**Installation of OpenShift cluster on ubuntu.**

**First we need to install docker on ubuntu using the below documentation.**

<https://www.digitalocean.com/community/tutorials/how-to-install-and-use-docker-on-ubuntu-20-04>

**Now check docker status**

***systemctl status docker***

## **Download OpenShift Origin**

**Step 1: At the time of writing this tutorial, the latest version of OpenShift Origin is v3.11.0. You can download it from the Git Hub repository using the following command:**

wget <https://github.com/openshift/origin/releases/download/v3.11.0/openshift-origin-client-tools-v3.11.0-0cbc58b-linux-64bit.tar.gz>

**Step 2: Once the download is completed, extract the downloaded file with the following command:**

***tar -xvzf openshift-origin-client-tools-v3.11.0-0cbc58b-linux-64bit.tar.gz***

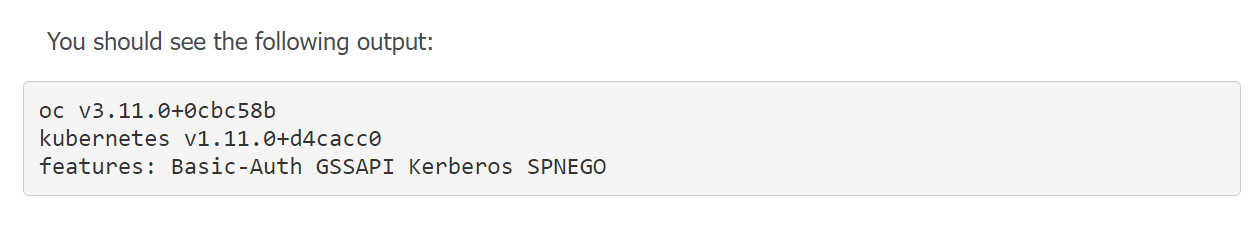
**Step 3. Next, change the directory to the extracted directory and copy kubectl and oc binaries to the /usr/local/bin directory.**

***cd openshift-origin-client-tools-v3.11.0-0cbc58b-linux-64bit***

***cp oc kubectl /usr/local/bin/***

**Next, verify the installation of OpenShift client utility using the following command:**

***oc version***

******

**Step 4: Next, you will need to create a new daemon.json file and allow the use of the Insecure Docker registry.**

***nano /etc/docker/daemon.json***

**Add the following line:**

**{**

**"insecure-registries" : [ "172.30.0.0/16" ]**

**}**

**Save and close the file then restart Docker service to implement the changes.**

***sudo systemctl restart docker***

**Step 5: Now, start the OpenShift Origin cluster by specifying your system's IP:**

***oc cluster up --public-hostname=your-server-ip***

**Like:**

***oc cluster up --public-hostname=10.51.96.70***

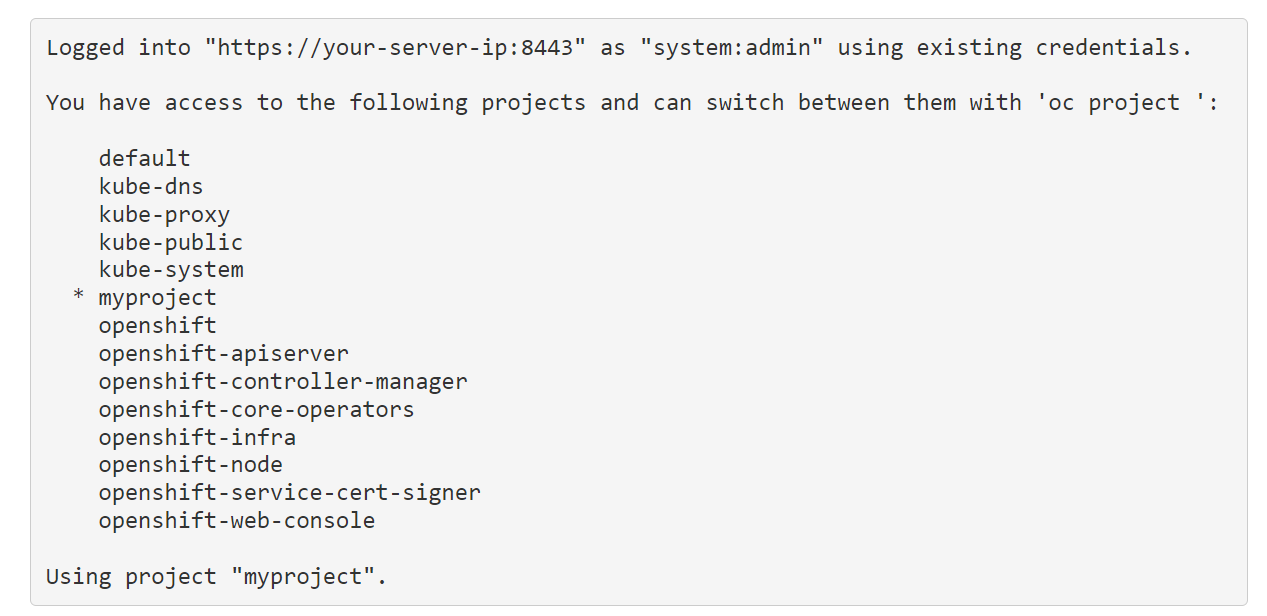
***Once the server started successfully, you should get the following output:***

******

**Step 6: Now, login to your cluster as administrator user with the following command:**

***oc login -u system:admin***

**Once login, you should get the following output:**

******

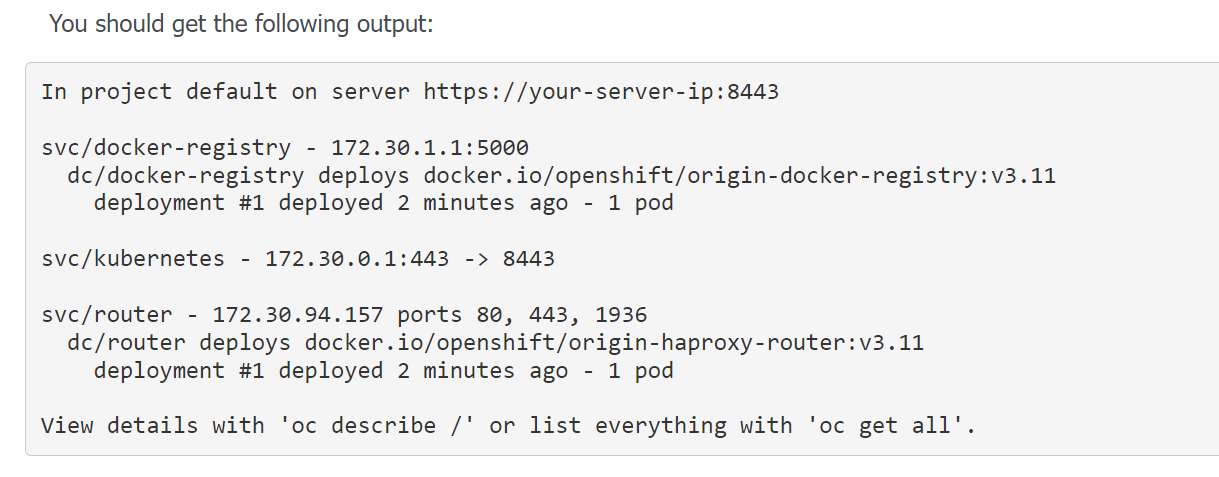
**Step 7: Next, change to the default project with the following command:**

***oc project default***

****

**Step 8: Now, verify the current status of your project with the following command:**

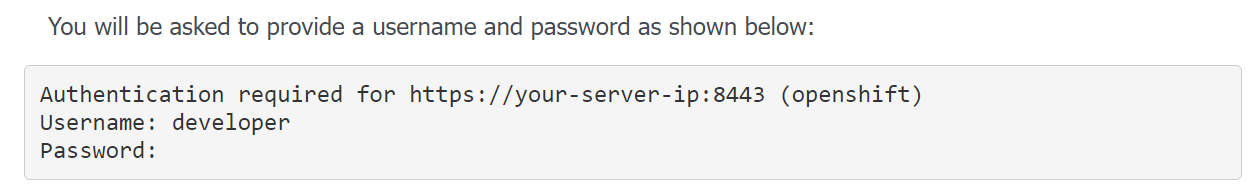
***oc status***

****

## **Create Project on OpenShift**

**Step 1: Now, log in to OpenShift with developer user with the following command:**

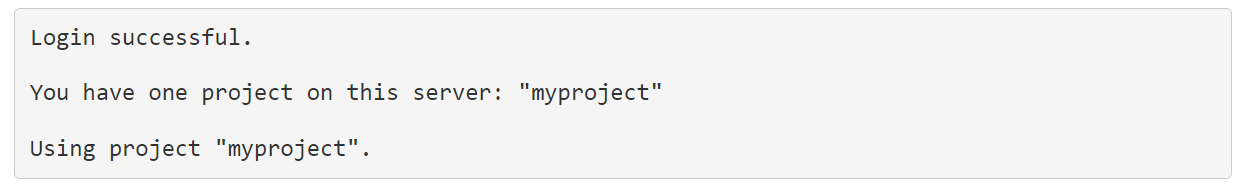
***oc login***

****

**Username : developer**

**Password: developer**

**Provide username as a developer and the password as a developer, and hit Enter. You should see the following output**

****

**Step 2: To create a new project, run the following command:**

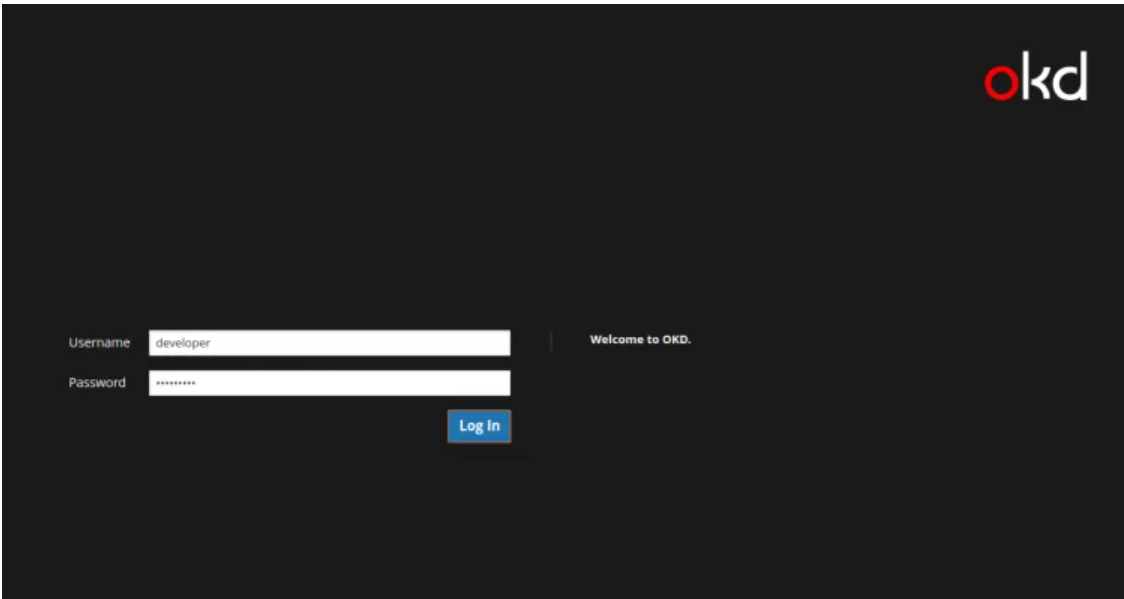
oc new-project dev --display-name="Project - Dev" --description="My Project"



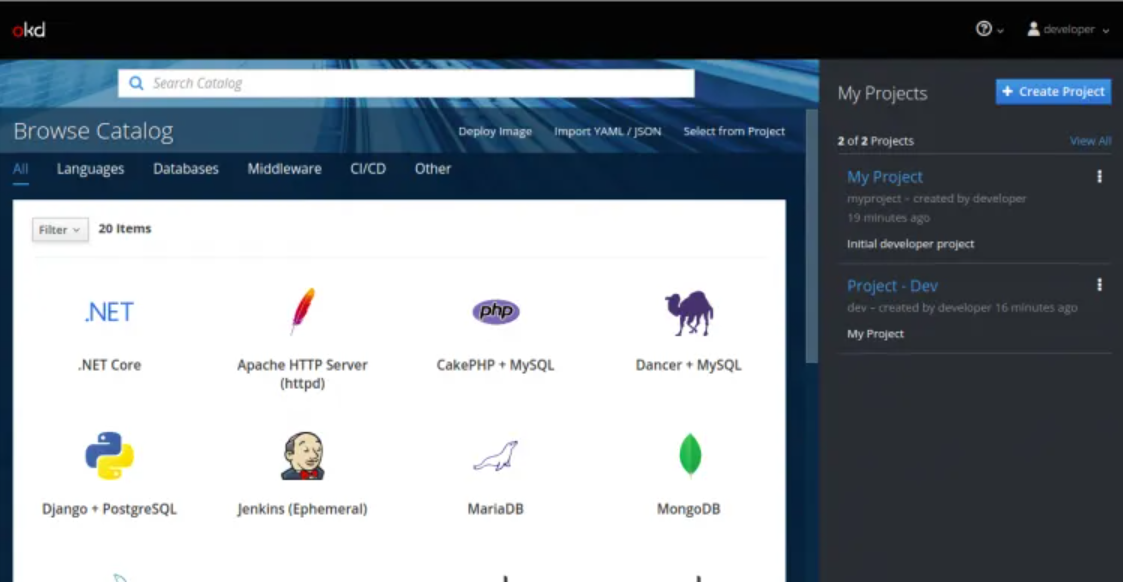
## 

## **Access the OpenShift Web Console**

**Now, open your web browser and type the URL https://your-server-ip:8443/console. You should see the OpenShift login page:**

****

**Provide your developer username and password, and click on the Log In button. You should see the following page:**

****

## **Deploy Demo Application on OpenShift Origin**

**Step 1: First, login to the OpenShift with developer user by running the following command:**

***oc login***

****

**Step 2: Once login, switch the project to the my-project which you have created through OpenShift web console:**

***oc project my-project***

****

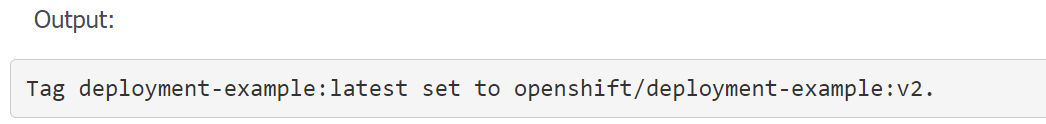
**Step 3: Next, verify the status of your current project with the following command:**

***oc status***

****

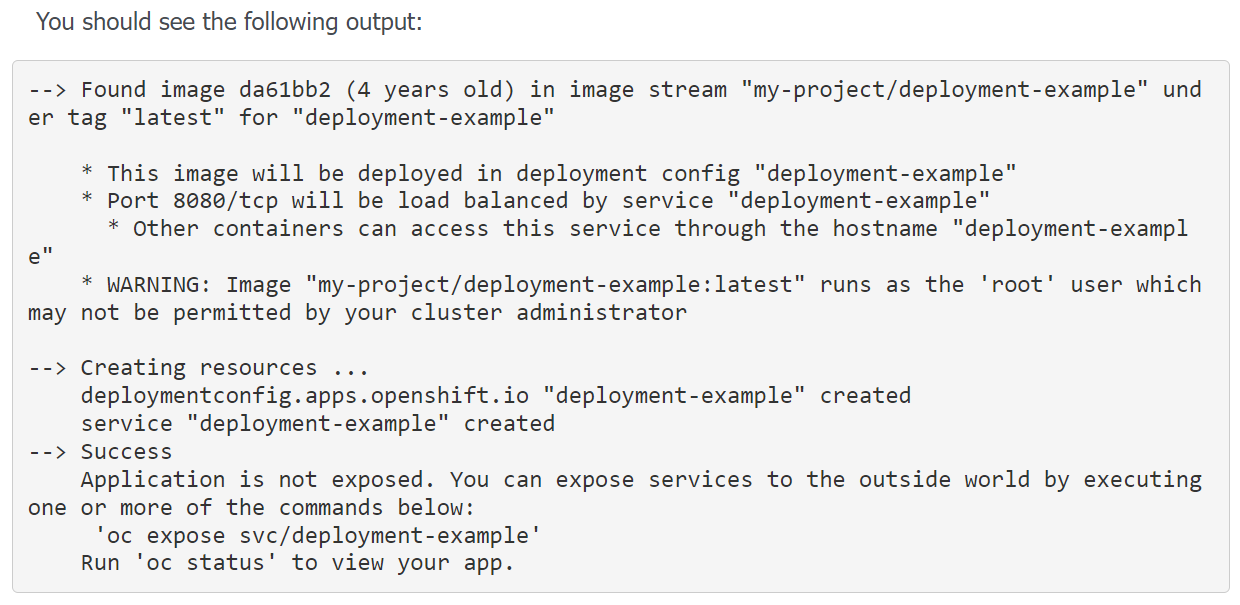
**Step 4: Next, tag an application image from Docker Hub registry with the following command:**

***oc tag --source=docker openshift/deployment-example:v2 deployment-example:latest***

****

**Step 5: Next, deploy an application to the OpenShift with the following command:**

***oc new-app deployment-example***

****

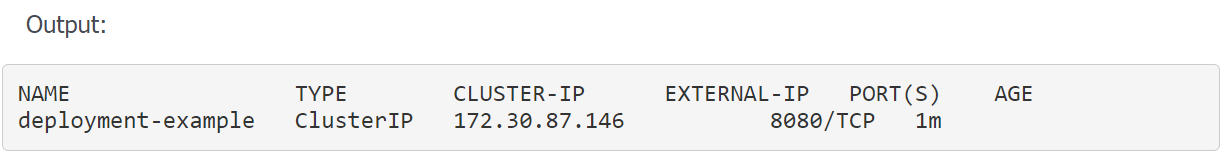
**Step 6: Now, verify the application deployment status with the following command:**

***oc status***

****

**Step 7: To get information about your service, run the following command:**

***oc get svc***

****

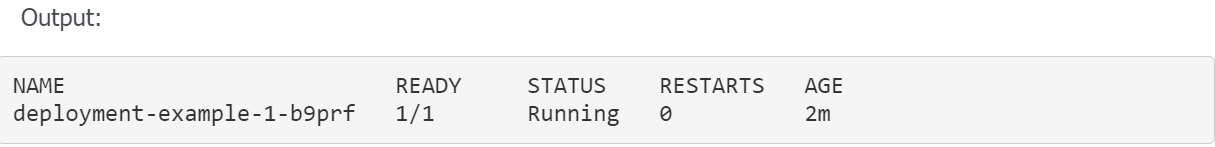
**Step 8: To get detailed information, run the following command:**

***oc describe svc deployment-example***

****

**Step 9: You can also verify the Pods status using the following command:**

***oc get pods***

****

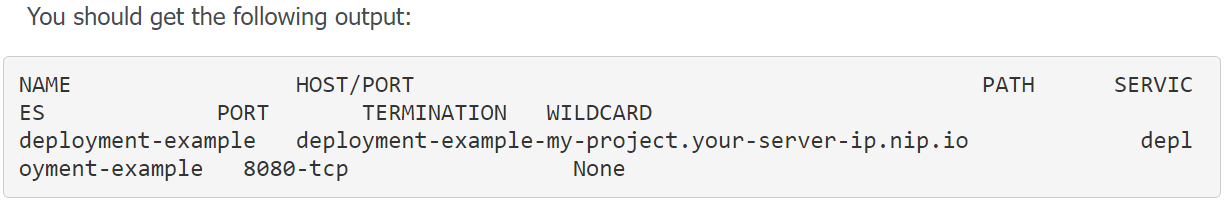
**Step 10: Now, expose the application for external access using the following command:**

***oc expose service/deployment-example***

****

**Step 11: To display the routes information, run the following command:**

***oc get routes***

******

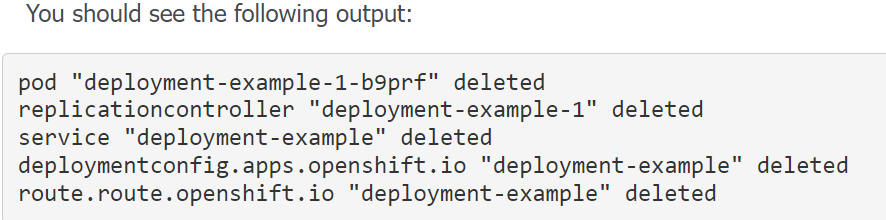
## ***Verify External Access***

***Now, your application is ready for external access. Open your web browser and type the above URL http://deployment-example-my-project.your-server-ip.nip.io. You should see your application on the following page:***

******

**Step 12: If you want to delete your application, run the following command:**

***oc delete all -l app=deployment-example***

****