

RADOS - Bug #25154

librados application's symbol could conflict with the libceph-common

07/30/2018 12:15 PM - Kefu Chai

Status:	Resolved	Start date:	07/30/2018
Priority:	Normal	Due date:	
Assignee:	Kefu Chai	% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:		Spent time:	0.00 hour
Source:		Reviewed:	
Tags:		Affected Versions:	
Backport:	luminous,mimic	ceph-qa-suite:	
Regression:	No	Component(RADOS):	
Severity:	3 - minor	Pull request ID:	

Description

quoting from Zongyou Yao's mail from ceph-devel ML

Internally, we have a program using librados C++ api to periodically check ceph's cluster status and send alerts to our internal system.

The little program is written using c++, and linked with librados and our base c++ library. The program works well with K version, but it core dumped with L version. Here is the minmum code to reproduce:

```
#include <iostream>
#include <rados/librados.hpp>

// Thread class from our base library
class Thread {
public:
    Thread() {
    }
};

int main() {
    Thread t;
    librados::Rados cluster;

    int error_code = cluster.init2("client.admin", "ceph", /* flags = */0);

    // ... code omitted

    return 0;
}

# g++ -I/path/to/ceph/src/include ./test.cpp -L/path/to/ceph/build/lib -lrados
# export LD_LIBRARY_PATH=/path/to/ceph/build/lib
# ./a.out
```

Here is backtrace for the core dump:

```
ceph/src/log/Log.cc: In function 'void ceph::logging::Log::start()' thread 7f839ed72180 time 2018-07-30 14:55:58.340036
ceph/src/log/Log.cc: 509: FAILED assert(!is_started())
ceph version 14.0.0-1698-gcecbf3e (cecbf3e5dda2dc132367d6d5d74b1b384846c31a) nautilus (dev)
1: (ceph::__ceph_assert_fail(char const*, char const*, int, char const*)+0x14e) [0x7f83951305ce]
2: (()+0x2e8787) [0x7f8395130787]
3: (ceph::logging::Log::stop()+0) [0x7f839534b130]
4: (CephContext::CephContext(unsigned int, code_environment_t, int)+0x1bd7) [0x7f839513f677]
5: (common_preinit(CephInitParameters const&, code_environment_t, int)+0x4e) [0x7f83951677be]
6: (()+0x884aa) [0x7f839e9c54aa]
7: (rados_create2()+0xa8) [0x7f839e9c5888]
8: ./a.out() [0x400be4]
9: (__libc_start_main()+0xf5) [0x7f839dd02b35]
10: ./a.out() [0x400af9]
Aborted
```

The reason for the core dump is the Thread::Thread in our base c++ library conflicts with librados from ceph's common Thread <https://github.com/ceph/ceph/blob/master/src/common/Thread.h#L41>
Both of them are in global namespace.

Maybe we'd better put <https://github.com/ceph/ceph/blob/master/src/common> in ceph or rados namespace. Or build librados using -Wl,-Bsymbolic -Wl,-Bsymbolic-functions flag.

Related issues:

- Copied to RADOS - Backport #26839: mimic: librados application's symbol could... **Resolved**
- Copied to RADOS - Backport #26840: luminous: librados application's symbol co... **Resolved**

History

#1 - 07/30/2018 12:15 PM - Kefu Chai

<https://github.com/ceph/ceph/pull/23320>

#2 - 08/03/2018 12:57 PM - Kefu Chai

- Status changed from Need Review to Pending Backport

#3 - 08/03/2018 04:02 PM - Patrick Donnelly

- Copied to Backport #26839: mimic: librados application's symbol could conflict with the libceph-common added

#4 - 08/03/2018 04:02 PM - Patrick Donnelly

- Copied to Backport #26840: luminous: librados application's symbol could conflict with the libceph-common added

#5 - 10/29/2018 09:43 PM - Nathan Cutler

- Status changed from Pending Backport to Resolved