
IPFS Operator

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IPFS Operator is a [Kubernetes Operator](#) designed to assist with running [IPFS Cluster](#)

IPFS cluster is used as the storage backend for many important and interesting projects. Some of the community projects hosted using IPFS cluster are listed [here](#). The largest known clusters are host to tens of millions of pins and host nearly 1PB of objects.

The IPFS Operator brings this technology to kubernetes. This operator enables kubernetes users to create clusters consisting of hundreds of peers quickly and easily. See [Getting Started](#) to begin.

Note: This project is under active development.

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1.1 Getting Started

This document explains methods that can be used to install the operator onto an existing kubernetes cluster.

No matter which method you choose, the same operator will be installed.

With helm

```
helm install ipfs-operator ./helm/ipfs-operator
```

manually

```
make install
```

Confirm that the operator is installed.

When the operator is installed, a new namespace will be created. Verify the operator is running in the *ipfs-operator* namespace.

Once the operator is installed, you can proceed with installing your first cluster.

1.2 Your First Cluster

Create a cluster, we need to create a cluster using the ipfs operator CRD.

Create a file with the following information

```
apiVersion: cluster.ipfs.io/v1alpha1
kind: IpfsCluster
metadata:
  name: ipfs-sample-1
spec:
  ipfsStorage: 2Gi
  clusterStorage: 2Gi
  replicas: 5
  follows: []
  networking:
    circuitRelays: 1
```

Adjust the storage requirements to meet your needs.

Once you have made the necessary adjustments, apply it to your cluster with kubectl

```
kubectl create namespace mycluster
kubectl -n mycluster apply -f ipfs.yaml
```

Verify that the cluster has started by viewing the status of the cluster.

```
kubectl -n mycluster status ipfs-sample-1
```

1.3 Hacking

Have you have found a bug in the operator or do you have an additional feature? That's great! Here are some tips.

1.4 Running your own images

If you have edited the code, you would like to install it in your own cluster, you will first need an account on an image host like dockerhub. Once you have this, you can build, push, and install the image using the **IMG** environment variable

```
export IMG=your-image-repo/ipfs-operator:version
make docker-build
make docker-push
make install
```

1.5 Creating a pull request

Pull requests are welcome and encouraged. Please make pull requests against <https://github.com/redhat-et/ipfs-operator>.