

Steps to deploy Train-Ticket

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Here are the steps to install trainticket v1.0.

Dependencies

1. An existing Kubernetes cluster

Here are a few recommended documents of Kubernetes installation for reference:

<https://kubernetes.io/docs/setup/>

<https://phoenixnap.com/kb/how-to-install-kubernetes-on-centos#ftoc-heading=3>

2. Helm

You can see https://helm.sh/docs/helm/helm_install/ for helm install.

1. Select and download the latest release from [Helm repository](#)
2. Unzip and copy

```
mv linux-amd64/helm /usr/local/bin/helm
```

3. LocalPV

You can see <https://openebs.io/docs/2.12.x/user-guides/installation> for localPV support.

1. Temporarily remove taint on the master node before installation

```
# Replace `k8s-master` with the name of your master node
kubectl taint nodes k8s-master node-
role.kubernetes.io/master:NoSchedule-
```

2. Run this command on the master node

```
kubectl apply -f https://openebs.github.io/charts/openebs-
operator.yaml
```

3. Then re-add traint

```
kubectl taint nodes k8s-master node-  
role.kubernetes.io/master=:NoSchedule  
# Ignore the error (error: taint "node-role.kubernetes.io/master"  
not found)
```

4. Set the default StorageClass

```
kubectl patch storageclass openebs-hostpath -p '{"metadata":  
{"annotations":{"storageclass.kubernetes.io/is-default-  
class":"true"}}}'
```

```
[root@master ~]# kubectl get pod -n openebs  
NAME                                READY   STATUS    RESTARTS   AGE  
openebs-localpv-provisioner-5d88cb474b-b55bw    1/1     Running   0           3h33m  
openebs-ndm-cluster-exporter-84bb5fc764-dnhlm  1/1     Running   0           3h33m  
openebs-ndm-h7zh4                             1/1     Running   0           3h33m  
openebs-ndm-node-exporter-gfwqk                1/1     Running   0           3h33m  
openebs-ndm-node-exporter-pl8ql                1/1     Running   0           3h33m  
openebs-ndm-node-exporter-svxwg                1/1     Running   0           3h33m  
openebs-ndm-node-exporter-wbmcl                1/1     Running   0           3h33m  
openebs-ndm-operator-7657446466-tfs2h         1/1     Running   0           3h33m  
openebs-ndm-rrbch                              1/1     Running   0           3h33m  
openebs-ndm-vl8w6                              1/1     Running   0           3h33m  
openebs-ndm-znc8r                              1/1     Running   0           3h33m
```

Deployment of Train-Ticket

Quick Start

1. Git clone

```
git clone https://github.com/FudanSELab/train-ticket.git  
cd train-ticket
```

2. Deploy

The deployment script has been configured, providing following commands for quick start:

```
make deploy
```

```
k8s-master [~]$ kubectl get pods
```

NAME	READY	STATUS	RESTARTS	AGE
nacos-0	1/1	Running	0	29d
nacos-1	1/1	Running	0	6h50m
nacos-2	1/1	Running	0	29d
nacosdb-mysql-0	2/3	Running	0	29d
nacosdb-mysql-1	3/3	Running	0	29d
nacosdb-mysql-2	3/3	Running	0	6h32m
rabbitmq-7dffdd7bb8-4dml	1/1	Running	0	18d
ts-admin-basic-info-service-595db5b9cf-fsmjv	1/1	Running	0	18d
ts-admin-basic-info-service-595db5b9cf-hlgmr	1/1	Running	0	18d
ts-admin-order-service-77b645d88f-srwqm	1/1	Running	0	18d
ts-admin-order-service-77b645d88f-tbh5m	1/1	Running	0	18d
ts-admin-route-service-77cd6cf987-774j6	1/1	Running	0	18d
ts-admin-route-service-77cd6cf987-b64nc	1/1	Running	0	18d
ts-admin-travel-service-d5c4d76b4-jslb2	1/1	Running	0	8d
ts-admin-travel-service-d5c4d76b4-w8ss7	1/1	Running	0	8d
ts-admin-user-service-57fbb896c4-4qzxc	1/1	Running	0	18d
ts-admin-user-service-57fbb896c4-sr2sw	1/1	Running	0	18d
ts-assurance-service-67584bc8ff-sd848	1/1	Running	0	18d
ts-assurance-service-67584bc8ff-wcclb	1/1	Running	0	18d
ts-auth-service-557dfdd4bf-pt7dz	1/1	Running	0	18d
ts-auth-service-557dfdd4bf-rz5k5	1/1	Running	0	18d
ts-avatar-service-5998599df8-fvsng	1/1	Running	0	18d
ts-avatar-service-5998599df8-kxxs2	1/1	Running	0	18d
ts-basic-service-dc47b9966-bgrkm	1/1	Running	0	8d
ts-basic-service-dc47b9966-rxxbd	1/1	Running	0	8d
ts-cancel-service-646644ddf4-ccrwm	1/1	Running	0	8d
ts-cancel-service-646644ddf4-gzzxm	1/1	Running	0	8d
ts-config-service-7578bd9cf7-ckrfj	1/1	Running	0	18d
ts-config-service-7578bd9cf7-mbj2l	1/1	Running	0	29d
ts-consign-price-service-c5f7dc849-cjslc	1/1	Running	0	8d
ts-consign-price-service-c5f7dc849-cxt95	1/1	Running	0	8d
ts-consign-service-97b57cdf6-j9pzg	1/1	Running	0	18d
ts-consign-service-97b57cdf6-s8fhj	1/1	Running	0	18d
ts-contacts-service-7586d57c67-922bp	1/1	Running	0	29d
ts-contacts-service-7586d57c67-bns65	1/1	Running	0	18d
ts-delivery-service-7ff949f98f-5cf66	1/1	Running	0	18d
ts-delivery-service-7ff949f98f-mpbfr	1/1	Running	0	29d
ts-execute-service-74b9955ddc-2vxm2	1/1	Running	0	18d
ts-execute-service-74b9955ddc-9lv7w	1/1	Running	0	29d
ts-food-delivery-service-86ddfd6bf7-8vt8j	1/1	Running	0	29d
ts-food-delivery-service-86ddfd6bf7-phwvp	1/1	Running	0	8d
ts-food-service-57ff7645dc-g8gcc	1/1	Running	0	18d
ts-food-service-57ff7645dc-zn7qw	1/1	Running	0	18d
ts-gateway-service-5866f657c6-9jkhc	1/1	Running	0	18d
ts-gateway-service-5866f657c6-vb7jt	1/1	Running	0	18d
ts-inside-payment-service-59c4bc8bb7-5rdxt	1/1	Running	0	8d
ts-inside-payment-service-59c4bc8bb7-l95k7	1/1	Running	0	8d
ts-news-service-8579ff9b5f-hb6pd	1/1	Running	0	8d
ts-news-service-8579ff9b5f-llqjc	1/1	Running	0	8d
ts-notification-service-f87b8776c-2csxw	1/1	Running	0	29d
ts-notification-service-f87b8776c-hl5ds	1/1	Running	0	29d
ts-order-other-service-5b5666cd96-7ncfg	1/1	Running	0	18d
ts-order-other-service-5b5666cd96-j59m6	1/1	Running	0	18d
ts-order-service-5c8b698d7b-bnvq7	1/1	Running	0	29d
ts-order-service-5c8b698d7b-dgp4p	1/1	Running	0	18d
ts-payment-service-5fb5487dd5-5fznr	1/1	Running	0	8d

Uninstall

1. Withdrawal of installation:

```
make reset-deploy
```

2. Remove Completely

`make reset-deploy` does not completely delete all related resources.

Here are the steps to completely clear the Train-Ticket related resource objects:

1. use `make reset-deploy` to delete most resource.
2. use `helm list` and `helm uninstall` to delete pod of databases.

```
k8s-master [~]$ helm list
NAME          NAMESPACE    REVISION    UPDATED                               STATUS    CHART          APP VERSION
nacos         default       1           2022-12-05 13:31:39.265632488 +0800 CST deployed  nacos-0.1.5   1.0
nacosdb       default       1           2022-12-05 13:30:39.893074998 +0800 CST deployed  mysql-1.0.0   5.7.34
rabbitmq      default       1           2022-12-05 13:31:50.943276122 +0800 CST deployed  rabbitmq-3    1.0
tsdb          default       1           2022-12-05 13:31:53.078241844 +0800 CST deployed  mysql-1.0.0   5.7.34
```

3. delete pvc and pv

Please ensure that all pods are deleted first, and then delete the PVC before deleting the PV.