Kubernetes Secret

What Are Kubernetes Secrets?

Kubernetes secrets let you store and manage sensitive information, such as passwords, OAuth tokens, and SSH keys. Storing confidential data in secrets is safer than plain ConfigMaps or in pod specifications.

Step 1: Create a Secret Using kubectl

There are several ways to create secrets using kubectl. One common method is to create a secret from one or more files. For instance, if you want to create a secret from a file containing your database password:

Prepare Your Data

Create a file named db-password.txt and write your password in it. Make sure not to include a newline unless it is part of the password.

vim db-password.txt

Note: add any desired password ex: root1234. And save and exit the file

Create the Secret

Use kubectl create secret to make a secret named db-password-secret:

kubectl create secret generic db-password-secret --from-file=db-password.txt

Step 2: Verify the Secret

You can verify that the secret was created successfully with the following command:

kubectl get secret

To view more details about the secret and its encoded contents, use:

kubectl describe secret db-password-secret

Step 3: Decode a Secret

Secrets are stored in base64-encoded format. To see the actual content of your secret, you need to decode it:

kubectl get secret db-password-secret -o jsonpath="{.data.db-password\.txt}" | base64 --decode

**Step 4: Use Secrets in a Pod**

To use a secret in a pod, reference the secret in your pod configuration. Here is an example of a pod that mounts the secret as a volume:

vim pod.yaml

apiVersion: v1

kind: Pod

metadata:

name: mypod

spec:

containers:

- name: mypod

image: nginx

volumeMounts:

- name: secret-volume

mountPath: "/etc/secret"

readOnly: true

volumes:

- name: secret-volume

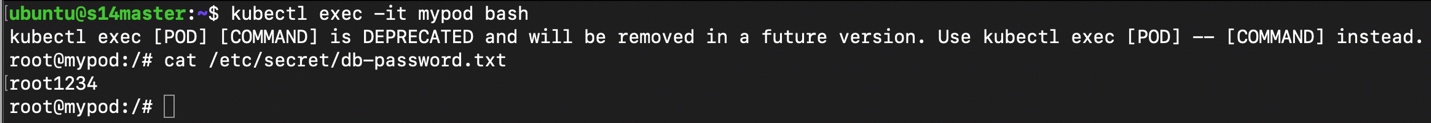
secret:

secretName: db-password-secret

kubectl create -f pod.yaml

Verify the password is copied to pod

kubectl exec -it mypod bash



### Step 6: Delete a Secret

If you no longer need a secret, you can delete it with:

kubectl delete secret db-password-secret

kubectl delete pods mypod