Replacing HELM

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Agenda

About Helm

Introducing Jsonnet and tools

Show me

Q&A

ProductDock

```yaml
 2  kind: Deployment
 3  metadata:
 4    name: {{ include "service-1.fullname" . }}
 5    labels:
 6      {{- include "service-1.labels" . | nindent 4 }}
 7  spec:
 8    {{- if not .Values.autoscaling.enabled }}
 9    replicas: {{ .Values.replicaCount }}
10    {{- end }}
11    selector:
12      matchLabels:
13        {{- include "service-1.selectorLabels" . | nindent 6 }}
14    template:
15      metadata:
16        {{- with .Values.podAnnotations }}
17        annotations:
18          {{- toYaml . | nindent 8 }}
19        {{- end }}
20        labels:
21          {{- include "service-1.selectorLabels" . | nindent 8 }}
22      spec:
23        {{- with .Values.imagePullSecrets }}
24        imagePullSecrets:
25          {{- toYaml . | nindent 8 }}
26        {{- end }}
27        serviceAccountName: {{ include "service-1.serviceAccountName" . }}
28        securityContext:
29          {{- toYaml .Values.podSecurityContext | nindent 8 }}
30        containers:
31          - name: {{ .Chart.Name }}
32            securityContext:
33              {{- toYaml .Values.securityContext | nindent 12 }}
34            image: "{{ .Values.image.repository }}:{{ .Values.image.tag | default .Chart.AppVersion }}"
35            imagePullPolicy: {{ .Values.image.pullPolicy }}
36            ports:
37              - name: http
38                containerPort: 80
39                protocol: TCP
40            livenessProbe:
41              httpGet:
42                path: /
43                port: http
44            readinessProbe:
45              httpGet:
46                path: /
47                port: http
48            resources:
49              {{- toYaml .Values.resources | nindent 12 }}
50        {{- with .Values.nodeSelector }}
51        nodeSelector:
52          {{- toYaml . | nindent 8 }}
53        {{- end }}
54        {{- with .Values.affinity }}
55        affinity:
56          {{- toYaml . | nindent 8 }}
57        {{- end }}
58        {{- with .Values.tolerations }}
59        tolerations:
60          {{- toYaml . | nindent 8 }}
61        {{- end }}
```

HELM

- yaml indentation
- string template
- upgrade process
- sharing values across charts (subcharts)

```jsonnet
local u = import 'utils.libsonnet';
{

  name:: error 'Name required',
  namespace:: error 'Namespace required',

  env:: if $.namespace != 'dev' then error 'env must be set' else 'europe-west4'

  apiVersion: 'apps/v1',
  kind: 'Deployment',
  metadata: {
    name: $.name,
    namespace: $.namespace,
    labels: {
      'app-name': $.name,
      'hashed': u.hashed($.name),
    }
  },
  spec: {
    replicas: 1,
    selector: {
      matchLabels: {
        'app-name': $.name,
      },
    },
    template: {
      metadata: {
        labels: {
          env: $.env,
          'app-name': $.name,
        },
      },
      spec: {
        securityContext: {},
        containers: [
          {
            name: $.name,
            securityContext: {},
            image: 'nginx:1.16.0',
            imagePullPolicy: 'IfNotPresent',
            ports: [
              {
                name: 'http',
                containerPort: 80,
                protocol: 'TCP',
```

Jsonnet

- superset of JSON
- a data templating language
- variables, functions, conditionals..

Jsonnet and Tools

kubecfg

qbec

KPM
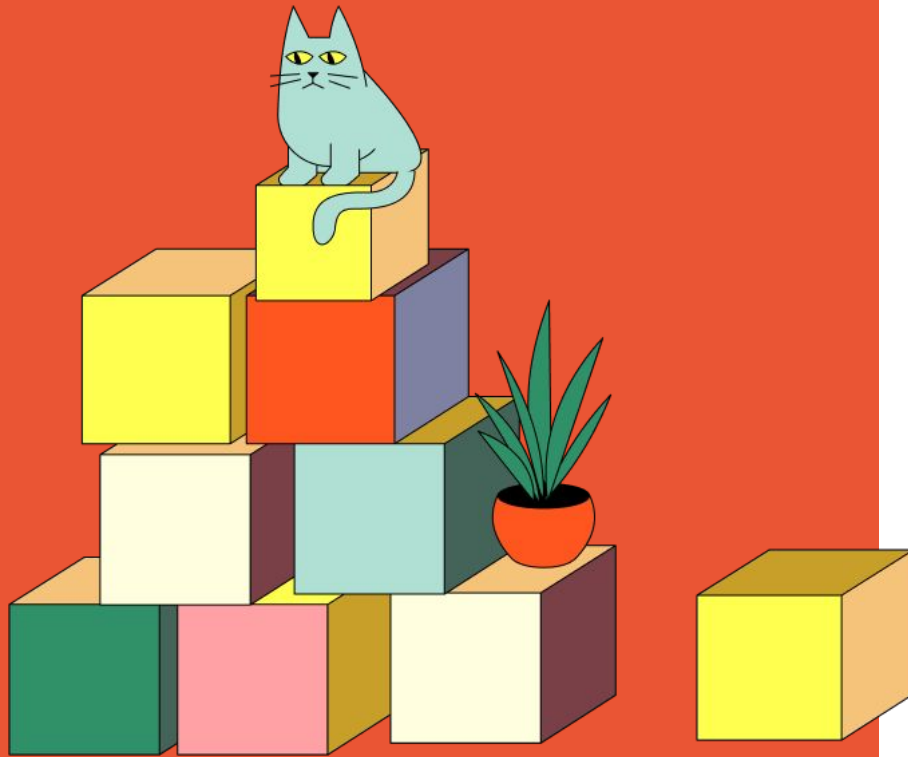
Kapitan

Show me

https://github.com/jzoric/replacing-helm

Q&A