**World Cereal Reference Data Module Deployment Guide**

Diagram

Description automatically generated

Reference data module consist of following deployment items broadly

1. Postgres database with Postgis: Image for this db is pushed in harbour  
   world-cereal/rdm/postgis
2. RDM website: Docker image is pushed in harbour  
   world-cereal/rdm/web
3. RDM API: Docker image for this is pushed in harbour  
   world-cereal/rdm/restapi
4. PVC/PV: persistence storage for postgres and API. yml file is pushed in github repo.

There are other auxiliary Kubernetes items like Secrets, required for getting the images from harbour, jobs for initial data seed and pgadmin website to view the database are not mentioned here, but will be explained in this document further

The necessary files required for deployment are pushed to git repository and can be executed one by one to complete the deployment

Steps for deployment:

1. Very first step is to create a namespace for rdm. You can find the scripts for this in the “init” folder: kubectl create ns rdm
2. Next create secrets to access the harbour images and add bitnami repository for using the helm charts - init-deployment.yaml. Update the secrets based on the production deployment values4
3. Apply the pvc.yml to create restapi-pvc required for the rest APIs
4. Create Databases:

Postgres with Postgis extension is used. The bitnami helm chart is used for deployment. The values file required for helm deployment is pushed in git repository. The PVC/PV are created implicitly by the helm chat

1. Install master database:  
   helm install rdm bitnami/postgresql --version 10.9.4 --values values.yaml -n rdm
2. Install community database  
   helm install rdm-cdb bitnami/postgresql --version 10.9.4 --values values.yaml -n rdm
3. Install reference database  
   helm install rdm-rdb bitnami/postgresql --version 10.9.4 --values values.yaml -n rdm
4. Next step is the deploy the database migrator. Update the connection string in rdmDbMigrate\job.yml and execute the below command and wait till the job is completed.  
   kubectl apply -f migrate/job.yml -n rdm  
   This will migrate and prepare the database for rest API to access by creating tables and seed data.
5. Create reference database and seed data  
   Update the connection string in rdmRefDbUpdate\job.yml and execute the below command and wait till the job is completed  
   kubectl apply -f rdmRefDbUpdate/job.yml -n rdm  
   This will download and create all the consortium datasets
6. Next step is to deploy the website  
   helm install rdmui bitnami/nginx --values rdmui/values.yaml -n rdm  
   Update the environmental variables and execute this cmd to deploy website.
7. Deploy combined ingress for API and website  
   The ingress annotations needs to be updated based in the https configuration in the deployment environment.  
   kubectl apply -f rdm-ingress/ingress.yaml -n rdm
8. Create users in keycloak and assign user\_id roles and groups. Use this credential to login to website. make sure there are 2 user groups created ewoc\_user and ewoc\_admin. Assign ewoc\_user to website users and other group to website admins.