Chapter 1: The Fundamentals of Delivery and Deployment

No Images

Chapter 2: Exploring Common Industry Delivery and Deployment Practices

No Images

Chapter 3: The "What" and "Why" of GitOps

No Images

Chapter 4: The Original GitOps – Continuous Deployment in Kubernetes

No Images

Chapter 5: The Purist GitOps – Continuous Deployment Everywhere

No Images

Chapter 6: Verified GitOps – Continuous Delivery Declaratively Defined

No Images

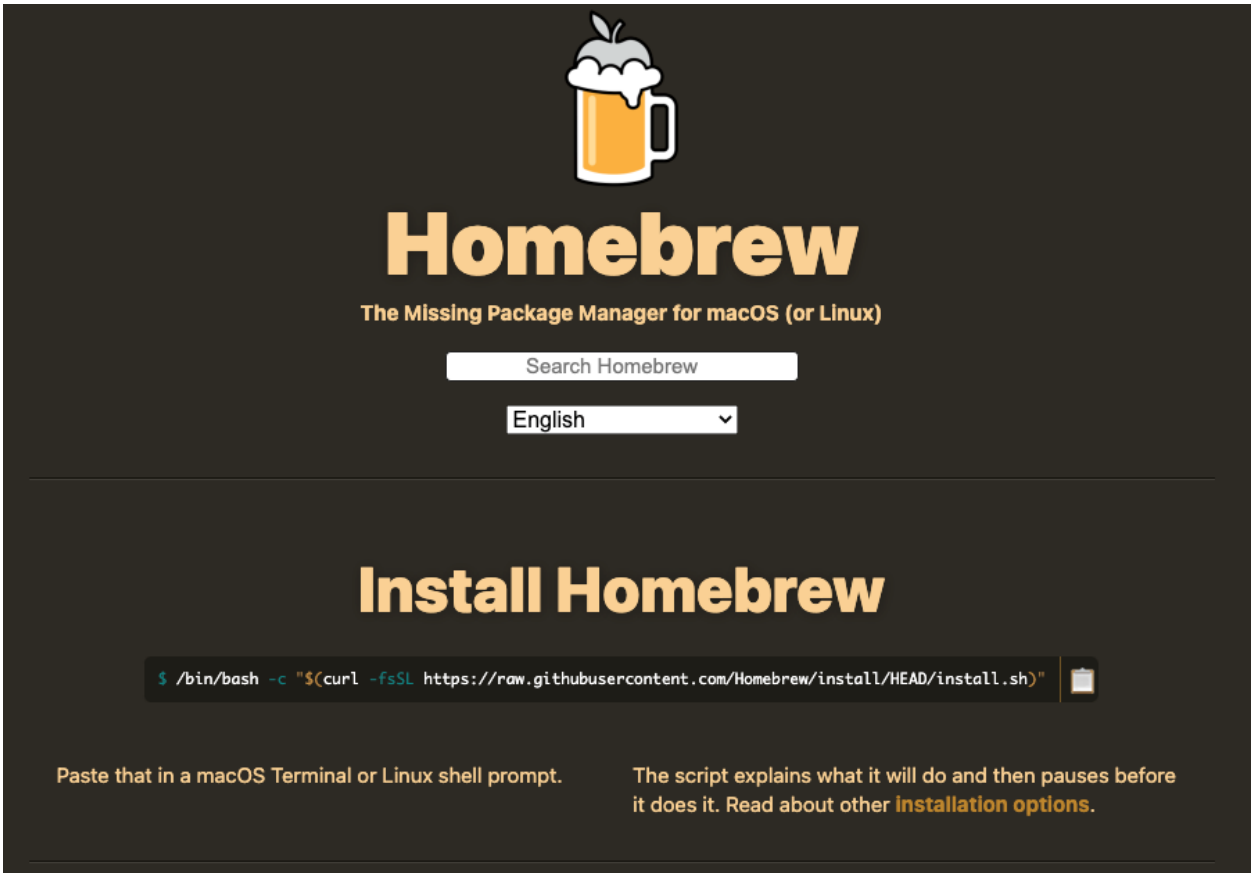
Chapter 7: Best Practices for Delivery, Deployment, and GitOps

No Images

Chapter 8: Practicing the Basics – Declarative Language File Building

No Images

Chapter 9: Originalist Gitops in Practice – Continuous Deployment



```
==> Tapping homebrew/core
remote: Enumerating objects: 129, done.
remote: Counting objects: 100% (129/129), done.
remote: Compressing objects: 100% (86/86), done.
remote: Total 893116 (delta 78), reused 76 (delta 43), pack-reused 892987
Receiving objects: 100% (893116/893116), 357.62 MiB | 481.00 KiB/s, done.
Resolving deltas: 100% (605918/605918), done.
From https://github.com/Homebrew/homebrew-core
 * [new branch]      master     -> origin/master
Checking out files: 100% (5749/5749), done.
HEAD is now at d5c0a4f9e6 gomplate: update 3.9.0 bottle.
==> Installation successful!

==> Homebrew has enabled anonymous aggregate formulae and cask analytics.
Read the analytics documentation (and how to opt-out) here:
  https://docs.brew.sh/Analytics
No analytics data has been sent yet (or will be during this `install` run).

==> Homebrew is run entirely by unpaid volunteers. Please consider donating:
  https://github.com/Homebrew/brew#donations

==> Next steps:
- Run `brew help` to get started
- Further documentation:
    https://docs.brew.sh
(base) ➜  ~
```

```
(base) ➜  ~ brew -v
Homebrew 2.7.5
Homebrew/homebrew-core (git revision d5c0a4; last commit 2021-01-26)
```

Homebrew Formulae

Search Homebrew Formulae

Homebrew Formulae is an online package browser for **Homebrew** – the macOS (and Linux) package manager. For more information on how to install and use Homebrew see **our homepage**.

Browse all macOS formulae

Browse all casks

Browse all Linux formulae

Analytics data

JSON API documentation

Homebrew Formulae
virtualbox
Homebrew – the
tion on how to install
Cask
virtualbox
virtualbox
virtualbox-extension-pack
virtualbox-extension-pack
Analytics data
Cask Install Events
/api/analytics/cask-install/90d.json (JSON API)
virtualbox...
Cask Install Events
/api/analytics/cask-install/30d.json (JSON API)
virtualbox...
Cask Install Events
/api/analytics/cask-install/365d.json (JSON API)
virtualbox...
Search by algolia

virtualbox

Install command: `$ brew install --cask virtualbox`

Name: **Oracle VirtualBox**

Free and open-source hosted hypervisor for x86 virtualization

https://www.virtualbox.org/

`/api/cask/virtualbox.json` (JSON API)

Cask code on GitHub

Current version: 6.1.18,142142

Conflicts with casks:

homebrew/cask-versions/virtualbox-beta

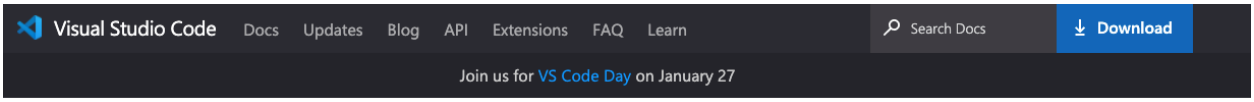
```
==> Tapping homebrew/cask
Cloning into '/usr/local/Homebrew/Library/Taps/homebrew/homebrew-cask'...
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 545889 (delta 0), reused 1 (delta 0), pack-reused 545885
Receiving objects: 100% (545889/545889), 239.08 MiB | 9.92 MiB/s, done.
Resolving deltas: 100% (385452/385452), done.
Tapped 3796 casks (3,916 files, 256.6MB).
==> Caveats
virtualbox requires a kernel extension to work.
If the installation fails, retry after you enable it in:
  System Preferences → Security & Privacy → General

For more information, refer to vendor documentation or this Apple Technical Note:
  https://developer.apple.com/library/content/technotes/tn2459/_index.html

==> Downloading https://download.virtualbox.org/virtualbox/6.1.18/VirtualBox-6.1.18-142142-OSX.dmg
######################################################################## 100.0%
==> Installing Cask virtualbox
==> Running installer for virtualbox; your password may be necessary.
==> Package installers may write to any location; options such as --appdir are ignored.
Password:
installer: Package name is Oracle VM VirtualBox
installer: choices changes file '/var/folders/5y/jks7k5hd6rjgjhtfy3_p6ddm0000gn/T/choices20210125-70799-pm6fef.xml' applied
installer: Upgrading at base path /
installer: The upgrade was successful.
==> Changing ownership of paths required by virtualbox; your password may be necessary
🍺  virtualbox was successfully installed!
```

```
==> Downloading https://homebrew.bintray.com/bottles/kubernetes-cli-1.20.2.big_sur.bottle.tar.gz
==> Downloading from https://d29vzk4ow07wi7.cloudfront.net/58049cbdcae1b674d62aa1ad4cb5d9b667ac010
######################################################################## 100.0%
==> Pouring kubernetes-cli-1.20.2.big_sur.bottle.tar.gz
==> Caveats
zsh completions have been installed to:
  /usr/local/share/zsh/site-functions
==> Summary
🍺  /usr/local/Cellar/kubernetes-cli/1.20.2: 246 files, 46.1MB
```

```
==> Downloading https://homebrew.bintray.com/bottles/minikube-1.17.0.big_sur.bottle.tar.gz
==> Downloading from https://d29vzk4ow07wi7.cloudfront.net/9543a3d3316da0e7727938b4c517e5dc18
######################################################################## 100.0%
==> Pouring minikube-1.17.0.big_sur.bottle.tar.gz
==> Caveats
zsh completions have been installed to:
  /usr/local/share/zsh/site-functions
==> Summary
🍺  /usr/local/Cellar/minikube/1.17.0: 8 files, 64.3MB
```

```
😄  minikube v1.17.0 on Darwin 11.1
✨  Using the virtualbox driver based on existing profile
👍  Starting control plane node minikube in cluster minikube
🔄  Restarting existing virtualbox VM for "minikube" ...
🐳  Preparing Kubernetes v1.20.2 on Docker 20.10.2 ...
    ▪ Generating certificates and keys ...
    ▪ Booting up control plane ...
    ▪ Configuring RBAC rules ...
🔎  Verifying Kubernetes components...
🌟  Enabled addons: storage-provisioner, default-storageclass
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

```
(base) ➜  ~ kubectl get ns
NAME              STATUS   AGE
default           Active   43s
kube-node-lease   Active   44s
kube-public       Active   44s
kube-system       Active   44s
```



Download Visual Studio Code

Free and built on open source. Integrated Git, debugging and extensions.

Windows
Windows 7, 8, 10

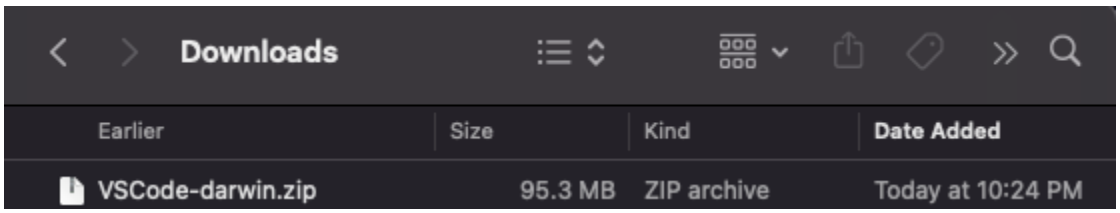
User Installer 64 bit 32 bit ARM
System Installer 64 bit 32 bit ARM
.zip 64 bit 32 bit ARM

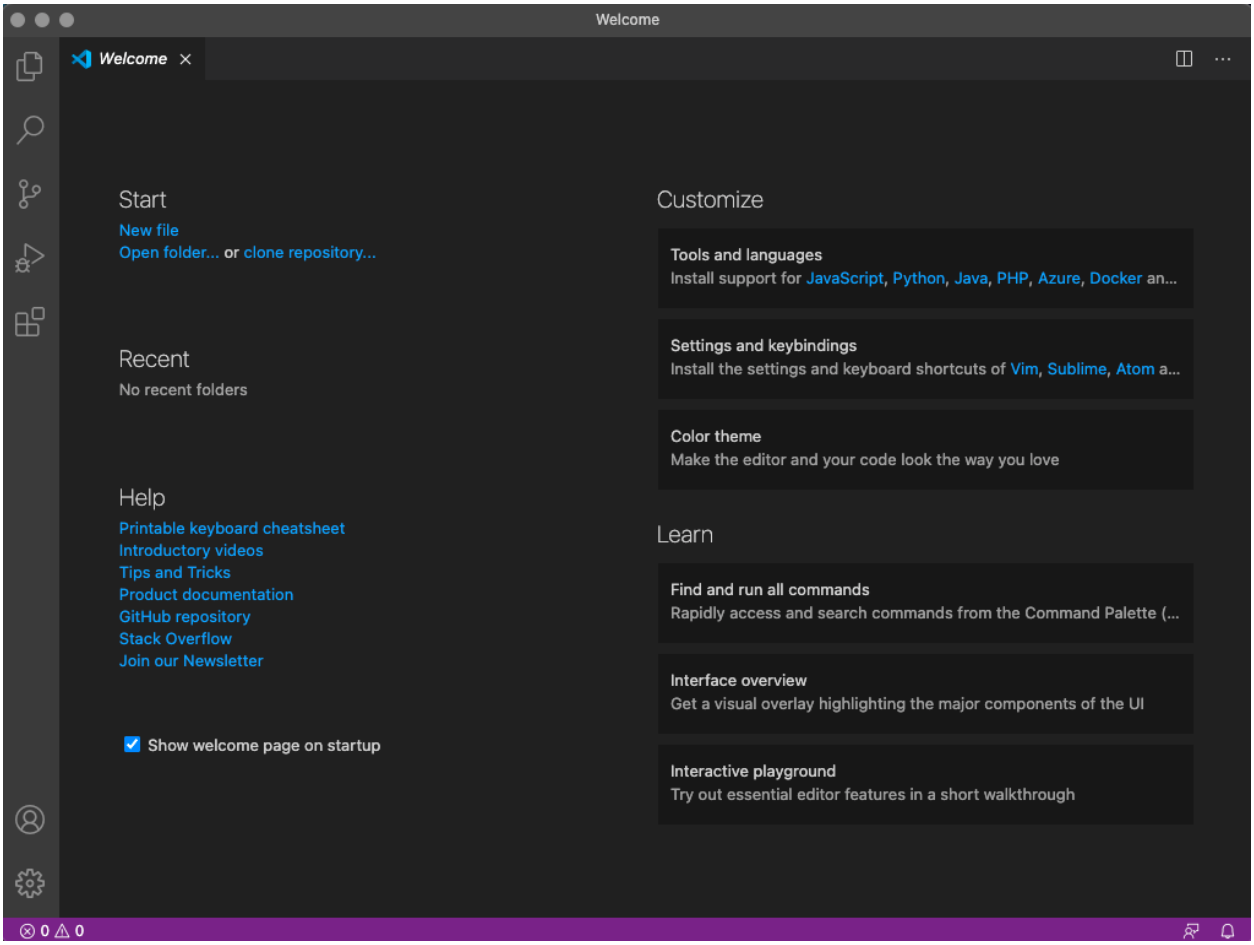
.deb
Debian, Ubuntu

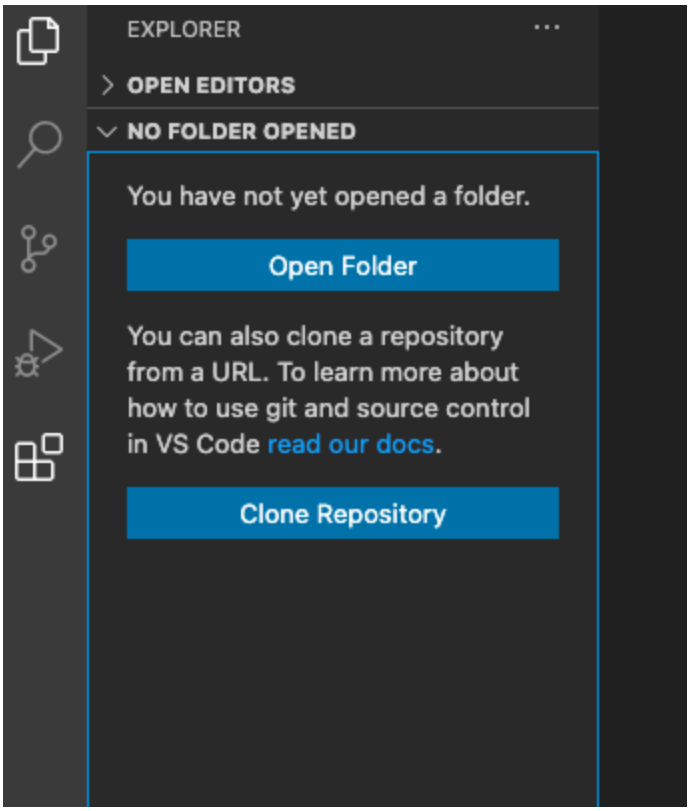
.rpm
Red Hat, Fedora, SUSE

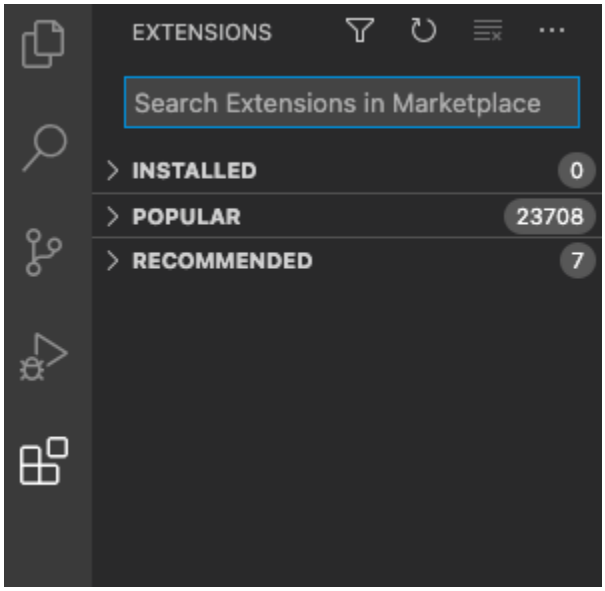
.deb 64 bit ARM ARM 64
.rpm 64 bit ARM ARM 64
.tar.gz 64 bit ARM ARM 64
Snap Store

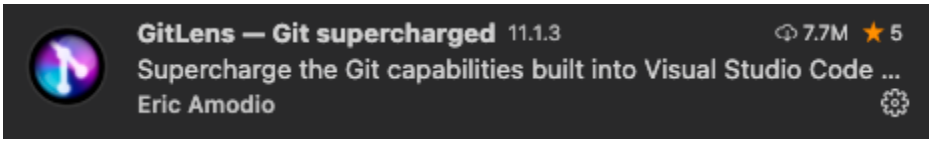
Mac
macOS 10.10+

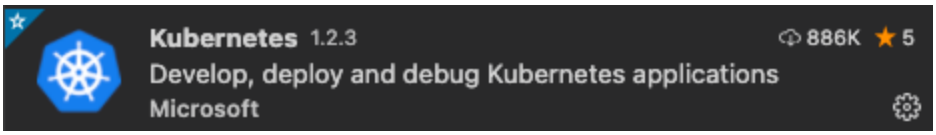


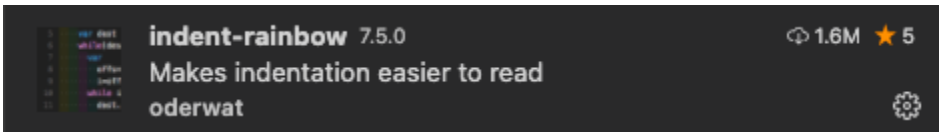

Welcome
Welcome
Start
New file
Open folder... or clone repository...
Recent
No recent folders
Help
Printable keyboard cheatsheet
Introductory videos
Tips and Tricks
Product documentation
GitHub repository
Stack Overflow
Join our Newsletter
Show welcome page on startup
Customize
Tools and languages
Install support for JavaScript, Python, Java, PHP, Azure, Docker an...
Settings and keybindings
Install the settings and keyboard shortcuts of Vim, Sublime, Atom a...
Color theme
Make the editor and your code look the way you love
Learn
Find and run all commands
Rapidly access and search commands from the Command Palette (...
Interface overview
Get a visual overlay highlighting the major components of the UI
Interactive playground
Try out essential editor features in a short walkthrough
0 0

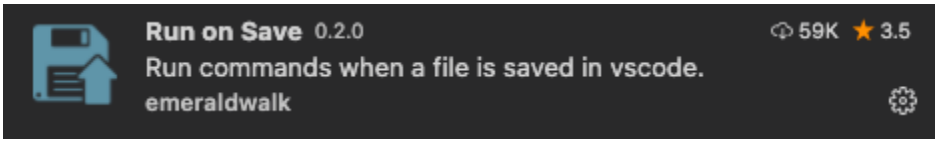

EXPLORER
OPEN EDITORS
NO FOLDER OPENED
You have not yet opened a folder.
Open Folder
You can also clone a repository from a URL. To learn more about how to use git and source control in VS Code read our docs.
Clone Repository

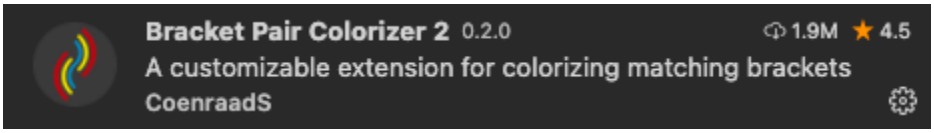

EXTENSIONS
Search Extensions in Marketplace
INSTALLED 0
POPULAR 23708
RECOMMENDED 7

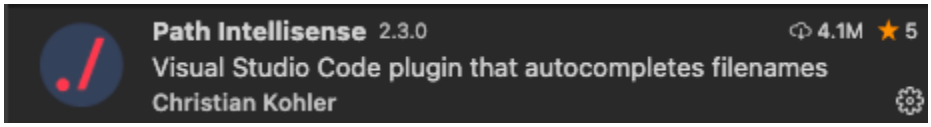

GitLens — Git supercharged 11.1.3
7.7M ★ 5
Supercharge the Git capabilities built into Visual Studio Code ...
Eric Amodio





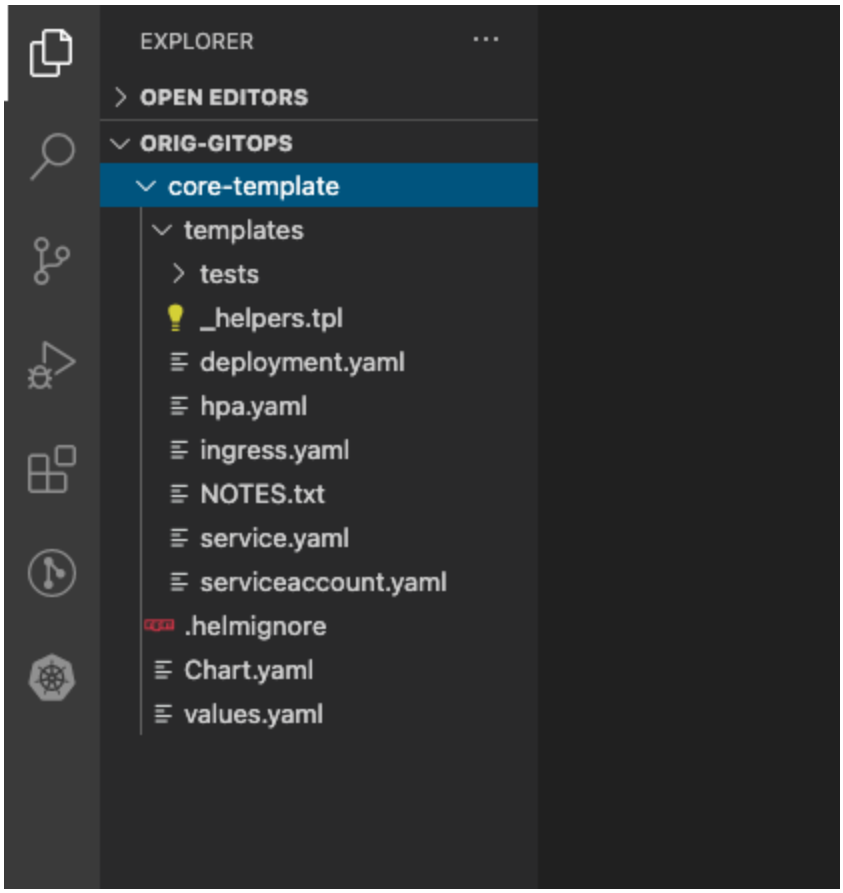


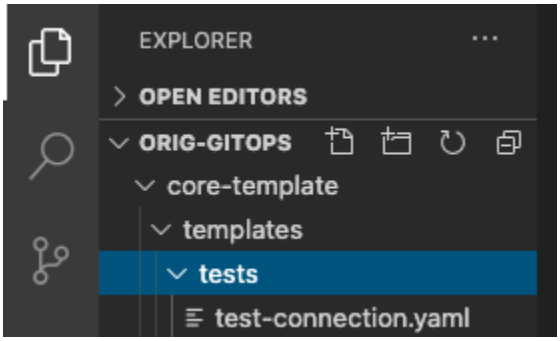


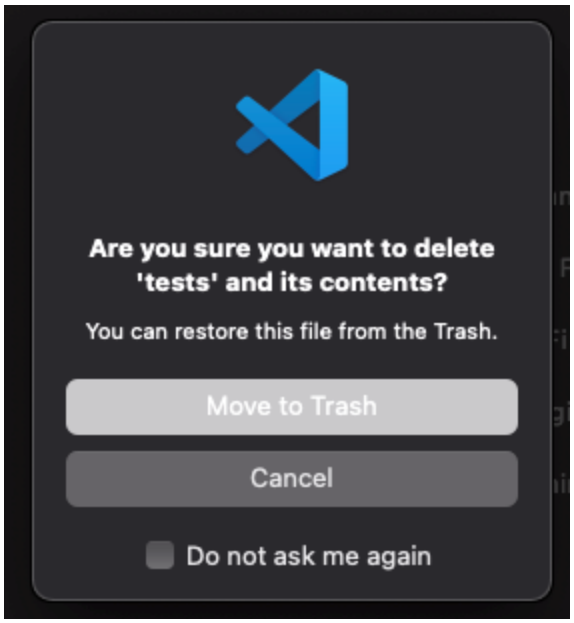


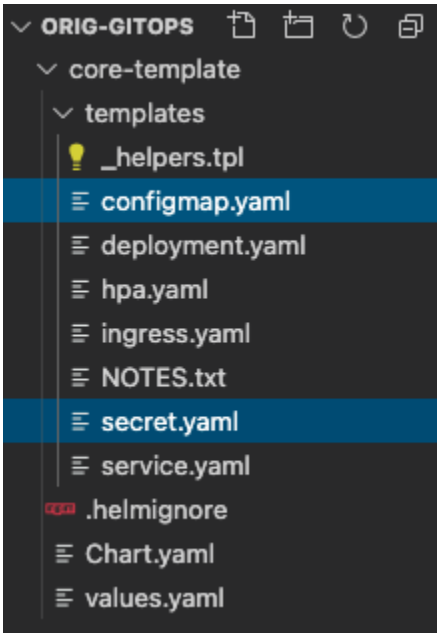

```
==> Pouring helm-3.5.0.big_sur.bottle.tar.gz
==> Caveats
zsh completions have been installed to:
  /usr/local/share/zsh/site-functions
==> Summary
🍺  /usr/local/Cellar/helm/3.5.0: 57 files, 43MB
```

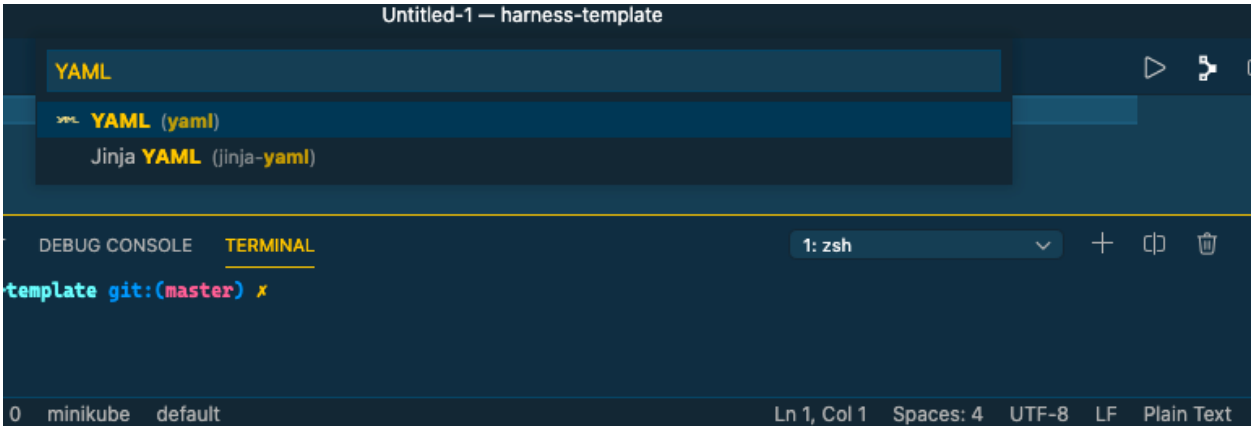
```
$ mkdir orig-gitops
$ cd orig-gitops
```

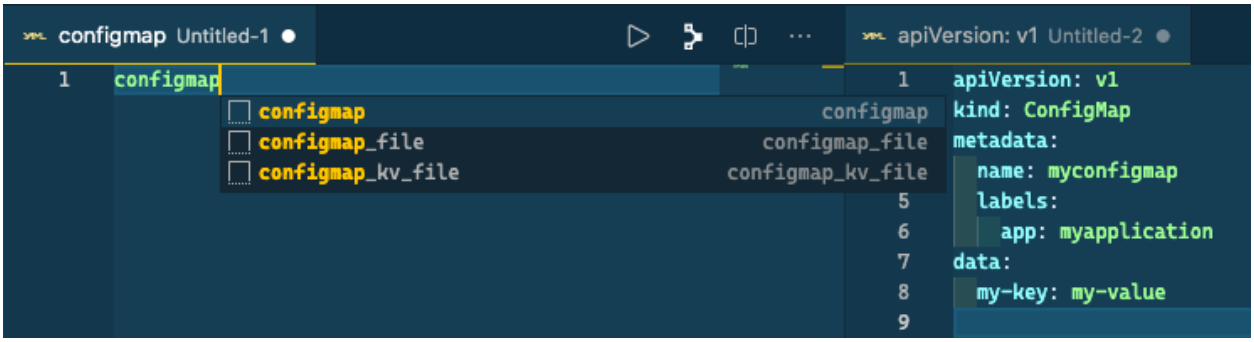

EXPLORER
OPEN EDITORS
ORIG-GITOPS
core-template
templates
tests
_helpers.tpl
deployment.yaml
hpa.yaml
ingress.yaml
NOTES.txt
service.yaml
serviceaccount.yaml
.helmignore
Chart.yaml
values.yaml

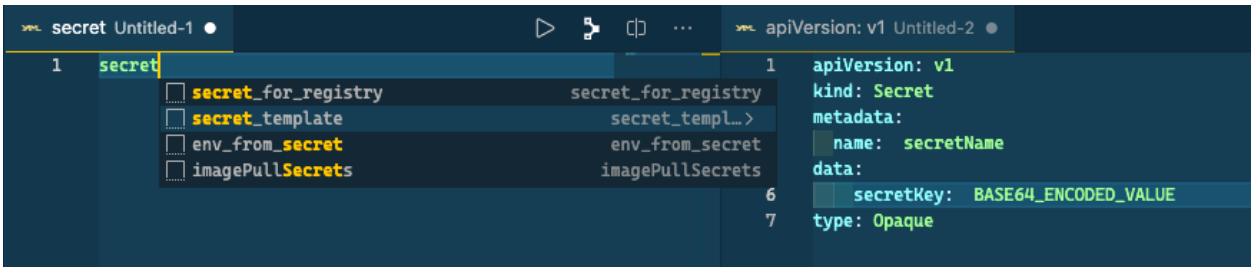

EXPLORER
OPEN EDITORS
ORIG-GITOPS
core-template
templates
tests
test-connection.yaml

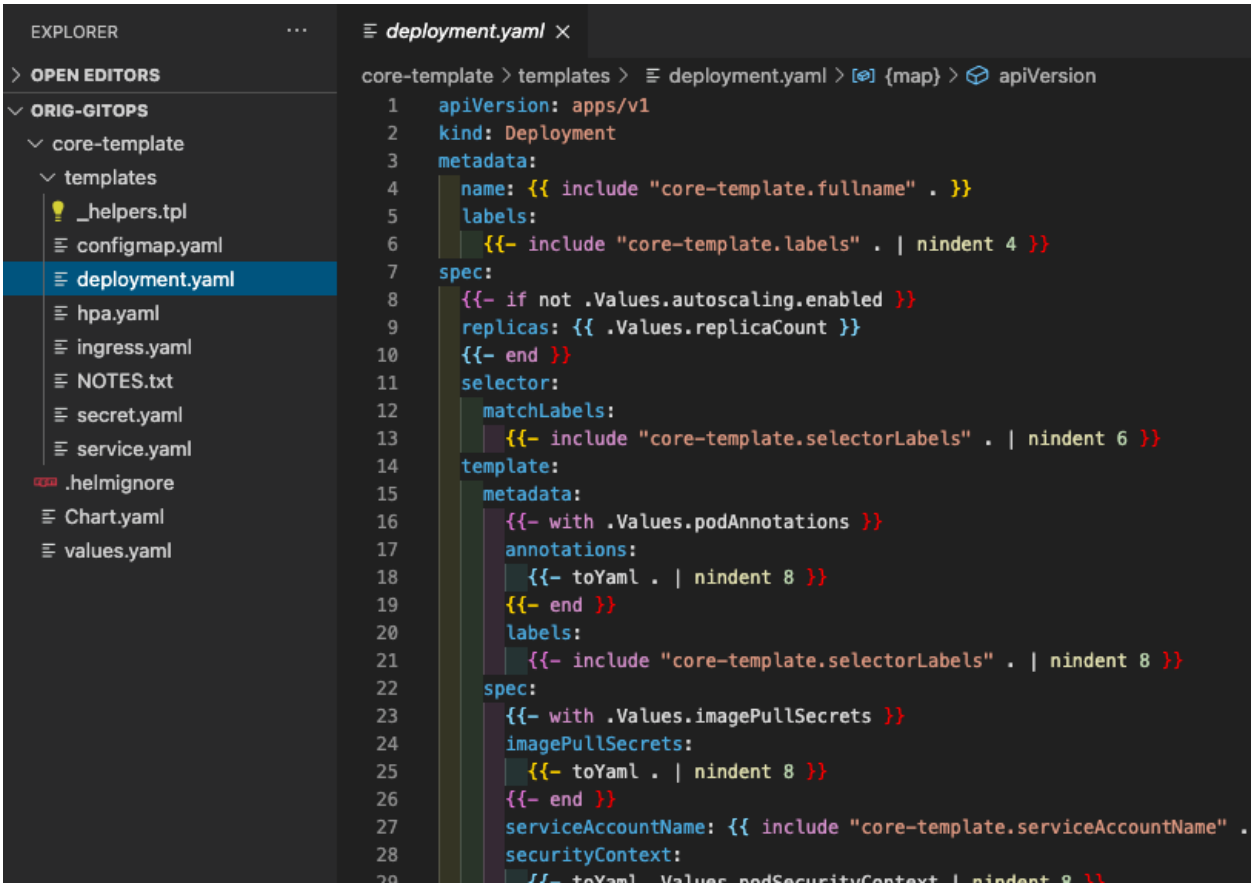

Are you sure you want to delete 'tests' and its contents?
You can restore this file from the Trash.
Move to Trash
Cancel
Do not ask me again

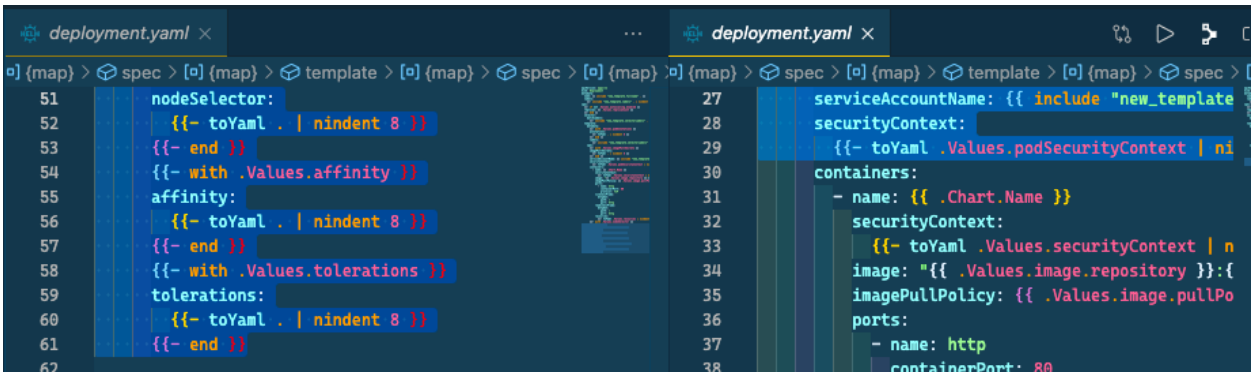

ORIG-GITOPS
core-template
templates
_helpers.tpl
configmap.yaml
deployment.yaml
hpa.yaml
ingress.yaml
NOTES.txt
secret.yaml
service.yaml
.helmignore
Chart.yaml
values.yaml

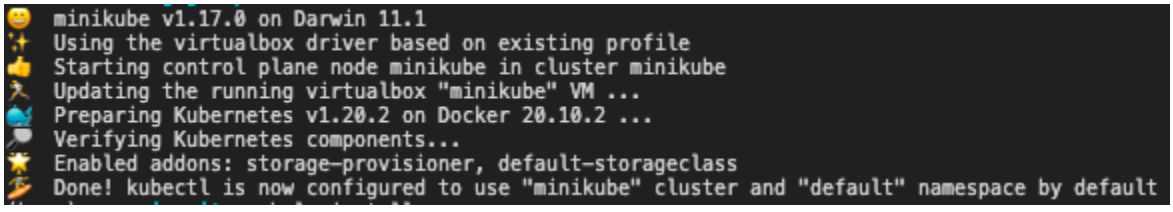

Untitled-1 — harness-template
YAML
YAML (yaml)
Jinja YAML (jinja-yaml)
DEBUG CONSOLE
TERMINAL
1: zsh
template git:(master) ✗
0 minikube default
Ln 1, Col 1 Spaces: 4 UTF-8 LF Plain Text

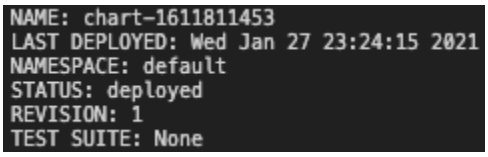

configmap Untitled-1
1 configmap
configmap configmap
configmap_file configmap_file
configmap_kv_file configmap_kv_file
apiVersion: v1 Untitled-2
1 apiVersion: v1
2 kind: ConfigMap
3 metadata:
4 name: myconfigmap
5 labels:
6 app: myapplication
7 data:
8 my-key: my-value
9


secret Untitled-1
1 secret
secret_for_registry secret_for_registry
secret_template secret_templ…
env_from_secret env_from_secret
imagePullSecrets imagePullSecrets
apiVersion: v1 Untitled-2
1 apiVersion: v1
2 kind: Secret
3 metadata:
4 name: secretName
5 data:
6 secretKey: BASE64_ENCODED_VALUE
7 type: Opaque


EXPLORER
OPEN EDITORS
ORIG-GITOPS
core-template
templates
_helpers.tpl
configmap.yaml
deployment.yaml
hpa.yaml
ingress.yaml
NOTES.txt
secret.yaml
service.yaml
.helmignore
Chart.yaml
values.yaml
deployment.yaml
core-template > templates > deployment.yaml > {map} > apiVersion
apiVersion: apps/v1
kind: Deployment
metadata:
name: {{ include "core-template.fullname" . }}
labels:
{{- include "core-template.labels" . | nindent 4 }}
spec:
{{- if not .Values.autoscaling.enabled }}
replicas: {{ .Values.replicaCount }}
{{- end }}
selector:
matchLabels:
{{- include "core-template.selectorLabels" . | nindent 6 }}
template:
metadata:
{{- with .Values.podAnnotations }}
annotations:
{{- toYaml . | nindent 8 }}
{{- end }}
labels:
{{- include "core-template.selectorLabels" . | nindent 8 }}
spec:
{{- with .Values.imagePullSecrets }}
imagePullSecrets:
{{- toYaml . | nindent 8 }}
{{- end }}
serviceAccountName: {{ include "core-template.serviceAccountName" .
securityContext:

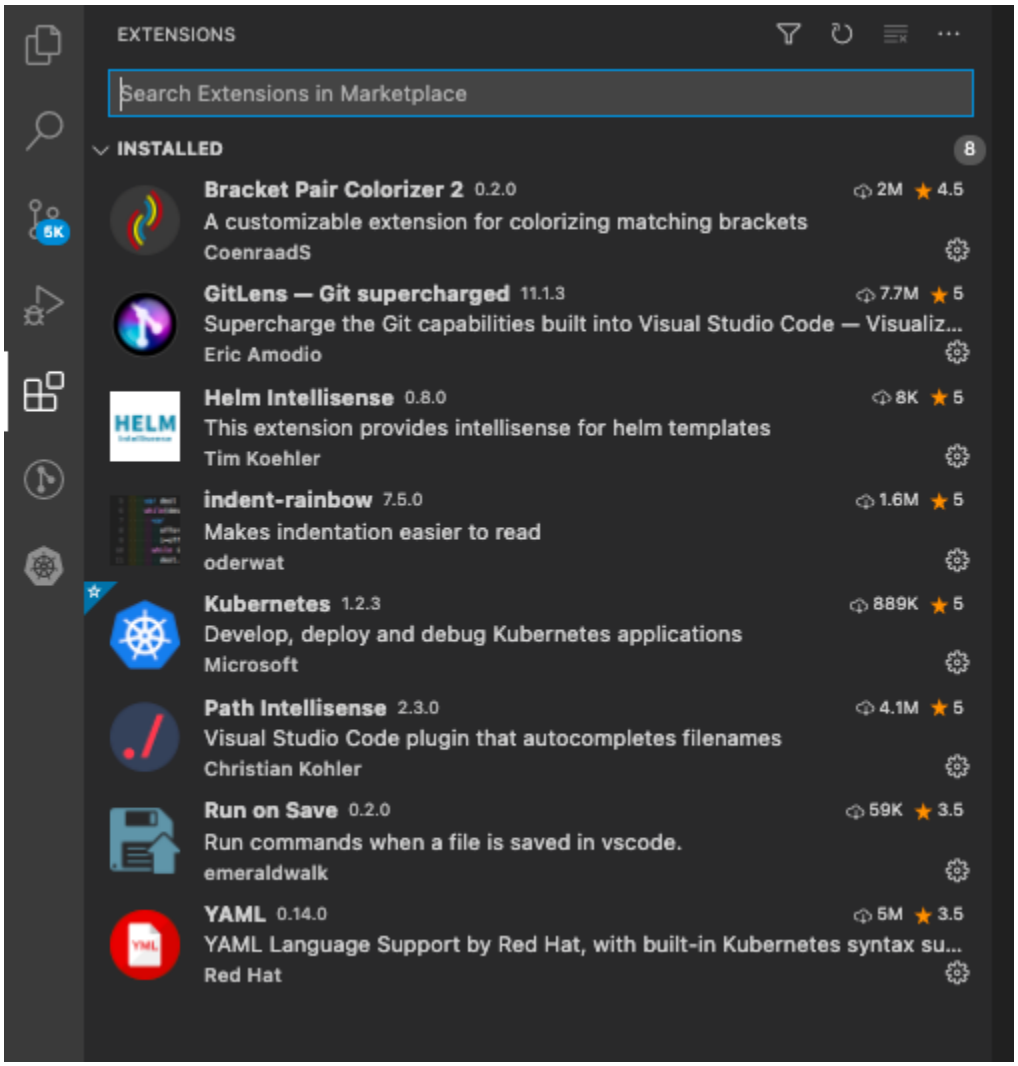

deployment.yaml
nodeSelector:
{{- toYaml . | nindent 8 }}
{{- end }}
{{- with .Values.affinity }}
affinity:
{{- toYaml . | nindent 8 }}
{{- end }}
{{- with .Values.tolerations }}
tolerations:
{{- toYaml . | nindent 8 }}
{{- end }}
deployment.yaml
serviceAccountName: {{ include "new_template
securityContext:
{{- toYaml .Values.podSecurityContext | ni
containers:
- name: {{ .Chart.Name }}
securityContext:
{{- toYaml .Values.securityContext | n
image: "{{ .Values.image.repository }}:{
imagePullPolicy: {{ .Values.image.pullPo
ports:
- name: http

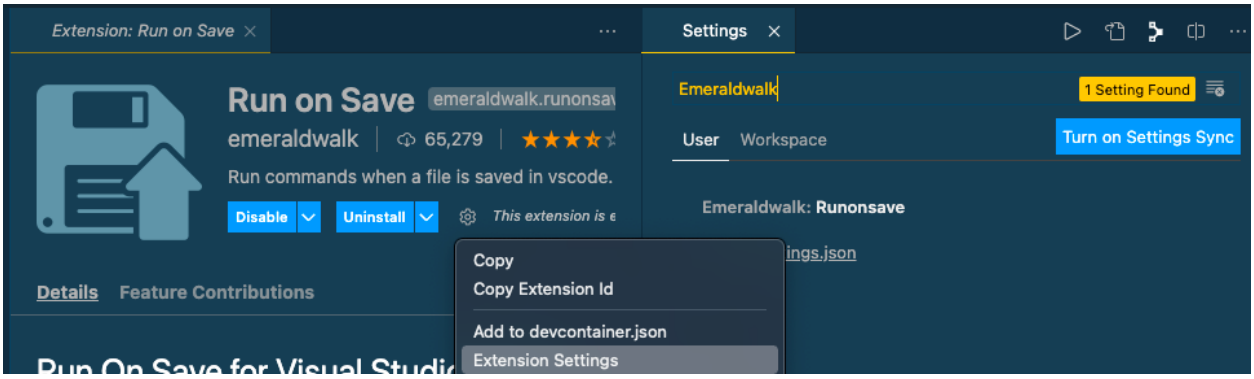

minikube v1.17.0 on Darwin 11.1
Using the virtualbox driver based on existing profile
Starting control plane node minikube in cluster minikube
Updating the running virtualbox "minikube" VM ...
Preparing Kubernetes v1.20.2 on Docker 20.10.2 ...
Verifying Kubernetes components...
Enabled addons: storage-provisioner, default-storageclass
Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default

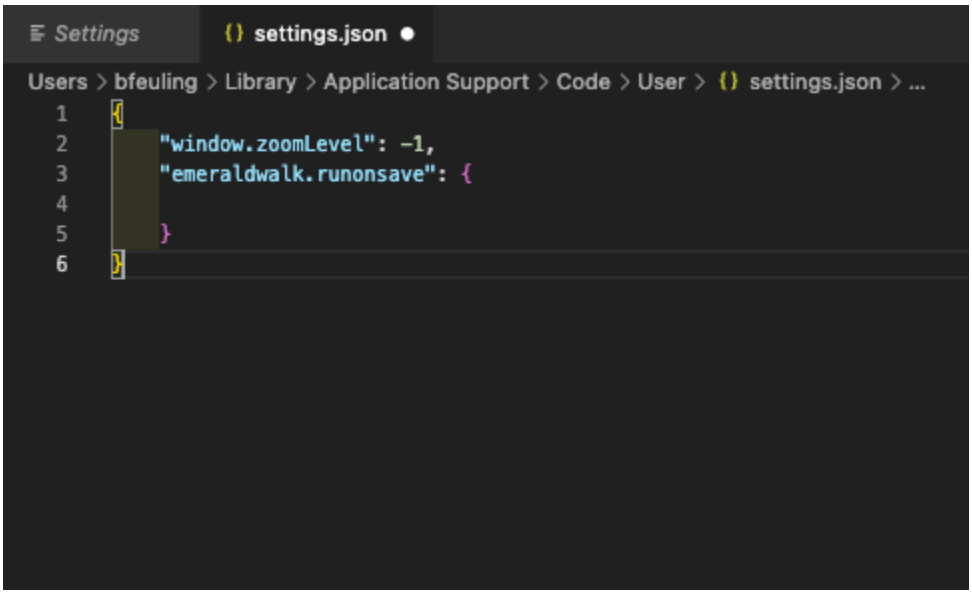

NAME: chart-1611811453
LAST DEPLOYED: Wed Jan 27 23:24:15 2021
NAMESPACE: default
STATUS: deployed
REVISION: 1
TEST SUITE: None

```
NAME                                          TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)    AGE
service/chart-1611811453-core-template        ClusterIP   10.100.113.255   <none>        80/TCP     4m
service/kubernetes                            ClusterIP   10.96.0.1        <none>        443/TCP    2d1h

NAME                                          READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/chart-1611811453-core-template   0/1     0            0           4m

NAME                                                    DESIRED   CURRENT   READY   AGE
replicaset.apps/chart-1611811453-core-template-7b94d774b4   1         0         0       4m
```

```
😄  minikube v1.17.0 on Darwin 11.1
✨  Using the virtualbox driver based on existing profile
👍  Starting control plane node minikube in cluster minikube
🎉  minikube 1.17.1 is available! Download it: https://github.com/kubernetes/minikube/releases/tag/v1.17.1
💡  To disable this notice, run: 'minikube config set WantUpdateNotification false'

🏃  Updating the running virtualbox "minikube" VM ...
🐳  Preparing Kubernetes v1.20.2 on Docker 20.10.2 ...
🔎  Verifying Kubernetes components...
🌟  Enabled addons: storage-provisioner, default-storageclass
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```







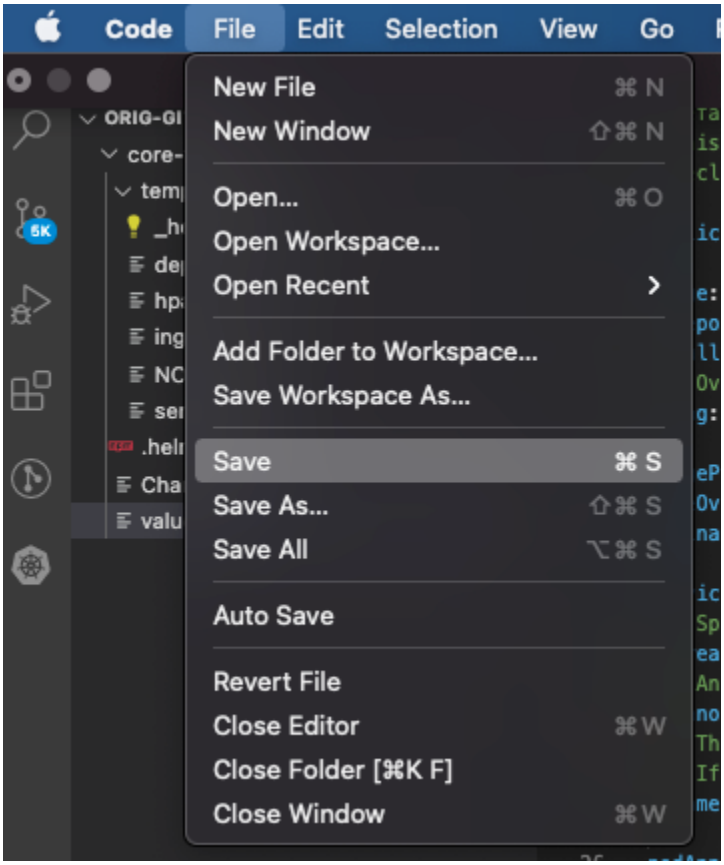

```
NAME                    NAMESPACE       REVISION        UPDATED                                 STATUS          CHART                   APP VERSION
chart-1611811453        default         1               2021-01-27 23:24:15.132401 -0600 CST    deployed        core-template-0.1.0     1.16.0
```

```
{
    "window.zoomLevel": -1,
    "emeraldwalk.runonsave": {
        "commands": [
            {
                "match": ".*",
                "cmd": "helm upgrade chart-1611811453 /path/to/chart/orig-gitops/core-template"
            }
        ]
    }
}
```

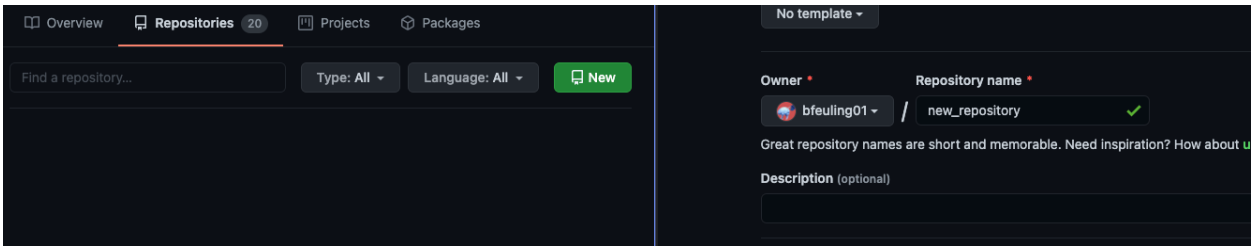
```
REVISION        UPDATED                  STATUS          CHART                   APP VERSION     DESCRIPTION
1               Wed Jan 27 23:24:15 2021 deployed        core-template-0.1.0     1.16.0          Install complete
```

```
17  serviceAccount:
18    # Specifies whether a service account should be
19    create: true
20    # Annotations to add to the service account
21    annotations: {}
22    # The name of the service account to use.
23    # If not set and create is true, a name is gener
24    name: ""
```

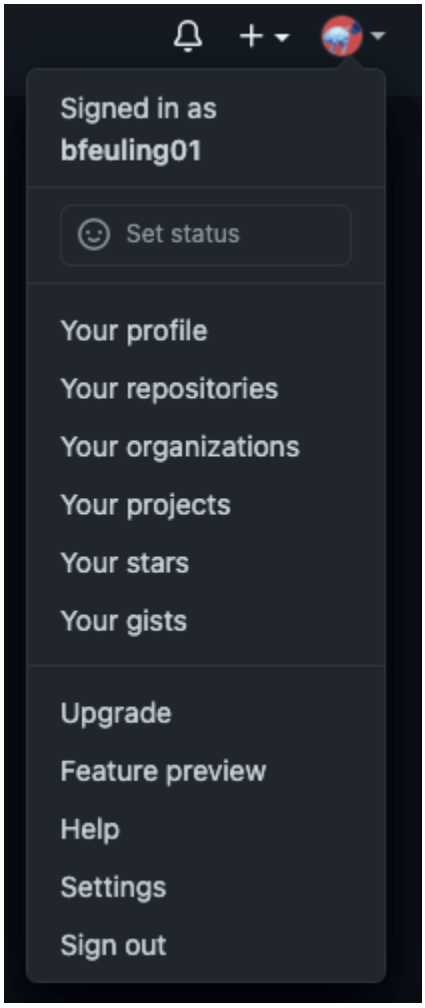
```
17  serviceAccount:
18    # Specifies whether a ser
19    create: false
20    # Annotations to add to th
21    annotations: {}
22    # The name of the service
23    # If not set and create is
24    name: ""
```

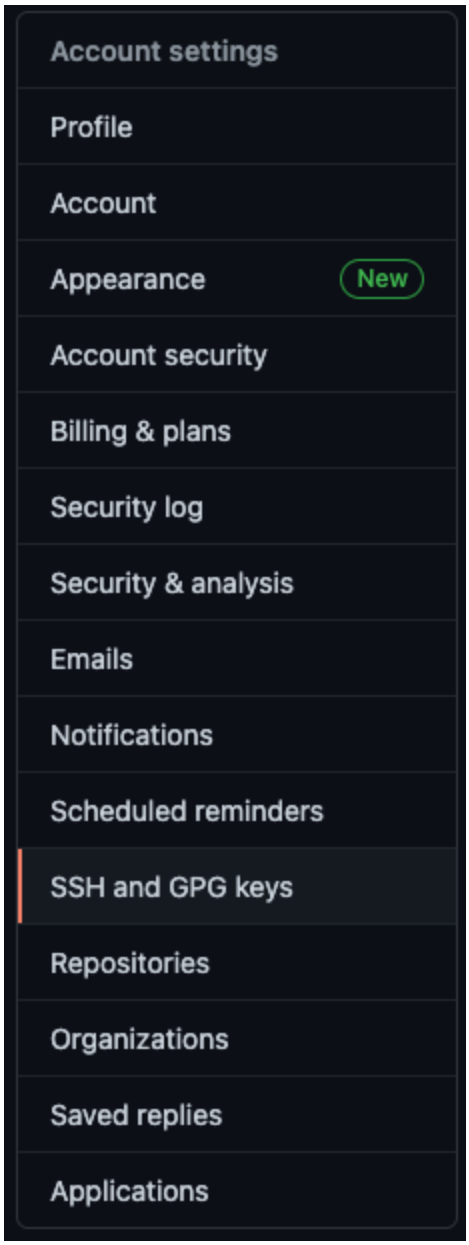


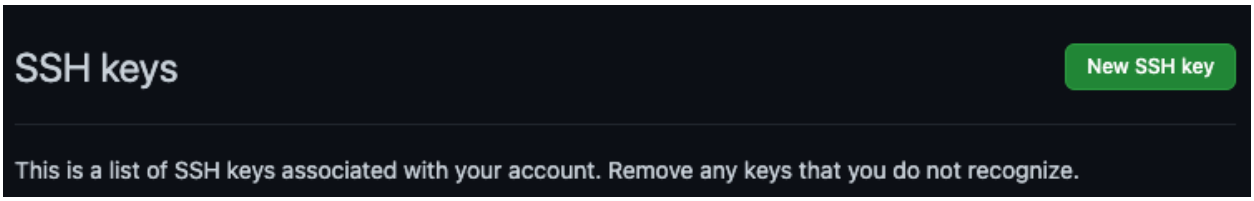

```
REVISION        UPDATED                         STATUS          CHART
1               Wed Jan 27 23:24:15 2021        deployed        core-template-0.1.0
2               Thu Jan 28 21:29:03 2021        failed          core-template-0.1.0
```

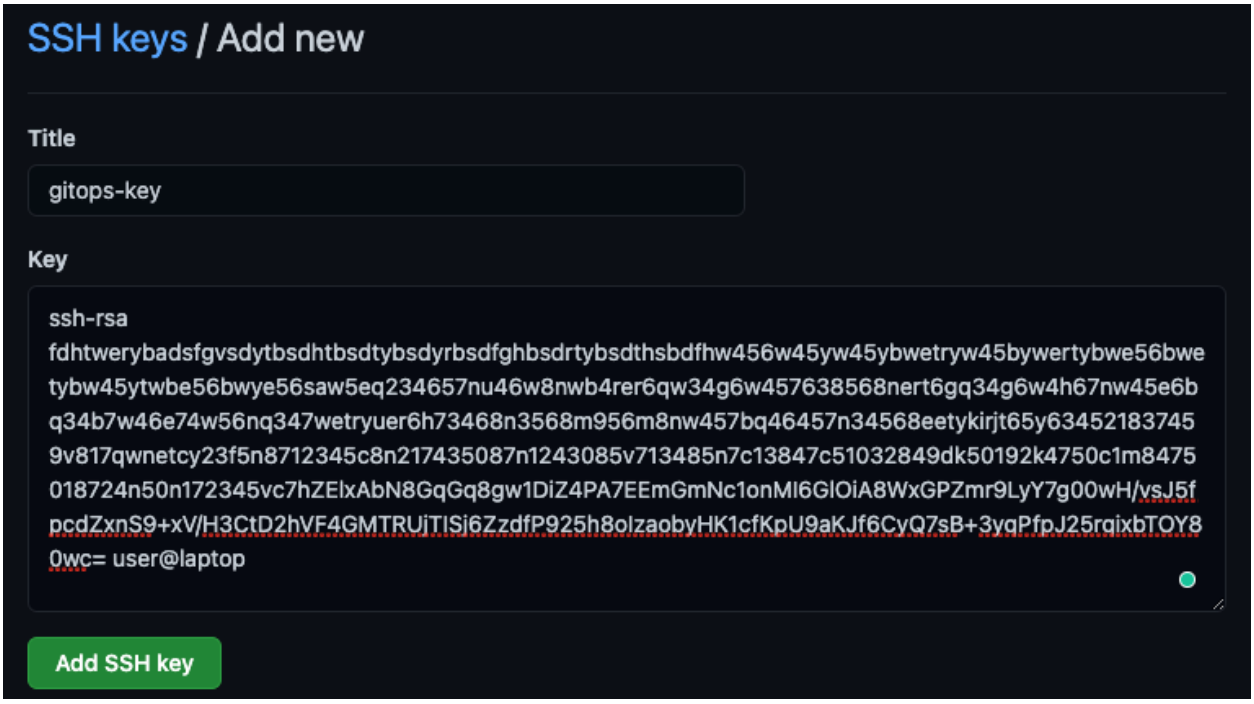


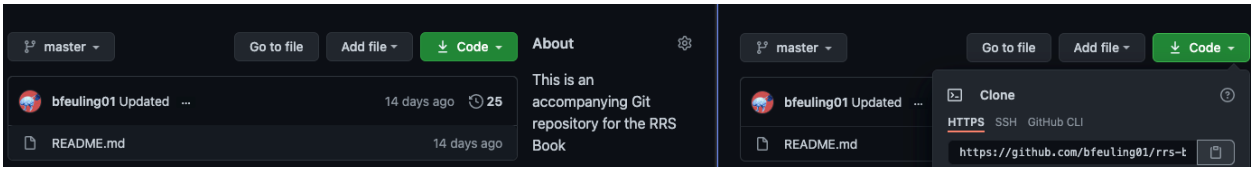
```
Generating public/private rsa key pair.
Enter file in which to save the key (/Users/[redacted]/.ssh/id_rsa): /Users/[redacted].ssh/rrs_book
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /Users/[redacted]/.ssh/rrs_book.
Your public key has been saved in /Users/[redacted]/.ssh/rrs_book.pub.
The key fingerprint is:
SHA256:xv0GeJuOQ8FIgbUh+obFyZm7ZPosbEr6IGXVbBI1D3c [redacted]
The key's randomart image is:
+---[RSA 3072]----+
|  .+**= . E      |
| +.=.* * .       |
|. B + = .        |
| + o o o o       |
|. O   . S +      |
| B . . . . =     |
|=..   .   o o    |
|=*     . o .     |
|=o+      . .     |
+----[SHA256]-----+
```




Account settings
Profile
Account
Appearance
New
Account security
Billing & plans
Security log
Security & analysis
Emails
Notifications
Scheduled reminders
SSH and GPG keys
Repositories
Organizations
Saved replies
Applications

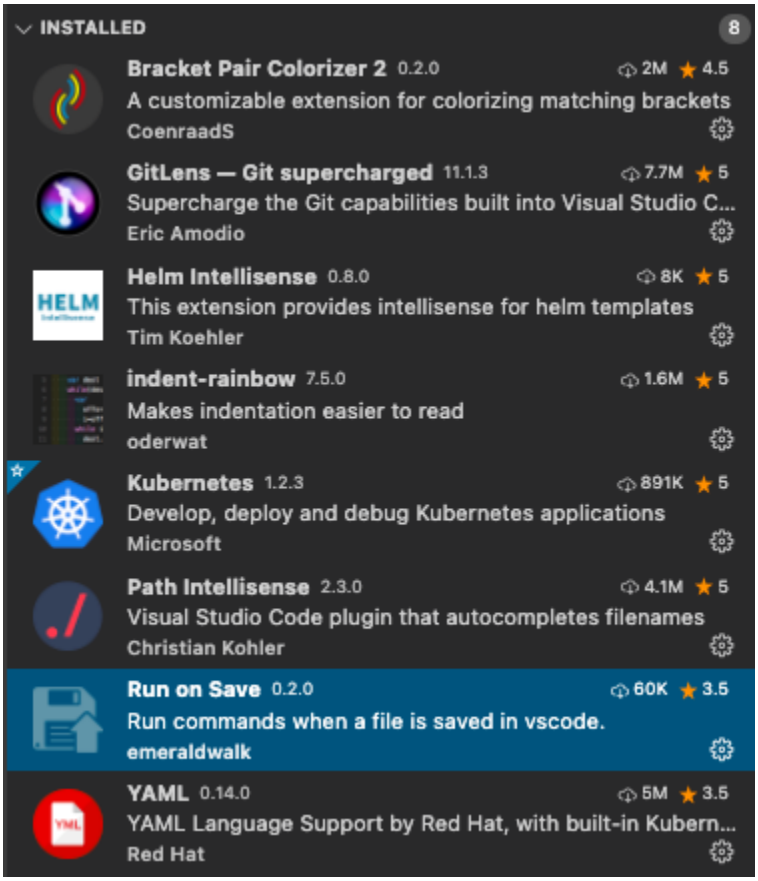

SSH keys
New SSH key
This is a list of SSH keys associated with your account. Remove any keys that you do not recognize.






```
Enumerating objects: 12, done.
Counting objects: 100% (12/12), done.
Delta compression using up to 8 threads
Compressing objects: 100% (12/12), done.
Writing objects: 100% (12/12), 4.62 KiB | 4.62 MiB/s, done.
Total 12 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:      https://github.com/bfeuling01/rrs-book/pull/new/master
remote:
To https://github.com/bfeuling01/rrs-book.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
```

```
😄  minikube v1.17.0 on Darwin 11.1
✨  Using the virtualbox driver based on existing profile
👍  Starting control plane node minikube in cluster minikube
🎉  minikube 1.17.1 is available! Download it: https://github.com/kubernetes/minikube/releases/tag/v1.17.1
💡  To disable this notice, run: 'minikube config set WantUpdateNotification false'

🏃  Updating the running virtualbox "minikube" VM ...
🐳  Preparing Kubernetes v1.20.2 on Docker 20.10.2 ...
🔎  Verifying Kubernetes components...
🌟  Enabled addons: storage-provisioner, default-storageclass
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```



Getting Started

Tip

This guide assumes you have a grounding in the tools that Argo CD is based on. Please read understanding the basics to learn about these tools.

Requirements

- Installed kubectl command-line tool.
- Have a kubeconfig file (default location is `~/.kube/config`).

1. Install Argo CD

```
kubectl create namespace argocd
kubectl apply -n argocd -f https://raw.githubusercontent.com/argoproj/argo-cd/stable/manifests/install.yaml
```

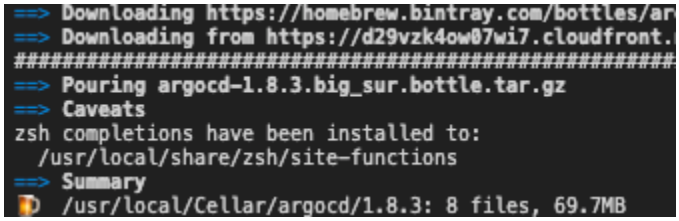
```
Warning: apiextensions.k8s.io/v1beta1 CustomResourceDefinition is deprecated in v1.
customresourcedefinition.apiextensions.k8s.io/applications.argoproj.io created
customresourcedefinition.apiextensions.k8s.io/appprojects.argoproj.io created
serviceaccount/argocd-application-controller created
serviceaccount/argocd-dex-server created
serviceaccount/argocd-redis created
serviceaccount/argocd-server created
role.rbac.authorization.k8s.io/argocd-application-controller created
role.rbac.authorization.k8s.io/argocd-dex-server created
role.rbac.authorization.k8s.io/argocd-redis created
role.rbac.authorization.k8s.io/argocd-server created
clusterrole.rbac.authorization.k8s.io/argocd-application-controller created
clusterrole.rbac.authorization.k8s.io/argocd-server created
rolebinding.rbac.authorization.k8s.io/argocd-application-controller created
rolebinding.rbac.authorization.k8s.io/argocd-dex-server created
rolebinding.rbac.authorization.k8s.io/argocd-redis created
rolebinding.rbac.authorization.k8s.io/argocd-server created
clusterrolebinding.rbac.authorization.k8s.io/argocd-application-controller created
clusterrolebinding.rbac.authorization.k8s.io/argocd-server created
configmap/argocd-cm created
configmap/argocd-gpg-keys-cm created
configmap/argocd-rbac-cm created
configmap/argocd-ssh-known-hosts-cm created
configmap/argocd-tls-certs-cm created
secret/argocd-secret created
service/argocd-dex-server created
service/argocd-metrics created
service/argocd-redis created
service/argocd-repo-server created
service/argocd-server created
service/argocd-server-metrics created
deployment.apps/argocd-dex-server created
deployment.apps/argocd-redis created
deployment.apps/argocd-repo-server created
deployment.apps/argocd-server created
statefulset.apps/argocd-application-controller created
```

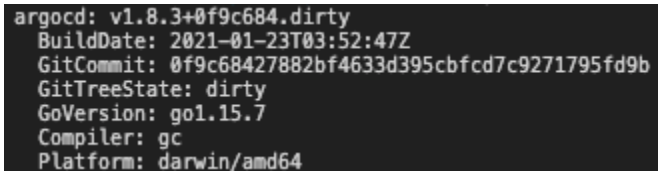
2. Download Argo CD CLI

Download the latest Argo CD version from https://github.com/argoproj/argo-cd/releases/latest. More detailed installation instructions can be found via the CLI installation documentation.

Also available in Mac Homebrew:

```
brew install argocd
```





3. Access The Argo CD API Server

By default, the Argo CD API server is not exposed with an external IP. To access the API server, choose one of the following techniques to expose the Argo CD API server:

Service Type Load Balancer

Change the argocd-server service type to `LoadBalancer`:

```
kubectl patch svc argocd-server -n argocd -p '{"spec": {"type": "LoadBalancer"}}
```

> Argo CD 1.8 and earlier

The initial password is autogenerated to be the pod name of th
This can be retrieved with the command:

```
kubectl get pods -n argocd -l app.kubernetes.io/name=argoc
```

Using the username `admin` and the password from above, logir
hostname:

```
argocd login <ARGOCD_SERVER>  # e.g. localhost:8080 or arg
```

Change the password using the command:

```
argocd account update-password
```

5. Register A Cluster To Deploy Apps To (Optional)

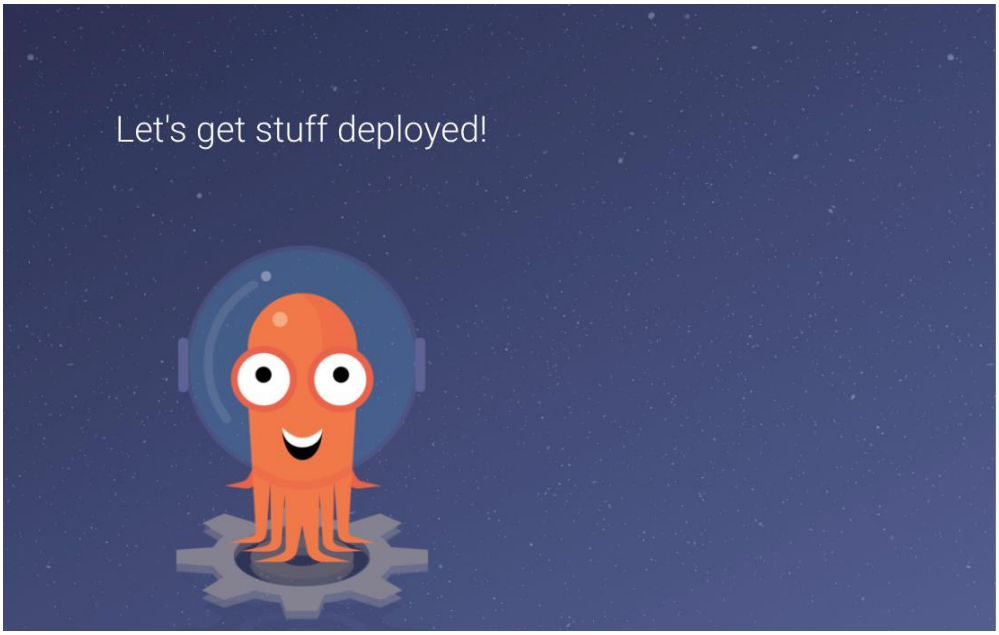
This step registers a cluster's credentials to Argo CD, and is only necessary when deploying to an external cluster. When deploying internally (to the same cluster that Argo CD is running in), https://kubernetes.default.svc should be used as the application's K8s API server address.

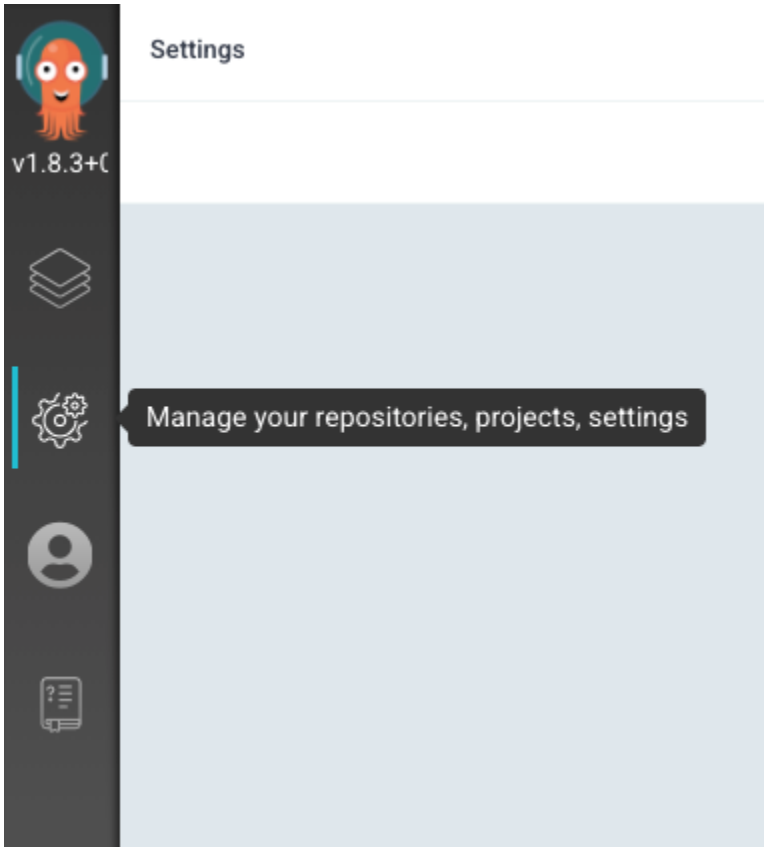
First list all clusters contexts in your current kubeconfig:

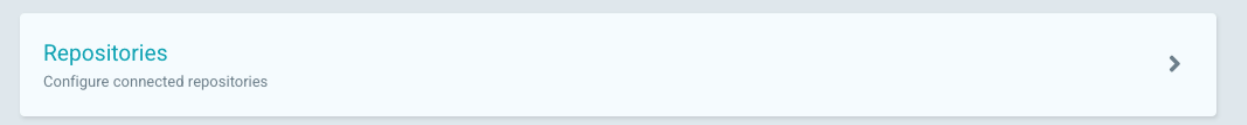
```
kubectl config get-contexts -o name
```

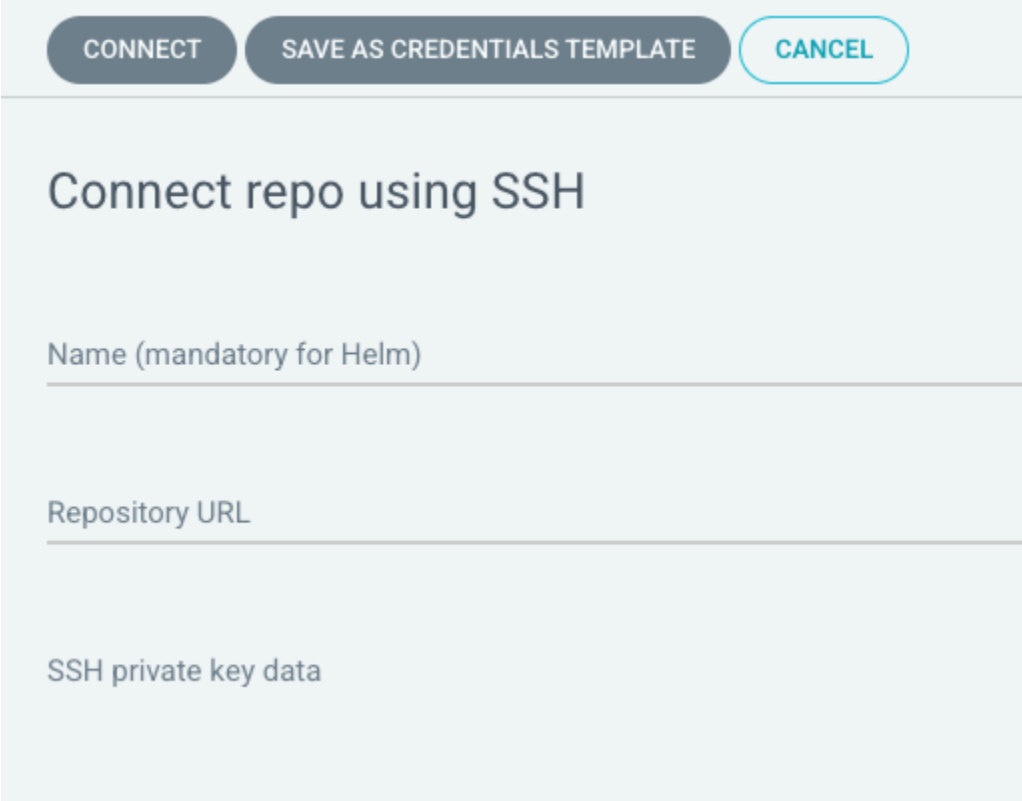
Choose a context name from the list and supply it to `argocd cluster add CONTEXTNAME`.

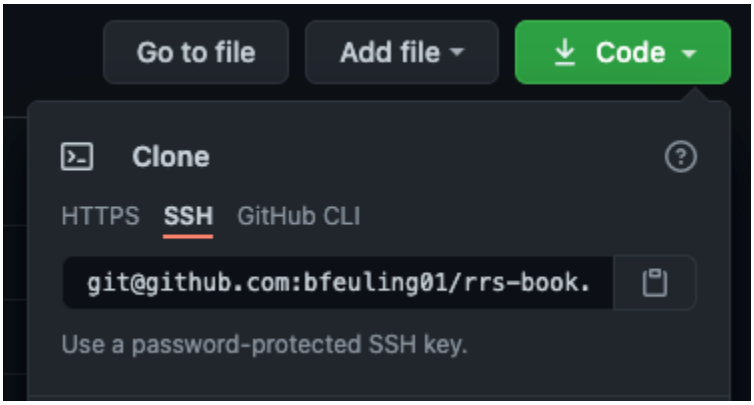
```
INFO[0000] ServiceAccount "argocd-manager" created in namespace "kube-system"
INFO[0000] ClusterRole "argocd-manager-role" created
INFO[0000] ClusterRoleBinding "argocd-manager-role-binding" created
Handling connection for 8080
Cluster 'https://192.168.99.103:8443' added
```






Repositories
Configure connected repositories


CONNECT
SAVE AS CREDENTIALS TEMPLATE
CANCEL
Connect repo using SSH
Name (mandatory for Helm)
Repository URL
SSH private key data


Go to file
Add file
Code
Clone
HTTPS
SSH
GitHub CLI
git@github.com:bfeuling01/rrs-book.
Use a password-protected SSH key.

CONNECT | SAVE AS CREDENTIALS TEMPLATE | CANCEL

Connect repo using SSH

Name (mandatory for Helm)

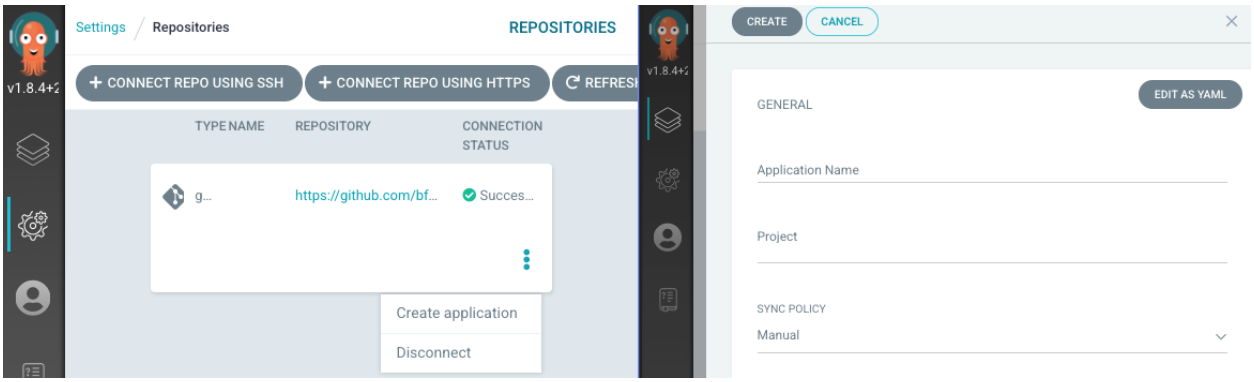
nginx

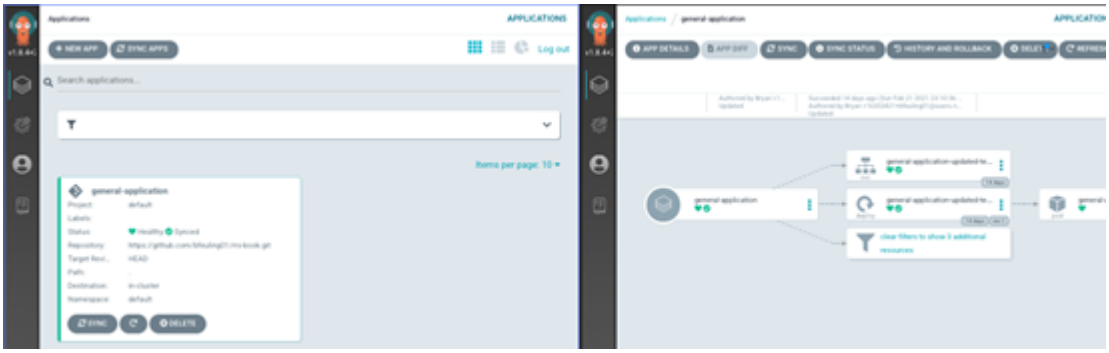
Repository URL

git@github.com:bfeuling01/rrs-book.git

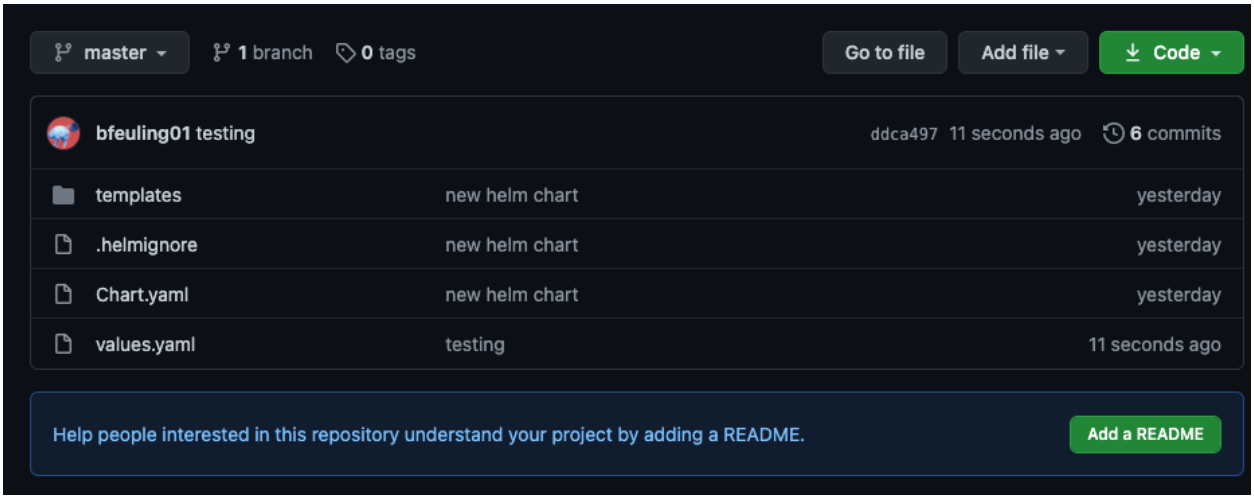
-----BEGIN RSA PRIVATE KEY-----
MIIkueshj456rvn8awe75v;uvqwfehtvyas79rv6ae8rtvawert pogspz8d6t8Ypw8y8568
YET78twe4cbasdftaI7E6CBq7o4qoWE76BC4ip7q36Nxjhekrhgv7976srtwegf342f64
Ha1a5c12TQc5v8yJCR1pICHnevLhCW0YUjIB8VUWU99f6BJaAqSl+4ud3bmcnGMb
2qZ1dKUjIwweJjH75VB0Vzijr0TWQj9164rCzFMNgTdGjq8ocuXi+OhObg1HpI4ts873
vjnnkjrbgvsdf7sv7d656c85gase598s6n7ad6f087g6ase8r723gr234r7we6fe274v7s6
kRvljDbPZMa2AxwqauCW4PDFAoGBAK5EAsTQLPJtuydUX+BSt9Frkyf1+6lqhJMB
khgvsd76v78sf6vba876eq2g45q4DFGUHU62G37DTFTAYTD8Q97t3ghq3997GAFoa
986CV986SDV3G4KQJSDC82JGE9A8DS7C6AWJ3189fskj4hg19827auictiyagsqUGE
BM4jORuyRU+mE3oOPd+jNnF5/mLDNZVqj7E/ueqMD0jQgpOpVKNS8f4w4xzvMHk1
ydKgYB3BHBjuESOMIcOJnfIh+9QzQG47LaUoWOEAYmUX3/y9ZdX/N58g5XqkJjNi
JCHAKS9R76234G2397689DIVG9873jg423r98fsydvgsdgfg9FSDGFkugviud78rwtew
/20I/osFAoGBAPB4lMDNH0tZcxFShTfRQBGmupNBZPgp3KFuiD1WxJvKVEA7AXPk
lycdfhbe58293ug4rf798YFSUIEGIUEG98yvdjf9KJGiyUIGOUSHDo8svdyuwgeoufOUZ8
GBAK5EAsTQLPJtuydUX+BSt9Frkyf1+6lqhJMBOBUHFOH872487fjh45OUIYViouge87
khgvsd76v78sf6vba876eq2g45q4DFGUHU62G37DTFTAYTD8Q97t3ghq3997GAFoa
986CV986SDV3G4KQJSDC82JGE9A8DS7C6AWJ3189fskj4hg19827auictiyagsqUGE

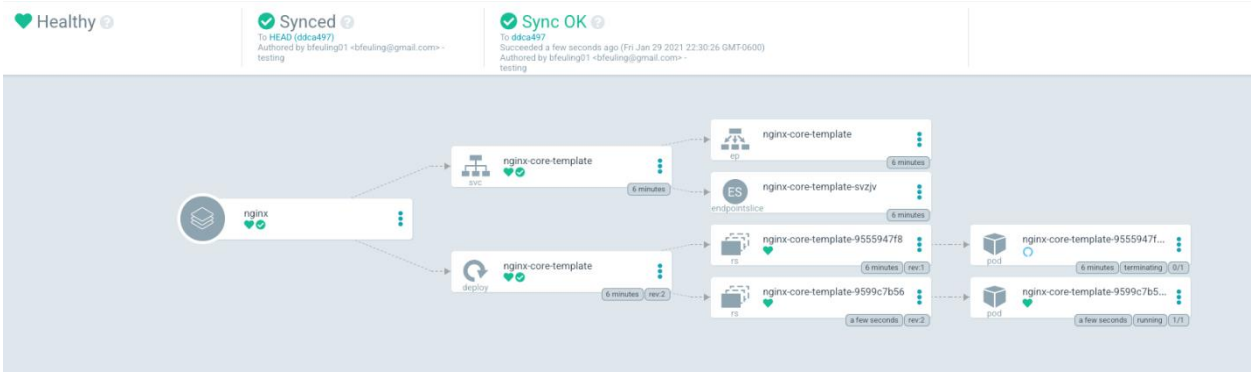
SSH private key data



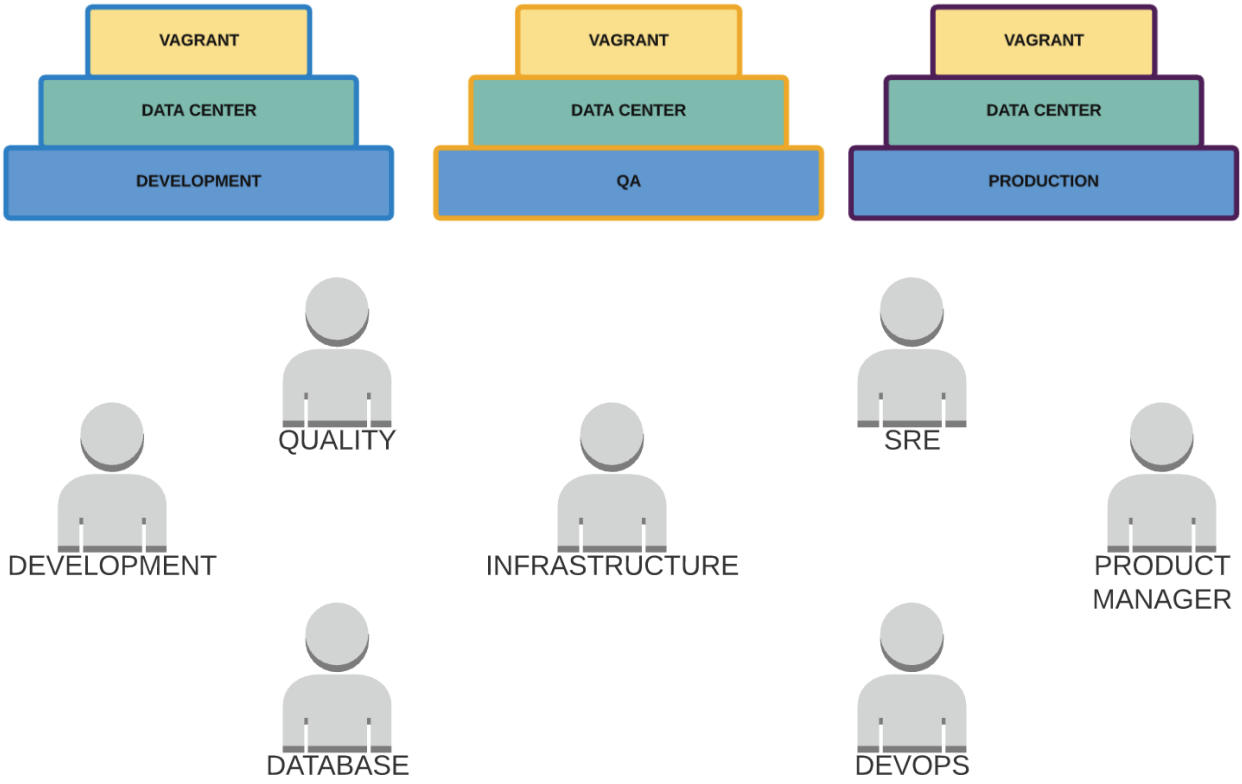


```
# Declare variables to be passed into your templates.

replicaCount: 1

image:
  repository: nginx
  pullPolicy: Always      You, seconds ago • Uncommitted changes
  # Overrides the image tag whose default is the chart appVersion.
  tag: ""
```

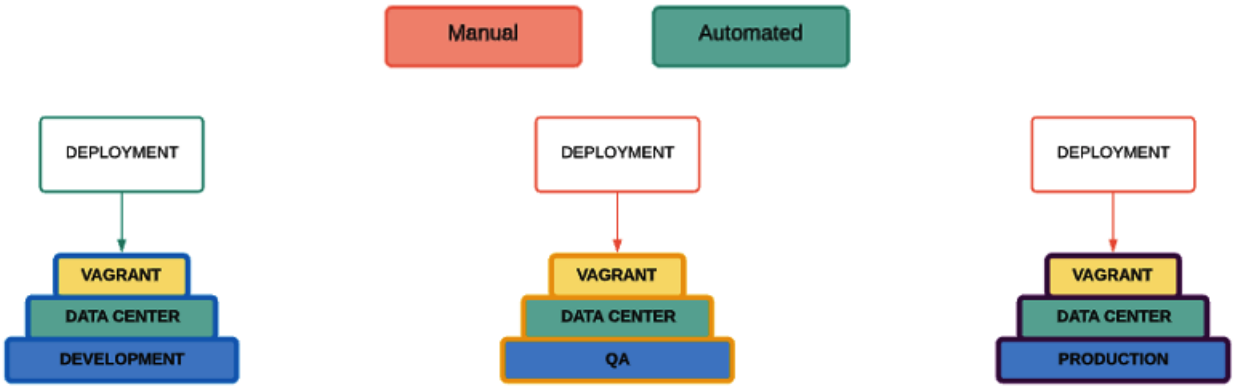


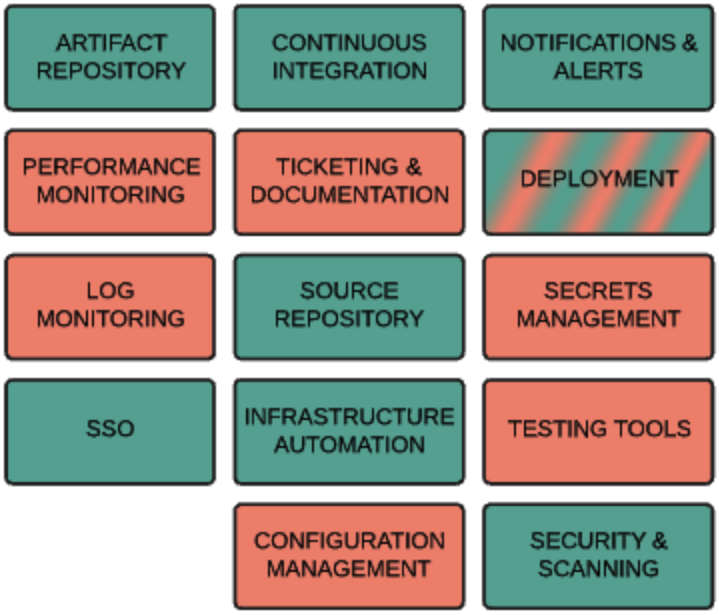

Healthy
Synced
To HEAD (ddca497)
Authored by bfeuling01 <bfeuling@gmail.com> - testing
Sync OK
To ddca497
Succeeded a few seconds ago (Fri Jan 29 2021 22:30:26 GMT-0600)
Authored by bfeuling01 <bfeuling@gmail.com> - testing
nginx
nginx-core-template
svc
6 minutes
nginx-core-template
deploy
6 minutes
rev:2
nginx-core-template
ep
6 minutes
nginx-core-template-svzjv
endpointslice
6 minutes
nginx-core-template-9555947f8
rs
6 minutes
rev:1
nginx-core-template-9555947f...
pod
6 minutes
terminating
0/1
nginx-core-template-9599c7b56
rs
a few seconds
rev:2
nginx-core-template-9599c7b5...
pod
a few seconds
running
1/1

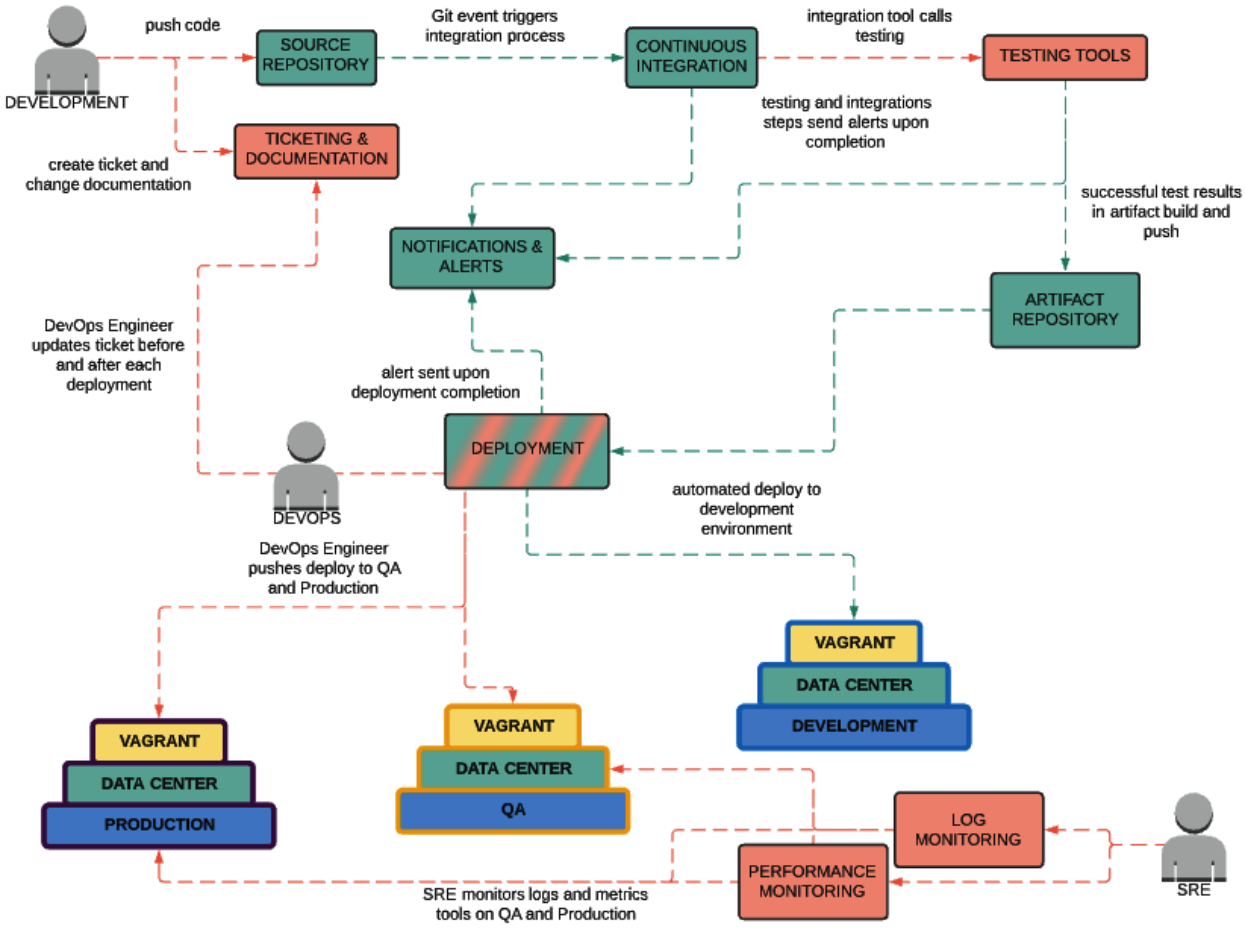
Chapter 10: Verified GitOps Setup – Continuous Delivery GitOps with Harness



ARTIFACT REPOSITORY	CONTINUOUS INTEGRATION	NOTIFICATIONS & ALERTS
PERFORMANCE MONITORING	TICKETING & DOCUMENTATION	DEPLOYMENT
LOG MONITORING	SOURCE REPOSITORY	SECRETS MANAGEMENT
SSO	INFRASTRUCTURE AUTOMATION	TESTING TOOLS
	CONFIGURATION MANAGEMENT	SECURITY & SCANNING




ARTIFACT REPOSITORY
CONTINUOUS INTEGRATION
NOTIFICATIONS & ALERTS
PERFORMANCE MONITORING
TICKETING & DOCUMENTATION
DEPLOYMENT
LOG MONITORING
SOURCE REPOSITORY
SECRETS MANAGEMENT
SSO
INFRASTRUCTURE AUTOMATION
TESTING TOOLS
CONFIGURATION MANAGEMENT
SECURITY & SCANNING


DEVELOPMENT
push code
SOURCE REPOSITORY
Git event triggers integration process
CONTINUOUS INTEGRATION
integration tool calls testing
TESTING TOOLS
testing and integrations steps send alerts upon completion
create ticket and change documentation
TICKETING & DOCUMENTATION
NOTIFICATIONS & ALERTS
successful test results in artifact build and push
ARTIFACT REPOSITORY
DevOps Engineer updates ticket before and after each deployment
alert sent upon deployment completion
DEPLOYMENT
DEVOPS
automated deploy to development environment
DevOps Engineer pushes deploy to QA and Production
VAGRANT
DATA CENTER
DEVELOPMENT
VAGRANT
DATA CENTER
PRODUCTION
VAGRANT
DATA CENTER
QA
LOG MONITORING
PERFORMANCE MONITORING
SRE
SRE monitors logs and metrics tools on QA and Production

site.yml

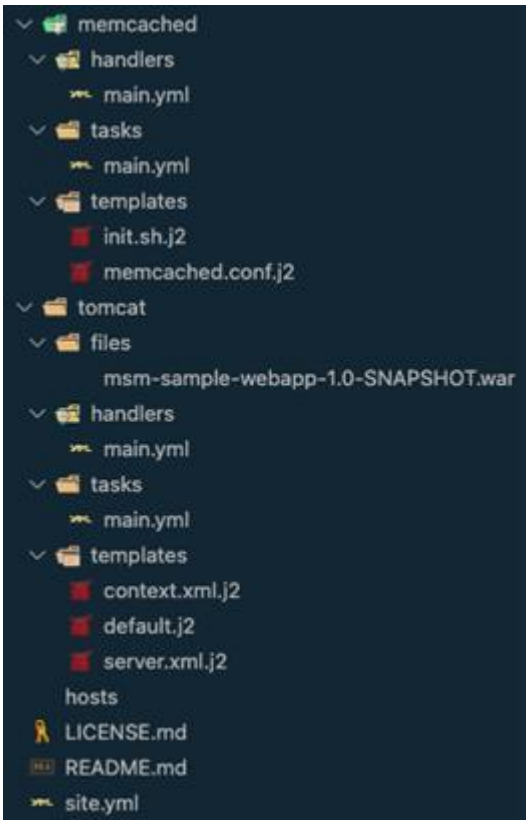
```yaml
---
# This playbook deploys the whole application stack in this site.

- name: apply common configuration to all nodes
  hosts: all
  remote_user: root

  roles:
    - common

- name: configure and deploy the webservers and application code
  hosts: webservers
  remote_user: root

  roles:
    - web

- name: deploy MySQL and configure the databases
  hosts: dbservers
  remote_user: root

  roles:
    - db
```

hosts

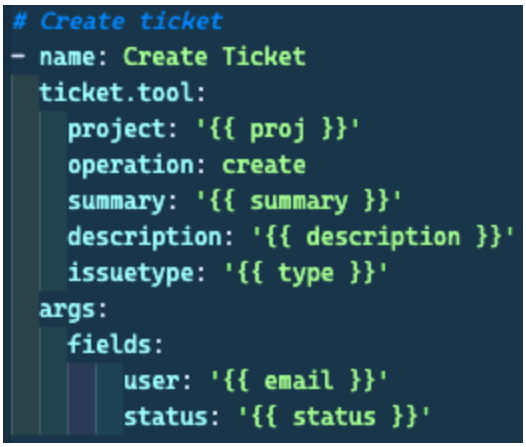
```
[webservers]
web1

[dbservers]
db1
```

```
[mysqld]
datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
user=mysql
# Disabling symbolic-links is recommended to prevent assorted security risks
symbolic-links=0
port={{ mysql_port }}

[mysqld_safe]
log-error=/var/log/mysqld.log
pid-file=/var/run/mysqld/mysqld.pid
```

```
(base) ➜  simple git:(master) ✗ ansible-playbook -i hosts site.yml

PLAY [apply common configuration to all nodes] *********************************************

TASK [Gathering Facts] *********************************************************************
```




```yaml
# Integration
- name: Ticketing Tool
  id: 'ticket.tool'
  uri: '{{ uri }}'
  port: '{{ port }}'
  username: '{{ user }}'
  password: '{{ pwd }}'
```



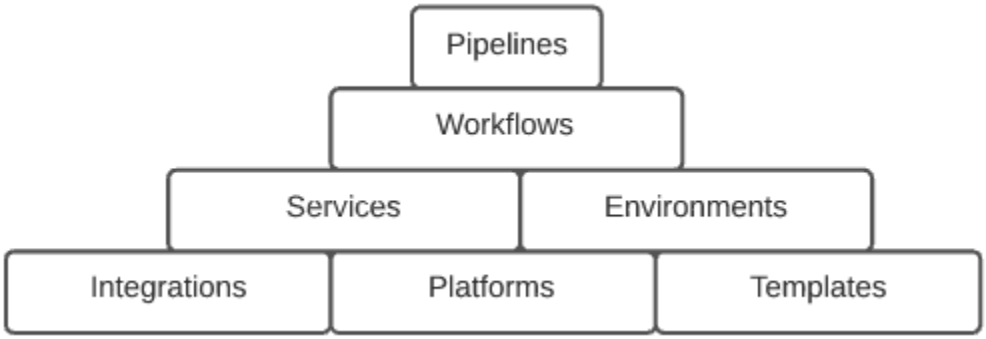
```yaml
# Create ticket
- name: Create Ticket
  ticket.tool:
    project: '{{ proj }}'
    operation: create
    summary: '{{ summary }}'
    description: '{{ description }}'
    issuetype: '{{ type }}'
  args:
    fields:
        user: '{{ email }}'
        status: '{{ status }}'
```

```yaml
---
- hosts: all
  input:

    - name: memory
      prompt: "Memory"
      private: no

    - name: cpu
      prompt: "Cpu"
      private: no

    - name: ticket_subject
      prompt: "Ticket summary"
      private: no

    - name: ticket_summary
      prompt: "Ticket summary"
      private: no

    - name: cluster
      prompt: "cluster"
      private: no

    - name: environment
      prompt: "Environment"
      private: no

    - name: artifact
      prompt: "Artifact"
      private: no

    - name: git_repo
      prompt: "Git repository"
      private: no

    - name: override_values
```

```yaml
- name: Store file into /tmp/variables/defaults
  ansible.builtin.fetch:
    src: https://github.com/company/application/defaults
    dest: /tmp/variables/defaults

- name: Store file into /tmp/variables/overrides
  ansible.builtin.fetch:
    src: https://github.com/company/application/overrides
    dest: /tmp/variables/overrides
```

```yaml
pipeline:
    name: "non-production"
    stages:
      pre-deployment:
        db-schema-change:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        db-deploy:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        network-change:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        cluster-create:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        server-create:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        ticket-create:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        approval:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
      deployment:
        server-application:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        kubernetes-application:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        serverless-application:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
      post-deployment:
        health-check:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        approval:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        ticket-update:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
        db-schema-change:
          script: "/path/to/script"
          configuration: "/path/to/configuration"
```

```yaml
pipeline:
- workflow: rolling
  workflowVariables:
    environment: development
    service: example-service
    infrastructure: dev
- workflow: rolling
  workflowVariables:
    environment: qa
    service: example-service
    infrastructure: qa
- type: APPROVAL
  properties:
    userGroups: administrators
    timeoutMillis: 86400000
- workflow: canary
  workflowVariables:
    service: example-service
    infrastructure: prod
```

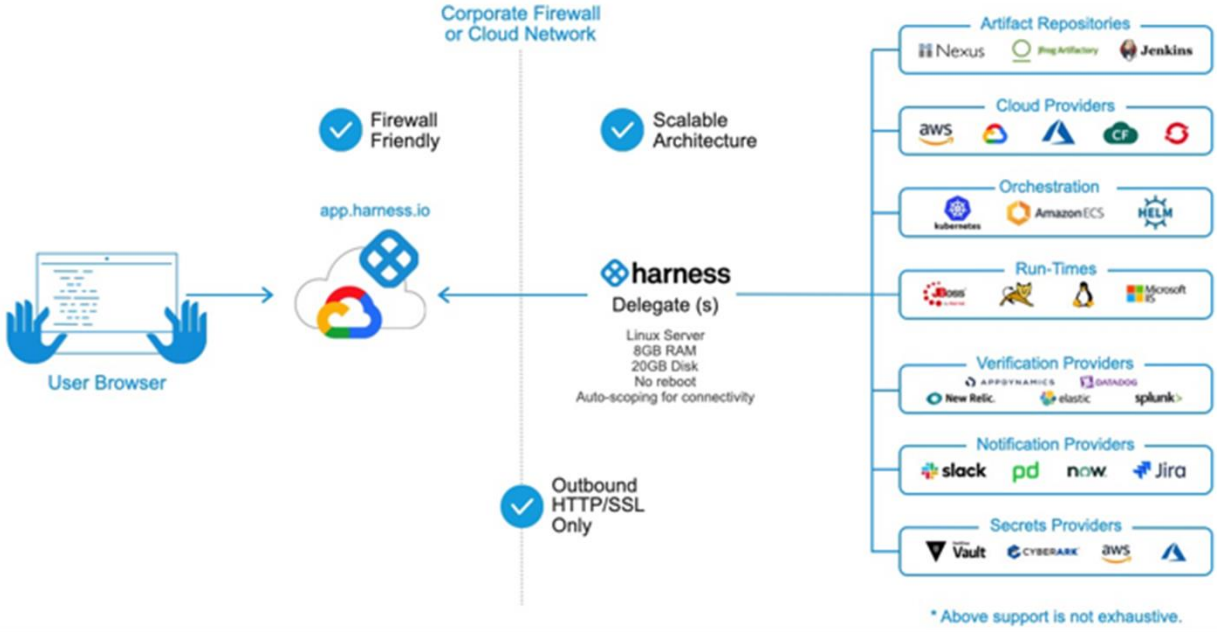


```yaml
apiVersion: apps/v1
kind: StatefulSet
metadata:
  labels:
    harness.io/app: harness-delegate
    harness.io/account: sykvuk
    harness.io/name: test
  name: test-sykvuk
  namespace: harness-delegate
spec:
  replicas: 1
  selector:
    matchLabels:
      harness.io/app: harness-delegate
      harness.io/account: sykvuk
      harness.io/name: test
  serviceName: ""
  template:
    metadata:
      labels:
        harness.io/app: harness-delegate
        harness.io/account: sykvuk
        harness.io/name: test
    spec:
      containers:
      - image: harness/delegate:latest
        imagePullPolicy: Always
        name: harness-delegate-instance
        resources:
          limits:
```

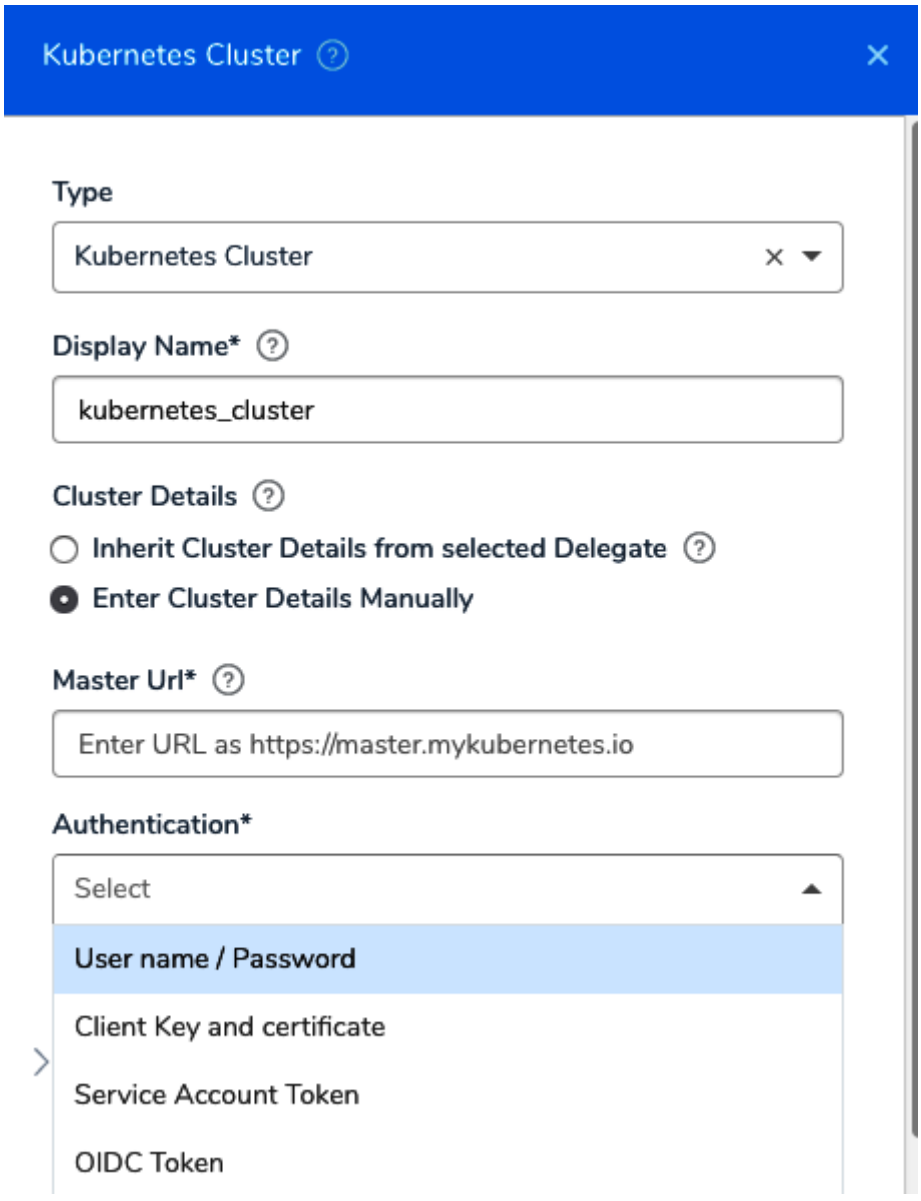
```yaml
        name: harness-delegate-instance
        resources:
          limits:
            cpu: "1"
            memory: "4Gi"
        readinessProbe:
```

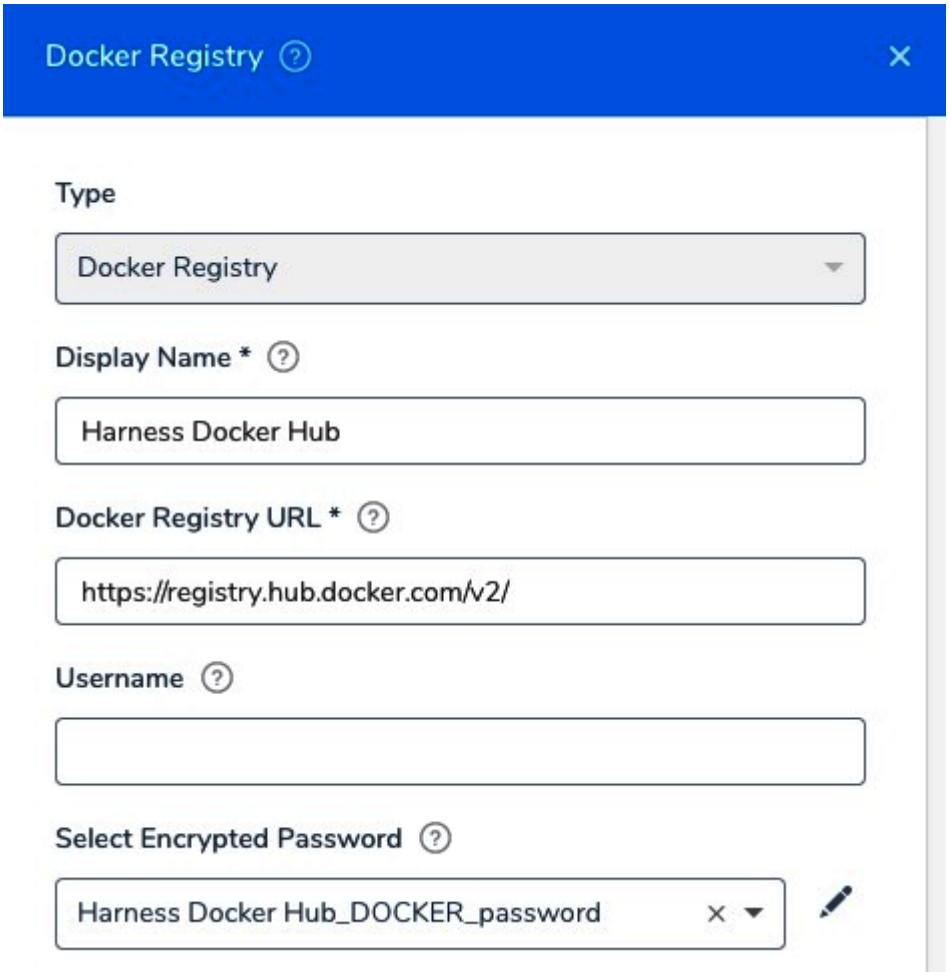
```
(base) ➜  ~ kubectl apply -f ~/Downloads/harness-delegate-kubernetes/harness-delegate.yaml
namespace/harness-delegate created
clusterrolebinding.rbac.authorization.k8s.io/harness-delegate-cluster-admin configured
secret/bf-test-proxy created
statefulset.apps/bf-test-sykvuk created
```

Harness SaaS Architecture



* Above support is not exhaustive.


Kubernetes Cluster
Type
Kubernetes Cluster
Display Name*
kubernetes_cluster
Cluster Details
Inherit Cluster Details from selected Delegate
Enter Cluster Details Manually
Master Url*
Enter URL as https://master.mykubernetes.io
Authentication*
Select
User name / Password
Client Key and certificate
Service Account Token
OIDC Token


Docker Registry
Type
Docker Registry
Display Name *
Harness Docker Hub
Docker Registry URL *
https://registry.hub.docker.com/v2/
Username
Select Encrypted Password
Harness Docker Hub_DOCKER_password

Git Connector

Display Name*

git_repository

Type Git Repo Git Account

URL*

HTTPS SSH

git@

SSH Key*

bf-git-key

Branch Name

master

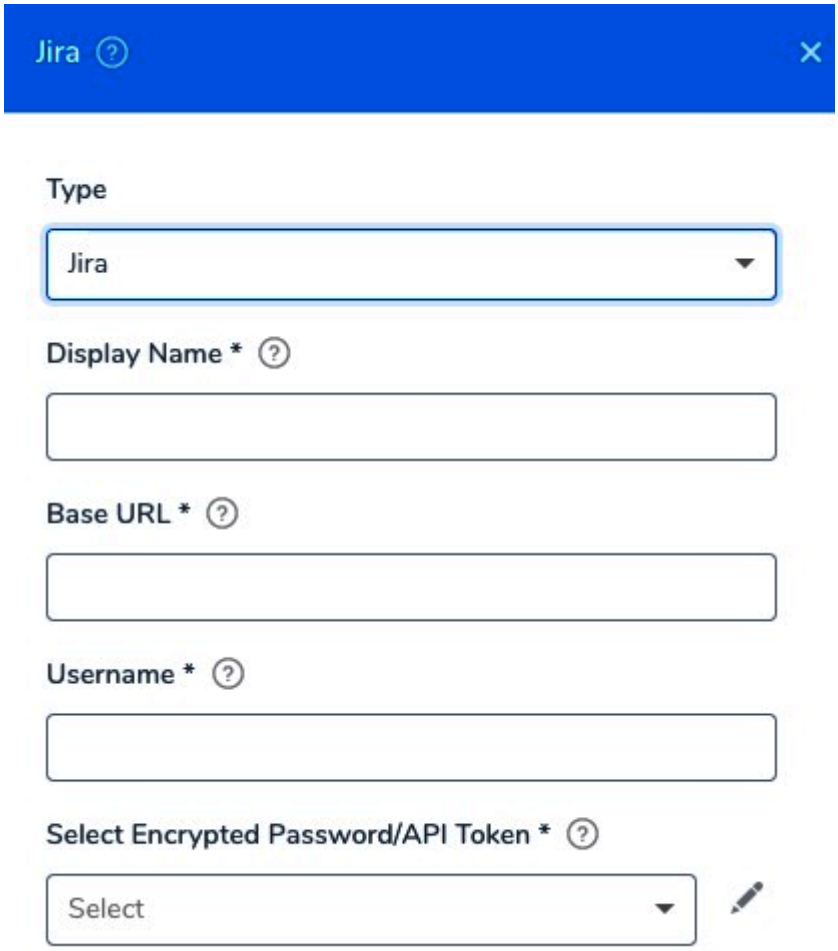
Generate Webhook URL

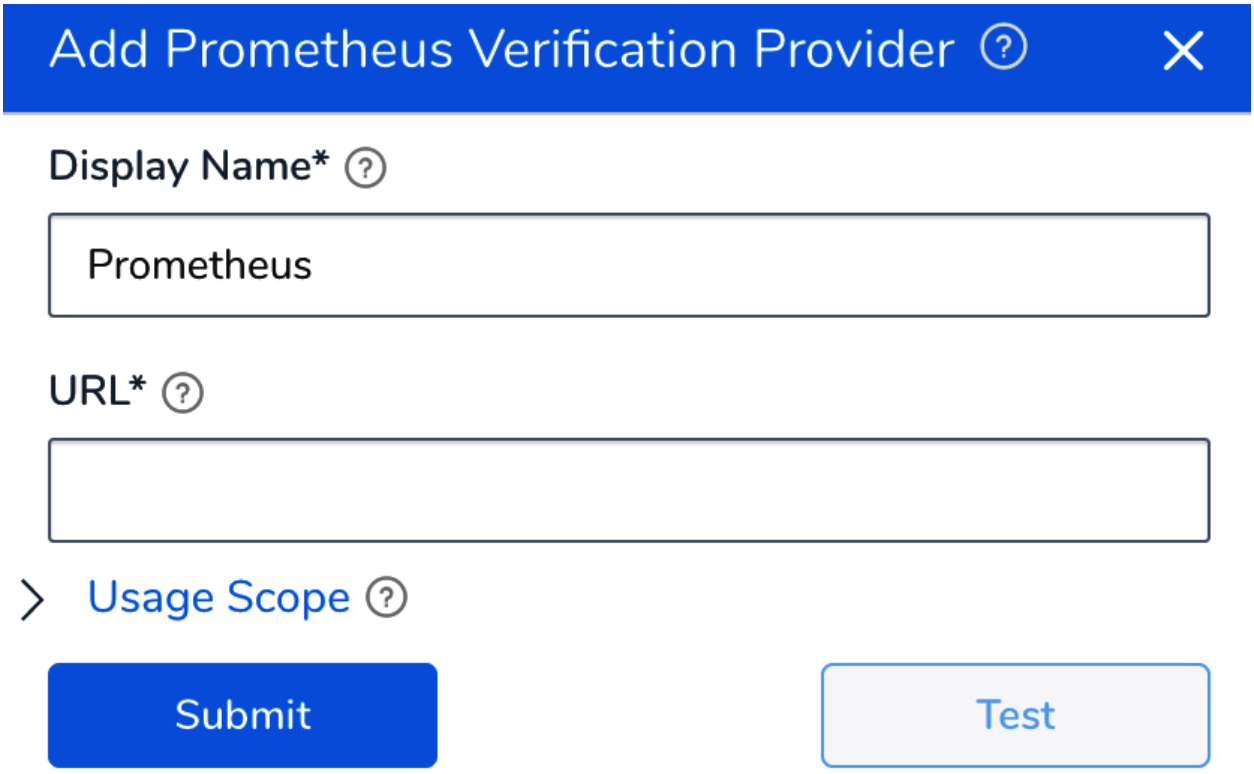
Customize Commit Attributes (Git Sync only)

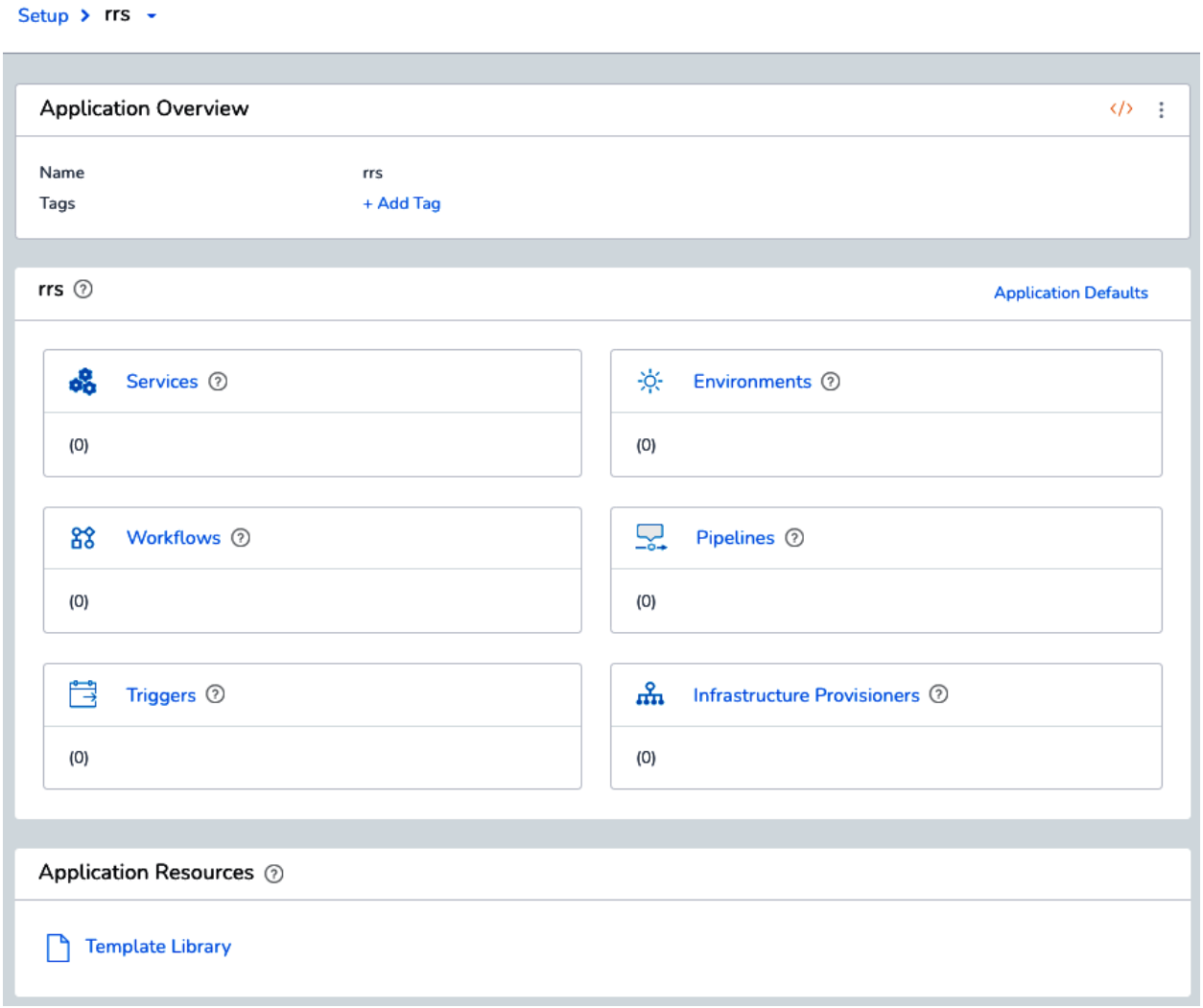
Usage Scope

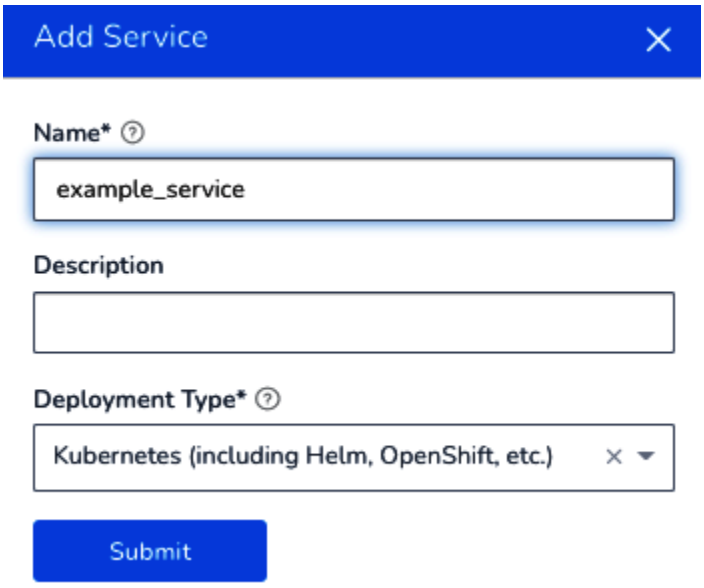
Add Row

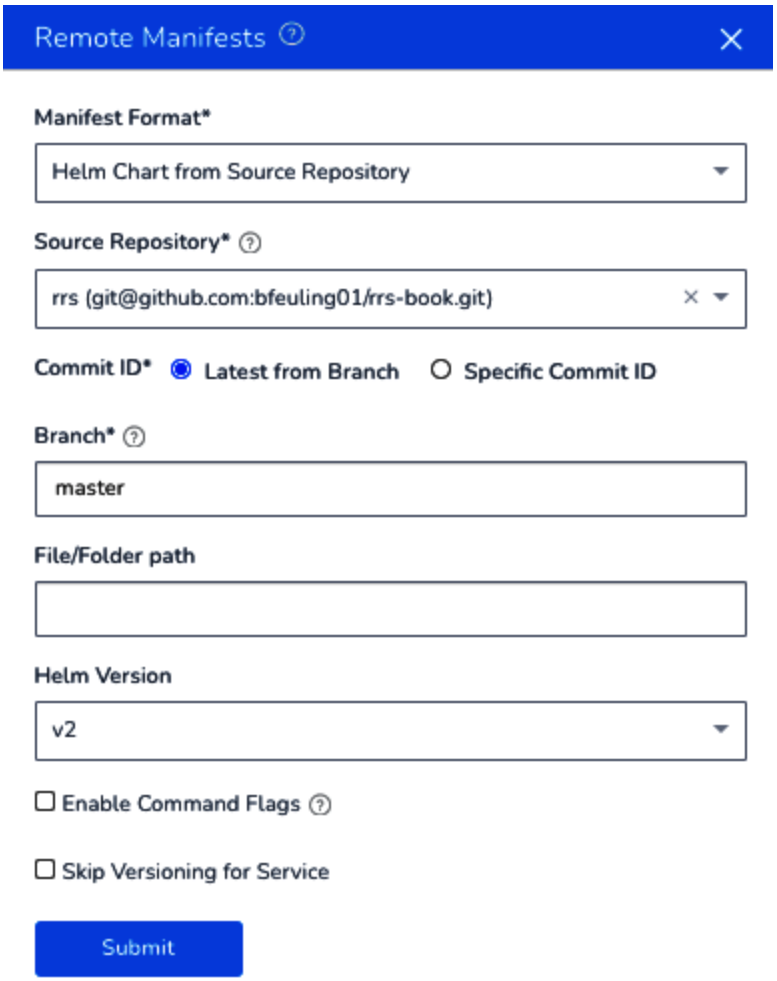
Applications	Environments	
All Applications	Production Environments	
All Applications	Non-Production Environments	

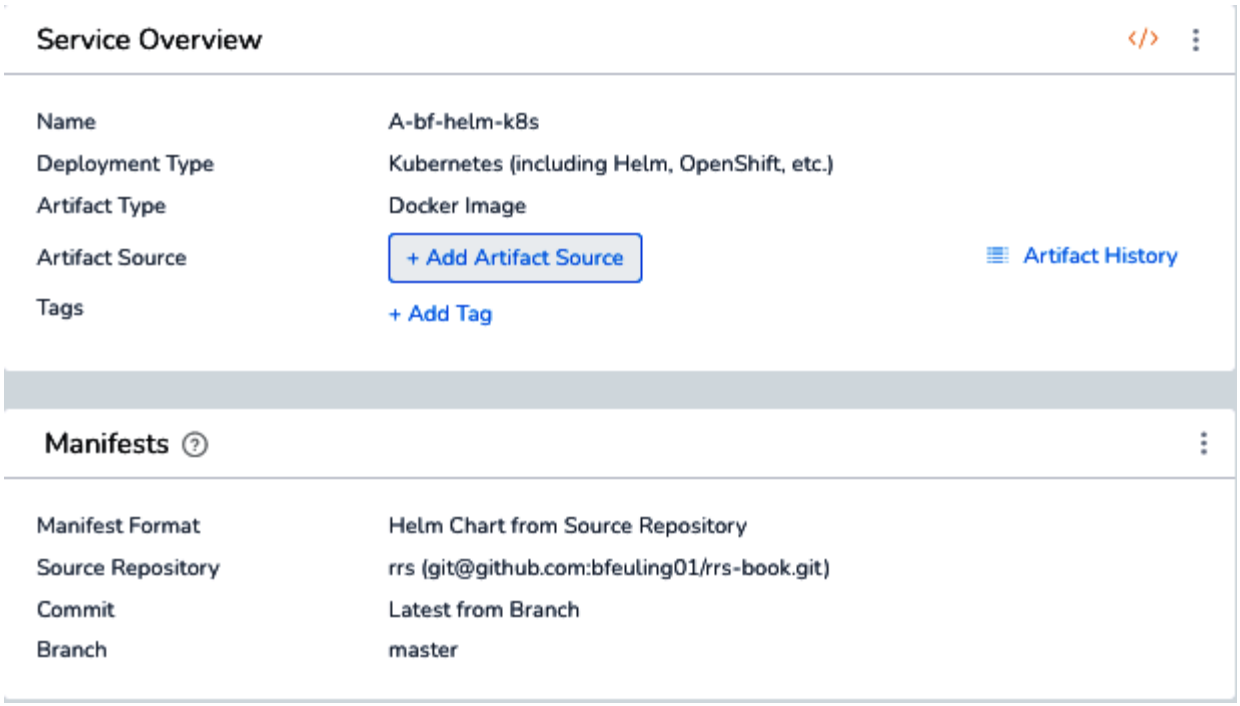

Jira
Type
Jira
Display Name *
Base URL *
Username *
Select Encrypted Password/API Token *
Select

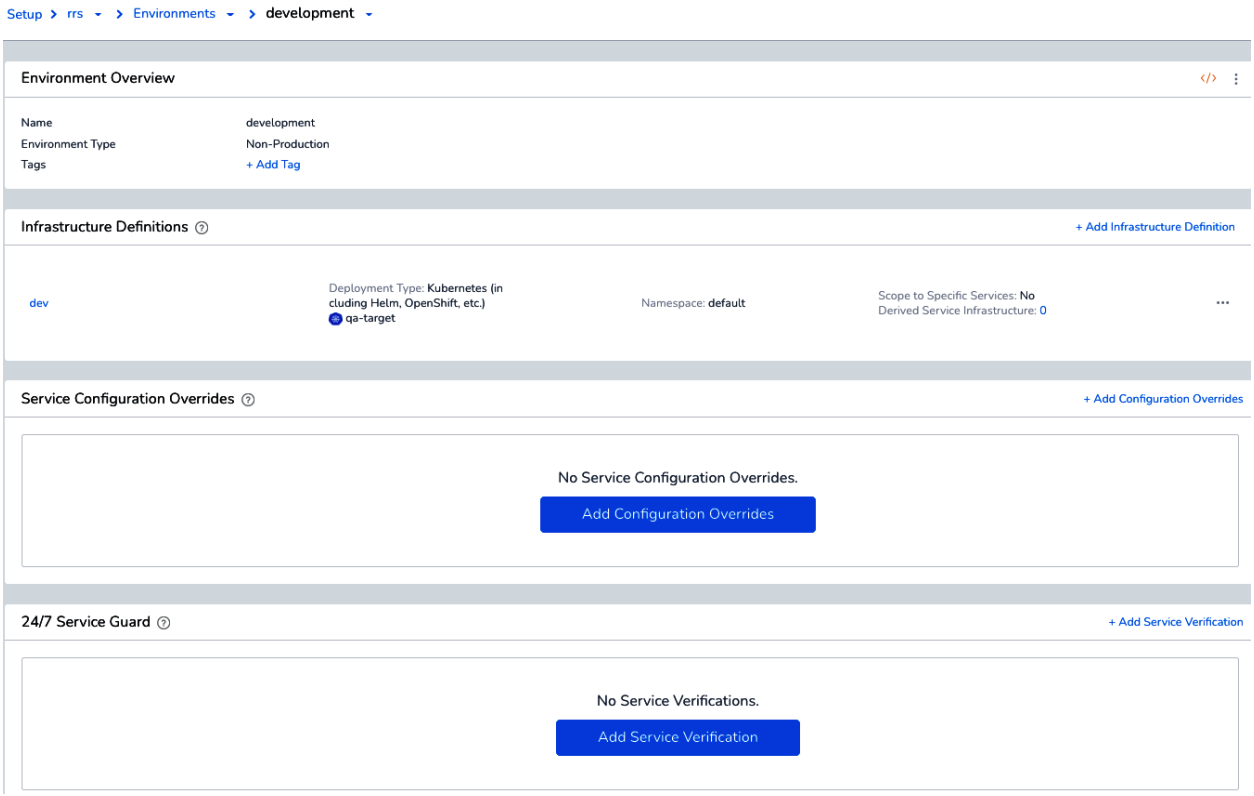

Add Prometheus Verification Provider
Display Name*
Prometheus
URL*
Usage Scope
Submit
Test


Setup > rrs
Application Overview
Name
rrs
Tags
+ Add Tag
rrs
Application Defaults
Services
(0)
Environments
(0)
Workflows
(0)
Pipelines
(0)
Triggers
(0)
Infrastructure Provisioners
(0)
Application Resources
Template Library


Add Service
Name*
example_service
Description
Deployment Type*
Kubernetes (including Helm, OpenShift, etc.)
Submit


Remote Manifests
Manifest Format*
Helm Chart from Source Repository
Source Repository*
rrs (git@github.com:bfeuling01/rrs-book.git)
Commit ID*
Latest from Branch
Specific Commit ID
Branch*
master
File/Folder path
Helm Version
v2
Enable Command Flags
Skip Versioning for Service
Submit


Service Overview
Name
A-bf-helm-k8s
Deployment Type
Kubernetes (including Helm, OpenShift, etc.)
Artifact Type
Docker Image
Artifact Source
+ Add Artifact Source
Artifact History
Tags
+ Add Tag
Manifests
Manifest Format
Helm Chart from Source Repository
Source Repository
rrs (git@github.com:bfeuling01/rrs-book.git)
Commit
Latest from Branch
Branch
master


Setup
rrs
Environments
development
Environment Overview
Name
development
Environment Type
Non-Production
Tags
+ Add Tag
Infrastructure Definitions
+ Add Infrastructure Definition
dev
Deployment Type: Kubernetes (including Helm, OpenShift, etc.)
qa-target
Namespace: default
Scope to Specific Services: No
Derived Service Infrastructure: 0
Service Configuration Overrides
+ Add Configuration Overrides
No Service Configuration Overrides.
Add Configuration Overrides
24/7 Service Guard
+ Add Service Verification
No Service Verifications.
Add Service Verification

Setup > rrs > Workflows > rolling > Rolling

Workflow Overview

Name	rolling
Service	example_service (Docker Image)
Deployment Type	Kubernetes
Environment	development
Workflow Type	Rolling
Tags	+ Add Tag

Rolling

1. Deploy

- Jira
- Rollout Deployment

Add Step

2. Verify

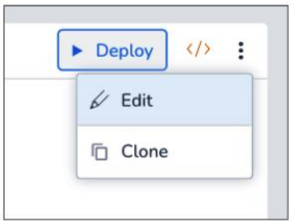
- Prometheus

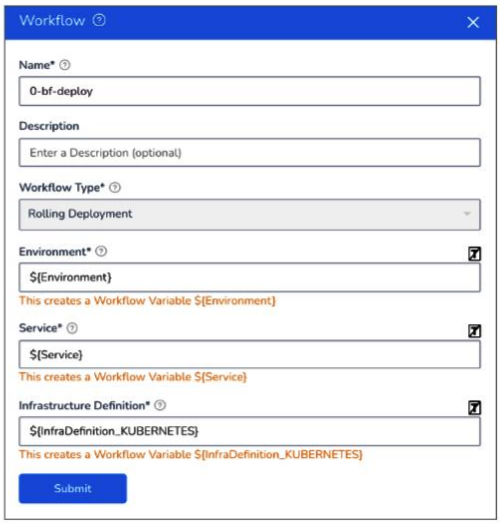
Add Step

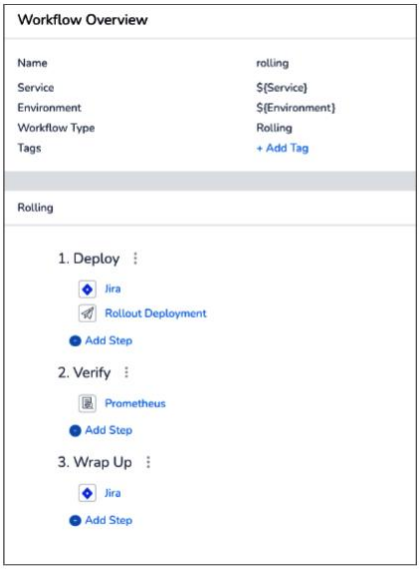
3. Wrap Up

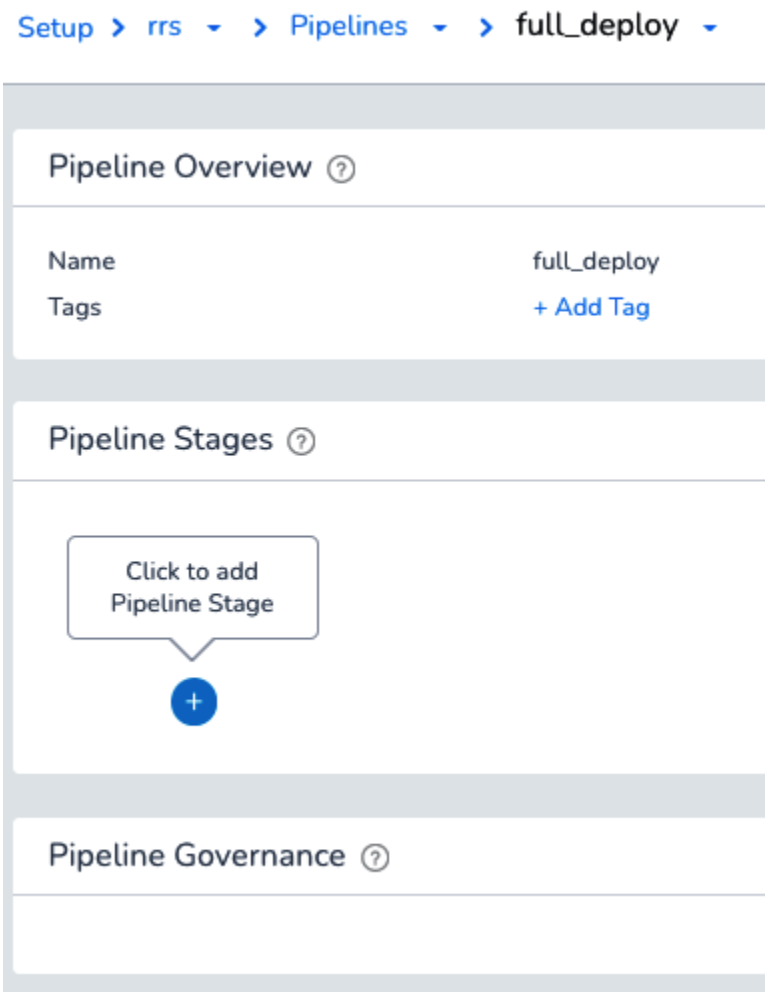
- Jira

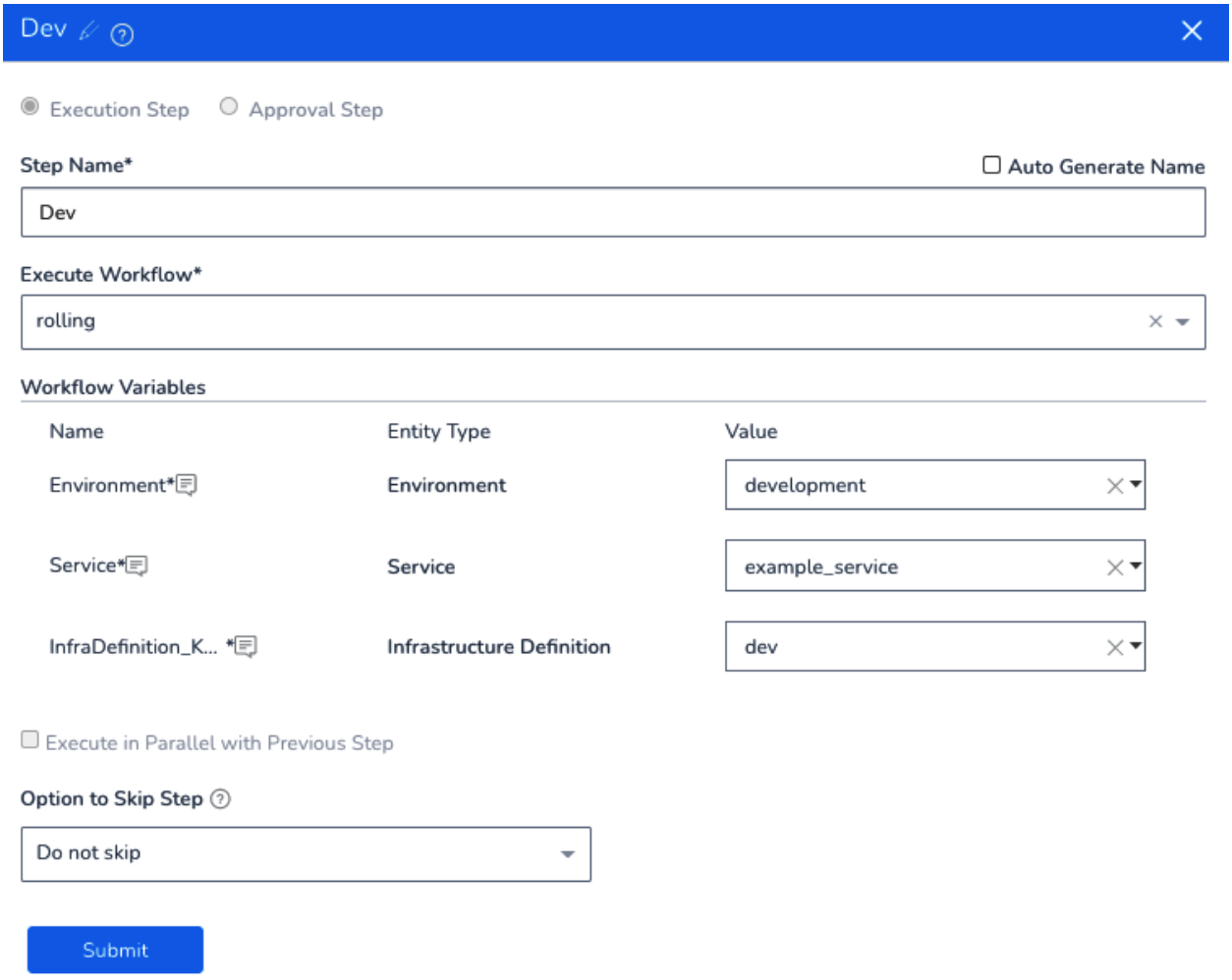
Add Step

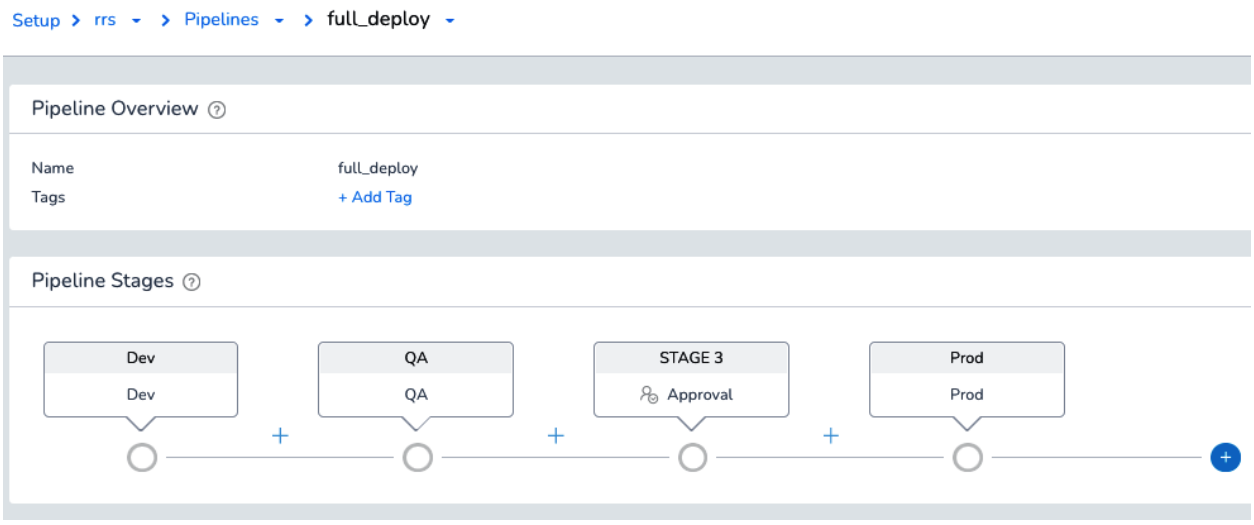

Deploy
Edit
Clone

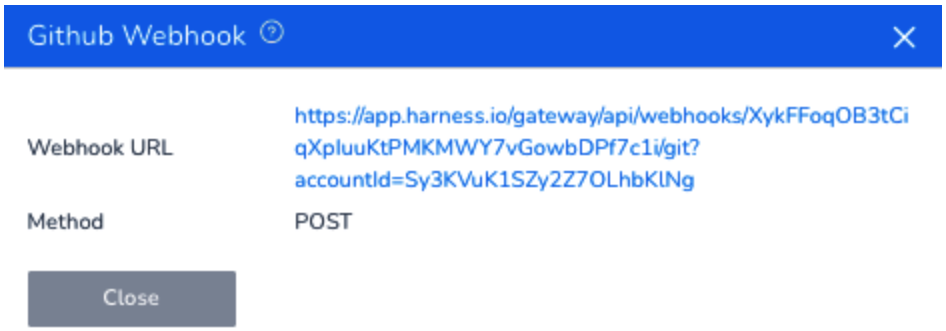

Workflow
Name*
0-bf-deploy
Description
Enter a Description (optional)
Workflow Type*
Rolling Deployment
Environment*
${Environment}
This creates a Workflow Variable ${Environment}
Service*
${Service}
This creates a Workflow Variable ${Service}
Infrastructure Definition*
${InfraDefinition_KUBERNETES}
This creates a Workflow Variable ${InfraDefinition_KUBERNETES}
Submit

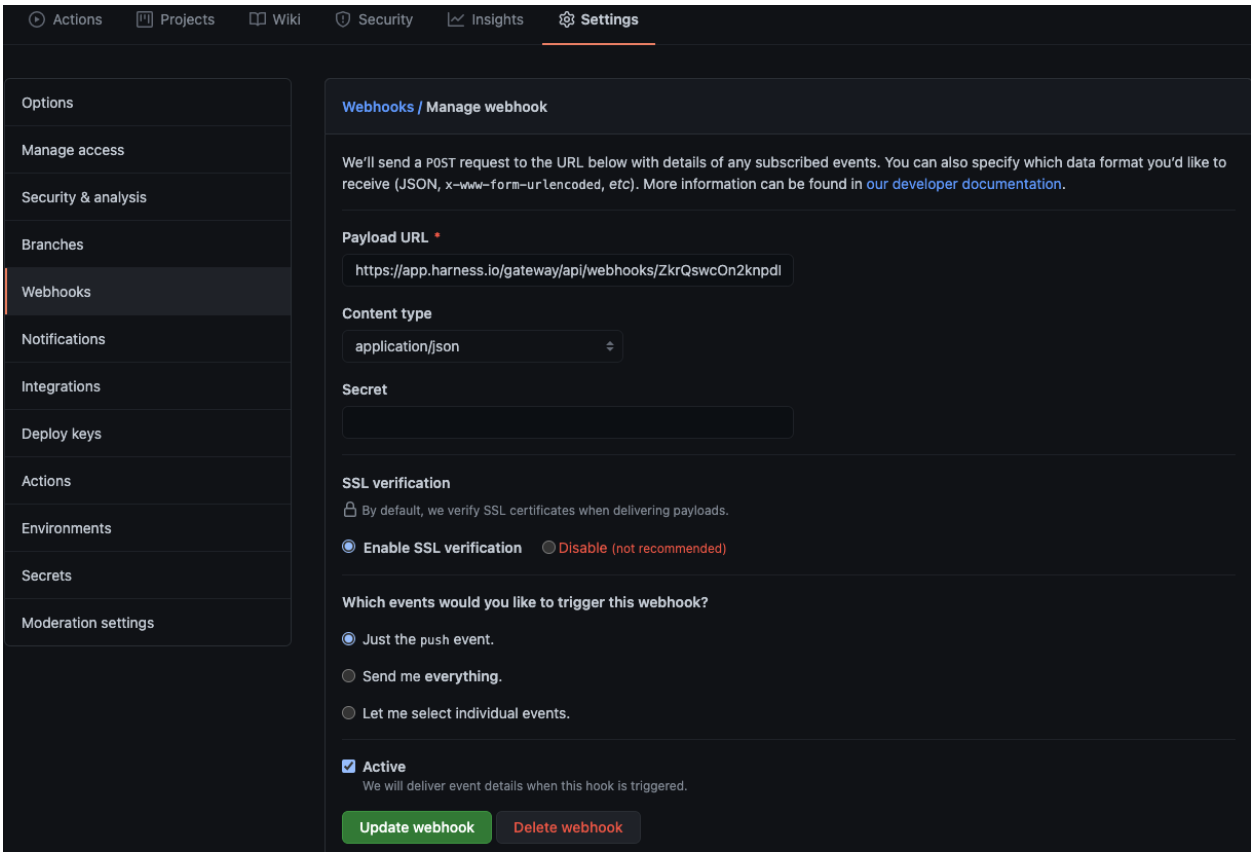

Workflow Overview
Name
rolling
Service
${Service}
Environment
${Environment}
Workflow Type
Rolling
Tags
+ Add Tag
Rolling
1. Deploy
Jira
Rollout Deployment
Add Step
2. Verify
Prometheus
Add Step
3. Wrap Up
Jira
Add Step


Setup
rrs
Pipelines
full_deploy
Pipeline Overview
Name
full_deploy
Tags
+ Add Tag
Pipeline Stages
Click to add Pipeline Stage
Pipeline Governance


Dev
Execution Step
Approval Step
Step Name*
Auto Generate Name
Dev
Execute Workflow*
rolling
Workflow Variables
Name
Entity Type
Value
Environment*
Environment
development
Service*
Service
example_service
InfraDefinition_K... *
Infrastructure Definition
dev
Execute in Parallel with Previous Step
Option to Skip Step
Do not skip
Submit

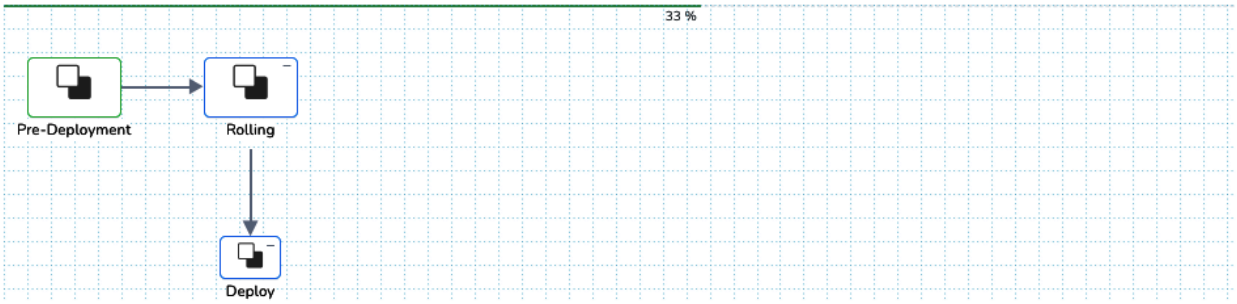

Setup
rrs
Pipelines
full_deploy
Pipeline Overview
Name
full_deploy
Tags
+ Add Tag
Pipeline Stages
Dev
Dev
QA
QA
STAGE 3
Approval
Prod
Prod


Github Webhook
Webhook URL
https://app.harness.io/gateway/api/webhooks/XykFFoqOB3tCiqXpluuKtPMKMWY7vGowbDPf7c1i/git?accountId=Sy3KVuK1SZy2Z7OLhbKlNg
Method
POST
Close


Actions
Projects
Wiki
Security
Insights
Settings
Options
Manage access
Security & analysis
Branches
Webhooks
Notifications
Integrations
Deploy keys
Actions
Environments
Secrets
Moderation settings
Webhooks / Manage webhook
We'll send a POST request to the URL below with details of any subscribed events. You can also specify which data format you'd like to receive (JSON, x-www-form-urlencoded, etc). More information can be found in our developer documentation.
Payload URL *
https://app.harness.io/gateway/api/webhooks/ZkrQswcOn2knpdl
Content type
application/json
Secret
SSL verification
By default, we verify SSL certificates when delivering payloads.
Enable SSL verification
Disable (not recommended)
Which events would you like to trigger this webhook?
Just the push event.
Send me everything.
Let me select individual events.
Active
We will deliver event details when this hook is triggered.
Update webhook
Delete webhook

rolling (Direct Workflow Execution) - 02/15/2021 11:26 pm (less than a minute ago)

Application	rrs	Artifacts	None
Services	example_service	Instances Deployed	None
Environment	development	Infrastructure	dev
Workflow	rolling	Triggered By	full_deploy (Deployment Trigger



Configuration As Code

Shared Resources

Cloud Providers

Connectors

Template Library

Application Stacks

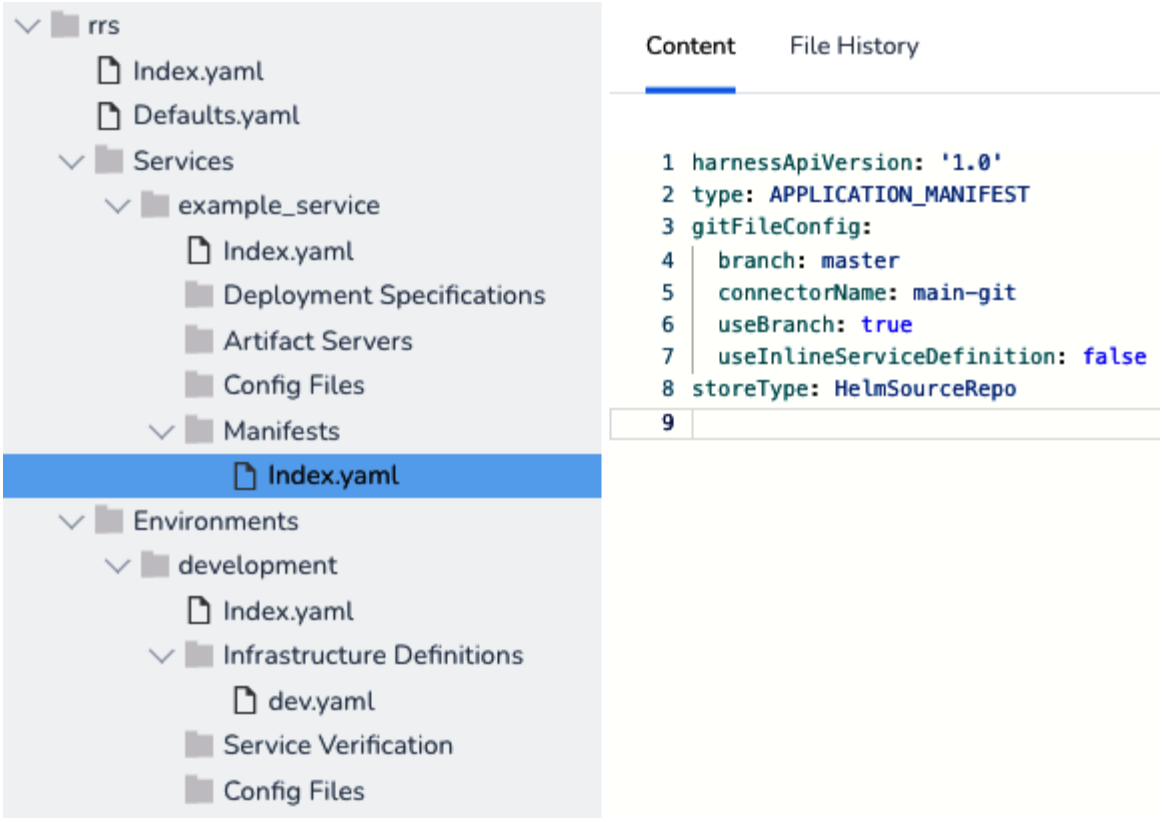
Account

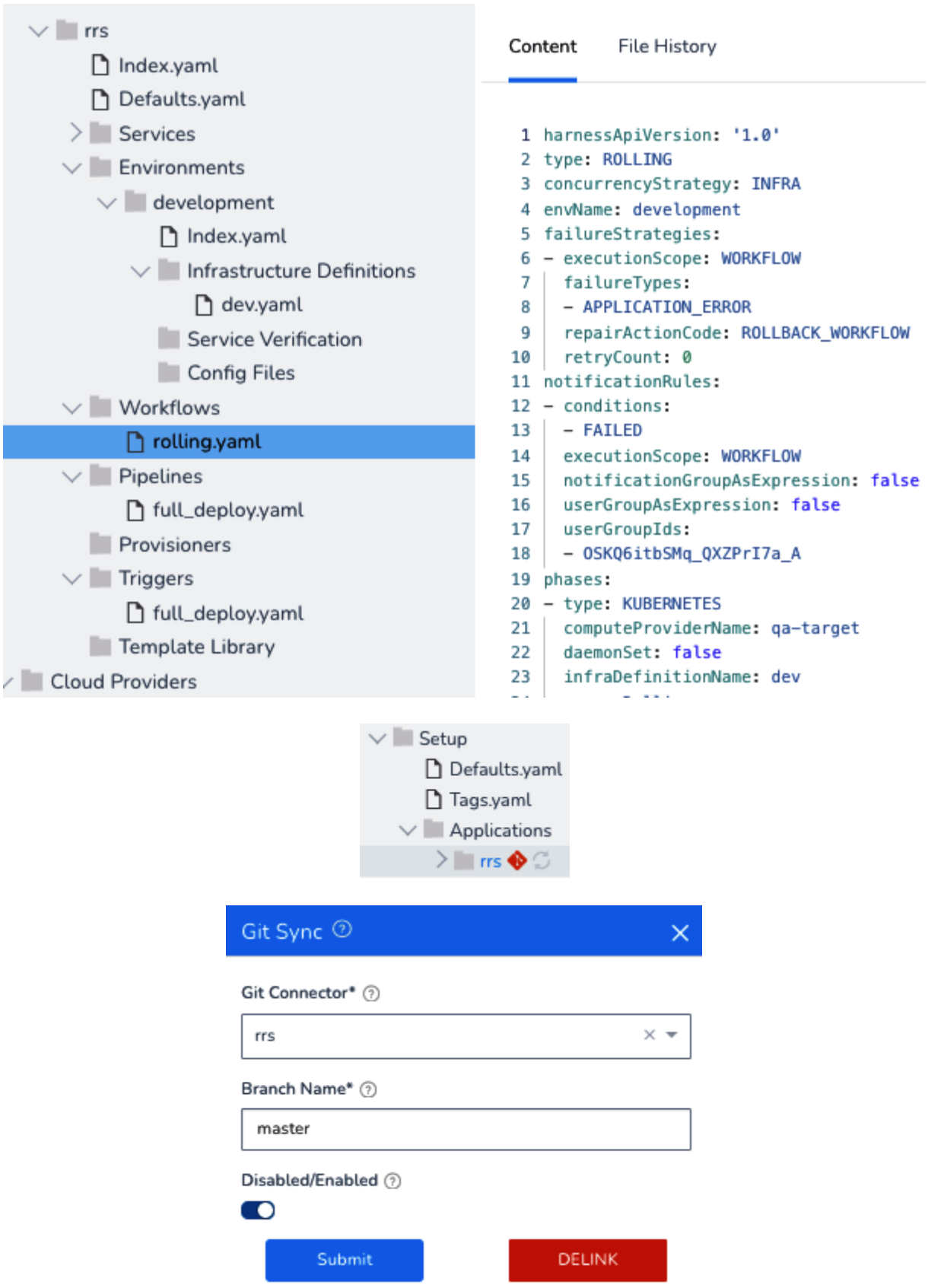
Tags Management

Alert Notification Rules

Harness Delegates

Harness API Explorer


rrs
Index.yaml
Defaults.yaml
Services
example_service
Index.yaml
Deployment Specifications
Artifact Servers
Config Files
Manifests
Index.yaml
Environments
development
Index.yaml
Infrastructure Definitions
dev.yaml
Service Verification
Config Files
Content
File History
1 harnessApiVersion: '1.0'
2 type: APPLICATION_MANIFEST
3 gitFileConfig:
4 branch: master
5 connectorName: main-git
6 useBranch: true
7 useInlineServiceDefinition: false
8 storeType: HelmSourceRepo
9


rrs
Index.yaml
Defaults.yaml
Services
Environments
development
Index.yaml
Infrastructure Definitions
dev.yaml
Service Verification
Config Files
Workflows
rolling.yaml
Pipelines
full_deploy.yaml
Provisioners
Triggers
full_deploy.yaml
Template Library
Cloud Providers
Content
File History
1 harnessApiVersion: '1.0'
2 type: ROLLING
3 concurrencyStrategy: INFRA
4 envName: development
5 failureStrategies:
6 - executionScope: WORKFLOW
7 failureTypes:
8 - APPLICATION_ERROR
9 repairActionCode: ROLLBACK_WORKFLOW
10 retryCount: 0
11 notificationRules:
12 - conditions:
13 - FAILED
14 executionScope: WORKFLOW
15 notificationGroupAsExpression: false
16 userGroupAsExpression: false
17 userGroupIds:
18 - OSKQ6itbSMq_QXZPrI7a_A
19 phases:
20 - type: KUBERNETES
21 computeProviderName: qa-target
22 daemonSet: false
23 infraDefinitionName: dev
Setup
Defaults.yaml
Tags.yaml
Applications
rrs
Git Sync
Git Connector*
rrs
Branch Name*
master
Disabled/Enabled
Submit
DELINK

Type	Name	URL
Git	rrs	git@github.com:bfeuling01/rrs-book.git

Git Connector

Display Name*

rrs

Type Git Repo Git Account

URL*

HTTPS SSH

git@github.com:bfeuling01/rrs-book.git

SSH Key*

bf-git-key

Branch Name

master

Generate Webhook URL

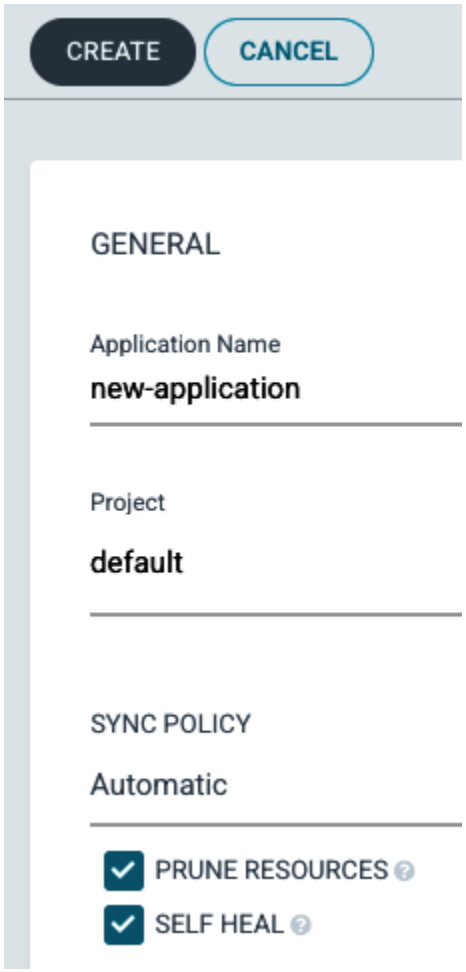
Customize Commit Attributes (Git Sync only)

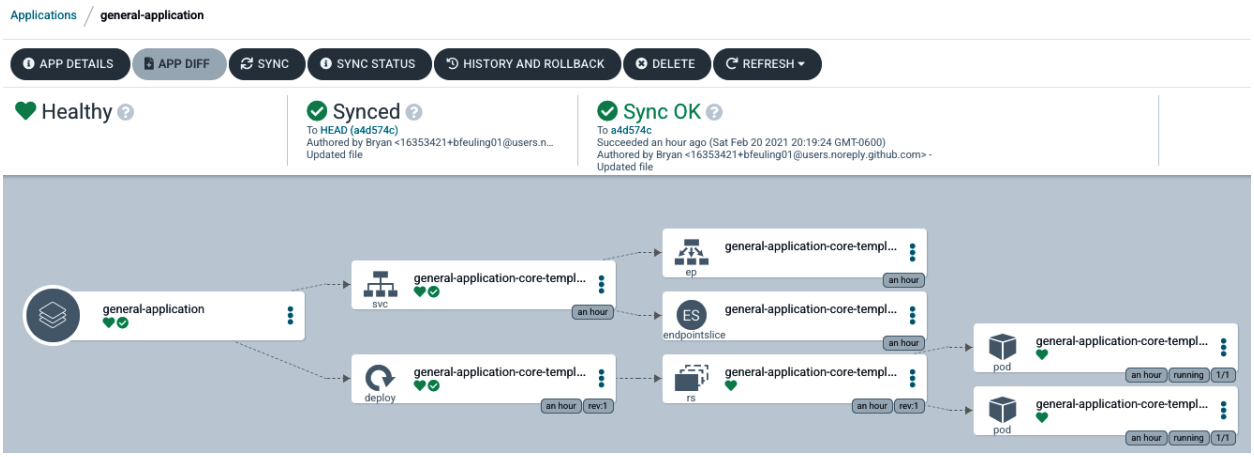
Usage Scope

Add Row

Applications	Environments	
All Applications	Production Environments	
All Applications	Non-Production Environments	

Chapter 11: Pitfall Examples – Experiencing Issues with GitOps

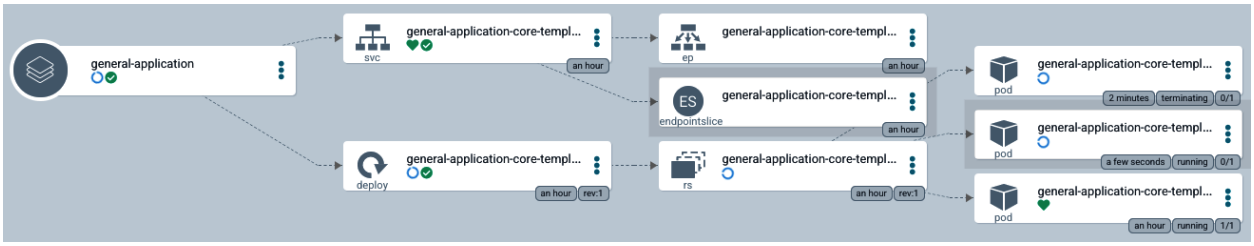


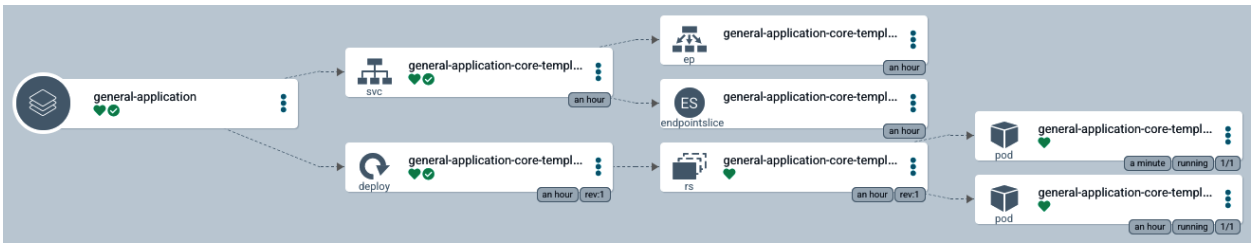


```
# Please edit the object below. Lines beginnin
# and an empty file will abort the edit. If an
# reopened with the relevant failures.
#
apiVersion: apps/v1
kind: Deployment
metadata:
  annotations:
    deployment.kubernetes.io/revision: "1"
    kubectl.kubernetes.io/last-applied-configu
      {"apiVersion":"apps/v1","kind":"Deployme
emplate","app.kubernetes.io/version":"1.16.0",
etes.io/instance":"general-application","app.k
,"spec":{"containers":[{"image":"nginx:1.16.0"
"}],"readinessProbe":{"httpGet":{"path":"/","p
  creationTimestamp: "2021-02-21T02:19:24Z"
  generation: 1
  labels:
    app.kubernetes.io/instance: general-applic
    app.kubernetes.io/managed-by: Helm
    app.kubernetes.io/name: core-template
    app.kubernetes.io/version: 1.16.0
    helm.sh/chart: core-template-0.1.0
  name: general-application-core-template
  namespace: default
  resourceVersion: "113483"
  uid: 4cac982c-408b-402d-bdc5-22090cec790b
spec:
  progressDeadlineSeconds: 600
  replicas: 2
  revisionHistoryLimit: 10
  selector:
    matchLabels:
```

```
# Please edit the object below. Lines beg
# and an empty file will abort the edit.
# reopened with the relevant failures.
#
apiVersion: apps/v1
kind: Deployment
metadata:
  annotations:
    deployment.kubernetes.io/revision: "1
    kubectl.kubernetes.io/last-applied-co
      {"apiVersion":"apps/v1","kind":"Dep
emplate","app.kubernetes.io/version":"1.1
etes.io/instance":"general-application","
,"spec":{"containers":[{"image":"nginx:1.
"}],"readinessProbe":{"httpGet":{"path":"
  creationTimestamp: "2021-02-21T02:19:24
  generation: 1
  labels:
    app.kubernetes.io/instance: general
    app.kubernetes.io/managed-by: Helm
    app.kubernetes.io/name: core-template
    app.kubernetes.io/version: 1.16.0
    helm.sh/chart: core-template-0.1.0
  name: general-application-core-template
  namespace: default
  resourceVersion: "113483"
  uid: 4cac982c-408b-402d-bdc5-22090cec79
spec:
  progressDeadlineSeconds: 600
  replicas: 1
  revisionHistoryLimit: 10
  selector:
    matchLabels:
```

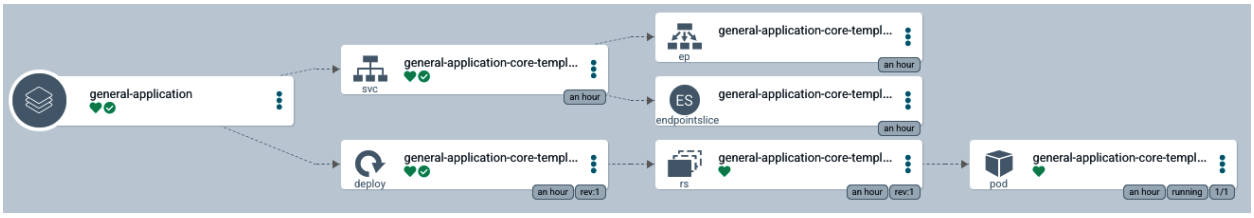
```
NAME                                                 READY   STATUS              RESTARTS   AGE
pod/general-application-core-template-686bcf99d5-dftxw   0/1     ContainerCreating   0          1s
pod/general-application-core-template-686bcf99d5-n8jvh   1/1     Running             0          60m
pod/general-application-core-template-686bcf99d5-vb47f   0/1     Terminating         0          39s

NAME                                          TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)   AGE
service/general-application-core-template     ClusterIP   10.98.143.247   <none>        80/TCP    60m
service/kubernetes                            ClusterIP   10.96.0.1       <none>        443/TCP   25d

NAME                                             READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/general-application-core-template   1/2     2            1           60m

NAME                                                       DESIRED   CURRENT   READY   AGE
replicaset.apps/general-application-core-template-686bcf99d5   2         2         1       60m
```





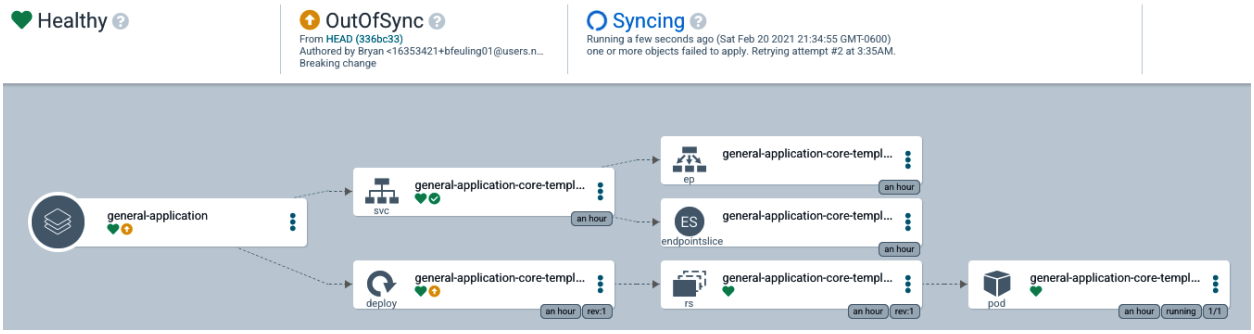

```yaml
# Default values for core-temp
# This is a YAML-formatted
# Declare variables to be

replicaCount: 2

image:
  repository: nginx
  pullPolicy: Always
  # Overrides the image tag
  tag: ""

imagePullSecrets: []
nameOverride: ""
fullnameOverride: ""
```

```yaml
# Default values for core
# This is a YAML-formatted
# Declare variables to be

replicaCount: 1

image:
  repository: nginx
  pullPolicy: Always
  # Overrides the image
  tag: ""

```

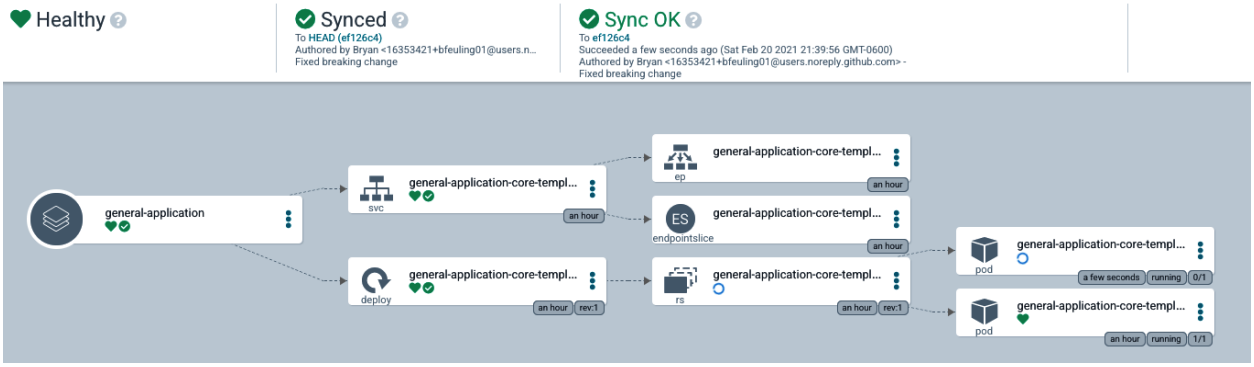


```yaml
# Default values for core
# This is a YAML-formatted
# Declare variables to be

replicaCount: 1

image:
  repository: nginx
  pullPolicy: Always
  # Overrides the image
  tag: ""

```

```yaml
# Default values for core-
# This is a YAML-formatted
# Declare variables to be

replicaCount: 0.5

image:
  repository: nginx
  pullPolicy: Always
  # Overrides the image tag
  tag: ""

imagePullSecrets: []
nameOverride: ""
fullnameOverride: ""
```

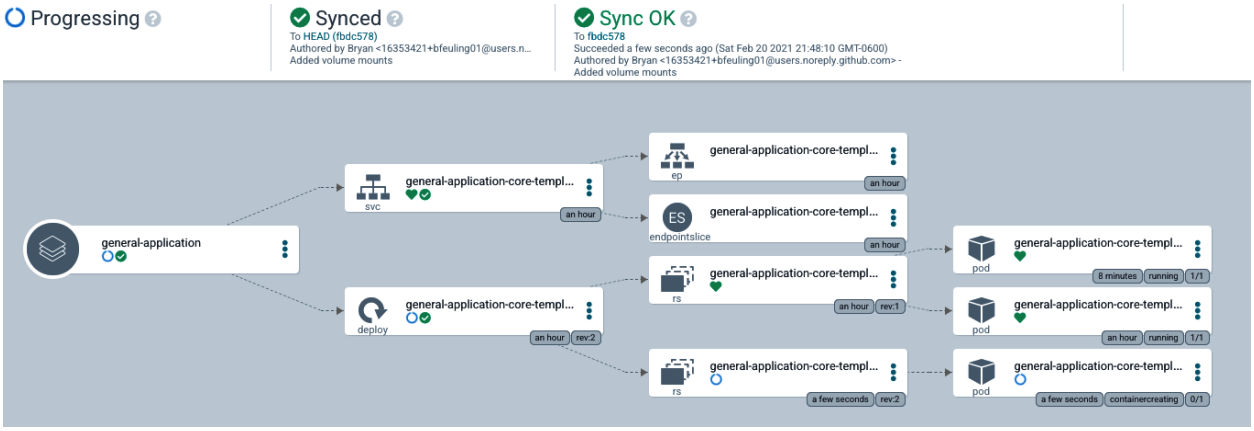


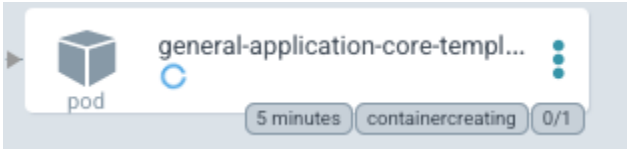
```
# Default values for core-
# This is a YAML-formatted
# Declare variables to be

replicaCount: 2

image:
  repository: nginx
  pullPolicy: Always
  # Overrides the image tag
  tag: ""

imagePullSecrets: []
nameOverride: ""
fullnameOverride: ""
```

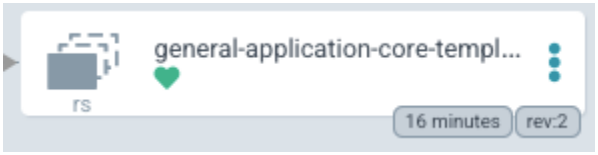


```
containers:
  - name: {{ .Chart.Name }}
    image: "{{ .Values.image.repository }}:{{
    imagePullPolicy: {{ .Values.image.pullPolicy }}
    ports:
      - name: http
        containerPort: 80
        protocol: TCP
    livenessProbe:
      httpGet:
        path: /
        port: http
    readinessProbe:
      httpGet:
        path: /
        port: http
    resources:
      {{- toYaml .Values.resources | nindent 12 }}
```

```
    ports:
      - name: http
        containerPort: 80
        protocol: TCP
    livenessProbe:
      httpGet:
        path: /
        port: http
    readinessProbe:
      httpGet:
        path: /
        port: http
    resources:
      {{- toYaml .Values.resources
    volumeMounts:
      - name: config-vol
        mountPath: /etc/config
volumes:
  - name: config-vol
    configMap:
      name: log-config
      items:
        - key: log_level
          path: log_level
```

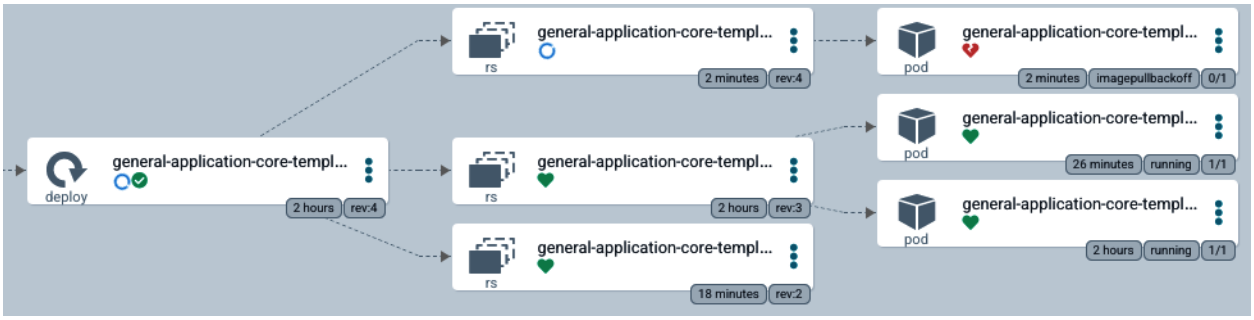




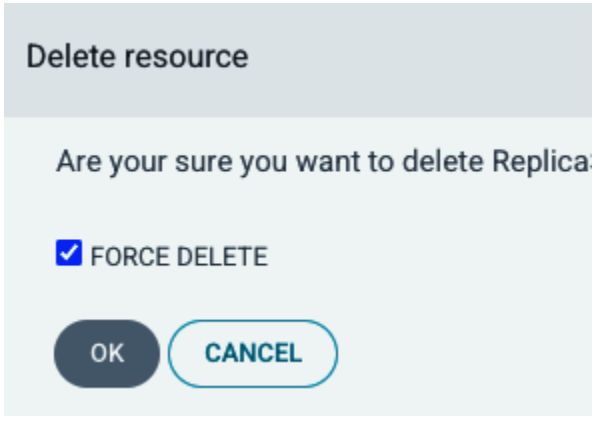


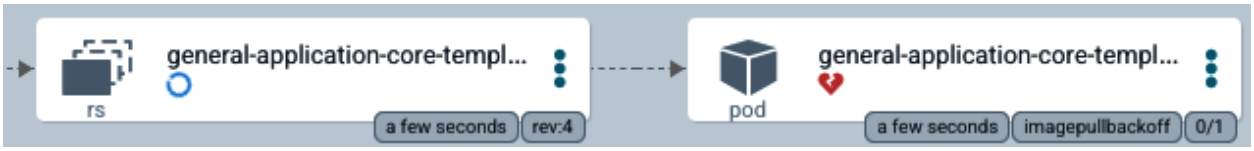

```
{{- with .Values.imagePullSecrets }}
imagePullSecrets:
  {{- toYaml . | nindent 8 }}
{{- end }}
containers:
  - name: {{ .Chart.Name }}
    image: "{{ .Values.image.repository }}:{{ .Values.image.tag | default .Chart.AppVersion }}"
    imagePullPolicy: {{ .Values.image.pullPolicy }}
    ports:
      - name: http
```

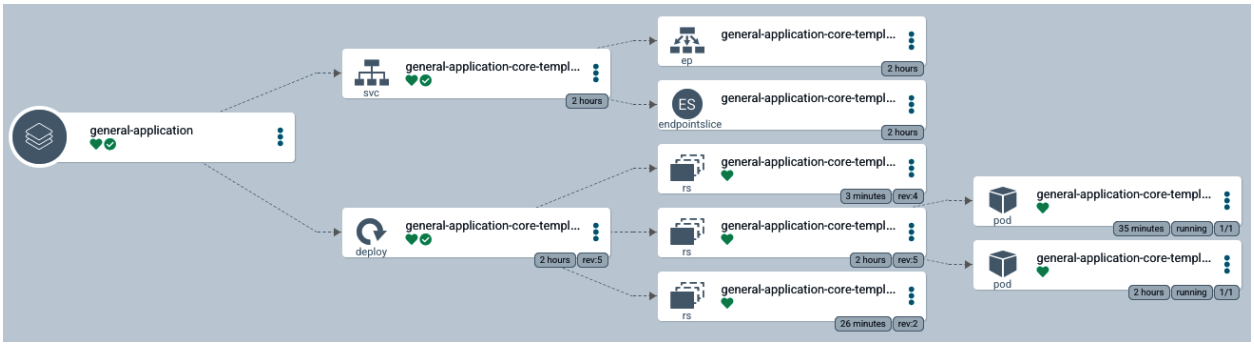
```
spec:
  {{- with .Values.imagePullSecrets }}
  imagePullSecrets:
    {{- toYaml . | nindent 8 }}
  {{- end }}
  containers:
    - name: {{ .Chart.Name }}
      image: 6515468712354.dkr.ecr.us-central-1.amazonaws.com/app:1.3
      imagePullPolicy: {{ .Values.image.pullPolicy }}
      ports:
```

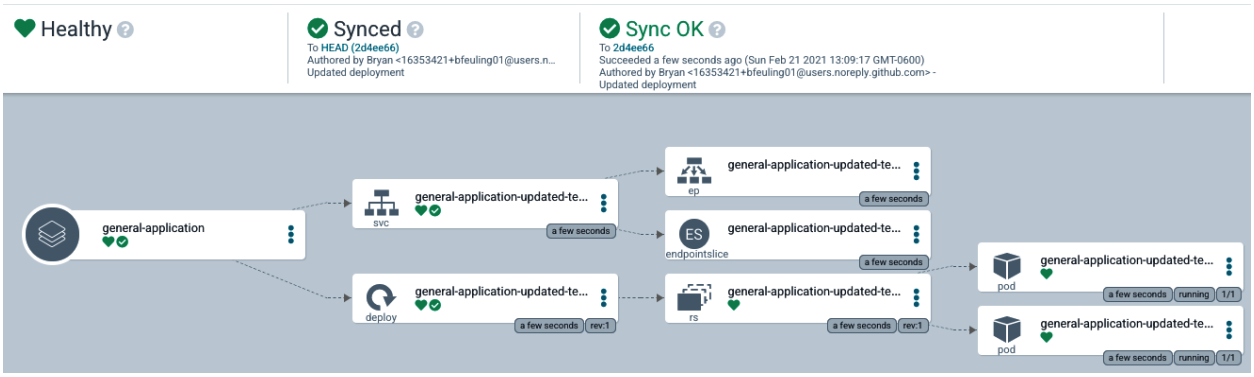

general-application-core-templ...
deploy
2 hours
rev:4
general-application-core-templ...
rs
2 hours
rev:4
general-application-core-templ...
rs
2 hours
rev:3
general-application-core-templ...
rs
18 minutes
rev:2
general-application-core-templ...
pod
2 minutes
imagepullbackoff
0/1
general-application-core-templ...
pod
26 minutes
running
1/1
general-application-core-templ...
pod
2 hours
running
1/1

general-application-core-templ...
rs
a few seconds
Sync
Delete

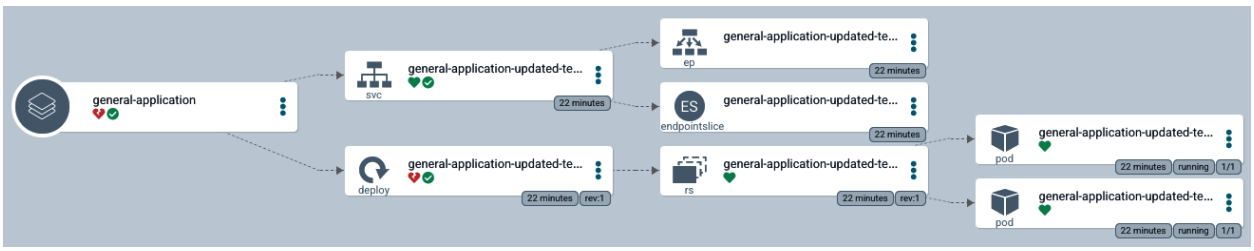

Delete resource
Are your sure you want to delete Replica
FORCE DELETE
OK
CANCEL


general-application-core-templ...
rs
a few seconds
rev:4
general-application-core-templ...
pod
a few seconds
imagepullbackoff
0/1


general-application
general-application-core-templ...
svc
2 hours
general-application-core-templ...
ep
2 hours
general-application-core-templ...
endpointslice
2 hours
general-application-core-templ...
deploy
2 hours
rev:5
general-application-core-templ...
rs
3 minutes
rev:4
general-application-core-templ...
rs
2 hours
rev:5
general-application-core-templ...
rs
26 minutes
rev:2
general-application-core-templ...
pod
35 minutes
running
1/1
general-application-core-templ...
pod
2 hours
running
1/1

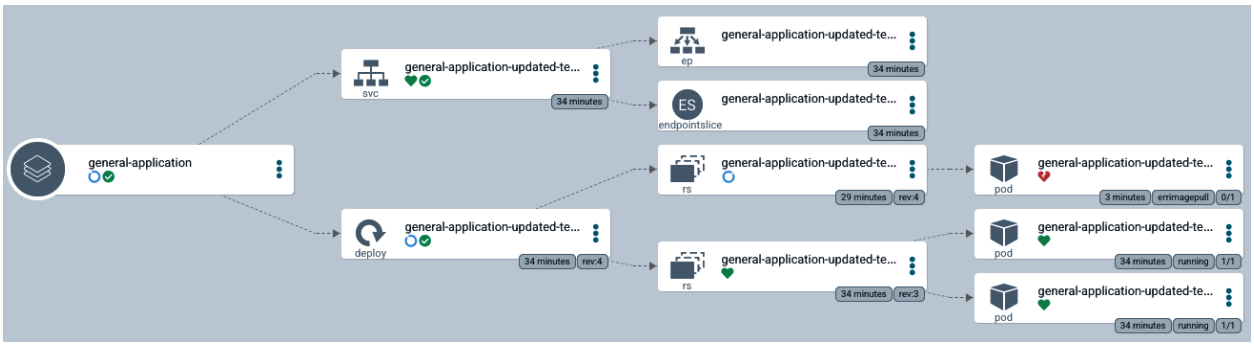


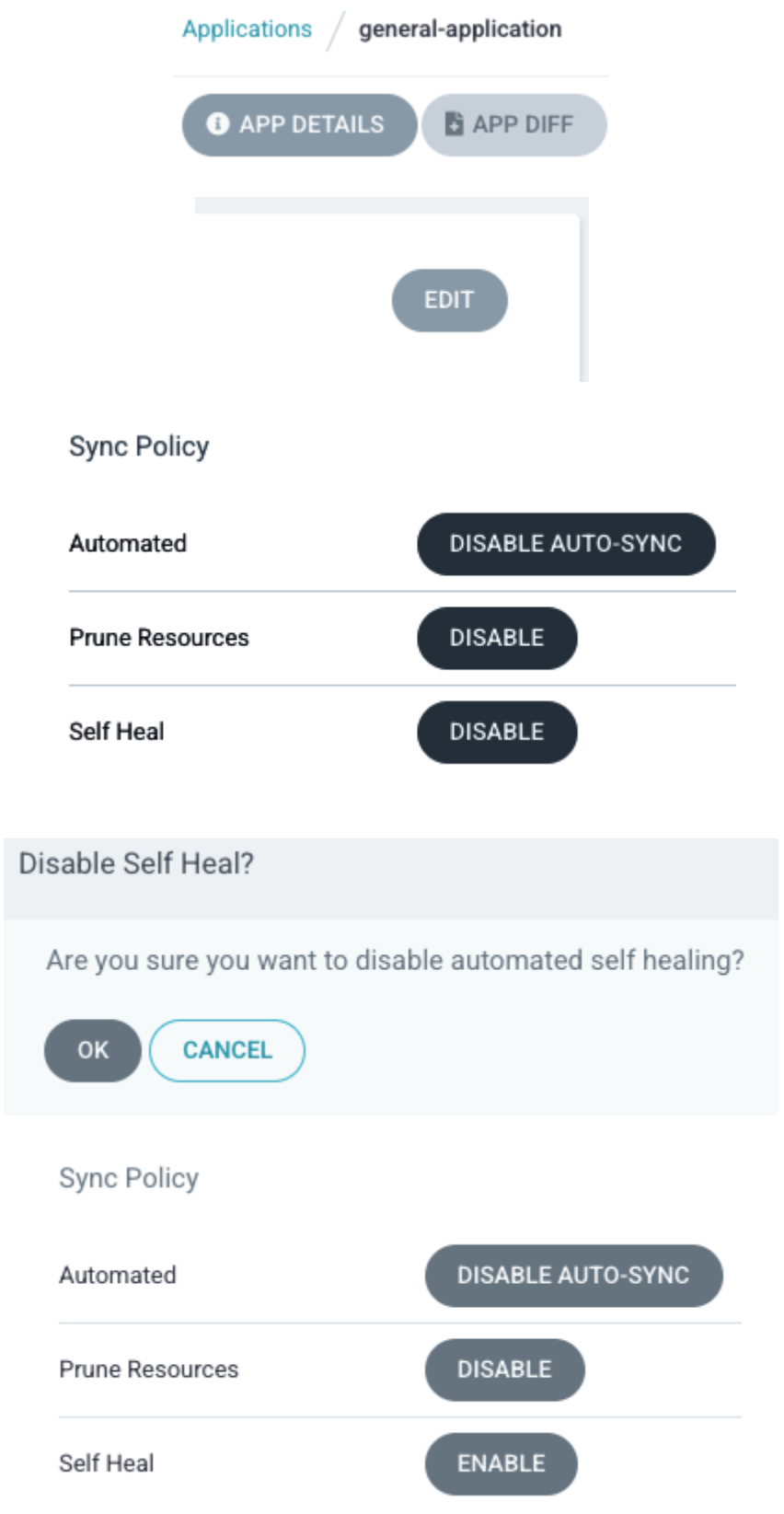

```
spec:
  {{- with .Values.imagePullSecrets }}
  imagePullSecrets:
    {{- toYaml . | nindent 8 }}
  {{- end }}
  containers:
    - name: {{ .Chart.Name }}
      image: 6515468712354.dkr.ecr.us-central-1.amazonaws.com/app:1.3
      imagePullPolicy: {{ .Values.image.pullPolicy }}
      ports:
```



REVISION	CHANGE-CAUSE
1	<none>
2	<none>

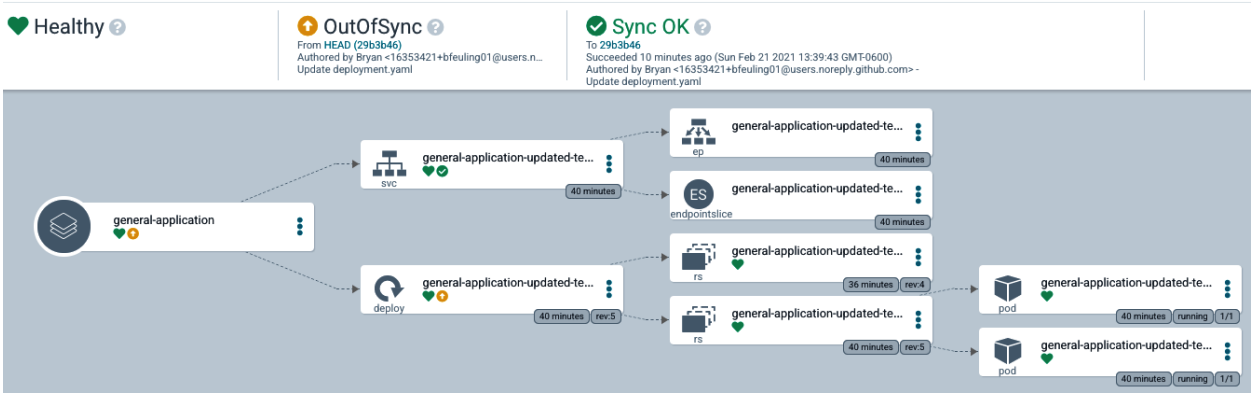
REVISION	CHANGE-CAUSE
3	<none>
4	<none>



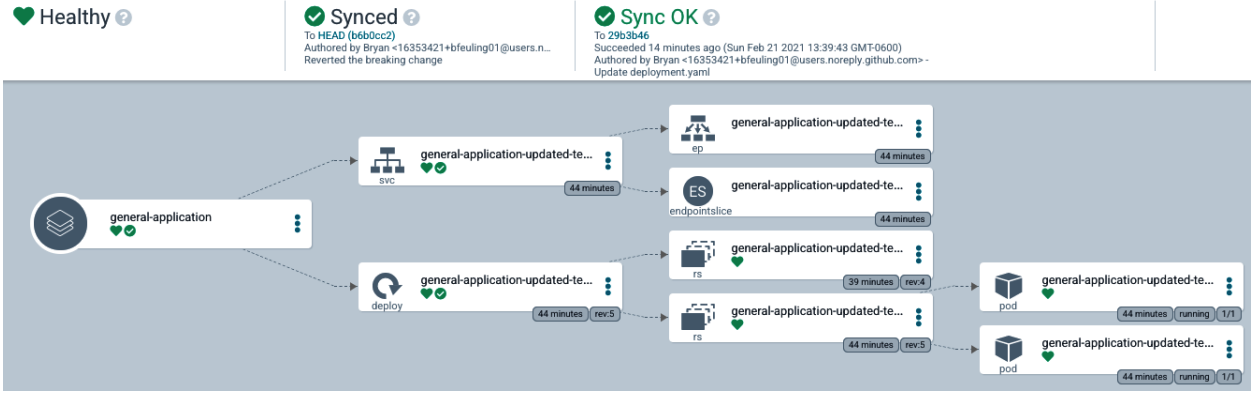

Applications
general-application
APP DETAILS
APP DIFF
EDIT
Sync Policy
Automated
DISABLE AUTO-SYNC
Prune Resources
DISABLE
Self Heal
DISABLE
Disable Self Heal?
Are you sure you want to disable automated self healing?
OK
CANCEL
Sync Policy
Automated
DISABLE AUTO-SYNC
Prune Resources
DISABLE
Self Heal
ENABLE

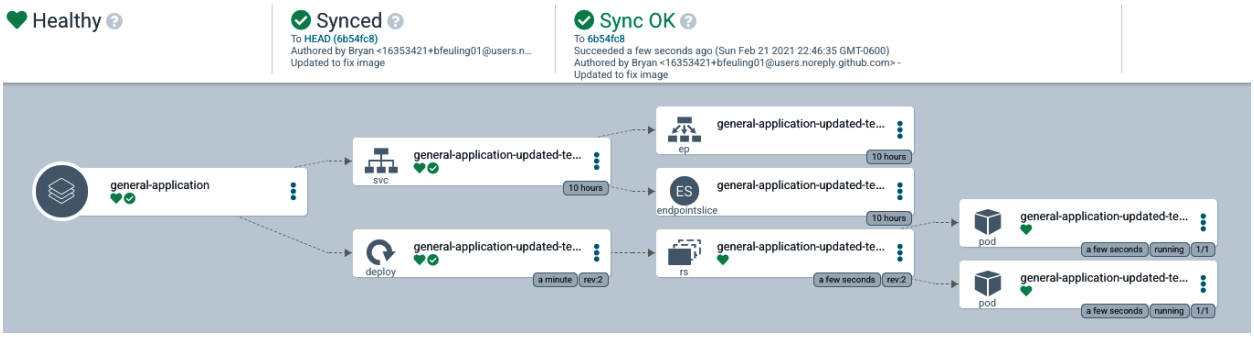
```
REVISION  CHANGE-CAUSE
3         <none>
4         <none>
```

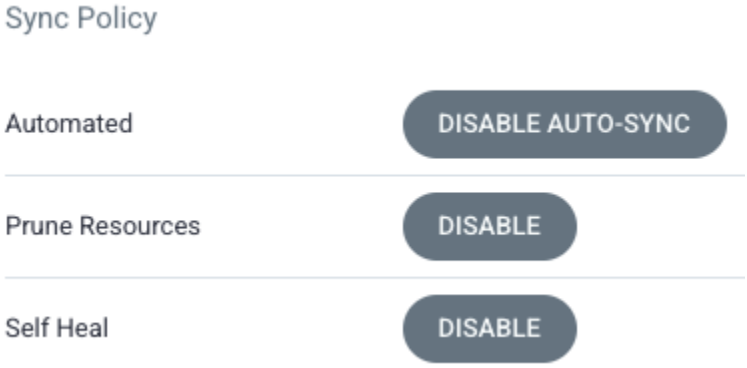
```
NAME                                                    READY   STATUS        RESTARTS   AGE
pod/general-application-updated-template-55f788fdb6-4xccf   0/1     Terminating   0          9m9s
pod/general-application-updated-template-96dcf9d57-4wfx5    1/1     Running       0          39m
pod/general-application-updated-template-96dcf9d57-z65k2    1/1     Running       0          39m
```

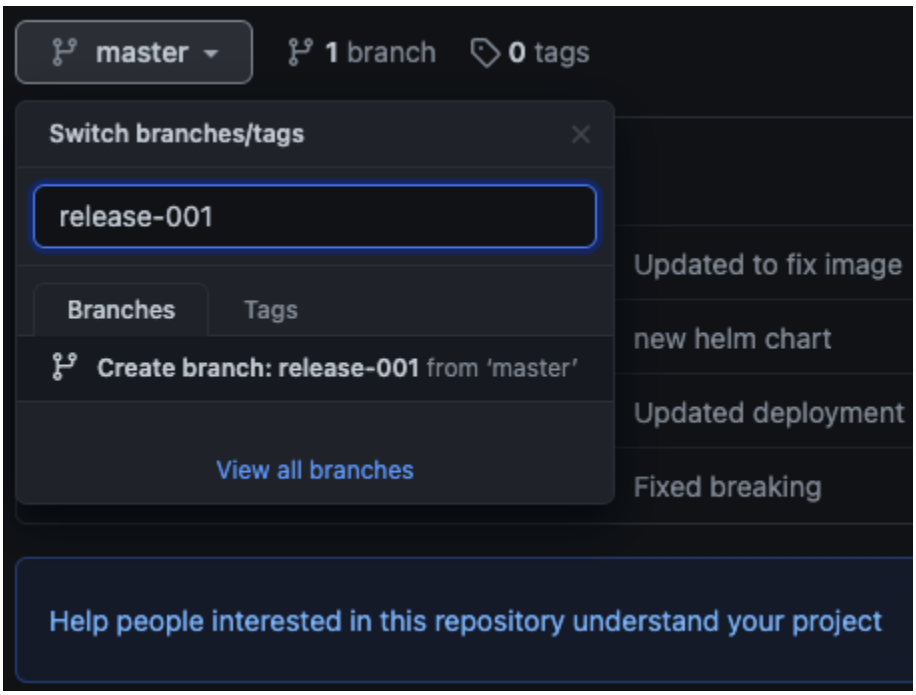


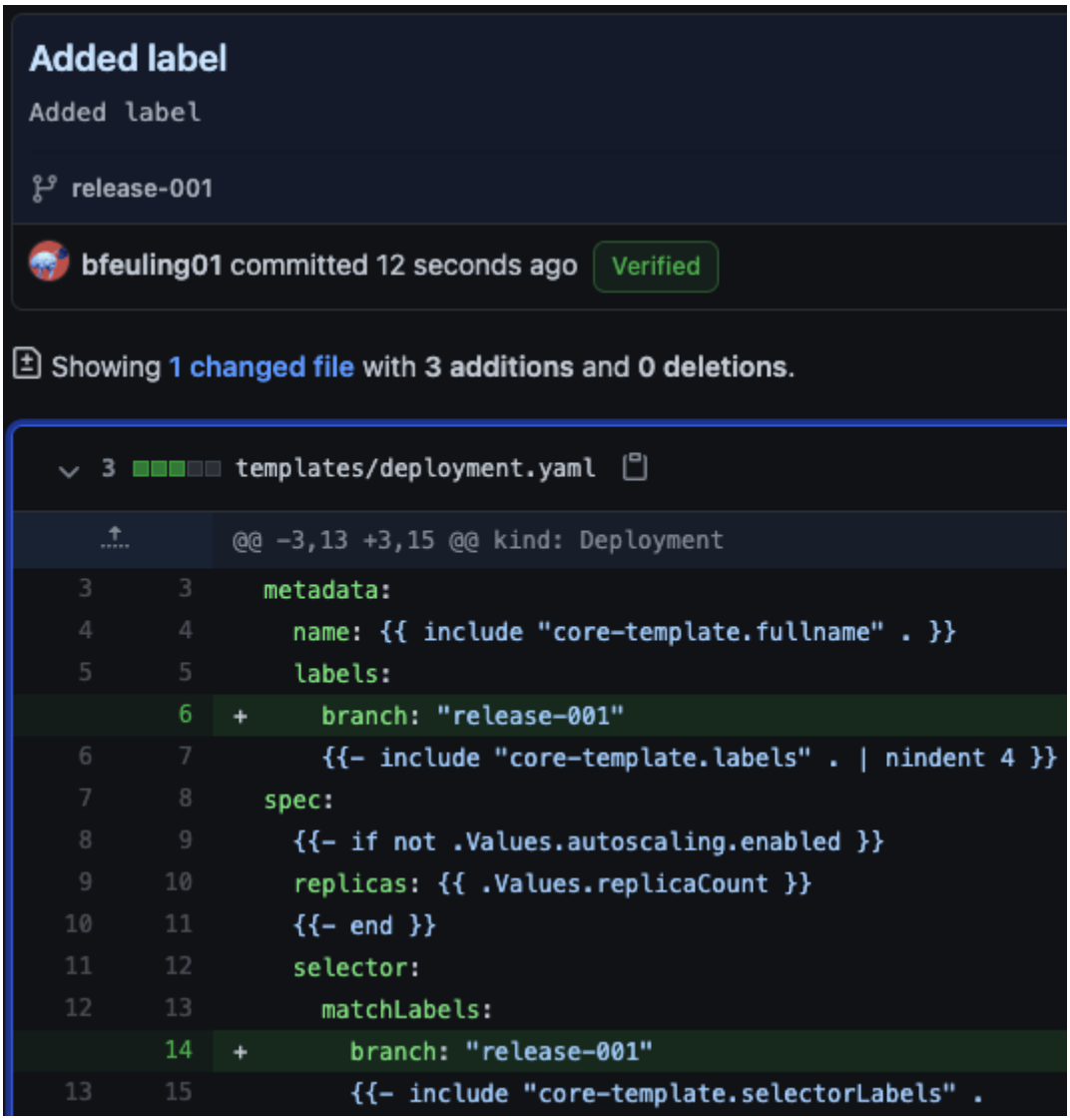

```
28  28          {{- end }}
29  29          containers:
30  30            - name: {{ .Chart.Name }}
31      -           image: "{{ .Values.image.repository }}:{{ .Values.image.tag | default .Chart.AppVersion }}"
    31  +           image: 6515468712354.dkr.ecr.us-central-1.amazonaws.com/app:1.3
32  32            imagePullPolicy: {{ .Values.image.pullPolicy }}
33  33            ports:
34  34              - name: http
```

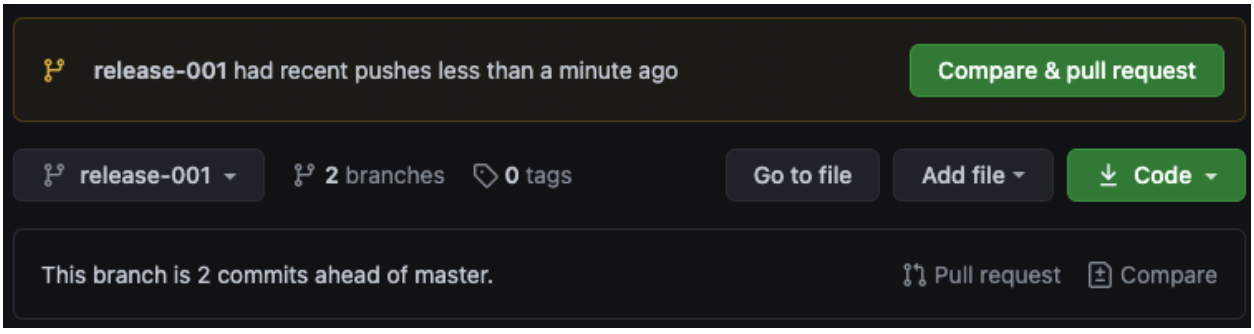


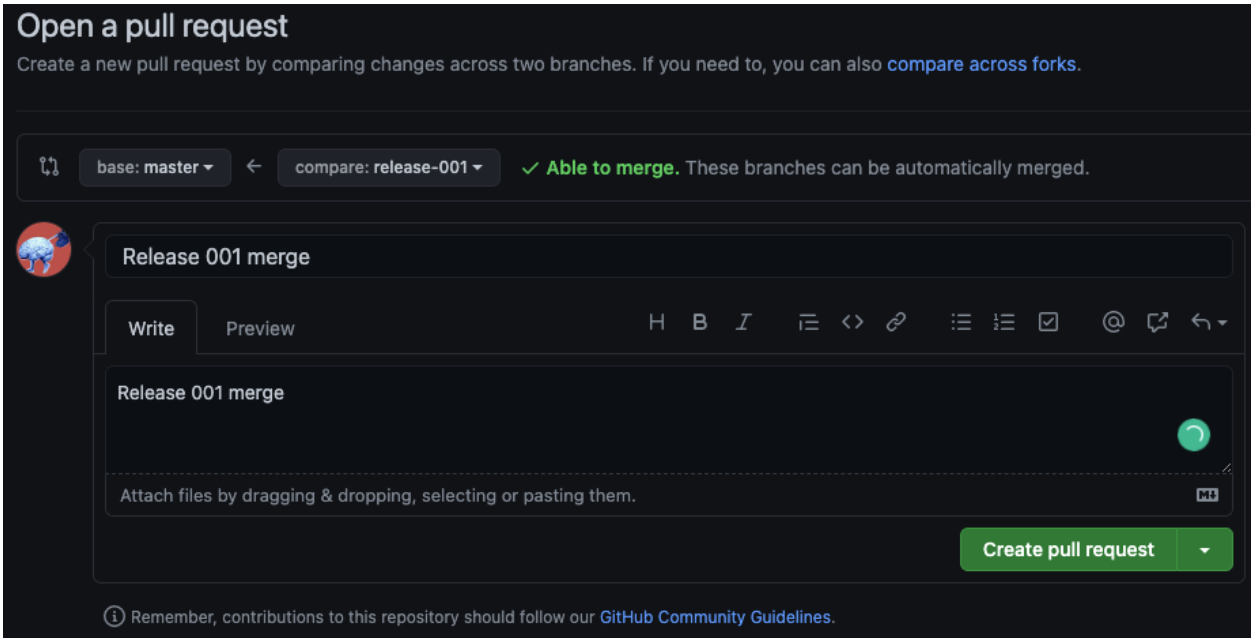

Healthy
Synced
To HEAD (6b54fc8)
Authored by Bryan <16353421+bfeuling01@users.n...
Updated to fix image
Sync OK
To 6b54fc8
Succeeded a few seconds ago (Sun Feb 21 2021 22:46:35 GMT-0600)
Authored by Bryan <16353421+bfeuling01@users.noreply.github.com> -
Updated to fix image
general-application
general-application-updated-te...
svc
10 hours
ep
10 hours
ES
endpointslice
10 hours
deploy
a minute
rev:2
rs
a few seconds
rev:2
pod
a few seconds
running
1/1
pod
a few seconds
running
1/1

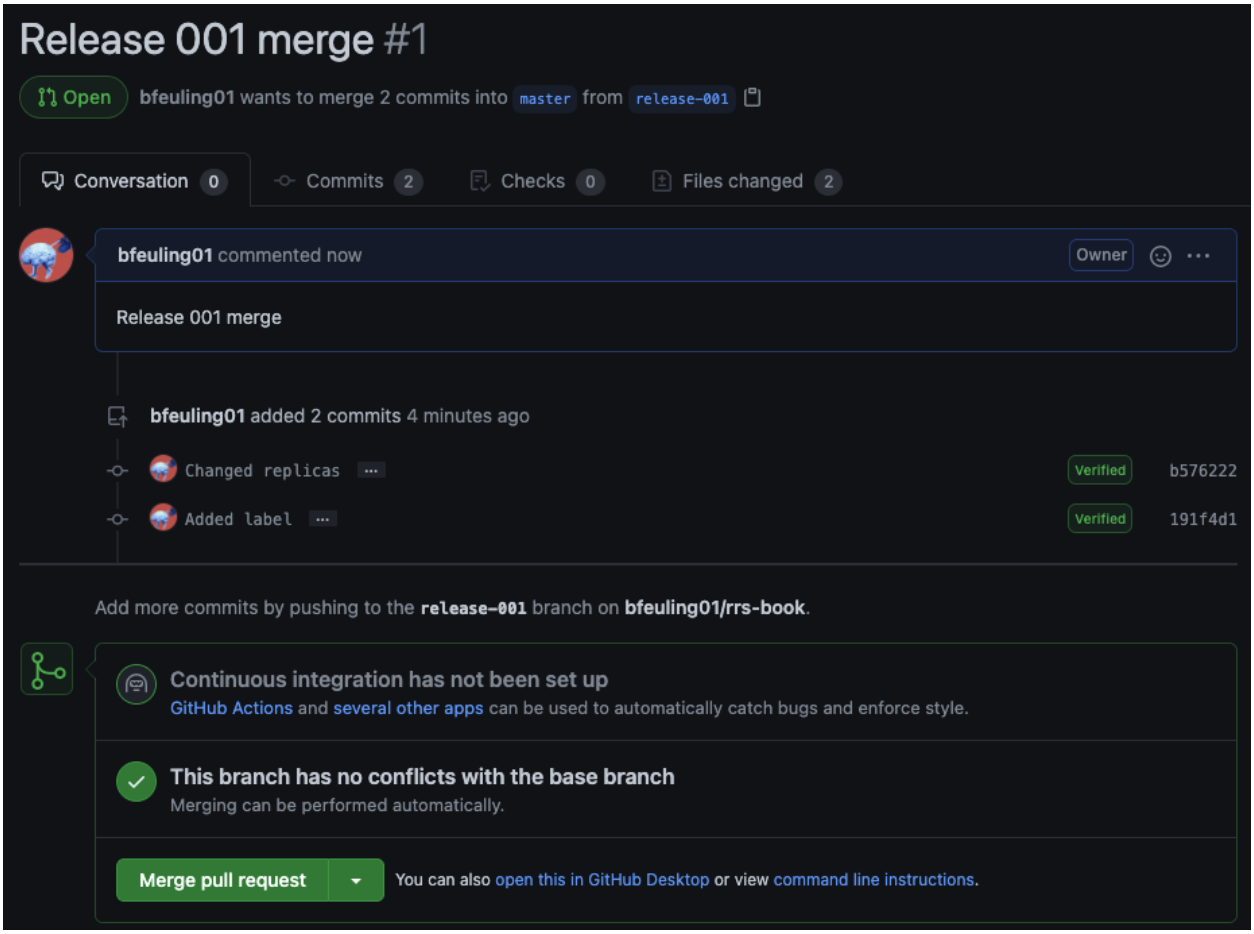

Sync Policy
Automated
DISABLE AUTO-SYNC
Prune Resources
DISABLE
Self Heal
DISABLE

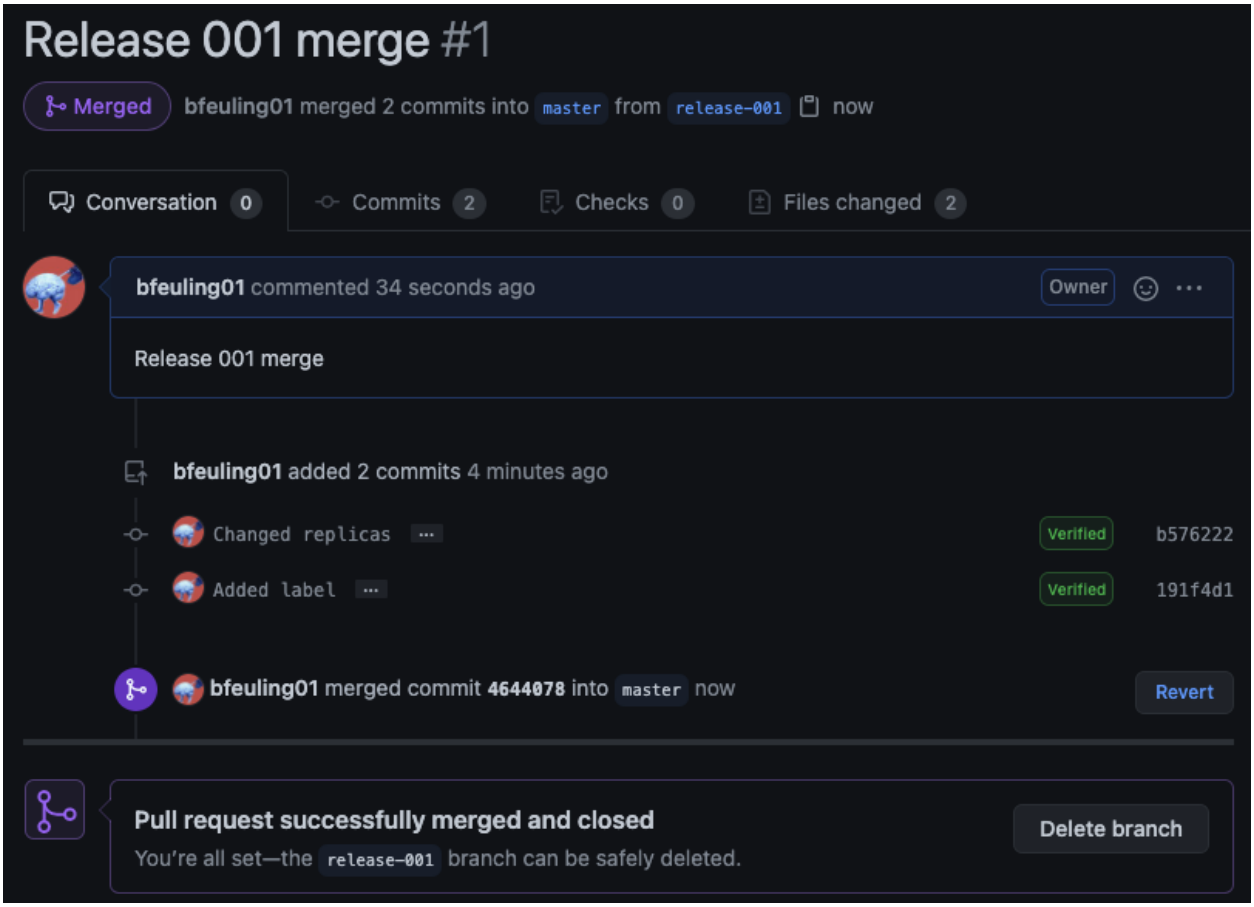

master
1 branch
0 tags
Switch branches/tags
release-001
Branches
Tags
Create branch: release-001 from 'master'
View all branches
Updated to fix image
new helm chart
Updated deployment
Fixed breaking
Help people interested in this repository understand your project

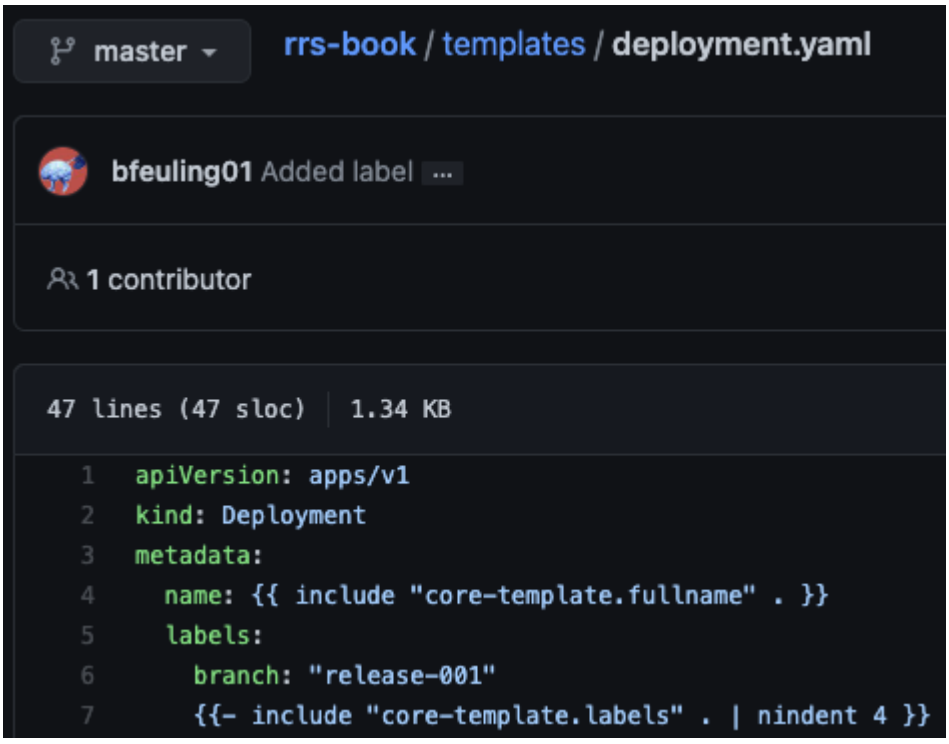

Added label
Added label
release-001
bfeuling01 committed 12 seconds ago
Verified
Showing 1 changed file with 3 additions and 0 deletions.
3 templates/deployment.yaml
@@ -3,13 +3,15 @@ kind: Deployment
metadata:
name: {{ include "core-template.fullname" . }}
labels:
+ branch: "release-001"
{{- include "core-template.labels" . | nindent 4 }}
spec:
{{- if not .Values.autoscaling.enabled }}
replicas: {{ .Values.replicaCount }}
{{- end }}
selector:
matchLabels:
+ branch: "release-001"
{{- include "core-template.selectorLabels" .

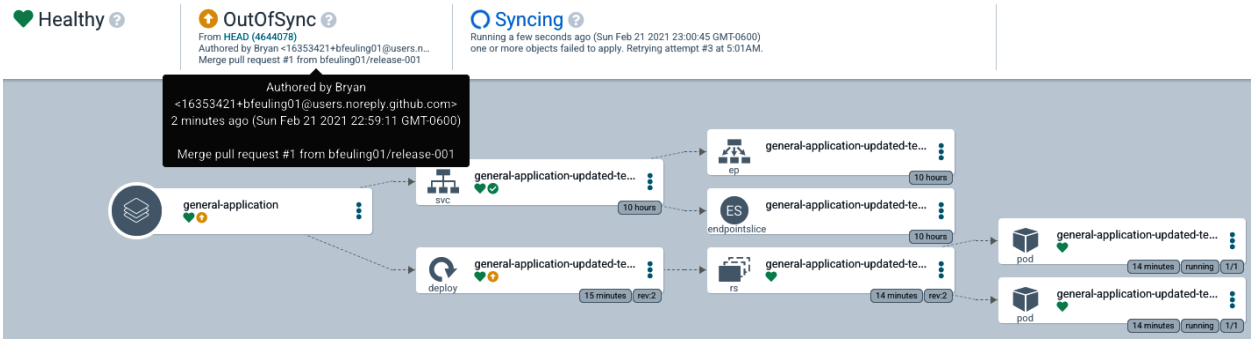

release-001 had recent pushes less than a minute ago
Compare & pull request
release-001
2 branches
0 tags
Go to file
Add file
Code
This branch is 2 commits ahead of master.
Pull request
Compare


Open a pull request
Create a new pull request by comparing changes across two branches. If you need to, you can also compare across forks.
base: master
compare: release-001
Able to merge. These branches can be automatically merged.
Release 001 merge
Write
Preview
Release 001 merge
Attach files by dragging & dropping, selecting or pasting them.
Create pull request
Remember, contributions to this repository should follow our GitHub Community Guidelines.


Release 001 merge #1
Open
bfeuling01 wants to merge 2 commits into master from release-001
Conversation 0
Commits 2
Checks 0
Files changed 2
bfeuling01 commented now
Owner
Release 001 merge
bfeuling01 added 2 commits 4 minutes ago
Changed replicas
Verified
b576222
Added label
Verified
191f4d1
Add more commits by pushing to the release-001 branch on bfeuling01/rrs-book.
Continuous integration has not been set up
GitHub Actions and several other apps can be used to automatically catch bugs and enforce style.
This branch has no conflicts with the base branch
Merging can be performed automatically.
Merge pull request
You can also open this in GitHub Desktop or view command line instructions.


Release 001 merge #1
Merged
bfeuling01 merged 2 commits into master from release-001 now
Conversation 0
Commits 2
Checks 0
Files changed 2
bfeuling01 commented 34 seconds ago
Owner
Release 001 merge
bfeuling01 added 2 commits 4 minutes ago
Changed replicas
Verified
b576222
Added label
Verified
191f4d1
bfeuling01 merged commit 4644078 into master now
Revert
Pull request successfully merged and closed
You're all set—the release-001 branch can be safely deleted.
Delete branch


master
rrs-book / templates / deployment.yaml
bfeuling01 Added label
1 contributor
47 lines (47 sloc) 1.34 KB
1 apiVersion: apps/v1
2 kind: Deployment
3 metadata:
4 name: {{ include "core-template.fullname" . }}
5 labels:
6 branch: "release-001"
7 {{- include "core-template.labels" . | nindent 4 }}




```yaml
- name: Deploy latest version of helm chart inside default namespace (and create it)
  community.kubernetes.helm:
    name: test
    chart_ref: stable/busybox
    release_namespace: default
    create_namespace: true

# From repository
- name: Add stable chart repo
  community.kubernetes.helm_repository:
    name: stable
    repo_url: "https://kubernetes-charts.storage.googleapis.com"

- name: Deploy helm chart on 5.0.12 with values loaded from template
  community.kubernetes.helm:
    name: test
    chart_ref: stable/busybox
    chart_version: 5.0.12
    values: "{{ lookup('template', 'somefile.yaml') | from_yaml }}"

# From git
- name: Git clone stable repo on HEAD
  ansible.builtin.git:
    repo: "http://github.com/helm/charts.git"
    dest: /tmp/helm_repo

- name: Deploy Grafana chart from local path
  community.kubernetes.helm:
    name: test
    chart_ref: /tmp/helm_repo/stable/busybox
    release_namespace: default
```

```yaml
- name: Deploy latest version of helm chart inside default namespace (and create it)
  community.kubernetes.helm:
    name: test
    chart_ref: stable/busybox
    release_namespace: default
    create_namespace: true

# From repository
- name: Add stable chart repo
  community.kubernetes.helm_repository:
    name: stable
    repo_url: "https://kubernetes-charts.storage.googleapis.com"

- name: Deploy helm chart on 5.0.12 with values loaded from template
  community.kubernetes.helm:
    name: test
    chart_ref: stable/busybox
    chart_version: 5.0.12
    values: "{{ lookup('template', 'somefile.yaml') | from_yaml }}"

# From git
- name: Git clone stable repo on HEAD
  ansible.builtin.git:
    repo: "http://github.com/helm/charts.git"
    dest: /tmp/helm_repo

- name: Deploy Grafana chart from local path
  community.kubernetes.helm:
    name: test
    chart_ref: /tmp/helm_repo/stable/busybox
    release_namespace: default
```

```yaml
---
harnessApiVersion: '1.0'
type: DOCKER
imageName: library/busybox
serverName: docker

---
harnessApiVersion: '1.0'
type: APPLICATION_MANIFEST
gitFileConfig:
  branch: master
  connectorName: helm-charts
  useBranch: true
  useInlineServiceDefinition: false
storeType: Remote

---
harnessApiVersion: '1.0'
type: INFRA_DEFINITION
cloudProviderType: KUBERNETES_CLUSTER
deploymentType: KUBERNETES
infrastructure:
- type: DIRECT_KUBERNETES
  cloudProviderName: default-cluster
  namespace: default
  releaseName: release-${infra.kubernetes.infraId}
```

```yaml
---
harnessApiVersion: '1.0'
type: ROLLING
concurrencyStrategy: INFRA
envName: Dev
failureStrategies:
- executionScope: WORKFLOW
  failureTypes:
  - APPLICATION_ERROR
  repairActionCode: ROLLBACK_WORKFLOW
  retryCount: 0
phases:
- type: KUBERNETES
  daemonSet: false
  name: Rolling
  phaseSteps:
  - type: K8S_PHASE_STEP
    name: Deploy
    steps:
    - type: K8S_DEPLOYMENT_ROLLING
      name: Rollout Deployment
      properties:
        skipDryRun: true
        stateTimeoutInMinutes: 10
        templateUuid: null
        templateVariables: null
        templateVersion: null
    stepsInParallel: false
  - type: K8S_PHASE_STEP
    name: Verify
    stepsInParallel: false
  - type: K8S_PHASE_STEP
    name: Wrap Up
    stepsInParallel: false
  provisionNodes: false
  serviceName: busybox
  statefulSet: false
  templateExpressions:
  - expression: ${Service}
    fieldName: serviceId
    metadata:
    - name: relatedField
    - name: artifactType
      value: DOCKER
    - name: entityType
      value: SERVICE
  - expression: ${InfraDefinition_KUBERNETES}
    fieldName: infraDefinitionId
    metadata:
    - name: relatedField
    - name: entityType
      value: INFRASTRUCTURE_DEFINITION
rollbackPhases:
- type: KUBERNETES
  daemonSet: false
  name: Rollback Rolling
  phaseNameForRollback: Rolling
  phaseSteps:
  - type: K8S_PHASE_STEP
    name: Deploy
    phaseStepNameForRollback: Deploy
    statusForRollback: SUCCESS
    steps:
    - type: K8S_DEPLOYMENT_ROLLING_ROLLBACK
      name: Rollback Deployment
    stepsInParallel: false
  - type: K8S_PHASE_STEP
    name: Wrap Up
    phaseStepNameForRollback: Wrap Up
    stepsInParallel: false
  provisionNodes: false
  serviceName: busybox
  statefulSet: false
  templateExpressions:
  - expression: ${Service}
    fieldName: serviceId
    metadata:
    - name: relatedField
    - name: artifactType
      value: DOCKER
    - name: entityType
      value: SERVICE
  - expression: ${InfraDefinition_KUBERNETES}
    fieldName: infraDefinitionId
    metadata:
    - name: relatedField
    - name: entityType
      value: INFRASTRUCTURE_DEFINITION
templateExpressions:
- expression: ${Environment}
  fieldName: envId
  metadata:
  - name: relatedField
    value: ${InfraDefinition_KUBERNETES}
  - name: entityType
    value: ENVIRONMENT
- expression: ${Service}
  fieldName: serviceId
  metadata:
  - name: relatedField
  - name: artifactType
    value: DOCKER
  - name: entityType
    value: SERVICE
- expression: ${InfraDefinition_KUBERNETES}
  fieldName: infraDefinitionId
  metadata:
  - name: relatedField
  - name: entityType
    value: INFRASTRUCTURE_DEFINITION
templatized: true
userVariables:
- type: ENTITY
  description: Variable for Environment entity
  fixed: false
  mandatory: true
  name: Environment
- type: ENTITY
  description: Variable for Service entity in Rollback Rolling
  fixed: false
  mandatory: true
  name: Service
- type: ENTITY
  description: Variable for Infrastructure Definition entity in Rollback Rolling
  fixed: false
  mandatory: true
  name: InfraDefinition_KUBERNETES
```

Chapter 12: What's Next?

No Images