Assumptions:

- Running Kubernetes Cluster with access to kubectl client
 - kubectl version

```
Client Version: version.Info{Major:"1", Minor:"18", GitVersion:"v1.18.3", GitCommit:"2e7996e3e2712684bc73f0dec0200d64eec7fe40", GitTreeState:"clean", BuildDate:"2020–05–20T12:52:00Z", GoVersion:"go1.13.9", Compiler:"gc", Platform:"linux/amd64"}

Server Version: version.Info{Major:"1", Minor:"18", GitVersion:"v1.18.3", oVersion:"go1.13.9", Compiler:"gc", Platform:"linux/amd64"}
```

Steps

- Clone the repository
 - git clone https://github.com/hellodk/assignment.git
- Now go to the directory
 - cd assignment
- Create a namespace thoughtworks(optional, I've not used it)
 - kubectl create ns thoughtworks
- o Create StatefulSet & Headless Service for MySQL
 - kubectl apply -f mysql-statefulsets

```
dk@typHooN:~/Documents/git/assignment$ kubectl apply -f mysql-statefulsets
configmap/initdb created
configmap/mysql created
service/mysql-read created
service/mysql-read created
statefulset.apps/mysql created
storageclass.storage.k8s.io/local-storage created
persistentvolume/mysql-volume created
persistentvolumeclaim/mysql-claim created
```

- Create Deployment and Service(NodePort)
 - kubectl apply -f mediawiki
- List the pods and service
 - kubectl get po, svc

```
dk@typHooN:~/Documents/git/assignment$ kubectl get po.svc
NAME
                                   READY
                                            STATUS
                                                      RESTARTS
                                                                  AGE
pod/mediawiki-84bbdbdf68-p8vpt
                                   1/1
                                            Running
                                                                  12m
pod/mysql-0
                                   2/2
                                            Running
                                                      0
                                                                  12m
NAME
                      TYPE
                                   CLUSTER-IP
                                                    EXTERNAL-IP
                                                                   PORT(S)
                                                                                   AGE
                                                                   443/TCP
service/kubernetes
                                   10.233.0.1
                                                                                    29h
                      ClusterIP
                                                    <none>
service/mediawiki
                                   10.233.58.217
                                                                   80:31840/TCP
                      NodePort
                                                    <none>
                                                                                    12m
service/mysql
                                                                   3306/TCP
                      ClusterIP
                                                                                    12m
                                   None
                                                    <none>
service/mysql-read
                      ClusterIP
                                   10.233.29.36
                                                                   3306/TCP
                                                                                    12m
                                                    <none>
```

Create the users and databases

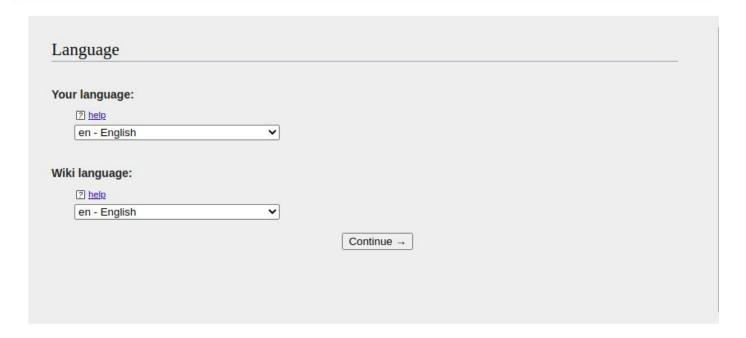
kubectl run mysql-client --image=mysql:5.7 -i --rm --restart=Never --\
mysql -h mysql-0.mysql <<EOF
CREATE USER 'wiki'@'%' IDENTIFIED BY 'mysqladmin';
CREATE DATABASE wikidatabase;
GRANT ALL PRIVILEGES ON wikidatabase.* TO 'wiki'@'%';
FLUSH PRIVILEGES;</p>
EOF

Test if the users and the databases have been created

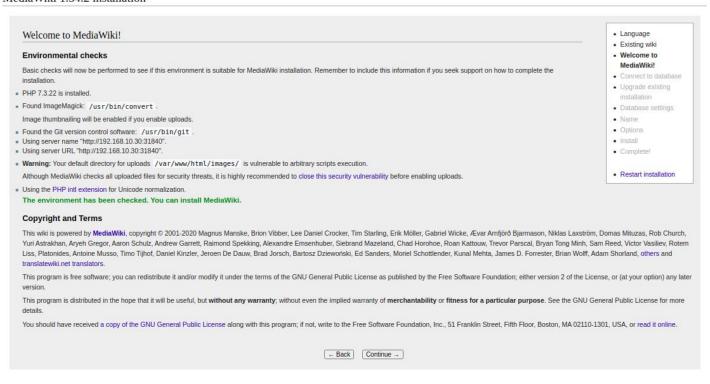
- kubectl run mysql-client --image=mysql:5.7 -i -t --rm --restart=Never -- bash -ic "mysql -h mysql-read -e 'SELECT user, host FROM mysql.user';"
- kubectl run mysql-client-loop1 --image=mysql:5.7 -i -t --rm --restart=Never -- bash -ic "mysql -h mysql-read -e 'show databases':"

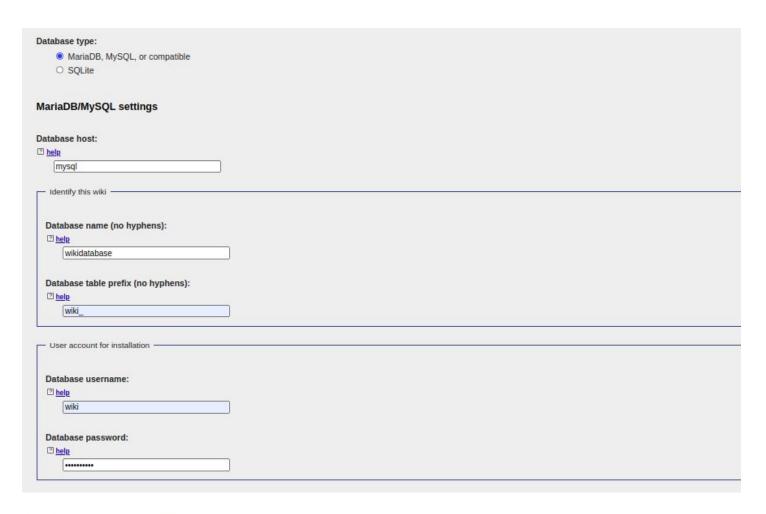
o Now go to the UI and complete the setup as shown in the screenshots

MediaWiki 1.34.2 installation

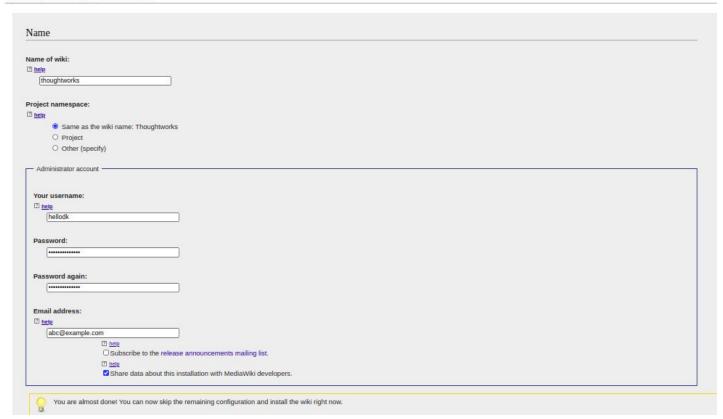


MediaWiki 1.34.2 installation





MediaWiki 1.34.2 installation





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MediaWiki 1.34.2 installation

Complete!



Congratulations! You have installed MediaWiki.

The installer has generated a LocalSettings.php file. It contains all your configuration.

You will need to download it and put it in the base of your wiki installation (the same directory as index.php). The download should have started automatically.

If the download was not offered, or if you cancelled it, you can restart the download by clicking the link below:



Download LocalSettings.php

Note: If you do not do this now, this generated configuration file will not be available to you later if you exit the installation without downloading it.

When that has been done, you can enter your wiki.

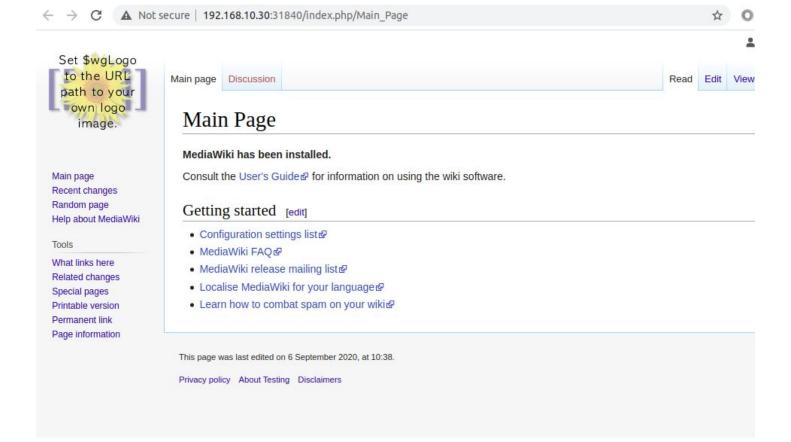


Did you know that your wiki supports extensions?

You can browse extensions by category.



- Go to the Downloads folder where the file has been downloaded
- Now copy the LocalSettings.php to the mediawiki container
 - kubectl cp ~/Downloads/LocalSettings.php mediawiki-84bbdbdf68-pgw6t:/var/www/html/
- Copying files to pods/containers is not a correct way Contradicts immutable images
- Unfortunately we can not help much here because of the following reasons:
 - The application is designed in such a way
 - I've just worked on mediawiki today I do not know if a better technique exists
- Now go to the browser and type <IP>:38014



• Improvements:

- Ingress can be used instead of NodePort
- StorageClasses can be used extensively for dynamic volume creation