Run book for SolrCloud configuration in K8S.

Step 2: Make sure your K8S running

Step 2: Install SolrCloud in k3s.

git clone https://github.com/freedev/solrcloud-zookeeper-kubernetes.git

cd solrcloud-zookeeper-kubernetes

Step 3: Make below changes to add 2 nodes to single solrcloud cluster

1) Navigate to statefulsets folder and modify below files to change replica to 3.

Statefulset-zookeeper-ensemble.yml

Statefulset-zookeeper.yml

Statefulset-solr-cluster.yml (change to 4)

Statefulset-solr.yml

2) Navigate to configmap folder and modify solr-config.properties to add other zookeeper details in ensemble

zkHost=zk-0.zkensemble:2181, zk-1.zkensemble:2181, zk-2.zkensemble:2181

3) Navigate to minikube folder and change the app version to V1 in below folders

Storageclass-solrcluster.yml

Storageclass-zkensemble.yml

4) Run below command to create/deploy SolrCloud cluster

./start-minikube.sh

Run below query to check pods

Kubectl get pods

You can access solar master at http://< external ip>:8983/solr

 or

Run minikube service list and click on the URL for SolrCloud.

Once SolrCloud is up and running,

To change the solr configuration, we need to login into the pod.
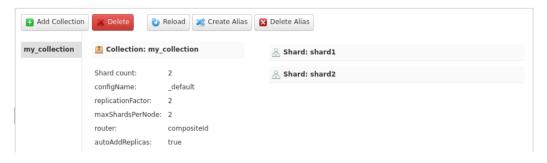
Kubectl -it exec podname -c conatinername bash

Eg: kubectl -it exec solr-0 -c solr bash.

Collection creation

1) Create a Collection in API using 2 shards and 2 replicas.

   My_collection

2) Use maxshards per node as 2

| Add Collection | Delete | Reload | Create Alias | Delete Alias |

my_collection

Collection: my_collection

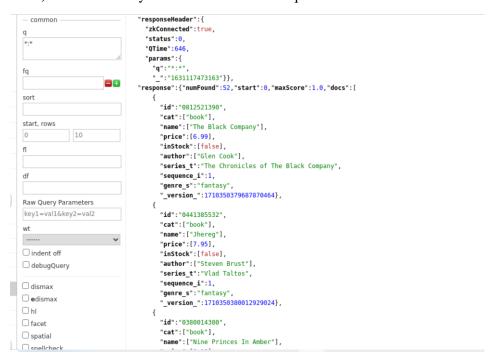|			
Shard count:	2		**Shard: shard1**
configName:	_default		**Shard: shard2**
replicationFactor:	2		
maxShardsPerNode:	2		
router:	compositeId		
autoAddReplicas:	true		

3) Once collection is create we can load using post

Post -c my_collection data files

Eg : post -c mycollection example/exampledocs/*

4) Once created you can check the data in queries

```
"responseHeader":{
  "zkConnected":true,
  "status":0,
  "QTime":646,
  "params":{
    "q":"*:*",
    "_":"1631117473163"}},
"response":{"numFound":52,"start":0,"maxScore":1.0,"docs":[
  {
    "id":"0812521390",
    "cat":["book"],
    "name":["The Black Company"],
    "price":[6.99],
    "inStock":[false],
    "author":["Glen Cook"],
    "series_t":"The Chronicles of The Black Company",
    "sequence_i":1,
    "genre_s":"fantasy",
    "_version_":1710350379687870464},
  {
    "id":"0441385532",
    "cat":["book"],
    "name":["Jhereg"],
    "price":[7.95],
    "inStock":[false],
    "author":["Steven Brust"],
    "series_t":"Vlad Taltos",
    "sequence_i":1,
    "genre_s":"fantasy",
    "_version_":1710350380012929024},
  {
    "id":"0380014300",
    "cat":["book"],
    "name":["Nine Princes In Amber"],
```

5) You can the shards and replicas and how many documents are loaded into each using nodes in Admin.

Refresh   Show all details

Hosts 1 - 3 of 3. Filter by: Host/node name   Show 10 hosts per page.

Host	Node	CPU	Heap	Disk usage	Requests	Collections	Replicas
solr-0.solrcluster Linux 5.4Gb Java 11 Load: 1.43 show details...	**8983_solr** Uptime: 16m show details...	**0%**	**31%**	**48.3Kb**	RPM: 0.04 p95: 912ms	my_collection	**my_collection_s2r4** (29 docs)
solr-1.solrcluster Linux 5.4Gb Java 11 Load: 1.43 show details...	**8983_solr** Uptime: 15m show details...	**0%**	**66%**	**50.1Kb**	RPM: 0.05 p95: 310ms	my_collection	**my_collection_s1r3** (23 docs)
solr-2.solrcluster Linux 5.4Gb Java 11 Load: 1.43 show details...	**8983_solr** Uptime: 15m show details...	**0%**	**57%**	**96.1Kb**	RPM: 0.02 p95: 364ms	my_collection	my_collection_s1r1 (23 docs) my_collection_s2r6 (29 docs)