

Bootstrap Juju on top of openstack

Notes:

Hard to imagine that you can bootstrap Juju on top of a private cloud using openstack successfully at the very first time, you may meet a lot of problems.

1. Which version of Juju installed in your system

The version of Juju/Ubuntu really matters

We install Juju by the following commands

```
sudo add-apt-repository ppa:juju/stable
sudo apt install juju
```

Juju 1.25 will be installed on Ubuntu 14.04, you will get the newest version (2.2.2) of Juju on Ubuntu 16.04, for Ubuntu 12.04, the version number installed less than 1

You **CANNOT** bootstrap Juju controller on top of openstack with Juju 1.25 because of known issue "Unable to bootstrap with --metadata-source", more details here

<https://bugs.launchpad.net/juju-core/+bug/1591488>

2. How to provide proper image metadata server

The easiest way to provide image metadata url is installing our own web server locally, it's very convenient because bothering yourself to create a new VM for metadata url is not necessary.

For Juju 2.0 and above, uploading image metadata files to openstack swift container and then exposing a service on openstack was not recommended because you may need to make sure you have good authentication with keystone. If you are familiar with openstack, you can add metadata server with openstack service, more details here <https://jujucharms.com/docs/2.0/howto-privatecloud>

3. Can Juju 2.2.2 be used to deploy vIMS(clearwater)

The latest stable version of Juju is 2.2.2, you can bootstrap Juju 2.2.2 on top of an openstack private cloud, however it seems that Juju 2.2.2 **CANNOT** be used to deploy clearwater(vIMS) on your openstack. Because it seems that charms of clearwater should be deployed in Ubuntu 12.04, if you are using Juju 2.2.2, the metadata tools file generated by juju metadata generate tools does not contain the agent binary file description for 2.2.2-precise-amd64, the item should looks like this:

```
"2.1.2-precise-amd64": {
    "release": "precise",
    "version": "2.1.2",
    "arch": "amd64",
    "size": 24822344,
```

```
    "path": "released/juju-2.1.2-precise-amd64.tgz",  
    "ftype": "tar.gz",  
    "sha256":  
    "66cfa5c27fe7a088f52e712d09bb6e443667b3de0df7a28b5ef8f194272d0cfa"  
  }
```

As a result of this, Juju deploy clearwater will fail because of Juju controller can not create new instances because no agent binary file found for ubuntu 12.04 even if you have uploaded the image of ubuntu 12.04 and generate proper metadata

If you want to deploy clearwater on your openstack, install Juju 2.0 instead.