

Arvados - Feature #13382

[keepstore] Write new blocks to appropriate storage class

04/24/2018 01:28 PM - Tom Clegg

Status: Resolved	Start date: 04/02/2021										
Priority: Normal	Due date:										
Assigned To: Tom Clegg	% Done: 100%										
Category:	Estimated time: 0.00 hour										
Target version: 2021-04-14 sprint											
Description <p>A PUT request can specify a storage class:</p> <pre>X-Keep-Storage-Classes: foo, bar</pre> <p>The keepstore should respond with how many replicas it was able to write for each storage class.</p> <p>Keepstore should go through all volumes it has access to and attempt to record the block enough times to satisfy all requested storage classes. Once a storage class is satisfied it is removed from the list. When all storage classes are satisfied or all volumes have been checked, a response is returned: success if at least one block was written (or already exists) with <i>any</i> of the desired storage classes, and failure if not.</p> <p>Proposed format:</p> <pre>X-Keep-Storage-Classes-Confirmed: foo=1, bar=1</pre> <p>The client (#17392) is responsible for keeping track of how many replicas have been written for each storage class. If one storage class is satisfied but not another, the satisfied one can be removed from the X-Keep-Storage-Classes list. <i>For the client</i>, the overall write is a success if all storage classes were satisfied, and a failure if any of the storage classes could not be satisfied.</p> <p>If the keepstore server can satisfy more than one requested storage class with multiple volumes, the block should be written to all of them. If a volume has more than one storage class, it can satisfy multiple storage classes at once.</p> <p>The X-Keep-Storage-Classes-Confirmed header should return the replicas per storage class. If two storage classes were satisfied then it would return "foo=1, bar=1" even if only a single replica to a single volume was actually written.</p> <p>"X-Keep-Replicas-Stored" will be the sum of the actual replicas stored (for foo=1,bar=1 this could be 1 or 2 depending on whether foo and bar are the same or separate volumes).</p>											
Subtasks: <table><tr><td>Task # 17482: Review 13382-write-to-storage-class</td><td style="text-align: right;">Resolved</td></tr></table>		Task # 17482: Review 13382-write-to-storage-class	Resolved								
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Related issues: <table><tr><td>Related to Arvados - Feature #11184: [Keep] Support multiple storage classes</td><td style="text-align: right;">In Progress</td></tr><tr><td>Related to Arvados - Story #13430: [arv-put] [Python] Allow caller to specify...</td><td style="text-align: right;">Resolved 05/22/2018</td></tr><tr><td>Related to Arvados Epics - Story #16107: Storage classes</td><td style="text-align: right;">New 03/01/2021 06/30/2021</td></tr><tr><td>Has duplicate Arvados - Feature #11646: [keepstore] Support X-Keep-Desired-Cl...</td><td style="text-align: right;">Closed 05/09/2017</td></tr><tr><td>Blocks Arvados - Story #17465: Support writing blocks to correct storage clas...</td><td style="text-align: right;">In Progress</td></tr></table>		Related to Arvados - Feature #11184: [Keep] Support multiple storage classes	In Progress	Related to Arvados - Story #13430: [arv-put] [Python] Allow caller to specify...	Resolved 05/22/2018	Related to Arvados Epics - Story #16107: Storage classes	New 03/01/2021 06/30/2021	Has duplicate Arvados - Feature #11646: [keepstore] Support X-Keep-Desired-Cl...	Closed 05/09/2017	Blocks Arvados - Story #17465: Support writing blocks to correct storage clas...	In Progress
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Related to Arvados - Story #13430: [arv-put] [Python] Allow caller to specify...	Resolved 05/22/2018										
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Associated revisions

Revision b4209cce - 04/06/2021 02:25 PM - Tom Clegg

Merge branch '13382-write-to-storage-class'

closes #13382

Arvados-DCO-1.1-Signed-off-by: Tom Clegg <tom@curii.com>

History

#1 - 04/24/2018 01:28 PM - Tom Clegg

- Related to Feature #11184: [Keep] Support multiple storage classes added

#2 - 05/02/2018 02:29 PM - Tom Clegg

- Description updated

#3 - 05/02/2018 04:40 PM - Tom Clegg

- Description updated

#4 - 05/02/2018 04:40 PM - Tom Clegg

- Description updated

#5 - 05/02/2018 04:42 PM - Tom Morris

- Story points set to 1.0

#6 - 05/02/2018 04:43 PM - Tom Morris

- Target version changed from To Be Groomed to Arvados Future Sprints

#7 - 05/02/2018 04:49 PM - Tom Clegg

- Description updated

#8 - 05/02/2018 04:52 PM - Tom Clegg

- Description updated

#9 - 05/02/2018 04:53 PM - Peter Amstutz

- Related to Story #13430: [arv-put] [Python] Allow caller to specify storage classes when writing data to Keep added

#10 - 05/08/2018 12:58 PM - Tom Clegg

- Description updated

#11 - 05/08/2018 12:59 PM - Tom Clegg

- Has duplicate Feature #11646: [keepstore] Support X-Keep-Desired-Classes header added

#12 - 02/16/2021 06:53 PM - Nico César

- Related to Story #16107: Storage classes added

#13 - 02/16/2021 07:41 PM - Peter Amstutz

- Description updated

#14 - 02/24/2021 04:18 PM - Peter Amstutz

- Target version changed from Arvados Future Sprints to 2021-03-17 sprint

#15 - 02/24/2021 04:32 PM - Peter Amstutz

- Target version changed from 2021-03-17 sprint to To Be Groomed

- Description updated

#16 - 03/03/2021 06:50 PM - Peter Amstutz

- Target version changed from To Be Groomed to 2021-03-17 sprint

#17 - 03/03/2021 06:52 PM - Peter Amstutz

- Target version deleted (2021-03-17 sprint)

#18 - 03/10/2021 05:30 PM - Peter Amstutz

- Description updated

#19 - 03/10/2021 05:31 PM - Peter Amstutz

- Description updated

#20 - 03/10/2021 05:47 PM - Peter Amstutz

- Story points changed from 1.0 to 3.0
- Target version set to 2021-03-31 sprint

#21 - 03/17/2021 04:07 PM - Peter Amstutz

- Assigned To set to Tom Clegg

#22 - 03/30/2021 05:04 PM - Tom Clegg

- Status changed from New to In Progress

#23 - 03/31/2021 03:23 PM - Peter Amstutz

- Target version changed from 2021-03-31 sprint to 2021-04-14 sprint

#24 - 03/31/2021 04:49 PM - Lucas Di Pentima

- Blocks Story #17465: Support writing blocks to correct storage classes in Python SDK added

#25 - 04/01/2021 04:27 PM - Tom Clegg

- Description updated

#26 - 04/01/2021 04:27 PM - Tom Clegg

13382-write-to-storage-class @ [96c664032e219cab6113acadca843f94009d39e4](https://ci.arvados.org/view/Developer/job/developer-run-tests/2400/) --
<https://ci.arvados.org/view/Developer/job/developer-run-tests/2400/>

#27 - 04/05/2021 02:40 PM - Lucas Di Pentima

Just one minor observation:

I think up to [fdd48c8](#), the putResult name made sense, but then as I understand it, the struct usage got a slightly different meaning. Do you think it would be clearer to name it something like put[Job|Task]?

The rest LGTM, thanks!

#28 - 04/05/2021 06:28 PM - Tom Clegg

Good point. How does "putProgress" sound? (I'm thinking it's just a progress tracker, doesn't have any other info about the job/task.)

13382-write-to-storage-class @ [4f33147a6937d3b22044346711b2e9c16a29f351](https://ci.arvados.org/view/Developer/job/developer-run-tests/2401/) --
<https://ci.arvados.org/view/Developer/job/developer-run-tests/2401/>

#29 - 04/06/2021 03:48 PM - Tom Clegg

- Status changed from In Progress to Resolved

Applied in changeset [arvados|b4209cce618b79a1cc022a85f860268a988201f1](#).

#30 - 05/13/2021 03:17 PM - Peter Amstutz

- Release set to 38