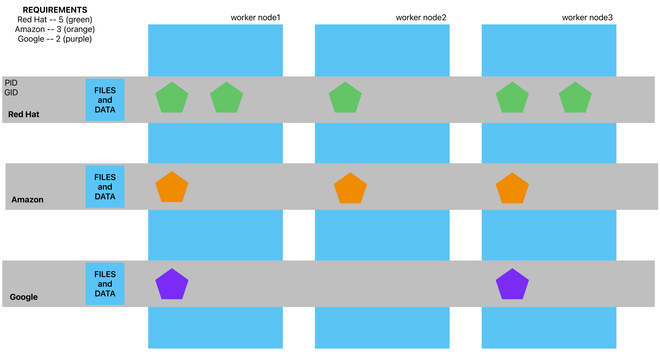
OpenShift Operators

Operators are a method of packaging, deploying and managing a Kubernetes Application.

Kubernetes Namespace
Red Hat OpenShift Project



Types of Users

Regular
System
Service Account

Important Resources of OpenShift

-- Pods (pod)
-- Services (svc)
-- Replica Set (rs)
-- Replication Controller (rc)
-- Persistent Volume (pv)
-- Persistent Volume Claims (pvc)
-- ConfigMaps (cm)
-- Secrets
-- Deployments (deploy)
-- DeploymentConfig (dc)
-- BuildConfig (bc)
-- Routes

YAML

Yet Another Markup Language

KEY: VALUE

```
fruit: apple
sport: football
```

LIST

```
Fruit
- apple
- banana
- mango
```

```
Fruit[0] == apple
Fruit [1] == banana
Fruit[2] == mango
```

DICTIONARY

```
Person:
  Name: ABC
  Age: 31
  Hometown: XYZ
```

```
Person.Name == ABC
Person.Age == 31
Person.Hometown == XYZ
```

Dictionary inside a List

```
Fruit:

- Apple:
    calories: 105 kcal
    fat: 3.2g
    protein: 5g
- Banana:
    calories: 132 kcal
    fat: 2.2g
- Mango:
    protein: 2.2g
```

The Fat of Banana

```
Fruit[1].fat == 2.2g
```

List inside a Dictionary

```
Person:
  Name: ABC
  Age: 31
  Hometown: XYZ
  Hobbies:
    - Football
    - Music
    - Movies
```

Want the Value as Music

```
Person.Hobbies[2] == Movies
Person[3].Hobbies.Music == ERROR
Person.Hobbies[1] == Music
```

HISTORY FOR THE DAY

```
 1  oc login https://api.ocp4.example.com:6443
 2  oc login -u admin -p redhatocp https://api.ocp4.example.com:6443
 3  oc whoami --show-console
 4  clear
 5  oc login -u admin -p redhatocp https://api.ocp4.example.com:6443
 6  oc whoami --show-console
 7  clear
 8  cd /
 9  ls
10  cd bin/
11  ls
12  ls oc
13  ll oc
14  cd ..
15  ls
16  cd sbin
17  ll oc
18  sudo ll oc
19  sudo ls -l oc
20  cd ..
21  ls
22  cd bin
23  ls | grep "oc"
24  ls | grep "kubectl"
25  clear
26  cd
27  clear
28  which oc
29  which kubectl
30  ls -li /usr/local/bin/oc
31  ls -li /usr/local/bin/kubectl
32  oc whoami --show-console
33  kubectl explain pod
34  oc explain pod
35  clear
36  oc projects
37  oc project openshift-etcd
38  oc projects
39  oc login -u developer -p developer https://api.ocp4.example.com:6443
40  oc projects
41  oc login -u admin -p redhatocp https://api.ocp4.example.com:6443
42  oc projects
```

```
43  oc new-project training
44  oc projects
45  oc cluster-info
46  oc api-resources
47  oc api-resources | less
48  oc get clusteroperators
49  oc get pods
50  oc projects
51  oc project openshift-etcd
52  oc get pods
53  oc get all
54  oc get service
55  oc get deployments
56  oc get pods
57  oc get pods -o wide
58  oc get pods
59  oc describe pod etcd-master01
60  clear
61  oc status
62  oc project training
63  oc create pod
64  oc create pod --help
65  oc delete
66  clear
67  oc login -u admin -p redhatocp https://api.ocp4.example.com:6443
68  oc whoami --show-console
69  oc login --token=sha256~wPTrOW57_Uvz14CXxh4vJRM77VocDk0dguk51mG13vk --server=https://api.ocp4.example.com:6443
70  oc get pods
71  oc get pods -n openshift-etcd
72  oc get service
73  oc get service -n openshift-etcd
74  oc api-versions
75  oc api-resources
76  oc api-resources | grep ""pod
77  vim pod.yaml
78  oc create -f pod.yaml
79  oc get pods
80  oc describe pod my-pod
81  oc get pds
82  oc get pods
```

```
83  oc get pods -o wide
84  vim pod.yaml
85  oc project openshift-etcd
86  oc get pods
87* oc get pods -o y
88  oc project openshift-apiserver
89  oc get pods
90  oc get pods -o yaml
91  oc get pods -o yaml | less
92  oc project training
93  oc get pods -o yaml
94  oc get pods -o yaml | yq r - 'item.status.PodIP'
95  oc get pods -o yaml | yq r - 'items.status.PodIP'
96  oc get pods -o yaml | yq r - 'status.PodIP'
97  oc get pods -o yaml | yq r - 'status.podIP'
98  oc get pods -o yaml | yq r - 'items.status.podIP'
99* oc get pods -o yaml | yq r - 'itemsstatus.podIP'
100 oc get pods -o yaml | yq r - 'items[0].status.podIP'
101 oc projects
102* oc get pods -o yaml | yq r - 'items[0].status.podIP'his
103 oc get pods -o yaml | less
104 oc get pods -o yaml
105 history
```