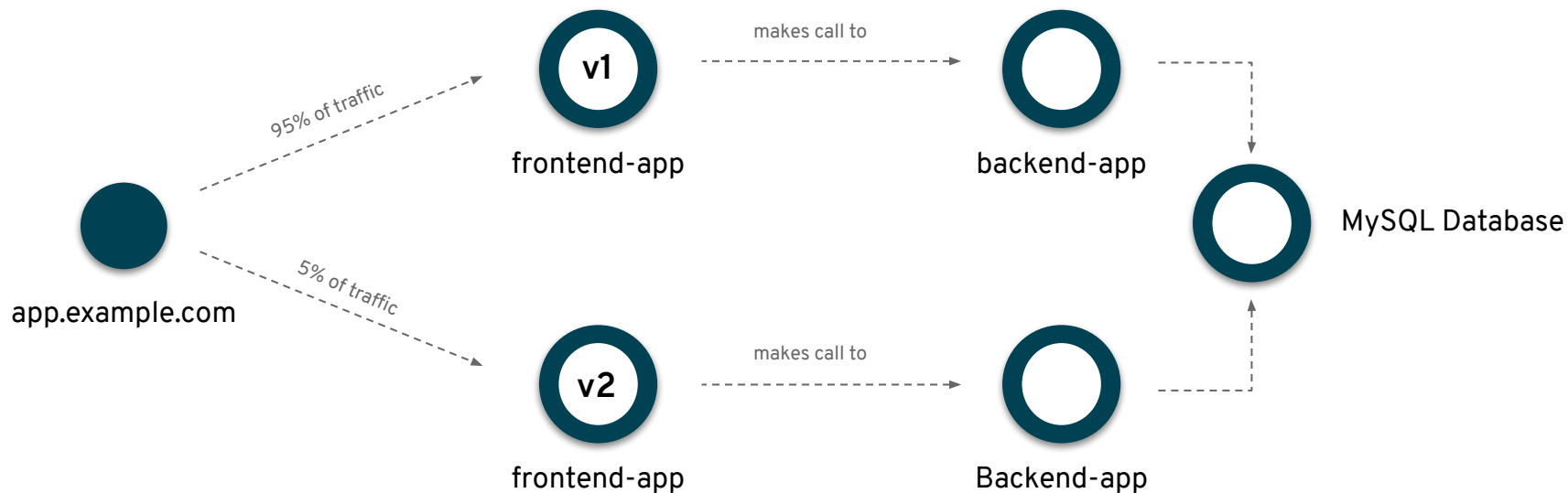


Red Hat Service Mesh

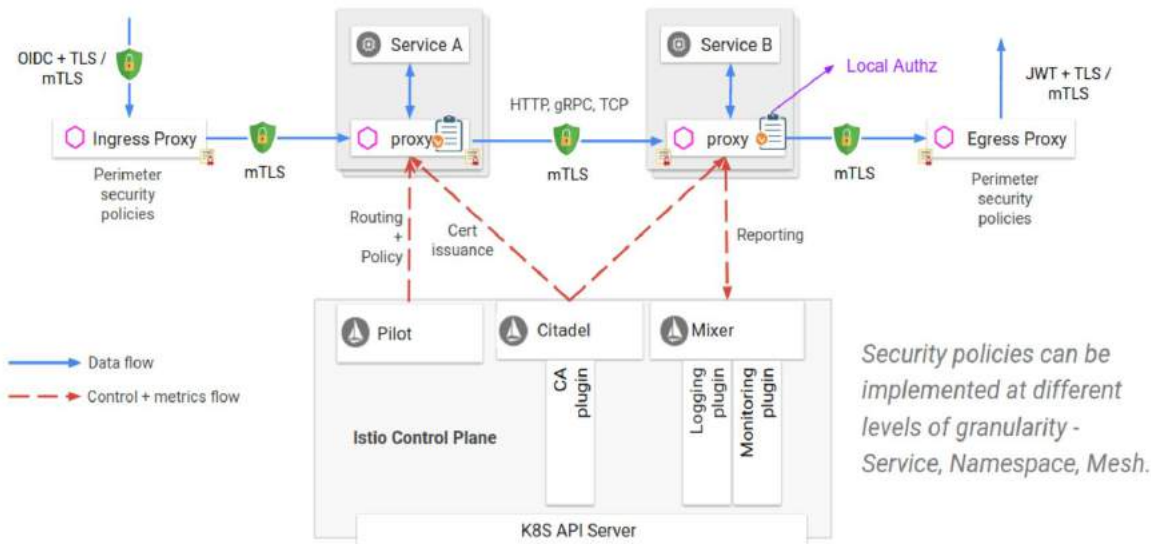


Control Traffic Flow

Control flow of traffic between application components



Istio Security



Security by default
no changes needed for application code and infrastructure

Defense in depth
integrate with existing security systems to provide multiple layers of defense

Zero-trust network
build security solutions on untrusted networks

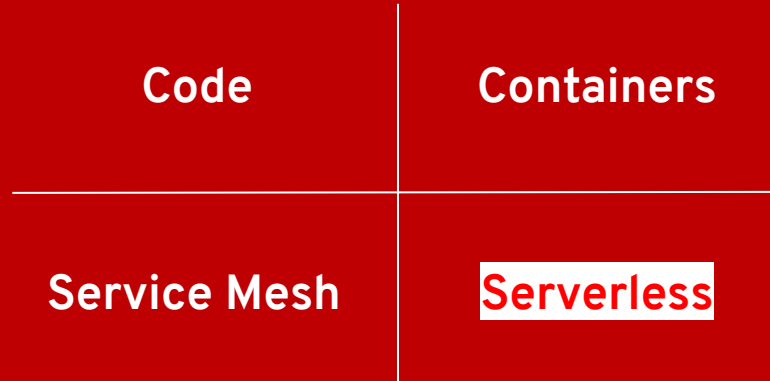


Demo

Istio service mesh

Next wave of developer tools

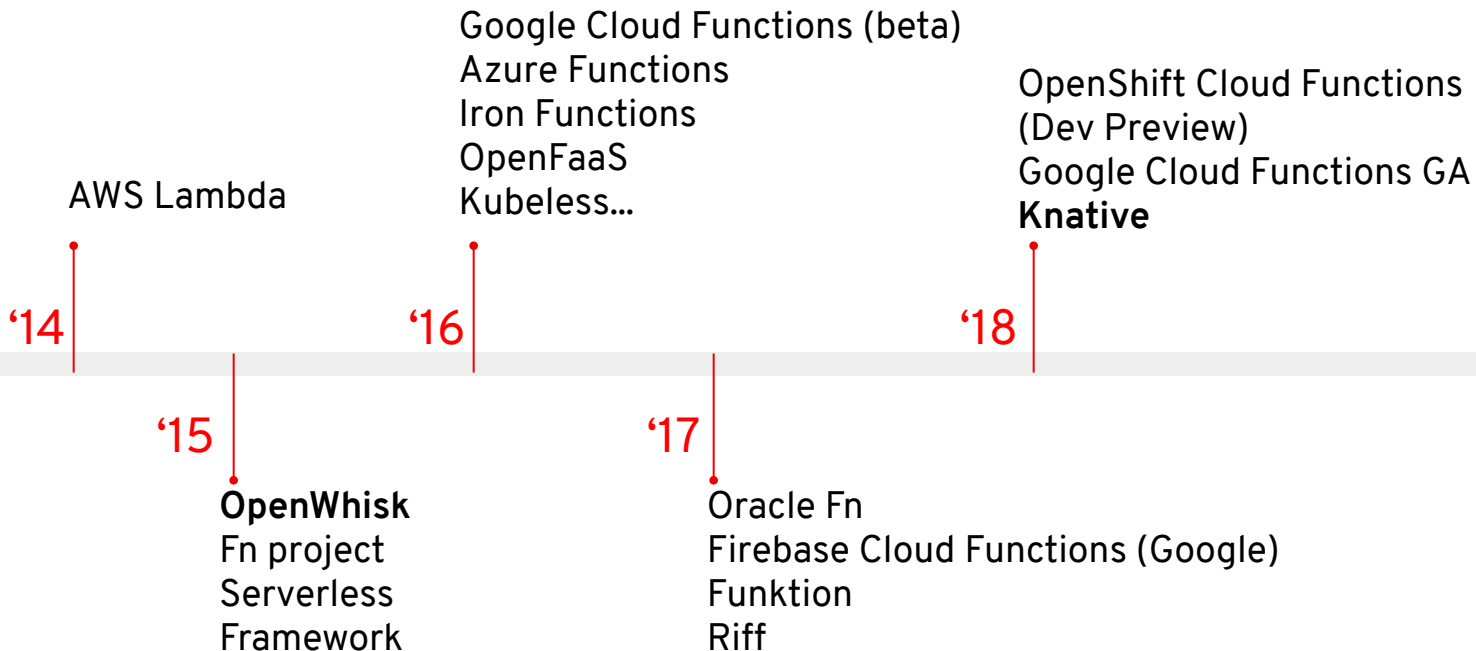
OpenShift has all of the latest tools to make
your devs more productive





A wide-angle photograph of a large, empty server room. The room features a high ceiling with a grid of square tiles and several rectangular fluorescent light fixtures. The floor is also tiled with a grid pattern, and some square ventilation grilles are visible. On the left side, there is a long row of server racks, some of which are black and others are light-colored. A green exit sign is visible above one of the doors. On the right side, there are more server racks, some of which are black and others are light-colored. The room is mostly empty, with a few white support poles visible in the distance. The overall atmosphere is clean and modern.

A Serverless Datacenter !



Tools



Security



Framework



Hosted

Installable

Platform



Cloud Native Landscape



s.cncf.io

Serverless computing refers to a new model of cloud native computing, enabled by architectures that do not require server management to build and run applications. This landscape illustrates a finer-grained deployment model where applications, bundled as one or more functions, are uploaded to a platform and then executed, scaled, and billed in response to the exact demand needed at the moment





OpenShift Serverless

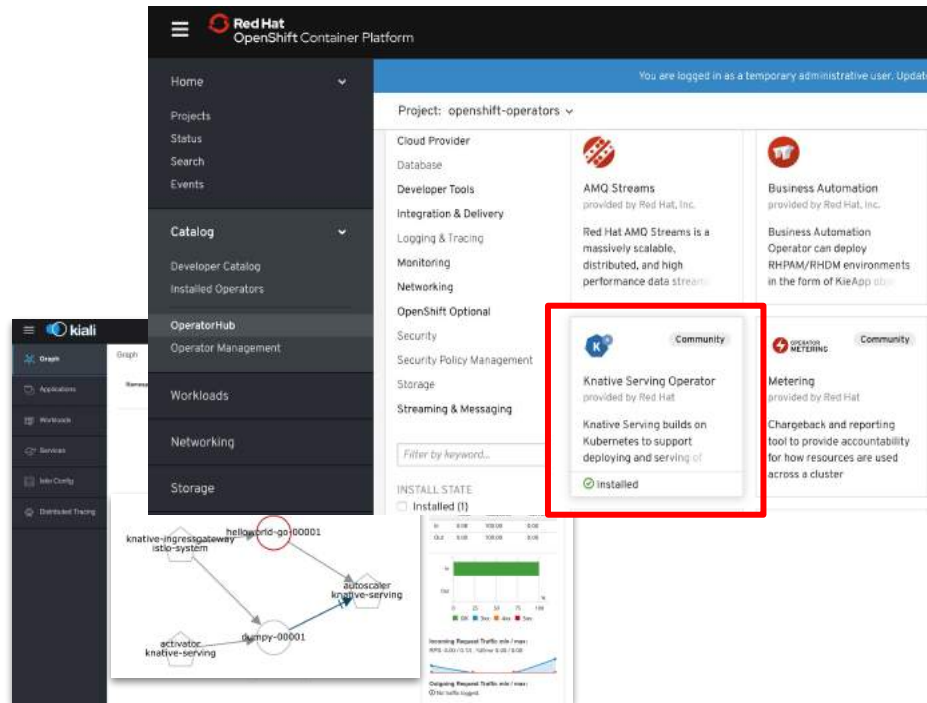
Key Features

- 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>



Knative Overview - Components

"...an extension to Kubernetes exposing building blocks to build modern, source-centric, and container-based applications that can run anywhere".

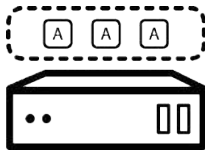
Build

A pluggable model for building artifacts, like jar files, zips or containers from source code.



Serving

An event-driven model that serves the container with your application and can "scale to zero".



Events

Common infrastructure for consuming and producing events that will stimulate applications.



Knative Overview - Components

"...an extension to Kubernetes exposing building blocks to build modern, source-centric, and container-based applications that can run anywhere".

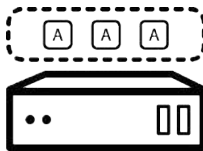
Build

A plugin for building artifacts, like jar files, and containers from source code.



Serving

An event-driven model that serves the container with your application and can "scale to zero".

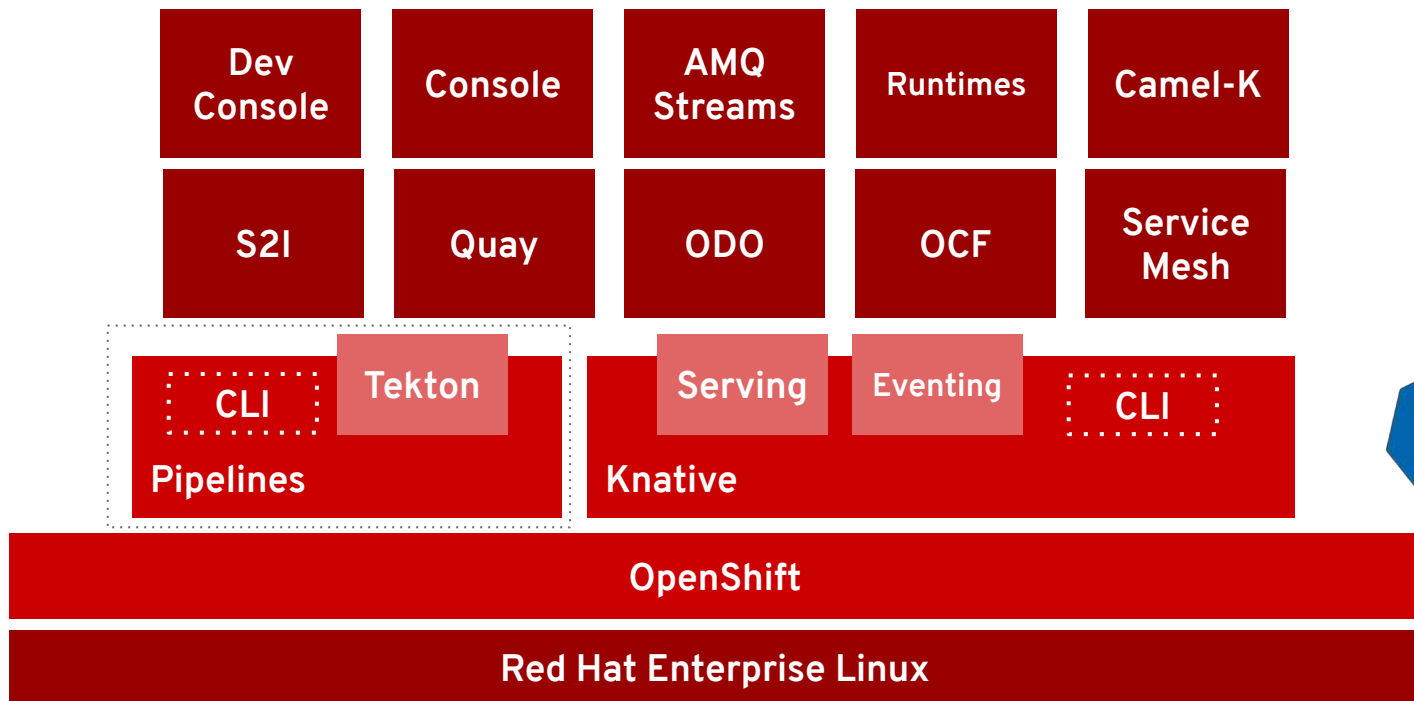


Events

Common infrastructure for consuming and producing events that will stimulate applications.



OpenShift Serverless: The Big Picture





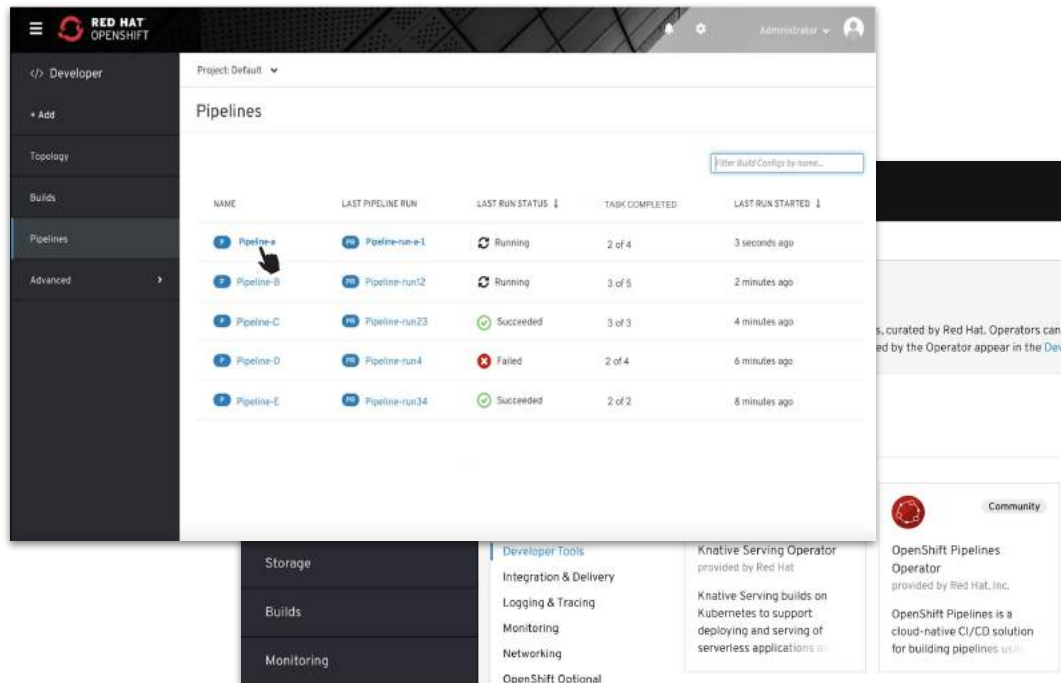
a set of shared, open source components for
building Kubernetes-style CI/CD systems

Governed by the Continuous Delivery Foundation

Contributions from Google, Red Hat, Cloudbees, Pivotal, IBM and more

Cloud-native CI/CD with OpenShift Pipelines

- Based on Tekton Pipelines
- Runs serverless (no babysitting!)
- Containers as building blocks
- Deploy to multiple platforms
- Standard CRDs
- Pipelines portable to any Kubernetes
- Available in OperatorHub



Dev Preview

Pipelines in Dev Console

The screenshot shows the Red Hat OpenShift Dev Console interface. The top navigation bar includes the Red Hat logo, the text 'RED HAT OPENSIFT', and a user profile 'Administrator'. The left sidebar has a menu with 'XYZ Name' and tabs for 'Builds' and 'Pipelines'. The main content area is titled 'Pipelines' and features a table of pipeline runs. Above the table, there are filters for 'Status' (Running: 2, Failed: 1, Completed: 2) and a 'Clear All Filters' button. The table has four columns: 'Build #', 'Last Run', 'Last Run Status', and 'Last Run Started'.

Build #	Last Run	Last Run Status	Last Run Started
Pipeline-A	Pipeline-run2	Running	2 min 15 sec ago
Pipeline-B	Pipeline-run12	Running	8 min 21 sec ago
Pipeline-C	Pipeline-run23	Completed	16 min 34 sec ago
Pipeline-D	Pipeline-run4	Failed	30 min 3 sec ago
Pipeline-E	Pipeline-run34	Completed	46 min 34 sec ago

Pipelines in Dev Console

RED HAT
OPENSIFT

Administrator

XYZ Name

Project: Default

Builds

Pipelines

2 All 0 Pending 0 Running 0 Complete 0 Failed 0 Not Started 0 Cancelled Select All Filters 2 Items

NAME	STATUS	STARTED	DURATION	TRIGGER
aa-build-3	Running	10 mins ago	2 min 04 sec	Comm# #123456ABC

Steps - (3/3) build-name (30s) Steps - (3/8) Test-st. (6s) Steps - (2/5) Code a... (13s) Steps - (0/2) storage b... (0s) Steps - (0/7) DeployTr... (0s)

```

Downloading six-1.11.0-py2.py3-none-any.whl
Building wheels for collected packages: tornado, configparser
Running setup.py bdist_wheel for tornado: started
Running setup.py bdist_wheel for tornado: finished with status 'done'
Stored in directory: /root/.cache/pip/wheels/8c/21/02/8cd6a38145bd792b449aa7c37be53dd7aa8bba42c716212c
Running setup.py bdist_wheel for configparser: started
Running setup.py bdist_wheel for configparser: finished with status 'done'
Stored in directory: /root/.cache/pip/wheels/1c/bd/b4/277a53f6c48645661b4cd1c21df28aca8f2e1e714a1d4cd8a
Successfully built tornado configparser
Installing collected packages: six, singledispatch, certifi, backports-abc, tornado, enum34, configparser, mccabe, pyflakes, pycodestyle, flake8
Found existing installation: six 1.8.0
Uninstalling six-1.8.0:
  Successfully uninstalled six-1.8.0
Successfully installed backports-abc-0.5 certifi-2017.11.5 configparser-3.5.0 enum34-1.1.6 flake8-3.5.0 mccabe-0.6.1 pycodestyle-2.3.1 pyflakes-1.6.0
singledispatch-3.4.0.3 six-1.11.0 tornado-4.5.3
$ python -c 'print("Hello, world")'
Hello, world
Sub succeeded
  
```



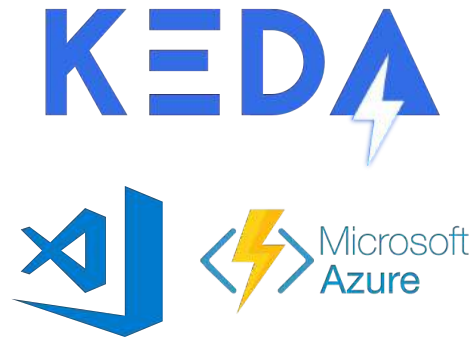
OpenShift Serverless + Azure Functions

Key Features

- Enable FaaS in OpenShift
- Familiar developer experience using VS Code and Azure CLI
- Polling based auto-scaling for Azure Queues, Kafka...
- Reuse Knative event sources, HTTP auto-scaling
- On premise or Any cloud.

Learn more

<https://github.com/kedacore/keda>



In partnership with



Red Hat



Microsoft Azure



OpenShift Serverless

Functions

Apps

Microservices

Containers

Platform



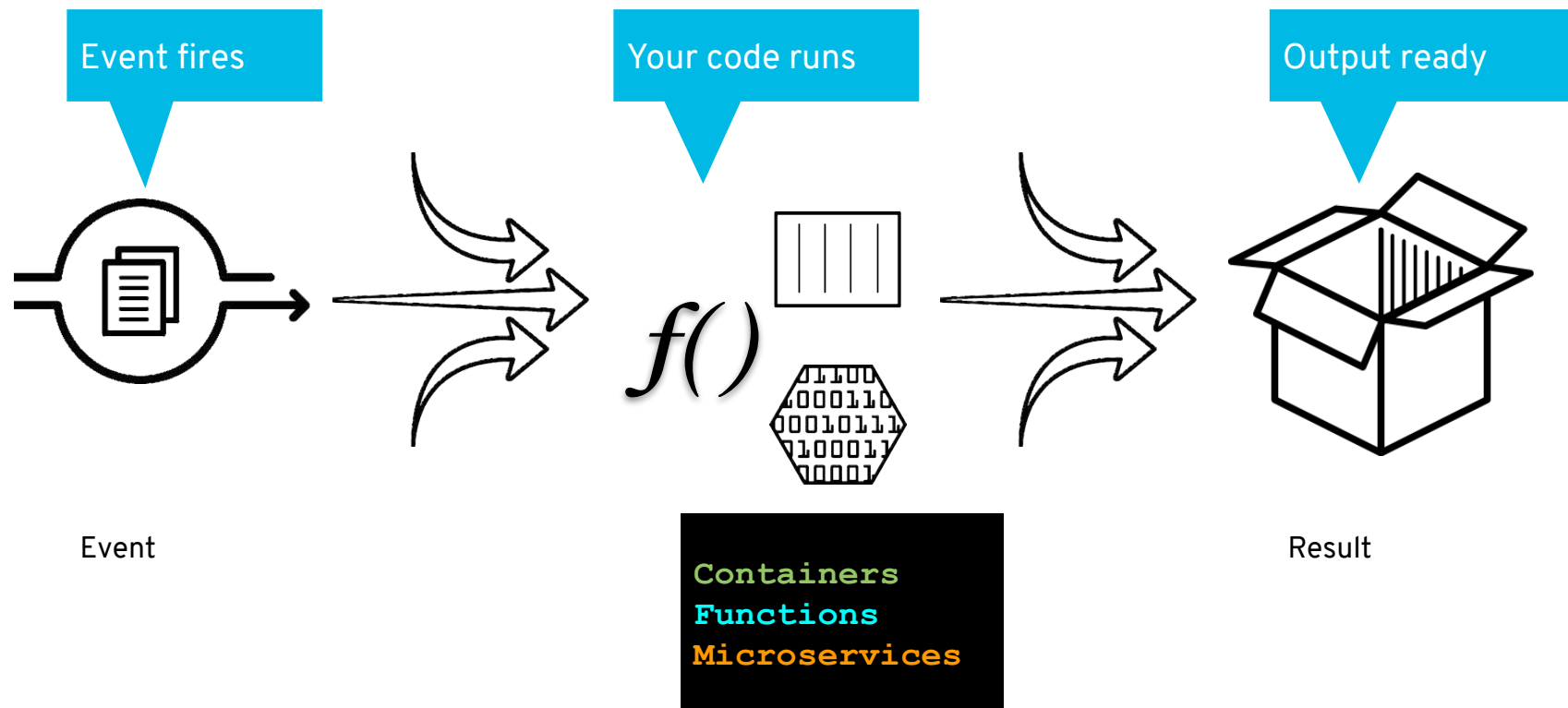
Application



Infrastructure

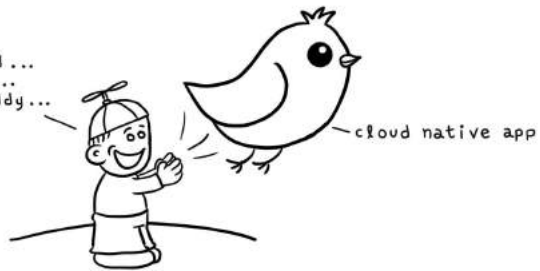


RED HAT
OPENSIFT



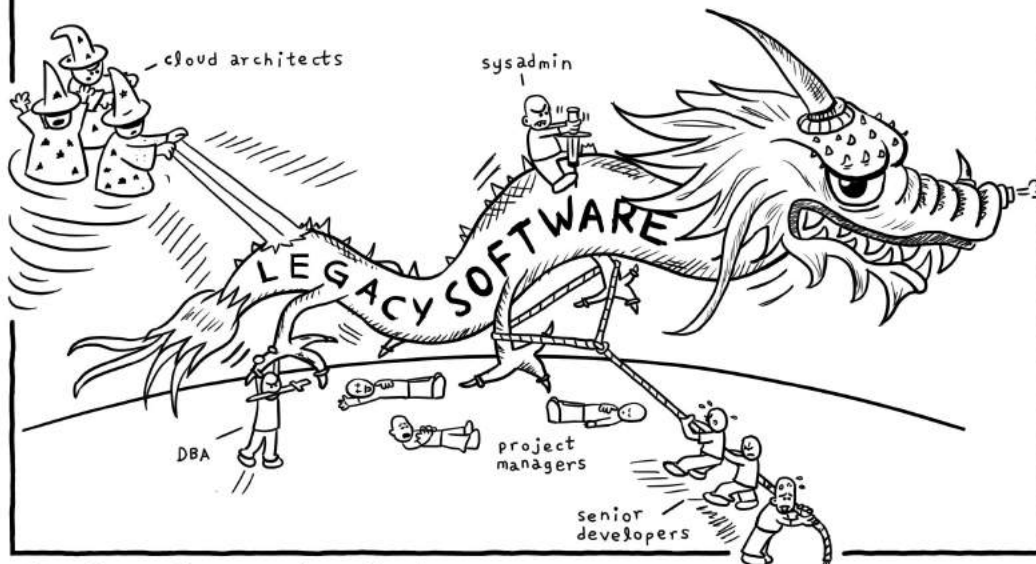
Startups Journey to cloud

rails scaffold...
heroku deploy...
fly little buddy...



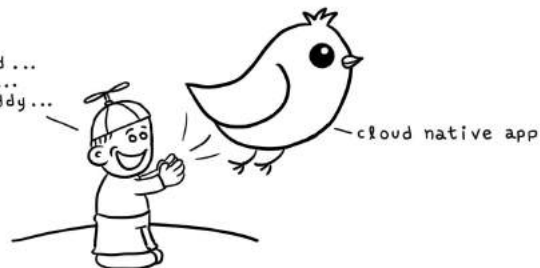
Daniel Stori {turnoff.us}
Thanks to Michael Tharrington

The Enterprise Journey to Cloud



Startups Journey to cloud

rails scaffold...
heroku deploy...
fly little buddy...





OpenShift Commons Gathering

September 18, 2019 | Milan, Italy

[Join Commons](#)[Interests](#)[Blog](#)[Participants](#)[Briefings](#)[Gatherings](#)[Testimonials](#)[Overview](#)[Schedule](#)[Speakers](#)[Venue](#)

OpenShift Commons Gathering Milan, Italy

Where users, partners, customers, contributors and upstream project leads come together to collaborate and work together on OpenShift.

[REGISTER NOW](#)[APPLY TO BE A SPONSOR](#)

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



youtube.com/user/RedHatVideos



facebook.com/redhatinc



twitter.com/RedHat



How to automate a hybrid environment with Ansible

OPEN HYBRID CLOUD CONNECTION ROADSHOW

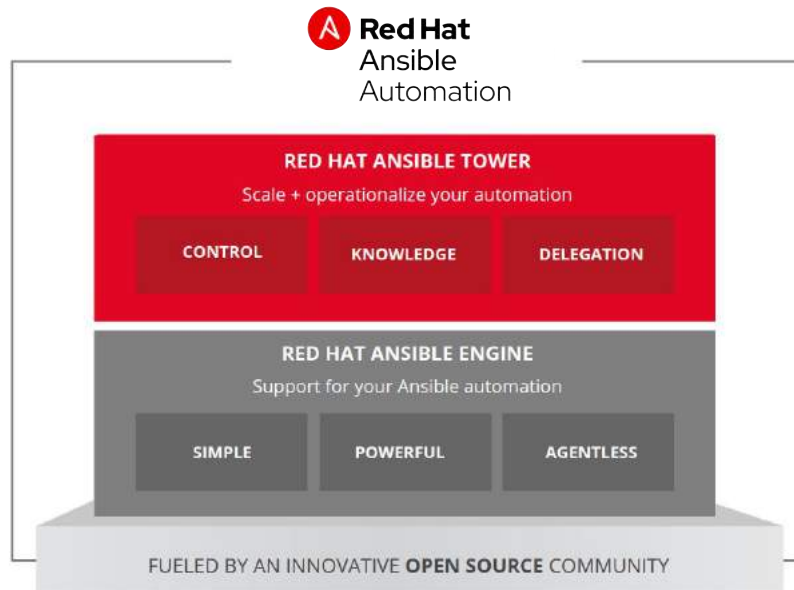
Rinaldo Bergamini
Senior Solution Architect

Ansible Automation

The Ansible project is an open source community sponsored by Red Hat. It's also a **simple automation language** that perfectly describes IT application environments in **Ansible Playbooks**.

Ansible Engine is a **supported product** built from the Ansible community project.

Ansible Tower is an **enterprise framework** for controlling, securing, managing and extending your Ansible automation.



Ansible Features

CROSS PLATFORM

Agentless support for all major OS variants, physical, virtual, cloud and network devices.

HUMAN READABLE

Perfectly describe and document every aspect of your application environment.

PERFECT DESCRIPTION OF APPLICATION

Every change can be made by Playbooks, ensuring everyone is on the same page.

VERSION CONTROLLED

Playbooks are plain-text. Treat them like code in your existing version control.

DYNAMIC INVENTORIES

Capture all the servers 100% of the time, regardless of infrastructure, location, etc.

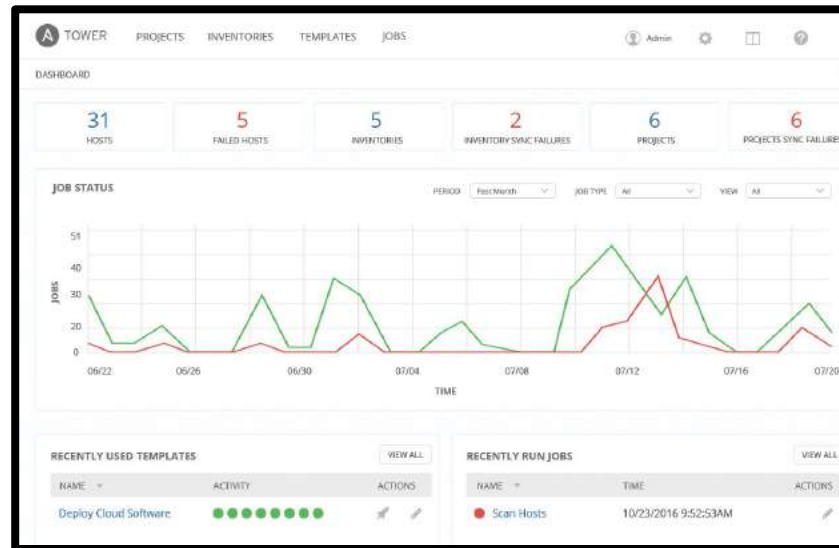
IDEMPOTENCY

Performing actions once is exactly the same as the result of performing them repeatedly.

Ansible Tower

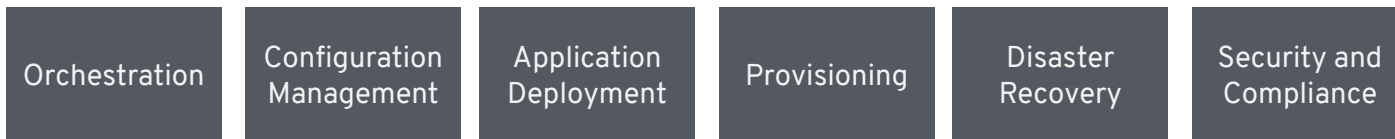
Ansible Tower is an **enterprise framework** for controlling, securing and managing your Ansible automation – with a **UI and RESTful API**

- **Role-based access control**
- **Deploy** entire applications with **push-button deployment** or **API** access
- All automations are **centrally logged**
- Very useful to **test** and develop playbooks
- Inventories and **Git integration**

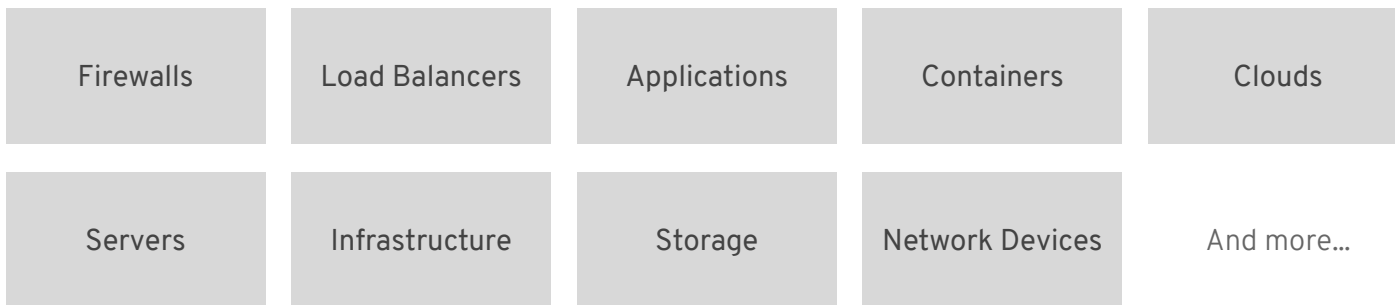


Ansible Use Cases

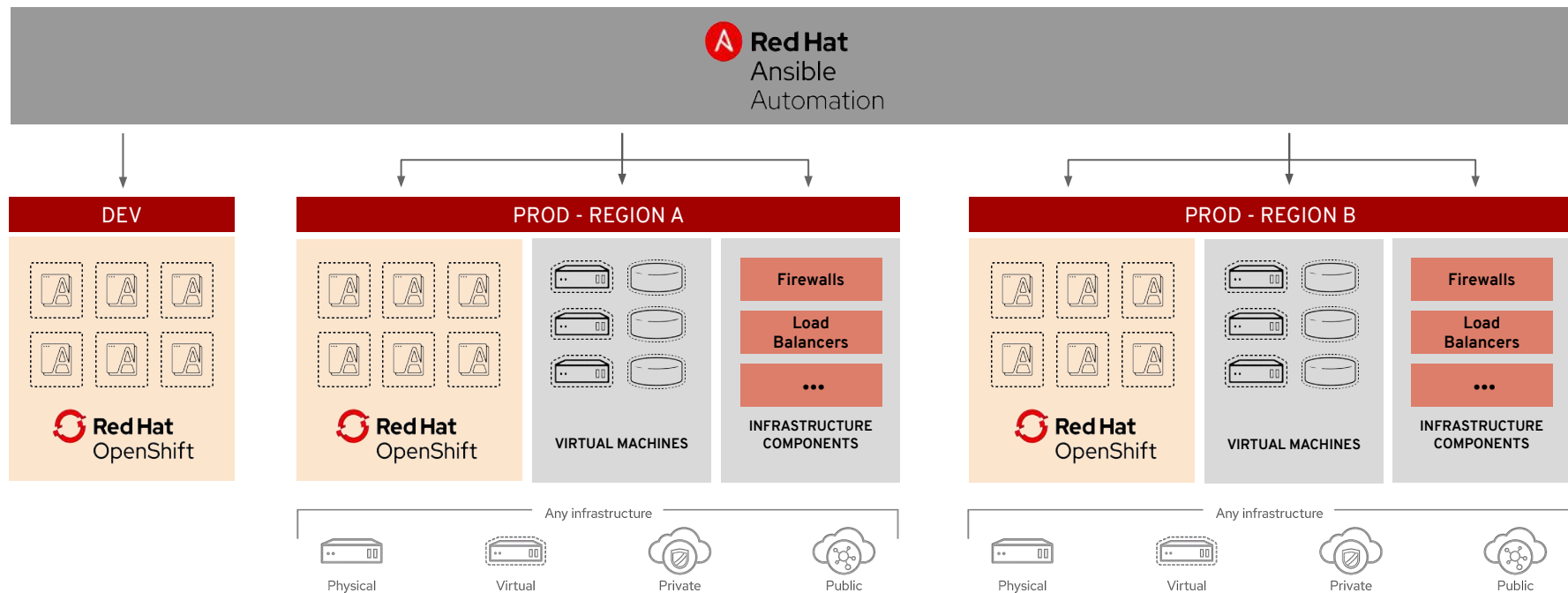
Do this...



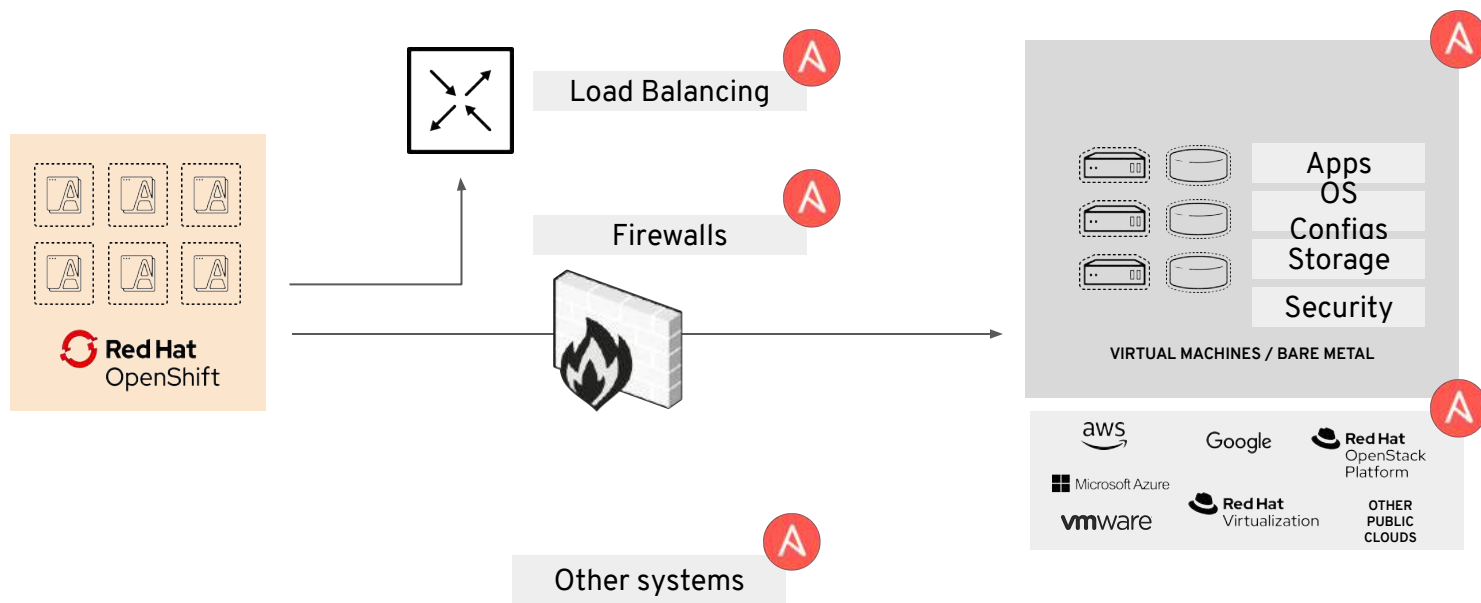
On these...



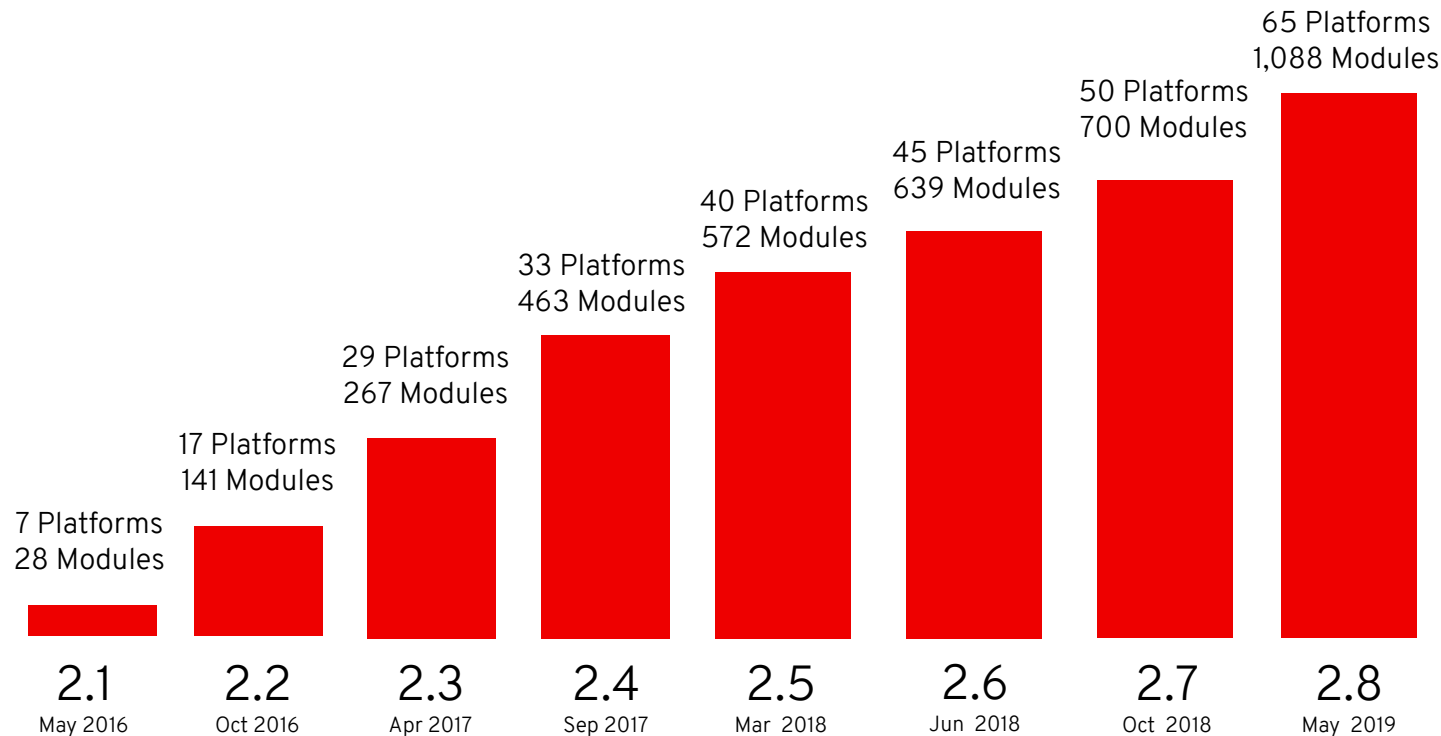
Automating end-to-end deployments



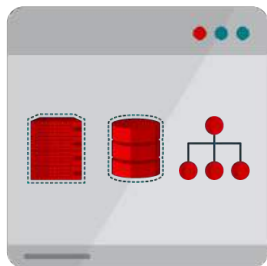
There's no hybrid IT without Automation



Ansible Network Automation Progress



Red Hat Virtualization



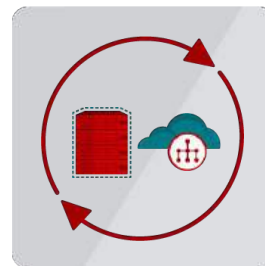
EASY TO INSTALL AND MASTER

Virtualized compute, network,
and storage resources using
the
open source KVM hypervisor
and HTML5 GUI



COMPLETE SOLUTION

One SKU has ALL the
features:
HA, Resource Scheduling,
Live Migration, Storage
Live Migration, DR and
much more

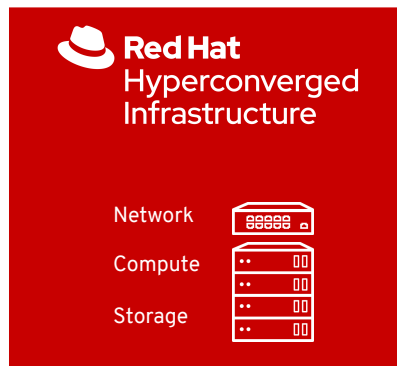
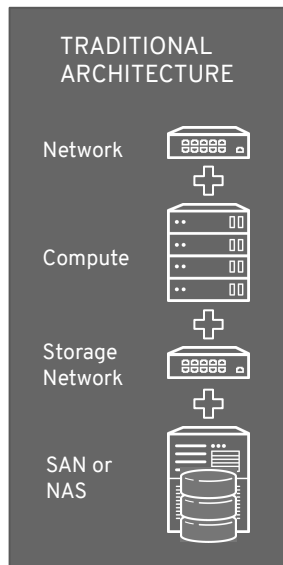


AUTOMATED WORKLOADS

Integrates with future
technologies using
RESTful API

Red Hat

Hyper Converged Infrastructure



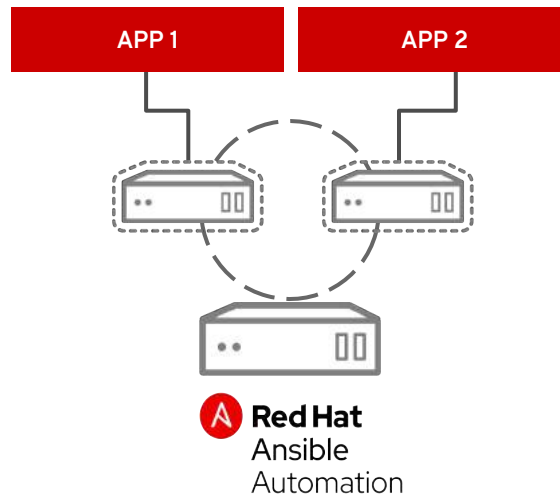
- Eliminate storage as a discrete tier
- Easily virtualize business applications, maximizing resource utilization
- Single budget for compute & storage
- Single team managing infrastructure
- Simplified planning & procurement
- Streamlined deployment & management
- Single support stack for compute & storage

Ansible Roles for Automation Included

Removes manual steps from deployment and reconfiguration

Includes and supports **Ansible Automation roles** for Red Hat Virtualization:

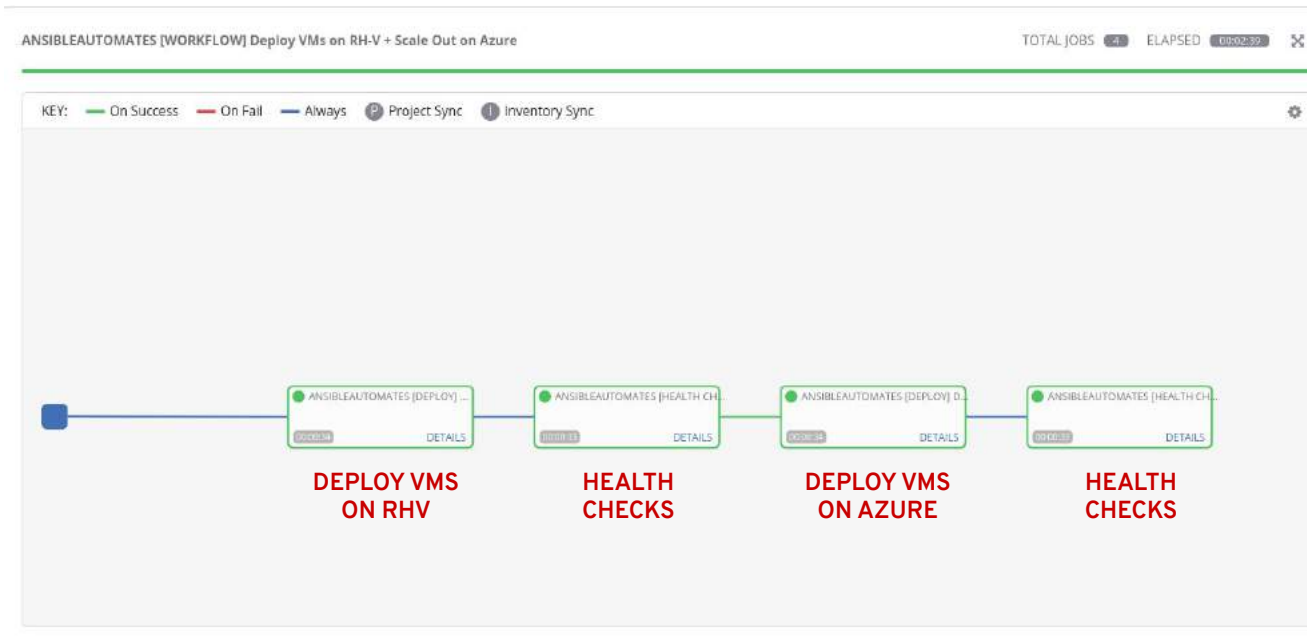
- Virtual DCs
- Clusters
- Virtual machines
- Virtual networks
- Virtual storage
- Configuration Mgmt
- **Disaster Recovery**



Demo

Automation of a hybrid deployment and
infrastructure scaling

On-Prem and Public Cloud hybrid deployment with Ansible Tower



Automating RHV VMs Provisioning

```
vars:  
  engine_url: https://rhvm-5c04.rhpds.opentlc.com/ovirt-engine/api  
  engine_user: admin@internal  
  wait_for_ip: true
```

```
http_vm:  
  cluster: Production  
  domain: rhpds.opentlc.com  
  template: rhel-7.5-template  
  memory: 2GiB  
  cores: 2  
  username: root  
  root_password: password  
  state: running
```

Automating RHV VMs Provisioning

```
disks:
  - size: 50GiB
    name: data
    storage_domain: glusterSD1
    interface: virtio
nics:
  - name: nic1
    network: vm public net
    profile: vm public net
cloud_init:
  - nic_on_boot: yes
```

```
vms:
  - name: postgresql-vm-0
    tag: postgresqlvm
    profile: "{{ db_vm }}"
  - name: apache-vm-0
    tag: httpvm
    profile: "{{ http_vm }}"
  - name: apache-vm-1
    tag: httpvm
    profile: "{{ http_vm }}"
```

```
roles:
  - ovirt.vm-infra
```

```
- name: Deploy apache on VM
  hosts: ovirt_tag_httpvm
  become: yes
  tasks:
    - name: install httpd
      shell: yum -y install httpd

- name: Deploy postgres on VM
  hosts: ovirt_tag_postgresqlvm
  become: yes
  tasks:
    - name: install postgres
      shell: yum -y install
```

postgresql

Automating Azure VMs Provisioning

```
- name: Create VM
  azure_rm_virtualmachine:
    resource_group: webinar-test
    name: WebinarVM
    vm_size: Standard_DS1_v2
    admin_username: azureuser
    ssh_password_enabled: false
    ssh_public_keys:
      - path: /home/azureuser/.ssh/authorized_keys
        key_data: "ssh-rsa AAAAB3Nz{snip}hwhqT9h "
    network_interfaces: myNIC
  image:
    offer: CentOS
    publisher: OpenLogic
    sku: '7.3'
    version: latest
```


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



youtube.com/user/RedHatVideos



facebook.com/redhatinc



twitter.com/RedHat



Agile integration

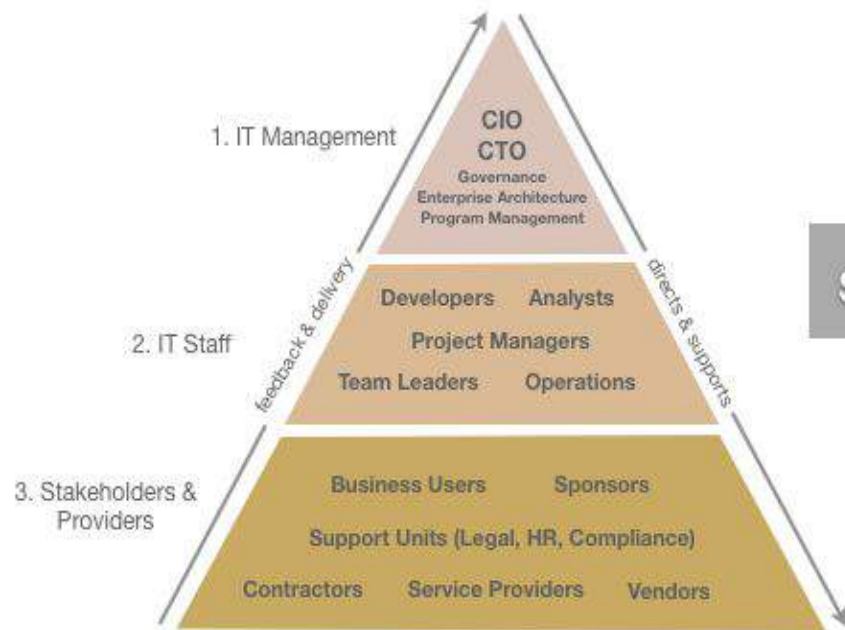
OPEN HYBRID CLOUD CONNECTION ROADSHOW

Giuseppe Bonocore - Red Hat
Senior Solution Architect

Integration and API for a cloud native world

Old Model of IT

centralized hierarchical
automation of business

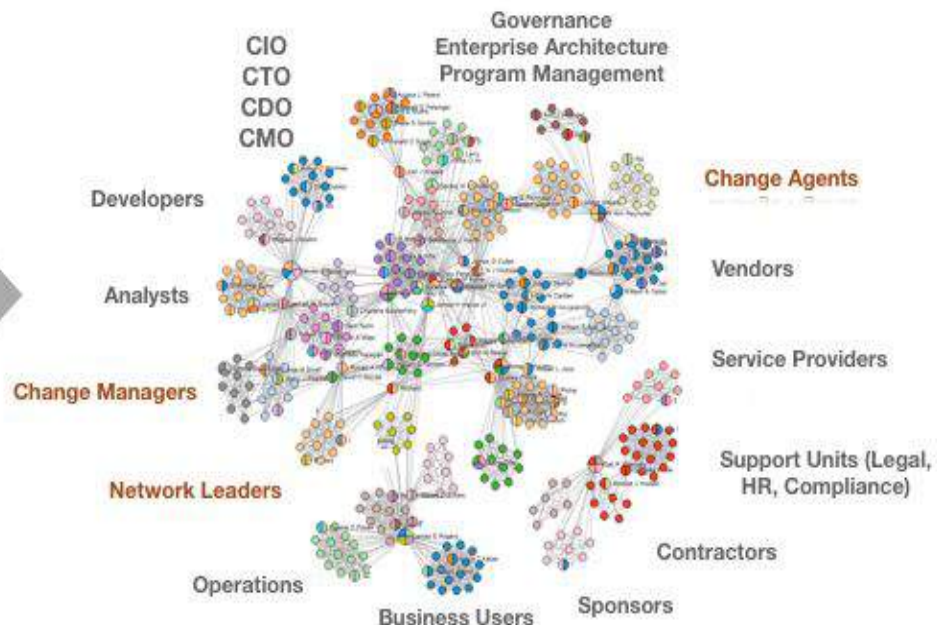


- Applies technology to what the business does today
- Good at maintaining status quo
- Focus on efficiency, economy of scale, continuity
- Well-defined processes designed for monolithic IT

shift

New Model of IT

decentralized network enablement
of digital transformation



- Explores how technology re-imagines the business
- Good at managing constant technology change
- Focus on responding to opportunities at scale
- Dynamic self-organizing processes for small IT in volume

THE EVOLUTION OF SOFTWARE ARCHITECTURE

1990's

SPAGHETTI-ORIENTED
ARCHITECTURE
(aka Copy & Paste)



2000's

LASAGNA-ORIENTED
ARCHITECTURE
(aka Layered Monolith)



2010's

RAVIOLI-ORIENTED
ARCHITECTURE
(aka Microservices)

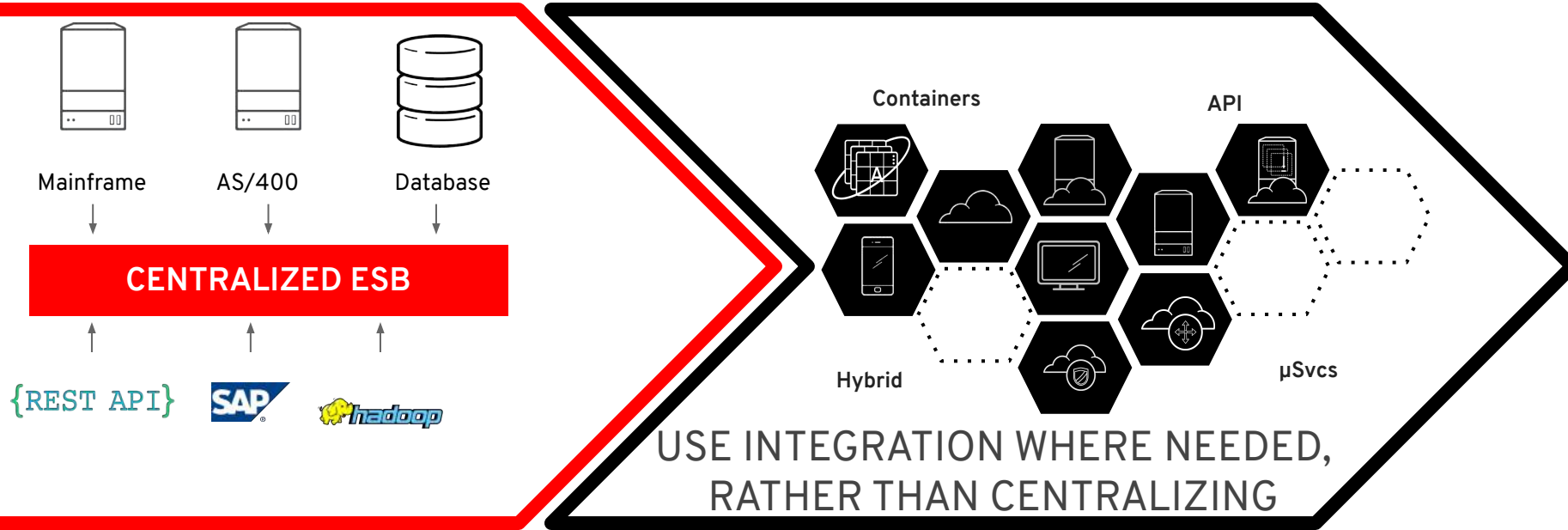


WHAT'S NEXT?

PROBABLY PIZZA-ORIENTED ARCHITECTURE

By @benorama

Mono2Micro in the integration world



Agile Integration

RED HAT® INTEGRATION

DISTRIBUTED
INTEGRATION

RED HAT® JBOSS®
FUSE

API FIRST



CLOUD NATIVE
MESSAGING

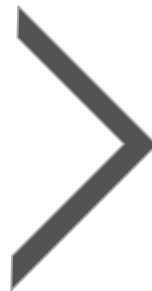
RED HAT® JBOSS®
AMQ

CONTAINERS &
MICROSERVICES



RED HAT®
OPENSIFT
Container Platform

From Communities To Enterprise



**RED HAT® JBOSS®
AMQ**

**RED HAT® JBOSS®
FUSE**

What is Apache Camel?



<http://camel.apache.org>

The swiss knife of integration

>10 years of development - still one of the most active Apache projects

Based on Enterprise Integration Patterns (EIP)

Uses a powerful Domain Specific Language (DSL)

Can integrate anything

Supports 300+ components

Fuse Online

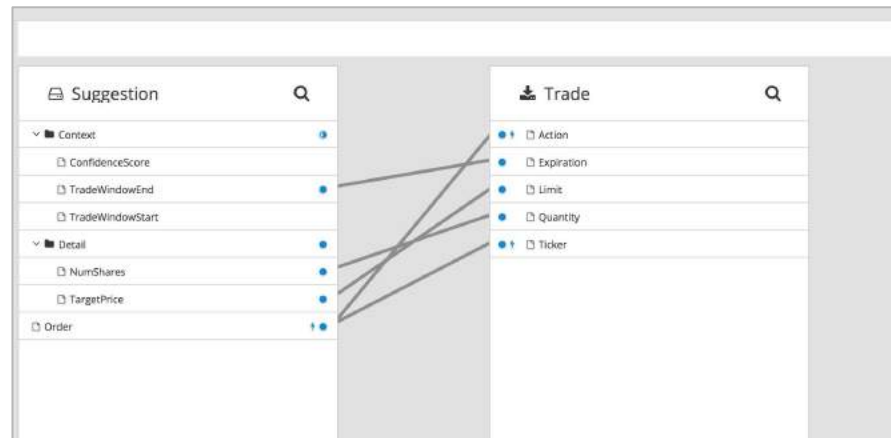
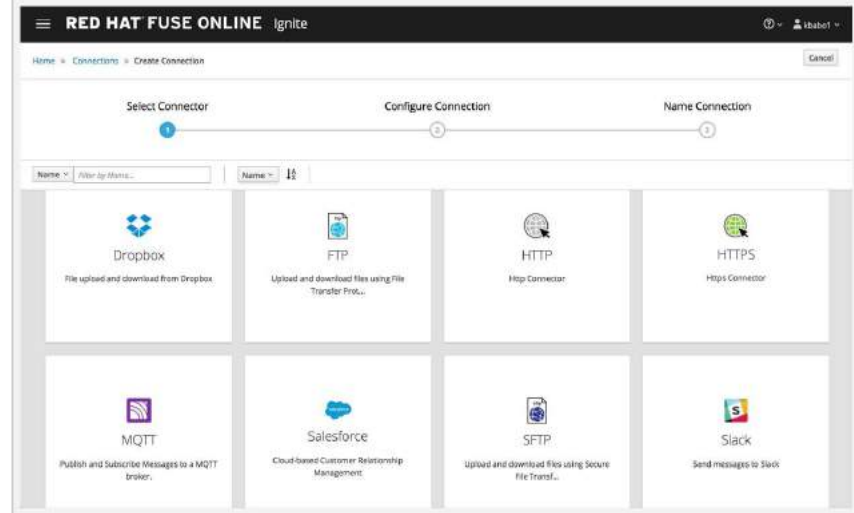


Target:

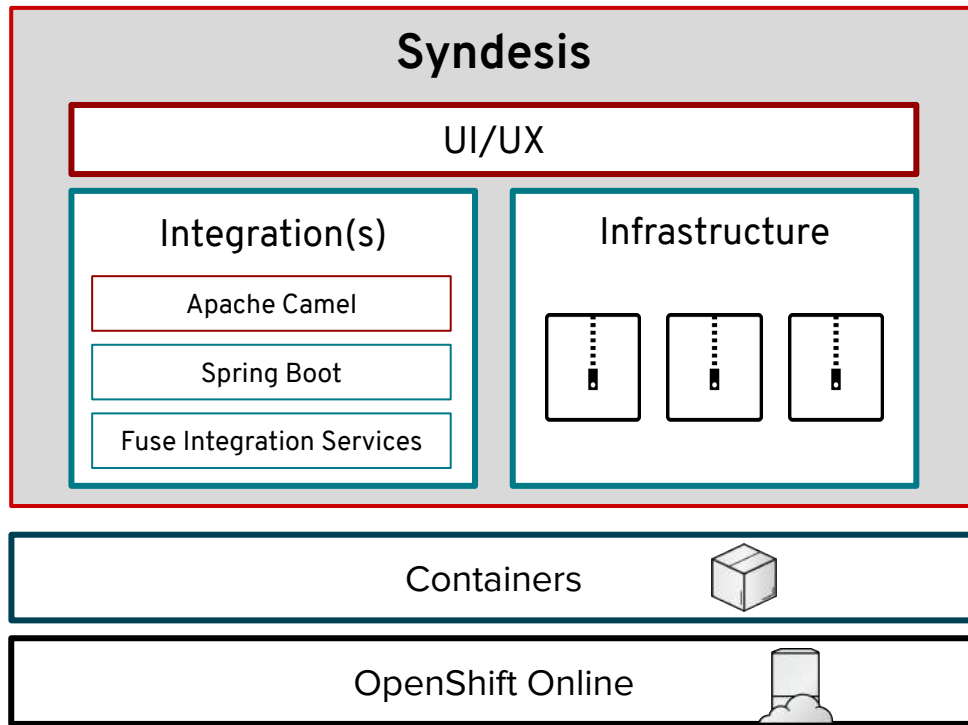
- **Citizen Integrators**

Features:

- Multiple **connectors** built from Camel components
- Few **clicks** to define a integration
- Graphical **data mapping** capabilities
- Design, expose or consume **REST API**
- Integrated with Apicur.io for API design
- Integrated with **3-scale** for API management
- Now **works with Camel K** as runtime engine for integrations!



Fuse Online Architecture



Fuse Online Concepts

Connections

- Instances of connectors
- JDBC, Rest, Messaging, Cloud (Google, AWS, SFDC...)
- (Growing) subset of camel components

Fuse Online Concepts

Connections

- Instances of connectors
- JDBC, Rest, Messaging, Cloud (Google, AWS, SFDC...)
- (Growing) subset of camel components

Customizations

- Api clients from OpenAPI
- <https://github.com/syndesisio/syndesis-extensions>

Fuse Online Concepts

Connections

- Instances of connectors
- JDBC, Rest, Messaging, Cloud (Google, AWS, SFDC...)
- (Growing) subset of camel components

Customizations

- Api clients from OpenAPI
- <https://github.com/syndesisio/syndesis-extensions>

Integrations

- Drag and drop composition of integration steps
- Connections + Customizations + Steps (e.g. Filter, DataMapping...)



Demo

Fuse Online

Demo Scenario - AMQP to REST

Goal: Put a new fruit in queue (web app), read from queue and created using a rest call (other web app)

1. Create a queue on OCP (**AMQ Online / Enmasse**)
2. Create a customization (API connector) starting from OpenAPI document (**Fuse Online / Syndesis**)
 - API for creating / updating / getting fruit objects
3. Create a connection to REST API starting from API connector just created
4. Create a connection to the queue (standard AMQP connector)
5. Create Integration
 - AMQP -> DataMapping -> Post to REST service
6. Deploy on OCP

OPENSHIFT CONTAINER PLATFORM

Navigation menu:

- Home
- Overview
- Clusters
- Namespaces
- Services
- Routes
- ConfigMaps
- Secrets
- Deployments
- ReplicaSets
- Pods
- Nodes
- Storage
- Monitoring
- Alerting
- Logging
- Security
- Compliance
- Help

Search: [Search]

Table of Pods:

Pod Name	IP Address	Ready	Restart Count	Age	Actions
pod-1	172.17.0.1	1/1	0	1m	[Refresh] [Stop]
pod-2	172.17.0.2	1/1	0	2m	[Refresh] [Stop]
pod-3	172.17.0.3	1/1	0	3m	[Refresh] [Stop]
pod-4	172.17.0.4	1/1	0	4m	[Refresh] [Stop]
pod-5	172.17.0.5	1/1	0	5m	[Refresh] [Stop]
pod-6	172.17.0.6	1/1	0	6m	[Refresh] [Stop]
pod-7	172.17.0.7	1/1	0	7m	[Refresh] [Stop]
pod-8	172.17.0.8	1/1	0	8m	[Refresh] [Stop]
pod-9	172.17.0.9	1/1	0	9m	[Refresh] [Stop]
pod-10	172.17.0.10	1/1	0	10m	[Refresh] [Stop]

Agile Integration

RED HAT® INTEGRATION

DISTRIBUTED
INTEGRATION

RED HAT® JBOSS®
FUSE

API FIRST



CLOUD NATIVE
MESSAGING

RED HAT® JBOSS®
AMQ

CONTAINERS &
MICROSERVICES



RED HAT®
OPENSIFT
Container Platform

Integration and API lifecycle

~~API MANAGEMENT vs SERVICE MESH~~

API MANAGEMENT and SERVICE MESH

API Management

Business and people centric

Resources are APIs and endpoints

Subjects are apps and users

Authentication & authorization

Controls access and tracks usage

Service Mesh

Infrastructure centric

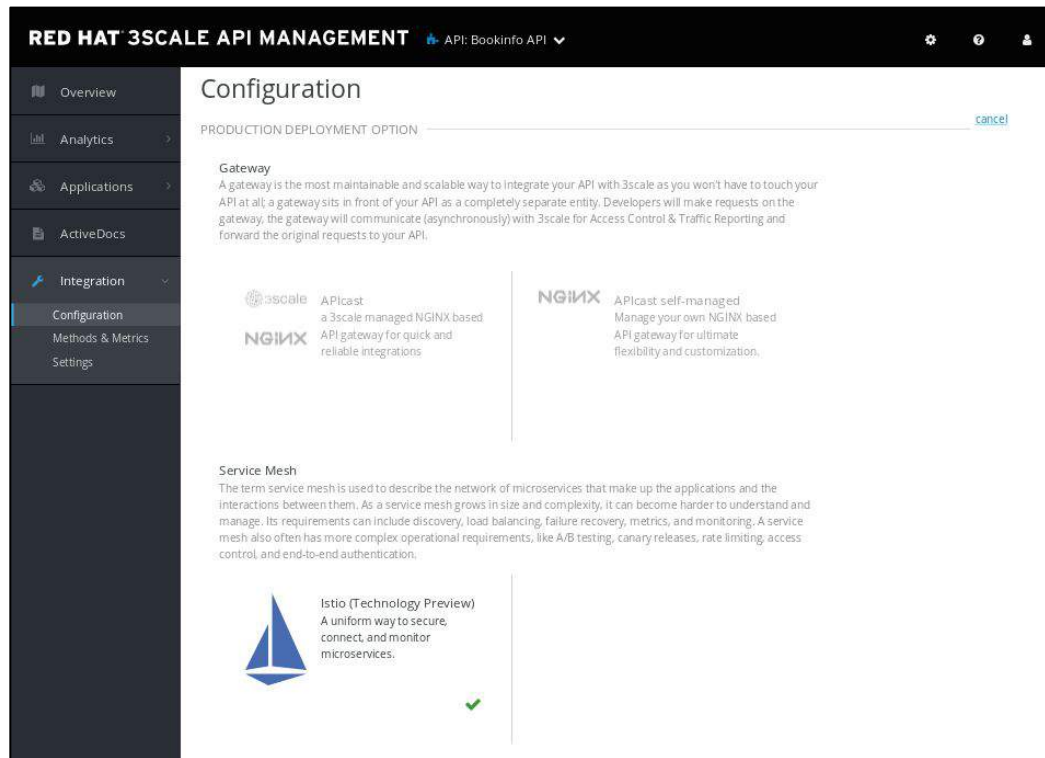
Resources are services, routes, pods

Subjects are services and requests

Authentication & authorization

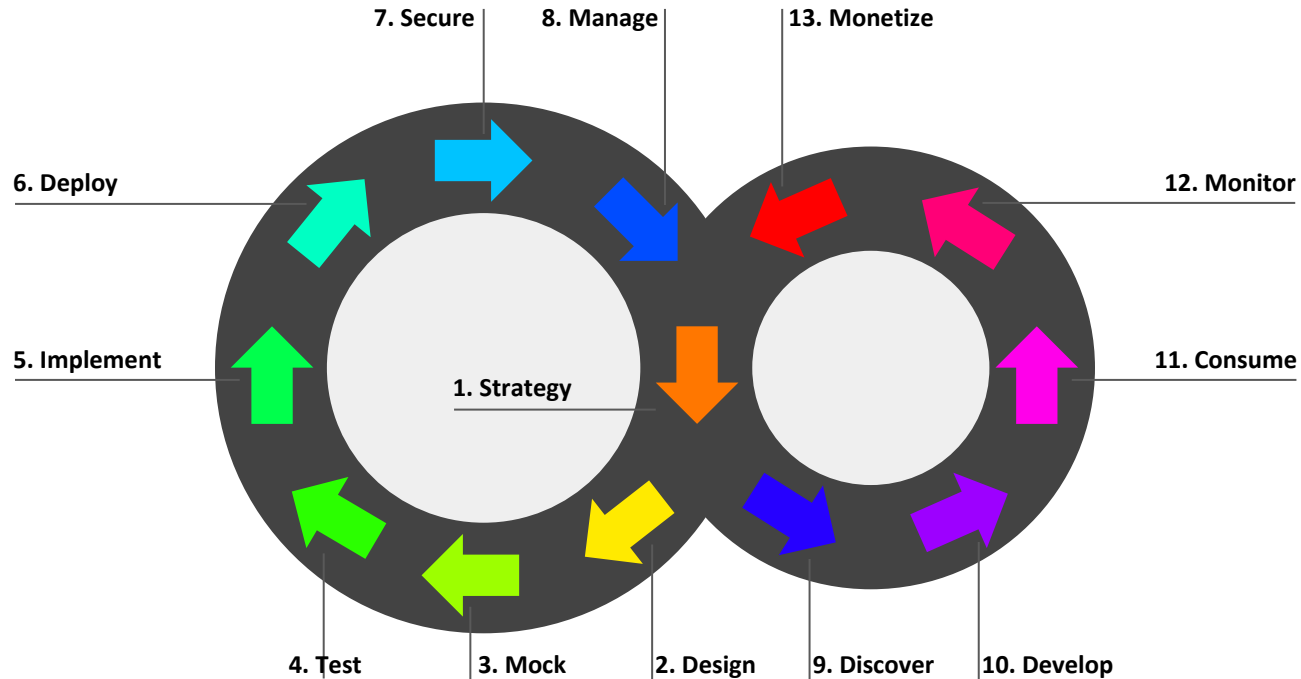
Controls access and tracks usage

3Scale Istio adapter

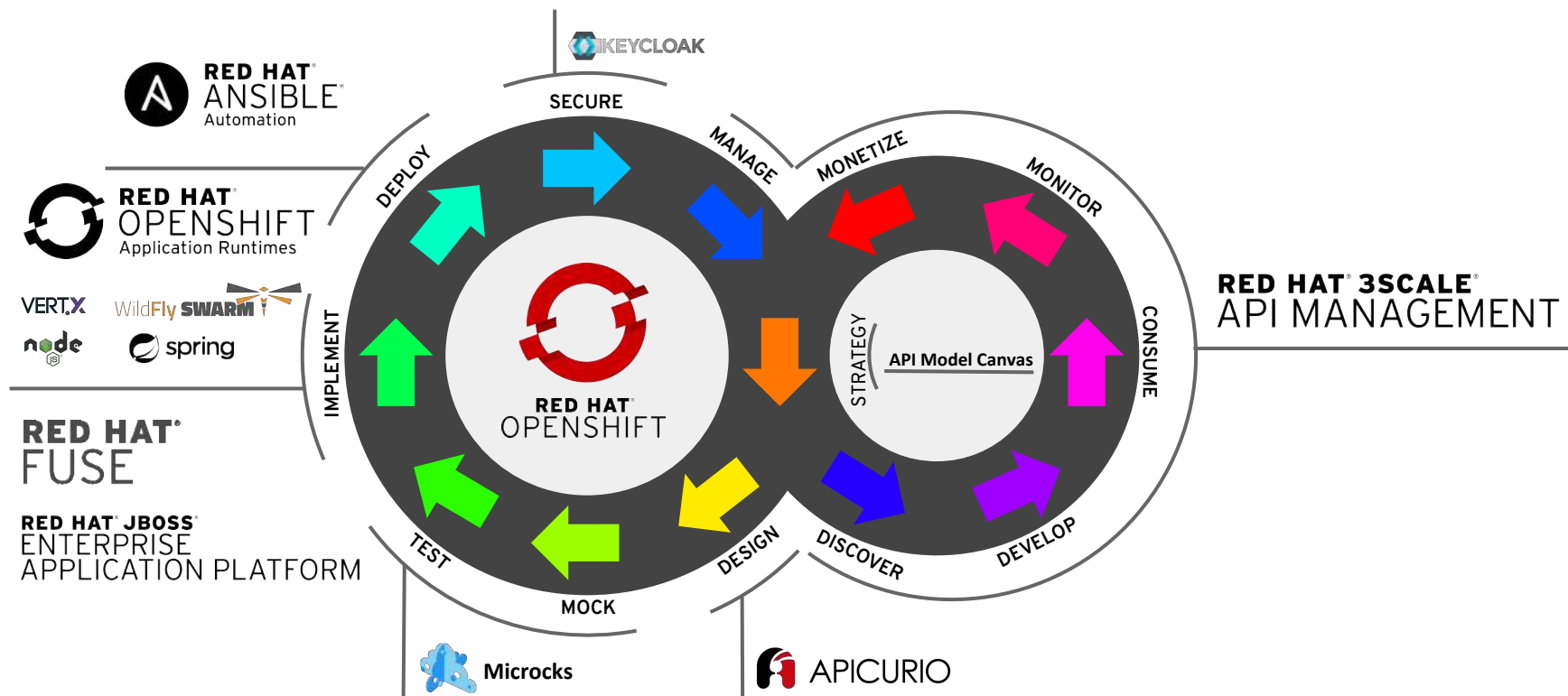


<https://github.com/3scale/3scale-istio-adapter>

Full Api Lifecycle Management



Full Api Lifecycle Management





Demo

Fuse Online + 3Scale

Demo Scenario - Fruit CRUD REST API

GOAL: Design and implement a crud rest api (from DB) and add it to 3scale

1. Create an integration from scratch (**Fuse Online / Syndesis**)
2. Design an API starting from JSON (**Fuse Online / Apicurio**)
3. Use GET method as first integration step
4. SQL Select as a second step
 - Rest GET -> DataMapping -> SQL Select -> DataMapping -> Rest response
5. Publish the integration
6. Import the endpoint into API Management (**3Scale**)

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



youtube.com/user/RedHatVideos



facebook.com/redhatinc



twitter.com/RedHat