When setting up cinder with ceph, rados.Ioctx objects are leaked when creating and deleting volumes. The problem is due to storing a reference to the callback functions __aio_safe_cb_c and __aio_complete_cb_c on the object. By storing the reference, a circular reference is inadvertently created which prevents the python garbage collector from destroying the rados.Ioctx objects that were created.

A graph of the circular reference is attached.

60b019f69aa0e39d276c669698c92fc890599f50

Associated revisions

Revision 60b019f6 - 02/03/2015 05:51 AM - Billy Olsen
Fix memory leak in python rados bindings

A circular reference was inadvertently created when using the CFUNCTYPE binding for callbacks for the asynchronous i/o callbacks. This commit refactors the usage of the callbacks such that the Ioctx object does not have a class reference to the callbacks.

Fixes: #10723
Backport: giant, firefly, dumpling
Signed-off-by: Billy Olsen <billy.olsen@gmail.com>
Reviewed-by: Dan Mick <dmick@redhat.com>
Reviewed-by: Josh Durgin <jdurgin@redhat.com>

Revision 3bab4705 - 03/10/2015 11:41 PM - Billy Olsen
Fix memory leak in python rados bindings

A circular reference was inadvertently created when using the CFUNCTYPE binding for callbacks for the asynchronous i/o callbacks. This commit refactors the usage of the callbacks such that the Ioctx object does not have a class reference to the callbacks.

Fixes: #10723
Revision 1b5fb51a - 03/17/2015 04:47 PM - Billy Olsen

Fix memory leak in python rados bindings

A circular reference was inadvertently created when using the CFUNCTYPE binding for callbacks for the asynchronous i/o callbacks. This commit refactors the usage of the callbacks such that the Ioctx object does not have a class reference to the callbacks.

Fixes: #10723
Backport: giant, firefly, dumpling
Signed-off-by: Billy Olsen <billy.olsen@gmail.com>
Reviewed-by: Dan Mick <dmick@redhat.com>
Reviewed-by: Josh Durgin <jdurgin@redhat.com>
(cherry picked from commit 60b019f69aa0e39d276c669698c92fc890599f50)

History

#1 - 02/03/2015 05:59 AM - Josh Durgin
- Category set to librados
- Status changed from New to Pending Backport
- Backport set to giant, firefly, dumpling

Nice catch!

#2 - 02/10/2015 04:55 AM - Josh Durgin

When this is backported, the fix for http://tracker.ceph.com/issues/10775 should be as well.

#3 - 03/10/2015 11:43 PM - Loic Dachary
- Description updated

  - firefly backport https://github.com/ceph/ceph/pull/3935

#4 - 03/17/2015 04:48 PM - Loic Dachary

  - giant backport https://github.com/ceph/ceph/pull/4046

#5 - 03/26/2015 03:32 PM - Loic Dachary
- Backport changed from giant, firefly, dumpling to giant, firefly
dumpling is end of life

#6 - 03/26/2015 03:34 PM - Loic Dachary
- Description updated

#7 - 03/26/2015 03:34 PM - Loic Dachary
1b5fb51 Fix memory leak in python rados bindings (in giant), 3bab470 Fix memory leak in python rados bindings (in firefly),

#8 - 03/26/2015 03:34 PM - Loic Dachary
- Status changed from Pending Backport to Resolved

Files

| Ioctx-circular-dependencies.png | 77.1 KB | 02/02/2015 | Billy Olsen |