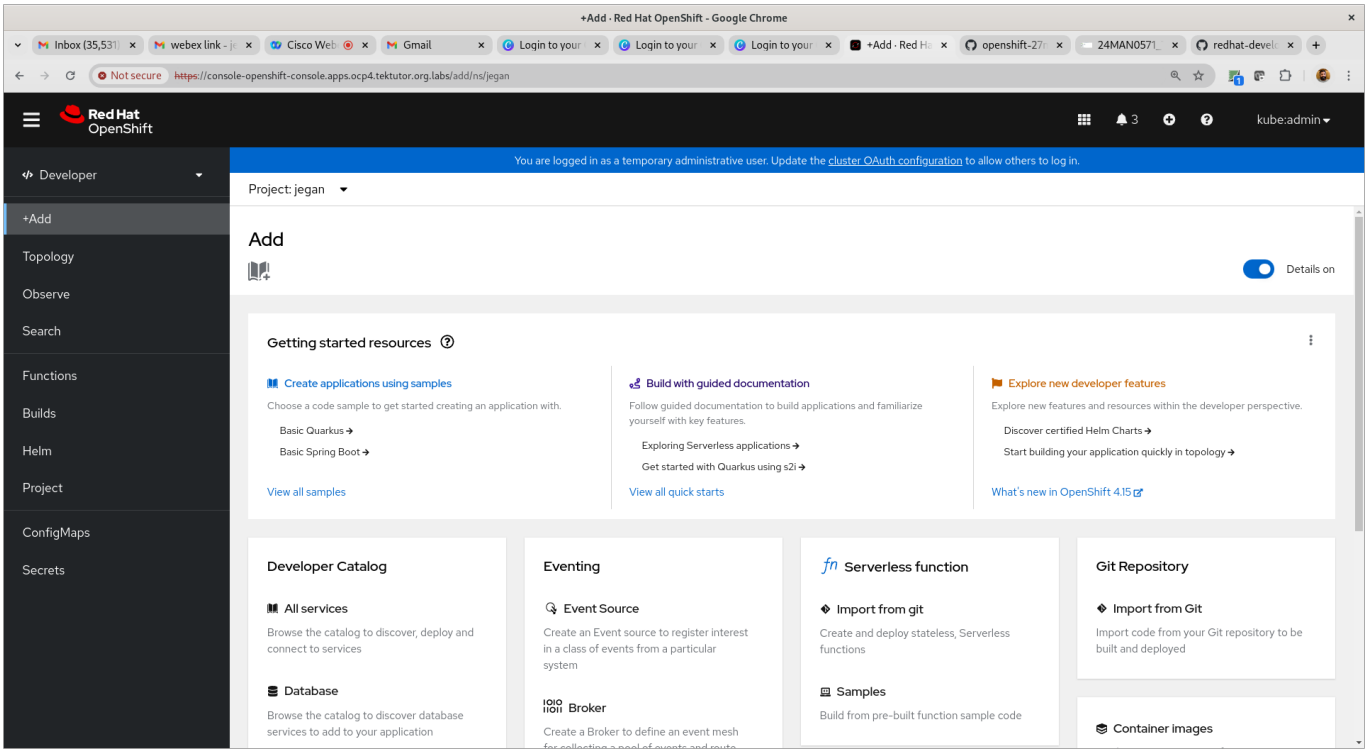
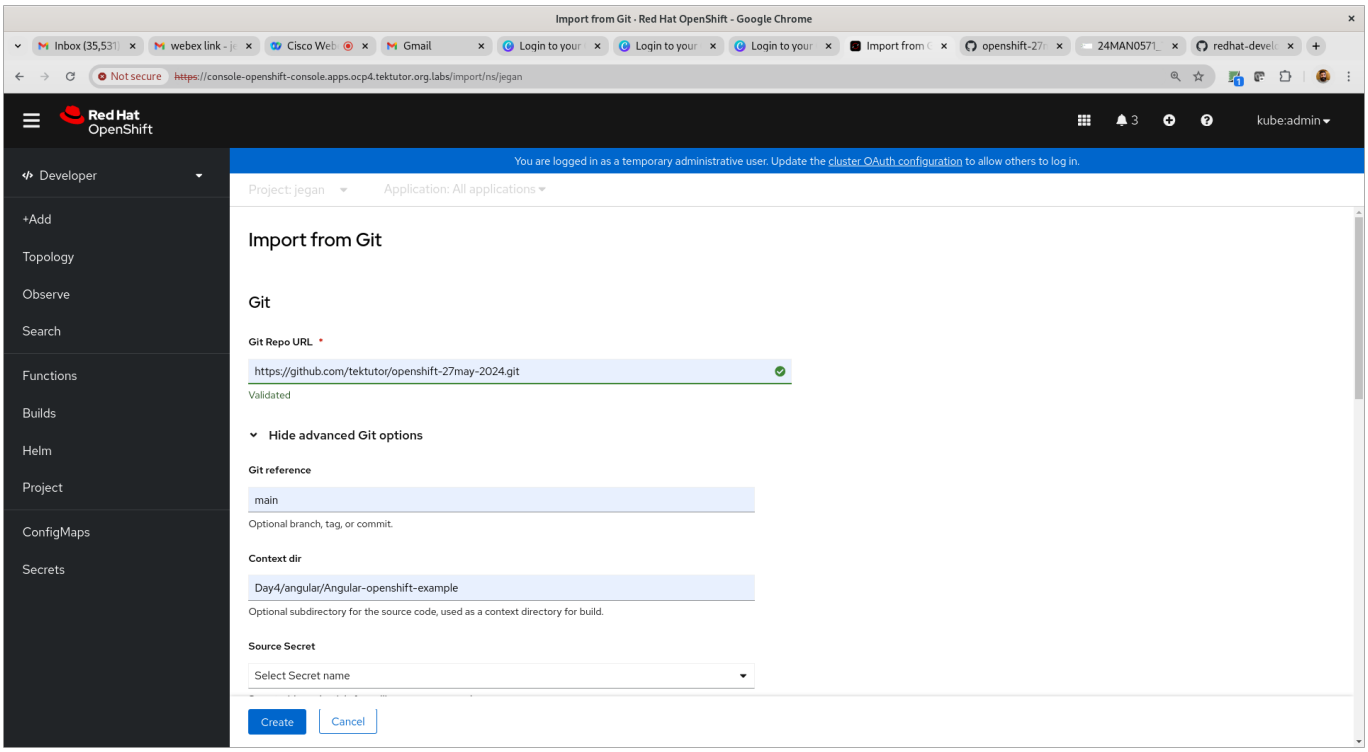
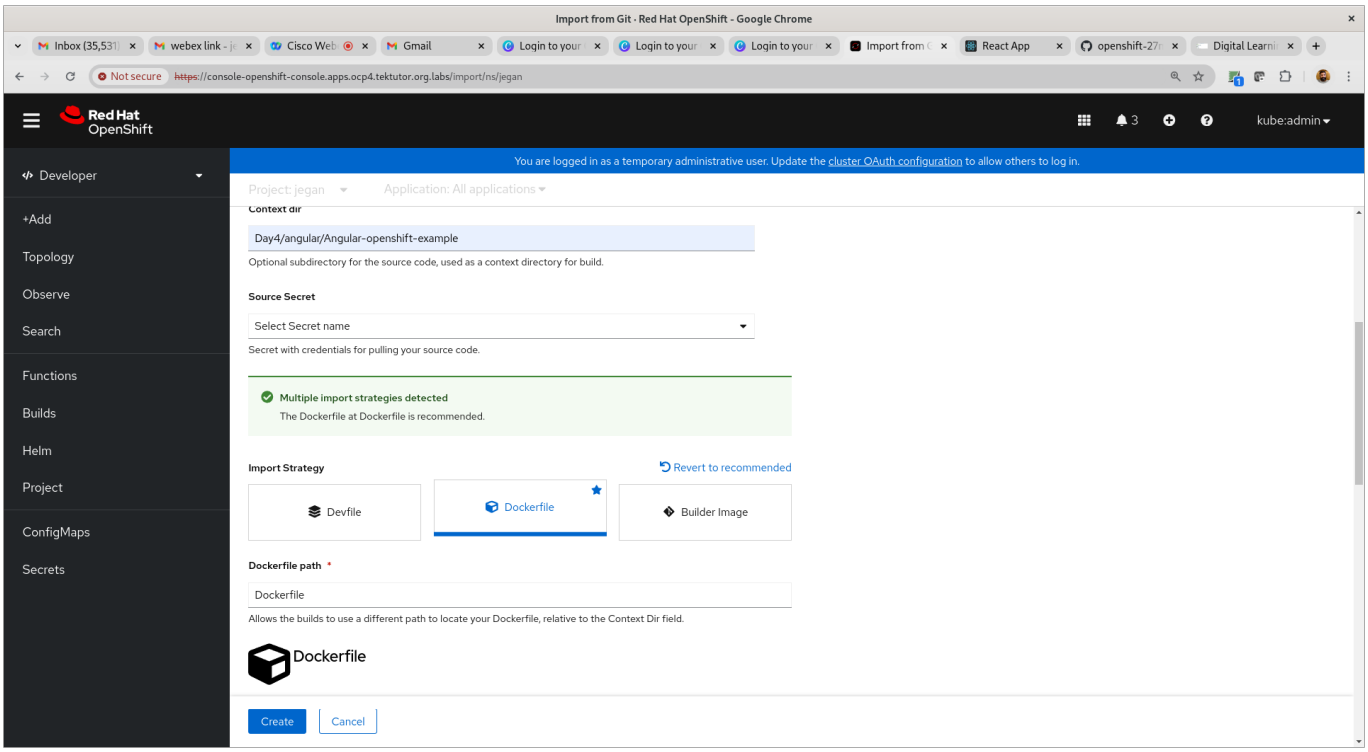
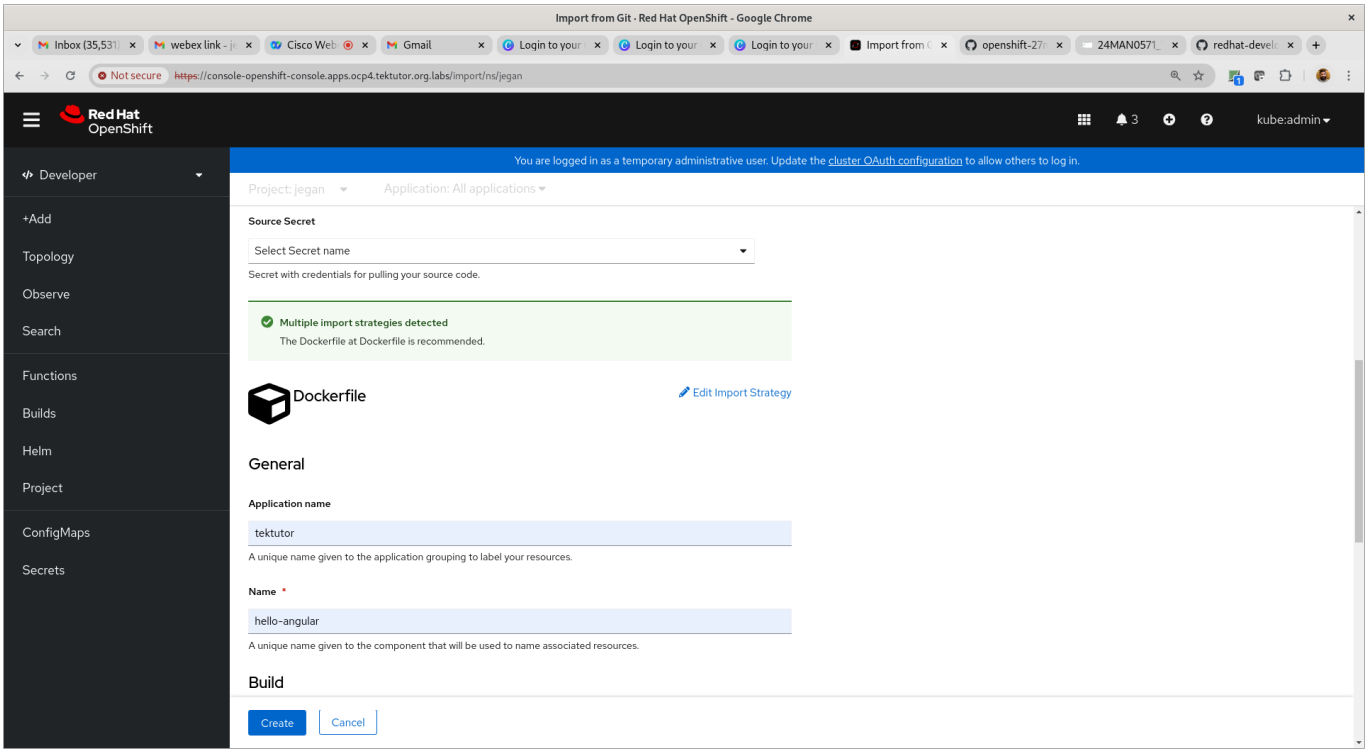
Day 4

Lab - Deploying Angular application from OpenShift Webconsole using Developer context






Import from Git - Red Hat OpenShift - Google Chrome
Red Hat OpenShift
kube:admin
You are logged in as a temporary administrative user. Update the cluster OAuth configuration to allow others to log in.
Developer
+Add
Topology
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
Project: jegan
Application: All applications
Context dir
Day4/angular/Angular-openshift-example
Optional subdirectory for the source code, used as a context directory for build.
Source Secret
Select Secret name
Secret with credentials for pulling your source code.
Multiple import strategies detected
The Dockerfile at Dockerfile is recommended.
Import Strategy
Revert to recommended
Devfile
Dockerfile
Builder Image
Dockerfile path *
Dockerfile
Allows the builds to use a different path to locate your Dockerfile, relative to the Context Dir field.
Dockerfile
Create
Cancel


Import from Git - Red Hat OpenShift - Google Chrome
Red Hat OpenShift
kube:admin
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Developer
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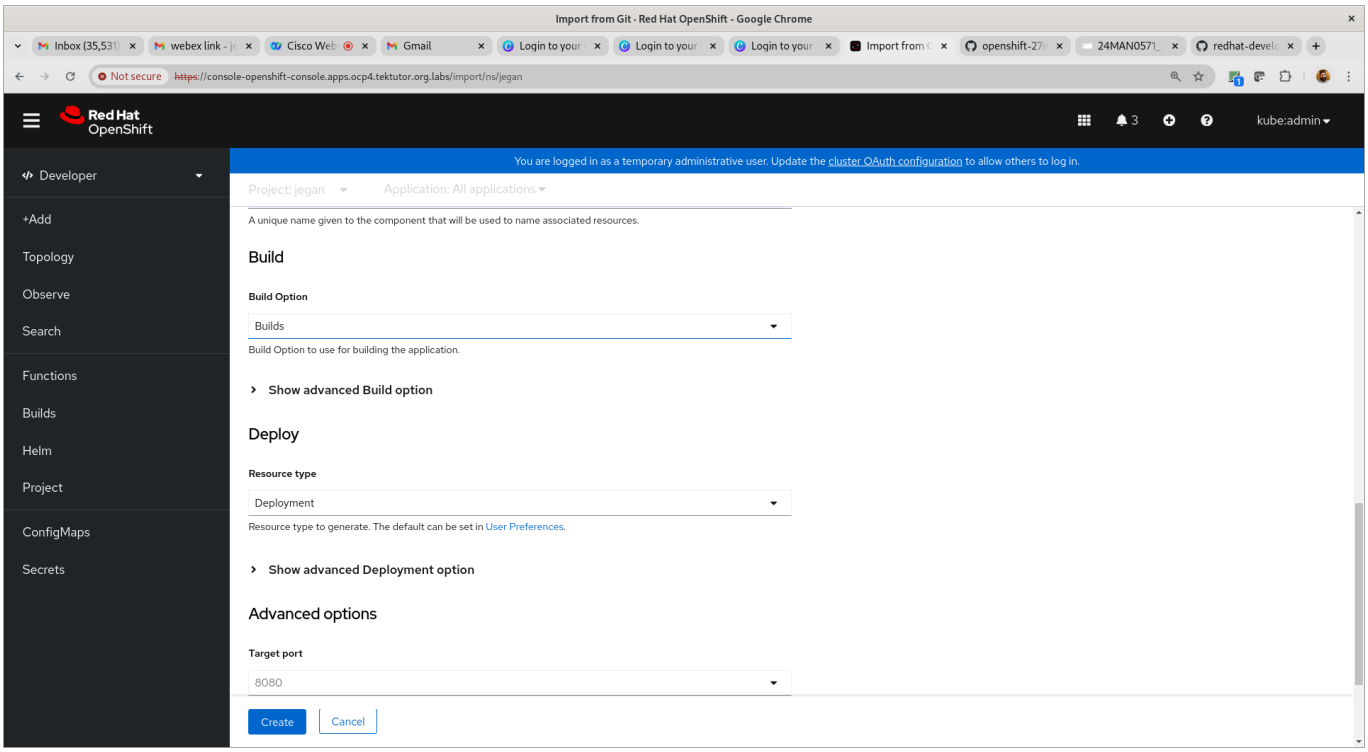
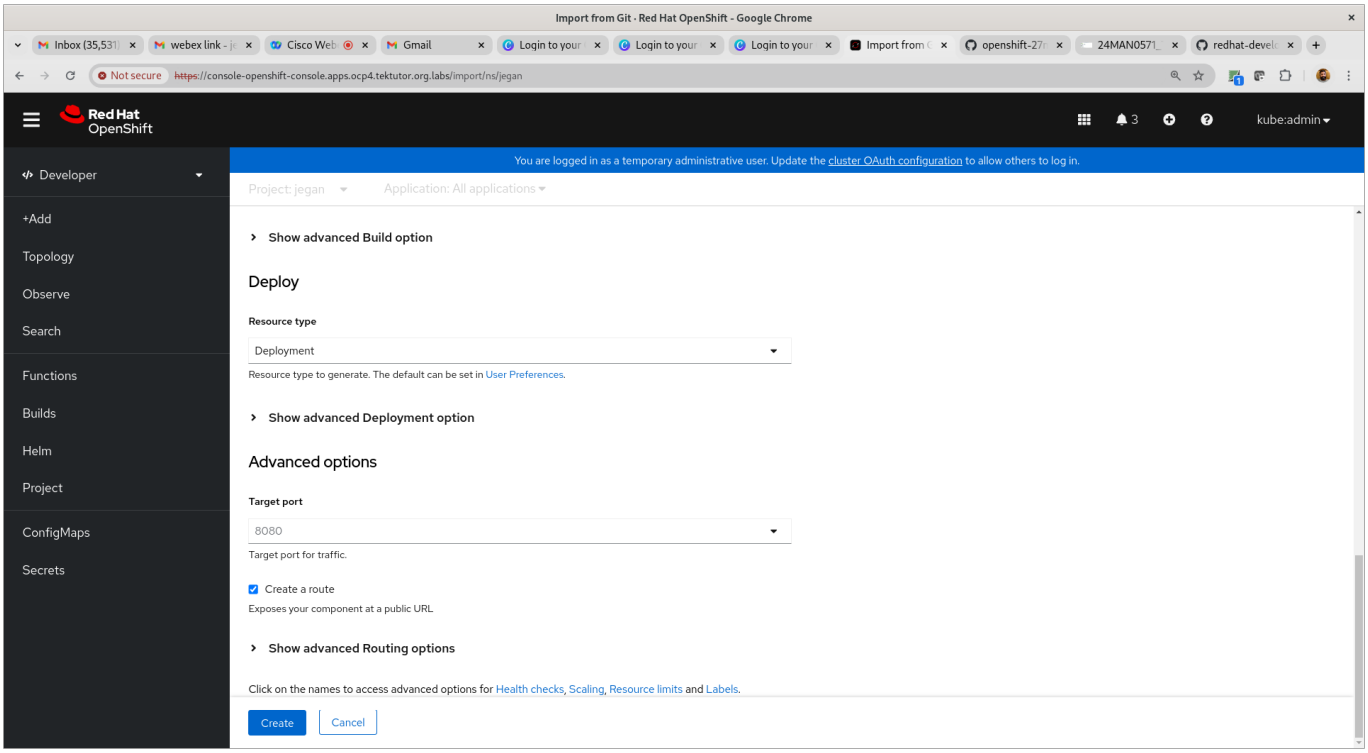
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
Project: jegan
Application: All applications
Source Secret
Select Secret name
Secret with credentials for pulling your source code.
Multiple import strategies detected
The Dockerfile at Dockerfile is recommended.
Dockerfile
Edit Import Strategy
General
Application name
tektutor
A unique name given to the application grouping to label your resources.
Name *
hello-angular
A unique name given to the component that will be used to name associated resources.
Build
Create
Cancel


Import from Git - Red Hat OpenShift - Google Chrome
Not secure https://console-openshift-console.apps.ocp4.tektutor.org.labs/import/ns/jegan
Red Hat OpenShift
kube:admin
You are logged in as a temporary administrative user. Update the cluster OAuth configuration to allow others to log in.
Developer
Project: jegan
Application: All applications
+Add
Topology
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
A unique name given to the component that will be used to name associated resources.
Build
Build Option
Builds
Build Option to use for building the application.
Show advanced Build option
Deploy
Resource type
Deployment
Resource type to generate. The default can be set in User Preferences.
Show advanced Deployment option
Advanced options
Target port
8080
Create
Cancel


Import from Git - Red Hat OpenShift - Google Chrome
Not secure https://console-openshift-console.apps.ocp4.tektutor.org.labs/import/ns/jegan
Red Hat OpenShift
kube:admin
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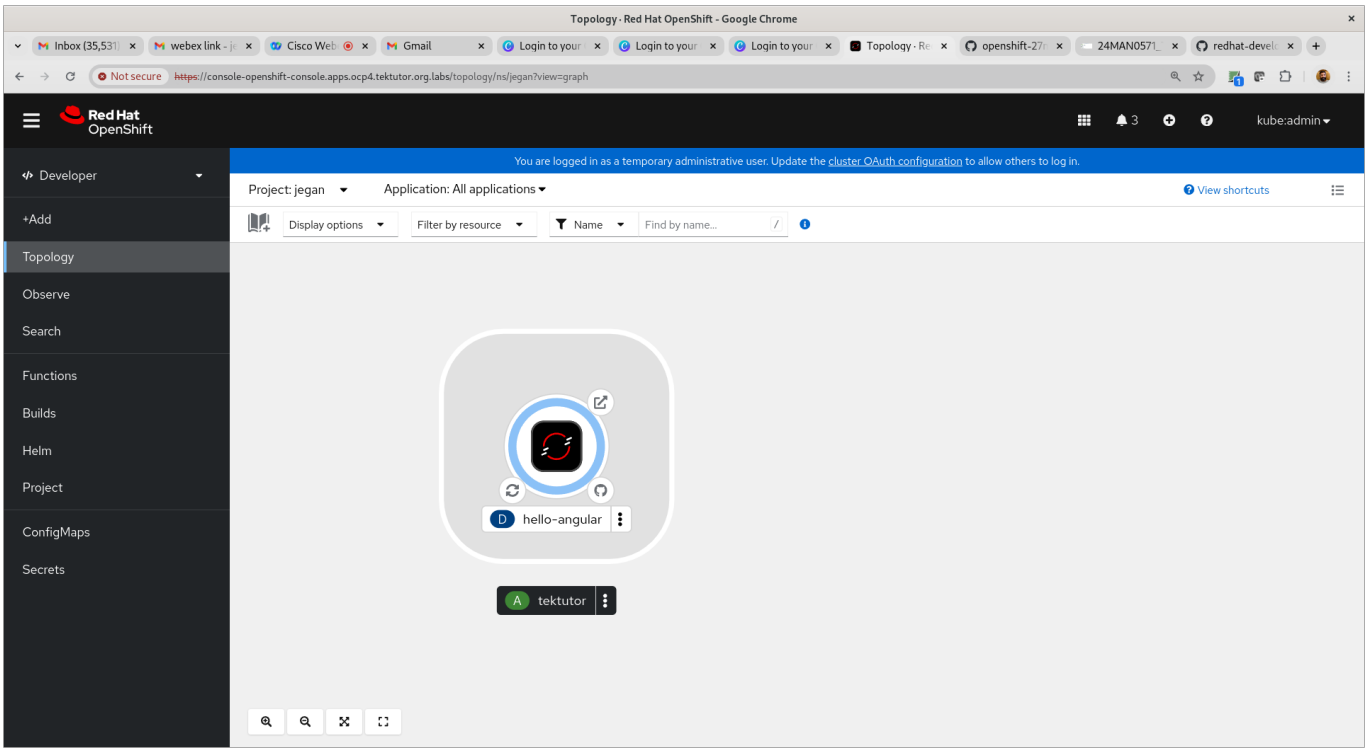
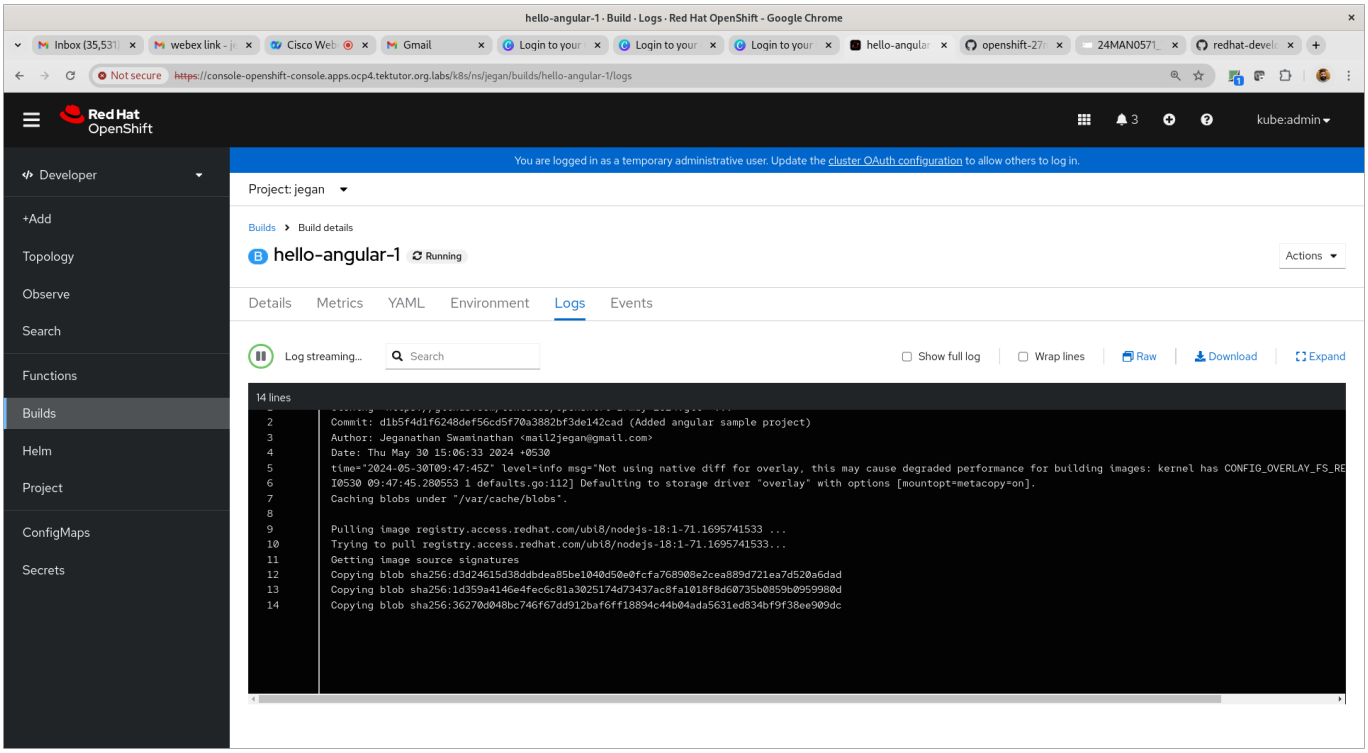
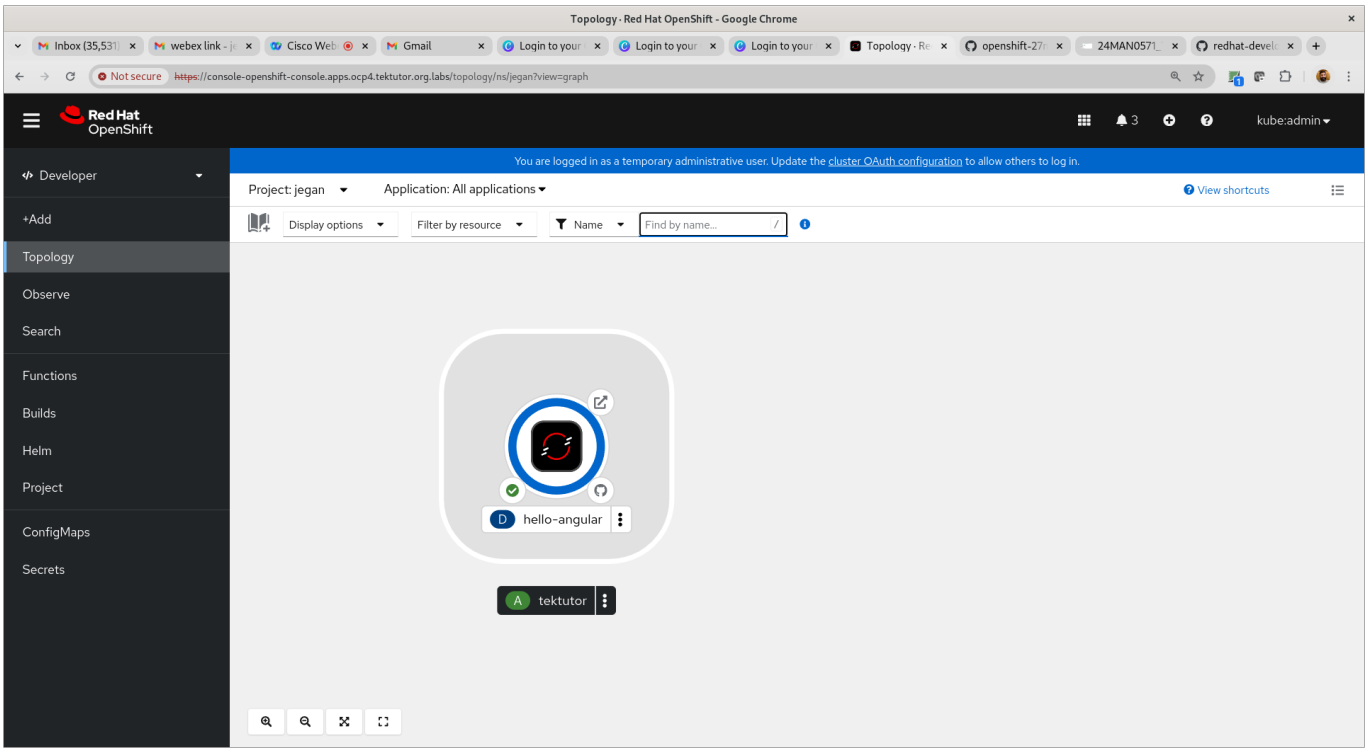
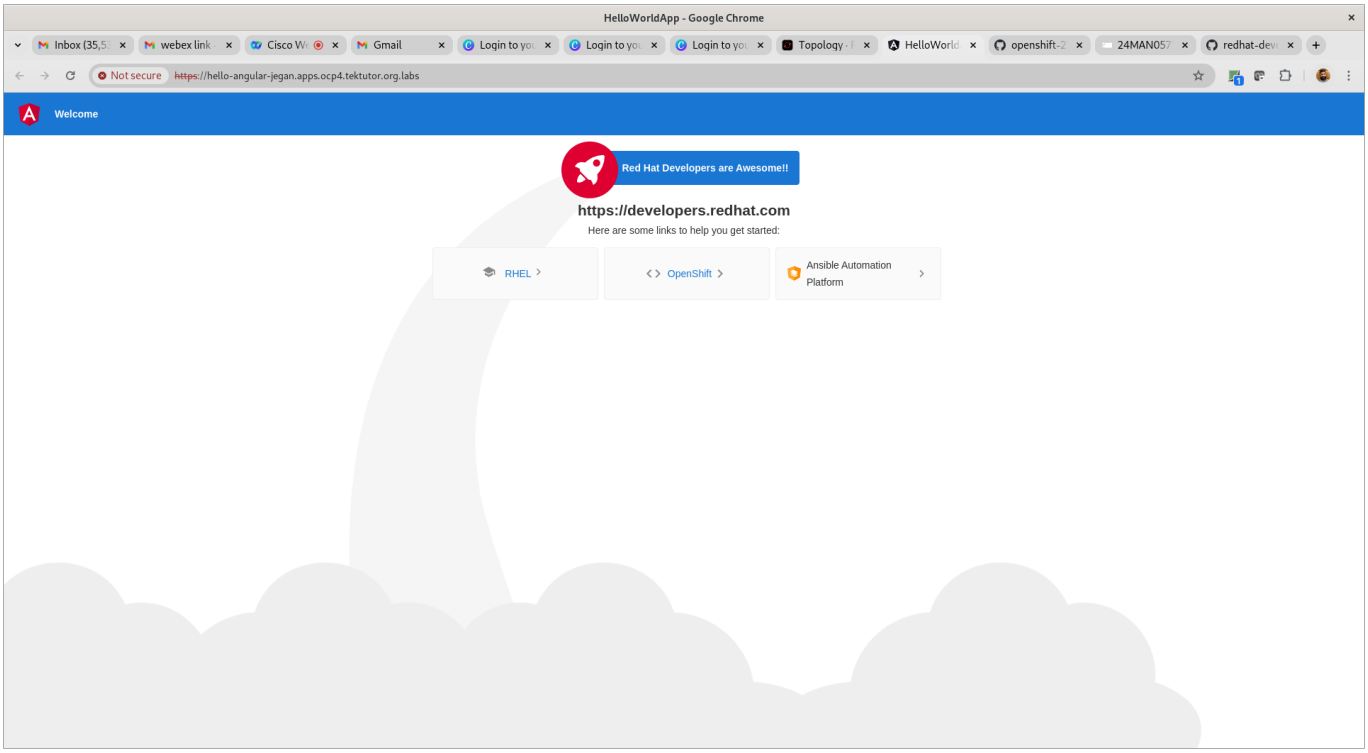
Developer
Project: jegan
Application: All applications
+Add
Topology
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
Show advanced Build option
Deploy
Resource type
Deployment
Resource type to generate. The default can be set in User Preferences.
Show advanced Deployment option
Advanced options
Target port
8080
Target port for traffic.
Create a route
Exposes your component at a public URL
Show advanced Routing options
Click on the names to access advanced options for Health checks, Scaling, Resource limits and Labels.
Create
Cancel

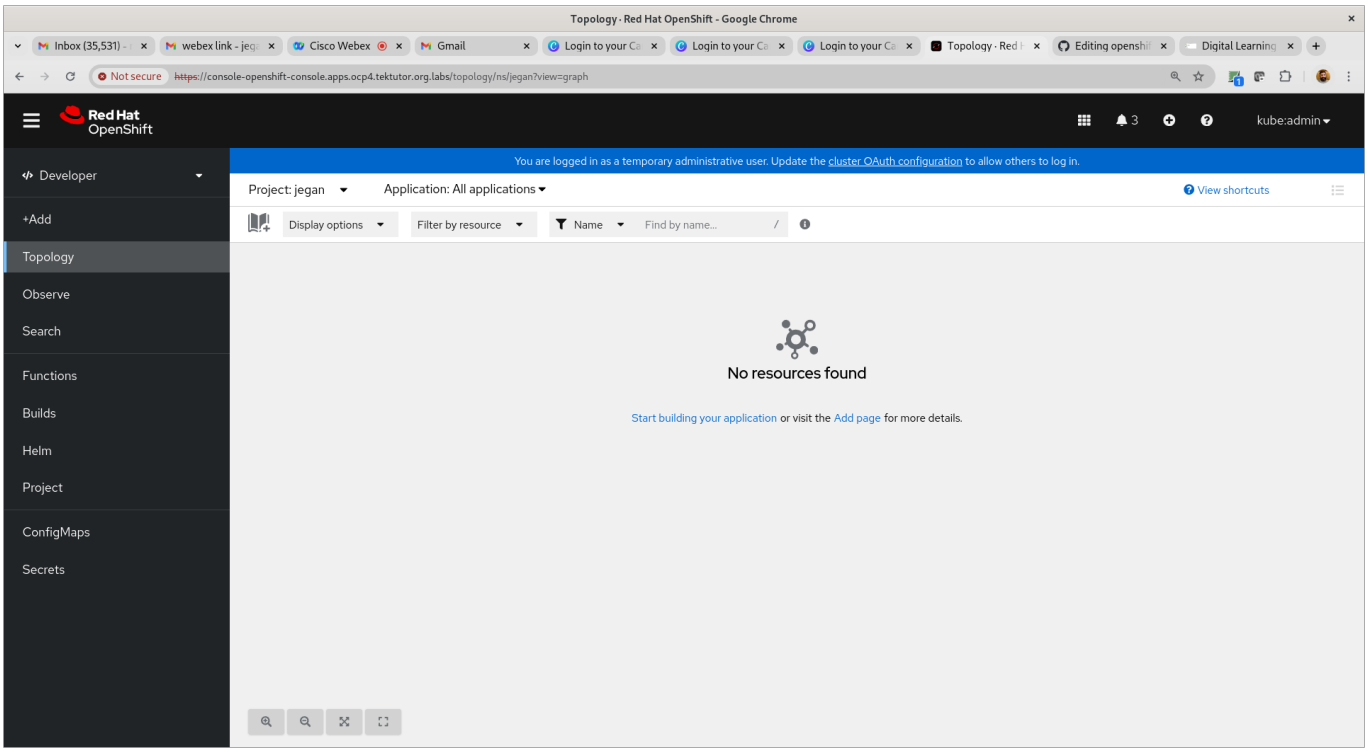

Topology - Red Hat OpenShift - Google Chrome
Red Hat OpenShift
kube:admin
Developer
+Add
Topology
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
You are logged in as a temporary administrative user. Update the cluster OAuth configuration to allow others to log in.
Project: jegan
Application: All applications
View shortcuts
Display options
Filter by resource
Name
Find by name...
hello-angular
tektutor

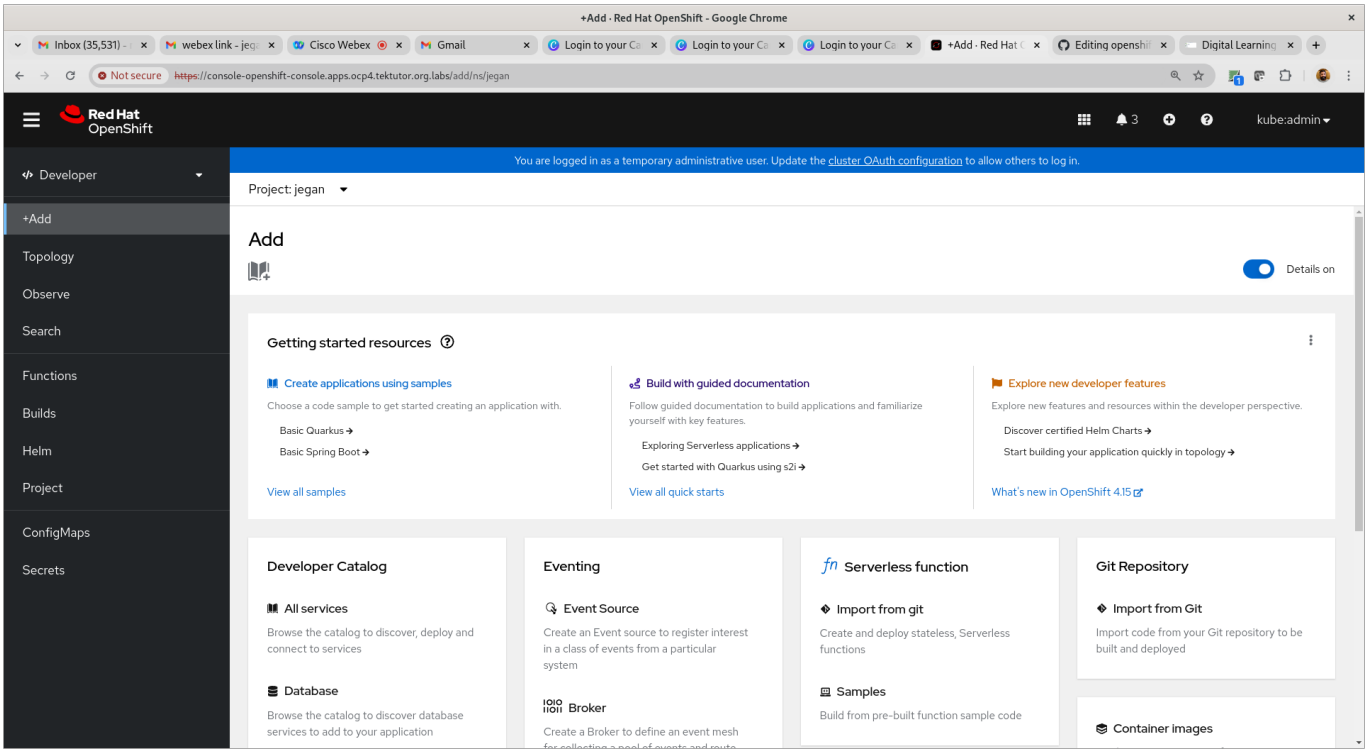

hello-angular-1 - Build - Logs - Red Hat OpenShift - Google Chrome
Red Hat OpenShift
kube:admin
Developer
+Add
Topology
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
You are logged in as a temporary administrative user. Update the cluster OAuth configuration to allow others to log in.
Project: jegan
Builds
Build details
hello-angular-1
Running
Actions
Details
Metrics
YAML
Environment
Logs
Events
Log streaming...
Search
Show full log
Wrap lines
Raw
Download
Expand
14 lines
Commit: d1b5f4d1f6248def56cd5f70a3882bf3de142cad (Added angular sample project)
Author: Jeganathan Swaminathan <mail2jegan@gmail.com>
Date: Thu May 30 15:06:33 2024 +0530
Caching blobs under "/var/cache/blobs".
Pulling image registry.access.redhat.com/ubi8/nodejs-18:1-71.1695741533 ...
Trying to pull registry.access.redhat.com/ubi8/nodejs-18:1-71.1695741533...
Getting image source signatures
Copying blob sha256:d3d24615d38ddbdea85be1040d50e0fcfa768908e2cea889d721ea7d520a6dad
Copying blob sha256:1d359a4146e4fec6c81a3025174d73437ac8fa1018f8d60735b0859b0959980d
Copying blob sha256:36270d048bc746f67dd912baf6ff18894c44b04ada5631ed834bf9f38ee909dc

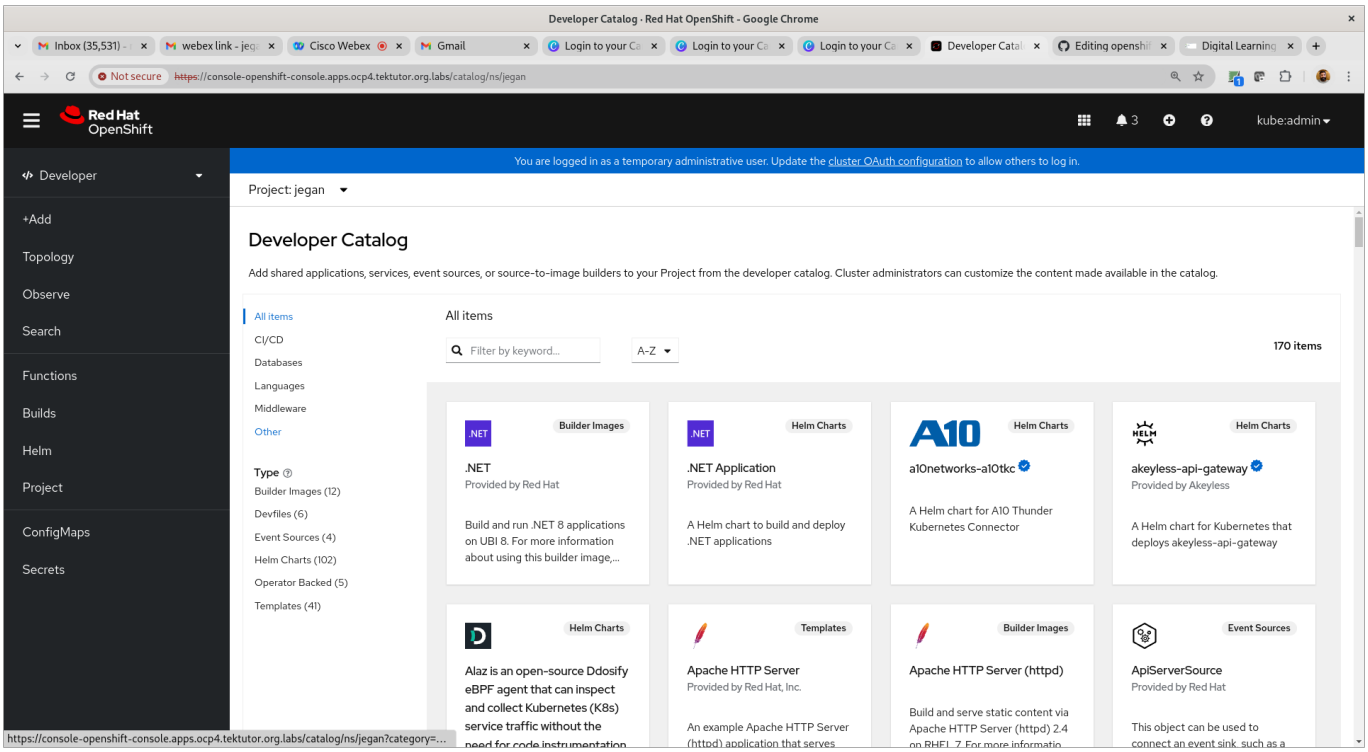


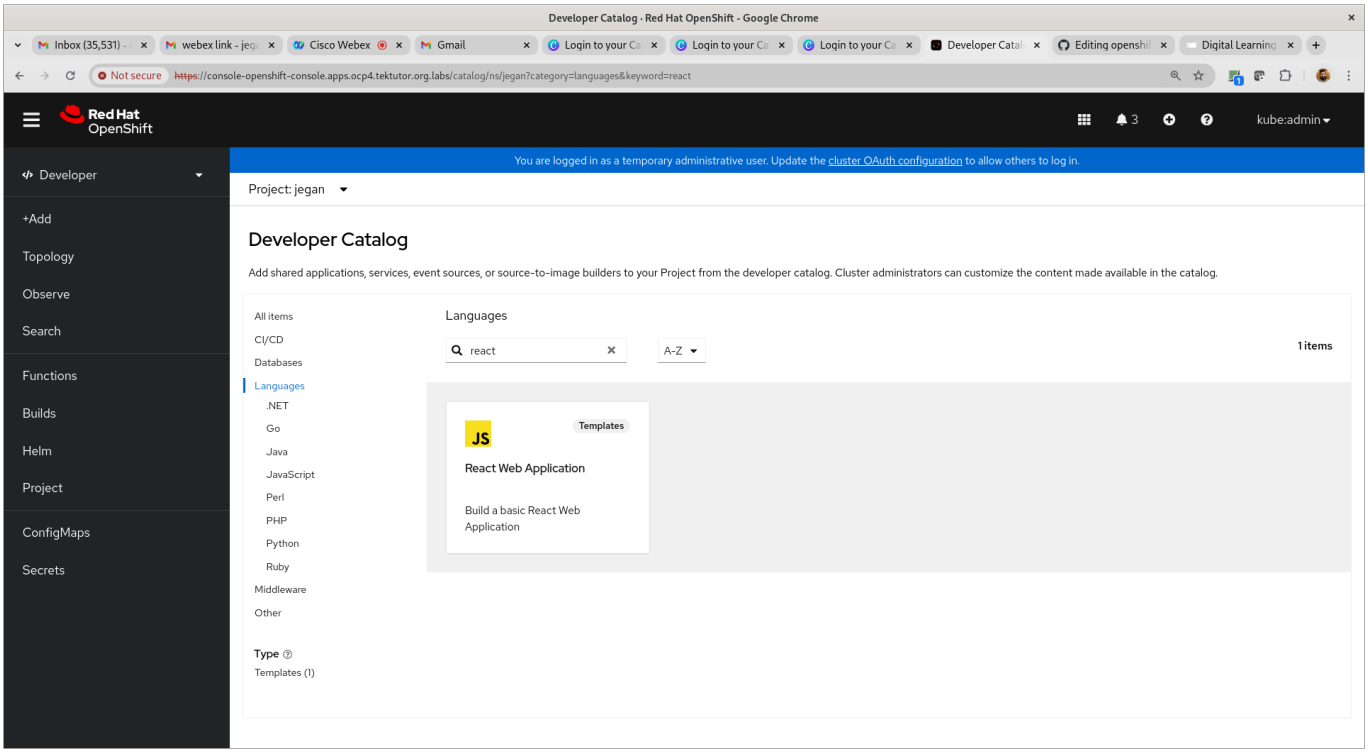


Lab - Deploying ReactJS application in Openshift from webconsole


Topology - Red Hat OpenShift - Google Chrome
Not secure https://console-openshift-console.apps.ocp4.tektutor.org.labs/topology/ns/jegan?view=graph
Red Hat OpenShift
kube:admin
Developer
+Add
Topology
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
You are logged in as a temporary administrative user. Update the cluster OAuth configuration to allow others to log in.
Project: jegan
Application: All applications
View shortcuts
Display options
Filter by resource
Name
Find by name...
No resources found
Start building your application or visit the Add page for more details.


+Add - Red Hat OpenShift - Google Chrome
Not secure https://console-openshift-console.apps.ocp4.tektutor.org.labs/add/ns/jegan
Red Hat OpenShift
kube:admin
Developer
+Add
Topology
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
You are logged in as a temporary administrative user. Update the cluster OAuth configuration to allow others to log in.
Project: jegan
Add
Details on
Getting started resources
Create applications using samples
Choose a code sample to get started creating an application with.
Basic Quarkus
Basic Spring Boot
View all samples
Build with guided documentation
Follow guided documentation to build applications and familiarize yourself with key features.
Exploring Serverless applications
Get started with Quarkus using s2i
View all quick starts
Explore new developer features
Explore new features and resources within the developer perspective.
Discover certified Helm Charts
Start building your application quickly in topology
What's new in OpenShift 4.15
Developer Catalog
All services
Browse the catalog to discover, deploy and connect to services
Database
Browse the catalog to discover database services to add to your application
Eventing
Event Source
Create an Event source to register interest in a class of events from a particular system
Broker
Create a Broker to define an event mesh
Serverless function
Import from git
Create and deploy stateless, Serverless functions
Samples
Build from pre-built function sample code
Git Repository
Import from Git
Import code from your Git repository to be built and deployed
Container images


Developer Catalog - Red Hat OpenShift - Google Chrome
Not secure https://console-openshift-console.apps.ocp4.tektutor.org.labs/catalog/ns/jegan
Red Hat OpenShift
kube:admin
You are logged in as a temporary administrative user. Update the cluster OAuth configuration to allow others to log in.
Developer
Project: jegan
+Add
Topology
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
Developer Catalog
Add shared applications, services, event sources, or source-to-image builders to your Project from the developer catalog. Cluster administrators can customize the content made available in the catalog.
All items
CI/CD
Databases
Languages
Middleware
Other
Type
Builder Images (12)
Devfiles (6)
Event Sources (4)
Helm Charts (102)
Operator Backed (5)
Templates (41)
All items
Filter by keyword...
A-Z
170 items
Builder Images
.NET
Provided by Red Hat
Build and run .NET 8 applications on UBI 8. For more information about using this builder image,...
Helm Charts
.NET Application
Provided by Red Hat
A Helm chart to build and deploy .NET applications
Helm Charts
a10networks-a10tkc
A Helm chart for A10 Thunder Kubernetes Connector
Helm Charts
akeyless-api-gateway
Provided by Akeyless
A Helm chart for Kubernetes that deploys akeyless-api-gateway
Helm Charts
Templates
Apache HTTP Server
Provided by Red Hat, Inc.
Builder Images
Apache HTTP Server (httpd)
Event Sources
ApiServerSource
Provided by Red Hat
https://console-openshift-console.apps.ocp4.tektutor.org.labs/catalog/ns/jegan?category=...


Developer Catalog - Red Hat OpenShift - Google Chrome
Not secure https://console-openshift-console.apps.ocp4.tektutor.org.labs/catalog/ns/jegan?category=languages&keyword=react
Red Hat OpenShift
kube:admin
You are logged in as a temporary administrative user. Update the cluster OAuth configuration to allow others to log in.
Developer
Project: jegan
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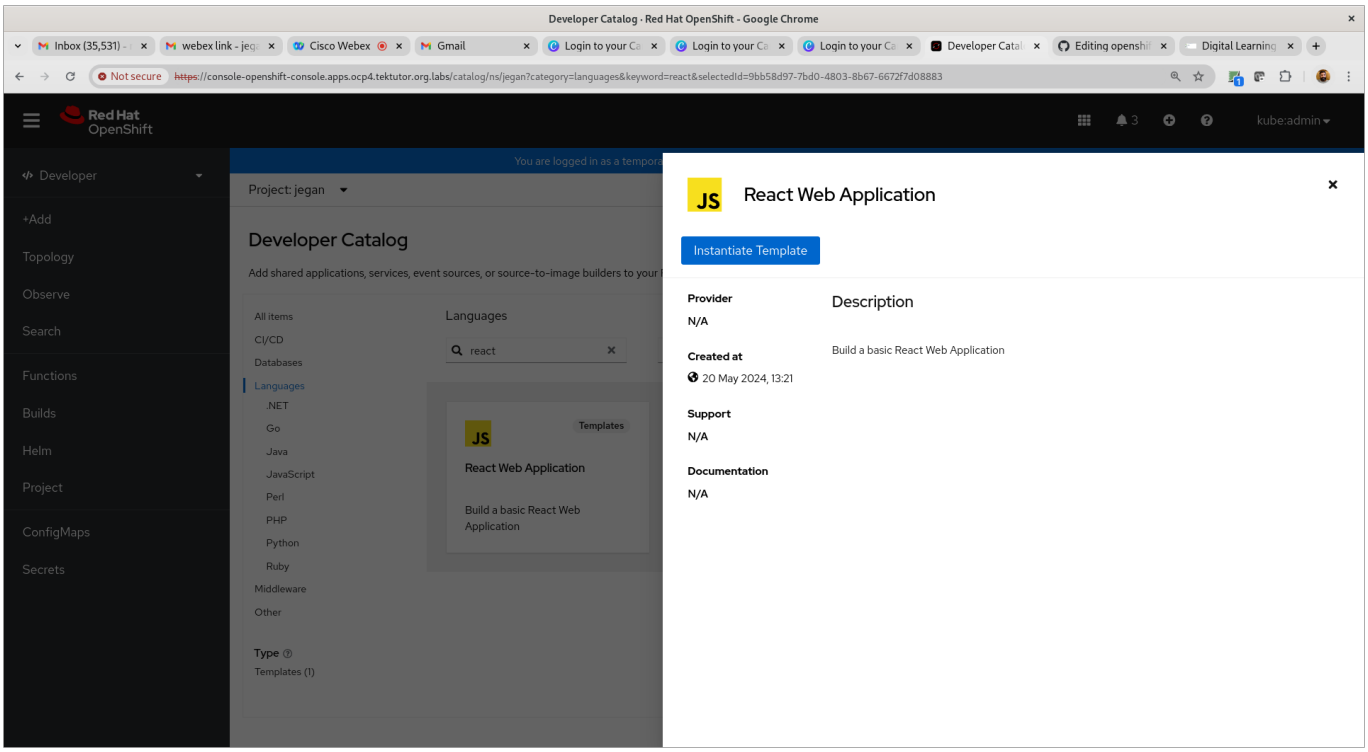
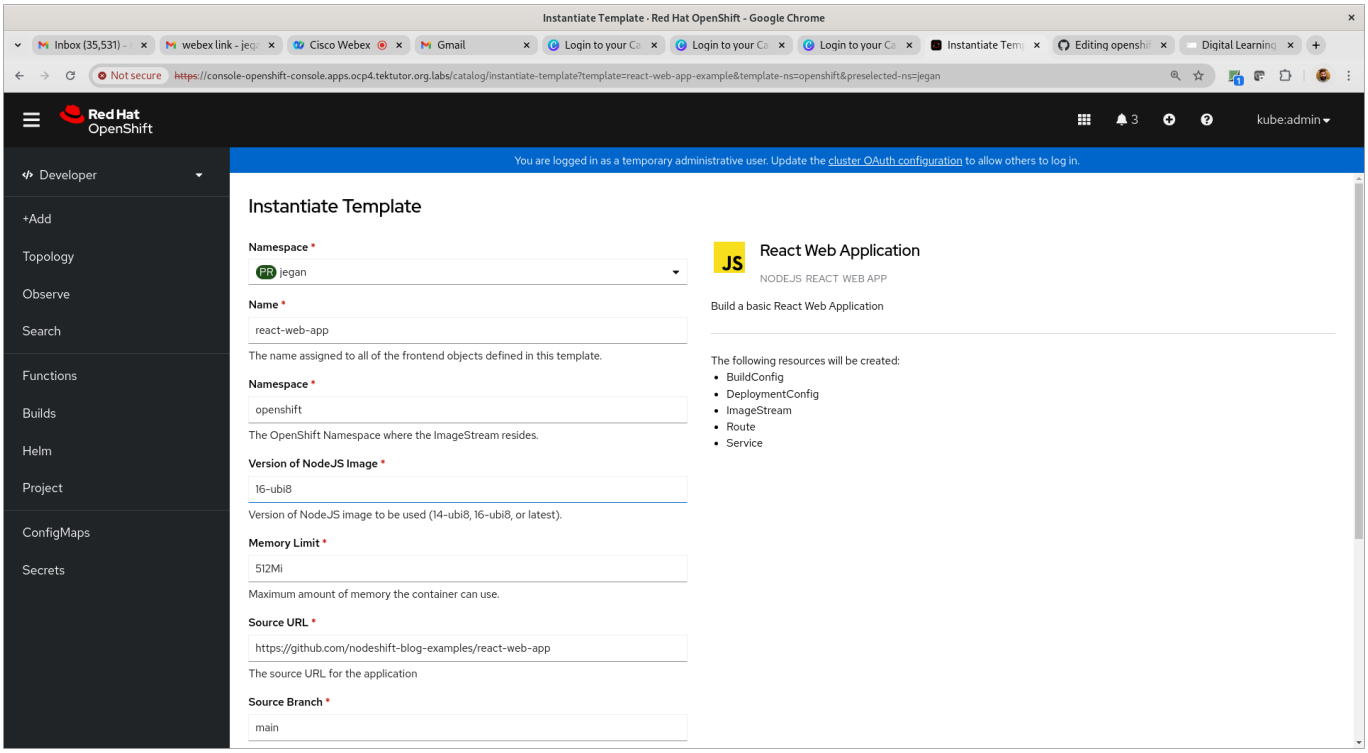
All items
CI/CD
Databases
Languages
.NET
Go
Java
JavaScript
Perl
PHP
Python
Ruby
Middleware
Other
Type
Templates (1)
Languages
react
A-Z
1 items
Templates
React Web Application
Build a basic React Web Application


Developer Catalog - Red Hat OpenShift - Google Chrome
Red Hat OpenShift
kube:admin
Developer
+Add
Topology
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
Project: jegan
Developer Catalog
Add shared applications, services, event sources, or source-to-image builders to your
All items
CI/CD
Databases
Languages
.NET
Go
Java
JavaScript
Perl
PHP
Python
Ruby
Middleware
Other
Type
Templates (1)
Languages
react
Templates
React Web Application
Build a basic React Web Application
React Web Application
Instantiate Template
Provider
N/A
Created at
20 May 2024, 13:21
Support
N/A
Documentation
N/A
Description
Build a basic React Web Application


Instantiate Template - Red Hat OpenShift - Google Chrome
Red Hat OpenShift
kube:admin
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Developer
+Add
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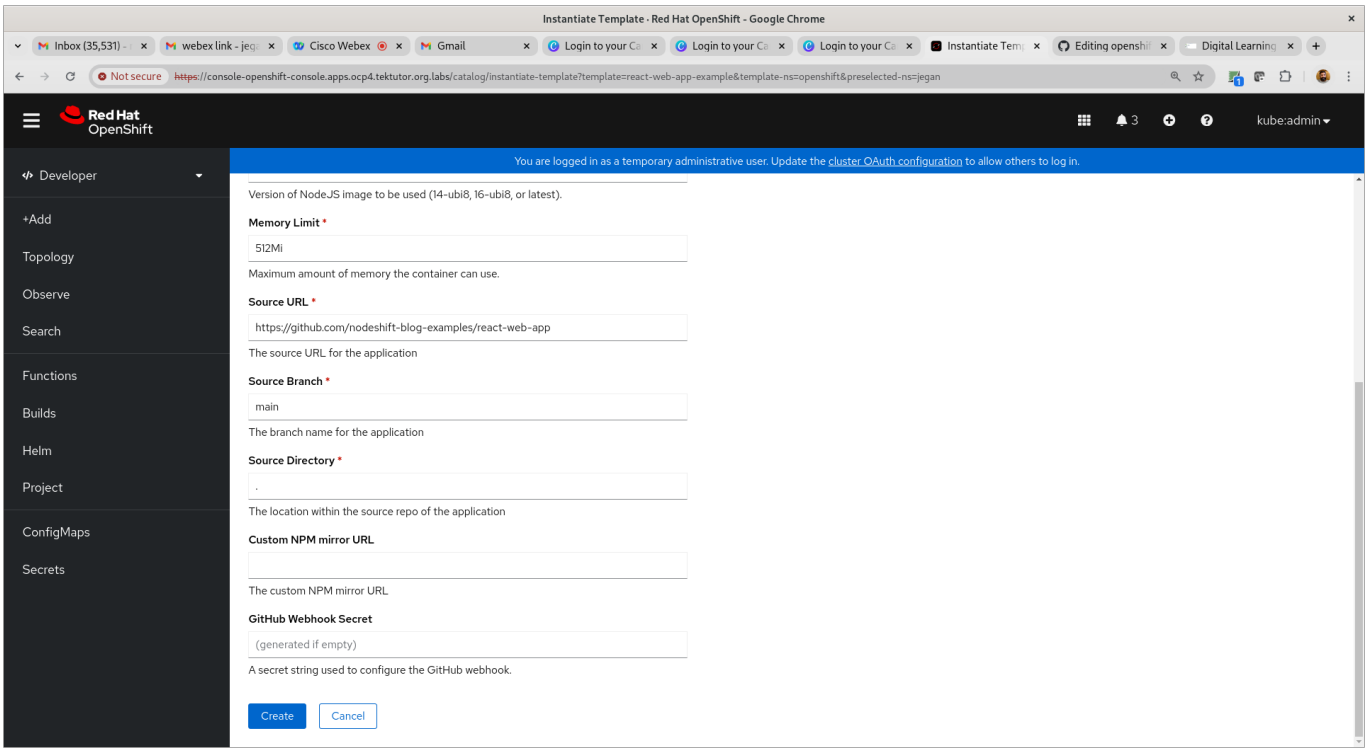
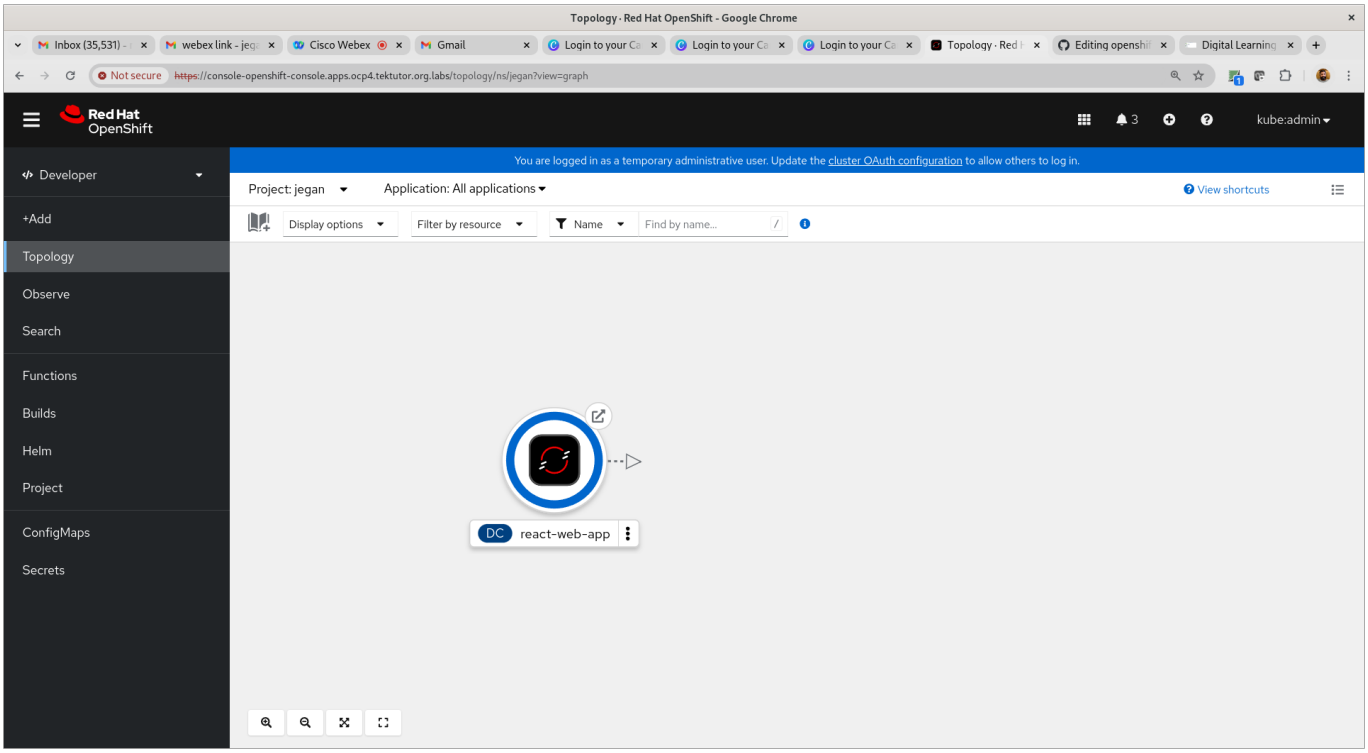
ConfigMaps
Secrets
Instantiate Template
Namespace *
jegan
Name *
react-web-app
The name assigned to all of the frontend objects defined in this template.
Namespace *
openshift
The OpenShift Namespace where the ImageStream resides.
Version of NodeJS Image *
16-ubi8
Version of NodeJS image to be used (14-ubi8, 16-ubi8, or latest).
Memory Limit *
512Mi
Maximum amount of memory the container can use.
Source URL *
https://github.com/nodeshift-blog-examples/react-web-app
The source URL for the application
Source Branch *
main
React Web Application
NODEJS REACT WEB APP
Build a basic React Web Application
The following resources will be created:
BuildConfig
DeploymentConfig
ImageStream
Route
Service


Instantiate Template · Red Hat OpenShift - Google Chrome
Not secure https://console-openshift-console.apps.ocp4.tektutor.org.labs/catalog/instantiate-template?template=react-web-app-example&template-ns=openshift&preselected-ns=jegan
Red Hat OpenShift
kube:admin
You are logged in as a temporary administrative user. Update the cluster OAuth configuration to allow others to log in.
Developer
+Add
Topology
Observe
Search
Functions
Builds
Helm
Project
ConfigMaps
Secrets
Version of NodeJS image to be used (14-ubi8, 16-ubi8, or latest).
Memory Limit *
512Mi
Maximum amount of memory the container can use.
Source URL *
https://github.com/nodeshift-blog-examples/react-web-app
The source URL for the application
Source Branch *
main
The branch name for the application
Source Directory *
.
The location within the source repo of the application
Custom NPM mirror URL
The custom NPM mirror URL
GitHub Webhook Secret
(generated if empty)
A secret string used to configure the GitHub webhook.
Create
Cancel


Topology · Red Hat OpenShift - Google Chrome
Not secure https://console-openshift-console.apps.ocp4.tektutor.org.labs/topology/ns/jegan?view=graph
Red Hat OpenShift
kube:admin
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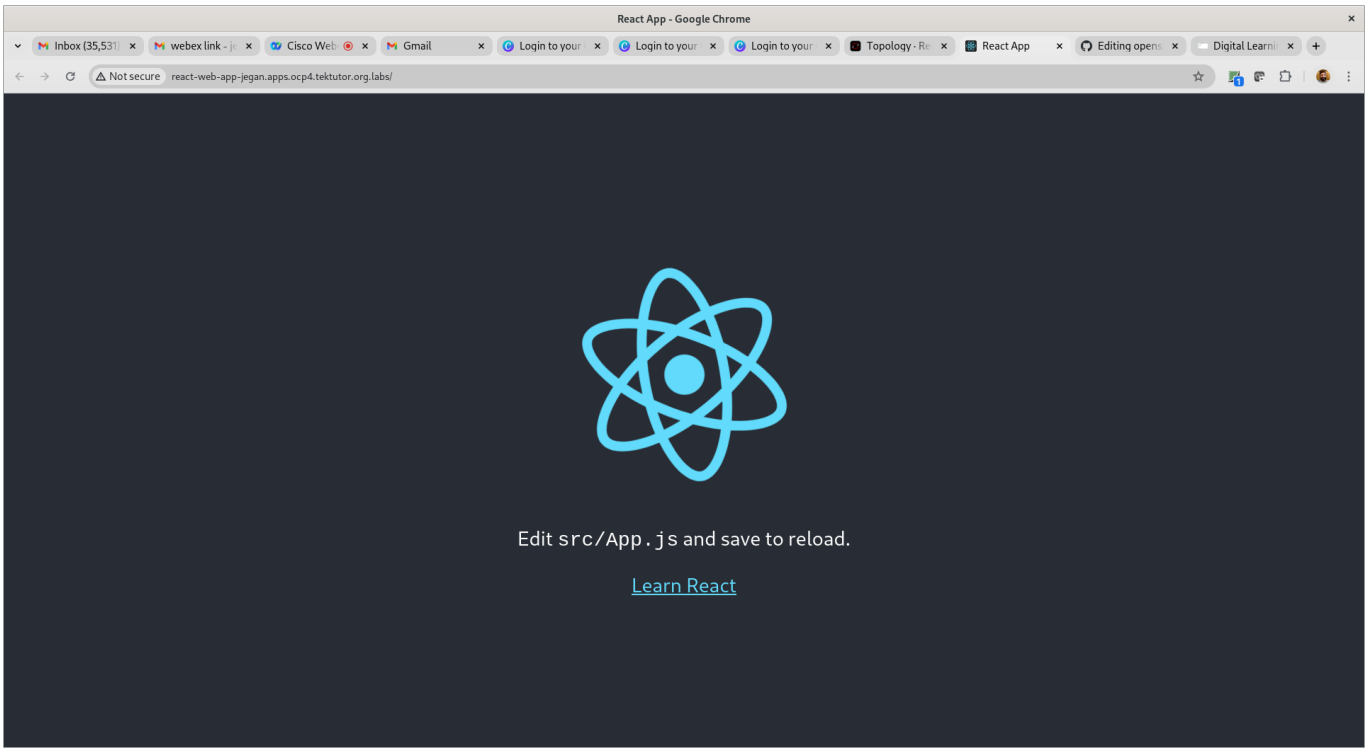
Secrets
Project: jegan
Application: All applications
View shortcuts
Display options
Filter by resource
Name
Find by name...
DC react-web-app

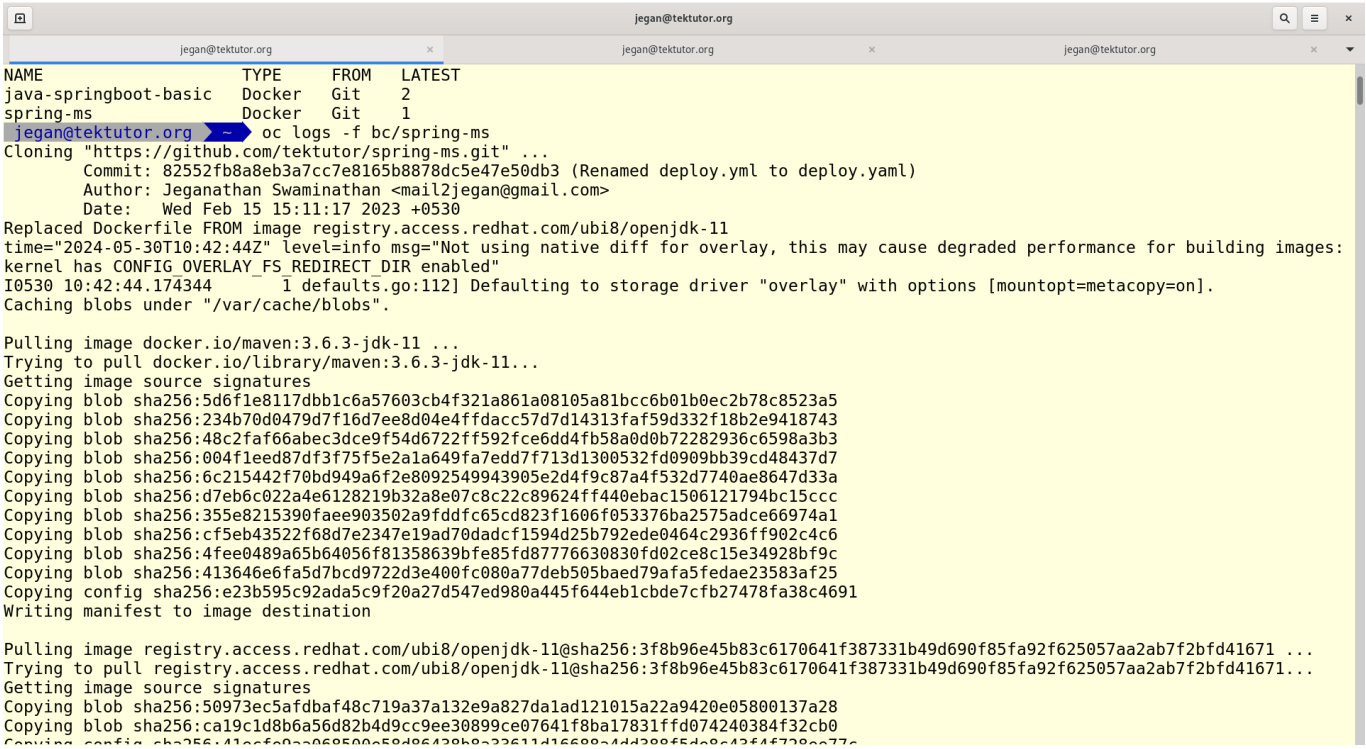


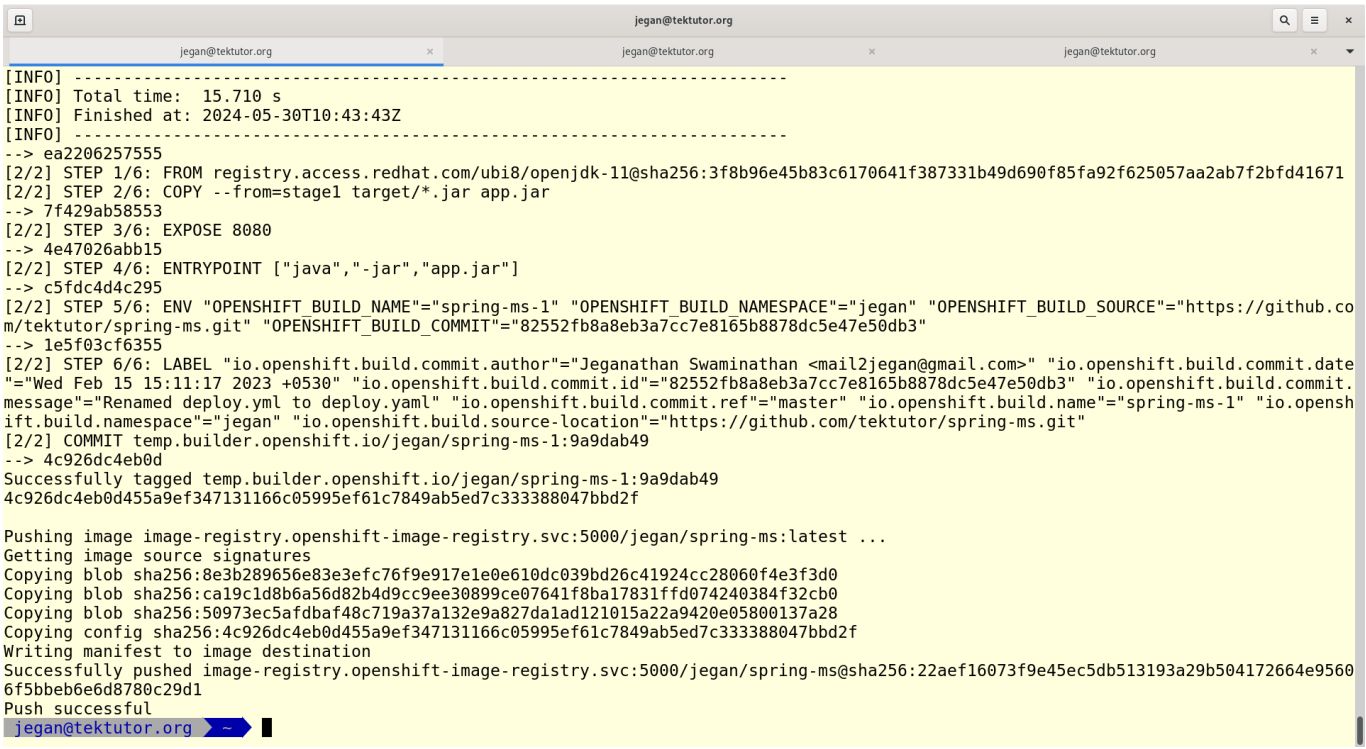
Lab - Deploying a Java springboot application from GitHub source code into Openshift

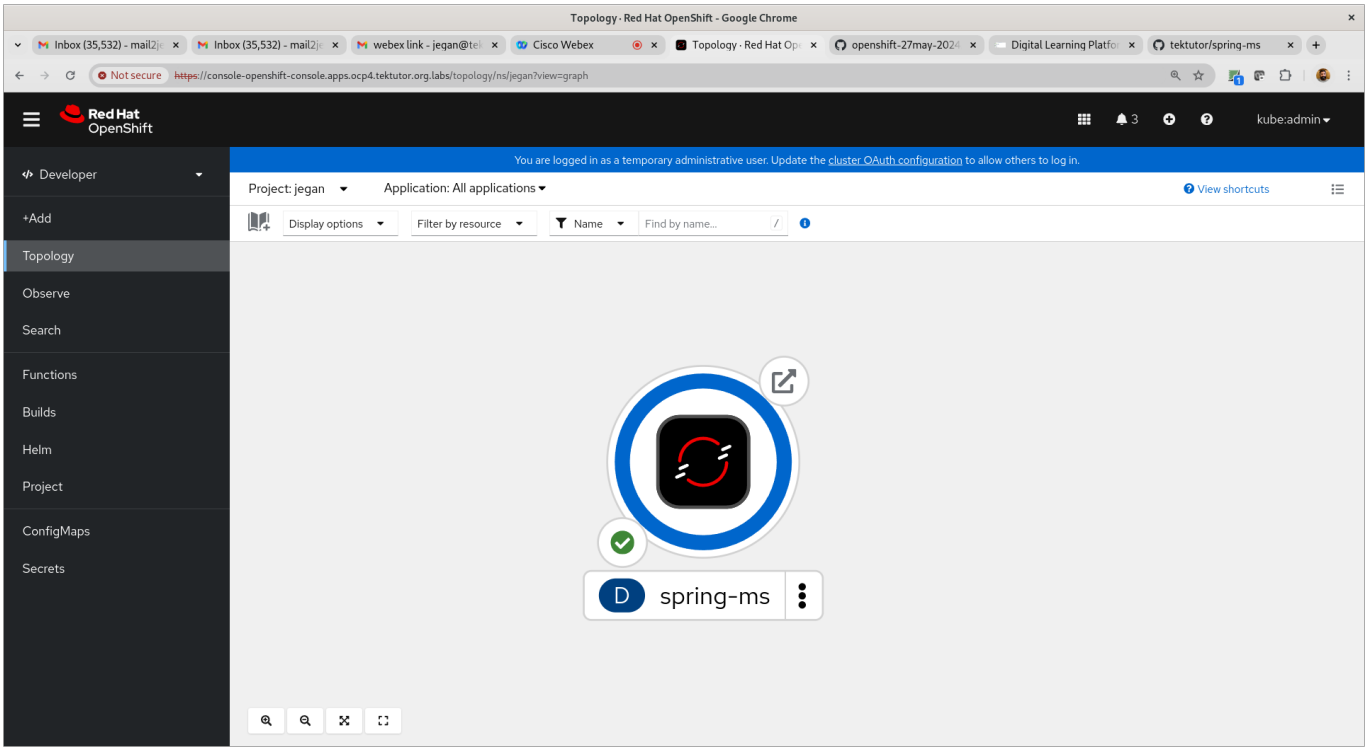
```
oc new-app https://github.com/tektutor/spring-ms.git --strategy=docker
oc expose svc/spring-ms
oc get bc
oc logs -f bc/spring-ms
```

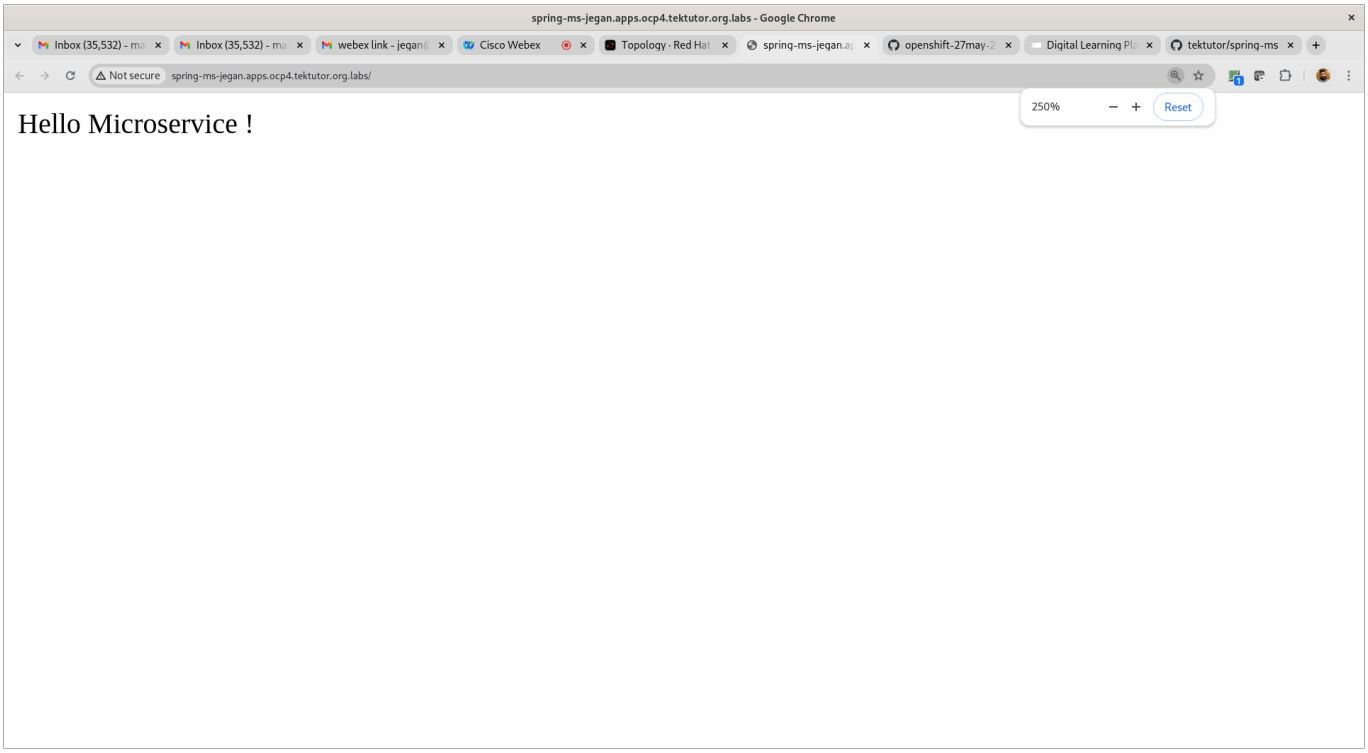
Expected output

```
jegan@tektutor.org ~ oc new-app https://github.com/tektutor/spring-ms.git --strategy=docker
--> Found container image 41ecfe9 (3 weeks old) from registry.access.redhat.com for "registry.access.redhat.com/ubi8/openjdk-11"

    Java Applications
    -----------------
    Platform for building and running plain Java applications (fat-jar and flat classpath)

    Tags: builder, java

    * An image stream tag will be created as "openjdk-11:latest" that will track the source image
    * A Docker build using source code from https://github.com/tektutor/spring-ms.git will be created
      * The resulting image will be pushed to image stream tag "spring-ms:latest"
      * Every time "openjdk-11:latest" changes a new build will be triggered

--> Creating resources ...
    imagestream.image.openshift.io "openjdk-11" created
    imagestream.image.openshift.io "spring-ms" created
    buildconfig.build.openshift.io "spring-ms" created
    deployment.apps "spring-ms" created
    service "spring-ms" created
--> Success
    Build scheduled, use 'oc logs -f buildconfig/spring-ms' to track its progress.
    Application is not exposed. You can expose services to the outside world by executing one or more of the commands below:
     'oc expose service/spring-ms'
    Run 'oc status' to view your app.
jegan@tektutor.org ~ oc expose svc/spring-ms
route/spring-ms exposed
jegan@tektutor.org ~ oc get bc
NAME                   TYPE     FROM   LATEST
java-springboot-basic   Docker   Git    2
spring-ms               Docker   Git    1
jegan@tektutor.org ~ oc logs -f bc/spring-ms
Cloning "https://github.com/tektutor/spring-ms.git" ...
        Commit: 82552fb8a8eb3a7cc7e8165b8878dc5e47e50db3 (Renamed deploy.yml to deploy.yaml)
        Author: Jeganathan Swaminathan <mail2jegan@gmail.com>
        Date:   Wed Feb 15 15:11:17 2023 +0530
```


jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
NAME TYPE FROM LATEST
java-springboot-basic Docker Git 2
spring-ms Docker Git 1
jegan@tektutor.org ~ oc logs -f bc/spring-ms
Cloning "https://github.com/tektutor/spring-ms.git" ...
Commit: 82552fb8a8eb3a7cc7e8165b8878dc5e47e50db3 (Renamed deploy.yml to deploy.yaml)
Author: Jeganathan Swaminathan <mail2jegan@gmail.com>
Date: Wed Feb 15 15:11:17 2023 +0530
Replaced Dockerfile FROM image registry.access.redhat.com/ubi8/openjdk-11
time="2024-05-30T10:42:44Z" level=info msg="Not using native diff for overlay, this may cause degraded performance for building images: kernel has CONFIG_OVERLAY_FS_REDIRECT_DIR enabled"
I0530 10:42:44.174344 1 defaults.go:112] Defaulting to storage driver "overlay" with options [mountopt=metacopy=on].
Caching blobs under "/var/cache/blobs".
Pulling image docker.io/maven:3.6.3-jdk-11 ...
Trying to pull docker.io/library/maven:3.6.3-jdk-11...
Getting image source signatures
Copying blob sha256:5d6f1e8117dbb1c6a57603cb4f321a861a08105a81bcc6b01b0ec2b78c8523a5
Copying blob sha256:234b70d0479d7f16d7ee8d04e4ffdacc57d7d14313faf59d332f18b2e9418743
Copying blob sha256:48c2faf66abec3dce9f54d6722ff592fce6dd4fb58a0d0b72282936c6598a3b3
Copying blob sha256:004f1eed87df3f75f5e2a1a649fa7edd7f713d1300532fd0909bb39cd48437d7
Copying blob sha256:6c215442f70bd949a6f2e8092549943905e2d4f9c87a4f532d7740ae8647d33a
Copying blob sha256:d7eb6c022a4e6128219b32a8e07c8c22c89624ff440ebac1506121794bc15ccc
Copying blob sha256:355e8215390faee903502a9fddfc65cd823f1606f053376ba2575adce66974a1
Copying blob sha256:cf5eb43522f68d7e2347e19ad70dadcf1594d25b792ede0464c2936ff902c4c6
Copying blob sha256:4fee0489a65b64056f81358639bfe85fd87776630830fd02ce8c15e34928bf9c
Copying blob sha256:413646e6fa5d7bcd9722d3e400fc080a77deb505baed79afa5fedae23583af25
Copying config sha256:e23b595c92ada5c9f20a27d547ed980a445f644eb1cbde7cfb27478fa38c4691
Writing manifest to image destination
Pulling image registry.access.redhat.com/ubi8/openjdk-11@sha256:3f8b96e45b83c6170641f387331b49d690f85fa92f625057aa2ab7f2bfd41671 ...
Trying to pull registry.access.redhat.com/ubi8/openjdk-11@sha256:3f8b96e45b83c6170641f387331b49d690f85fa92f625057aa2ab7f2bfd41671...
Getting image source signatures
Copying blob sha256:50973ec5afdbaf48c719a37a132e9a827da1ad121015a22a9420e05800137a28
Copying blob sha256:ca19c1d8b6a56d82b4d9cc9ee30899ce07641f8ba17831ffd074240384f32cb0


jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
[INFO] --
[INFO] Total time: 15.710 s
[INFO] Finished at: 2024-05-30T10:43:43Z
[INFO] --
--> ea2206257555
[2/2] STEP 1/6: FROM registry.access.redhat.com/ubi8/openjdk-11@sha256:3f8b96e45b83c6170641f387331b49d690f85fa92f625057aa2ab7f2bfd41671
[2/2] STEP 2/6: COPY --from=stage1 target/*.jar app.jar
--> 7f429ab58553
[2/2] STEP 3/6: EXPOSE 8080
--> 4e47026abb15
[2/2] STEP 4/6: ENTRYPOINT ["java","-jar","app.jar"]
--> c5fdc4d4c295
[2/2] STEP 5/6: ENV "OPENSHIFT_BUILD_NAME"="spring-ms-1" "OPENSHIFT_BUILD_NAMESPACE"="jegan" "OPENSHIFT_BUILD_SOURCE"="https://github.com/tektutor/spring-ms.git" "OPENSHIFT_BUILD_COMMIT"="82552fb8a8eb3a7cc7e8165b8878dc5e47e50db3"
--> 1e5f03cf6355
[2/2] STEP 6/6: LABEL "io.openshift.build.commit.author"="Jeganathan Swaminathan <mail2jegan@gmail.com>" "io.openshift.build.commit.date"="Wed Feb 15 15:11:17 2023 +0530" "io.openshift.build.commit.id"="82552fb8a8eb3a7cc7e8165b8878dc5e47e50db3" "io.openshift.build.commit.message"="Renamed deploy.yml to deploy.yaml" "io.openshift.build.commit.ref"="master" "io.openshift.build.name"="spring-ms-1" "io.openshift.build.namespace"="jegan" "io.openshift.build.source-location"="https://github.com/tektutor/spring-ms.git"
[2/2] COMMIT temp.builder.openshift.io/jegan/spring-ms-1:9a9dab49
--> 4c926dc4eb0d
Successfully tagged temp.builder.openshift.io/jegan/spring-ms-1:9a9dab49
4c926dc4eb0d455a9ef347131166c05995ef61c7849ab5ed7c333388047bbd2f
Pushing image image-registry.openshift-image-registry.svc:5000/jegan/spring-ms:latest ...
Getting image source signatures
Copying blob sha256:8e3b289656e83e3efc76f9e917e1e0e610dc039bd26c41924cc28060f4e3f3d0
Copying blob sha256:ca19c1d8b6a56d82b4d9cc9ee30899ce07641f8ba17831ffd074240384f32cb0
Copying blob sha256:50973ec5afdbaf48c719a37a132e9a827da1ad121015a22a9420e05800137a28
Copying config sha256:4c926dc4eb0d455a9ef347131166c05995ef61c7849ab5ed7c333388047bbd2f
Writing manifest to image destination
Successfully pushed image-registry.openshift-image-registry.svc:5000/jegan/spring-ms@sha256:22aef16073f9e45ec5db513193a29b504172664e95606f5bbeb6e6d8780c29d1
Push successful
jegan@tektutor.org ~





Info - Installing openssl (is already installed in our lab - just for your future reference)

Installing openssl from source code (Already installed on Lab machines, so kindly skip this installation)

```
sudo yum -y remove openssl openssl-devel
sudo yum groupinstall 'Development Tools'
sudo yum install perl-IPC-Cmd perl-Test-Simple -y
cd /usr/src
wget https://www.openssl.org/source/openssl-3.0.0.tar.gz
tar -zxf openssl-3.0.0.tar.gz
rm openssl-3.0.0.tar.gz
```

```
cd /usr/src/openssl-3.0.0
./config
make
make test
make install

sudo ln -s /usr/local/lib64/libssl.so.3 /usr/lib64/libssl.so.3
sudo ln -s /usr/local/lib64/libcrypto.so.3 /usr/lib64/libcrypto.so.3

sudo ldconfig
sudo tee /etc/profile.d/openssl.sh<<EOF
export PATH=/usr/local/bin:$PATH
export
LD_LIBRARY_PATH=/usr/local/openssl/lib:/usr/local/openssl/lib64:$LD_LIBRARY
_PATH
EOF

which openssl
openssl version
```

Lab - Let's deploy nginx

```
oc new --name=nginx bitnami/nginx:latest
```

Expected output ![nginx][nginx1.png]

Lab - Create an edge route (https based public route url)

Find your base domain of your openshift cluster

```
oc get ingresses.config/cluster -o jsonpath={.spec.domain}
```

Expected output

```
[root@tektutor.org auth]# oc get ingresses.config/cluster -o jsonpath=
{.spec.domain}
apps.ocp.tektutor.org.labs
```

Let's deploy a microservice and create an edge route as shown below.

First, let's generate a private key

```
openssl genrsa -out key.key
```

We need to create a public key using the private key with specific with your organization domain

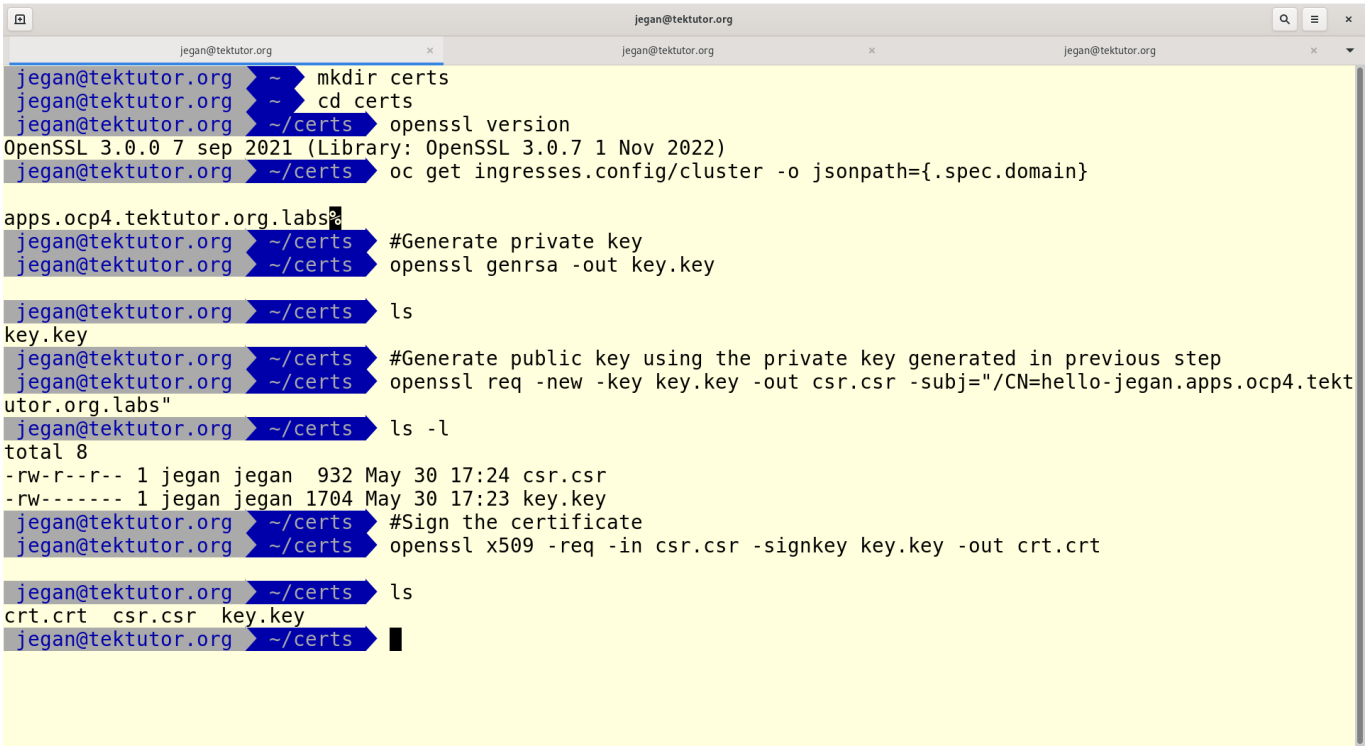
```
openssl req -new -key key.key -out csr.csr -subj="/CN=hello-
jegan.apps.ocp.tektutor.org.labs"
```

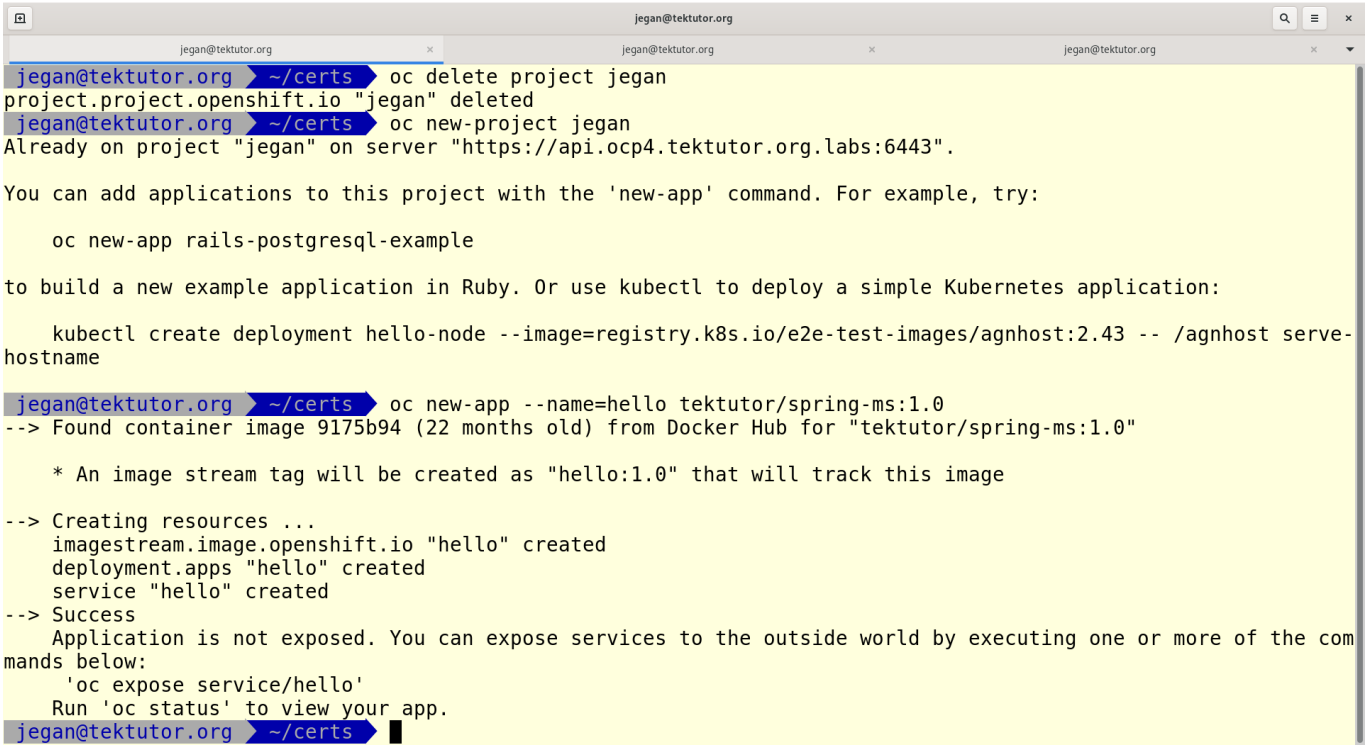
Sign the public key using the private key and generate certificate(.crt)

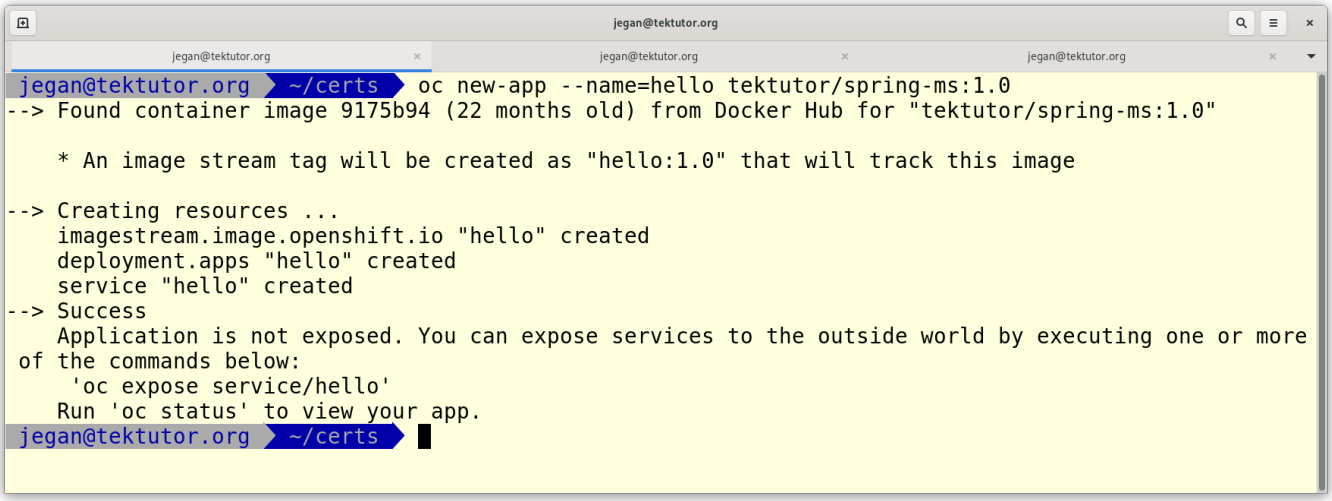
```
openssl x509 -req -in csr.csr -signkey key.key -out crt.crt
oc create route edge --service spring-ms --hostname hello-
jegan.apps.ocp4.tektutor.org.labs --key key.key --cert crt.crt
```

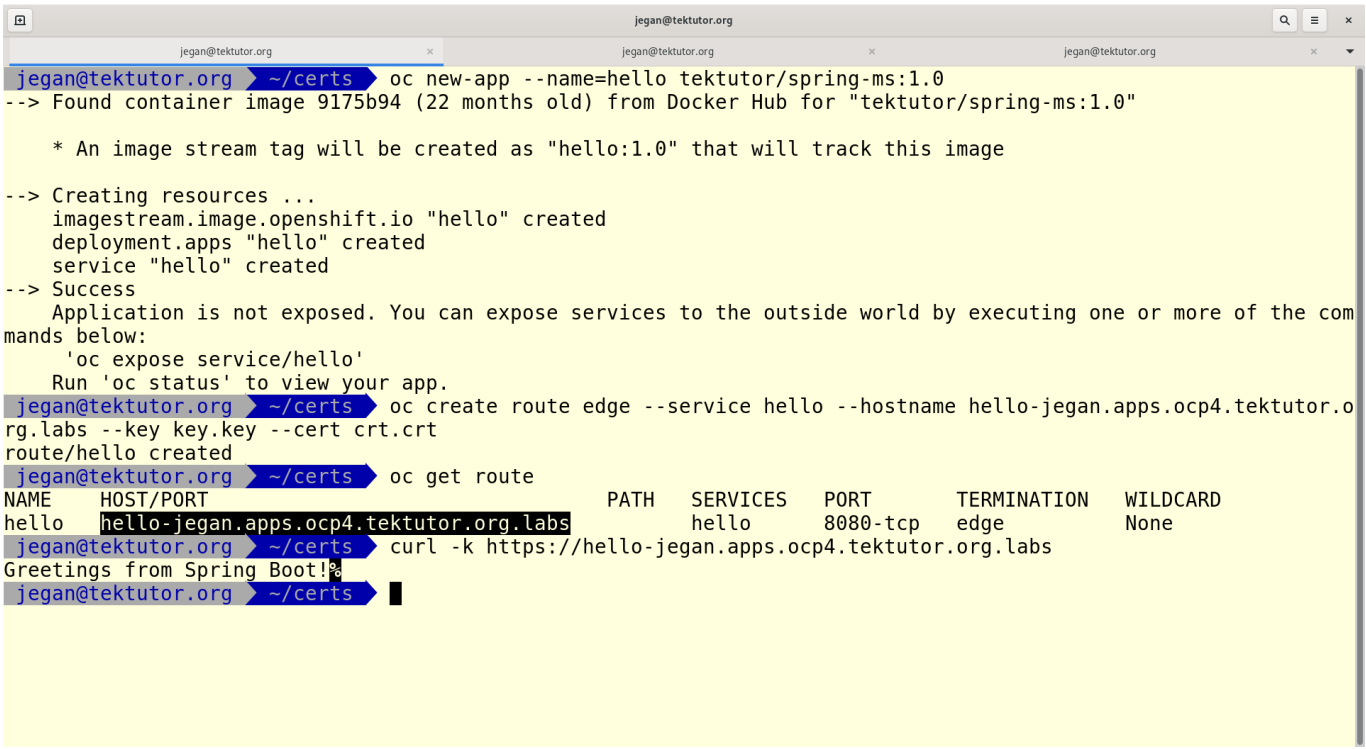
Expected output

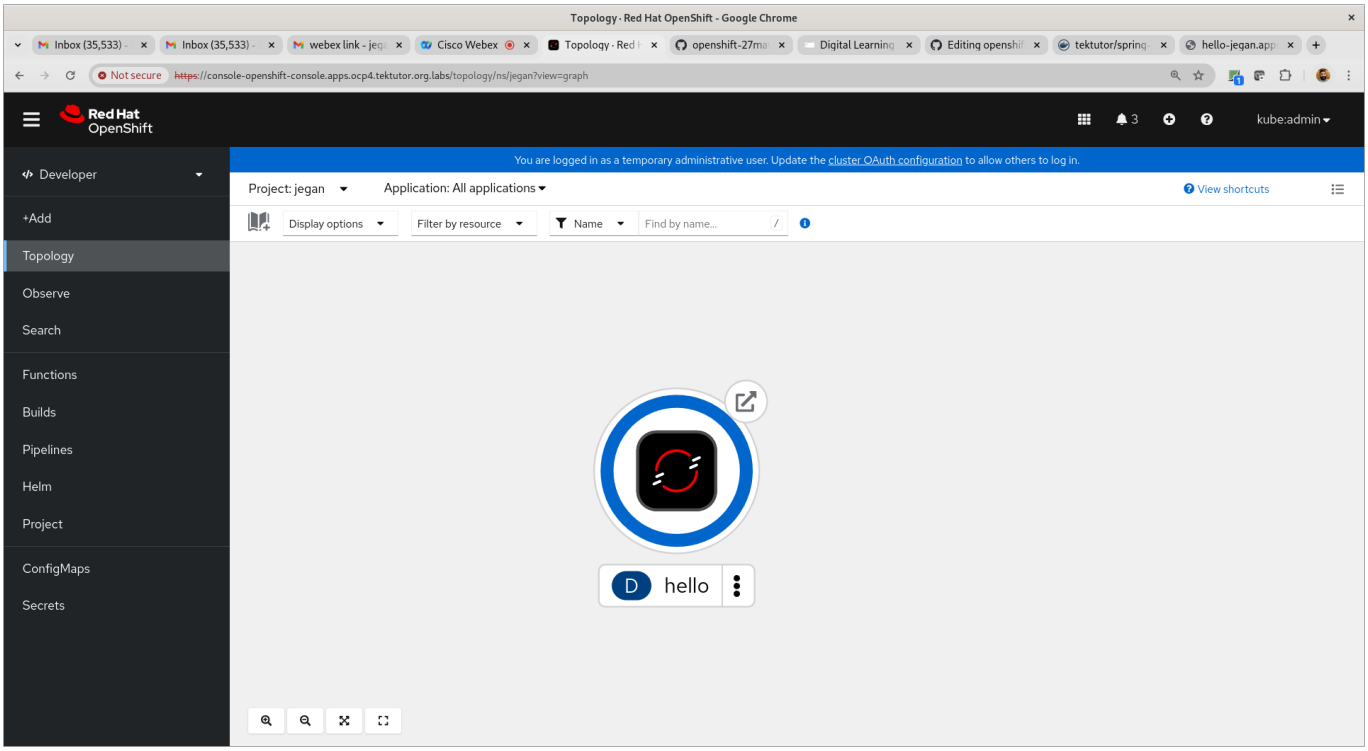
```
[jegan@tektutor.org edge-route]$ oc get svc
NAME        TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)    AGE
spring-ms   ClusterIP   172.30.208.33           8080/TCP   87m
[jegan@tektutor.org edge-route]$ oc expose deploy/nginx --port=8080
service/nginx exposed

[jegan@tektutor.org edge-route]$ oc get svc
NAME        TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)    AGE
nginx       ClusterIP   172.30.16.165           8080/TCP   4s
spring-ms   ClusterIP   172.30.208.33           8080/TCP   87m

[jegan@tektutor.org edge-route]$ oc get ingresses.config/cluster -o
jsonpath={.spec.domain}
apps.ocp4.tektutor.org.labs

[jegan@tektutor.org edge-route]$ oc project
Using project "jegan-devops" on server
"https://api.ocp4.tektutor.org.labs:6443".

[jegan@tektutor.org edge-route]$ openssl req -new -key key.key -out csr.csr
-subj="/CN=nginx-jegan-devops.apps.ocp4.tektutor.org.labs"

[jegan@tektutor.org edge-route]$ openssl x509 -req -in csr.csr -signkey
key.key -out crt.crt

[jegan@tektutor.org edge-route]$ oc create route edge --service nginx --
hostname nginx-jegan-devops.apps.ocp4.tektutor.org.labs --key key.key --
cert crt.crt
route.route.openshift.io/nginx created

[jegan@tektutor.org edge-route]$ oc get route
NAME    HOST/PORT                                          PATH   SERVICES
PORT    TERMINATION   WILDCARD
nginx   nginx-jegan-devops.apps.ocp4.tektutor.org.labs   nginx         edge
None
```

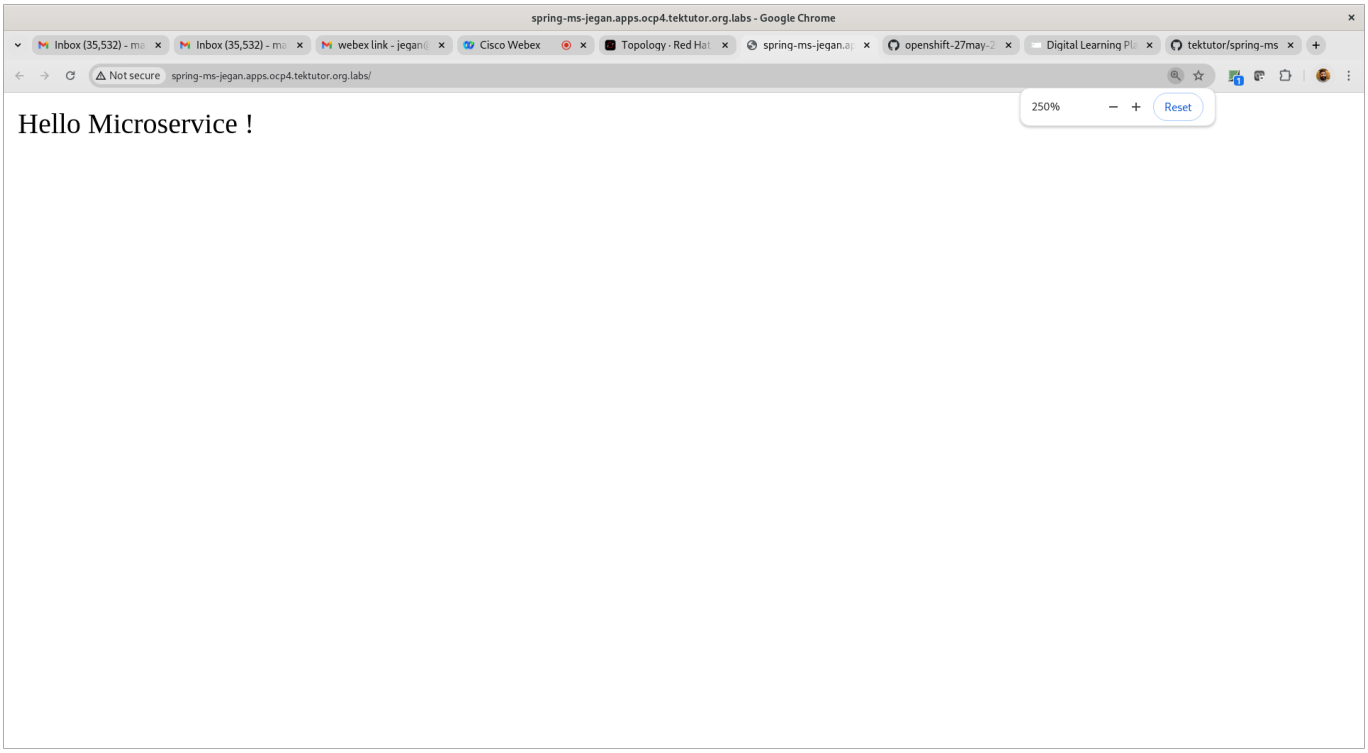

jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org ~ mkdir certs
jegan@tektutor.org ~ cd certs
jegan@tektutor.org ~/certs openssl version
OpenSSL 3.0.0 7 sep 2021 (Library: OpenSSL 3.0.7 1 Nov 2022)
jegan@tektutor.org ~/certs oc get ingresses.config/cluster -o jsonpath={.spec.domain}
apps.ocp4.tektutor.org.labs
jegan@tektutor.org ~/certs #Generate private key
jegan@tektutor.org ~/certs openssl genrsa -out key.key
jegan@tektutor.org ~/certs ls
key.key
jegan@tektutor.org ~/certs #Generate public key using the private key generated in previous step
jegan@tektutor.org ~/certs openssl req -new -key key.key -out csr.csr -subj="/CN=hello-jegan.apps.ocp4.tektutor.org.labs"
jegan@tektutor.org ~/certs ls -l
total 8
-rw-r--r-- 1 jegan jegan 932 May 30 17:24 csr.csr
-rw------- 1 jegan jegan 1704 May 30 17:23 key.key
jegan@tektutor.org ~/certs #Sign the certificate
jegan@tektutor.org ~/certs openssl x509 -req -in csr.csr -signkey key.key -out crt.crt
jegan@tektutor.org ~/certs ls
crt.crt csr.csr key.key
jegan@tektutor.org ~/certs


jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org ~/certs oc delete project jegan
project.project.openshift.io "jegan" deleted
jegan@tektutor.org ~/certs oc new-project jegan
Already on project "jegan" on server "https://api.ocp4.tektutor.org.labs:6443".
You can add applications to this project with the 'new-app' command. For example, try:
oc new-app rails-postgresql-example
to build a new example application in Ruby. Or use kubectl to deploy a simple Kubernetes application:
kubectl create deployment hello-node --image=registry.k8s.io/e2e-test-images/agnhost:2.43 -- /agnhost serve-hostname
jegan@tektutor.org ~/certs oc new-app --name=hello tektutor/spring-ms:1.0
--> Found container image 9175b94 (22 months old) from Docker Hub for "tektutor/spring-ms:1.0"
* An image stream tag will be created as "hello:1.0" that will track this image
--> Creating resources ...
imagestream.image.openshift.io "hello" created
deployment.apps "hello" created
service "hello" created
--> Success
Application is not exposed. You can expose services to the outside world by executing one or more of the commands below:
'oc expose service/hello'
Run 'oc status' to view your app.
jegan@tektutor.org ~/certs


jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org ~/certs oc new-app --name=hello tektutor/spring-ms:1.0
--> Found container image 9175b94 (22 months old) from Docker Hub for "tektutor/spring-ms:1.0"
* An image stream tag will be created as "hello:1.0" that will track this image
--> Creating resources ...
imagestream.image.openshift.io "hello" created
deployment.apps "hello" created
service "hello" created
--> Success
Application is not exposed. You can expose services to the outside world by executing one or more of the commands below:
'oc expose service/hello'
Run 'oc status' to view your app.
jegan@tektutor.org ~/certs


jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org
jegan@tektutor.org ~/certs oc new-app --name=hello tektutor/spring-ms:1.0
--> Found container image 9175b94 (22 months old) from Docker Hub for "tektutor/spring-ms:1.0"
* An image stream tag will be created as "hello:1.0" that will track this image
--> Creating resources ...
imagestream.image.openshift.io "hello" created
deployment.apps "hello" created
service "hello" created
--> Success
Application is not exposed. You can expose services to the outside world by executing one or more of the commands below:
'oc expose service/hello'
Run 'oc status' to view your app.
jegan@tektutor.org ~/certs oc create route edge --service hello --hostname hello-jegan.apps.ocp4.tektutor.org.labs --key key.key --cert crt.crt
route/hello created
jegan@tektutor.org ~/certs oc get route
NAME HOST/PORT PATH SERVICES PORT TERMINATION WILDCARD
hello hello-jegan.apps.ocp4.tektutor.org.labs hello 8080-tcp edge None
jegan@tektutor.org ~/certs curl -k https://hello-jegan.apps.ocp4.tektutor.org.labs
Greetings from Spring Boot!%
jegan@tektutor.org ~/certs


Topology - Red Hat OpenShift - Google Chrome
Red Hat OpenShift
kube:admin
Developer
+Add
Topology
Observe
Search
Functions
Builds
Pipelines
Helm
Project
ConfigMaps
Secrets
You are logged in as a temporary administrative user. Update the cluster OAuth configuration to allow others to log in.
Project: jegan
Application: All applications
View shortcuts
Display options
Filter by resource
Name
Find by name...
D
hello


spring-ms-jegan.apps.ocp4.tektutor.org.labs - Google Chrome
Not secure
spring-ms-jegan.apps.ocp4.tektutor.org.labs/
250%
Reset
Hello Microservice !