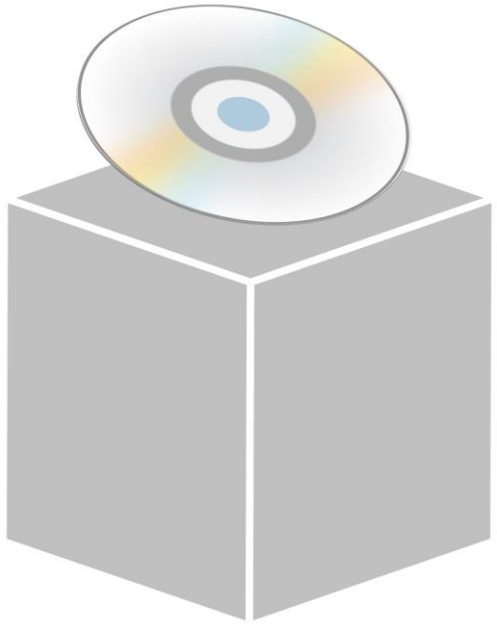
Glance Installation for Ubuntu



Glance Image Service Overview

The Image service (Glance) enables users to discover, register and retrieve VM images. It offers a REST API that enables you to query BM image metadata and retrieve an actual image

The OpenStack Image service includes the following components:

1. **glance-api:** Accepts Image API calls for image discovery, retrieval and storage.
2. **glance-registry:** Stores, processes and retrieves metadata about images.
3. **Database:** Stores image metadata and you can choose your database depending on you preference.
4. **Storage Repository for Image Files**
5. **Metadata Definition Service:** Includes the new property's key, description, constraints and the resource types which it can be associated with.

Install and Configure Glance - Prerequisites

Before you install and configure the Glance Image service on the controller, you must create a database, service credentials and API endpoints.

1. To create a database, complete , complete these steps:
   - Use the database access client to connect to the database server as the root user.

     mysql
2. Source the admin credentials to gain access to admin-only CLI commmands:

   . admin-openrc
3. To create the service credentials, complete these steps:
   - Create the glance user

     openstack user create --domain default --password-prompt glance
   - Add the admin role to the glance user and service project:

     openstack role add --project service --user glance admin

Install and Configure Glance - Prerequisites

- Create the glance service entity:

  openstack service create --name glance \ --description “OpenStack Image” image

4. Create the Image service API endpoints:

   openstack endpoint create --region RegionOne \ image public http://controller:9292

   openstack endpoint create --region RegionOne \ image internal http://controller:9292

   openstack endpoint create --region RegionOne \ image admin http://controller:9292

Install and Configure Components

1. Install the packages:
   sudo apt install glance
2. Edit the /etc/glance/glance-api.conf file and complete the following actions:
   - In the [database] section, configure database access:

     ```
     [database]
     #  .....
     connection = mysql+pymysql://glance:GLANCE_DBPASS@controller/glance
     ```

   - In the [keystone_authtoken] and [paste_deploy] sections, configure Identity service access:

     ```
     [keystone_authtoken]
     #   ......
     auth_uri = http://controller:5000
     auth_url = http://controller: 35357
     nencached_servers = controller:11211
     auth_type = password
     project_domain_name = default
     user_domain_name = default
     project_name = service
     username = glance
     password = GLANCE_PASS
     ```

Install and Configure Components

```
[paste_deploy]
#  ……
flavor = keystone
```

- In the [glance_store] section, configure the local file system store and location of image files:

```
[glance_store]
# …..
stores = file, http
default_store = file
filesystem_store_datadir = /var/lib/glance/images/
```

3. Edit the /etc/glance/glance-registry.conf file and complete the following actions:
   - In the [database] section, configure database access:

```
[database]
#   ...
connection = mysql+pymysql://glance:GLANCE_DBPASS@controller/glance
```

Install and Configure Components

- In the [keystone_authtoken] and [paste_deploy] sections, configure Identity service access:

```
[keystone_authtoken]
#   ……
auth_uri = http://controller:5000
auth_url = http://controller: 35357
nencached_servers = controller:11211
auth_type = password
project_domain_name = default
user_domain_name = default
project_name = service
username = glance
password = GLANCE_PASS

[paste_deploy]
#  ……
flavor = keystone
```

4. Populate the Image service database

```
sudo su -s /bin/sh -c “glance-manage db_sync” glance
```

Finalize the Installation

Restart the Image service

```
sudo service glance-registry restart
sudo service glance-api registry
```

Verify Operation

Verify the operation of the Image service using CirrOS, a small Linux image that helps you test your OpenStack deployment.

1. Source the admin credentials to gain access to admin-only CLI commands:

   ```
   . admin-openrc
   ```

2. Download the source image:

   ```
   wget http://download.cirros-cloud.net/0.3.5/cirros-0.3.5-x86_64-disk.img
   ```

3. Upload the image to the Image service using the QCOW2 disk format, bare container format and public visibility so all projects can access it:

   ```
   openstack image create “cirros” --file cirros-0.3.5-x86_64-disk.img \
   --disk-format qcow2 --container--format bare --public
   ```

4. Confirm the upload of the image and validate attributes:

   ```
   openstack image list
   ```

Glance Configuration Options

Glance uses the following configuration files for its various services. You can visit each of the links to get a complete overview how these files are configured:

- Basic Configuration
- glance-api.conf
- glance-cache.conf
- glance-manage.conf
- glance-registry.conf
- glance-scrubber.conf
- Glance Sample Configuration