RADOS - Bug #22847

ceph osd force-create-pg cause all ceph-mon to crash and unable to come up again

02/01/2018 04:29 AM - Frank Li

Status:	Resolved	**% Done:**	0%
Priority:	High	**Spent time:**	0.00 hour
Assignee:			
Category:			
Target version:	v12.2.3		
Source:	Community (user)	**Affected Versions:**	v12.2.2
Tags:		**ceph-qa-suite:**	
Backport:	luminous	**Component(RADOS):**	
Regression:	No	**Pull request ID:**	
Severity:	2 - major	**Crash signature (v1):**	
Reviewed:		**Crash signature (v2):**	

Description

during the course of trouble-shooting an osd issue, I ran this command:
ceph osd force-create-pg 1.ace11d67
then all of the ceph-mon crashed with this error:
--- begin dump of recent events ---
0> 2018-01-31 22:47:22.959665 7fc64350e700 -1 ** **Caught signal (Aborted) ***
in thread 7fc64350e700 thread_name:cpu_tp

```
ceph version 12.2.2 (cf0baeeeeba3b47f9427c6c97e2144b094b7e5ba) luminous (stable)
 1: (()+0x8eae11) [0x55f1113fae11]
 2: (()+0xf5e0) [0x7fc64aafa5e0]
 3: (gsignal()+0x37) [0x7fc647fca1f7]
 4: (abort()+0x148) [0x7fc647fcb8e8]
 5: (ceph::__ceph_assert_fail(char const*, char const*, int, char const*)+0x284) [0x55f1110fa4a4]
 6: (()+0x2ccc4e) [0x55f110ddcc4e]
 7: (OSDMonitor::update_creating_pgs()+0x98b) [0x55f11102232b]
 8: (C_UpdateCreatingPGs::finish(int)+0x79) [0x55f1110777b9]
 9: (Context::complete(int)+0x9) [0x55f110ed30c9]
 10: (ParallelPGMapper::WQ::_process(ParallelPGMapper::Item*, ThreadPool::TPHandle&)+0x7f) [0x55f1
11204e1f]
 11: (ThreadPool::worker(ThreadPool::WorkThread*)+0xa8e) [0x55f111100f1e]
 12: (ThreadPool::WorkThread::entry()+0x10) [0x55f111101e00]
 13: (()+0x7e25) [0x7fc64aaf2e25]
 14: (clone()+0x6d) [0x7fc64808d34d]
 NOTE: a copy of the executable, or `objdump -rdS &lt;executable&gt;` is needed to interpret this.
```

here is the current ceph -s output:
[root@dl1-kaf101 frli]# ceph -s
cluster:
id: 021a1428-fea5-4697-bcd0-a45c1c2ca80b
health: HEALTH_WARN
nodown flag(s) set
32 osds down
4 hosts (32 osds) down
2 racks (32 osds) down
1 row (32 osds) down
Reduced data availability: 10240 pgs inactive, 5 pgs down, 3431 pgs peering, 3643 pgs stale
Degraded data redundancy: 215798/552339 objects degraded (39.070%), 10240 pgs unclean, 4666 pgs degraded, 4666 pgs
undersized

```
services:
```

```
    mon: 5 daemons, quorum dl1-kaf101,dl1-kaf201,dl1-kaf301,dl1-kaf302,dl1-kaf401
    mgr: dl1-kaf101(active), standbys: dl1-kaf201
    osd: 64 osds: 19 up, 51 in
         flags nodown




data:
    pools:   3 pools, 10240 pgs
    objects: 179k objects, 712 GB
    usage:   2135 GB used, 461 TB / 463 TB avail
    pgs:     20.879% pgs unknown
             79.121% pgs not active
             215798/552339 objects degraded (39.070%)
             3381 stale+undersized+degraded+peered
             3169 peering
             2138 unknown
             1285 undersized+degraded+peered
             262  stale+peering
             5    down
```

Related issues:	
Copied to RADOS - Backport #22942: luminous: ceph osd force-create-pg cause a...	**Resolved**

History

#1 - 02/02/2018 05:46 PM - Sage Weil

- Status changed from New to Need More Info

- Priority changed from Normal to High

Can you attach the entire osd log for the crashed osd? (In particular, we need to see what assertion failed.) Thanks!

#2 - 02/02/2018 05:46 PM - Sage Weil

- Project changed from Ceph to RADOS

- Category deleted (Monitor)

#3 - 02/02/2018 06:09 PM - Sage Weil

- Status changed from Need More Info to Fix Under Review

https://github.com/ceph/ceph/pull/20267

#4 - 02/02/2018 06:21 PM - Frank Li

4> 2018-01-31 22:47:22.942381 7fc641d0b700 1 10.102.52.37:6789/0 <== mon.0 10.102.52.37:6789/0 0 ==== log(1 entries from seq 1 at
2018-01-31 22:47:22.934106) v1 ==== 0+0+0 (0 0 0) 0x55f11b065f80 con 0x55f11b5a4000
-3> 2018-01-31 22:47:22.942394 7fc641d0b700 5 mon.dl1-kaf101@0(electing) e6 _ms_dispatch setting monitor caps on this connection
-2> 2018-01-31 22:47:22.942405 7fc641d0b700 5 mon.dl1-kaf101@0(electing).paxos(paxos recovering c 28110997..28111530) is_readable = 0 -
now=2018-01-31 22:47:22.942405 lease_expire=0.000000 has v0 lc 28111530
-1> 2018-01-31 22:47:22.942422 7fc641d0b700 5 mon.dl1-kaf101@0(electing).paxos(paxos recovering c 28110997..28111530) is_readable = 0 -
now=2018-01-31 22:47:22.942422 lease_expire=0.000000 has v0 lc 28111530
0> 2018-01-31 22:47:22.955415 7fc64350e700 -1
/home/jenkins-build/build/workspace/ceph-build/ARCH/x86_64/AVAILABLE_ARCH/x86_64/AVAILABLE_DIST/centos7/DIST/centos7/MACHINE_SIZ
E/huge/release/12.2.2/rpm/el7/BUILD/ceph-12.2.2/src/osd/OSDMapMapping.h: In function 'void OSDMapMapping::get(pg_t, std::vector<int>*, int*,
std::vector<int>*, int*) const' thread 7fc64350e700 time 2018-01-31 22:47:22.952877
/home/jenkins-build/build/workspace/ceph-build/ARCH/x86_64/AVAILABLE_ARCH/x86_64/AVAILABLE_DIST/centos7/DIST/centos7/MACHINE_SIZ
E/huge/release/12.2.2/rpm/el7/BUILD/ceph-12.2.2/src/osd/OSDMapMapping.h: 288: FAILED assert(pgid.ps() < p->second.pg_num)

#5 - 02/02/2018 06:22 PM - Frank Li

Please note the Crash happend on the monitor, not the OSD, the OSDs all stayed up, but all the monitor crashed.

#6 - 02/02/2018 08:29 PM - Frank Li

Just for future operational references, is there anyway to revert the Monitor map to a previous state in the case of an operation that crashed all the monitor daemons ?

#7 - 02/02/2018 09:14 PM - Frank Li

I've updated all the ceph-mon with the RPMs from the patch repo, they came up fine, and I've restarted the OSDs, but now they seems to be stuck in the booting stage:
[root@dl1-cephosd101 ceph]# ceph --admin-daemon /var/run/ceph/dl1approd-osd.7.asok status {
"cluster_fsid": "021a1428-fea5-4697-bcd0-a45c1c2ca80b",
"osd_fsid": "29f0db5d-bd64-4c4e-9ef7-04a8ac2b88e7",
"whoami": 7,
"state": "booting",
"oldest_map": 133275,
"newest_map": 133997,
"num_pgs": 483
}

here is the OSD debug log:
2018-02-02 21:13:03.959263 7f09fa6d9700 2 osd.0 133997 ms_handle_reset con 0x559fbdf82800 session 0
2018-02-02 21:13:03.959268 7f0a0bd3d700 5 -- 10.102.52.11:6800/38382 reap_dead delete 0x559fbdf82800
2018-02-02 21:13:03.959276 7f0a0bd3d700 5 -- 10.102.52.11:6800/38382 reap_dead delete 0x559fbedf1000
2018-02-02 21:13:03.959280 7f0a0bd3d700 5 -- 10.102.52.11:6800/38382 reap_dead delete 0x559fbedf2800
2018-02-02 21:13:03.959283 7f0a0bd3d700 5 -- 10.102.52.11:6800/38382 reap_dead delete 0x559fbedf5800
2018-02-02 21:13:03.959286 7f0a0bd3d700 5 -- 10.102.52.11:6800/38382 reap_dead delete 0x559fbedf8800
2018-02-02 21:13:04.285164 7f0a0ad3b700 1 -- 10.102.52.11:6800/38382 >> - conn(0x559fbedf8800 :6800 s=STATE_ACCEPTING pgs=0 cs=0 l=0)._process_connection sd=166
~~2018-02-02 21:13:04.285329 7f0a0ad3b700 1~~ -- 10.102.52.11:6800/38382 >> - conn(0x559fbedf8800 :6800 s=STATE_ACCEPTING_WAIT_BANNER_ADDR pgs=0 cs=0 l=0).read_bulk peer close file descriptor 166
2018-02-02 21:13:04.285347 7f0a0ad3b700 1 -- 10.102.52.11:6800/38382 >> - conn(0x559fbedf8800 :6800 s=STATE_ACCEPTING_WAIT_BANNER_ADDR pgs=0 cs=0 l=0).read_until read failed
2018-02-02 21:13:04.285351 7f0a0ad3b700 1 -- 10.102.52.11:6800/38382 >> - conn(0x559fbedf8800 :6800 s=STATE_ACCEPTING_WAIT_BANNER_ADDR pgs=0 cs=0 l=0)._process_connection read peer banner and addr failed
2018-02-02 21:13:04.285376 7f0a0ad3b700 2 -- 10.102.52.11:6800/38382 >> - conn(0x559fbedf8800 :6800 s=STATE_ACCEPTING_WAIT_BANNER_ADDR pgs=0 cs=0 l=0)._stop
2018-02-02 21:13:04.285427 7f09fa6d9700 2 osd.0 133997 ms_handle_reset con 0x559fbedf8800 session 0
2018-02-02 21:13:04.695847 7f0a07d77700 10 osd.0 133997 tick
2018-02-02 21:13:04.695864 7f0a07d77700 10 osd.0 133997 do_waiters -- start
2018-02-02 21:13:04.695867 7f0a07d77700 10 osd.0 133997 do_waiters -- finish
2018-02-02 21:13:04.866376 7f0a07576700 10 osd.0 133997 tick_without_osd_lock
2018-02-02 21:13:04.899985 7f09e9eb8700 20 osd.0 133997 update_osd_stat osd_stat(46278 MB used, 9266 GB avail, 9312 GB total, peers [] op hist [])
2018-02-02 21:13:04.900005 7f09e9eb8700 20 osd.0 133997 check_full_status cur ratio 0.00485325. nearfull_ratio 0.85. backfillfull_ratio 0.9, full_ratio 0.95, failsafe_ratio 0.97, new state none
2018-02-02 21:13:04.900022 7f09e9eb8700 5 osd.0 133997 heartbeat: osd_stat(46278 MB used, 9266 GB avail, 9312 GB total, peers [] op hist [])

#8 - 02/02/2018 09:15 PM - Frank Li

Frank Li wrote:

> I've updated all the ceph-mon with the RPMs from the patch repo, they came up fine, and I've restarted the OSDs, but now they seems to be stuck in the booting stage:

Should I be updating the ceph-osd to the same patched version ??

```
[root@dl1-cephosd101 ceph]# ceph --admin-daemon /var/run/ceph/dl1approd-osd.7.asok status {
"cluster_fsid": "021a1428-fea5-4697-bcd0-a45c1c2ca80b",
"osd_fsid": "29f0db5d-bd64-4c4e-9ef7-04a8ac2b88e7",
"whoami": 7,
"state": "booting",
"oldest_map": 133275,
"newest_map": 133997,
"num_pgs": 483
}
```

here is the OSD debug log:
```
2018-02-02 21:13:03.959263 7f09fa6d9700  2 osd.0 133997 ms_handle_reset con 0x559fbdf82800 session 0
2018-02-02 21:13:03.959268 7f0a0bd3d700  5 -- 10.102.52.11:6800/38382 reap_dead delete 0x559fbdf82800
2018-02-02 21:13:03.959276 7f0a0bd3d700  5 -- 10.102.52.11:6800/38382 reap_dead delete 0x559fbedf1000
2018-02-02 21:13:03.959280 7f0a0bd3d700  5 -- 10.102.52.11:6800/38382 reap_dead delete 0x559fbedf2800
2018-02-02 21:13:03.959283 7f0a0bd3d700  5 -- 10.102.52.11:6800/38382 reap_dead delete 0x559fbedf5800
2018-02-02 21:13:03.959286 7f0a0bd3d700  5 -- 10.102.52.11:6800/38382 reap_dead delete 0x559fbedf8800
2018-02-02 21:13:04.285164 7f0a0ad3b700  1 -- 10.102.52.11:6800/38382 >> - conn(0x559fbedf8800 :6800 s=STATE_ACCEPTING pgs=0
cs=0 l=0)._process_connection sd=166
2018-02-02 21:13:04.285329 7f0a0ad3b700  1 -- 10.102.52.11:6800/38382 >> - conn(0x559fbedf8800 :6800
s=STATE_ACCEPTING_WAIT_BANNER_ADDR pgs=0 cs=0 l=0).read_bulk peer close file descriptor 166
2018-02-02 21:13:04.285347 7f0a0ad3b700  1 -- 10.102.52.11:6800/38382 >> - conn(0x559fbedf8800 :6800
s=STATE_ACCEPTING_WAIT_BANNER_ADDR pgs=0 cs=0 l=0).read_until read failed
2018-02-02 21:13:04.285351 7f0a0ad3b700  1 -- 10.102.52.11:6800/38382 >> - conn(0x559fbedf8800 :6800
s=STATE_ACCEPTING_WAIT_BANNER_ADDR pgs=0 cs=0 l=0)._process_connection read peer banner and addr failed
2018-02-02 21:13:04.285376 7f0a0ad3b700  2 -- 10.102.52.11:6800/38382 >> - conn(0x559fbedf8800 :6800
s=STATE_ACCEPTING_WAIT_BANNER_ADDR pgs=0 cs=0 l=0)._stop
2018-02-02 21:13:04.285427 7f09fa6d9700  2 osd.0 133997 ms_handle_reset con 0x559fbedf8800 session 0
2018-02-02 21:13:04.695847 7f0a07d77700 10 osd.0 133997 tick
2018-02-02 21:13:04.695864 7f0a07d77700 10 osd.0 133997 do_waiters -- start
2018-02-02 21:13:04.695867 7f0a07d77700 10 osd.0 133997 do_waiters -- finish
2018-02-02 21:13:04.866376 7f0a07576700 10 osd.0 133997 tick_without_osd_lock
2018-02-02 21:13:04.899985 7f09e9eb8700 20 osd.0 133997 update_osd_stat osd_stat(46278 MB used, 9266 GB avail, 9312 GB total, peers []
op hist [])
2018-02-02 21:13:04.900005 7f09e9eb8700 20 osd.0 133997 check_full_status cur ratio 0.00485325. nearfull_ratio 0.85. backfillfull_ratio 0.9,
full_ratio 0.95, failsafe_ratio 0.97, new state none
2018-02-02 21:13:04.900022 7f09e9eb8700  5 osd.0 133997 heartbeat: osd_stat(46278 MB used, 9266 GB avail, 9312 GB total, peers [] op hist
[])
```

#9 - 02/04/2018 07:29 AM - Frank Li

ALso, while the monitors came up and form a forum, but very soon, they would all stop responding again, and then I find three out of the five would not respond to the mon_status command from the asok socket, and two of the ones that responded are in probing mode and is considered out of the quorum.

#10 - 02/05/2018 03:52 AM - Kefu Chai

- Target version changed from v12.2.2 to v12.2.3

Should I be updating the ceph-osd to the same patched version ??

no need to update ceph-osd.

but very soon, they would all stop responding again

could you post the debug-mon=20 log of one of the mon nodes?

#11 - 02/06/2018 01:23 AM - Frank Li

- File dl1approd-mon.dl1-kaf101.log.prob.1.gz added

- File dl1approd-mon.dl1-kaf101.log.prob.2.gz added

please see attached logs for when the monitor was started, and then later got into the stuck mode.
I just replaced the IP address with xxxxx.

#12 - 02/06/2018 06:50 AM - Kefu Chai

- Status changed from Fix Under Review to Pending Backport

#13 - 02/06/2018 07:49 PM - Frank Li

so anything I can do to help recover the cluster ??

#14 - 02/07/2018 05:50 AM - Nathan Cutler

- Backport set to luminous

#15 - 02/07/2018 05:50 AM - Nathan Cutler

- Copied to Backport #22942: luminous: ceph osd force-create-pg cause all ceph-mon to crash and unable to come up again added

#16 - 02/07/2018 06:12 AM - Kefu Chai

```
2018-02-05 18:02:21.203957 7f9318dd5700  5 mon.dl1-kaf101@0(electing).elector(1497)  so far i have { mon.0: fe
atures 2305244844532236283 mon_feature_t([kraken
,luminous]), mon.1: features 2305244844532236283 mon_feature_t([kraken,luminous]), mon.2: features 23052448445
32236283 mon_feature_t([kraken,luminous]), mon.3
: features 2305244844532236283 mon_feature_t([kraken,luminous]), mon.4: features 2305244844532236283 mon_featu
re_t([kraken,luminous]) }
2018-02-05 18:02:21.203974 7f9318dd5700 10 mon.dl1-kaf101@0(electing).elector(1497) bump_epoch 1497 to 1498
..

2018-02-05 18:02:21.207901 7f9318dd5700 10 mon.dl1-kaf101@0(electing) e6 win_election epoch 1498 quorum 0,1,2,
3,4 features 2305244844532236283 mon_features mo
n_feature_t([kraken,luminous])
```

the cluster formed a quorum of [0,1,2,3,4] since 18:02:21. and it was not in probing mode after the quorum was formed.

> and two of the ones that responded are in probing mode and is considered out of the quorum.

how do you come to this conclusion?

> I find three out of the five would not respond to the mon_status command from the asok socket

did you sent mon_status to dl1approd-mon.dl1-kaf101?

also i'd suggest you create another ticket to track this issue. as it's different from the one we've addressed in [#22847](#).

#17 - 02/07/2018 06:56 AM - Kefu Chai

```
2018-02-05 18:32:25.923127 7f931b5da700  0 log_channel(cluster) log [INF] : osd.0 marked down after no beacon
for 900.076451 seconds
...
2018-02-05 18:32:25.925921 7f931b5da700  0 log_channel(cluster) log [INF] : osd.44 marked down after no beacon
```

```
for 900.076451 seconds
```

was any osd up when you were testing?

#18 - 02/07/2018 05:58 PM - Frank Li

Kefu Chai wrote:

> [...]
>
> was any osd up when you were testing?

Yes, but they were in Booting State, all of them, I'll file a different ticket for that.

#19 - 02/07/2018 06:01 PM - Frank Li

Kefu Chai wrote:

> [...]
>
> the cluster formed a quorum of [0,1,2,3,4] since 18:02:21. and it was not in probing mode after the quorum was formed.
>
> > and two of the ones that responded are in probing mode and is considered out of the quorum.
>
> how do you come to this conclusion?

When the ceph -s stopped responding on kaf101, I tried to run the mon_status command on the asok socket, which also hang.
When I tried the same mon_status command on kaf401, it responded and showed that it was probing and unable to form a quorum.
[root@dl1-kaf401 frli]# ceph --admin-daemon /var/run/ceph/dl1approd-mon.*.asok mon_status {
"name": "dl1-kaf401",
"rank": 4,
"state": "electing",
"election_epoch": 35553,
"quorum": [],
"features": {
"required_con": "153140804152475648",
"required_mon": [
"kraken",
"luminous"
],
"quorum_con": "2305244844532236283",
"quorum_mon": [
"kraken",
"luminous"
]
},

> I find three out of the five would not respond to the mon_status command from the asok socket

did you sent mon_status to dl1approd-mon.dl1-kaf101?

also i'd suggest you create another ticket to track this issue. as it's different from the one we've addressed in [#22847](#).

#20 - 02/07/2018 06:02 PM - Frank Li

I'll open a separate ticket to track the monitor not responding issue. the fix for the force-create-pg issue is good.

#21 - 02/07/2018 06:06 PM - Frank Li

https://tracker.ceph.com/issues/22952

ticket opened for ceph-mon not responding issue.

#22 - 02/09/2018 10:08 PM - Frank Li

Just FYI, Using this new patch, the leader ceph-mon will hung once it is up, and any kind of OSD command is ran, like ceph osd unset nodown, or bring up/down an OSD will cause the leader to hang. I've tried it on another 12.2.2 cluster.
see https://tracker.ceph.com/issues/22952 for details. So while this patch fixed the original issue of crashing, I'm still no able to get my cluster into a healthy state and risk losing all the data, are there any other way to bring the cluster back to working mode ??

#23 - 02/12/2018 08:49 AM - Kefu Chai

- Related to Bug #22952: Monitor stopped responding after awhile added

#24 - 02/14/2018 06:51 AM - Frank Li

just curious, I saw this patch got merged to the master branch and has the target version of 12.2.3, does that mean it'll make it into the official 12.2.3 ?

#25 - 02/14/2018 09:10 AM - Nathan Cutler

Frank Li wrote:

> just curious, I saw this patch got merged to the master branch and has the target version of 12.2.3, does that mean it'll make it into the official 12.2.3 ?

The target version field on this issue was presumably filled in by you when you opened the bug.

The luminous backport is https://github.com/ceph/ceph/pull/20399 and it is still pending. It will not be in 12.2.3.

#26 - 02/14/2018 05:48 PM - Frank Li

ok, I'll wait for 12.2.4 or a 12.2.3 + the patch then.

#27 - 02/24/2018 04:31 AM - Kefu Chai

- Related to deleted (Bug #22952: Monitor stopped responding after awhile)

#28 - 03/29/2018 01:24 PM - Nathan Cutler

- Status changed from Pending Backport to Resolved

Files

ceph.versions	518 Bytes	02/01/2018	Frank Li
ceph.osd.tree.log	5.46 KB	02/01/2018	Frank Li
ceph_health_detail.log	13.3 KB	02/01/2018	Frank Li
dl1approd-mon.dl1-kaf101.log.prob.1.gz	960 KB	02/06/2018	Frank Li
dl1approd-mon.dl1-kaf101.log.prob.2.gz	902 KB	02/06/2018	Frank Li