



Exercise 8.3: OPTIONAL LAB: Conformance Testing

The **cncf.io** group is in the process of formalizing what is considered to be a conforming Kubernetes cluster. While that project matures there is an existing tool provided by **Sonobuoy** <https://sonobuoy.io/> which can be useful. We will need to make sure a newer version of **Golang** is installed for it to work. You can download the code from github and look around with git or with go, depending on which tool you are most familiar. **Things change quickly these steps may not work....today**

1. Download a compiled binary. A shorter URL is shown first, then the longer, just in case the link changes and you need to navigate. They should download the same file.

```
student@cp:~$ curl -sLO https://tinyurl.com/4cdeyz55
```

```
student@cp:~$ mv 4cdeyz55 sonobuoy.tar.gz
```

```
student@cp:~$ tar -xvf sonobuoy.tar.gz
```

```
LICENSE
sonobuoy
```

```
student@cp:~$ curl -sLO \
https://github.com/vmware-tanzu/sonobuoy/releases/download/v0.56.8/sonobuoy_0.56.8_linux_amd64.tar.gz
```

2. Run the test. Use the `--wait` option, which will capture the screen until the test finishes. This could take a while to finish, such as an hour. You should get some output indicating testing objects being created.

```
student@cp:~$ sudo mv sonobuoy /usr/local/bin/
```

```
student@cp:~$ sonobuoy run --wait
```

```
INFO[0000] create request issued           name=sonobuoy namespace=
resource=namespaces
INFO[0000] create request issued           name=sonobuoy-serviceaccount
namespace=sonobuoy resource=serviceaccounts
INFO[0000] create request issued           name=sonobuoy-serviceaccount
-sonobuoy namespace= resource=clusterrolebindings
INFO[0000] create request issued           name=sonobuoy-serviceaccount
-sonobuoy namespace= resource=clusterroles
INFO[0000] create request issued           name=sonobuoy-config-cm
namespace=sonobuoy resource=configmaps
INFO[0000] create request issued           name=sonobuoy-plugins-cm
namespace=sonobuoy resource=configmaps
INFO[0000] create request issued           name=sonobuoy namespace=
sonobuoy resource=pods
INFO[0000] create request issued           name=sonobuoy-aggregator
namespace=sonobuoy resource=services
14:45:09      PLUGIN      NODE    STATUS  RESULT                                PROGRESS
14:45:09          e2e      global  running  Passed: 0, Failed: 0, Remaining:354
14:45:09  systemd-logs    cp-1    complete
14:45:09  systemd-logs    worker-1 complete
14:45:09
14:45:09 Sonobuoy is still running. Runs can take 60 minutes or more depending
on cluster and plugin configuration.

<output_omitted>
```

```

16:38:29      e2e      global      running      Passed:345, Failed: 3, Remaining: 6
16:38:49      e2e      global      complete     Passed:351, Failed: 3, Remaining: 0
16:38:49 Sonobuoy plugins have completed. Preparing results for download.
16:39:09      e2e      global      complete     failed   Passed:351, Failed: 3, Remaining: 0
16:39:09      systemd-logs      cp-1      complete     passed
16:39:09      systemd-logs      worker-1  complete     passed
16:39:09 Sonobuoy has completed. Use `sonobuoy retrieve` to get results.

```

- If you don't want to wait for the full results, open a second terminal session to the cp and use the **status** and **logs** sub commands.

```
student@cp:~$ sonobuoy status
```

```

      PLUGIN  STATUS      RESULT  COUNT
PROGRESS
      e2e      running      1    Passed: 31, Failed: 0, Remaining:323
systemd-logs  complete      2

Sonobuoy is still running. Runs can take 60 minutes or more depending on
cluster and plugin configuration.

```

```
student@cp:~$ sonobuoy logs
```

```

namespace="sonobuoy" pod="sonobuoy-systemd-logs-daemon-set-34bef90c2026439b-x7q7g"
container="sonobuoy-worker"
time="2022-07-23T14:44:51Z" level=trace msg="Invoked command single-node with args
[] and flags [level=trace logtostderr=true sleep=-1 v=6]"
time="2022-07-23T14:44:51Z" level=info msg="Waiting for waitfile"
waitfile=/tmp/sonobuoy/results/done
time="2022-07-23T14:44:51Z" level=info msg="Starting to listen on port 8099 for
progress updates and will relay them to
https://[192.168.193.162]:8080/api/v1/progress/by-node/cp-1/systemd-logs"
....

```

- Wait until the results are ready, or log into the container and look for results.

```
student@cp:~$ sonobuoy retrieve
```

```
202207231444_sonobuoy_7d9c5bb5-e547-4827-bb2e-07e12f8fed25.tar.gz
```

- View the results

```
student@cp:~$ sonobuoy results 202207231444_sonobuoy_7d9c5bb5-e547-4827-bb2e-07e12f8fed25.tar.gz
```

```

Plugin: e2e
Status: failed
Total: 6971
Passed: 351
Failed: 3
Skipped: 6617

Failed tests:
[sig-scheduling] SchedulerPredicates [Serial] validates that NodeSelector is respected if not
↔ matching [Conformance]
<output_omitted>

```

- Delete the pods and namespaces created by Sonobuoy.

```
student@cp:~$ sonobuoy delete --wait
```

