

#### "Zero to Hero in Minutes"

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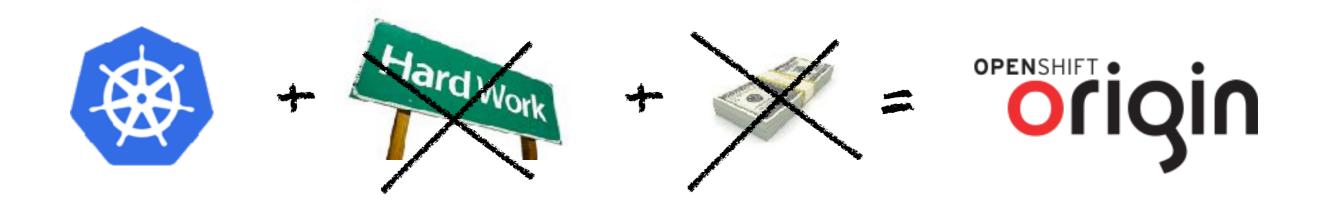
Solutions Architect & CNCF Ambassador

@debianmaster

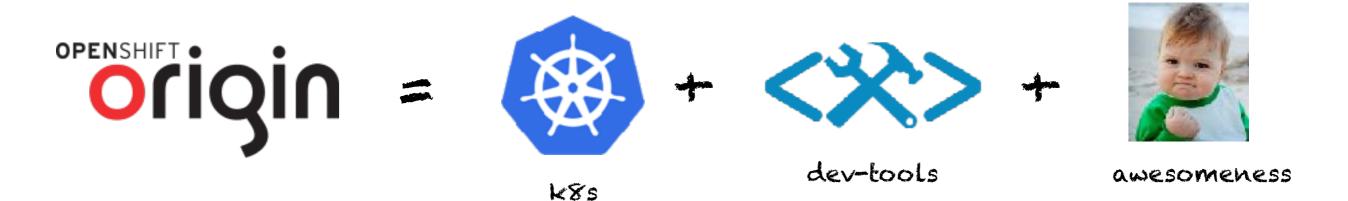
## Want to use k8s?



# why re-invent the wheel?



# What is openshift?



## Analogy



Kernel for you DC



# What does openshift add?

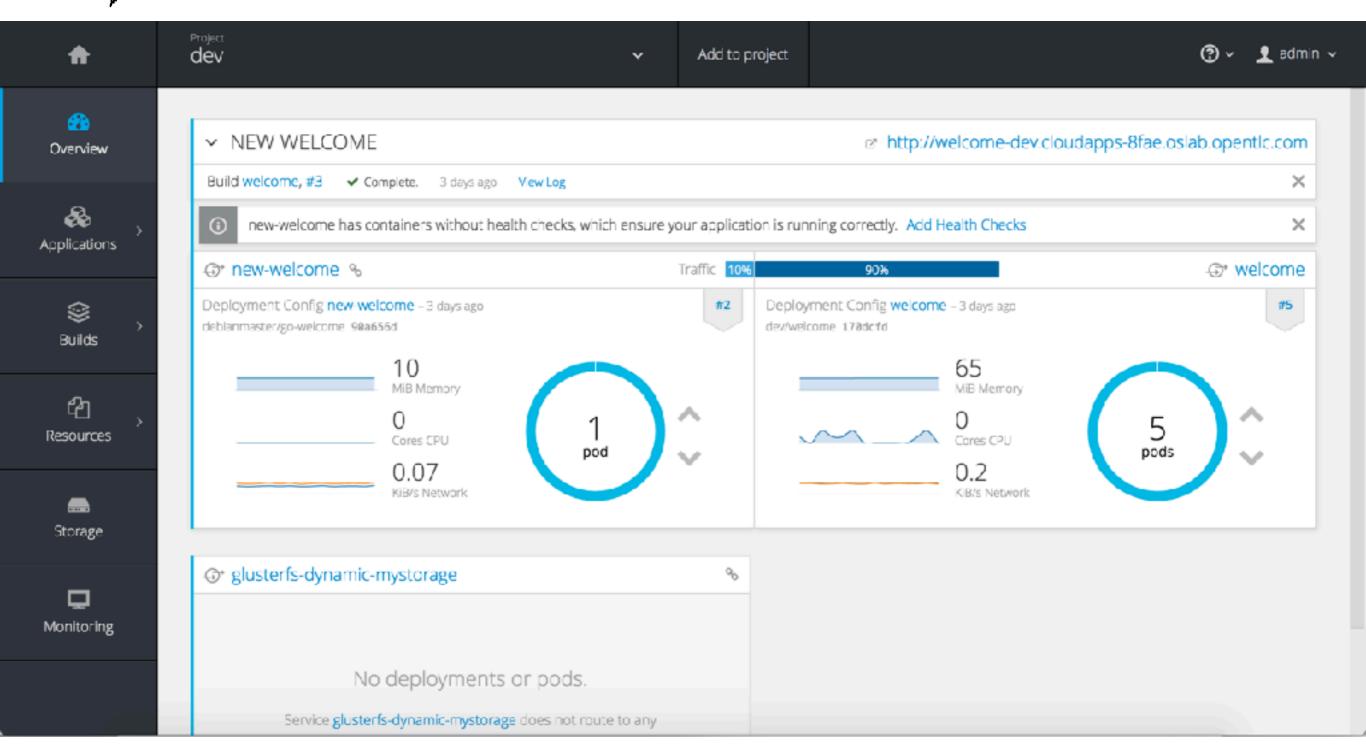
- -> Developer tools
- -> ci/cd work workflow
- -> Advanced Multi-tenancy
- -> Advanced User Interface
- -> Registry & trusted base images
- -> Many more .....

#### Start a cluster

\$ oc cluster up



#### UI for k8s



# Start from anywhere

Docker image Dockerfile

Source

JAR

#### From Docker Image

\$ oc new-app docker.io/mongodb

### From Dockerfile

\$ oc new-app <a href="https://github.com/i63/store-inventory">https://github.com/i63/store-inventory</a> —strategy=docker

### Build via Dockerfile

---> Running in aa2e6323df48

22

```
Follow
    Cloning "https://github.com/i63/store-inventory" ...
            Commit: 290576d79858aff432a6cd3668ffa4fc426fe10c (Merge branch 'master' of https://github.com/i63/store-inventory)
            Author: tetradev1 <9chakri+ds@gmail.com>
                    Sat Jun 24 15:46:32 2017 -0700
    Pulling image golang@sha256:9c4e698d6d1378cea1a7dbdbce2688b50f458d3a09a9f9cd8e1825c187dc3c43 ...
    Pulled 0/7 layers, 1% complete
    Pulled 1/7 layers, 27% complete
    Pulled 2/7 layers, 41% complete
    Pulled 3/7 layers, 43% complete
10 Pulled 4/7 layers, 57% complete
    Pulled 5/7 layers, 74% complete
11
    Pulled 6/7 layers, 95% complete
12
    Pulled 7/7 layers, 100% complete
13
    Extracting
14
    Step 1: FROM golang@sha256:9c4e698d6d1378cea1a7dbdbce2688b50f458d3a09a9f9cd8e1825c187dc3c43
15
     ---> 6ce094895555
16
    Step 2 : RUN mkdir /app
17
     ---> Running in 10c9e1c3a518
18
19
     ---> d8fdd3b1ba08
    Removing intermediate container 10c9e1c3a518
20
    Step 3 : RUN go get github.com/gin-gonic/gin && go get github.com/go-sql-driver/mysql
21
```

#### Source 2 image

```
$ oc new-app \
https://github.com/i63/store-products \
--strategy=source
```

```
Follow
```

```
Cloning "https://github.com/i63/store-products" ...
            Commit: 8d7761e1e8905600f2c7ebebba588a337d065060 (Update README.md)
            Author: Chakradhar Rao Jonagam <debianmaster@users.noreply.github.com>
                    Sat Jun 24 15:45:23 2017 -0700
            Date:
 4
    ---> Installing application source ...
    ---> Building your Node application from source
 6
    mongodb@2.2.30 node_modules/mongodb
    — es6−promise@3.2.1
 8
    ├── readable-stream@2.2.7 (inherits@2.0.3, buffer-shims@1.0.0, process-nextick-args@1.0.7, util-deprecate@1.0.2, core-util-is@1.0.2,
    isarray@1.0.0, string_decoder@1.0.3)
    mongodb-core@2.1.14 (require_optional@1.0.1, bson@1.0.4)
10
    express@3.21.2 node_modules/express
11
     — escape-html@1.0.2
12
13
     — merge-descriptors@1.0.0
     — cookie@0.1.3
15
     — commander@2.6.0
     — cookie-signature@1.0.6
16
     proxy-addr@1.0.10 (forwarded@0.1.0, ipaddr.js@1.0.5)
29
     — send@0.13.0 (destroy@1.0.3, statuses@1.2.1, ms@0.7.1, mime@1.3.4, on-finished@2.3.0, http-errors@1.3.1)
30
31
     mkdirp@0.5.1 (minimist@0.0.8)
     connect@2.30.2 (bytes@2.1.0, pause@0.1.0, on-headers@1.0.1, vhost@3.0.2, basic-auth-connect@1.0.0, cookie-parser@1.3.5,
32
    qs@4.0.0, connect-timeout@1.6.2, serve-favicon@2.3.2, http-errors@1.3.1, response-time@2.3.2, morgan@1.6.1, finalhandler@0.4.0,
     express-session@1.11.3, type-is@1.6.15, method-override@2.3.9, serve-static@1.10.3, multiparty@3.3.2, compression@1.5.2,
    errorhandler@1.4.3, csurf@1.8.3, body-parser@1.13.3, serve-index@1.7.3)
    Pushing image 172.30.142.160:5000/dev/store-products:latest ...
    Pushed 0/5 layers, 3% complete
35
    Pushed 1/5 layers, 23% complete
    Pushed 2/5 layers, 49% complete
36
37
     Pushed 3/5 layers, 70% complete
38
    Pushed 4/5 layers, 96% complete
    Pushed 5/5 layers, 100% complete
39
     Push successful
40
```

### From WAR/JAR file

```
$ oc new-build \
    --image-stream=tomat \
    --binary=true
    --name=myapp
```

\$ oc start-build myapp --from-dir=.

# CI/CD workflow setup

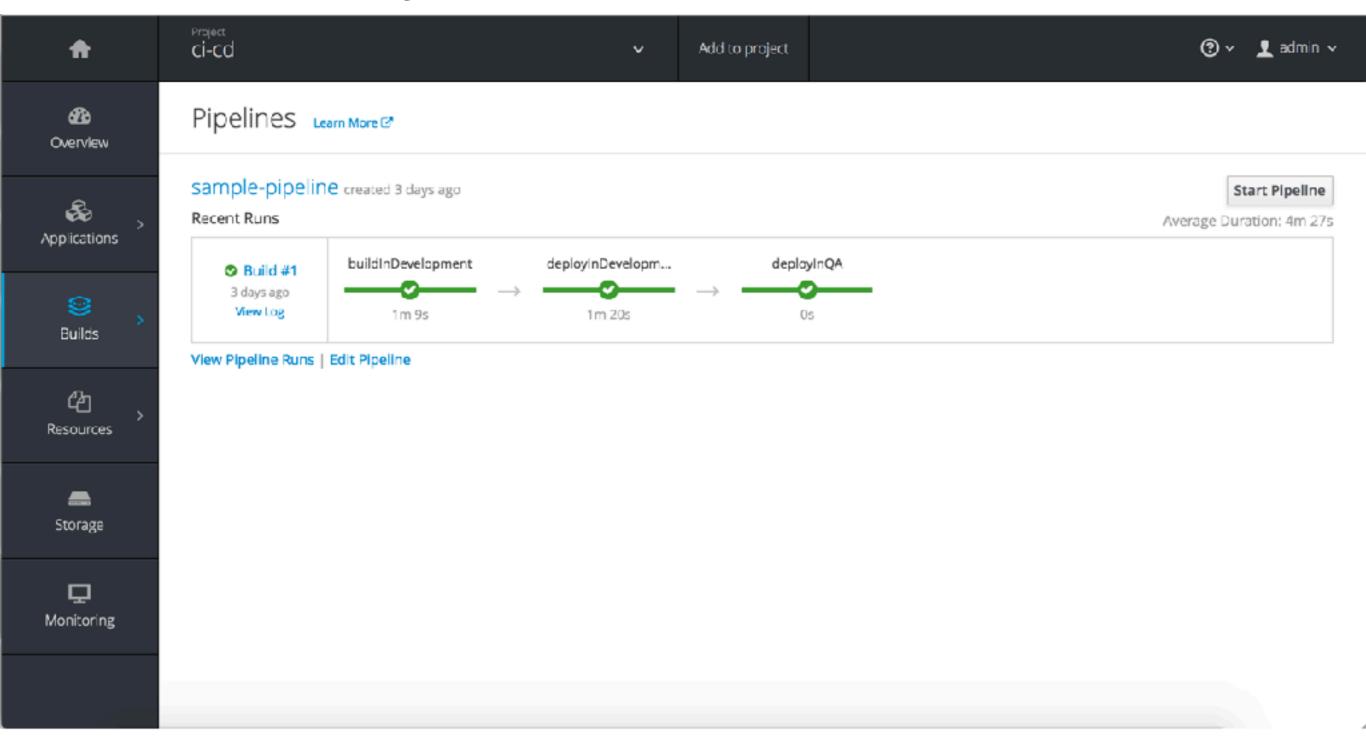
```
jenkinsfile: |-
        node('') {
          stage 'buildInDevelopment'
          stage 'deployInDevelopment'
          stage 'deployInQA'
```

\$ oc create -f pipeline.yaml

#### CI/CD workflow setup

```
jenkinsfile: |-
       node('') {
          stage 'buildInDevelopment'
            openshiftBuild(namespace:'dev',buildConfig: 'store-frontend', showBuildLogs: 'true')
          stage 'deployInDevelopment'
            openshiftDeploy(namespace:'dev',deploymentConfig: 'store-frontend')
            openshiftScale(namespace:'dev',deploymentConfig: 'store-frontend',replicaCount: '5')
          stage 'deployInQA'
           input 'Proceed ?'
            openshiftTag(namespace: 'dev', sourceStream: 'store-frontend',
                 sourceTag: 'latest', destinationStream: 'store-frontend', destinationTag: 'promoteToQA')
            openshiftDeploy(namespace:'qa',deploymentConfig: 'store-frontend')
```

### Jenkins Integration



Summary

With Openshift Origin you can use k8s without having to spend time building tooling.

Hence. Zero to Hero in Minutes

"Thank you!"

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