Configuring App Cluster cAdvisor target in the Monitoring Cluster

Creating a Service Account with necessary privileges (In App Cluster)

(So we can authorize scrape requests made by Prometheus in the Monitoring Cluster)

- **Create Service Account**

```
kubectl create serviceaccount prometheus -n monitoring
```

```
kubectl get serviceaccounts prometheus -o yaml -n monitoring
```

```
[simuser@blp13509313 ~]$ kubectl get serviceaccounts prometheus -o yaml -n monitoring
apiVersion: v1
kind: ServiceAccount
metadata:
  creationTimestamp: "2022-08-17T16:48:13Z"
  name: prometheus
  namespace: monitoring
  resourceVersion: "7925423"
  uid: 9a4e7e90-dd4d-49e4-b0d6-81a72672742c
secrets:
- name: prometheus-token-g74pv
```

- **Get the bearer token associated with that secret**

```
kubectl describe secret prometheus-token-g74pv -n monitoring
```

```
[simuser@blp13509313 ~]$ kubectl describe secret prometheus-token-g74pv -n monitoring
Name:         prometheus-token-g74pv
Namespace:    monitoring
Labels:       <none>
Annotations:  kubernetes.io/service-account.name: prometheus
              kubernetes.io/service-account.uid: 9a4e7e90-dd4d-49e4-b0d6-81a72672742c

Type:  kubernetes.io/service-account-token

Data
====
ca.crt:     1066 bytes
namespace:  10 bytes
token:      eyJhbGciOiJSUzI1NiIsImtpZCI6Ik1xYlNPdzBpLVYtdHhCOURRR2RzZDIyVWlqeUdRbUJyQWJ1
YW1lc3BhY2UiOiJtb25pdG9yaW5nIiwia3ViZXJuZXRlcy5pby9zZXJ2aWNlYWNjb3VudC9zZWNyZXQubmFtZSI6
icHJvbWV0aGV1cyIsImt1YmVybmV0ZXMuaW8vc2VydmljZWFjY291bnQvc2VydmljZS1hY2NvdW50LnVpZCI6Ij
Byb21ldGhldXMifQ.jy0cYnljHyJHqp0dLDBsHz3iY2zi2OJmj5_oPBPf6kSFq7SerIlUF_r1Qky4q0jJrU6QrXH
Ha23ssdcq3dJncsBPX72jsE-Pm3HjuPYFIPa8SGm_7EBze9BKtz79Q0Y5O1cowxhrN1sWIUggJP9UYRiL7uZzol9
```

- **Create a ClusterRoleBinding to assign the service account a role with necessary privileges**

```
kubectl create clusterrolebinding prometheus-admin --clusterrole cluster-admin --user
system:serviceaccount:monitoring:prometheus --serviceaccount=monitoring:prometheus --
namespace=monitoring

kubectl get clusterrolebinding prometheus-admin -o wide
```

```
[simuser@blp13509313 ~]$ kubectl get clusterrolebinding prometheus-admin -o wide
NAME               ROLE                        AGE  USERS                                          SERVICEACCOUNTS
prometheus-admin   ClusterRole/cluster-admin   21h  system:serviceaccount:monitoring:prometheus    monitoring/prometheus
```

- **Get the Kubernetes Endpoint**

```
[simuser@blp13509313 ~]$ kubectl get ep
NAME         ENDPOINTS                                                     AGE
kubernetes   10.13.55.70:61149,10.55.130.193:61149,10.55.130.215:61149   15d
[simuser@blp13509313 ~]$
```

Configuring Prometheus (in Monitoring Cluster)

- **Add a bearer token file and the scrape targets yaml file.**

```
## Prometheus server ConfigMap entries
##
serverFiles:

  app-cluster-token: eyJhbGciOiJSUzI1NiIs

  app-cluster-node-targets.yml:
    - targets: ['10.55.130.193:61149']
      labels:
        __meta_node_name : blp13509313
    - targets: ['10.55.130.193:61149']
      labels:
        __meta_node_name : blp13509354
```

Add these 2 files under "`serverFiles`". Files mentioned here will be available to the Prometheus server pods in `/etc/config/` path on the working directory.

Bearer Token of the service account we created in the App Cluster

Kubernetes Endpoint of the App Cluster

Node Name Labels (For relabel_configs)

```
serverFiles:

  app-cluster-token: <token>

  app-cluster-node-targets.yml:
    - targets: ['<host>']
      labels:
        __meta_node_name : <node name>
```

- **Add a new cAdvisor Job in Prometheus scrape_configs**

```
scrape_configs:

 - job_name: 'kubernetes-nodes-cadvisor-application'
   scheme: https
   tls_config:
     insecure_skip_verify: true
   bearer_token_file: /etc/config/app-cluster-token
   file_sd_configs:
     - files:
       - /etc/config/app-cluster-node-targets.yml
   relabel_configs:
     - source_labels: [__meta_node_name]
       regex: (.+)
       target_label: __metrics_path__
       replacement: /api/v1/nodes/$1/proxy/metrics/cadvisor
```

- **Add kubernetes-nodes job for the App Cluster (Optional)**

```
 - job_name: 'kubernetes-nodes-application'
   scheme: https
   tls_config:
     insecure_skip_verify: true
   bearer_token_file: /etc/config/app-cluster-token
   file_sd_configs:
     - files:
       - /etc/config/app-cluster-node-targets.yml
   relabel_configs:
     - source_labels: [__meta_node_name]
       regex: (.+)
       target_label: __metrics_path__
       replacement: /api/v1/nodes/$1/proxy/metrics
```

- **Check added targets in Prometheus**