



kubernetes

Kubernetes: Secrets

KUBERNETES : Basics of Kuebernetes

- **Secrets** used to manage sensitive Data in Kubernetes. Like, Password, credentials, keys, authentication tokens etc.
- Users can **create secrets**, and the system also creates some secrets.
- A **secret** can be used with a pod in two ways:
 - A.** As files in a Volume mounted on one or more of its containers
 - B.** Used by kubelet when pulling images for the pod.

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Kubernetes Built-in Secrets

- Kubernetes automatically creates secrets which contain credentials for accessing the **API Server**.
- The automatic creation and use of **API credentials** can be disabled or overridden if desired.

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Create Secrets via Kubectl

- Use-Case: Some Pods need to access the DataBase.
- Create the Files, which have **DB credentials** like: Username & Password.
- Create Secrets in Kubernetes.

```
kubectl create secret generic db-user-pass --from-file=./username.txt  
—from-file=./password.txt
```

- **Note** : Special characters such as \$, *, and ! require escaping.
- For example, if your actual password is **S!B*d\$zDsb**, you should execute the command this way:

```
kubectl create secret generic dev-db-secret --from-  
literal=username=devuser --from-literal=password=S!\B\\*d\$zDsb
```

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Create Secrets via Manifest

- To create secrets from manifest file, User First need to convert the String in Base64 Encoding.

```
echo -n 'admin' | base64
```

- Now User needs to pass the Base 64 encoding in Manifest file.

- Get Secrets list:

```
kubectl get secrets
```

- Describe Secrets.

```
kubectl describe secrets <secret-name>
```

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Decoding the Secrets

- Secrets can be decode in Kubernetes.

```
kubectl get secret <secret-name> -o yaml
```

- Decode Base64 String in Actual password/username.

```
echo 'Base64Sting' | base64 --decode
```

Will see you in Next Lecture...

Thank you!

A close-up photograph of a hand holding a black marker, writing the words 'Thank you!' in a cursive script on a white surface. The hand is positioned on the right side of the frame, with the marker tip touching the paper. The background is plain white.

See you in next lecture ...