

rgw - Bug #22139

clang compilation error in BoundedKeyCounter

11/15/2017 09:02 PM - Casey Bodley

Status:	Resolved	Start date:	11/15/2017
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:		Spent time:	0.00 hour
Source:		Reviewed:	
Tags:		Affected Versions:	
Backport:	luminous	ceph-qa-suite:	
Regression:	No	Pull request ID:	
Severity:	3 - minor		

Description

clang complains about the use of `BoundedKeyCounter::const_pointer_iterator` in `vector::assign()`, because it doesn't satisfy the `ForwardIterator` concept:

```
In file included from /home/jenkins/workspace/ceph-master/src/test/common/test_bounded_key_counter.cc:14:
```

```
/home/jenkins/workspace/ceph-master/src/common/bounded_key_counter.h:154:14: error: no matching member function for call to 'assign'
```

```
    sorted.assign(const_pointer_iterator{counters.cbegin()},  
    ~~~~~^~~~~~
```

```
/home/jenkins/workspace/ceph-master/src/test/common/test_bounded_key_counter.cc:24:11: note: in instantiation of function template specialization 'BoundedKeyCounter<int, int>::get_highest<(lambda at /home/jenkins/workspace/ceph-master/src/test/common/test_bounded_key_counter.cc:24:30)>' requested here
```

```
    counter.get_highest(count, [&callbacks] (const Key& key, Count count) {  
        ^
```

```
/home/jenkins/workspace/ceph-master/src/test/common/test_bounded_key_counter.cc:66:17: note: in instantiation of function template specialization '(anonymous namespace)::count_highest<int, int>' requested here
```

```
    EXPECT_EQ(0u, count_highest(counter, 10));  
        ^
```

```
/usr/include/c++/v1/vector:588:10: note: candidate function not viable: no known conversion from 'BoundedKeyCounter<int, int>::const_pointer_iterator' to 'std::__1::vector<const std::__1::pair<const int, int> *, std::__1::allocator<const std::__1::pair<const int, int> *> >::size_type' (aka 'unsigned long') for 1st argument
```

```
    void assign(size_type __n, const_reference __u);  
        ^
```

```
/usr/include/c++/v1/vector:576:9: note: candidate template ignored: requirement '!__is_forward_iterator<const_pointer_iterator>::value' was not satisfied [with _InputIterator = BoundedKeyCounter<int, int>::const_pointer_iterator]
```

```
    assign(_InputIterator __first, _InputIterator __last);  
        ^
```

```
/usr/include/c++/v1/vector:586:9: note: candidate template ignored: requirement 'is_constructible<value_type, typename iterator_traits<const_pointer_iterator>::reference>::value' was not satisfied [with _ForwardIterator = BoundedKeyCounter<int, int>::const_pointer_iterator]
```

```
    assign(_ForwardIterator __first, _ForwardIterator __last);  
        ^
```

```
/usr/include/c++/v1/vector:592:10: note: candidate function not viable: requires single argument ' __il', but 2 arguments were provided
```

```
    void assign(initializer_list<value_type> __il)  
        ^
```

```
In file included from /home/jenkins/workspace/ceph-master/src/test/common/test_bounded_key_counter.cc:14:
```

```
/home/jenkins/workspace/ceph-master/src/common/bounded_key_counter.h:154:14: error: no matching member function for call to 'assign'
```

```

sorted.assign(const_pointer_iterator{counters.cbegin()},
~~~~~^~~~~~
/home/jenkins/workspace/ceph-master/src/test/common/test_bounded_key_counter.cc:36:11: note: in instantiation of function template specialization 'BoundedKeyCounter<int, int>::get_highest<(lambda at /home/jenkins/workspace/ceph-master/src/test/common/test_bounded_key_counter.cc:36:30)>' requested here
    counter.get_highest(count, [&results] (const Key& key, Count count) {
        ^
/home/jenkins/workspace/ceph-master/src/test/common/test_bounded_key_counter.cc:111:30: note: in instantiation of function template specialization '(anonymous namespace)::get_highest<int, int, std::__1::vector<std::__1::pair<int, int>, std::__1::allocator<std::__1::pair<int, int> > >>' requested here
    EXPECT_EQ(Vector({{1,1}}), get_highest(counter, 10));
        ^
/usr/include/c++/v1/vector:588:10: note: candidate function not viable: no known conversion from 'BoundedKeyCounter<int, int>::const_pointer_iterator' to 'std::__1::vector<const std::__1::pair<const int, int> *, std::__1::allocator<const std::__1::pair<const int, int> * > >::size_type' (aka 'unsigned long') for 1st argument
    void assign(size_type __n, const_reference __u);
        ^
/usr/include/c++/v1/vector:576:9: note: candidate template ignored: requirement '!__is_forward_iterator<const_pointer_iterator>::value' was not satisfied [with _InputIterator = BoundedKeyCounter<int, int>::const_pointer_iterator]
    assign(_InputIterator __first, _InputIterator __last);
        ^
/usr/include/c++/v1/vector:586:9: note: candidate template ignored: requirement 'is_constructible<value_type, typename iterator_traits<const_pointer_iterator>::reference::value' was not satisfied [with _ForwardIterator = BoundedKeyCounter<int, int>::const_pointer_iterator]
    assign(_ForwardIterator __first, _ForwardIterator __last);
        ^
/usr/include/c++/v1/vector:592:10: note: candidate function not viable: requires single argument '__il', but 2 arguments were provided
    void assign(initializer_list<value_type> __il)
        ^
2 errors generated.
gmake[2]: *** [src/test/common/CMakeFiles/unittest_bounded_key_counter.dir/build.make:63: src/test/common/CMakeFiles/unittest_bounded_key_counter.dir/test_bounded_key_counter.cc.o] Error 1

```

Related issues:

Copied to rgw - Backport #23227: luminous: clang compilation error in Bounded...

Resolved

History

#1 - 11/15/2017 09:34 PM - Casey Bodley

- Status changed from New to Need Review

<https://github.com/ceph/ceph/pull/18953>

#2 - 11/15/2017 11:25 PM - Casey Bodley

- Status changed from Need Review to Resolved

#3 - 03/05/2018 01:54 PM - Casey Bodley

- Status changed from Resolved to Pending Backport

- Backport set to luminous

#4 - 03/05/2018 05:03 PM - Nathan Cutler

- Copied to Backport #23227: luminous: clang compilation error in BoundedKeyCounter added

#5 - 05/03/2018 02:08 PM - Nathan Cutler

- Status changed from Pending Backport to Resolved