

# sample-cli-plugin

This repository implements a single kubectl plugin for switching the namespace that the current KUBECONFIG context points to. In order to remain as indestructive as possible, no existing contexts are modified.

**Note:** go-get or vendor this package as `k8s.io/sample-cli-plugin`.

This particular example demonstrates how to perform basic operations such as:

- How to create a new custom command that follows kubectl patterns
- How to obtain a user's KUBECONFIG settings and modify them
- How to make general use of the provided "cli-runtime" set of helpers for kubectl and third-party plugins

It makes use of the genericclioptions in [k8s.io/cli-runtime](https://k8s.io/cli-runtime) to generate a set of configuration flags which are in turn used to generate a raw representation of the user's KUBECONFIG, as well as to obtain configuration which can be used with RESTClients when sending requests to a kubernetes api server.

## Details

The sample cli plugin uses the [client-go library](#) to patch an existing KUBECONFIG file in a user's environment in order to update context information to point the client to a new or existing namespace.

In order to be as non-destructive as possible, no existing contexts are modified in any way. Rather, the current context is examined, and matched against existing contexts to find a context containing the same "AuthInfo" and "Cluster" information, but with the newly desired namespace requested by the user.

## Purpose

This is an example of how to build a kubectl plugin using the same set of tools and helpers available to kubectl.

## Running

```
# assumes you have a working KUBECONFIG
$ GO111MODULE="on" go build cmd/kubectl-ns.go
# place the built binary somewhere in your PATH
$ cp ./kubectl-ns /usr/local/bin

# you can now begin using this plugin as a regular kubectl command:
# update your configuration to point to "new-namespace"
$ kubectl ns new-namespace
# any kubectl commands you perform from now on will use "new-namespace"
$ kubectl get pod
NAME             READY    STATUS    RESTARTS   AGE
new-namespace-pod 1/1      Running   0           1h

# list all of the namespace in use by contexts in your KUBECONFIG
$ kubectl ns --list

# show the namespace that the currently set context in your KUBECONFIG points to
$ kubectl ns
```

## Use Cases

This plugin can be used as a developer tool, in order to quickly view or change the current namespace that kubectl points to.

It can also be used as a means of showcasing usage of the cli-runtime set of utilities to aid in third-party plugin development.

## Cleanup

You can "uninstall" this plugin from kubectl by simply removing it from your PATH:

```
$ rm /usr/local/bin/kubectl-ns
```

## Compatibility

HEAD of this repository will match HEAD of k8s.io/apimachinery and k8s.io/client-go.

## Where does it come from?

sample-cli-plugin is synced from

<https://github.com/kubernetes/kubernetes/blob/master/staging/src/k8s.io/sample-cli-plugin>. Code changes are made in that location, merged into k8s.io/kubernetes and later synced here.