



"Zero to Hero in Minutes"

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Want to use k8s?



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Ready for
primetime

why re-invent the wheel?



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OPENSIFT
origin

What is openshift?

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k8s dev-tools awesomeness

Analogy



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Kernel for you DC



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O/S for your 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

Project dev

Add to project

admin

Overview

Applications

Builds

Resources

Storage

Monitoring

NEW WELCOME

<http://welcome-dev.cloudapps-8fae.oslab.opentlc.com>

Build [welcome](#), #3 Complete. 3 days ago [View Log](#)

new-welcome has containers without health checks, which ensure your application is running correctly. [Add Health Checks](#)

new-welcome

Traffic

10%90%

Deployment Config [new welcome](#) - 3 days ago
debianmaster/go-welcome 98a655d

10 MiB Memory

0 Cores CPU

0.07 KiB/s Network

1 pod

welcome

Traffic

10%90%

Deployment Config [welcome](#) - 3 days ago
dev/welcome 170dc1d

65 MiB Memory

0 Cores CPU

0.2 KiB/s Network

5 pods

glusterfs-dynamic-mystorage

No deployments or pods.
Service [glusterfs-dynamic-mystorage](#) does not route to any

Start from anywhere

Docker
image

Source
code

Dockerfile

JAR

WAR

From Docker Image

```
$ oc new-app docker.io/mongodb
```

From Dockerfile

```
$ oc new-app https://github.com/i63/store-inventory —strategy=docker
```

Build via Dockerfile

[Follow](#)

```
1 Cloning "https://github.com/i63/store-inventory" ...
2 Commit: 290576d79858aff432a6cd3668ffa4fc426fe10c (Merge branch 'master' of https://github.com/i63/store-inventory)
3 Author: tetradev1 <9chakri+ds@gmail.com>
4 Date: Sat Jun 24 15:46:32 2017 -0700
5 Pulling image golang@sha256:9c4e698d6d1378cea1a7dbdbce2688b50f458d3a09a9f9cd8e1825c187dc3c43 ...
6 Pulled 0/7 layers, 1% complete
7 Pulled 1/7 layers, 27% complete
8 Pulled 2/7 layers, 41% complete
9 Pulled 3/7 layers, 43% complete
10 Pulled 4/7 layers, 57% complete
11 Pulled 5/7 layers, 74% complete
12 Pulled 6/7 layers, 95% complete
13 Pulled 7/7 layers, 100% complete
14 Extracting
15 Step 1 : FROM golang@sha256:9c4e698d6d1378cea1a7dbdbce2688b50f458d3a09a9f9cd8e1825c187dc3c43
16 ----> 6ce094895555
17 Step 2 : RUN mkdir /app
18 ----> Running in 10c9e1c3a518
19 ----> d8fdd3b1ba08
20 Removing intermediate container 10c9e1c3a518
21 Step 3 : RUN go get github.com/gin-gonic/gin && go get github.com/go-sql-driver/mysql
22 ----> Running in aa2e6323df48
```

Source 2 image

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

Source 2 image process

[Follow](#)

```
1 Cloning "https://github.com/i63/store-products" ...
2   Commit: 8d7761e1e8905600f2c7eb8ba588a337d065060 (Update README.md)
3   Author: Chakradhar Rao Jonagam <debianmaster@users.noreply.github.com>
4   Date:   Sat Jun 24 15:45:23 2017 -0700
5   ----> Installing application source ...
6   ----> Building your Node application from source
7   mongodb@2.2.30 node_modules/mongodb
8   |— es6-promise@3.2.1
9   |— 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)
10  |— mongodb-core@2.1.14 (require_optional@1.0.1, bson@1.0.4)
11  express@3.21.2 node_modules/express
12  |— escape-html@1.0.2
13  |— merge-descriptors@1.0.0
14  |— cookie@0.1.3
15  |— commander@2.6.0
16  |— cookie-signature@1.0.6
29  |— proxy-addr@1.0.10 (forwarded@0.1.0, ipaddr.js@1.0.5)
30  |— 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)
31  |— mkdirp@0.5.1 (minimist@0.0.8)
32  |— 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,
   |  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)
33 Pushing image 172.30.142.160:5000/dev/store-products:latest ...
34 Pushed 0/5 layers, 3% complete
35 Pushed 1/5 layers, 23% complete
36 Pushed 2/5 layers, 49% complete
37 Pushed 3/5 layers, 70% complete
38 Pushed 4/5 layers, 96% complete
39 Pushed 5/5 layers, 100% complete
40 Push successful
```

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

Overview

Applications

Builds

Resources

Storage

Monitoring

Project
ci-cd

▼

Add to project

?

▼

admin

▼

Pipelines

[Learn More](#)

sample-pipeline

created 3 days ago

Start Pipeline

Average Duration: 4m 27s

Recent Runs

✔ Build #1

3 days ago

[View Log](#)

buildInDevelopment

1m 9s

→

deployInDevelopm...

1m 20s

→

deployInQA

0s

[View Pipeline Runs](#)

[Edit Pipeline](#)

Summary

With Openshift **Origin** you can use **K8s** without having to spend time building tooling.

Hence.. Zero to Hero in Minutes

“Thank you!”

@debianmaster