

Lab4 Notes/Findings

Step1: Install/Setup Istio:

```
kacper@UNKNOWN:~$ curl -L https://istio.io/downloadIstio | sh -
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           Dload  Upload   Total     Spent    Left     Speed
100   102  100   102    0     0    573      0 --:--:-- --:--:-- --:--:--   573
100  5124  100  5124    0     0  13764      0 --:--:-- --:--:-- --:--:--  13764

Downloading istio-1.26.0 from https://github.com/istio/istio/releases/download/1.26.0/istio-1.26.0-linux-amd64.tar.gz ...

Istio 1.26.0 download complete!

The Istio release archive has been downloaded to the istio-1.26.0 directory.

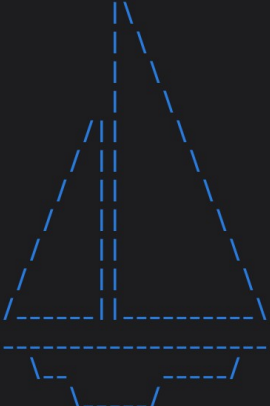
To configure the istioctl client tool for your workstation,
add the /home/kacper/istio-1.26.0/bin directory to your environment path variable with:
    export PATH="$PATH:/home/kacper/istio-1.26.0/bin"

Begin the Istio pre-installation check by running:
    istioctl x precheck

Try Istio in ambient mode
    https://istio.io/latest/docs/ambient/getting-started/
Try Istio in sidecar mode
    https://istio.io/latest/docs/setup/getting-started/
Install guides for ambient mode
    https://istio.io/latest/docs/ambient/install/
Install guides for sidecar mode
    https://istio.io/latest/docs/setup/install/

Need more information? Visit https://istio.io/latest/docs/
kacper@UNKNOWN:~$ cd istio-1.26.0/
kacper@UNKNOWN:~/istio-1.26.0$ sudo install -m 755 bin/istioctl /usr/local/bin/
[sudo] password for kacper:
kacper@UNKNOWN:~/istio-1.26.0$ istioctl version --remote=false
client version: 1.26.0
kacper@UNKNOWN:~/istio-1.26.0$
```

```
kacper@UNKNOWN:~/istio-1.26.0$ istioctl install --set profile=demo -y
```



```

✓ Istio core installed 🚢
✓ Istiod installed 🧠
✓ Egress gateways installed 🛩️
✓ Ingress gateways installed 🛩️
✓ Installation complete
kacper@UNKNOWN:~/istio-1.26.0$ istioctl verify-install
Error: unknown command "verify-install" for "istioctl"
Run 'istioctl --help' for usage.
kacper@UNKNOWN:~/istio-1.26.0$ istioctl verify-install
Error: unknown command "verify-install" for "istioctl"
Run 'istioctl --help' for usage.
kacper@UNKNOWN:~/istio-1.26.0$ kubectl get pods -n istio-system
NAME                                READY   STATUS    RESTARTS   AGE
istio-egressgateway-675cdb9f4b-bwp22 1/1     Running   0           40s
istio-ingressgateway-6cd9bc7f5b-dz8n9 1/1     Running   0           40s
istiod-7f898458c5-sm4bs               1/1     Running   0           50s
kacper@UNKNOWN:~/istio-1.26.0$

```

Step2: Enable Automatic sidecar injection:

```
kacper@UNKNOWN:~/istio-1.26.0$ kubectl label namespace default istio-injection=enabled --overwrite
kubectl get namespace -L istio-injection
namespace/default labeled
NAME          STATUS    AGE      ISTIO-INJECTION
default       Active    9d        enabled
istio-system  Active    3m48s
kube-node-lease Active    9d
kube-public   Active    9d
kube-system   Active    9d
kacper@UNKNOWN:~/istio-1.26.0$
```

Step3: Deploy Bookinfo Sample App:

```
kacper@UNKNOWN:~/istio-1.26.0$ kubectl apply -f samples/bookinfo/platform/kube/bookinfo.yaml
kubectl get pods,svc -n default
service/details created
serviceaccount/bookinfo-details created
deployment.apps/details-v1 created
service/ratings created
serviceaccount/bookinfo-ratings created
deployment.apps/ratings-v1 created
service/reviews created
serviceaccount/bookinfo-reviews created
deployment.apps/reviews-v1 created
deployment.apps/reviews-v2 created
deployment.apps/reviews-v3 created
service/productpage created
serviceaccount/bookinfo-productpage created
deployment.apps/productpage-v1 created
```

NAME	READY	STATUS	RESTARTS	AGE
pod/details-v1-766844796b-cmf5p	0/2	Init:0/1	0	0s
pod/productpage-v1-54bb874995-kd5qs	0/2	Init:0/1	0	0s
pod/ratings-v1-5dc79b6bcd-xz9p9	0/2	Init:0/1	0	0s
pod/reviews-v1-598b896c9d-n22l8	0/2	Init:0/1	0	0s
pod/reviews-v2-556d6457d-t65sn	0/2	Init:0/1	0	0s
pod/reviews-v3-564544b4d6-5gmj8	0/2	Init:0/1	0	0s

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/details	ClusterIP	10.96.210.146	<none>	9080/TCP	0s
service/kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	9d
service/productpage	ClusterIP	10.96.188.194	<none>	9080/TCP	0s
service/ratings	ClusterIP	10.96.160.120	<none>	9080/TCP	0s
service/reviews	ClusterIP	10.105.89.132	<none>	9080/TCP	0s

```
kacper@UNKNOWN:~/istio-1.26.0$
```

```
kacper@UNKNOWN:~/istio-1.26.0$ kubectl get pod | grep -E 'productpage|reviews|details|ratings'
```

details-v1-766844796b-6cddv	2/2	Running	0	8m47s
productpage-v1-54bb874995-2hmg8	2/2	Running	0	8m47s
ratings-v1-5dc79b6bcd-glask	2/2	Running	0	8m47s
reviews-v1-598b896c9d-84rnm	2/2	Running	0	8m47s
reviews-v2-556d6457d-z4s2j	2/2	Running	0	8m47s
reviews-v3-564544b4d6-s4rbg	2/2	Running	0	8m47s

```
kacper@UNKNOWN:~/istio-1.26.0$
```

Step4: Minicube Tunnel:

```
kacper@UNKNOWN:~/istio-1.26.0$ minikube tunnel --profile=minikube
[sudo] password for kacper:
Status:
  machine: minikube
  pid: 28074
  route: 10.96.0.0/12 -> 192.168.49.2
  minikube: Running
  services: [bookinfo-gateway-istio, istio-ingressgateway]
errors:
  minikube: no errors
  router: no errors
  loadbalancer emulator: no errors
```

```
kacper@UNKNOWN:~/istio-1.26.0$ ADDR=$(kubectl get gateway bookinfo-gateway \
-o jsonpath='{.status.addresses[0].value}')
curl -I -H "Host: bookinfo.example.com" "http://${ADDR}/productpage"
HTTP/1.1 200 OK
server: istio-envoy
date: Thu, 15 May 2025 16:38:13 GMT
content-type: text/html; charset=utf-8
content-length: 15068
vary: Cookie
x-envoy-upstream-service-time: 638

kacper@UNKNOWN:~/istio-1.26.0$ xdg-open "http://${ADDR}/productpage"
kacper@UNKNOWN:~/istio-1.26.0$ Opening in existing browser session.
kacper@UNKNOWN:~/istio-1.26.0$ █
```

BookInfo Sample

Sign in

The Comedy of Errors


Wikipedia Summary: The Comedy of Errors is one of **William Shakespeare's** early plays. It is his shortest and one of his most farcical comedies, with a major part of the humour coming from slapstick and mistaken identity, in addition to puns and word play.

[Learn more about Istio →](#)


Book Details

ISBN-10	Publisher	Pages	Type	Language
1234567890	PublisherA	200	paperback	English

Book Reviews

★★★★★
"An extremely entertaining play by Shakespeare. The slapstick humour is refreshing!"


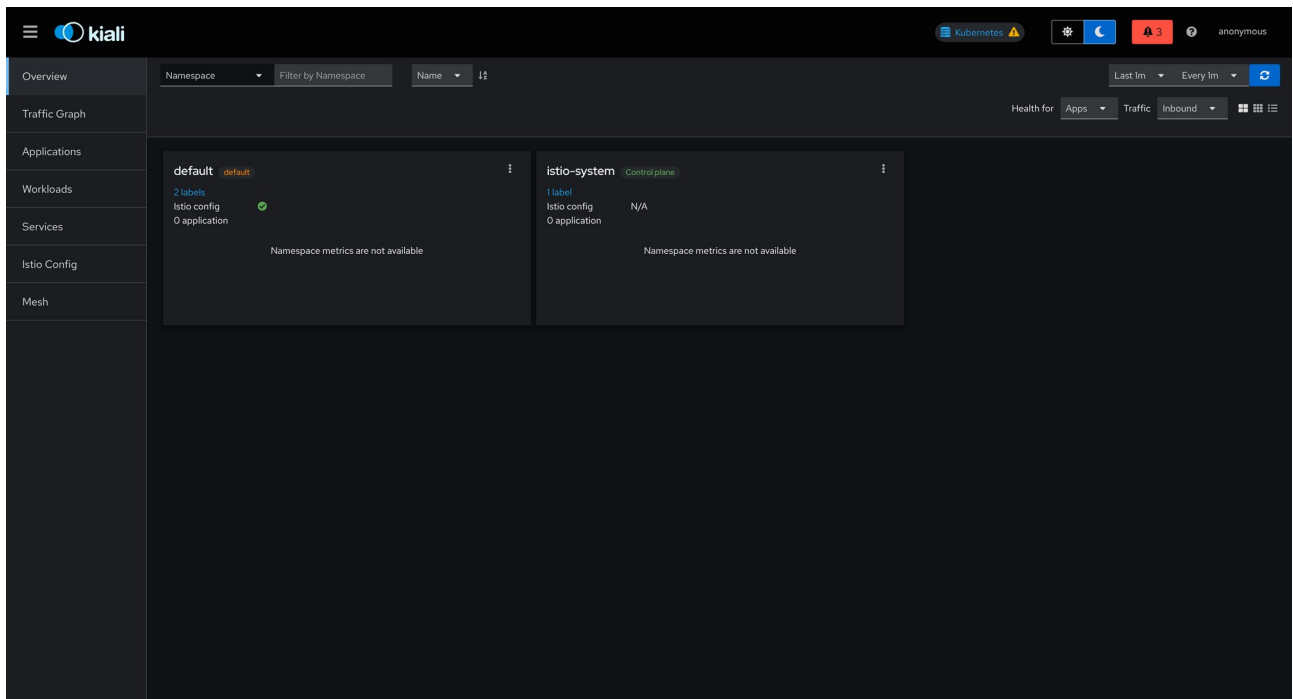
Reviewer1
Reviews served by: reviews-v2-556d6457d-z4s2j

★★★★☆
"Absolutely fun and entertaining. The play lacks thematic depth when compared to other plays by Shakespeare."


Reviewer2
Reviews served by: reviews-v2-556d6457d-z4s2j

Step5: Launching in Kiali Dashboard:

```
kacper@UNKNOWN:~/istio-1.26.0$ istioctl dashboard kiali &
[1] 30156
kacper@UNKNOWN:~/istio-1.26.0$ Error: no pods found with selector app=kiali
istioctl dashboard kiali
Error: no pods found with selector app=kiali
[1]+  Exit 1                  istioctl dashboard kiali
kacper@UNKNOWN:~/istio-1.26.0$ bash<br>kubectl apply -f ${ISTIO_HOME}/samples/addons/kiali.yaml
bash: br: No such file or directory
kacper@UNKNOWN:~/istio-1.26.0$ kubectl apply -f ${ISTIO_HOME}/samples/addons/kiali.yaml
error: the path "/samples/addons/kiali.yaml" does not exist
kacper@UNKNOWN:~/istio-1.26.0$ kubectl apply -f ~/istio-1.26.0/samples/addons/kiali.yaml
serviceaccount/kiali created
configmap/kiali created
clusterrole.rbac.authorization.k8s.io/kiali created
clusterrolebinding.rbac.authorization.k8s.io/kiali created
service/kiali created
deployment.apps/kiali created
kacper@UNKNOWN:~/istio-1.26.0$ kubectl -n istio-system get pod -l app=kiali
NAME                                READY   STATUS    RESTARTS   AGE
kiali-6d774d8bb8-cclf5             0/1     Running   0           9s
kacper@UNKNOWN:~/istio-1.26.0$ istioctl dashboard kiali &
[1] 31864
kacper@UNKNOWN:~/istio-1.26.0$ http://localhost:20001/kiali
```



Step6: Cleanup:

```
kacper@UNKNOWN:~/istio-1.26.0$ kubectl delete -f samples/bookinfo/platform/kube/bookinfo.yaml
kubectl delete -f samples/bookinfo/gateway-api/bookinfo-gateway.yaml
kubectl delete -f samples/addons/kiali.yaml
istioctl uninstall -y
kubectl delete ns istio-system
minikube delete --purge
service "details" deleted
serviceaccount "bookinfo-details" deleted
deployment.apps "details-v1" deleted
service "ratings" deleted
serviceaccount "bookinfo-ratings" deleted
deployment.apps "ratings-v1" deleted
service "reviews" deleted
serviceaccount "bookinfo-reviews" deleted
deployment.apps "reviews-v1" deleted
deployment.apps "reviews-v2" deleted
deployment.apps "reviews-v3" deleted
service "productpage" deleted
serviceaccount "bookinfo-productpage" deleted
deployment.apps "productpage-v1" deleted
gateway.gateway.networking.k8s.io "bookinfo-gateway" deleted
httproute.gateway.networking.k8s.io "bookinfo" deleted
serviceaccount "kiali" deleted
configmap "kiali" deleted
clusterrole.rbac.authorization.k8s.io "kiali" deleted
clusterrolebinding.rbac.authorization.k8s.io "kiali" deleted
service "kiali" deleted
deployment.apps "kiali" deleted
Error: at least one of the --revision (or --set revision=<revision>), --filename or --purge flags must be set
namespace "istio-system" deleted
2025-05-15T16:51:37.412173Z error klog an error occurred forwarding 20001 -> 20001: error forwarding port 20001 to pod 0dd27caf8f397271092bddcd4bb9322107c37129cdf9cc8caa39cd397f10b527, uid : container no
t running (0dd27caf8f397271092bddcd4bb9322107c37129cdf9cc8caa39cd397f10b527): Unhandled Error logger=UnhandledError
2025-05-15T16:51:37.414871Z error port forward failed: lost connection to pod
❗ Deleting "minikube" in docker ...
❗ Deleting container "minikube" ...
🔥 Removing /home/kacper/.minikube/machines/minikube ...
🗑️ Removed all traces of the "minikube" cluster.
🎉 Successfully purged minikube directory located at - [/home/kacper/.minikube]
❗ Minikube images have not been deleted. To delete images run:
  * docker rmi gcr.io/k8s-minikube/kicbase:v0.0.46
```