Manage images

« (troubleshooting.html) » (requirements.html) (https://bugs.launchpad.net/glance/+filebug?field.title=Manage%20images%20in%20glance&field.comment=%0A%0A%0AThis bug tracker is for errors with the documentation, use the following as a template and remove or add fields as you see fit. Convert [ ] into [x] to check boxes:%0A%0A- [ ] This doc is inaccurate in this way: _____%0A- [ ] This is a doc addition request.%0A- [ ] I have a fix to the document that I can paste below including example: input and output. %0A%0AIf you have a troubleshooting or support issue, use the following resources:%0A%0A - Ask OpenStack: http://ask.openstack.org%0A - The mailing list: http://lists.openstack.org%0A - IRC: 'openstack' channel on Freenode%0A%0A----------%0ARelease:%2016.0.1.dev1%20on%20'Thu%20Mar%201%2007:26:57%202018,%20commit%20968f4ae'%0ASHA:%20968f4ae9ce244d9372cb3e8f45acea9d557f317d%0ASourc images.rst%0AURL: https://docs.openstack.org/glance/queens/admin/manage-images.html&field.tags=)

UPDATED: 'THU MAR 1 07:26:57 2018, COMMIT 968F4AE'

The cloud operator assigns roles to users. Roles determine who can upload and manage images. The operator might restrict image upload and management to only cloud administrators or operators.

You can upload images through the **openstack image create** command or the Image service API. You can use the **openstack** client for the image management. It provides mechanisms to list and delete images, set and delete image metadata, and create images of a running instance or snapshot and backup types.

After you upload an image, you cannot change it.

For details about image creation, see the Virtual Machine Image Guide (https://docs.openstack.org/image-guide/).

List or get details for images (glance)¶

To get a list of images and to get further details about a single image, use **openstack image list** and **openstack image show** commands.

```
$ openstack image list
+--------------------------------------+---------------------------------+--------+
| ID                                   | Name                            | Status |
+--------------------------------------+---------------------------------+--------+
| dfc1dfb0-d7bf-4fff-8994-319dd6f703d7 | cirros-0.3.5-x86_64-uec         | active |
| a3867e29-c7a1-44b0-9e7f-10db587cad20 | cirros-0.3.5-x86_64-uec-kernel  | active |
| 4b916fba-6775-4092-92df-f41df7246a6b | cirros-0.3.5-x86_64-uec-ramdisk | active |
| d07831df-edc3-4817-9881-89141f9134c3 | myCirrosImage                   | active |
+--------------------------------------+---------------------------------+--------+
```

```
$ openstack image show myCirrosImage
+------------------+------------------------------------------------------+
| Field            | Value                                                |
+------------------+------------------------------------------------------+
| checksum         | ee1eca47dc88f4879d8a229cc70a07c6                     |
| container_format | ami                                                  |
| created_at       | 2016-08-11T15:07:26Z                                 |
| disk_format      | ami                                                  |
| file             | /v2/images/d07831df-edc3-4817-9881-89141f9134c3/file |
| id               | d07831df-edc3-4817-9881-89141f9134c3                 |
| min_disk         | 0                                                    |
| min_ram          | 0                                                    |
| name             | myCirrosImage                                        |
| owner            | d88310717a8e4ebcae84ed075f82c51e                     |
| protected        | False                                                |
| schema           | /v2/schemas/image                                    |
| size             | 13287936                                             |
| status           | active                                               |
| tags             |                                                      |
| updated_at       | 2016-08-11T15:20:02Z                                 |
| virtual_size     | None                                                 |
| visibility       | private                                              |
+------------------+------------------------------------------------------+
```

When viewing a list of images, you can also use **grep** to filter the list, as follows:

```
$ openstack image list | grep 'cirros'
| dfc1dfb0-d7bf-4fff-8994-319dd6f703d7 | cirros-0.3.5-x86_64-uec         | active |
| a3867e29-c7a1-44b0-9e7f-10db587cad20 | cirros-0.3.5-x86_64-uec-kernel  | active |
| 4b916fba-6775-4092-92df-f41df7246a6b | cirros-0.3.5-x86_64-uec-ramdisk | active |
```

Note

To store location metadata for images, which enables direct file access for a client, update the **/etc/glance/glance-api.conf** file with the following statements:

- **show_multiple_locations = True**
- **filesystem_store_metadata_file = filePath**

where filePath points to a JSON file that defines the mount point for OpenStack images on your system and a unique ID. For example:

```
[{
    "id": "2d9bb53f-70ea-4066-a68b-67960eaae673",
    "mountpoint": "/var/lib/glance/images/"
}]
```

After you restart the Image service, you can use the following syntax to view the image's location information:

```
$ openstack --os-image-api-version 2 image show imageID
```

For example, using the image ID shown above, you would issue the command as follows:

```
$ openstack --os-image-api-version 2 image show 2d9bb53f-70ea-4066-a68b-67960eaae673
```

Create or update an image (glance)¶

To create an image, use **openstack image create**:

```
$ openstack image create imageName
```

To update an image by name or ID, use **openstack image set**:

```
$ openstack image set imageName
```

The following list explains the optional arguments that you can use with the **create** and **set** commands to modify image properties. For more information, refer to the OpenStack Image command reference (https://docs.openstack.org/developer/python-openstackclient/command-objects/image.html).

The following example shows the command that you would use to upload a CentOS 6.3 image in qcow2 format and configure it for public access:

```
$ openstack image create --disk-format qcow2 --container-format bare \
  --public --file ./centos63.qcow2 centos63-image
```

The following example shows how to update an existing image with a properties that describe the disk bus, the CD-ROM bus, and the VIF model:

Note

When you use OpenStack with VMware vCenter Server, you need to specify the **vmware_disktype** and **vmware_adaptertype** properties with **openstack image create**. Also, we recommend that you set the **hypervisor_type="vmware"** property. For more information, see Images with VMware vSphere (https://docs.openstack.org/ocata/config-reference/compute/hypervisor-vmware.html#images-with-vmware-vsphere) in the OpenStack Configuration Reference.

```
$ openstack image set \
    --property hw_disk_bus=scsi \
    --property hw_cdrom_bus=ide \
    --property hw_vif_model=e1000 \
    f16-x86_64-openstack-sda
```

Currently the libvirt virtualization tool determines the disk, CD-ROM, and VIF device models based on the configured hypervisor type (**libvirt_type** in **/etc/nova/nova.conf** file). For the sake of optimal performance, libvirt defaults to using virtio for both disk and VIF (NIC) models. The disadvantage of this approach is that it is not possible to run operating systems that lack virtio drivers, for example, BSD, Solaris, and older versions of Linux and Windows.

If you specify a disk or CD-ROM bus model that is not supported, see the Disk and CD-ROM bus model values table. If you specify a VIF model that is not supported, the instance fails to launch. See the VIF model values table.

The valid model values depend on the **libvirt_type** setting, as shown in the following tables.

Disk and CD-ROM bus model values

libvirt_type setting	Supported model values
qemu or kvm	• fdc • ide • scsi • sata • virtio • usb
xen	• ide • xen

VIF model values

libvirt_type setting	Supported model values
qemu or kvm	• e1000 • ne2k_pci • pcnet • rtl8139 • virtio
xen	• e1000 • netfront • ne2k_pci • pcnet • rtl8139
vmware	• VirtualE1000 • VirtualPCNet32 • VirtualVmxnet

Note

By default, hardware properties are retrieved from the image properties. However, if this information is not available, the **libosinfo** database provides an alternative source for these values.

If the guest operating system is not in the database, or if the use of **libosinfo** is disabled, the default system values are used.

Users can set the operating system ID or a **short-id** in image properties. For example:

```
$ openstack image set --property short-id=fedora23 \
  name-of-my-fedora-image
```

Alternatively, users can set **id** to a URL:

```
$ openstack image set \
  --property id=http://fedoraproject.org/fedora/23 \
  ID-of-my-fedora-image
```

Create an image from ISO image¶

You can upload ISO images to the Image service (glance). You can subsequently boot an ISO image using Compute.

In the Image service, run the following command:

```
$ openstack image create ISO_IMAGE --file IMAGE.iso \
  --disk-format iso --container-format bare
```

Optionally, to confirm the upload in Image service, run:

```
$ openstack image list
```

Troubleshoot image creation¶

If you encounter problems in creating an image in the Image service or Compute, the following information may help you troubleshoot the creation process.

- Ensure that the version of qemu you are using is version 0.14 or later. Earlier versions of qemu result in an **unknown option -s** error message in the **/var/log/nova/nova-compute.log** file.
- Examine the **/var/log/nova/nova-api.log** and **/var/log/nova/nova-compute.log** log files for error messages.

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