stoney cloud
stepping stone
& StackHPC

Adding Kubernetes as-a-Service
for stoney cloud users

StackHPC

stepping stone

1992-2024: The story so far...

meiko

Api NetWorks

Quadrics
A Finmeccanica Company

CRAY

Stack HPC

meiko

Api NetWorks

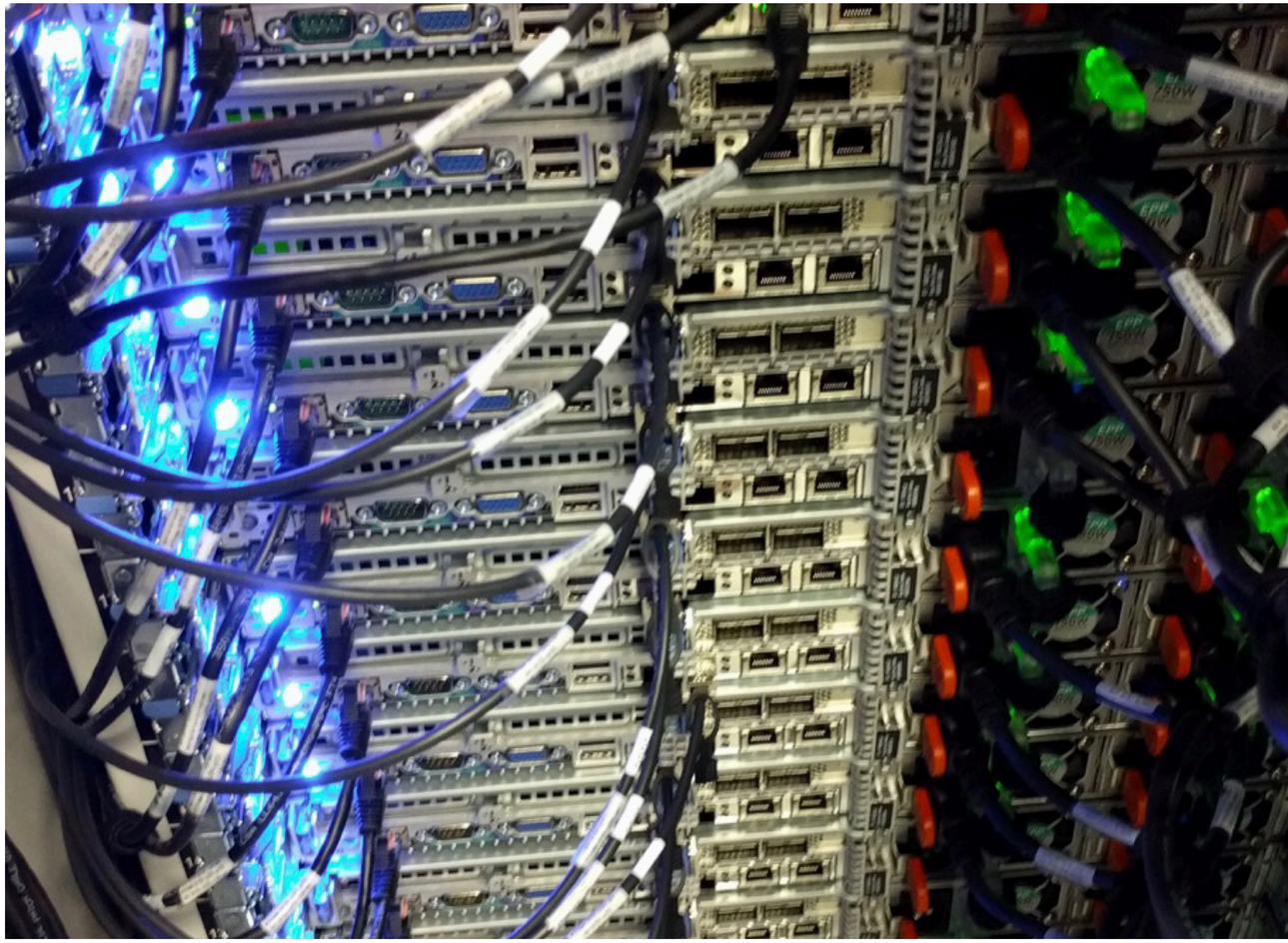
Quadrics
A Finmeccanica Company

CRAY

Stack
HPC

StackHPC - Modus Operandi

- Upstream development of open cloud infrastructure for Research Computing
- Development and integration of HPC technologies into cloud-native contexts
- Consultancy to organisations for managing HPC-cloud transition
- Training and support for sustainability
- Scientific OpenStack community engagement



StackHPC

Dawn

HPC & AI on Open Cloud Infrastructure

StackHPC

BUILDING THE OPEN INFRASTRUCTURE BLUEPRINT

HOW LINUX, OPENSTACK, AND KUBERNETES COMBINE TO DELIVER AN OPEN SOURCE POWERED INFRASTRUCTURE STACK

READ THE WHITE PAPER →

Kubernetes on OpenStack

- Kubernetes clusters are deployed within client projects
- Clients deploy their own Kubernetes clusters via self-service
- Kubernetes resources integrate with OpenStack cloud infrastructure
- Each client manages their own Kubernetes cluster deployments

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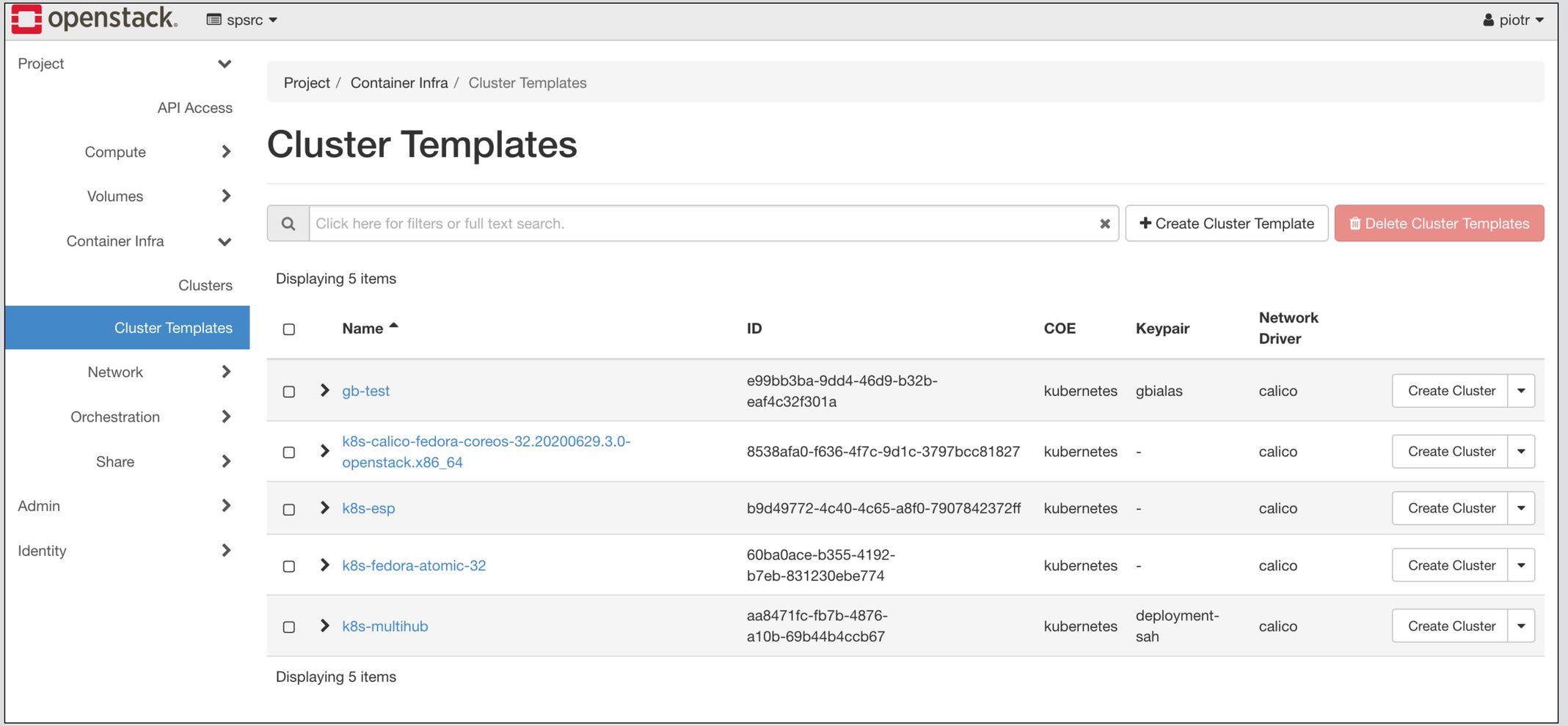

Kubernetes Cluster Templates

Different configurations - tested solutions provided by cloud administrators

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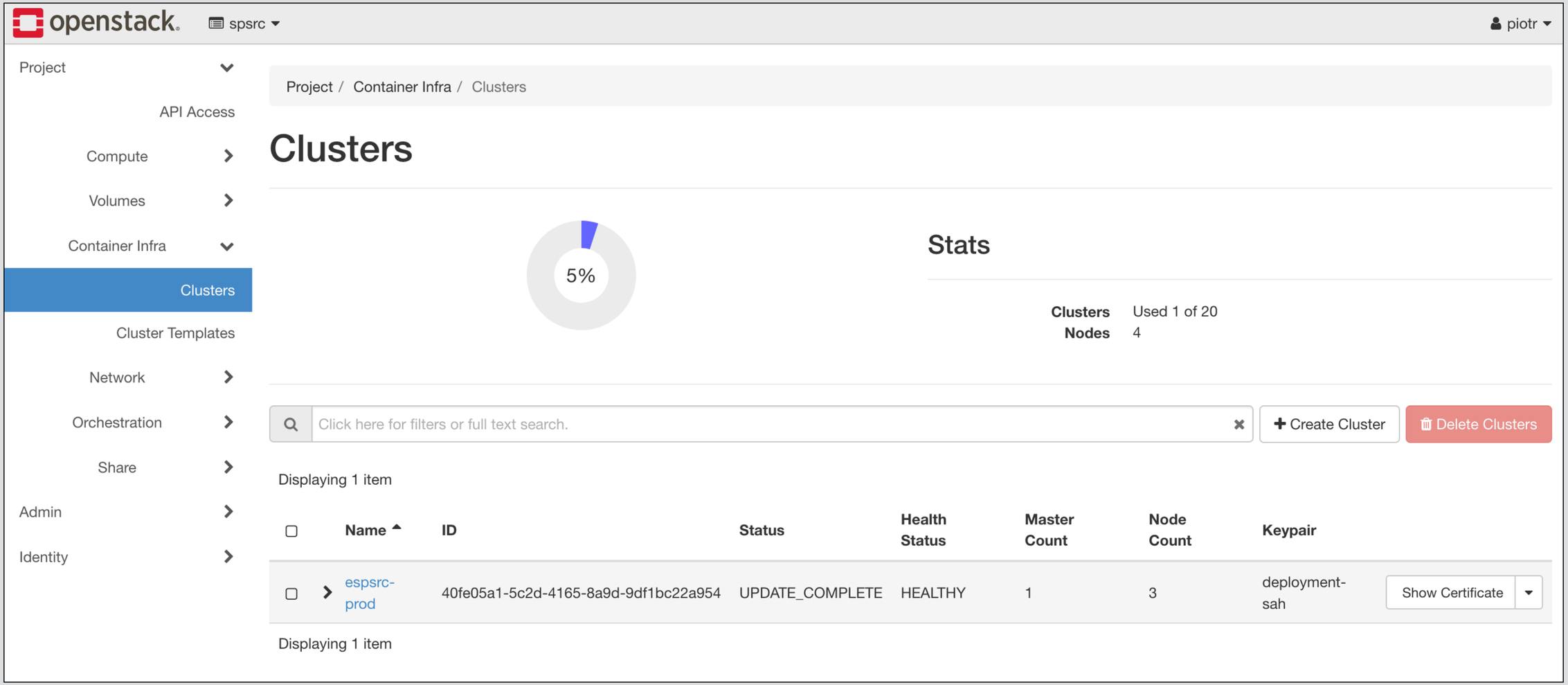

Deploying Kubernetes Clusters

As easy as clicking "Create Cluster"...

Integrates with stoney cloud compute, storage and networking

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Open Source Contributions

Testing code

Giving feedback

Solving problems

Contributing back

[occm] [cinder-csi-plugin] Sanitize AZ name #2634

Code

Merged **k8s-ci-robot** merged 1 commit into `kubernetes:master` from `stackhpc:master` Sep 4, 2024

Conversation 24 | Commits 1 | Checks 0 | Files changed

scrungus commented Aug 23, 2024 Contributor

What this PR does / why we need it: AZ names can contain unicode characters, for example "Württemberg". The current behaviour is that this causes the occm pod to crash:

```
$ crictl logs a358b0388996d (openstack-cloud-controller-mana
error syncing 'test-hshu2jf73dym-default-worker-6s4mq-s9swb'
```

This PR sanitizes the label value before it is applied.
We also see the same problem in cinder-csi-plugin:

```
$ kubectl logs -n openstack-system openstack-cinder-csi-node
...
I0822 14:53:22.576401       1 main.go:101] Received NotifyRe
```

So this change also sanitises the label coming from the metadata service.
Special notes for reviewers:

I believe a similar fix is needed for cinder-csi-plugin
Release note:

Reviewers
- jichenjc
- dulek
- anguslees

Assignees
- jichenjc

Labels
approved | cncf-cla: yes | lgtm | ok-to-test | release-note | size/S

Projects
None yet

Milestone
No milestone

In Summary

- StackHPC is very happy to have found a good partner in stepping stone AG
- We hope the Kubernetes service available on stoney cloud continues to be a success!
- StackHPC looks forward to further work together and future collaborations

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The Rise of the HPC Cloud

Thank You
Questions?

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