Chameleon Cloud Tutorial

Setting up DevStack on Chameleon Bare Metal Servers

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DevStack on Chameleon Cloud

Objective

In this tutorial, we will show you how to install and access DevStack on a Chameleon Cloud bare metal server.

Prerequisites

The following prerequisites are expected for successful completion of this tutorial:

- Chameleon Cloud account (http://chameleoncloud.org/user/register/)
- SSH client (for Windows users, download PuTTY from here: http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html)
- A basic knowledge of Linux

Installation Process

1. Create a cloud Server

Login to https://ironic.chameleon.tacc.utexas.edu/dashboard/project/instances/ and create a Chameleon Cloud Server from the web interface with the following attributes. If no valid reservation exists, please refer to the Chameleon User Guide or this video for how to create one. See figure 1 for details.

1. Instance name: **devstack-demo**
2. Availability zone: **Any Availability Zone**
3. Reservation: **<any valid reservation>**
4. Flavor: **baremetal**
5. Instance count: **1**
6. Instance boot source: **Boot from image**
7. Image name: **CC-CentOS7**
8. Click on the "**Access & Security**" tab
9. Select a pre-installed SSH key from the list, or, install one by clicking on "**+**"
10. Click: **Launch**

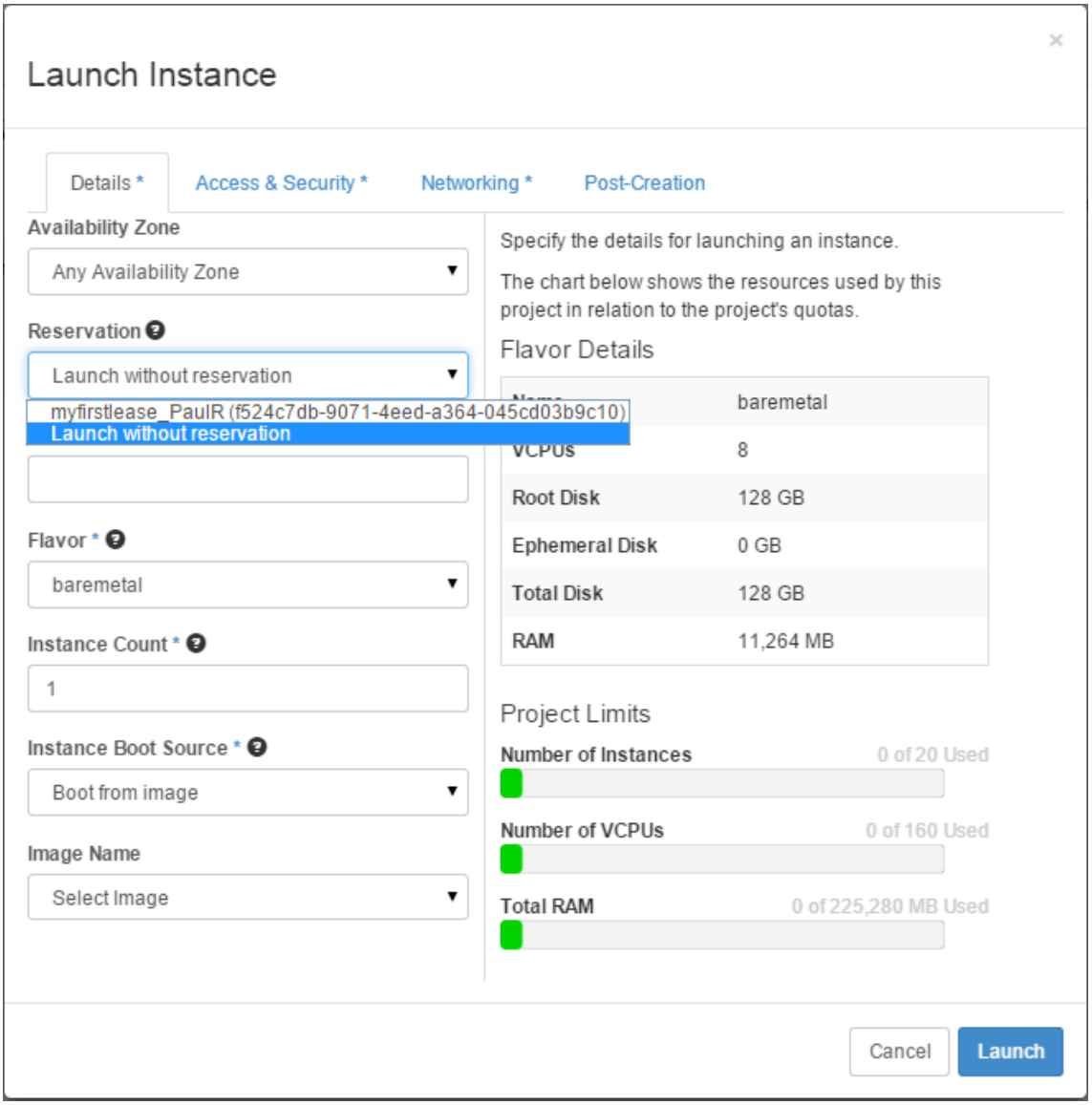

Figure 1 - Create the Chameleon Cloud Server

The Chameleon Cloud server will begin building. When the server becomes available, click on the "Associate Floating IP" button at the end of its row. Select an available IP address from the list and click on "**Associate**". See figure 2 below for details. Make note of this new IP address, as we will need it to complete the next step.

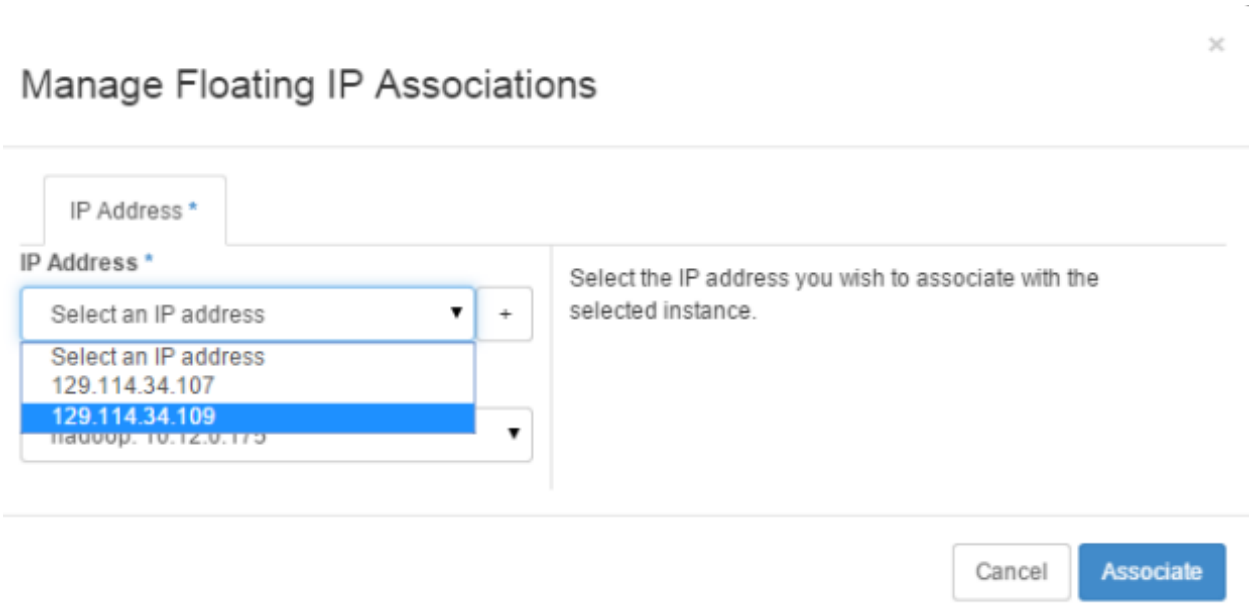

Figure 2 – Associate a Floating IP Address dialog box

Now we can connect to the new server via SSH using the floating IP address we just assigned. If you are a Linux or Mac user, type the following command in a new Terminal window (Windows users: follow along using PuTTY):

```
ssh cc@Floating.IP.Address
```

2. Add a user

We need to add a user with sudo privileges in order to install DevStack. Use the following commands to accomplish these tasks:

```
sudo adduser stack
sudo sh -c 'echo "stack ALL=(ALL) NOPASSWD: ALL" >> /etc/sudoers'
```

We now need to copy our SSH public key to the new user, allowing us to login to that account.

```
sudo mkdir /home/stack/.ssh
sudo cp ~/.ssh/authorized_keys /home/stack/.ssh/
sudo chown -R stack:stack /home/stack/.ssh
```

From here on, we should use the new “stack” user we just created. Logout and login as “stack”.

```
cd ~
git clone https://git.openstack.org/openstack-dev/devstack
cd devstack
```

Next, we want to create a `local.conf` configuration file inside the `devstack` directory, and ensure its contents are as follows:

local.conf

```
[[local|localrc]]
FLOATING_RANGE=10.12.0.240/28
FIXED_RANGE=192.168.1.0/24
FIXED_NETWORK_SIZE=256
FLAT_INTERFACE=eno1
SERVICE_TOKEN=azertytoken
ADMIN_PASSWORD=secret
MYSQL_PASSWORD=secretdb
RABBIT_PASSWORD=stackqueue
SERVICE_PASSWORD=$ADMIN_PASSWORD
HOST_IP=Your.Server.IP.Address
```

Ensure that your server's IP address is accurately reflected in the "HOST_IP" field of the configuration file. Note that this is different than the floating IP address we associated with the server. The host IP address can be seen in the Chameleon dashboard directly above your instance's floating IP address, and should begin with "`10.`".

Finally, start DevStack by executing the command:

```
./stack.sh
```

Approximately 20 minutes later your installation should finish, and you should receive a message similar to the following: