

Ceph - Bug #13829

config set with negative value results in "error setting 'filestore_merge_threshold' to '-40': (22) Invalid argument"

11/19/2015 06:39 AM - Brad Hubbard

Status:	Resolved	% Done:	0%
Priority:	High	Spent time:	0.00 hour
Assignee:	Brad Hubbard		
Category:	OSD		
Target version:			
Source:	Community (user)	Affected Versions:	v0.94
Tags:		ceph-qa-suite:	
Backport:	hammer	Pull request ID:	
Regression:	No	Crash signature (v1):	
Severity:	3 - minor	Crash signature (v2):	
Reviewed:			

Description

In the filestore-config-ref we say...

filestore merge threshold

Description: Min number of files in a subdir before merging into parent NOTE: A > negative value means to disable subdir merging

But running the following on 0.94.3 (95cefea9fd9ab740263bf8bb4796fd864d9afe2b) gives an error.

```
# ceph --admin-daemon /var/run/ceph/ceph-osd.312.asok config set filestore_merge_threshold -40
{
  "error": "error setting 'filestore_merge_threshold' to '-40': (22) Invalid argument"
}
```

0.94.1 (e4bfad3a3c51054df7e537a724c8d0bf9be972ff) is not affected so I did a git bisect to find the commit that introduced this behavior.

```
$ git bisect bad
9b947fa320b77e0055a581005353c2561a12a198 is the first bad commit
commit 9b947fa320b77e0055a581005353c2561a12a198
Author: Kefu Chai <kchai@redhat.com>
Date: Wed Apr 29 15:41:08 2015 +0800
```

```
common/config: detect overflow of int values
```

```
* #include "strtol.h" in strtol.cc, to ensure the function defintions
  are consistent.
* add a test accordingly
* fix the testcase of converting 1024E.
* do not accept integers overflow after adding SI suffix
* do not accept integers underflow (i.e. negative values)
```

```
Fixes: #11484
```

That patch includes the following code to src/common/strtol.cc.

```
163 long long r_ll = strict_strtoll(v, 10, err);
164
165 if (r_ll < 0) {
166     *err = "strict_sistrtoll: value should not be negative";
167     return 0;
168 }
169
170 uint64_t r = r_ll;
171 if (err->empty() && m > 0) {
172     if (r > (std::numeric_limits<uint64_t>::max() >> m)) {
173         *err = "strict_sistrtoll: value seems to be too large";
174         return 0;
175     }
176     r <<= m;
177 }
```

and this to src/common/strtol.h

```
34 template <typename Target>
35 Target strict_si_cast(const char *str, std::string *err) {
36     uint64_t ret = strict_sistrtoll(str, err);
37     if (!err->empty())
38         return ret;
39     if (ret > (uint64_t)std::numeric_limits<Target>::max()) {
40         err->append("The option value ");
41         err->append(str);
42         err->append("' seems to be too large");
43         return 0;
44     }
45     return ret;
46 }
```

Negative values fail both the test for a negative value (of course) and the tests for uint64_t overflow.

Working with kefu on a patch so assigning this to myself.

Related issues:

Copied to Ceph - Backport #16680: hammer: config set with negative value resu...

Resolved

Associated revisions

Revision 8b777a0c - 01/29/2016 08:06 AM - Brad Hubbard

common: Allow config set with negative value

A recent commit disabled negative values but they are required for variables such as filestore_merge_threshold.

Fixes: #13829

Signed-off-by: Kefu Chai <kchai@redhat.com>

Signed-off-by: Brad Hubbard <bhubbard@redhat.com>

Revision 994ac294 - 01/29/2016 08:06 AM - Brad Hubbard

qa: Add test for #13829

qa/workunits/cephtool/test.sh: add test for setting negative int options
src/test/daemon_config.cc: remove tests for failed negative values

Fixes: #13829

Signed-off-by: Brad Hubbard <bhubbard@redhat.com>

Revision f70e4adf - 07/14/2016 03:27 AM - Brad Hubbard

common: Allow config set with negative value

A recent commit disabled negative values but they are required for variables such as filestore_merge_threshold.

Modified patch to remove C++11 specific elements so it will build for hammer

Fixes: #13829

Signed-off-by: Kefu Chai <kchai@redhat.com>

Signed-off-by: Brad Hubbard <bhubbard@redhat.com>

(cherry picked from commit 8b777a0c346bc70fd10d07e89368b3785b58f10e)

Revision 3a30ffc2 - 07/14/2016 03:32 AM - Brad Hubbard

qa: Add test for #13829

qa/workunits/cephtool/test.sh: add test for setting negative int options
src/test/daemon_config.cc: remove tests for failed negative values

Fixes: #13829

Signed-off-by: Brad Hubbard <bhubbard@redhat.com>

(cherry picked from commit 994ac2942d04584d1617e6d4bbd5b880b1ea0448)

History

#1 - 11/19/2015 06:45 AM - Kefu Chai

- Description updated

#2 - 11/19/2015 07:58 AM - Kefu Chai

- File test.cc added

brad, i attached a POC to explain my idea to this change.

#3 - 01/28/2016 04:38 AM - Brad Hubbard

- Status changed from New to In Progress

<https://github.com/ceph/ceph/pull/7390>

#4 - 03/03/2016 04:10 AM - Brad Hubbard

- Status changed from In Progress to Resolved

Fixed in commit 389ecbbc2a9d7d4d334ea31a5c4120e9acc1b9aa

#5 - 07/13/2016 11:34 PM - Brad Hubbard

- Copied to Backport #16680: hammer: config set with negative value results in "error setting 'filestore_merge_threshold' to '-40': (22) Invalid argument" added

#6 - 07/14/2016 03:24 AM - Kefu Chai

- Backport set to hammer

#7 - 07/14/2016 03:24 AM - Kefu Chai

- Status changed from Resolved to Pending Backport

#8 - 08/22/2016 11:42 PM - Brad Hubbard

- Status changed from Pending Backport to Resolved

Files

test.cc	1.62 KB	11/19/2015	Kefu Chai
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