

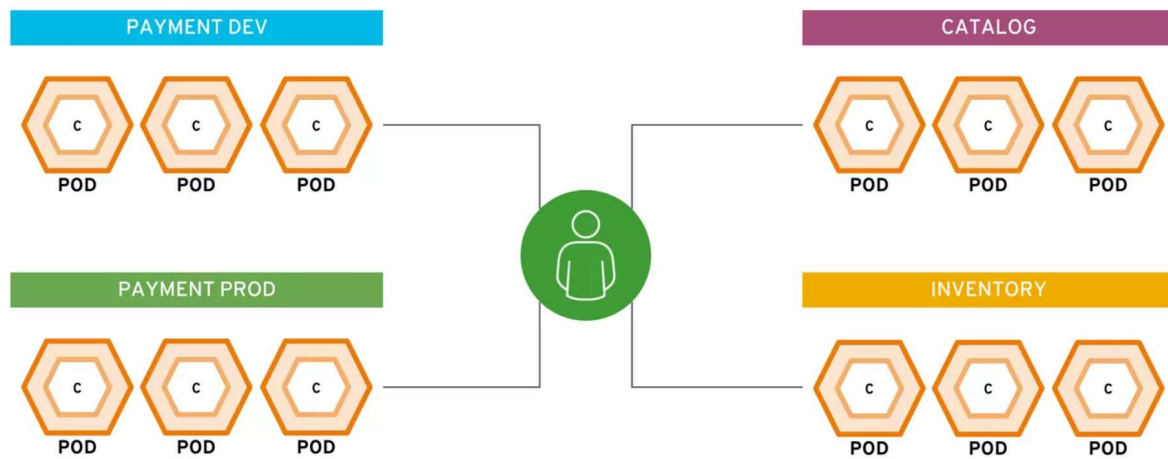
4- OPENSIFT PROJECT CONCEPT



Sezgin KEŞÇİOĞLU tarafından oluşturuldu
Son güncelleme: Eki 24, 2022

OpenShift Concepts

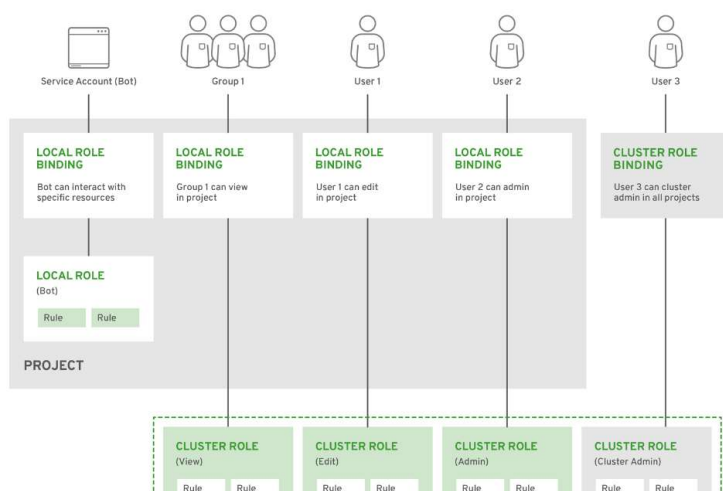
projects isolate apps across environments,
teams, groups and departments



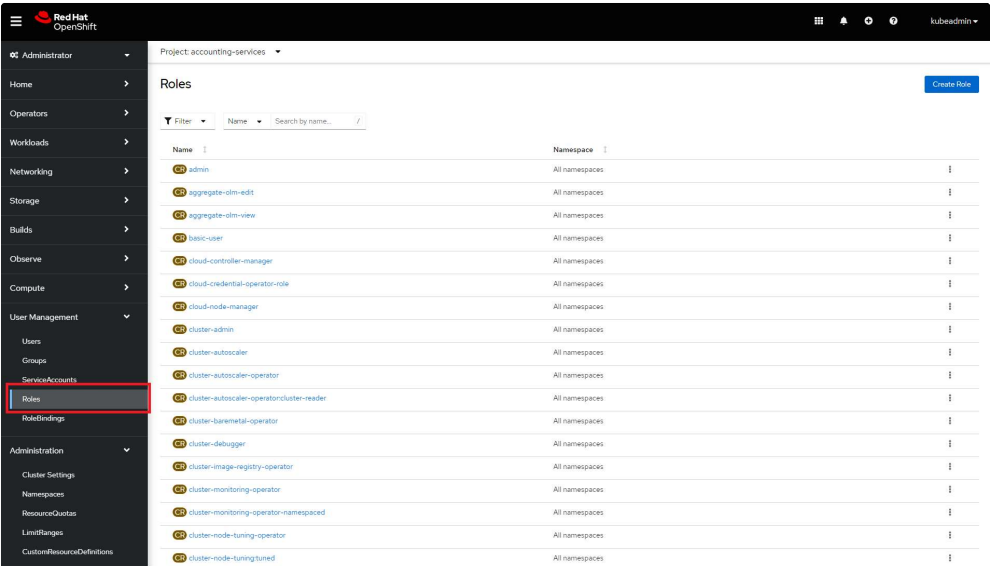
- Named resources to avoid basic naming collisions.
- The ability to limit community resource consumption.

Projects allow OpenShift to guarantee resource availability for applications through the use of quotas. The quota represents an upper bound on the CPU, RAM and persistent storage that all pods in the project can use. Quotas prevent any single project from taking over all of OpenShift resources, while a quota does limit the amount of resources available to your application. Guarantees the availability of those same resources.

- Delegated management authority to trusted users.
 - Role-based access control (RBAC)



RBAC ROLE BINDING



RBAC ROLE COLLECTION OF OPENSIFT

A project has components as below;

Objects	Pods, services, replication controllers, etc.
Policies	Rules for which users can or cannot perform actions on objects.
Constraints	Quotas for each kind of object that can be limited.
Service accounts	Service accounts act automatically with designated access to objects in the project.

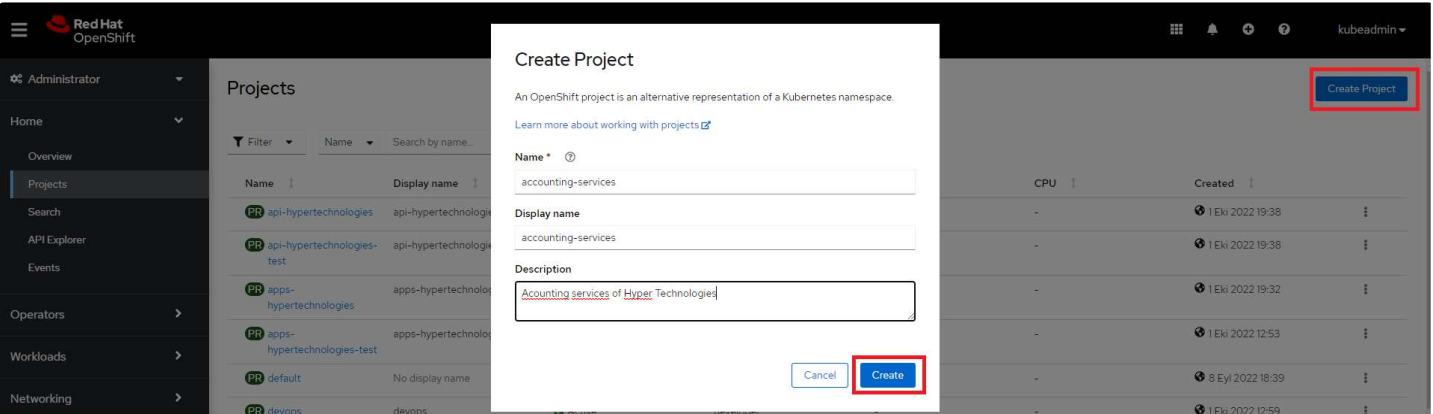
PROJECT LAB SECTION

Project Creation

FROM CLI WITH OC

```
1 #oc new-project <project_name> --description="<description>" --display-name="<display_name>"
2 oc new-project hello-openshift --description="This is an example project" --display-name="Hello OpenShift"
```

FROM MANAGEMENT INTERFACE



FROM CLI WITH OC

```
1 oc get project
```

```
C:\TOOLS\cmdr
λ oc get project
NAME                                DISPLAY NAME                                STATUS
api-hypertechnologies              api-hypertechnologies                      Active
api-hypertechnologies-test         api-hypertechnologies-test                Active
apps-hypertechnologies             apps-hypertechnologies                    Active
apps-hypertechnologies-test        apps-hypertechnologies-test               Active
default                             devops                                     Active
devops                             devops                                     Active
```

FROM MANAGEMENT INTERFACE

URL: <https://console-openshift-console.apps-crc.testing/k8s/cluster/projects>

Administrator

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Name

Search by name...

Name	Display name	Status	Requester	Memory	CPU	Created	
PR api-hypertechnologies	api-hypertechnologies	Active	developer	-	-	1 Eki 2022 19:38	
PR api-hypertechnologies-test	api-hypertechnologies-test	Active	developer	-	-	1 Eki 2022 19:38	
PR apps-hypertechnologies	apps-hypertechnologies	Active	developer	-	-	1 Eki 2022 19:32	
PR apps-hypertechnologies-test	apps-hypertechnologies-test	Active	developer	-	-	1 Eki 2022 12:53	
PR default	No display name	Active	No requester	-	-	8 Eyl 2022 18:39	
PR devops	devops	Active	developer	-	-	1 Eki 2022 12:59	
PR kube-node-lease	No display name	Active	No requester	-	-	8 Eyl 2022 18:39	
PR kube-public	No display name	Active	No requester	-	-	8 Eyl 2022 18:39	
PR kube-system	No display name	Active	No requester	-	-	8 Eyl 2022 18:39	
PR openshift	No display name	Active	No requester	-	-	8 Eyl 2022 18:45	

Create Project

RESOURCE ALLOCATION FOR A PROJECT NAMESPACE

ResourceQuota.yaml definition

```
1 apiVersion: v1
2 kind: ResourceQuota
3 metadata:
4   name: accounting-services-quota
5   namespace: accounting-services
6 spec:
7   hard:
8     pods: '4'
9     requests.cpu: '1'
10    requests.memory: 1Gi
11    limits.cpu: '2'
12    limits.memory: 2Gi
```

Administrator

Project: accounting-services

ResourceQuotas > ResourceQuota details

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ResourceQuotas

LimitRanges

CustomResourceDefinitions

RQ

accounting-services-quota

Details

YAML

ResourceQuota details

limits.cpu

%0 used

limits.memory

%0 used

Pods

0 of 4 used

requests.cpu

%0 used

requests.memory

%0 used

Name

accounting-services-quota

Namespace

NS accounting-services

Labels

No labels

Edit

Annotations

0 annotations

ClusterResourceQuota

CRQ accounting-services-quota

Label selector

No labels

Project annotations

No selector

Created at

Project Container & Pod LimitRanges

LimitRange yaml definition

```
1 kind: LimitRange
2 apiVersion: v1
3 metadata:
4   name: accounting-services-limit-range
5   namespace: accounting-services
6 spec:
7   limits:
8     - type: Pod
9       max:
10        cpu: '2'
11        memory: 3Gi
12       min:
13        cpu: 200m
14        memory: 1Gi
15     - type: Container
16       max:
17        cpu: 500m
18        memory: 1Gi
19       min:
20        cpu: 100m
21        memory: 500Mi
22       default:
23        cpu: 100m
24        memory: 500Mi
25       defaultRequest:
26        cpu: 100m
27        memory: 500Mi
28       maxLimitRequestRatio:
29        cpu: '2'
```

Red Hat OpenShift

Administrator

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Project: accounting-services

LimitRanges > LimitRange details

LR accounting-services-limit-range

Details

YAML

1 kind: LimitRange

2 apiVersion: v1

3 metadata:

4 name: accounting-services-limit-range

5 namespace: accounting-services

6 spec:

7 limits:

8 - type: Pod

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ResourceQuotas

LimitRanges

CustomResourceDefinitions

```
9
10
11   max:
12     cpu: '2'
13     memory: 3Gi
14   min:
15     cpu: 200m
16     memory: 1Gi
17   type: Container
18   max:
19     cpu: 500m
20     memory: 1Gi
21   min:
22     cpu: 100m
23     memory: 500Mi
24   default:
25     cpu: 100m
26     memory: 500Mi
27   defaultRequest:
28     cpu: 100m
29     memory: 500Mi
30   maxLimitRequestRatio:
31     cpu: '2'
```

+ Etiket ekle

👤 Tepki ekleyen ilk siz olun