



# Define a custom app

## Project Astra

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# Define a custom app

Creating a custom app lets you group elements of your Kubernetes cluster into a single app.

A custom app gives you more granular control over what to include in a Astra operation, including:

- Clone
- Snapshot
- Backup
- Protection Policy

In most cases you will want to use Astra's features on your entire app. However, you can also create a custom app to use these features by the labels you assign to Kubernetes objects in a namespace.

To create a custom app, go to the Apps page and click + **Define custom app**.

As you make your selections, the Custom App window will show you which resources will be included or excluded from your custom app. This helps you make sure you are choosing the correct criteria for defining your custom app.

Custom Application

SELECTED RESOURCES

Filter by name

Resources (1) ↑

Created

Pod (1)

nginx-pod0

2020/10/09 14:01 UTC

deployment: canary +1

UNSELECTED RESOURCES

Filter by name

Resources (2) ↑

Created

Pod (2)

nginx-pod1

2020/10/09 14:01 UTC

deployment: stable +1

nginx-pod2

2020/10/09 14:01 UTC

In the above example, one resource (the pod `nginx-pod0` labeled `deployment:canary`) will be included in the custom app. Two pods (`nginx-pod1` and `nginx-pod2` both labeled `deployment:stable`) will be excluded.



Custom apps can only be created within a specified namespace on a single cluster. The Astra beta program does not support the ability for a custom app to span multiple namespaces or clusters.

A label is a key/value pair you can assign to Kubernetes objects for identification. Labels make it easier

to sort, organize, and find your Kubernetes objects. To learn more about Kubernetes labels, [see the official Kubernetes documentation](#).



Overlapping policies for the same resource under different names can cause data conflicts. If you create a custom app for a resource, be sure it's not being cloned or backed up under any other policies.

## Example: Separate Protection Policy for canary release

In this example, the devops team is managing a canary release deployment. Their cluster has three pods running NginX. Two of the pods are dedicated to the stable release. The third pod is for the canary release.

The devops team's Kubernetes admin adds the label `deployment=stable` to the stable release pods. She adds the label `deployment=canary` to the canary release pod.

```
:~$ kubectl get pods --namespace=nginx-app --show-labels
NAME          READY   STATUS    RESTARTS   AGE   LABELS
nginx-pod0    1/1     Running   0           50s   deployment=canary,run=nginx-pod0
nginx-pod1    1/1     Running   0           45s   deployment=stable,run=nginx-pod1
nginx-pod2    1/1     Running   0           41s   deployment=stable,run=nginx-pod2
:~$
```

The team's stable release includes a requirement for hourly snapshots and daily backups. The canary release is more ephemeral, so they want to create a less aggressive, short-term Protection Policy for anything labeled `deployment=canary`.

In order to avoid possible data conflicts, the admin will create two custom apps: one for the canary release, and one for the stable release. This keeps the backups, snapshots, and clone operations separate for the two groups of Kubernetes objects.

After she adds the cluster to the Astra beta program, her next step is to define a custom app. To do this, she clicks the + **Define custom app** button on the Apps page.

In the pop-up window which appears, she sets `devops-canary-deployment` as the app name. She chooses the cluster in the **Compute** drop-down, then the app's namespace from the **Namespace** drop-down.

At this point, she can either type `deployment=canary` in the **Labels** field, or select that label from the resources listed below.

After defining the custom app for the canary deployment, she repeats the process for the stable deployment.

When she has finished creating the two custom apps, she can treat these resources as any other Astra application. She can clone them, create backups and snapshots, and create a custom Protection Policy for each group of resources based on her Kubernetes labels.

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