INTRODUCTION

This page provides examples to get started using the Openstack Container service known as Zun .

Setup

You must have an account and CLI access as described in Cloud Intro .

Running a Public Container

To run a container is as simple as

```
openstack appcontainer run --net network=campus37 --wait nginx
```

Access the public IP address of the container for the default Nginx start page.

Try these commands to get started (using the UUID of your running container instances):

```
openstack appcontainer list
openstack appcontainer exec --interactive ${UUID} /bin/bash
```

Private Registry Images

Openstack automatically pulls from the Dockerhub registry, or images uploaded to Glance with

```
openstack image create --container-format docker ...
openstack image list
```

To start a container image that was uploaded to Glance, provide a reference to it in the appcontainer. All other options remain as usual.

```
openstack appcontainer run --image-driver glance ...
```

Glance has no user authentication, but will prevent access to your image from outside your project. To use a private docker registry instead of glance, first create a registry row in Zun. The following example is part of a CI pipeline based on Git, Docker, Gitlab, and Openstack.

```
openstack appcontainer registry create --username gitlab+deploy-token-99 --
password sekret --domain vcs.cs.uchicago.edu --name VCS_LDAP
```

You can then create and run images from this registry, for example

```
openstack appcontainer create --registry VCS_LDAP --name ldap1 --wait --net
```

```
network=campus37 --image-driver docker
vcs.cs.uchicago.edu:5050/chudler/ldapslave
```

Substitute `vcs.cs.uchicago.edu:5050/…` for your own custom Docker Registry,

Modifying and Saving a Container

Importantly, the repository that you push the image to must have been setup in zun. See the previous section.

```
openstack appcontainer run --net network=campus37 --wait nginx
openstack appcontainer exec --interactive ${UUID} sed -i -s 's/Welcome to
nginx/Hello world/' /usr/share/nginx/html/index.html
openstack appcontainer commit ${UUID} VCS_LDAPSLAVE:os_latest
```

Caveats

Private registries are not supported for the `openstack appcontainer image pull`, and related commands. Nonetheless, the images are automatically pulled to the compute host, or can be specified by

```
openstack appcontainer create --image-pull-policy ...
```

GPU

(currently, unavailable***)

Simply start your container on the designated host.

```
openstack appcontainer run --availability-zone gpu --environment
NVIDIA_VISIBLE_DEVICES=all --auto-remove --wait --interactive
nvidia/cuda:10.0-base nvidia-smi
```

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