



Red Hat

WILDFLY AND KUBERNETES HOW THEY PLAY TOGETHER

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AGENDA

WILDFLY TO KUBERNETES

- s2i builds
- Galleon provisioning tool
- WildFly Operator

AGENDA

WILDFLY TO KUBERNETES



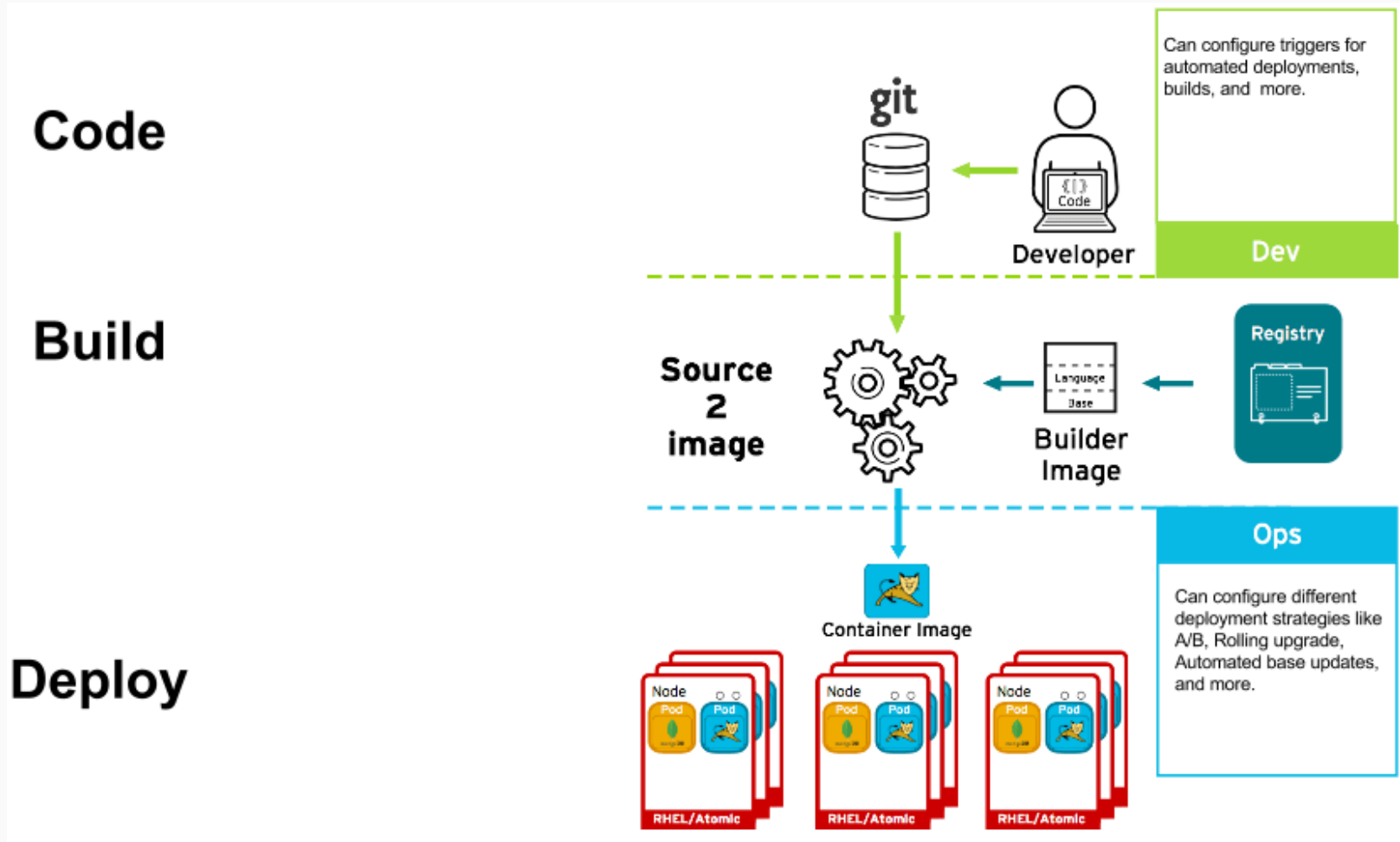
DEMO PROJECT

WildFly Quickstart / HelloWorld

- Servlet
- CDI

<https://github.com/wildfly/quickstart>

S2I



Source: <https://blog.openshift.com/save-yourself-from-the-next-glibc/>

WILDFLY CONTAINERS

<https://quay.io/organization/wildfly>

- quay.io/wildfly/wildfly-centos7
- quay.io/wildfly/wildfly-runtime-centos7
- quay.io/wildfly/wildfly-operator

s2i build

-e GALLEON_PROVISION_DEFAULT_FAT_SERVER=true
-e MAVEN_OPTS="-Dcom.redhat.xpaas.repo.jbossorg"

--context-dir helloworld

--ref 18.0.0.Final

<https://github.com/wildfly/quickstart>
quay.io/wildfly/wildfly-centos7

helloworld-wildfly-centos7

s2i build ← **s2i command to build**

```
-e GALLEON_PROVISION_DEFAULT_FAT_SERVER=true  
-e MAVEN_OPTS="-Dcom.redhat.xpaas.repo.jbossorg"
```

```
--context-dir helloworld
```

```
--ref 18.0.0.Final
```

<https://github.com/wildfly/quickstart>

quay.io/wildfly/wildfly-centos7

helloworld-wildfly-centos7

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<https://github.com/wildfly/quickstart> ← the source code

quay.io/wildfly/wildfly-centos7

helloworld-wildfly-centos7

s2i build ← s2i command to build

-e GALLEON_PROVISION_DEFAULT_FAT_SERVER=true
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--context-dir helloworld

--ref 18.0.0.Final ← tag/branch

<https://github.com/wildfly/quickstart> ← the source code

quay.io/wildfly/wildfly-centos7

helloworld-wildfly-centos7

s2i build ← **s2i command to build**

-e GALLEON_PROVISION_DEFAULT_FAT_SERVER=true

-e MAVEN_OPTS="-Dcom.redhat.xpaas.repo.jbossorg"

--context-dir helloworld ← **directory where build is started**

--ref 18.0.0.Final ← **tag/branch**

<https://github.com/wildfly/quickstart> ← **the source code**

quay.io/wildfly/wildfly-centos7

helloworld-wildfly-centos7

s2i build ← **s2i command to build**

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--context-dir helloworld ← **directory where build is started**

--ref 18.0.0.Final ← **tag/branch**

<https://github.com/wildfly/quickstart> ← **the source code**

quay.io/wildfly/wildfly-centos7 ← **base docker image**

helloworld-wildfly-centos7

s2i build ← **s2i command to build**

-e GALLEON_PROVISION_DEFAULT_FAT_SERVER=true

-e MAVEN_OPTS="-Dcom.redhat.xpaas.repo.jbossorg"

--context-dir helloworld ← **directory where build is started**

--ref 18.0.0.Final ← **tag/branch**

<https://github.com/wildfly/quickstart> ← **the source code**

quay.io/wildfly/wildfly-centos7 ← **base docker image**

helloworld-wildfly-centos7 ← **result docker image**

s2i build ← s2i command to build

-e GALLEON_PROVISION_DEFAULT_FAT_SERVER=true

-e MAVEN_OPTS="-Dcom.redhat.xpaas.repo.jbossorg"
↖ environmental variables configures how the build goes

--context-dir helloworld ← directory where build is started

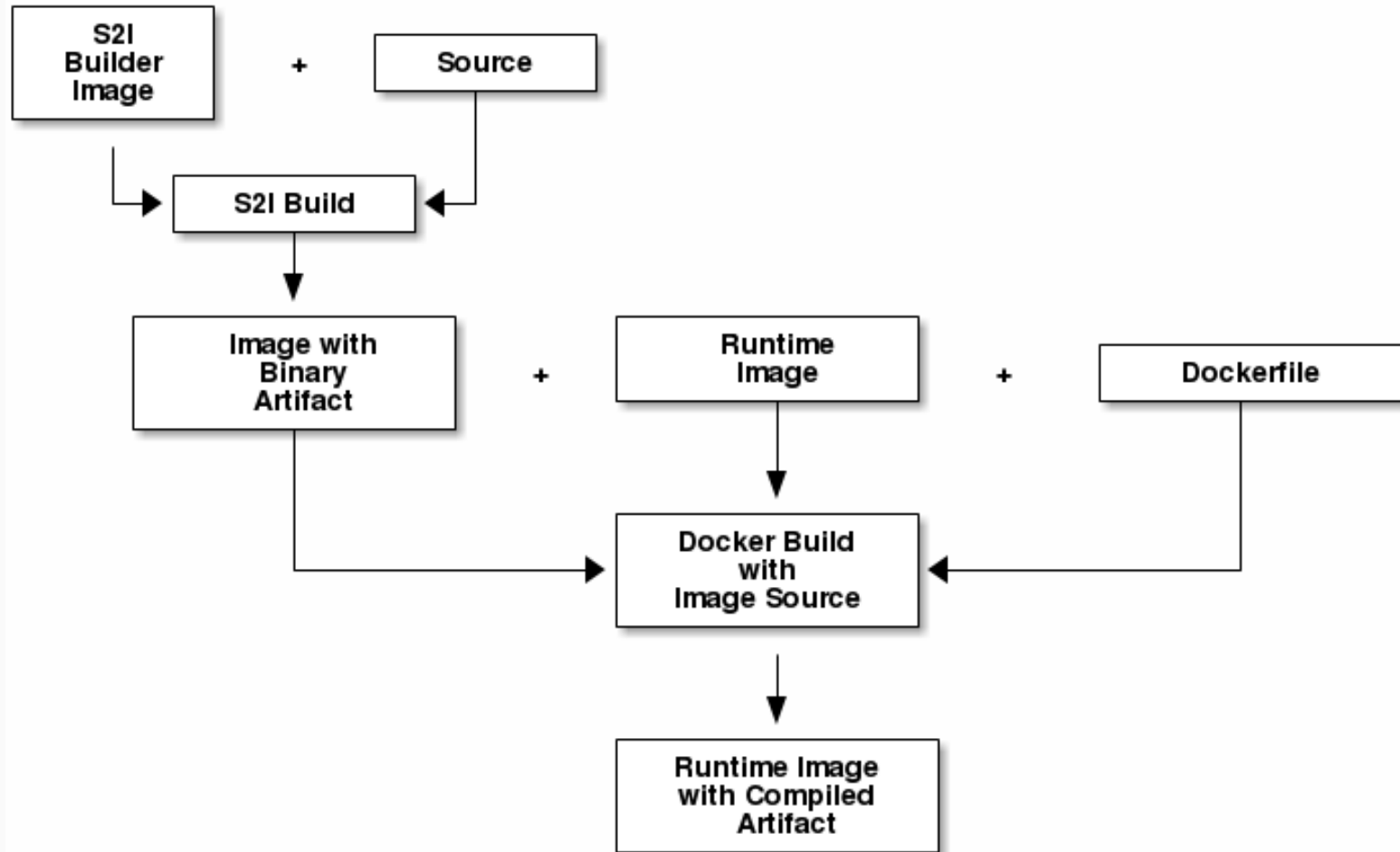
--ref 18.0.0.Final ← tag/branch

<https://github.com/wildfly/quickstart> ← the source code

quay.io/wildfly/wildfly-centos7 ← base docker image

helloworld-wildfly-centos7 ← result docker image

CHAINING BUILDS



Source: <https://blog.openshift.com/chaining-builds/>

WHY S2I

- Galleon features available
- OpenShift integration
 - [wildfly/wildfly-s2i / wildfly-s2i-chained-build-template.yml](#)

WILDFLY MODULES

```
java  
  -jar $JBOSS_HOME/jboss-modules.jar  
  -mp $JBOSS_HOME/modules  
  org.jboss.as.standalone
```

WILDFLY MODULES

```
java  ← java command
      -jar $JBOSS_HOME/jboss-modules.jar  ← jar of the module system
      -mp $JBOSS_HOME/modules
      org.jboss.as.standalone
```

WILDFLY MODULES

```
java    ← java command
  -jar  $JBOSS_HOME/jboss-modules.jar      ↙ jar of the module system
  -mp   $JBOSS_HOME/modules                ← where the modules reside
  org.jboss.as.standalone
```

WILDFLY MODULES

```
java    ← java command
  -jar  $JBOSS_HOME/jboss-modules.jar      ↙ jar of the module system
  -mp   $JBOSS_HOME/modules                ← where the modules reside
  org.jboss.as.standalone                 ← start-up module
```

GALLEON

```
galleon.sh install  
wildfly:current  
--layers=jaxrs,cdi  
--dir=my-wildfly-server
```

Galleon layers - XML descriptors for WildFly Core build

GALLEON

```
galleon.sh install ← galleon command to install  
wildfly:current  
--layers=jaxrs,cdi  
--dir=my-wildfly-server
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Galleon layers - XML descriptors for WildFly Core build

GALLEON

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galleon.sh install ← galleon command to install  
wildfly:current ← WildFly maven repo  
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Galleon layers - XML descriptors for WildFly Core build

GALLEON

```
galleon.sh install ← galleon command to install  
wildfly:current ← WildFly maven repo  
--layers=jaxrs,cdi ← Layers to be generated  
--dir=my-wildfly-server
```

Galleon layers - XML descriptors for WildFly Core build

GALLEON

```
galleon.sh install ← galleon command to install  
wildfly:current ← WildFly maven repo  
--layers=jaxrs,cdi ← Layers to be generated  
--dir=my-wildfly-server ← Output directory
```

Galleon layers - XML descriptors for WildFly Core build

GALLEON

```
galleon.sh install ← galleon command to install  
wildfly:current ← WildFly maven repo  
--layers=jaxrs,cdi ← Layers to be generated  
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```

Galleon layers - XML descriptors for WildFly Core build

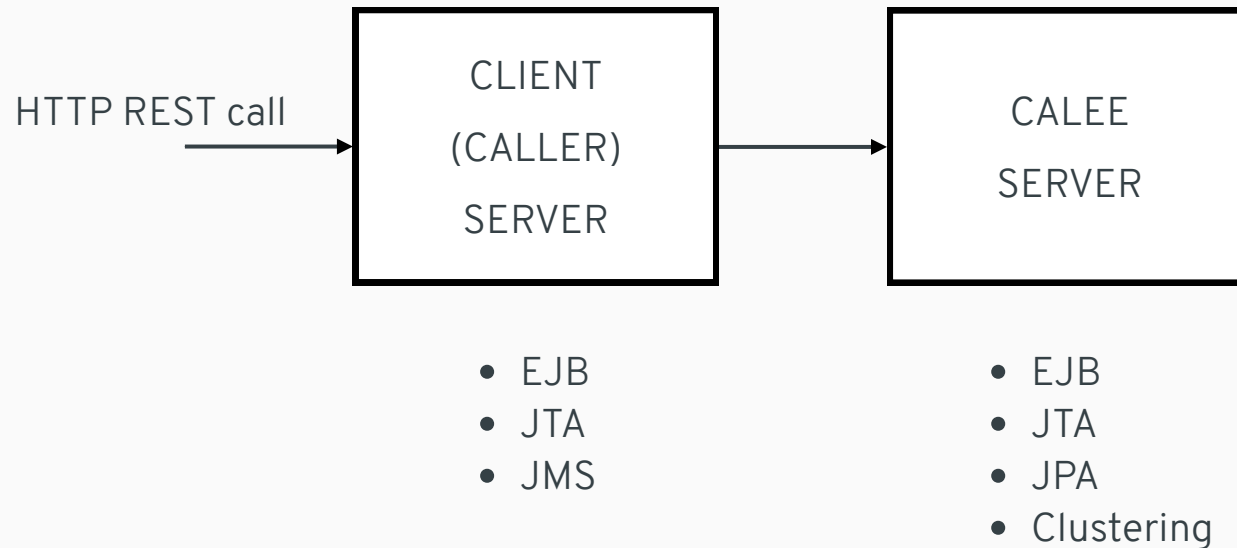
- [wildfly/wildfly-core / core-galleon-pack/src/main/resources/layers/standalone](#)

DEMO PROJECT

- JAX-RS (HTTP REST)
- EJB
- JPA (Hibernate ORM)
- JMS (Messaging)
- JTA (Transactions)
- Clustering

<https://github.com/ochaloup/wildfly-kubernetes-presentation>

DEMO PROJECT



DEBUGGING

- environmental variable **DEBUG**

kubectl port-forward <pod> 8787:8787

- s2i magic debugging with variable
SCRIPT_DEBUG



**ENJOY THE REST
OF THE
CONFERENCE**