

- This lecture assumes that you are using GitLab. For other Git services, please consult the provider's documentation.
- Go to gitlab.com and login.
- Create a new project called SampleGitOpsApp. The project should be blank, private, and without a README file.
- Go back to the terminal and run the following commands:

```
cd myapp
git remote add origin git@gitlab.com:[your username]/samplegitopsapp.git
git push -u origin --all
```

- Go back to Gitlab and refresh the page.
- Click on the profile picture and select preferences.
- Select personal access tokens.
- Create one called argo cd. The access level should be `api`.
- Copy the value of the token.
- On the terminal, create a secret by running the following command:

```
argocd repo add "https://gitlab.com/abohmeed/samplegitopsapp.git" --username "[your username]" --password "[your personal token]"
```

- Create the Argo CD directory by running the following commands:

```
mkdir argo-cd
cd argo-cd
```

- Create the Nginx installation file as follows:

```
# nginx.yaml
apiVersion: argoproj.io/v1alpha1
kind: Application
metadata:
  name: nginx
  namespace: argocd
spec:
  project: default
  source:
    repoURL: 'https://gitlab.com/[your username]/samplegitopsapp.git'
    path: manifests
    targetRevision: main
  destination:
    server: 'https://kubernetes.default.svc'
```

```
namespace: default
syncPolicy:
  automated:
    selfHeal: true
    prune: true
```

- Apply the manifest to the cluster as follows:

```
kubectl apply -f nginx.yaml
```

- Go to the UI and view the applications. Make sure that the sync status is OK.
- Go back to the terminal and view the running pods and services:

```
kubectl get pods
kubectl get services
```

- Create a Git workflow as follows:

```
git checkout -b feature/increase-replicas
# modify the deployment replicas to be three
git add base/deployment.yaml
git commit -m "Increases the replica count"
git push --set-upstream origin feature/increase-replicas
```

- Go to Gitlab by copying the link from the output message of the above command.
- Approve and merge the MR.
- Go back to the terminal and run the following:

```
argocd app sync nginx
kubectl get pods
```