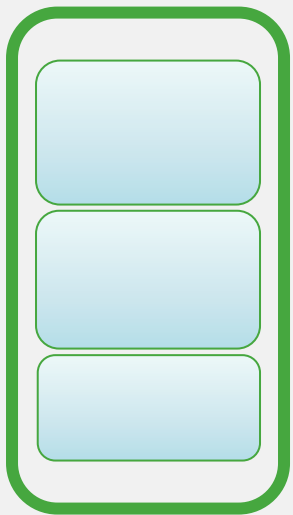




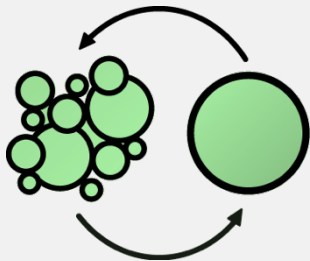
JENKINS @ RED HAT

James Falkner
Senior Principal Technical Marketing Manager
Middleware Marketing – Technical, Global

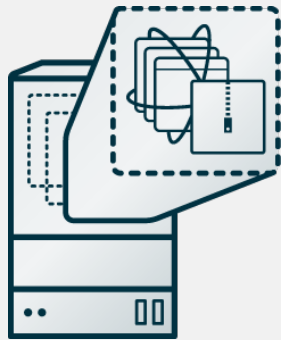
IT IS STRUGGLING TO EVOLVE



MONOLITHIC



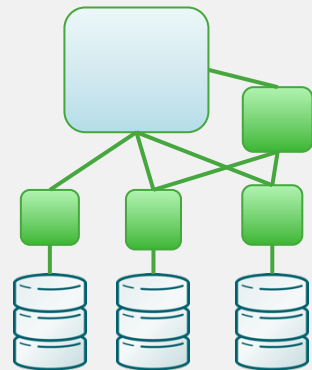
DEVOPS



CONTAINERS



CLOUD

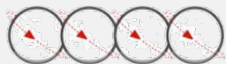


MICROSERVICES

IT'S ABOUT MORE THAN CONTAINERS

Development Process

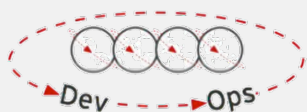
Waterfall



Agile

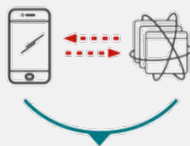


DevOps



Application Architecture

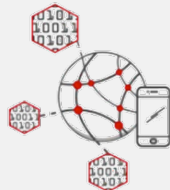
Monolithic



N-Tier



Microservices



Deployment & Packaging

Physical Servers



Virtual Servers



Containers



Application Infrastructure

Datacenter



Hosted



Cloud



DEVOPS @ RED HAT



OPEN SOURCE CULTURE



AUTOMATE TO ACCELERATE

ANSIBLE
by Red Hat®



DEVOPS NATIVE PLATFORMS

RED HAT® JBOSS®
MIDDLEWARE





redhat®



Jenkins

JENKINS PLUGINS: WILDFLY / JBOSS EAP



Source Code Management

None

- Create OpenShift Resource(s)
- Delete OpenShift Resource(s) by Key
- Delete OpenShift Resource(s) from JSON/YAML
- Delete OpenShift Resource(s) using Labels
- Deploy WAR/EAR to WildFly
- Execute Windows batch command
- Execute shell
- Invoke Ant
- Invoke top-level Maven targets
- OpenShift: Delete Application
- OpenShift: Deploy Application
- Scale OpenShift Deployment
- Set build status to "pending" on GitHub commit
- Tag OpenShift Image
- Trigger OpenShift Build
- Trigger OpenShift Deployment
- Verify OpenShift Build
- Verify OpenShift Deployment
- Verify OpenShift Service

Add build step

Build

Deploy WAR/EAR to WildFly

- WAR/EAR files
- Hostname
- Port
- User Name
- Password
- Server Group

Delete

JENKINS PLUGINS: ANSIBLE



Build

Invoke Ansible Playbook

Playbook path

Inventory

☐ File

☒ Inline content

Dynamic inventory ☐

Content

Host subset

Credentials

☒ sudo

```
node {  
    ansiblePlaybook(  
        playbook: 'path/to/playbook.yml',  
        inventory: 'path/to/inventory.ini',  
        credentialsId: 'jcsirot',  
        extras: '-e parameter="some value"')  
}
```

JENKINS PLUGINS: KUBERNETES



Kubernetes

Name

Kubernetes URL

Kubernetes server certificate key

Disable https certificate check ☒

Kubernetes Namespace

Credentials [Add](#)

[Test Connection](#)

Jenkins URL

Jenkins tunnel

Connection Timeout

Read Timeout

Container Cap

Images

Kubernetes Pod Template

Name

Labels

Docker image

Jenkins slave root directory

Command to run slave agent

Arguments to pass to the command

Max number of instances

- Dynamically deploys Jenkins slaves to Kubernetes cluster
- Automatic setup/teardown
- Supports k8s service accounts, k8s API, OpenShift OAuth token credentials
- Customizable slave pod templates

JENKINS PLUGINS: OPENS SHIFT

OpenShift Jenkins Sync

Enabled ☒

Server

Namespace

Check if we should sync OpenShift builds with Jenkins jobs

The API server to sync against - leave blank if running on an OpenShift cluster

The namespace to sync BuildConfigs with - leave blank to sync with all namespaces. Environment variables in the form will be expanded.



Build

Trigger OpenShift Build

URL of the OpenShift api endpoint

The name of the BuildConfig to trigger

The name of the project the BuildConfig is stored in

The authorization token for interacting with OpenShift

Specify the commit hash the build should be run from

Allow for verbose logging during this build step plug-in ☒ Yes ☐ No

Specify the name of a build which should be re-run

Build wait time

Pipe the build logs from OpenShift to the Jenkins console ☒ Yes ☐ No

Verify whether any deployments triggered by this build's output fired ☒ Yes ☐ No

Delete

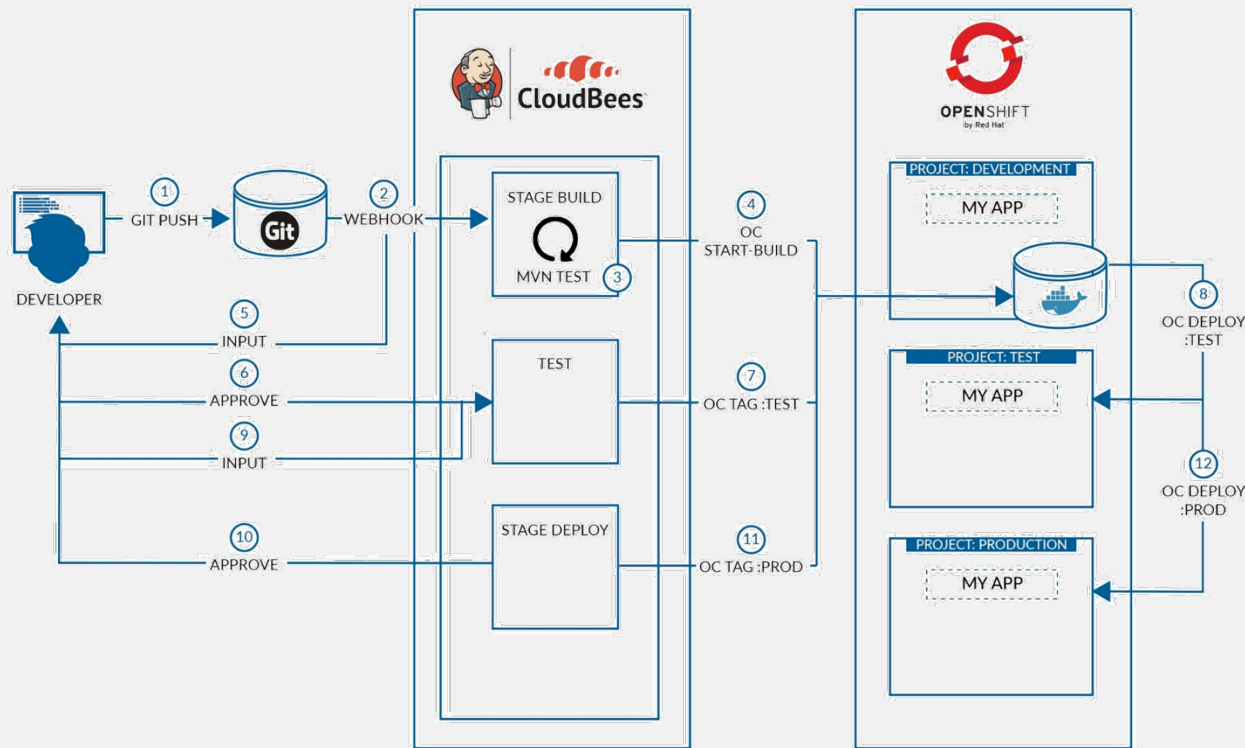
OpenShift Sync Plugin

- Syncs OpenShift Builds <-> Jenkins Jobs

OpenShift Pipeline Plugin

- Provides Build Steps, Pipeline DSL
- ImageStreams-as-SCM
- Build promotion via tagging

JENKINS WITH OPENSIFT



Provides

- Official S2I Images
- Label-based slave deployment
- Sample Pipelines
- red.ht/2bXNbQJ

Use Cases

- Elastic runtime for Jenkins
- Deployment target for Jenkins



Overview



Applications



Builds



Resources



Storage



Monitoring

MOBILEPAYMENTS

<http://mobilepayments-incubator-project.54.197.214.19.xip.io>

pipeline



Build #6

a minute ago

Jenkins Build | View Log

Validate PR



6s

Build



1m 1s

Service: mobilepayments

Deployment: mobilepayments

an hour ago

#12



66.1

MiB Memory



0

Millicores CPU



0

KiB/s Network



1
pod

Autoscaled: min: 1, max: 4

Service: mongodb

Deployment: mongodb

3 hours ago

#1



118.5

MiB Memory



7

Millicores CPU



0

KiB/s Network



1
pod

<https://jenkins-incubator-project.54.197.214.19.xip.io>

OPENSIFT 3.3 PIPELINES red.ht/2cIAifi

fabric8-console X

fabric8.vagrant.f8/workspaces/default/projects/awesome

fabric8 Teams default Apps awesome Dashboard

Dashboard

Pipelines

Builds

Metrics

Settings

Source

Forge

Environments

Testing

Staging

Production

awesome : 1.0.1

Build #1 P 1945c04 Docs

awesome : 1.0.1

Build #1 P 1945c04 Docs

Active Pipelines [View All Pipelines >>](#)

Build #2

Started 2 seconds ago

Logs [View Full Log](#)

```
Checking out revision 378f7b6ba017b7bc84ae15a8cde6025cf78d9fc6 (refs/remotes/origin/master)
[Pipeline] node
Started by user anonymous
Fetching changes from the remote Git repository
Checking out Revision 378f7b6ba017b7bc84ae15a8cde6025cf78d9fc6 (refs/remotes/origin/master)
[Pipeline] node
Running on 2c41ea9e885 in /home/jenkins/workspace/workspace/awesome
[Pipeline] {
[Pipeline] git
Fetching changes from the remote Git repository
Checking out Revision 378f7b6ba017b7bc84ae15a8cde6025cf78d9fc6 (refs/remotes/origin/master)
```

Commits [View All Commits >>](#)

Updated page src/main/java/org/example/Controller.java
gogsadmin committed

378f7b6

devops:edit --copyPipelineToProject=true --pipeline=workflows/maven/CanaryReleaseStageAndApprovePromote/Jenkinsfile

1945c04

JENKINS WITH FABRIC8
“OPINIONATED OPEN SOURCE MICROSERVICES PLATFORM
BASED ON DOCKER, KUBERNETES AND JENKINS”
fabric8.io

JENKINS WITH ANSIBLE TOWER



**ANSIBLE
TOWER**
by Red Hat®



Jenkins

MARK YOUR CALENDARS



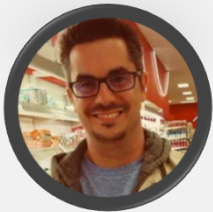
Jenkins World
2016



DEVOPS NATIVE (BoF)

DAVID CODELLI, RED HAT

WEDNESDAY 5:00pm EXHIBIT HALL A-2



CI/CD WITH JENKINS AND ANSIBLE TOWER

DYLAN SILVA, RED HAT

THURSDAY 1:30pm EXHIBIT HALL A-3



HOW TO DO CONTINUOUS DELIVERY WITH JENKINS PIPELINE, DOCKER AND KUBERNETES

JAMES STRACHAN, RED HAT

THURSDAY 2:30PM GREAT AMERICA J



THANK YOU



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youtube.com/user/RedHatVideos