

# Kustomize Your Deployments

# bespinian

Cloud Native Citizens



# Declarative Resources

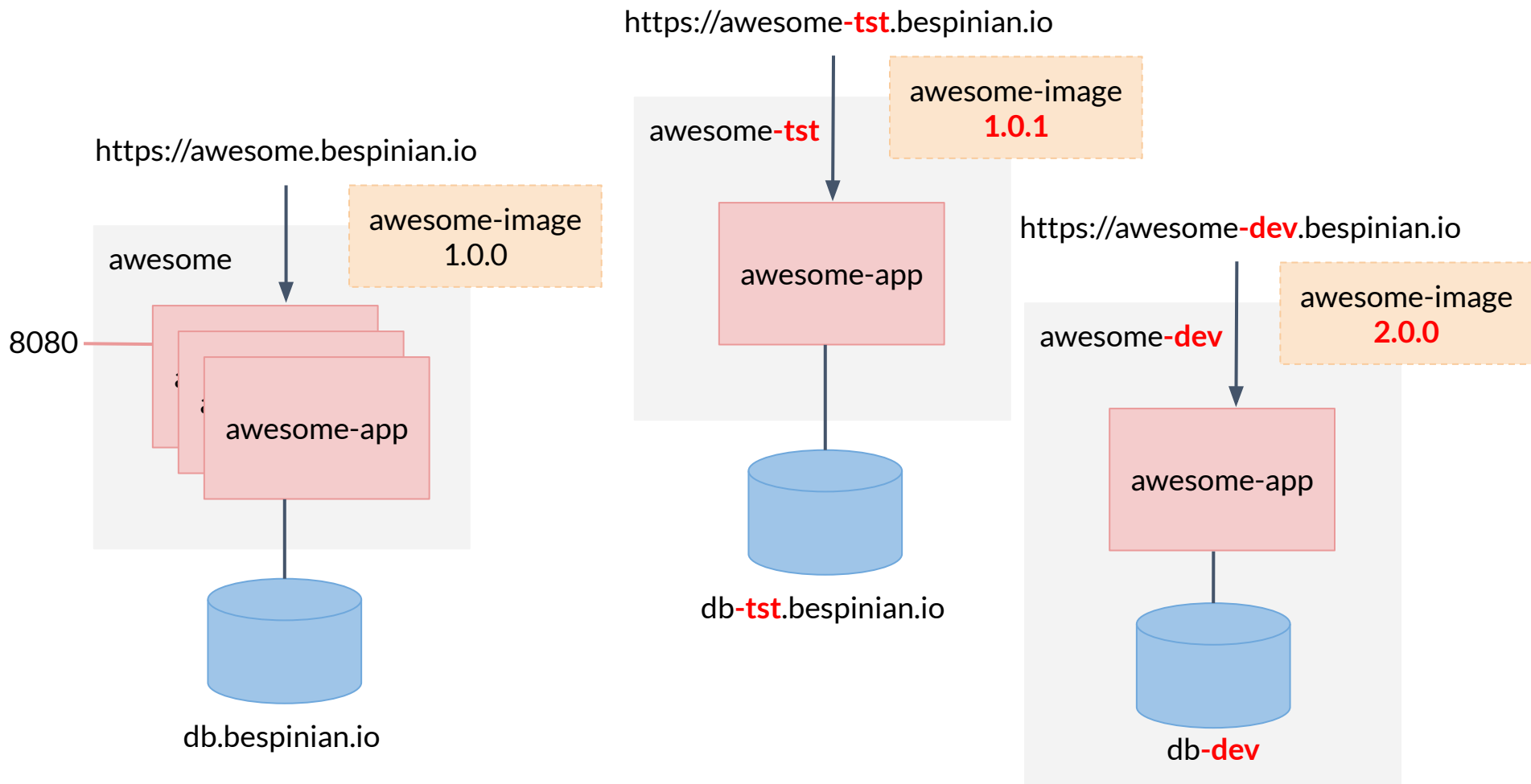
... are applied with **kubectl apply** 😎

... reflect the desired state of your components 😎

... in an idempotent way 😎

... allow you to version your state 😎

... cannot contain variables or parameters 🤔



# Roll your own

```
#!/bin/bash
```

```
kubectl create ns ${NAMESPACE}
```

```
kubens ${NAMESPACE}
```

```
kubectl create deployment awesome-app  
--image=awesome-image:${VERSION}
```

```
...
```

# Helm - Templating



```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: awesome-app
  namespace: {{ .Values.Namespace }}
spec:
  {{- if .Values.replicaCount }}
    replicas: {{ .Values.replicaCount }}
  {{- else }}
    replicas: 1
  {{- end }}
  ...
```

```
Namespace: awesome
replicaCount: 3
...
```

values.yml

```
Namespace: awesome-tst
...
```

values-tst.yml

```
Namespace: awesome-dev
...
```

values-dev.yml

# OpenShift Templates



```
apiVersion: v1
kind: Template
metadata:
  name: awesome-template
objects:
- apiVersion: v1
  kind: Deployment
  metadata:
    name: awesome-app
  spec:
    ...
parameters:
- description: DB host
  value: db.bespinian.io
  name: DB_HOST
...
```

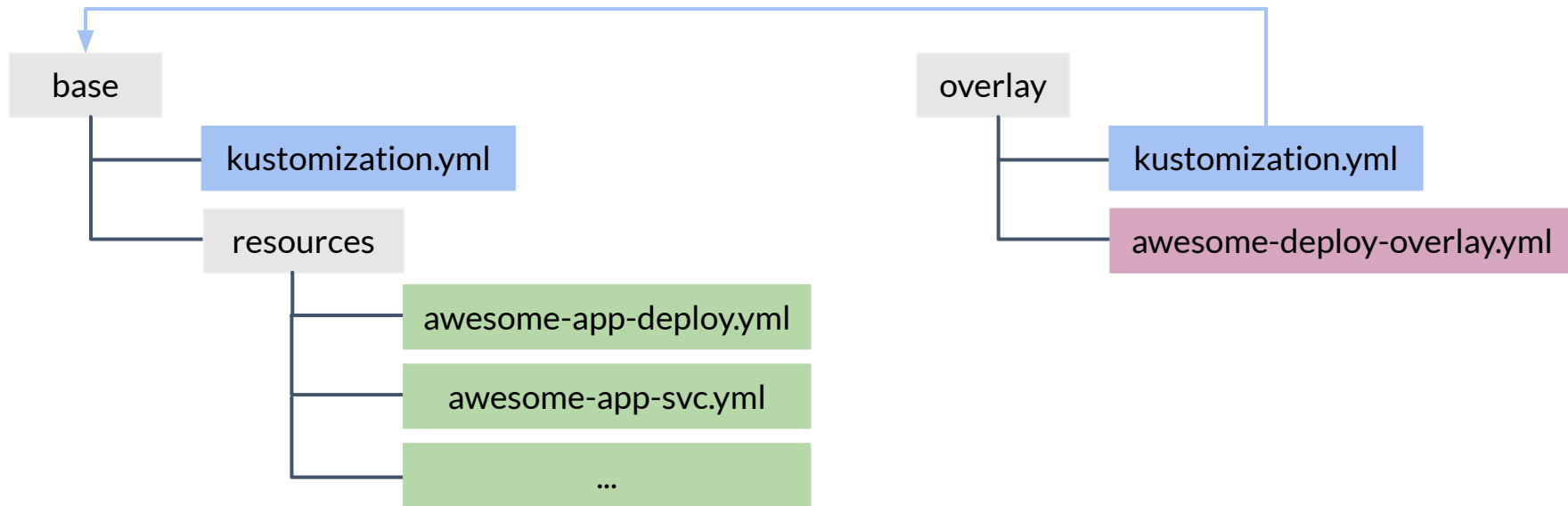
# Jsonnet - Generation

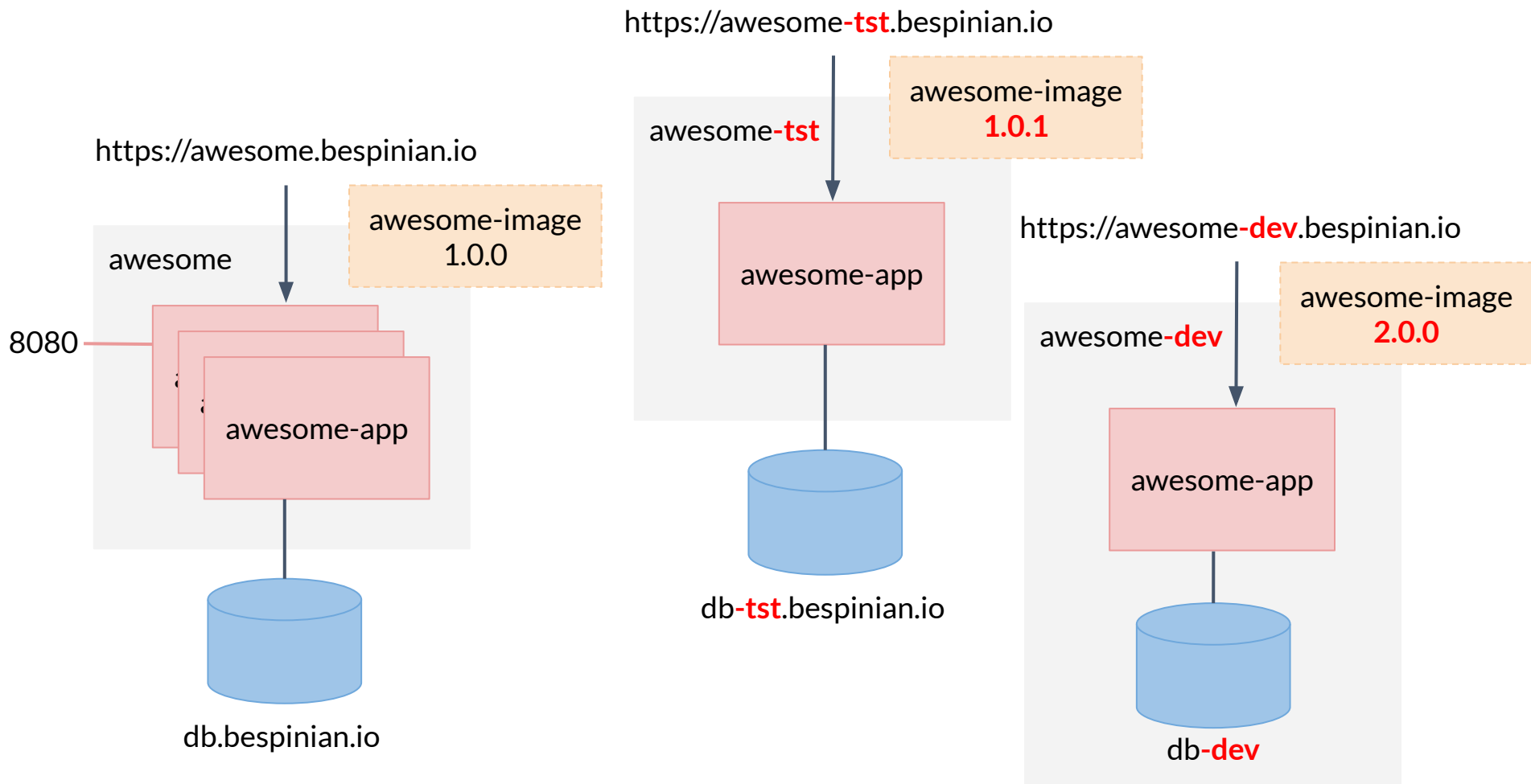


```
local namespace = inv.parameters.namespace;
local name      = "awesome-app";
local image     = inv.parameters[name].image;
local replicas  = inv.parameters[name].replicas;
local container = kube.Container(name) {
  image: image
};
kube.Deployment(name) {
  spec+: {
    replicas: replicas,
    template+: {
      spec+: {
        containers: [ container ]
      }
    }
  }
}
```



# Kustomize - Overlays







# General Overlays



# Namespaces, Names, Labels



# Images



... speaking of images

<https://github.com/swisscom/korp>



# Config Maps



Hierarchies  
i.e. “go nuts! (or don’t)”



# Advantages



Easily readable

Declarative, idempotent

Native to Kubernetes / kubectl

# Limitations



Can only cover finite numbers of variations

Cannot overlay files in config maps

Variation points cannot be formalized / limited

kubectl ships with older version of kustomize

# Thanks!

[bespinian.io](https://bespinian.io)

We are hiring!

