

背景

OpenStack进行卷操作时可能产生“僵尸卷”，其状态为“error_deleting”，无法再前台删除。

<input type="checkbox"/>	bac8a929-de61-4627-8b67-d27ab993454d	-	20GiB		-	nova	True	不	<button>更新元数据</button>
<input type="checkbox"/>	ca6facd4-2c3a-49f9-b303-9547456c83b3	-	1GiB		-	nova	True	不	<button>更新元数据</button>
<input type="checkbox"/>	a8e1c148-6032-4423-95e5-9fa9c94b0371	-	1GiB		-	nova	True	不	<button>更新元数据</button>
<input type="checkbox"/>	b2fe0db2-3ffa-4d2e-90d3-438c678670b3	-	1GiB		-	nova	True	不	<button>更新元数据</button>

解决方案

修改Volume的状态，重新下发删除命令。

- 1 #列出所有状态为“error_deleting”的卷
- 2 `openstack volume list --status error_deleting`

```
[root@node1 ~]# openstack volume list --status error_deleting
+-----+-----+-----+-----+-----+
| ID                                           | Display Name | Status       | Size | Attached to |
+-----+-----+-----+-----+-----+
| bac8a929-de61-4627-8b67-d27ab993454d      |               | error_deleting | 20   |              |
| ca6facd4-2c3a-49f9-b303-9547456c83b3      |               | error_deleting | 1    |              |
| a8e1c148-6032-4423-95e5-9fa9c94b0371      |               | error_deleting | 1    |              |
| b2fe0db2-3ffa-4d2e-90d3-438c678670b3      |               | error_deleting | 1    |              |
+-----+-----+-----+-----+-----+
```

- 1 #重置卷的状态为available，并删除
- 2 `openstack volume set --state available bac8a929-de61-4627-8b67-d27ab993454d`
- 3 `openstack volume delete bac8a929-de61-4627-8b67-d27ab993454d`
- 4

Cinder数据库中的表

cinder.volume和cinder.volume_metadata包含了OpenStack当前环境的所有Volume信息。表以id为主键。

cinder.volume_metadata也包含了表信息，这两张表的关系如何？？

几个关键信息：

1.该表不但包括当前存在的Volume信息，还包括已经删除的Volume信息！！通过deleted字段来表示（1表示已删除，0表示未删除）！

2.status对应Volume的当前状态，上面的问题主要原因就是该字段的状态为error_deleting，无法删除

手工强制删除的方案：

登录DB直接删除上面两条数据；

登录后端执行命令删除：1.对于LVM驱动，先执行dd清除数据，然后执行lvremove删除逻辑盘

Cinder删除卷时打印的日志

cinder-api：

```
1 node2 2017-04-26 09:38:28.466 21 INFO cinder.api.openstack.wsgi [req-0b2cd
2 DELETE http://172.24.9.198:8776/v2/406cd353135e44f0ade98f53d92d5d8b/volume
3 node2 2017-04-26 09:38:28.467 21 INFO cinder.api.v2.volumes [req-0b2cd5e9-
4 Delete volume with id: 5539c0db-0fbe-4b8e-b2ba-7a388d9ab605
5 node2 2017-04-26 09:38:28.533 21 INFO cinder.volume.api [req-0b2cd5e9-47cb
6 Volume info retrieved successfully.
7 node2 2017-04-26 09:38:28.558 21 INFO cinder.volume.api [req-0b2cd5e9-47cb
8 Delete volume request issued successfully.
9 node2 2017-04-26 09:38:28.558 21 INFO cinder.api.openstack.wsgi [req-0b2cd
10 node2 2017-04-26 09:38:28.559 21 INFO eventlet.wsgi.server [req-0b2cd5e9-4
11 172.24.9.13,172.24.9.12 "DELETE /v2/406cd353135e44f0ade98f53d92d5d8b/volum
```

cinder-api获取一个http请求，请求的格式为：DELETE

cinder_endpoint+project+volumes+卷id。

获取请求后cinder.api.v3.volumes.delete方法被调用，该方法解析context中的附件参数，如force，cascade，并依次调用以下方法：

cinder.volume.API.get：

从数据库获取volume的信息并进行鉴权，“Volume info retrieved successfully”，表示检索卷信息成功。

cinder.volume.API.delete :

查当前Volume的状态，Volume是否创建了快照，Volume是否有级联，是否能够执行删除。如果符合删除条件，将volume的状态改为deleting发送删除消息（cinder.volume.rpcapi.VolumeAPI.delete）并打印“Delete volume request issued successfully.”

cinder-volume :

```
1 node1 2017-04-26 11:43:26.961 33 DEBUG cinder.coordination [req-2280236d-b
2 Lock "e89c3b06-73a4-4322-9de2-a86a69a636f7-delete_volume" acquired by "del
3 node1 2017-04-26 11:43:27.092 33 DEBUG cinder.volume.drivers.netapp.dataon
4 Destroyed LUN volume-e89c3b06-73a4-4322-9de2-a86a69a636f7 destroy_lun /var
5 node1 2017-04-26 11:43:27.093 33 DEBUG cinder.volume.drivers.netapp.utils
6 QoS policy group info for volume volume-e89c3b06-73a4-4322-9de2-a86a69a636
7 node1 2017-04-26 11:43:27.106 33 DEBUG cinder.volume.drivers.netapp.dataon
8 Deleted LUN with name volume-e89c3b06-73a4-4322-9de2-a86a69a636f7 and QoS
9 node1 2017-04-26 11:43:27.145 33 DEBUG cinder.quota [req-2280236d-bf9d-4f4
10 Created reservations ['ebb81cf1-71dc-4c76-8b9b-7183801eca5c', '8ce18439-f2
11 node1 2017-04-26 11:43:27.181 33 DEBUG cinder.volume.drivers.netapp.dataon
12 Updating volume stats _update_volume_stats /var/lib/kolla/venv/lib/python2
13 node1 2017-04-26 11:43:27.697 33 DEBUG cinder.manager [req-2280236d-bf9d-4
14 Notifying Schedulers of capabilities ... _publish_service_capabilities /va
15 node1 2017-04-26 11:43:27.698 33 DEBUG oslo_messaging._drivers.amqpdriver
16 CAST unique_id: 444be097a4b0467ab792f4e1d625466a FANOUT topic 'cinder-sche
17 node1 2017-04-26 11:43:27.703 33 DEBUG oslo_messaging._drivers.amqpdriver
18 CAST unique_id: fa1ce5374aee45ae9a2805357329ff9a exchange 'openstack' topi
19 node1 2017-04-26 11:43:27.706 33 INFO cinder.volume.manager [req-2280236d-
20 Deleted volume successfully.
21 node1 2017-04-26 11:43:27.714 33 DEBUG cinder.coordination [req-2280236d-b
22 Lock "e89c3b06-73a4-4322-9de2-a86a69a636f7-delete_volume" released by "del
```