Exploring Admission Control

Relevant Documentation

- Using Admission Controllers
- A Guide to Kubernetes Admission Controllers

Exam Tips

- Admission controllers intercept requests to the Kubernetes API and can be used to validate and/or modify them.
- You can enable admission controllers using the `--enable-admission-plugins` flag for kube-apiserver.

Lesson Reference

Log in to the **control plane node**.

Attempt to create a Pod that uses a Namespace that does not exist.

```
vi new-namespace-pod.yml
```

```
apiVersion: v1
kind: Pod
metadata:
  name: new-namespace-pod
  namespace: new-namespace
spec:
  containers:
  - name: busybox
    image: busybox:stable
    command: ['sh', '-c', 'while true; do echo Running...; sleep 5; done']
```

```
kubectl apply -f new-namespace-pod.yml
```

This will fail because specified Namespace, `new-namespace`, does not exist.

Change the API Server configuration to enable the `NamespaceAutoProvision` admission controller.

```
sudo vi /etc/kubernetes/manifests/kube-apiserver.yaml
```

Locate the `--enable-admission-plugins` flag, and add `NamespaceAutoProvision` to the list.

```
    - --enable-admission-plugins=NodeRestriction,NamespaceAutoProvision
```

When you save changes to this file, the API Server will be automatically re-created with the new settings. It may become unavailable for a few moments during this process. Most `kubectl` commands will fail during this time, until the new API Server is available.

Try to create `new-namespace-pod` again.

```
kubectl apply -f new-namespace-pod.yml
```

It should succeed this time, as the `NamespaceAutoProvision` admission controller will automatically handle the process of creating the Namespace.

List the Namespaces to see the new Namespace.

```
kubectl get namespace
```