



Multi-cluster, multi-app deployments with App Sets

GitOpsCon US

Kostis Kapelonis | December 2025

Kostis Kapelonis



Developer Advocate (Octopus Deploy/Codefresh)

Argo Maintainer (Argo CD, Argo Rollouts)

Co-author GitOps certification

<http://learning.octopus.com>



Agenda

- 1 Understand Application Sets
- 2 Group Application Sets with App-of-Apps files
- 3 Avoid the Helm sandwich
- 4 Employ Cluster groups with Tags
- 5 Create Many Application Sets
- 6 Use the PR Generator for preview envs



Introduction



CNCF End User Survey Finds Argo CD as Majority Adopted GitOps Solution for Kubernetes



Nearly 60% of Kubernetes clusters managed by survey respondents now rely on Argo CD, with strong satisfaction fueled by 3.0 performance and security updates

<https://www.cncf.io/announcements/2025/07/24/cncf-end-user-survey-finds-argo-cd-as-majority-adopted-gitops-solution-for-kubernetes/>





argo

v2.11.0+1cffa15



Applications

Settings

User Info

Documentation

 ★ Favorites OnlySYNC STATUS CLEAR ⚡ Unknown 2 🟢 Synced 20 ⚡ OutOfSync 0HEALTH STATUS CLEAR ⓘ Unknown 0 ⚡ Progressing 6 ⚡ Suspended 0 ❤️ Healthy 20 💔 Degraded 2 🕷 Missing 0

Applications

APPLICATIONS TILES

+ NEW APP⟳ SYNC APPS⟳ REFRESH APPS🔍 Search applications.../✖

Log in

Previous 1 2 Next

Sort: name ▾ Items per page: 10 ▾

argo-events

Project: default
Labels:
Status: ❤️ Healthy ✅ Synced
Repository: https://github.com/argoproj/argoproj-de...
Target Ref: HEAD
Path: argo-events
Destination: in-cluster
Namespace: workflow-playground
Created: 02/22/2024 21:32:40 (6 months ago)
Last Sync: 07/13/2024 18:06:35 (a month ago)

⟳ SYNC⟳ REFRESH✖ DELETE

argo-rollouts

Project: default
Labels:
Status: ❤️ Healthy ✅ Synced
Repository: https://github.com/argoproj/argoproj-de...
Target Ref: HEAD
Path: argo-rollouts
Destination: in-cluster
Namespace: argo-rollouts
Created: 02/22/2024 21:32:41 (6 months ago)
Last Sync: 02/23/2024 19:36:19 (6 months ago)

⟳ SYNC⟳ REFRESH✖ DELETE

argo-workflows

Project: default
Labels:
Status: ❤️ Healthy ✅ Synced
Repository: https://github.com/argoproj/argoproj-de...
Target Ref: HEAD
Path: argo-workflows
Destination: in-cluster
Namespace: argo
Created: 02/22/2024 21:32:41 (6 months ago)
Last Sync: 03/11/2024 13:40:15 (5 months ago)

⟳ SYNC⟳ REFRESH✖ DELETE

argocd-image-updater

Project: default
Labels:
Status: ❤️ Healthy ✅ Synced
Repository: https://github.com/argoproj/argoproj-de...
Target Ref: HEAD
Path: argocd-image-updater
Destination: in-cluster

⟳ SYNC⟳ REFRESH✖ DELETE

dex

Project: default
Labels:
Status: ❤️ Healthy ✅ Synced
Repository: https://github.com/argoproj/argoproj-de...
Target Ref: HEAD
Path: dex
Destination: in-cluster

⟳ SYNC⟳ REFRESH✖ DELETE

example.guestbook

Project: default
Labels:
Status: ❤️ Healthy ✅ Synced
Repository: https://github.com/agaudreault/argocd-...
Target Ref: sync-from-demo
Path: guestbook
Destination: in-cluster

⟳ SYNC⟳ REFRESH✖ DELETE

```
apiVersion: argoproj.io/v1alpha1
kind: Application
metadata:
  name: guestbook Name of application
  namespace: argocd
spec:
  project: default
  source: Where to read the Kubernetes manifest from
    repoURL: https://github.com/argoproj/argocd-example-apps.git
    targetRevision: HEAD
    path: guestbook
  destination: Which cluster to deploy the application to
    server: https://kubernetes.default.svc
    namespace: guestbook
```



Always use ApplicationSets

- Understand the generators
- Learn how to combine them
- Don't miss the PR generator

KUBECTL

NEW
APP BUTTON

APPLICATION
CRD

APPLICATIONSET



Application Set 101



Same App - different clusters

Cluster A



Cluster B



Cluster C



AppSet

Billing App

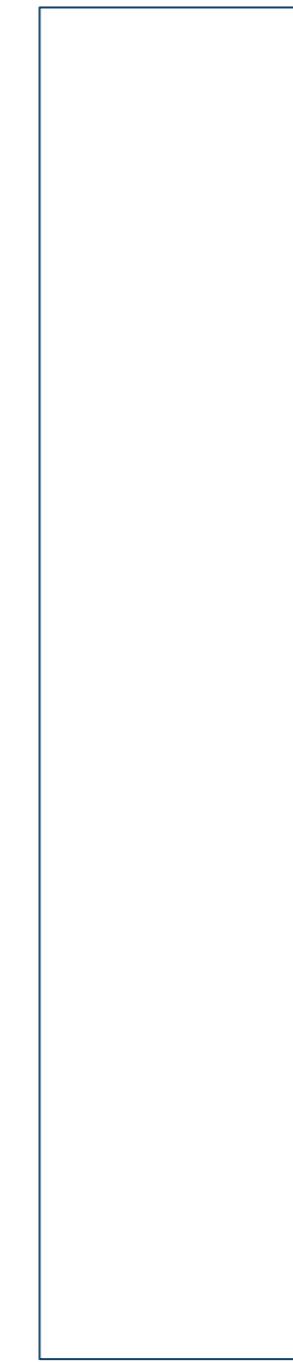
Billing App

Billing App



Same cluster- different apps

AppSet



Cluster



Billing App

Sealed Secrets

Argo Rollouts

Cert Manager



Many Apps - Many Clusters

Cluster A



Cluster B



Cluster C



AppSet

Billing App

Sealed Secrets

Argo Rollouts

Cert Manager

Billing App

Sealed Secrets

Argo Rollouts

Cert Manager

Billing App

Sealed Secrets

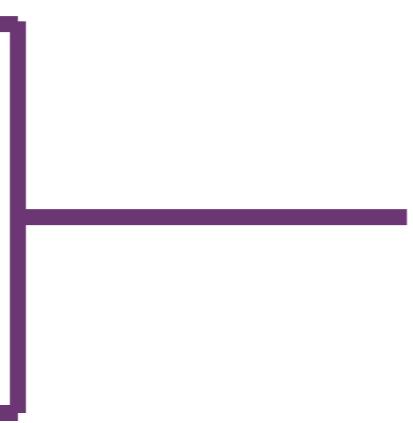
Argo Rollouts

Cert Manager



Generators

- List
- Cluster
- Git
- SCM Provider
- Pull Request
- Cluster Decision
- Matrix
- Merge
- Plugin



Combine and Extend
Generators!



Forget individual Apps

```
apiVersion: argoproj.io/v1alpha1
kind: Application
metadata:
  name: guestbook    Name of application
  namespace: argocd
spec:
  project: default
  source:          Where to read the Kubernetes manifest
    repoURL: https://github.com/argoproj/argocd-example-apps.git
    targetRevision: HEAD
    path: guestbook
  destination:      Which cluster to deploy the application to
    server: https://kubernetes.default.svc
    namespace: guestbook
```



```

apiVersion: argoproj.io/v1alpha1
kind: ApplicationSet
metadata:
  name: my-qa-appset
  namespace: argocd
spec:
  goTemplate: true
  goTemplateOptions: ["missingkey=error"]
  generators:
    - git:
        repoURL: https://github.com/kostis-codefresh/many-appsets-demo.git
        revision: HEAD
      directories:
        - path: apps/*/envs/qa
  template:
    metadata:
      name: '{{index .path.segments 1}}-{{index .path.segments 3}}'
    spec:
      # The project the application belongs to.
      project: default

      # Source of the application manifests
      source:
        repoURL: https://github.com/kostis-codefresh/many-appsets-demo.git
        targetRevision: HEAD
        path: '{{.path.path}}'

      # Destination cluster and namespace to deploy the application
      destination:
        server: https://kubernetes.default.svc
        namespace: '{{index .path.segments 1}}-{{index .path.segments 3}}'

```

Files

main

Go to file

- apps
- billing
- base
- envs
 - prod-eu
 - prod-us
- fake-invoices
- invoices
- orders
- payments

..

deployment.yml

kustomization.yml

replicas.yml

settings.yml

version.yml

Generate applications from Git folders



Cluster bootstrapping

[+ NEW APP](#)[SYNC APPS](#)[REFRESH APPS](#) Search applications...

Log out

Applications

Settings

User Info

Documentation

Favorites Only

SYNC STATUS

 Unknown 0 Synced 13 OutOfSync 0

HEALTH STATUS

 Unknown 0 Progressing 12 Suspended 0 Healthy 1 Degraded 0 Missing 0

LABELS

LABELS

PROJECTS

Previous 1 2 Next

Sort: name ▾ Items per page: 10 ▾

★	Project:	default	Source:	https://github.com/kostis-codefresh/many-appsets-demo.git/appsets	HEAD	Healthy	Synced	
★	Name:	all-apps	Destination:	in-cluster/argocd				
★	Project:	default	Source:	https://github.com/kostis-codefresh/many-appsets-demo.git/apps/billing/envs/prod-eu	HEAD	Progressing	Synced	
★	Name:	billing-prod-eu	Destination:	in-cluster/billing-prod-eu				
★	Project:	default	Source:	https://github.com/kostis-codefresh/many-appsets-demo.git/apps/billing/envs/prod-us	HEAD	Progressing	Synced	
★	Name:	billing-prod-us	Destination:	in-cluster/billing-prod-us				
★	Project:	default	Source:	https://github.com/kostis-codefresh/many-appsets-demo.git/apps/fake-invoices/envs/qa	HEAD	Progressing	Synced	
★	Name:	fake-invoices-qa	Destination:	in-cluster/fake-invoices-qa				
★	Project:	default	Source:	https://github.com/kostis-codefresh/many-appsets-demo.git/apps/invoices/envs/prod-eu	HEAD	Progressing	Synced	
★	Name:	invoices-prod-eu	Destination:	in-cluster/invoices-prod-eu				
★	Project:	default	Source:	https://github.com/kostis-codefresh/many-appsets-demo.git/apps/invoices/envs/prod-us	HEAD	Progressing	Synced	
★	Name:	invoices-prod-us	Destination:	in-cluster/invoices-prod-us				
★	Project:	default	Source:	https://github.com/kostis-codefresh/many-appsets-demo.git/apps/invoices/envs/qa	HEAD	Progressing	Synced	
★	Name:	invoices-qa	Destination:	in-cluster/invoices-qa				
★	Project:	default	Source:	https://github.com/kostis-codefresh/many-appsets-demo.git/apps/invoices/envs/staging	HEAD	Progressing	Synced	
★	Name:	invoices-staging	Destination:	in-cluster/invoices-staging				
★	Project:	default	Source:	https://github.com/kostis-codefresh/many-appsets-demo.git/apps/orders/envs/prod-us	HEAD	Progressing	Synced	
★	Name:	orders-prod-us	Destination:	in-cluster/orders-prod-us				
★	Project:	default	Source:	https://github.com/kostis-codefresh/many-appsets-demo.git/apps/orders/envs/qa	HEAD	Progressing	Synced	
★	Name:	orders-qa	Destination:	in-cluster/orders-qa				

Previous 1 2 Next

Sort: name ▾ Items per page: 10 ▾



A good starting point

- Store your applications with Kustomize Overlays OR
- Store your applications with Helm value Hierarchies
- Use [the Git generator](#) to load apps
- Use the [Cluster generator](#) to assign apps to clusters
- Create one applicationset per environment or cluster type





BEST PRACTICES

How to Structure Your Argo CD Repositories Using Application Sets

21 min read



Kostis Kapelonis May 17, 2024



<https://codefresh.io/blog/how-to-structure-your-argo-cd-repositories-using-application-sets/>



Confusion with App-of-Apps

They are not mutually exclusive



What to choose?



“Should I use Application
Sets or App of Apps”?



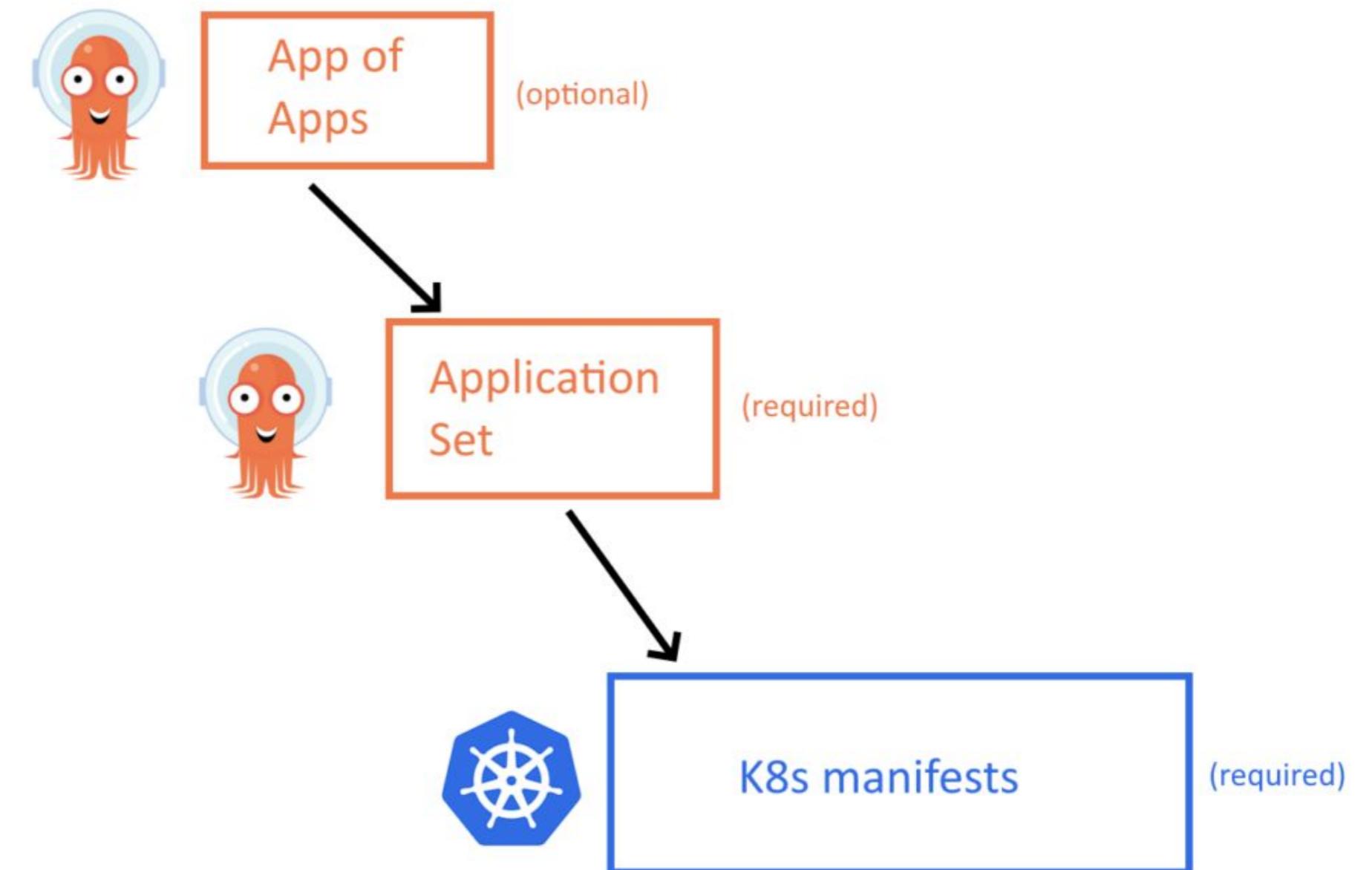
“Choosing” between App-of-apps and App Sets

- “I prefer app-of-apps and not application sets”
- “I haven’t explored application sets yet. Still using App-of-Apps”
- “I tried Application Sets but found them too complex. Now using App-of-Apps”
- “I am using App-Of-Apps to do X. Can I do X with ApplicationSets?”
- “This is my setup. Do you recommend App-Of-Apps or Application Sets?”



ApplicationSets AND App-Of-Apps

- Application Sets are NOT a replacement for App-of-apps
- You should use them together
- Group many ApplicationSets in a root App
- Great for cluster bootstrapping



Don't use Helm

...for Argo CD manifests





Ops

How do we template
Kubernetes manifests?

Let's use Helm !



Do



Ops





Ops

How do we template
Argo CD Applications?



Don't

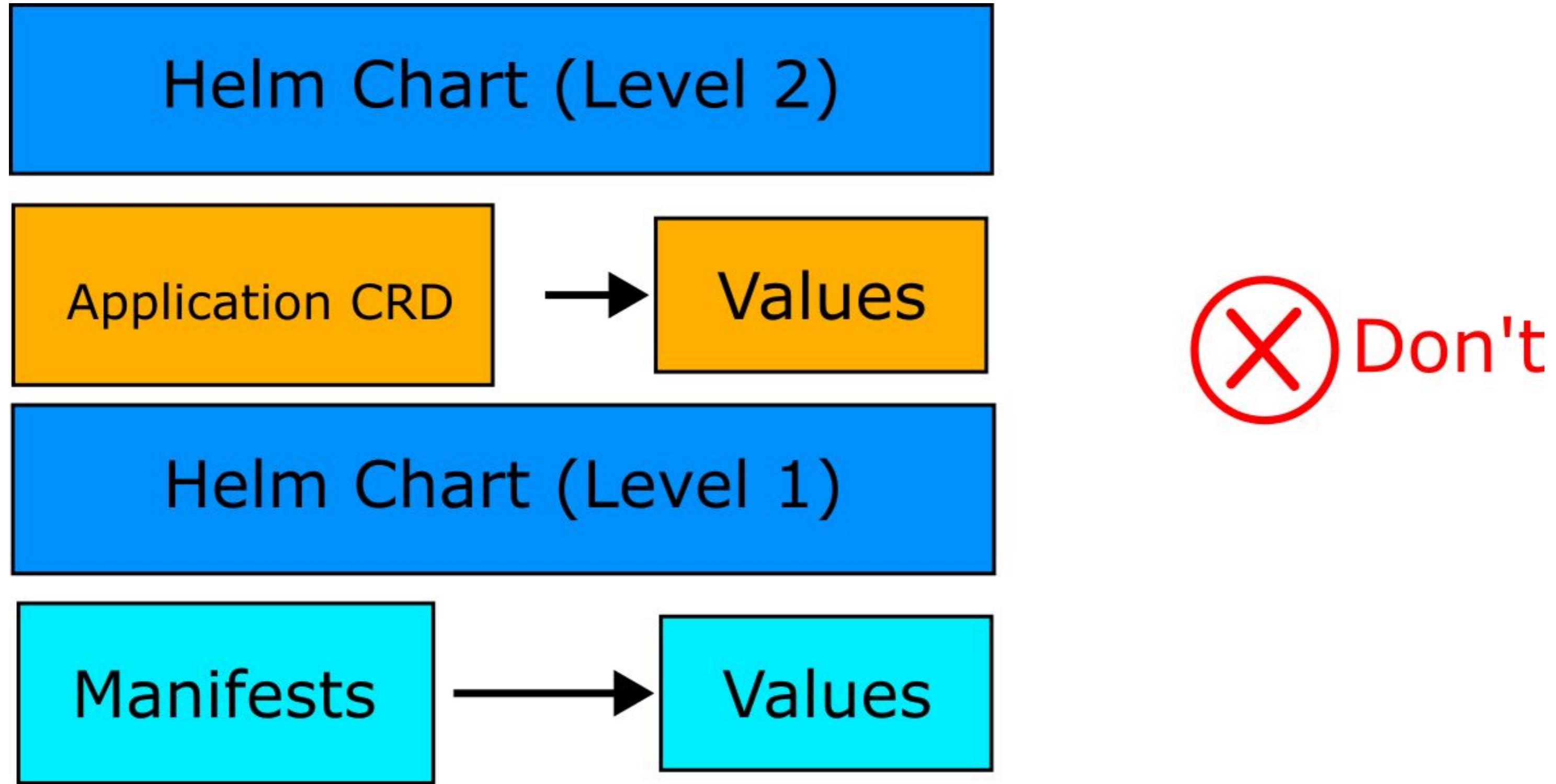


Ops

Let's use Helm !

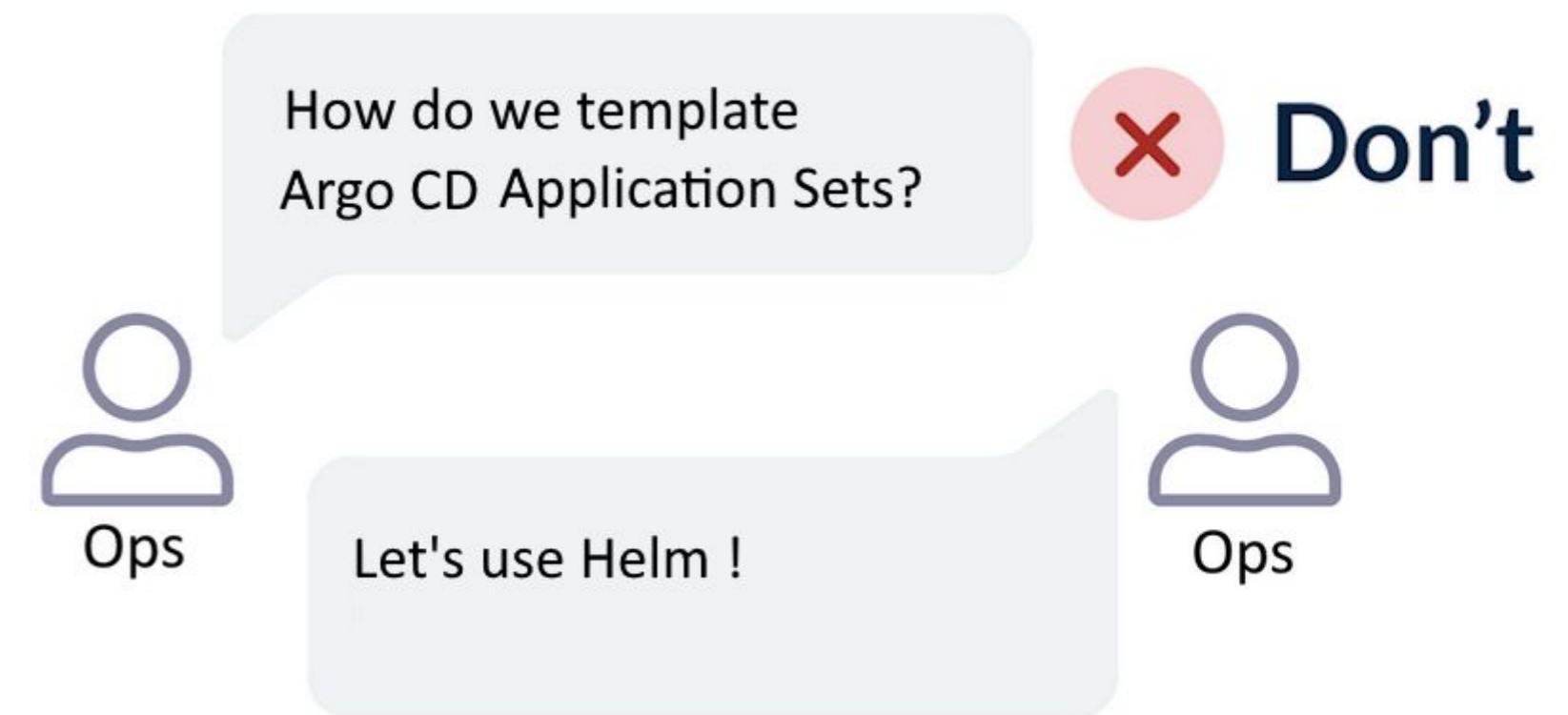


Two layers of Helm - “Helm Sandwich”



Application Sets already support templating

- Don't use Helm as a hammer...
- No need for extra complexity
- It is difficult to debug Helm Application CRDs that point to Helm charts



Dev experience



Dev

I am looking at values-qa.yaml for my-app and I don't see this setting I want to change.

You are looking at the wrong values file. You need to change the values file for the Helm chart that creates the Argo CD Application that references the Helm chart which contains the actual values. And those values are in a different Git repository and not the one you are looking at right now.

What? That sounds very complex.

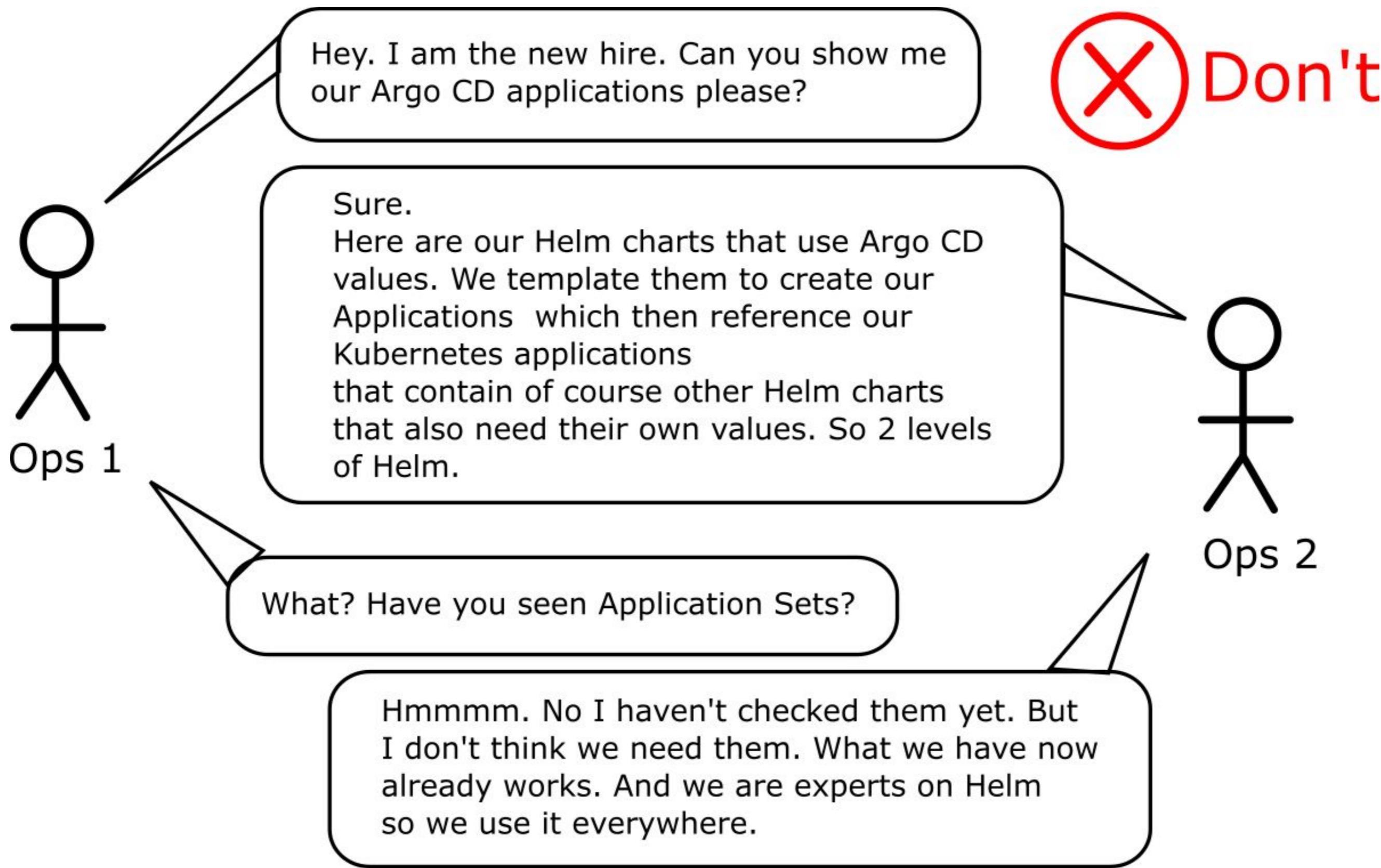
Yes we use the "Helm sandwich pattern". Even I get confused some times. Anyway, open a ticket and I will make that change for you if you don't want to learn about Argo CD.



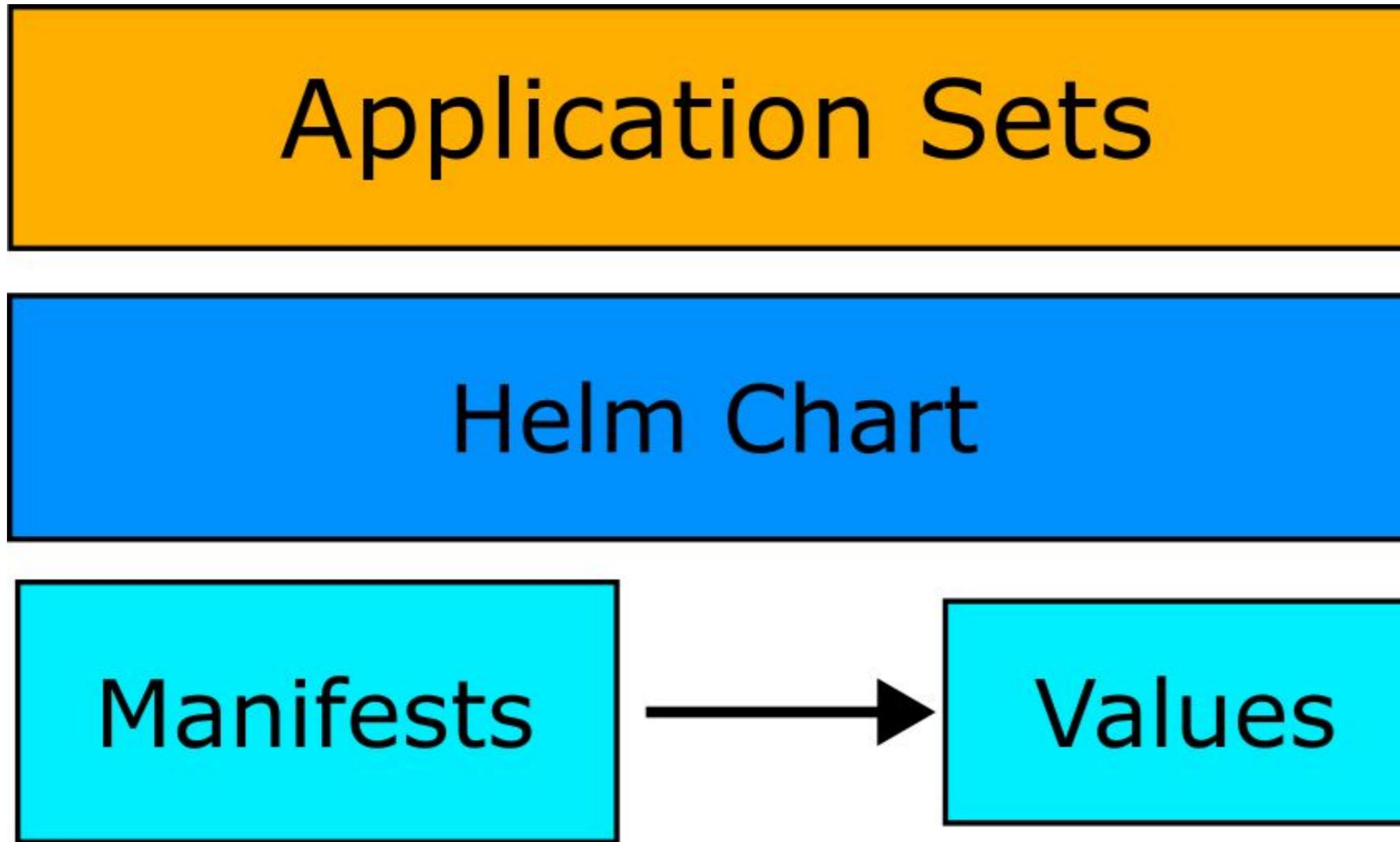
Ops



Ops experience



Solution: use Application Sets



Application Set templating

Sprig Function Documentation

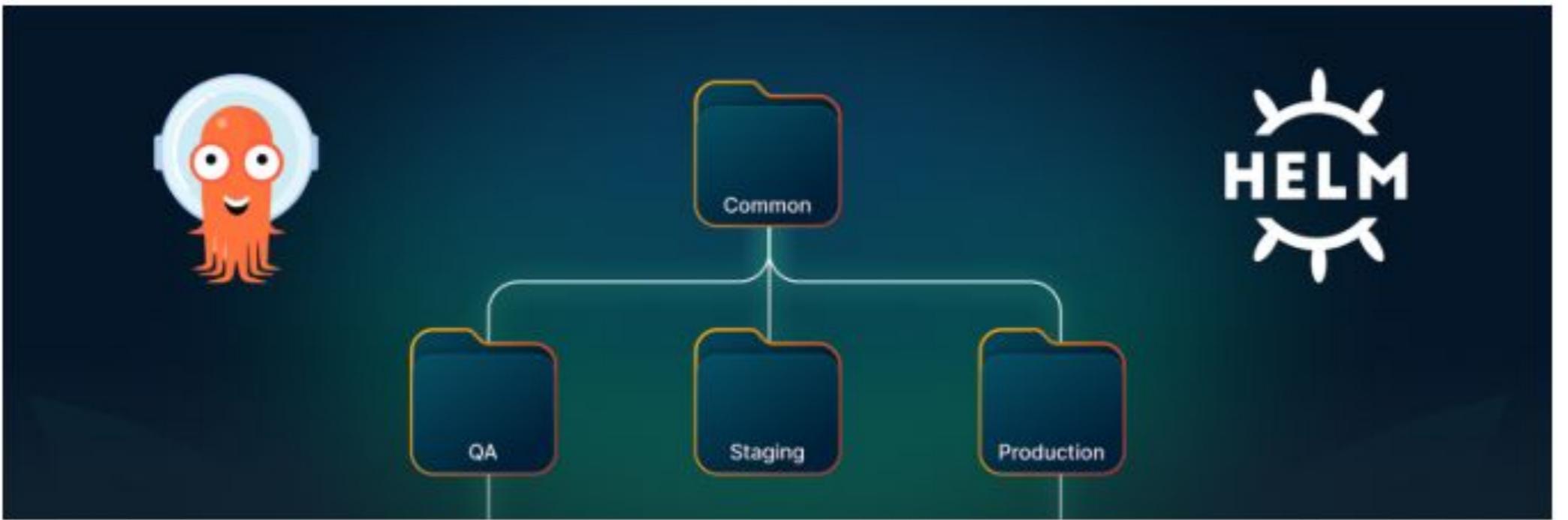
The Sprig library provides over 70 template functions for Go's template language.

- **String Functions:** `trim`, `wrap`, `randAlpha`, `plural`, etc.
 - **String List Functions:** `splitList`, `sortAlpha`, etc.
- **Integer Math Functions:** `add`, `max`, `mul`, etc.
 - **Integer Slice Functions:** `until`, `untilStep`
- **Float Math Functions:** `addf`, `maxf`, `multf`, etc.
- **Date Functions:** `now`, `date`, etc.
- **Defaults Functions:** `default`, `empty`, `coalesce`, `fromJson`, `toJson`,
`toPrettyJson`, `toRawJson`, `ternary`
- **Encoding Functions:** `b64enc`, `b64dec`, etc.
- **Lists and List Functions:** `list`, `first`, `uniq`, etc.
- **Dictionaries and Dict Functions:** `get`, `set`, `dict`, `hasKey`, `pluck`, `dig`, `deepCopy`,
etc.
- **Type Conversion Functions:** `atoi`, `int64`, `toString`, etc.
- **Path and Filepath Functions:** `base`, `dir`, `ext`, `clean`, `isAbs`, `osBase`, `osDir`,
`osExt`, `osClean`, `osIsAbs`
- **Flow Control Functions:** `fail`
- Advanced Functions
 - **UUID Functions:** `uuidv4`
 - **OS Functions:** `env`, `expandenv`
 - **Version Comparison Functions:** `semver`, `semverCompare`
 - **Reflection:** `typeof`, `kindIs`, `typeIsLike`, etc.
 - **Cryptographic and Security Functions:** `derivePassword`, `sha256sum`,
`genPrivateKey`, etc.
 - **Network:** `getHostByName`
 - **URL:** `urlParse`, `urlJoin`

Usage example

```
apiVersion: argoproj.io/v1alpha1
kind: ApplicationSet
metadata:
  name: test-appset
spec:
...
template:
  metadata:
    name: 'hellos3-{{.name}}-{{ cat .branch | slugify 23 }}'
  annotations:
    label-1: '{{ cat .branch | slugify }}'
    label-2: '{{ cat .branch | slugify 23 }}'
    label-3: '{{ cat .branch | slugify 50 false }}'
```





BEST PRACTICES

Using Helm Hierarchies in Multi-Source Argo CD Applications for Promoting to Different GitOps Environments

14 min read

<https://codefresh.io/blog/helm-values-argocd/>



Use Cluster Groups with tags

Pet vs Cattle



Many Apps - Many Clusters

Cluster A



Cluster B



Cluster C



AppSet

Billing App

Sealed Secrets

Argo Rollouts

Billing App

Sealed Secrets

Argo Rollouts

Cert Manager

Billing App

Sealed Secrets

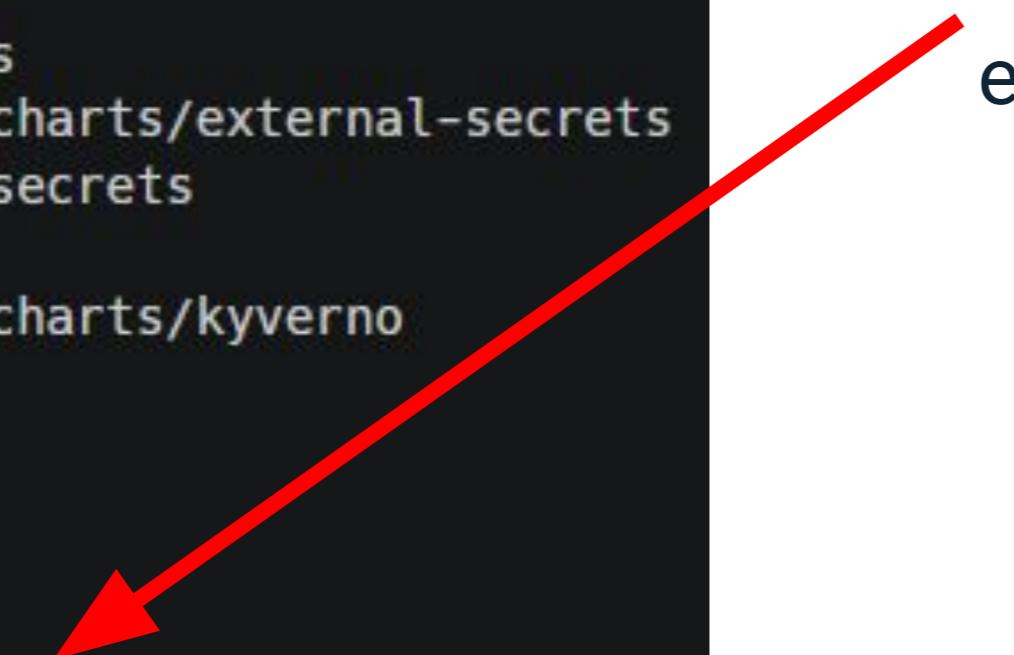
Argo Rollouts

Cert Manager



```
- merge:  
  mergeKeys:  
    - app  
generators:  
  - list:  
    elements:  
      - app: external-dns  
        appPath: infra/helm-charts/external-dns  
        namespace: dns  
      - app: argocd  
        appPath: infra/helm-charts/argocd  
        namespace: argocd  
      - app: external-secrets  
        appPath: infra/helm-charts/external-secrets  
        namespace: external-secrets  
      - app: kyverno  
        appPath: infra/helm-charts/kyverno  
        namespace: kyverno  
  - list:  
    elements:  
      - app: external-dns  
        enabled: "true"  
      - app: argocd  
        enabled: "true"  
      - app: external-secrets  
        enabled: "false"  
      - app: kyverno  
        enabled: "true"  
  
selector:  
matchLabels:  
  enabled: "true"
```

Trying to define exactly what goes into each cluster

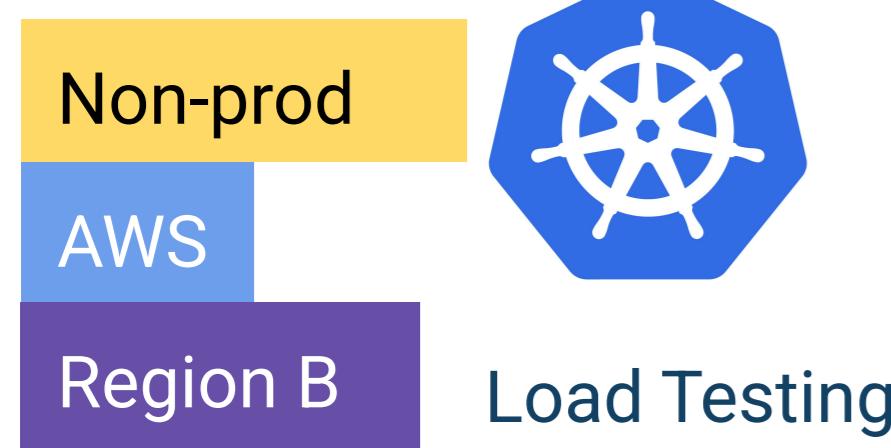
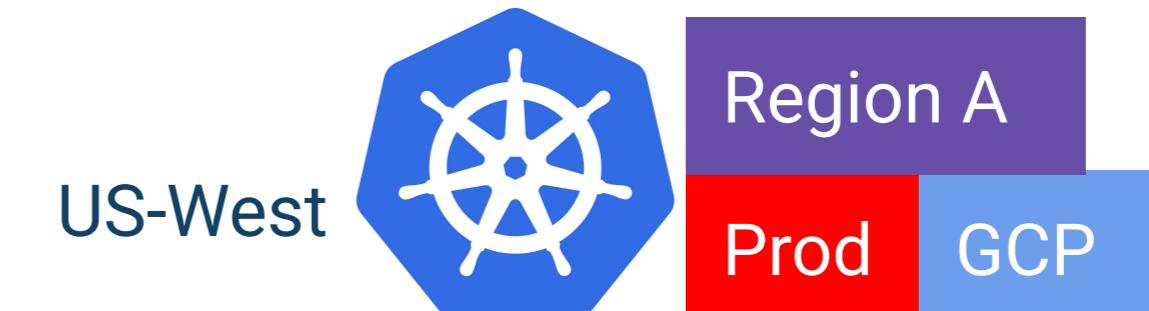
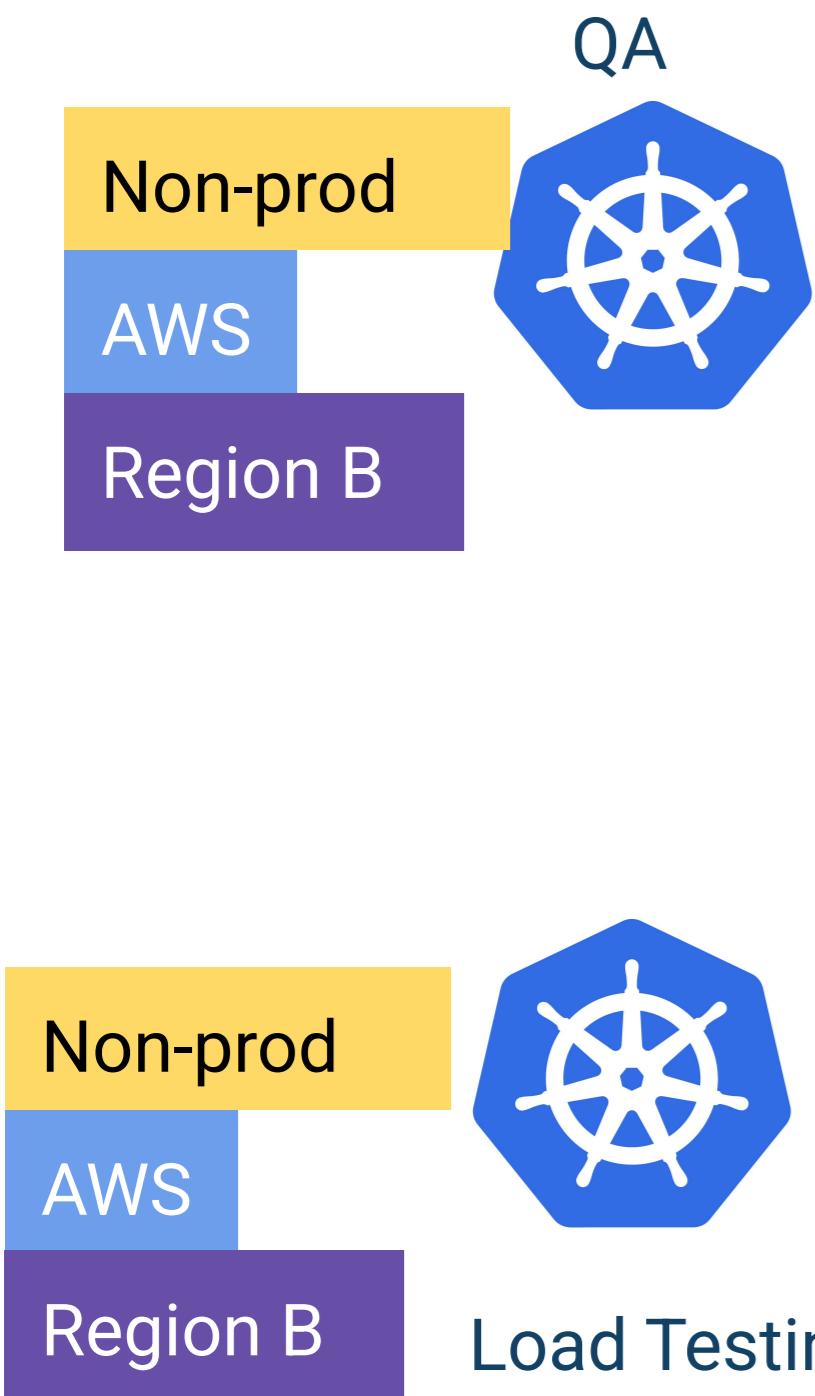


REJECTED



Tag your clusters

APPROVED



Labels are in cluster secrets

APPROVED

```
apiVersion: v1
data:
  [...snip...]
kind: Secret
metadata:
  annotations:
    managed-by: argocd.argoproj.io
  labels:
    argocd.argoproj.io/secret-type: cluster
  cloud: gcp
  department: billing
  env: qa
  region: eu
  type: workload
  name: cluster-k3d-qa-eu-serverlb-1347542961
  namespace: argocd
```

This cluster belongs to the:

- gcp
 - qa
 - EU
 - workload
 - billing
- ...cluster groups



Use Tags with apps



- “In all my AWS clusters I want these apps” -> Create application Set
- “In all my Prod clusters I want these apps ” -> Create Application Set
- “In all my US Region clusters I want these apps” -> Create Application Set
- “In all my Staging clusters I want these apps” -> Create Application Set

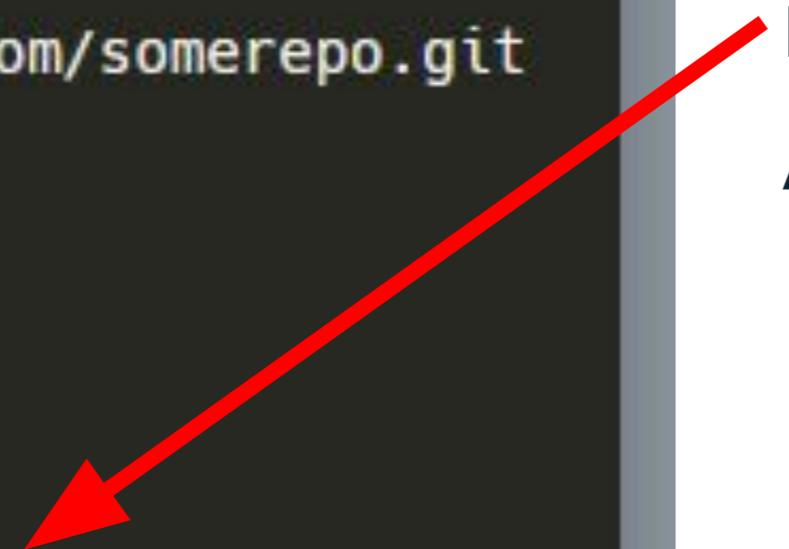


Choose cluster group (And mode)



```
spec:  
  goTemplate: true  
  goTemplateOptions: ["missingkey=error"]  
  generators:  
    - matrix:  
        generators:  
          - git:  
              repoURL: https://github.com/somerepo.git  
              revision: HEAD  
              directories:  
                - path: simple-apps/*  
          - clusters:  
              selector:  
                  matchLabels:  
                      type: "workload"  
                      region: "asia"  
                      env: "prod"
```

Choose all clusters that are
in Production AND in Asia
AND with type “workload”



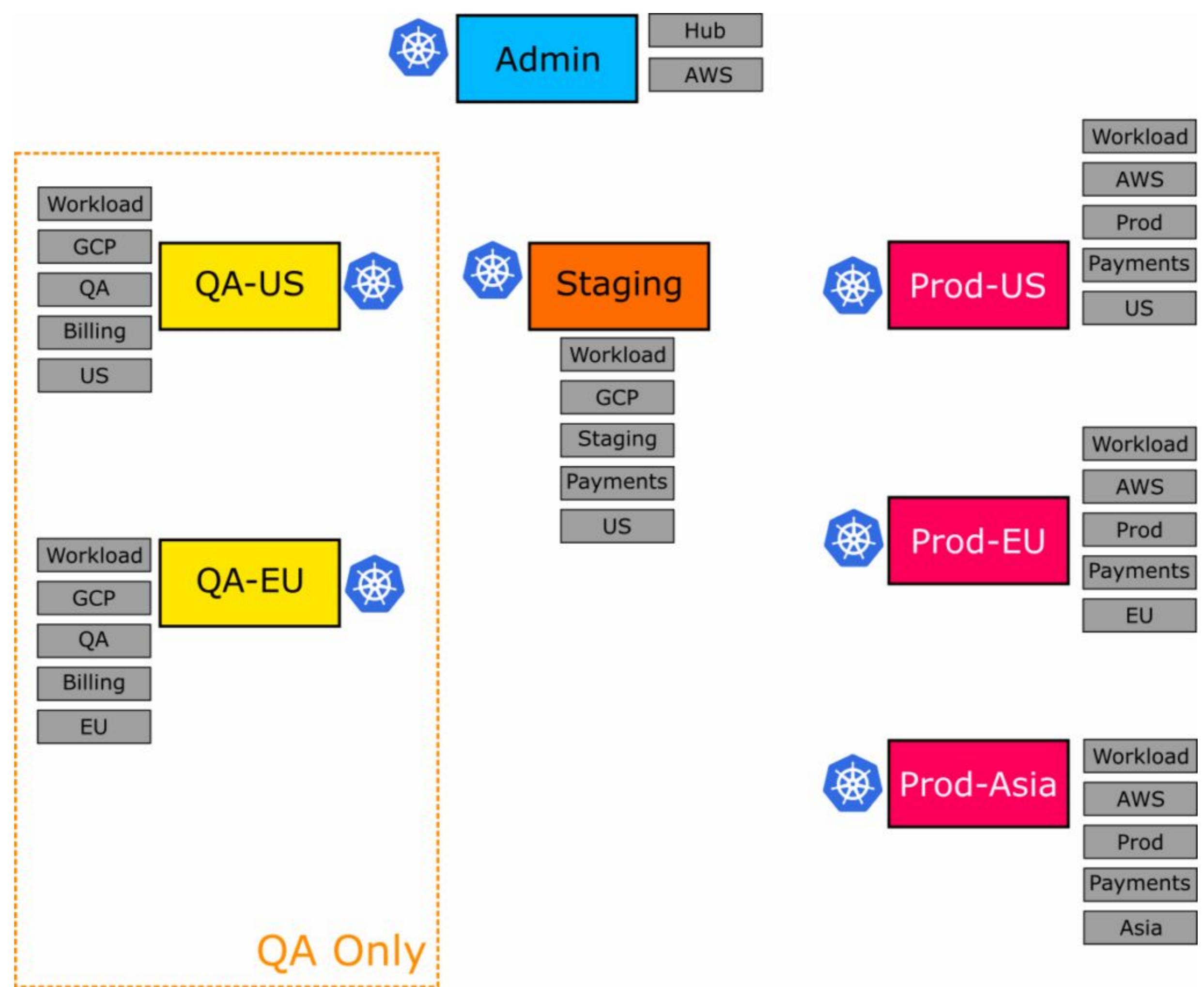
Choose cluster group (Or mode)

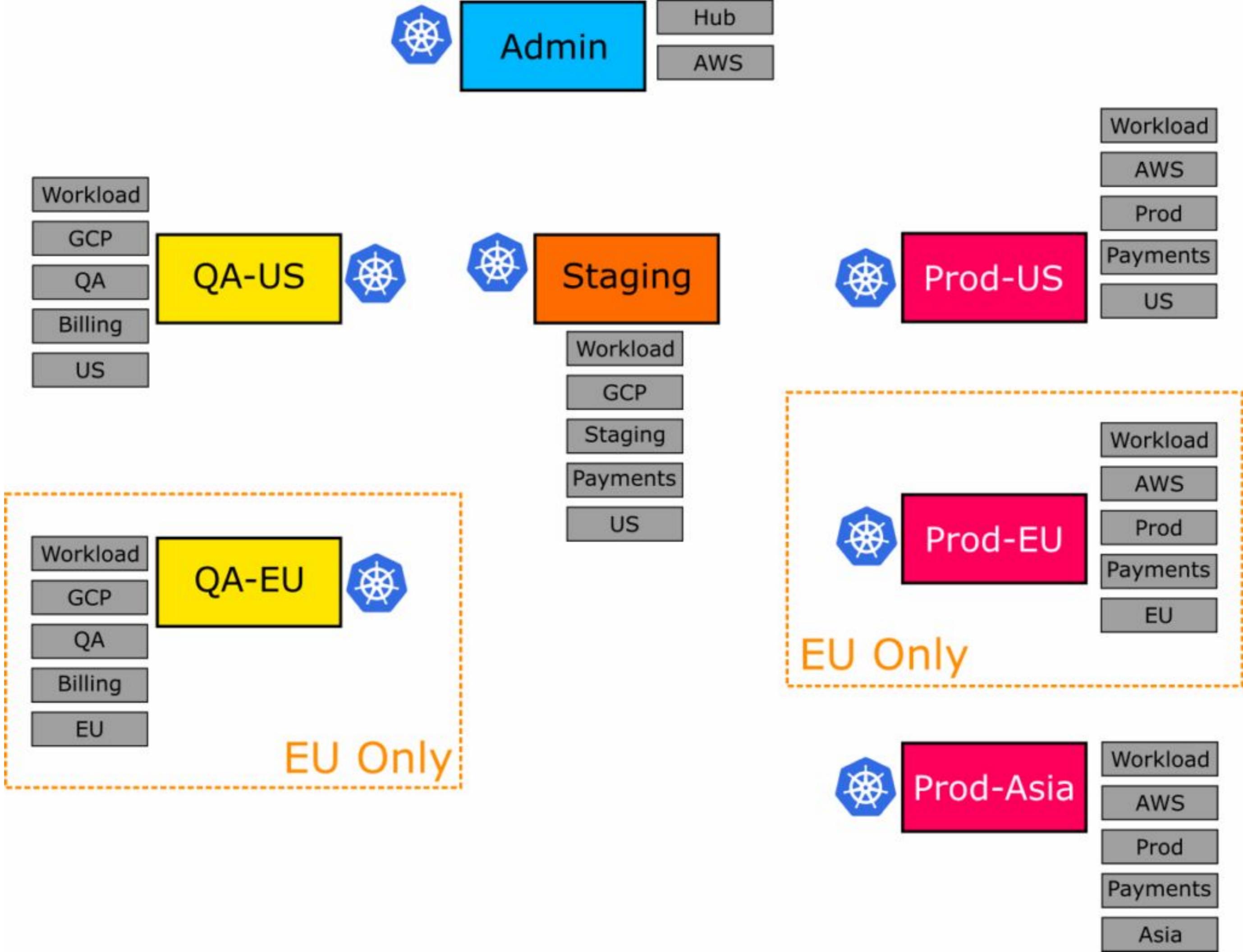
APPROVED

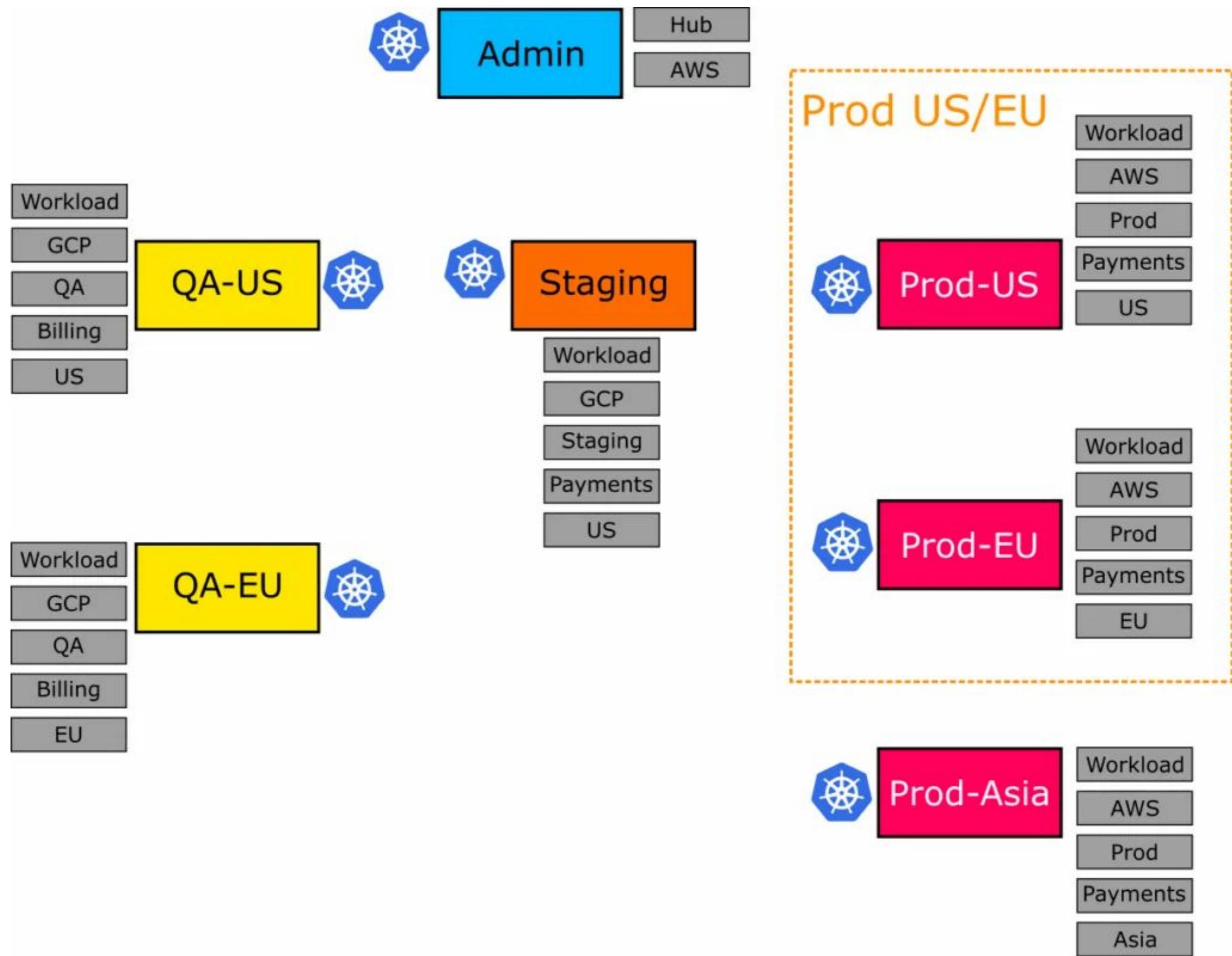
```
spec:  
  goTemplate: true  
  goTemplateOptions: ["missingkey=error"]  
  generators:  
    - matrix:  
        generators:  
          - clusters:  
              selector:  
                matchLabels:  
                  type: "workload"  
                  env: "prod"  
                matchExpressions:  
                  - key: region  
                    operator: In  
                    values:  
                      - "eu"  
                      - "us"  
          - git:  
              repoURL: https://github.com/somerepo.git  
              revision: HEAD  
              directories:  
                - path: 'kustomize-apps/*/envs/{.name}'
```

Choose all clusters that are in Production AND with type “workload” and in region EU OR US)

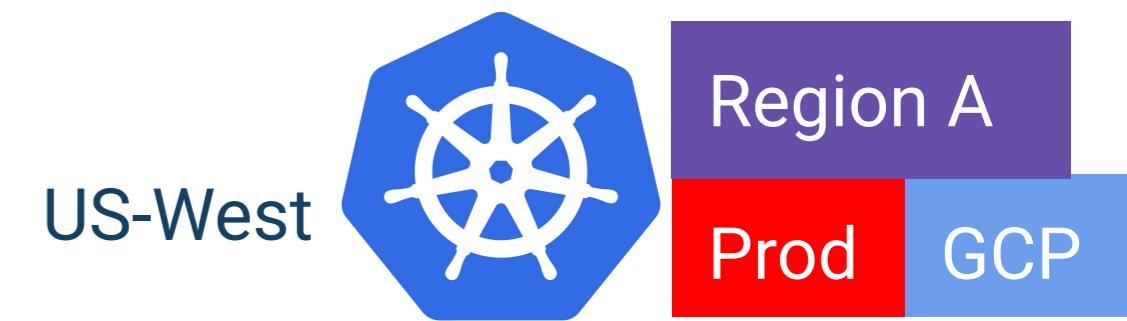
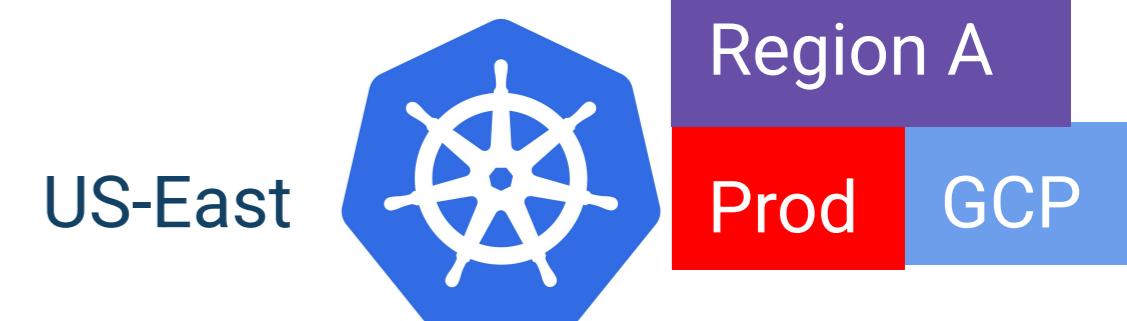
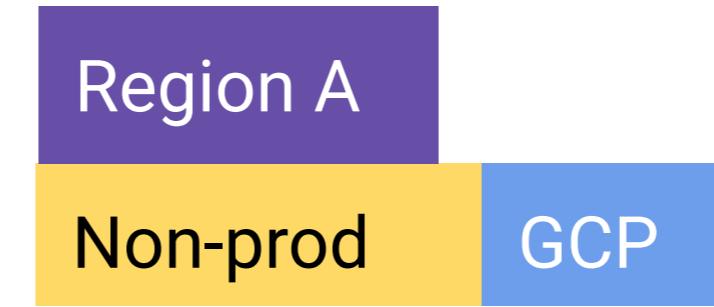
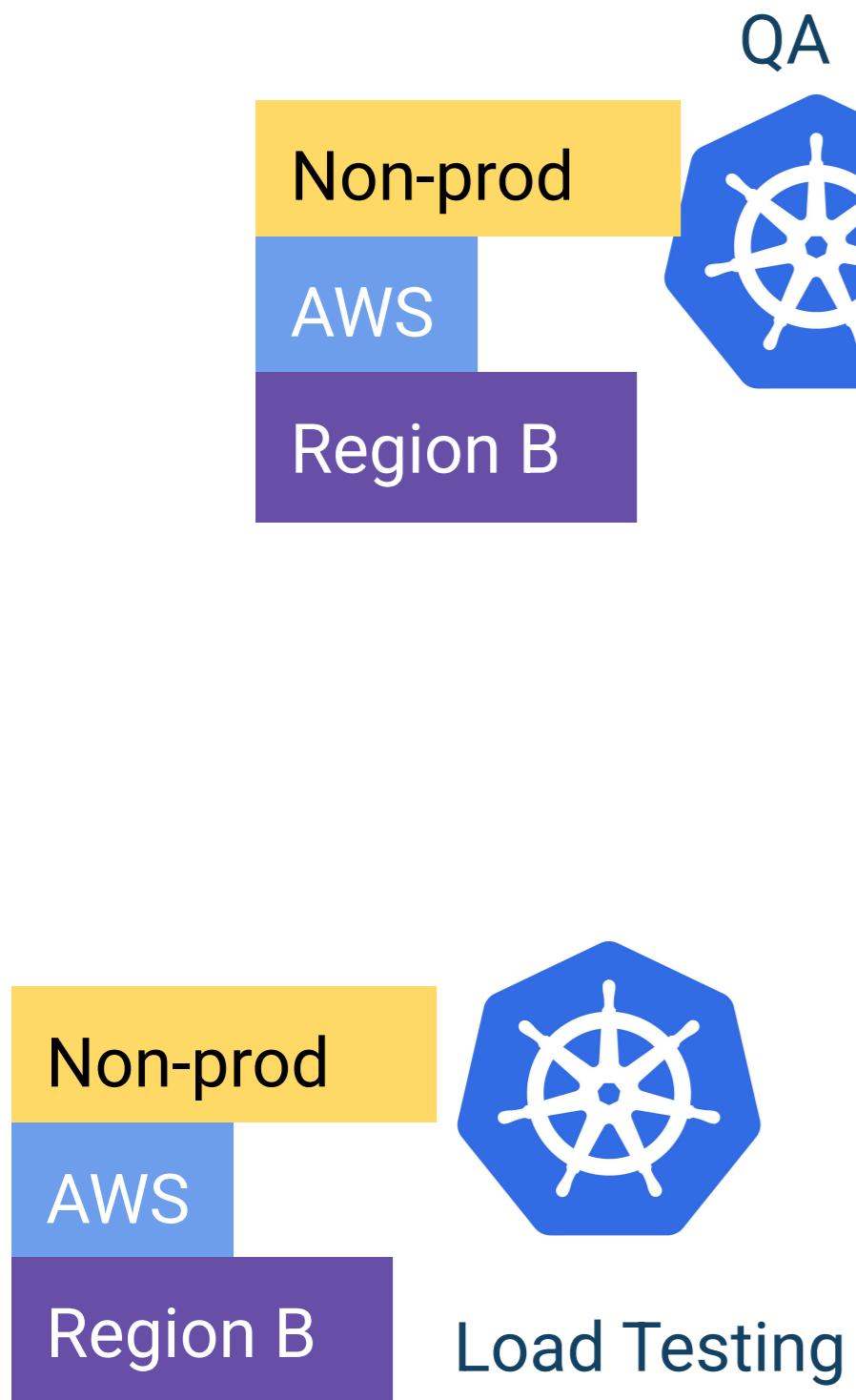








New cluster?



APPROVED



New Cluster bootstrapping

1. Create cluster with Terraform/Pulumi/Crossplane etc.
2. Assign tags to cluster “This is a prod cluster in GCP”
3. Argo CD will take care of everything else

Finished



Communication with developers



Ops

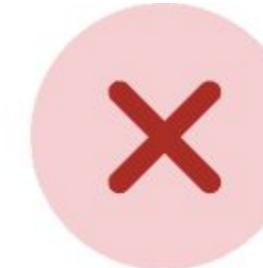
What do you want on your new cluster?

For Infra apps I want

1. cert-manager
2. Argo Rollouts
3. Sealed Secrets

For Apps I want

1. billing micro-service
2. Payment micro-service
3. Redis Queue

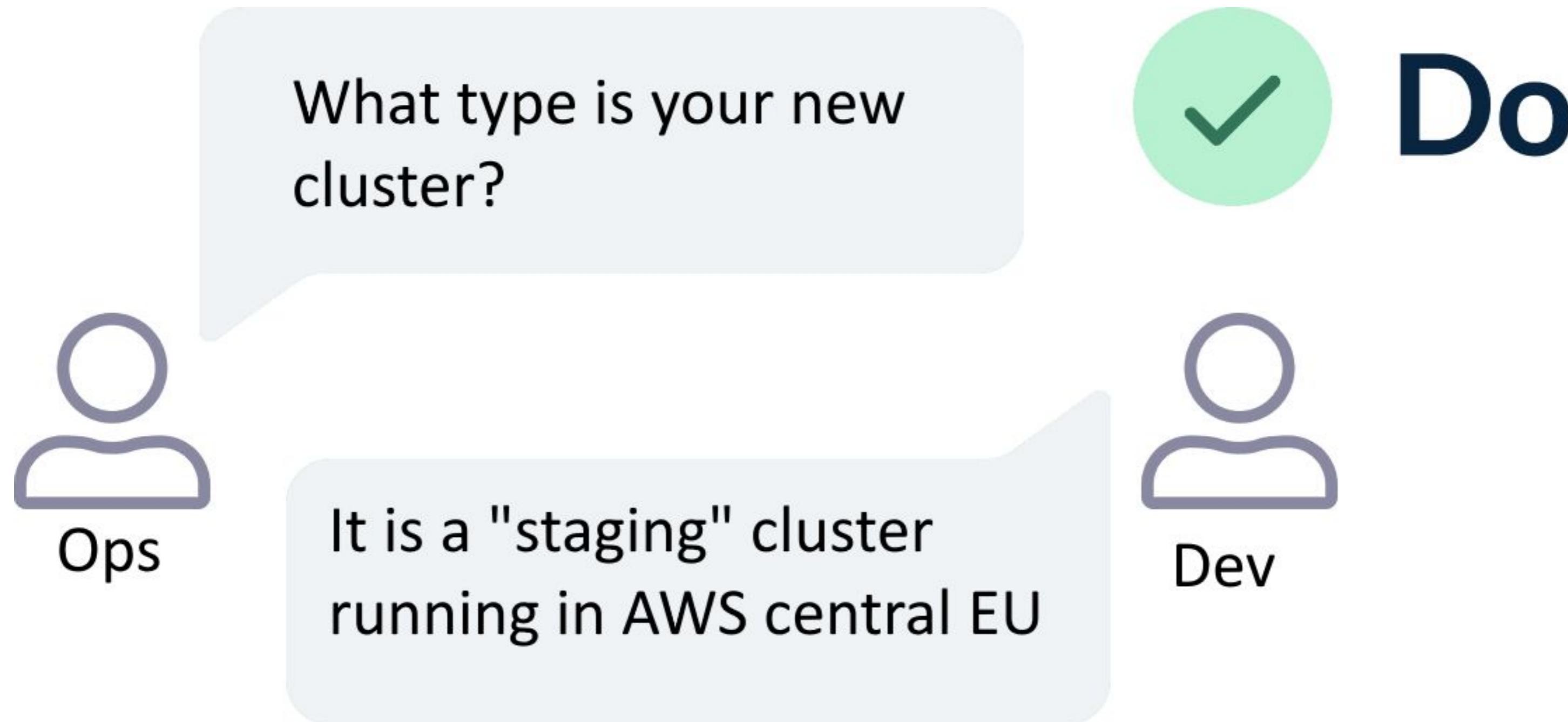


Dev

Don't



Communication with developers





BEST PRACTICES

Distribute Your Argo CD Applications to Different Kubernetes Clusters Using Application Sets

23 min read



<https://codefresh.io/blog/argocd-clusters-labels-with-apps/>



Create many Application Sets

Per team/environment/cloud/department etc.



Many Apps - Many Clusters

Cluster A



Cluster B



Cluster C



AppSet

Billing App

Sealed Secrets

Argo Rollouts

Billing App

Sealed Secrets

Argo Rollouts

Cert Manager

Billing App

Sealed Secrets

Argo Rollouts

Cert Manager



Use Tags with apps



- “In all my AWS clusters I want these apps” -> Create application Set
- “In all my Prod clusters I want these apps ” -> Create Application Set
- “In all my US Region clusters I want these apps” -> Create Application Set
- “In all my Staging clusters I want these apps” -> Create Application Set



```
apiVersion: argoproj.io/v1alpha1
kind: ApplicationSet
metadata:
  name: appset-{{ .Values.application.name }}
  namespace: argo
spec:
  goTemplate: true
  goTemplateOptions: ["missingkey=error"]
  generators:
    - list:
        elements:
          - cluster: 01
            url: https://qa-svc.privatelink.eastwest.azmk8s.io:443
template:
  metadata:
    name: "{{ .Values.application.name }}-{{`{{ .cluster }}`}}"
  spec:
    destination:
      namespace: "{{ .Values.spec.namespace }}"
      server: "{{`{{ .url }}`}}"
      project: "{{ .Values.spec.project }}"
    syncPolicy:
      automated:
        selfHeal: true
    source:
      repoURL: "{{ .Values.spec.source.repoURL }}"
      targetRevision: "{{ .Values.spec.source.targetRevision }}"
      path: "{{ .Values.spec.source.chart }}"
      helm:
        parameters:
          - name: application.name
            value: "{{ .Values.application.name }}"
            {{- range $key1, $value1 := .Values.params -}}
              {{- if typeIs "map[string]interface {}" $value1 -}}
                {{- range $key2, $value2 := $value1 -}}
                  {{- if typeIs "map[string]interface {}" $value2 -}}
                    {{- range $key3, $value3 := $value2 -}}
                      {{- if typeIs "map[string]interface {}" $value3 -}}
                        {{- range $key4, $value4 := $value3 -}}
                          {{- if typeIs "map[string]interface {}" $value4 -}}
                            {{- range $key5, $value5 := $value4 -}}
                              {{- if typeIs "map[string]interface {}" $value5 -}}
                                {{- range $key6, $value6 := $value5 -}}
                                  - name: {{ $key1 }}.{{ $key2 }}.{{ $key3 }}.{{ $key4 }}.{{ $key5 }}.{{ $key6 }}
                                    value: {{ $value6 | quote}}
                                    {{- end -}}
                                    {{- else -}}
                                  - name: {{ $key1 }}.{{ $key2 }}.{{ $key3 }}.{{ $key4 }}.{{ $key5 }}
                                    value: {{ $value5 | quote}}
                                    {{- end -}}
                                    {{- end -}}
                                    {{- else -}}
                                  - name: {{ $key1 }}.{{ $key2 }}.{{ $key3 }}.{{ $key4 }}
                                    value: {{ $value4 | quote}}
                                    {{- end -}}
                                    {{- end -}}
                                    {{- else -}}
                                  - name: {{ $key1 }}.{{ $key2 }}.{{ $key3 }}
                                    value: {{ $value3 | quote}}
                                    {{- end -}}
                                    {{- end -}}
                                    {{- else -}}
                                  - name: {{ $key1 }}.{{ $key2 }}
                                    value: {{ $value2 | quote}}
                                    {{- end -}}
                                    {{- end -}}
                                    {{- else -}}
                                  - name: {{ $key1 }}
                                    value: {{ $value1 | quote}}
                                    {{- end -}}
                                    {{- end -}}
                                    {{- end -}}
```

“Here is our single Application Set that controls all our apps and clusters”

REJECTED



Ops 1

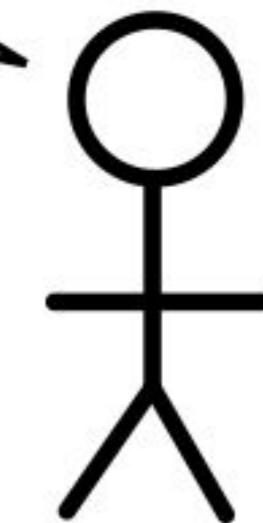
Hey. I am the new hire. Can you show me our Argo CD applications please?



Don't

Sure.

Here is our single mega-super-duper-extra-mighty Application Set that creates all our apps. It has 3 levels or merge/matrix generators so be careful when you change it.



Ops 2

What? Why not use many simpler Application Sets?

Hmm. I never thought that I could use multiple application sets. This actually makes sense and it would simplify our setup a lot.

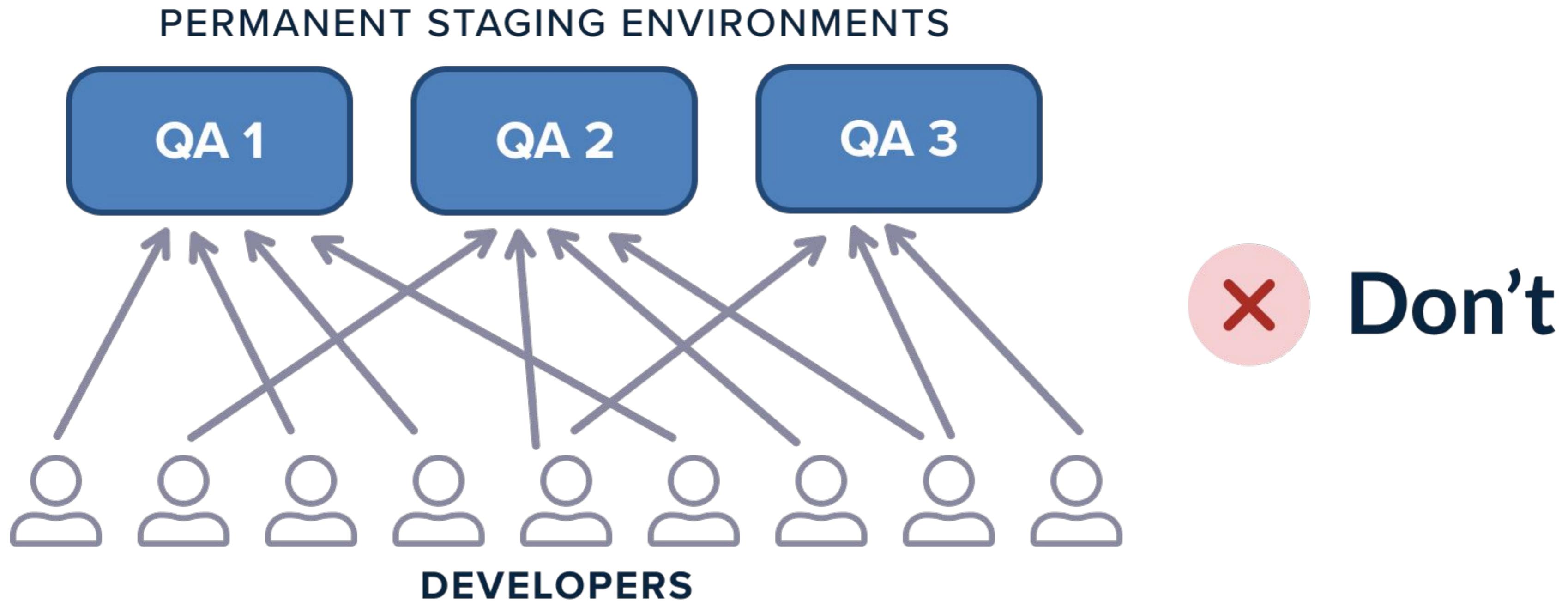


Understand the PR generator

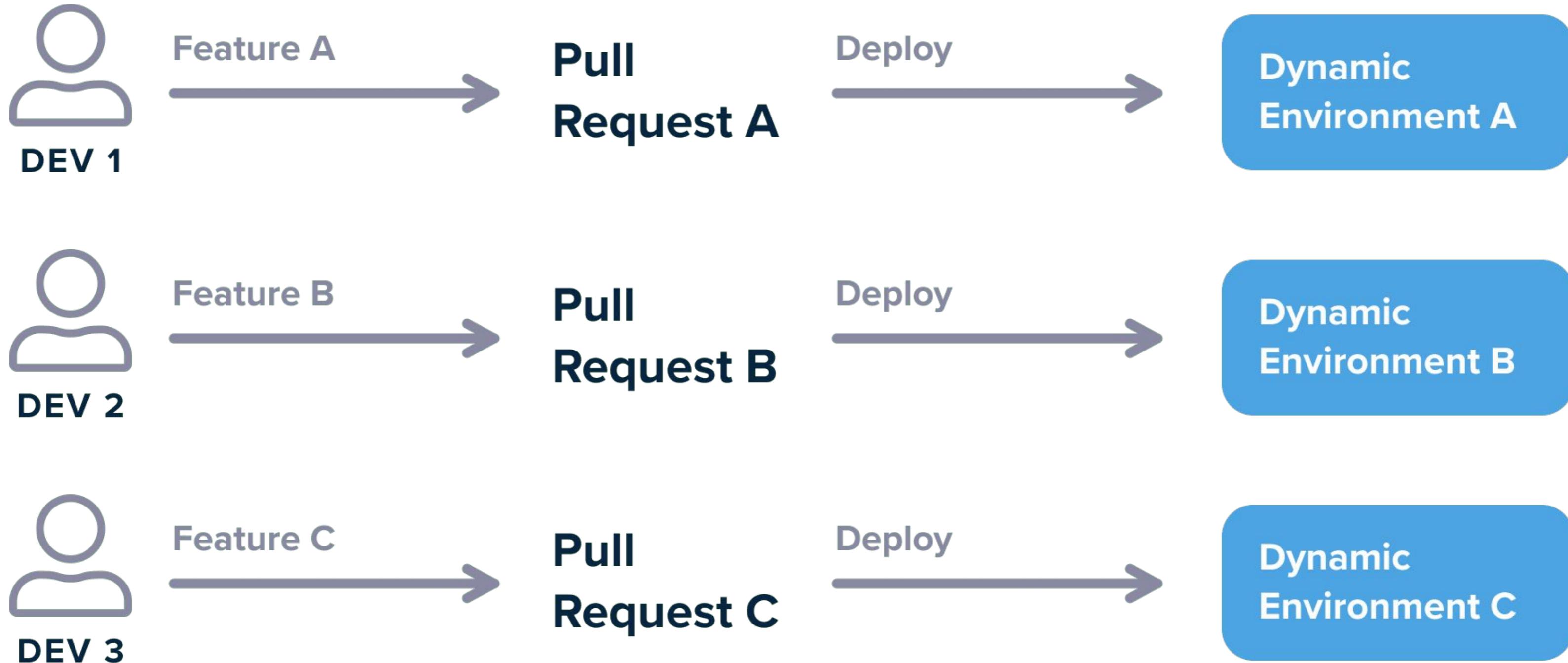
It is perfect for preview/ephemeral/temporary environments



The old way

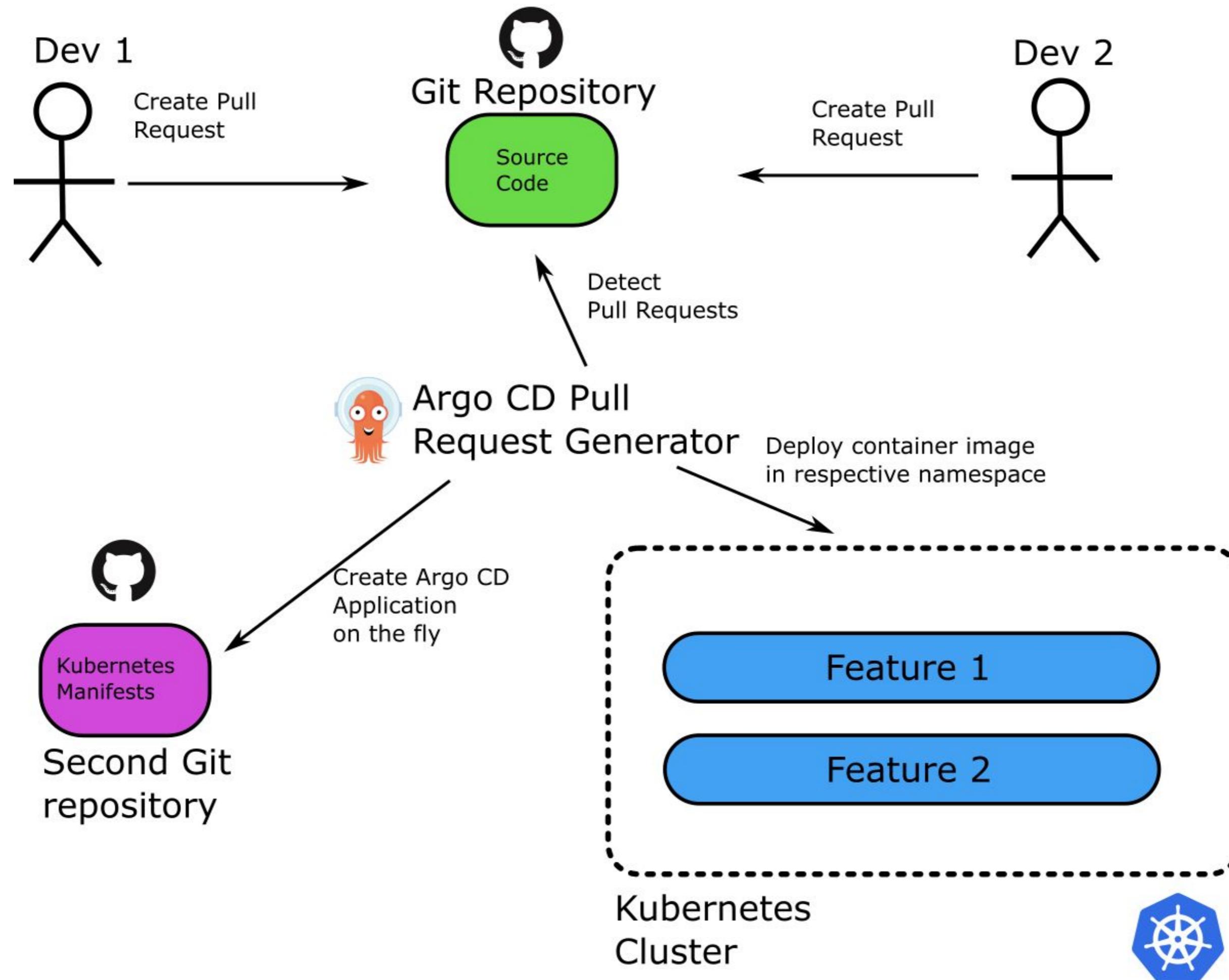


The correct way



Do Each feature is tested on its own





Dynamic/temporary deployments

The screenshot shows the Argo UI interface for managing applications. The left sidebar contains navigation links for Applications, Settings, User Info, Documentation, and Favorites Only. It also displays SYNC STATUS and HEALTH STATUS sections with counts for Unknown, Synced, and OutOfSync states.

The main area is titled "Applications" and features a search bar and buttons for "+ NEW APP", "SYNC APPS", and "REFRESH APPS".

Two application cards are listed:

- myapp-fix-queue-size**
 - Project: default
 - Labels:
 - Status: Healthy Synced
 - Repository: [https://github.com/kostis-codefresh/preview-env-...](https://github.com/kostis-codefresh/preview-env-)
 - Target Revis...: HEAD
 - Path: kustomize-preview-app/
 - Destination: in-cluster
 - Namespace: preview-fix-queue-size
 - Created At: 05/15/2024 14:14:54 (13 minutes ago)
 - Last Sync: 05/15/2024 14:27:31 (a few seconds ago)
- myapp-my-billing-feature**
 - Project: default
 - Labels:
 - Status: Healthy Synced
 - Repository: [https://github.com/kostis-codefresh/preview-env-...](https://github.com/kostis-codefresh/preview-env-)
 - Target Revis...: HEAD
 - Path: kustomize-preview-app/
 - Destination: in-cluster
 - Namespace: preview-my-billing-feature
 - Created At: 05/15/2024 14:14:54 (13 minutes ago)
 - Last Sync: 05/15/2024 14:27:30 (a few seconds ago)

Each card includes "SYNC", "REFRESH", and "DELETE" buttons at the bottom.



Dynamic/temporary deployments

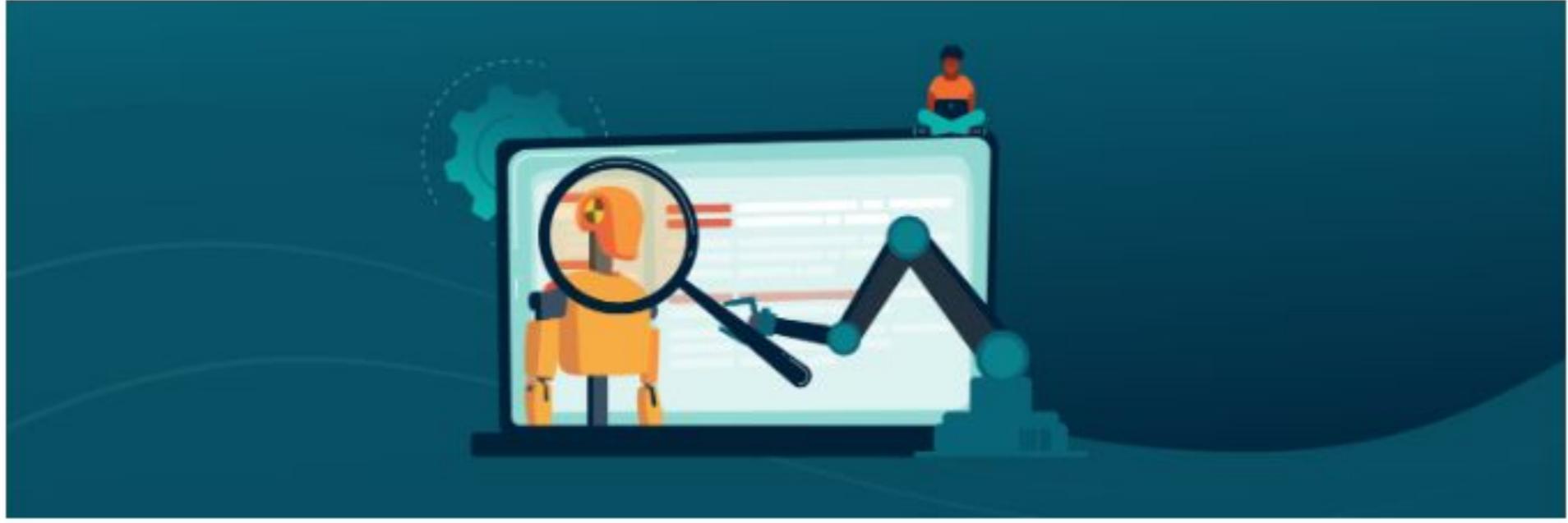
- Create a PR request -> Application deployed
- Close PR -> Application removed
- Merge PR -> Application removed
- Commit again -> Application updated
- Works great with vCluster

The screenshot shows the Argo UI interface. On the left is a sidebar with the Argo logo, version v2.10.6+d504d2b, and links for Applications, Settings, User Info, and Documentation. Below these are sections for Favorites Only, SYNC STATUS (Unknown: 0, Synced: 2, OutOfSync: 0), and HEALTH STATUS (Unknown: 0, Progressing: 0). The main area is titled "Applications" with buttons for "+ NEW APP", "SYNC APPS", "REFRESH APPS", and a search bar. Two applications are listed:

Application	Project	Status	Repository	Target Revision	Path	Destination	Namespace	Created At	Last Sync
myapp-fix-queue-size	default	Healthy Synced	https://github.com/kostis-codefresh/preview-env...	HEAD	kustomize-preview-app/	in-cluster	preview-fix-queue-size	05/15/2024 14:14:54 (13 minutes ago)	05/15/2024 14:27:31 (a few seconds ago)
myapp-my-billing-feature	default	Healthy Synced	https://github.com/kostis-codefresh/preview-env...	HEAD	kustomize-preview-app/	in-cluster	preview-my-billing-feature	05/15/2024 14:14:54 (13 minutes ago)	05/15/2024 14:27:30 (a few seconds ago)

Each application row has buttons for SYNC, REFRESH, and DELETE.





TECHNICAL GUIDES

Creating Temporary Preview Environments Based On Pull Requests With Argo CD And Codefresh

11 min read



Kostis Kapelonis May 30, 2024



<https://codefresh.io/blog/creating-temporary-preview-environments-based-pull-requests-argo-cd-codefresh/>



Conclusion

- 1 **Understand Application Sets**
- 2 **Group Application Sets with App-of-Apps files**
- 3 **Avoid the Helm sandwich**
- 4 **Employ Cluster groups with Tags**
- 5 **Create Many Application Sets**
- 6 **Use the PR Generator for preview envs**





Thank you!

Questions: kostis.kapelonis@octopus.com

GitOps/Argo CD certification learning.octopus.com

CNCF Slack <https://slack.cncf.io/>

Blog <https://blog.argoproj.io/>



Octopus Deploy