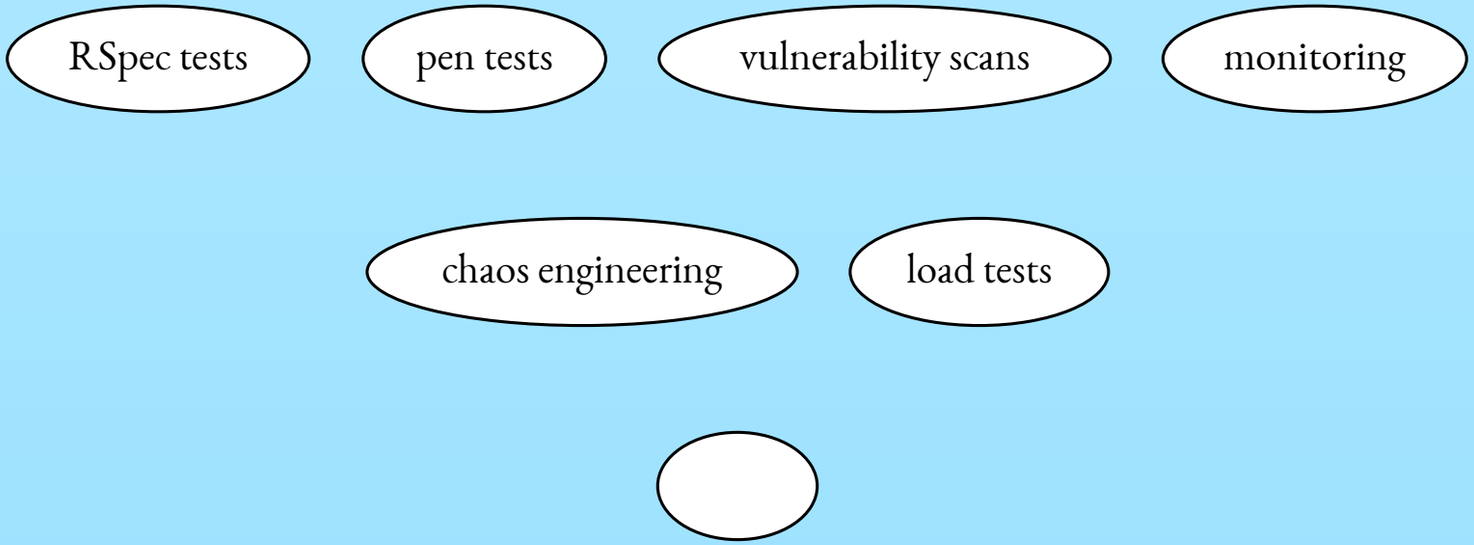
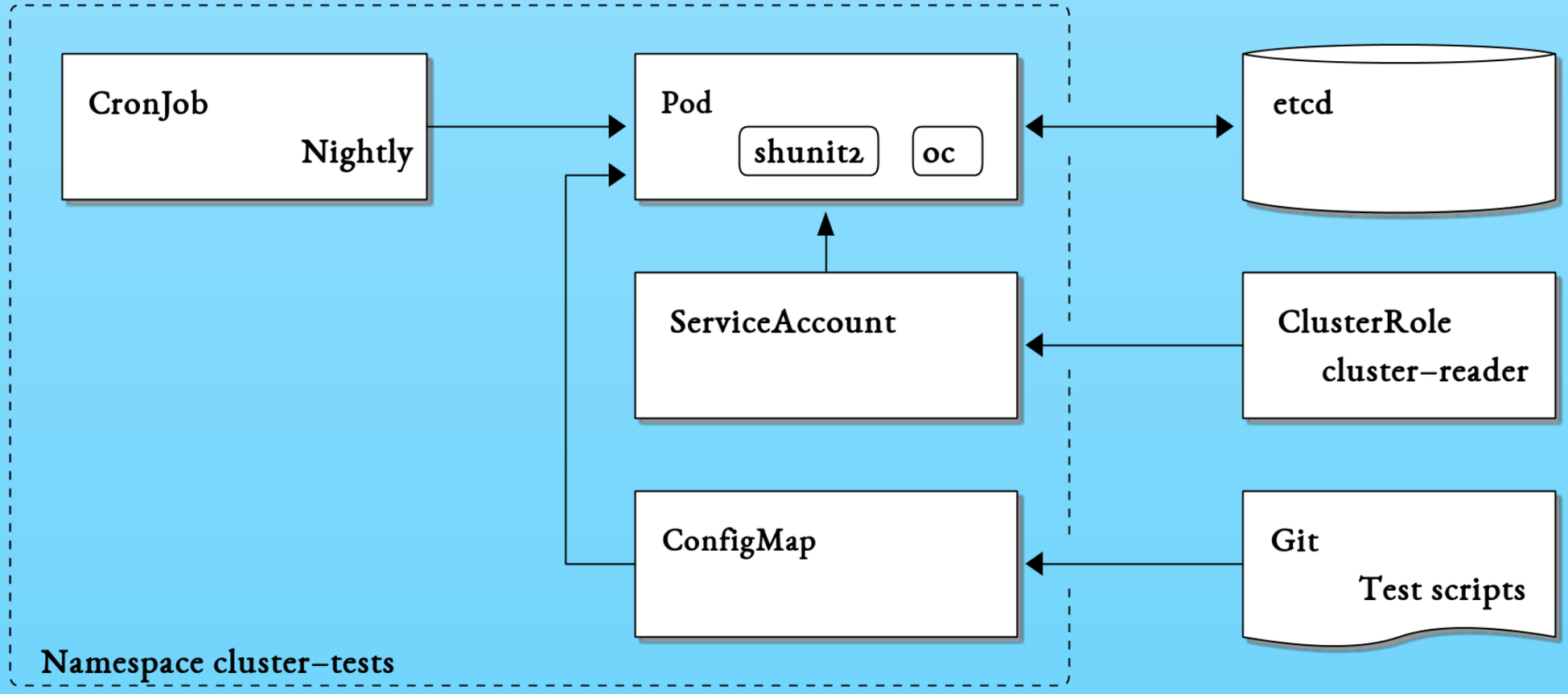
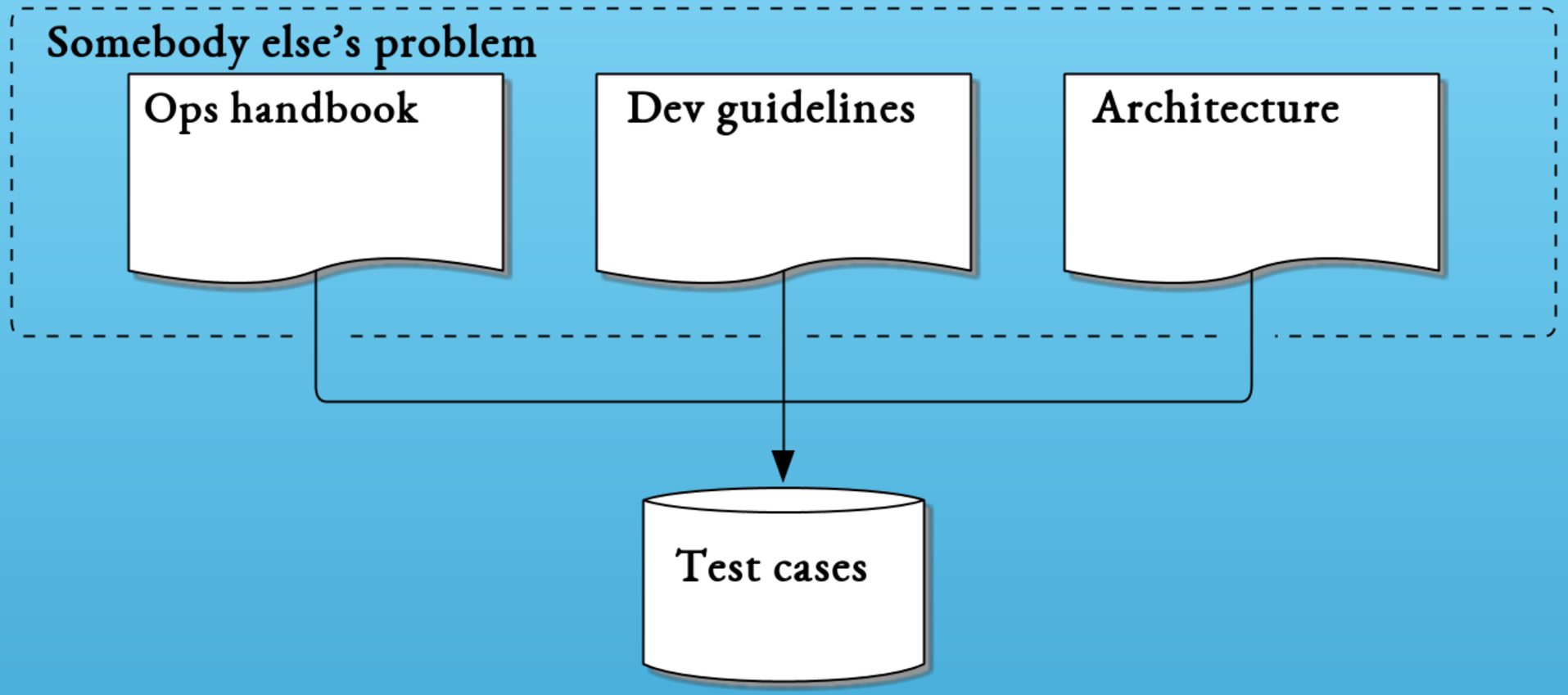
Infrastructure tests for lazy people



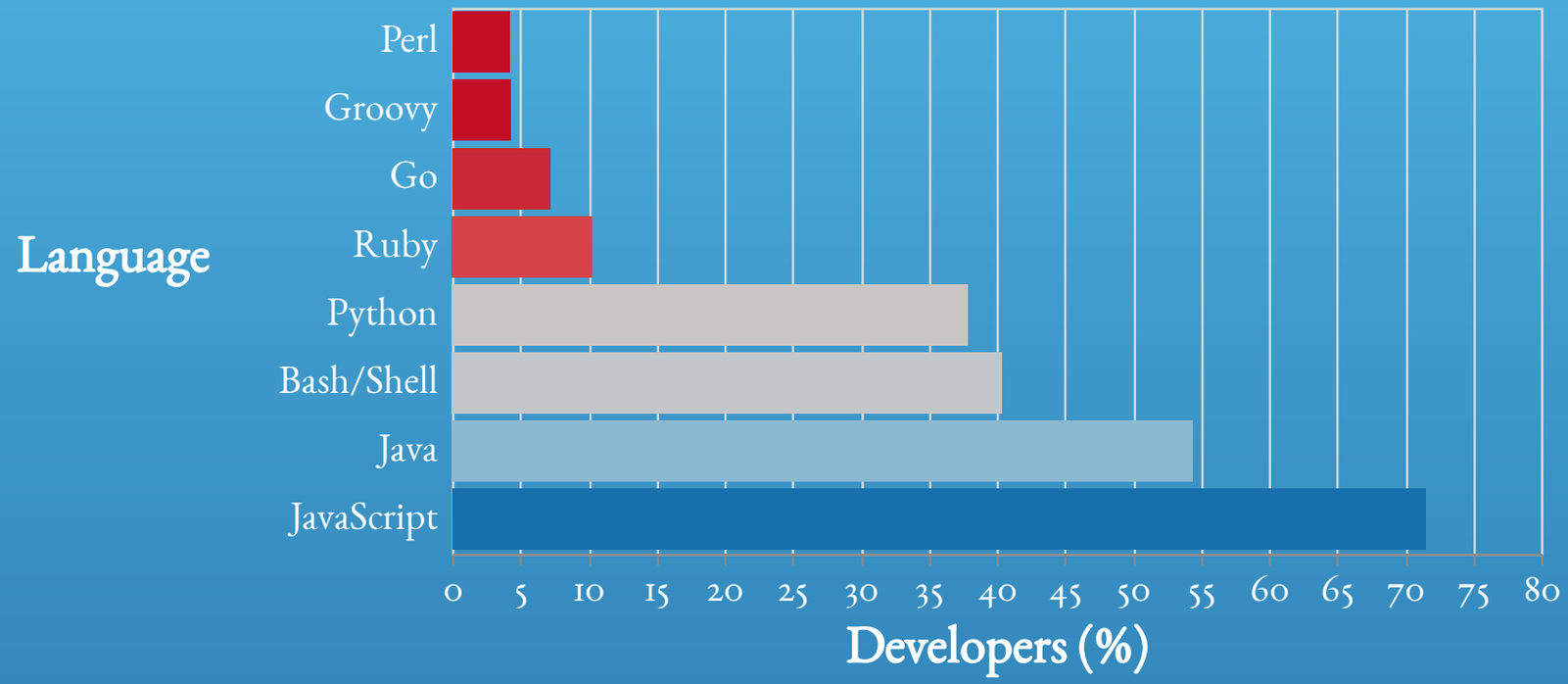
Let someone else do the testing



Let someone else write the brief



Let someone else write the tests



Source: “Programming, scripting and markup languages”, Stack Overflow survey 2018

Operational handbook

```
test_self_provisioner() {
  count_self_provisioner=`oc adm policy who-can create projectrequests \
    2>/dev/null | grep -c system:authenticated`
  assertEquals " non-admin users must not create project requests;" \
    0 ${count_self_provisioner}
}
suite_addTest test_self_provisioner
```

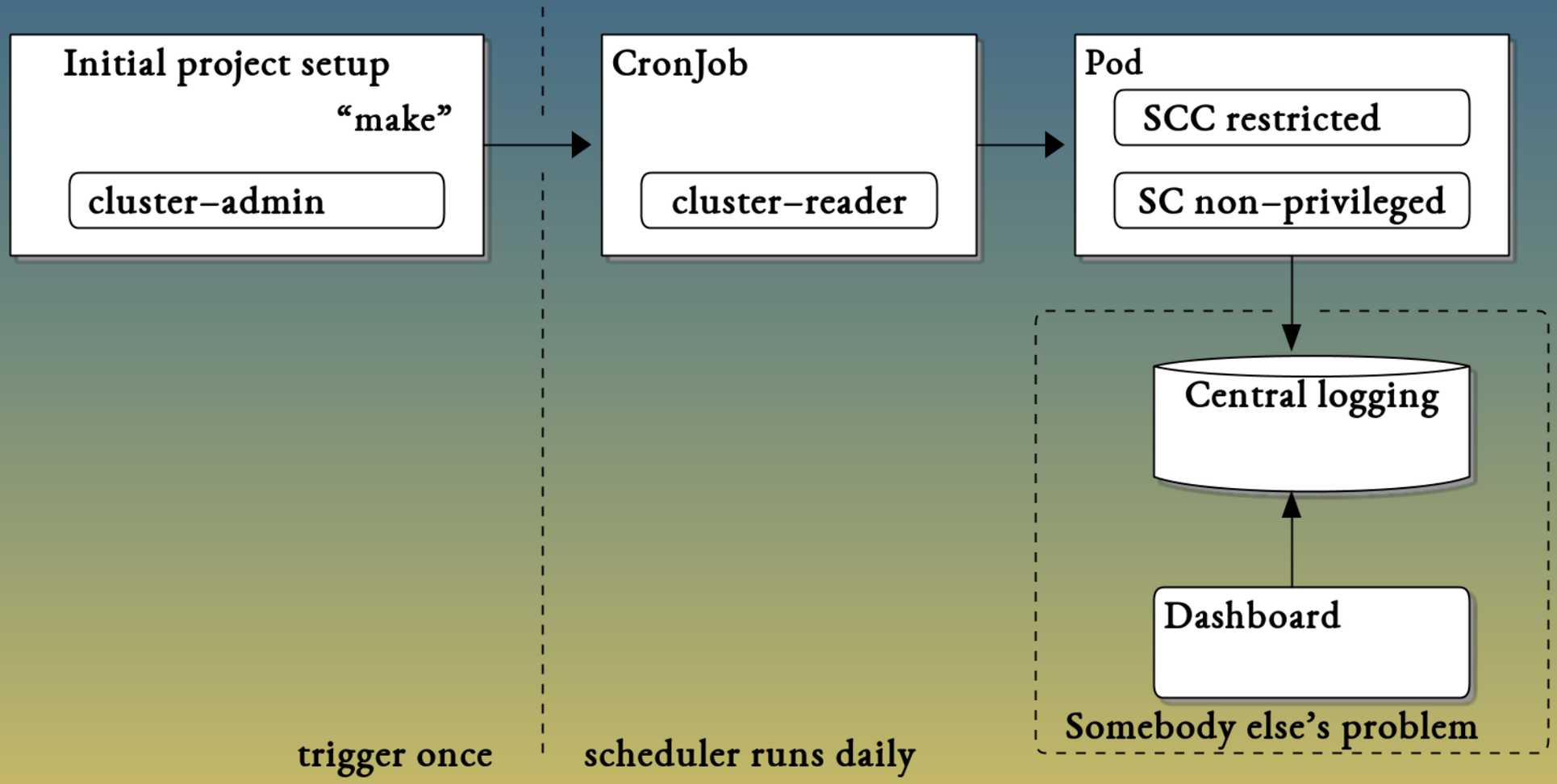
Development guidelines

```
test_anyuid() {
  scc_anyuid=`oc describe scc anyuid 2>/dev/null`
  for project in ${USER_PROJECTS}; do
    count_anyuid_default=`echo ${scc_anyuid} | \
      grep -c "Users:.*system:serviceaccount:${project}:default"`
    assertEquals \
      " service account default in project ${project} has SCC anyuid;" \
      0 ${count_anyuid_default}
  done
}
suite_addTest test_anyuid
```

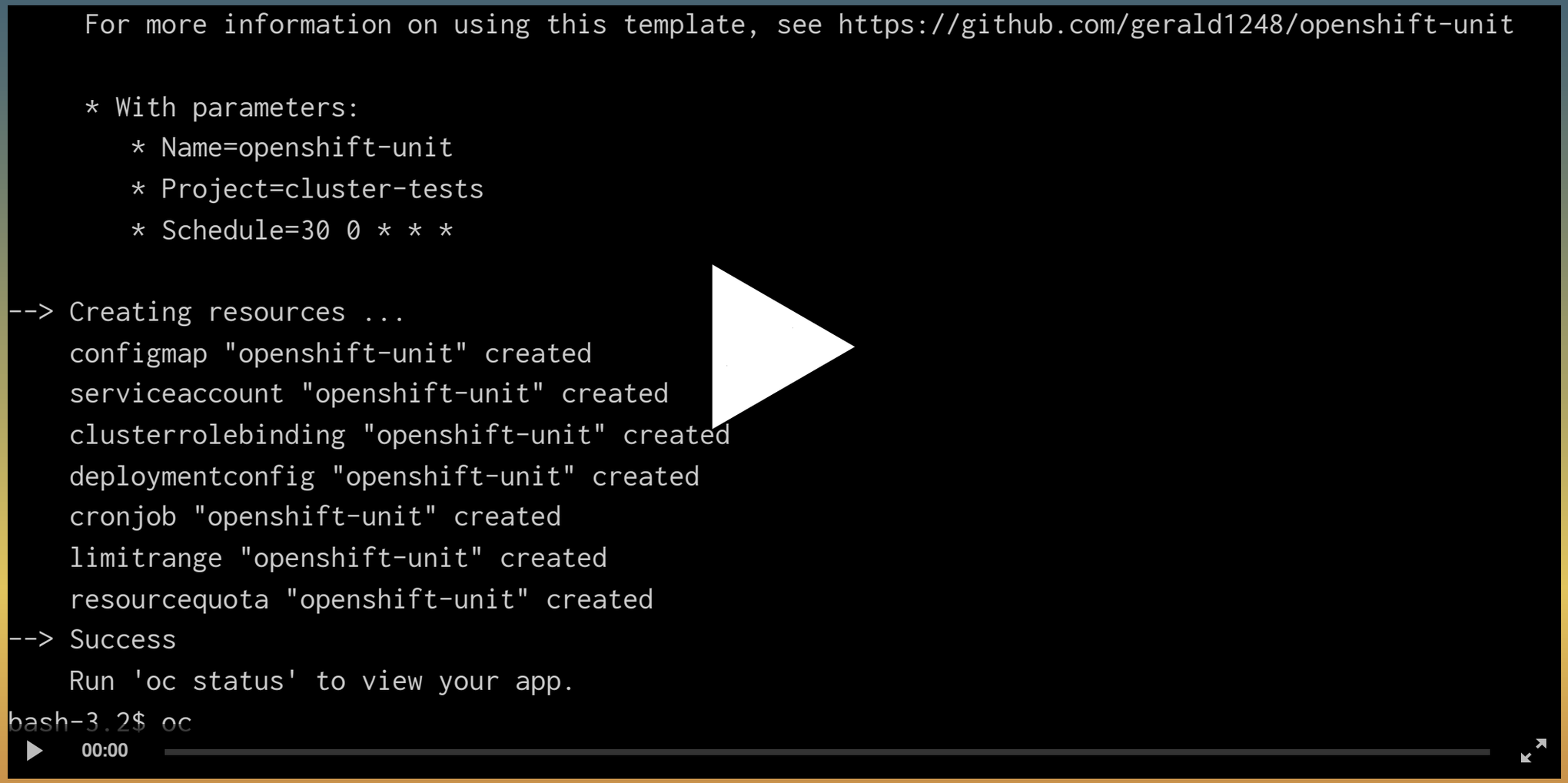
Architecture

```
test_high_availability() {
  for svc in ${HA_SERVICES}; do
    nodes=`oc get po --all-namespaces -o wide | grep ${svc} | \
      awk '{ print $8 }'`
    zones=""
    for node in ${nodes}; do
      zones="${zones} `oc get node/${node} -L zone | \
        awk '{print $6}' | tail -n +2`"
    done
    zone_count=`echo ${zones} | tr ' ' '\n' | sort -u | wc -l`
    ha=$((zone_count > 2))
    assertTrue " ${svc} must be distributed across 3 zones;" ${ha}
  done
}
suite_addTest test_high_availability
```

Let others build the infrastructure for you



What's left?


For more information on using this template, see https://github.com/gerald1248/openshift-unit
* With parameters:
* Name=openshift-unit
* Project=cluster-tests
* Schedule=30 0 * * *
--> Creating resources ...
configmap "openshift-unit" created
serviceaccount "openshift-unit" created
clusterrolebinding "openshift-unit" created
deploymentconfig "openshift-unit" created
cronjob "openshift-unit" created
limitrange "openshift-unit" created
resourcequota "openshift-unit" created
--> Success
Run 'oc status' to view your app.
bash-3.2$ oc
00:00

Why do today what can be done tomorrow?

Do use tests to define the desired cluster state

Don’t fret if it takes longer than expected to reach it

Do take pride in the work not done

Thank you

OpenShift cluster tests geraldi248/openshift-unit

OpenShift project backup geraldi248/openshift-backup

Slides courtesy of markdeck by @arnehilmann arnehilmann/markdeck