CS571
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Week 12

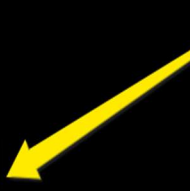## Simplifying API server communication with ambassador containers

Running the curl pod with an additional ambassador container
 -The ambassador container, running the kubectl-proxy image

```
mansishah@macbookpro downward % vim curl-with-ambassador.yaml
mansishah@macbookpro downward % cat curl-with-ambassador.yaml
apiVersion: v1
kind: Pod
metadata:
  name: curl-with-ambassador
spec:
  containers:
  - name: main
    image: tutum/curl
    command: ["sleep", "9999999"]
  - name: ambassador
    image: luksa/kubectl-proxy:1.6.2
mansishah@macbookpro downward % kubectl create -f curl-with-ambassador.yaml
pod/curl-with-ambassador created
mansishah@macbookpro downward % kubectl get pod
NAME                    READY    STATUS       RESTARTS    AGE
curl                    1/1      Running      0           129m
curl-with-ambassador    2/2      Running      0           9s
downward                1/1      Running      0           6h1m
my-job-nglj9            0/1      Completed    0           4h42m
mansishah@macbookpro downward %
```

Talking to the API server through the ambassador:
-By default, kubectl proxy binds to port 8001, and because both containers in the pod share the same network interfaces.

```
mansishah@macbookpro downward % kubectl exec -it curl-with-ambassador -c main bash
root@curl-with-ambassador:/# curl localhost:8001
{
  "paths": [
    "/api",
    "/api/v1",
    "/apis",
    "/apis/",
    "/apis/admissionregistration.k8s.io",
    "/apis/admissionregistration.k8s.io/v1",
    "/apis/admissionregistration.k8s.io/v1beta1",
    "/apis/apiextensions.k8s.io",
    "/apis/apiextensions.k8s.io/v1",
    "/apis/apiextensions.k8s.io/v1beta1",
    "/apis/apiregistration.k8s.io",
    "/apis/apiregistration.k8s.io/v1",
    "/apis/apiregistration.k8s.io/v1beta1",
    "/apis/apps",
    "/apis/apps/v1",
    "/apis/authentication.k8s.io",
    "/apis/authentication.k8s.io/v1",
    "/apis/authentication.k8s.io/v1beta1",
    "/apis/authorization.k8s.io",
    "/apis/authorization.k8s.io/v1",
    "/apis/authorization.k8s.io/v1beta1",
    "/apis/autoscaling",
    "/apis/autoscaling/v1",
    "/apis/autoscaling/v2beta1",
    "/apis/autoscaling/v2beta2",
    "/apis/batch",
    "/apis/batch/v1",
    "/apis/batch/v1beta1",
    "/apis/certificates.k8s.io",
    "/apis/certificates.k8s.io/v1beta1",
    "/apis/coordination.k8s.io",
    "/apis/coordination.k8s.io/v1",
    "/apis/coordination.k8s.io/v1beta1",
    "/apis/discovery.k8s.io",
    "/apis/discovery.k8s.io/v1beta1",
    "/apis/events.k8s.io",
    "/apis/events.k8s.io/v1beta1",
    "/apis/extensions",
    "/apis/extensions/v1beta1",
    "/apis/networking.k8s.io",
    "/apis/networking.k8s.io/v1",
```

```
  "/livez",
  "/livez/autoregister-completion",
  "/livez/etcd",
  "/livez/log",
  "/livez/ping",
  "/livez/poststarthook/apiservice-openapi-controller",
  "/livez/poststarthook/apiservice-registration-controller",
  "/livez/poststarthook/apiservice-status-available-controller",
  "/livez/poststarthook/bootstrap-controller",
  "/livez/poststarthook/crd-informer-synced",
  "/livez/poststarthook/generic-apiserver-start-informers",
  "/livez/poststarthook/kube-apiserver-autoregistration",
  "/livez/poststarthook/rbac/bootstrap-roles",
  "/livez/poststarthook/scheduling/bootstrap-system-priority-classes",
  "/livez/poststarthook/start-apiextensions-controllers",
  "/livez/poststarthook/start-apiextensions-informers",
  "/livez/poststarthook/start-cluster-authentication-info-controller",
  "/livez/poststarthook/start-kube-aggregator-informers",
  "/livez/poststarthook/start-kube-apiserver-admission-initializer",
  "/logs",
  "/metrics",
  "/openapi/v2",
  "/readyz",
  "/readyz/autoregister-completion",
  "/readyz/etcd",
  "/readyz/log",
  "/readyz/ping",
  "/readyz/poststarthook/apiservice-openapi-controller",
  "/readyz/poststarthook/apiservice-registration-controller",
  "/readyz/poststarthook/apiservice-status-available-controller",
  "/readyz/poststarthook/bootstrap-controller",
  "/readyz/poststarthook/crd-informer-synced",
  "/readyz/poststarthook/generic-apiserver-start-informers",
  "/readyz/poststarthook/kube-apiserver-autoregistration",
  "/readyz/poststarthook/rbac/bootstrap-roles",
  "/readyz/poststarthook/scheduling/bootstrap-system-priority-classes",
  "/readyz/poststarthook/start-apiextensions-controllers",
  "/readyz/poststarthook/start-apiextensions-informers",
  "/readyz/poststarthook/start-cluster-authentication-info-controller",
  "/readyz/poststarthook/start-kube-aggregator-informers",
  "/readyz/poststarthook/start-kube-apiserver-admission-initializer",
  "/readyz/shutdown",
  "/version"
]
root@curl-with-ambassador:/#
```