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Merging Multiple kubeconfig Files into One: A Comprehensive Guide

Hakan Bayraktar · Follow

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Introduction

When you're tasked with managing multiple Kubernetes clusters, juggling numerous kubeconfig files can be quite challenging. By default, `kubectl` looks for a file named `config` in the `$HOME/.kube` directory.But what's the most efficient way to consolidate these multiple kubeconfig files into a single, more manageable configuration? In this step-by-step guide, I will take you through the entire process.

Step 1: Creating a Back Up Your kubeconfig File

Before you begin, it's a good practice to create a backup of your existing kubeconfig file to ensure you can revert in case of any issues. You can do this with the following command:

```
cp ~/.kube/config ~/.kube/config-bck
```

Step 2: Setting the KUBECONFIG Environment Variable

The `KUBECONFIG` environment variable is a list of paths to configuration files, such as `"/path/cluster1:/path/cluster2"`. Setting this variable allows you to merge multiple

kubeconfig files. You can set it using the following command:

```
export KUBECONFIG=~/.kube/config:/path/cluster1:/path/cluster2
```

Step 3: Merging All kubeconfig Files

Now, merge all your kubeconfig files into one unified file using the following command:

```
kubectl config view --flatten > one-config.yaml
```

Step 4: Replacing the Old Configuration File

To start using your newly merged kubeconfig file, replace the old one with it:

```
mv one-config.yaml ~/.kube/config
```

Step 5: Verification and Validation

To ensure that everything is functioning as expected, display all the clusters defined in the kubeconfig using the following command:

```
kubectl config get-clusters
```

For more in-depth information, you can refer to the relevant section of the Kubernetes documentation. This resource caters to anyone interested in gaining extensive knowledge in Kubernetes cluster management.

Kubernetes   Kubernetes Cluster   Kubeconfig   Kubectl

Written by Hakan Bayraktar

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```
join 146.190.135.86:6443 --token f1h95l.u4nkex9cw8d0g63w          --disc
3d1666af50c85f060b9fadc73f13c932e0e2a9eeef08f51f91a
e-flight checks
nfiguration from the cluster...
an look at this config file with 'kubectl -n kube-system get cm kubeadm-
g kubelet configuration to file "/var/lib/kubelet/config.yaml"
g kubelet environment file with flags to file "/var/lib/kubelet/kubeadm-
ng the kubelet
g for the kubelet to perform the TLS Bootstrap...

ne cluster:
request was sent to apiserver and a response was received.
rmed of the new secure connection details.

' on the control-plane to see this node join the cluster.
```

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```
emctl restart nfs-kernel-server
s-kernel-server
FS server and services
/systemd/system/nfs-server.service; enab
ed) since Fri 2023-11-03 16:53:28 UTC; 4
tartPre=/usr/sbin/exportfs -r (code=exit
tart=/usr/sbin/rpc.nfsd (code=exited, st
e=exited, status=0/SUCCESS)
```

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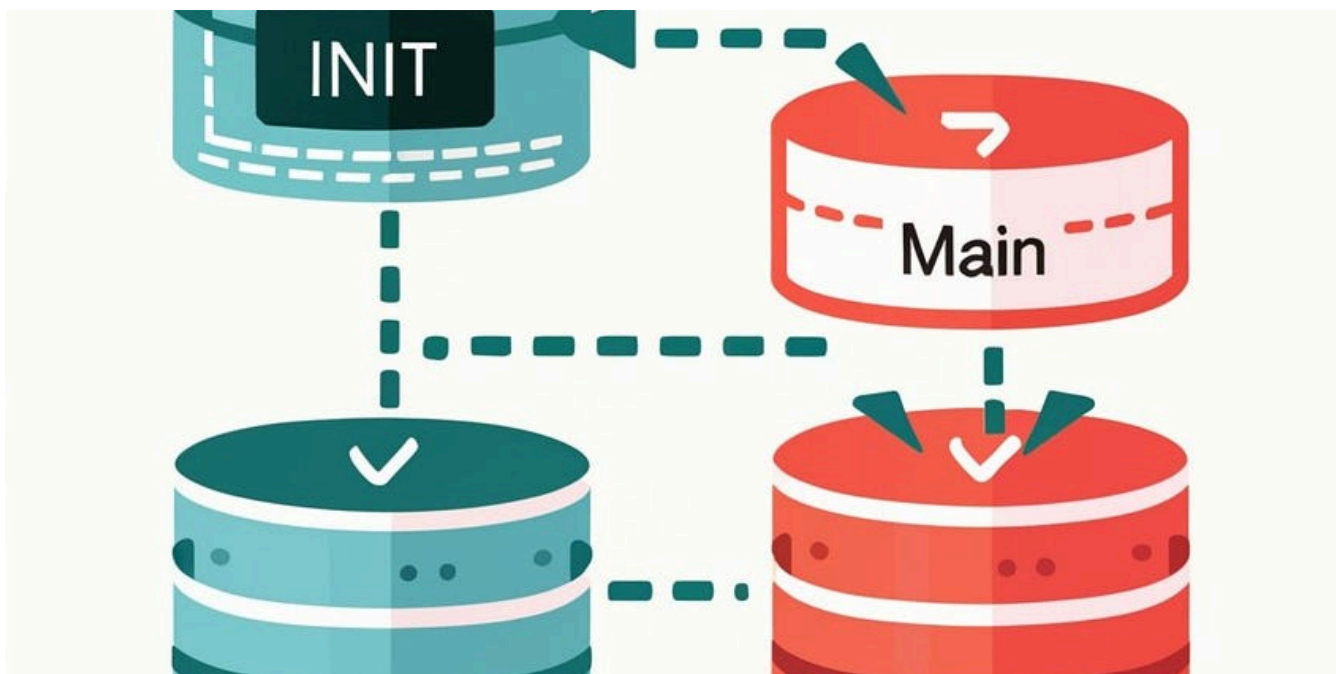
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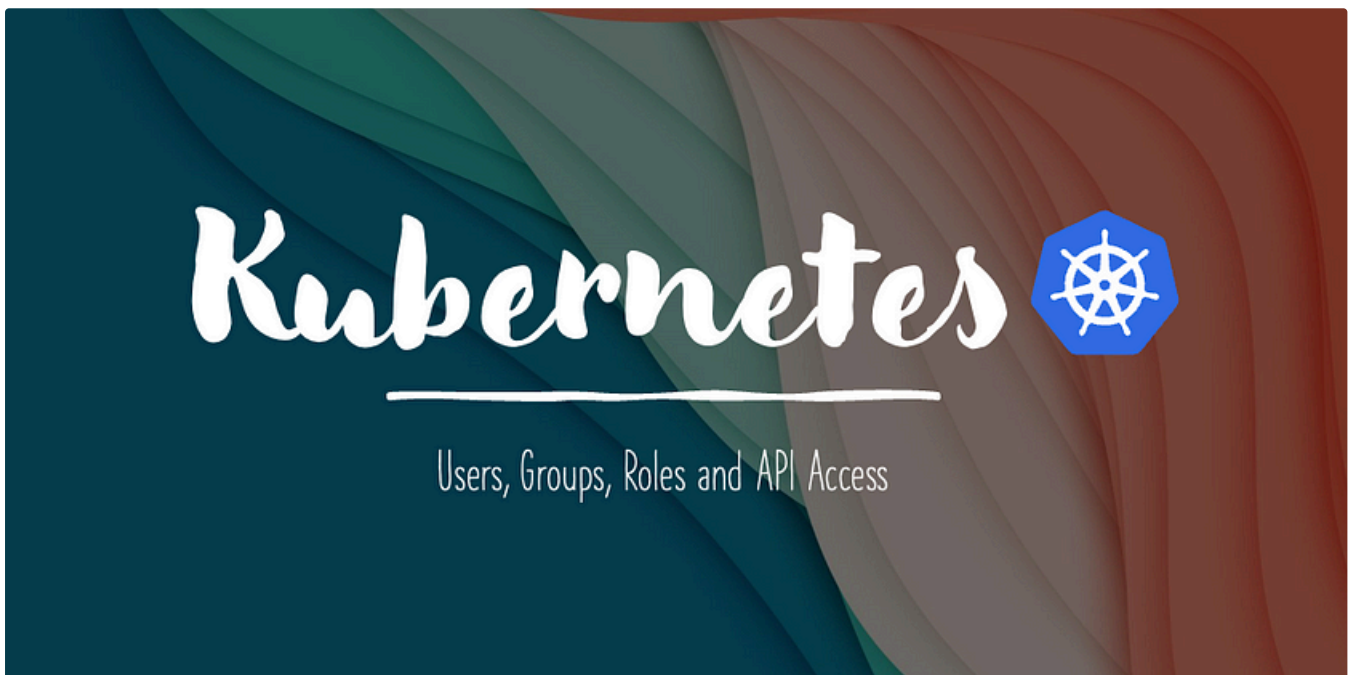4 min read   ·   Jan 10, 2024

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