

Argo Contributor Experience

Argo CD

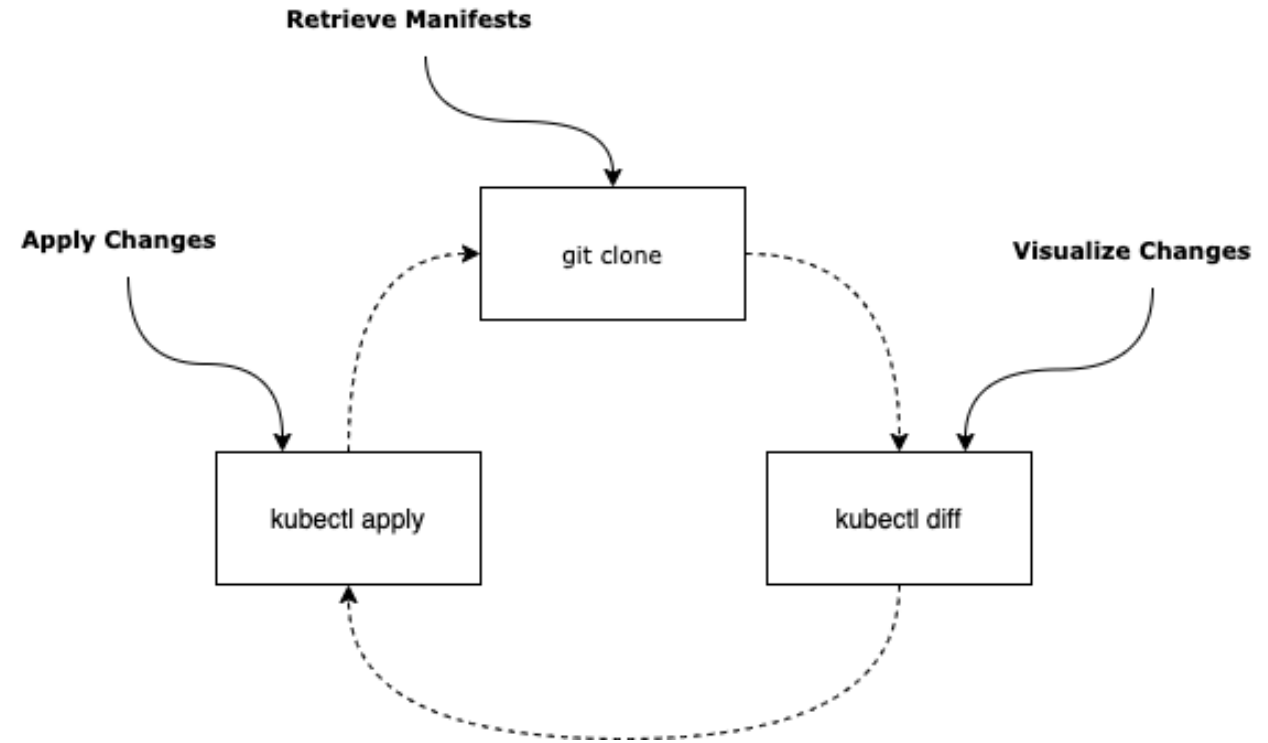
- Architecture overview
- Development environment setup
- How to triage "first good issues" to get started



argo

GitOps Operator

- **Retrieve Manifests** Clone Git repository, run config management tool such as Helm or Kustomize.
- **Visualize Deviations** Compare manifests with live resources in K8S cluster.
- **Apply Changes** Push updated manifests to K8S cluster.



Argo CD Architecture

- Retrieve Manifests

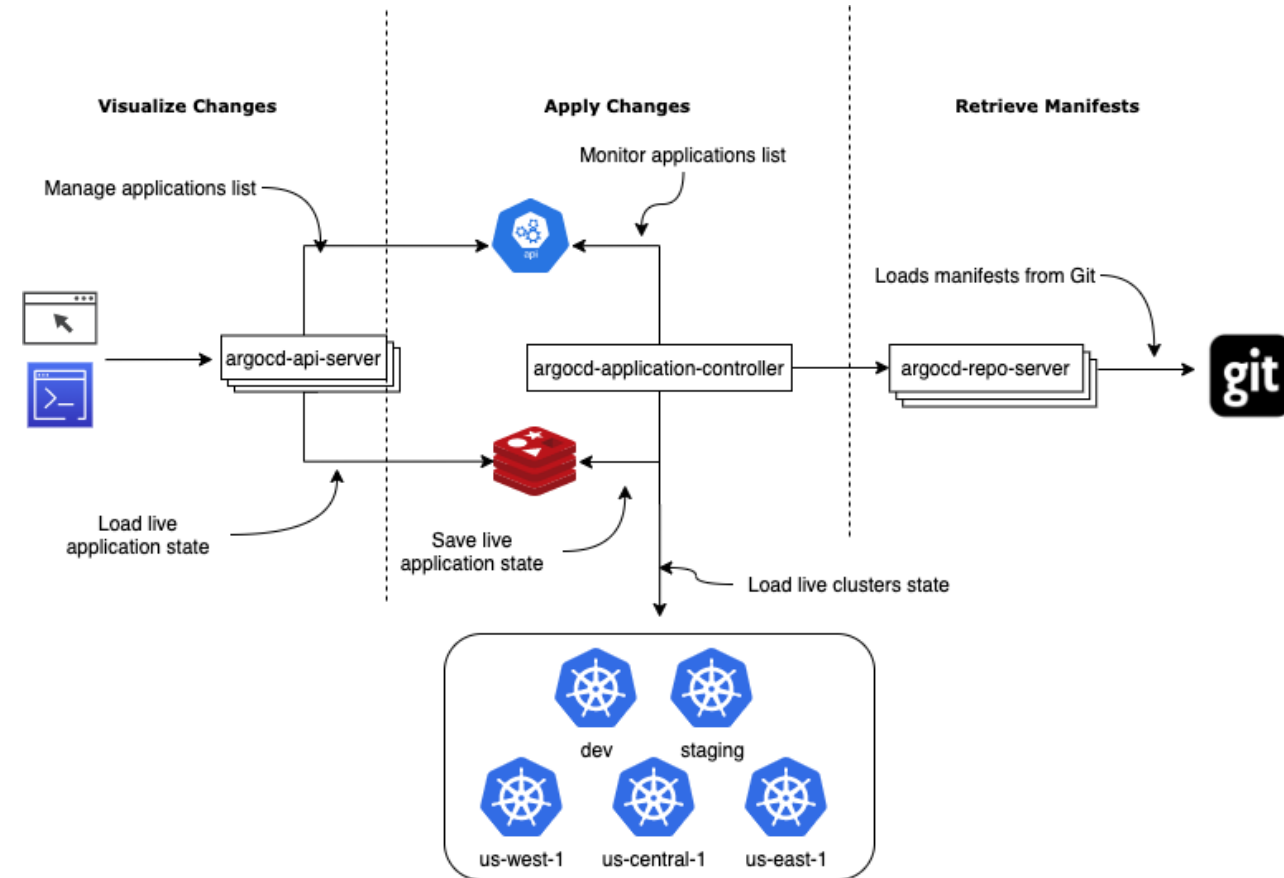
`argocd-repo-server`

- Visualize Deviations

`argocd-server`

- Apply Changes

`argocd-application-controller`



Argo CD On Your laptop

Developer guide

- [golang](#)
- [docker](#)
- kubernetes ([minikube](#), [k3s](#)) + [kubectl](#)
- optionally: [kustomize](#), [helm](#)

Configure Your Cluster

- CustomResourceDefinitions: **Application, AppProject**
- ConfigMaps: **argocd-cm, argocd-rbac-cm, argocd-gpg-keys-cm, argocd-tls-certs-cm, argocd-ssh-known-hosts-cm**
- Secrets: **argocd-secret**

```
kustomize build test/manifests/base/ | kubectl apply -f -
```

Run Components

Option 1

Run everything in Docker: `make start`. Simplest way to get started but slower (especially on Mac/Windows). More details in [developer guide](#)

Option 2

Run all components manually and use [goreman](#) to make it easier.

- Install `goreman` `go get github.com/mattn/goreman`
- Start everything: `goreman start`
- Start components one by one `goreman start api-server repo-server controller`

Configure your IDE

- Use `goimports -local github.com/argoproj/argo-cd -w $FilePath$`
- Use [Procfile](#) to run components from your IDE
- Magic environment variables:
 - `ARGOCD_FAKE_IN_CLUSTER` - switches <https://kubernetes.default.svc> to your cluster
 - `ARGOCD_TLS_DATA_PATH` , `ARGOCD_SSH_DATA_PATH` - teaches repo-server to load certs from local folders

First good issues

- good first issue label: [https://github.com/argoproj/argo-cd/issues?q=is%3Aopen+is%3Aissue+label%3A"good+first+issue"](https://github.com/argoproj/argo-cd/issues?q=is%3Aopen+is%3Aissue+label%3A%22good+first+issue%22)
- filter using component:<name> labels: api, applications-set, audit, cli, config-management, core, distribution, git, multi-cluster, multi-tenancy, rbac, settings, sso, third-party-k8s, ui