

Infrastructure - Story #2052

Metacat Create locks SystemMetadata Map as well as Synchronization on the same PID

2011-11-23 18:29 - Robert Waltz

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|---|--------------------------|------------------------|------------|
| Status: | Closed | Start date: | 2011-11-23 |
| Priority: | Normal | Due date: | |
| Assignee: | Ben Leinfelder | % Done: | 100% |
| Category: | Metacat | Estimated time: | 0.00 hour |
| Target version: | Sprint-2012.01-Block.1.1 | | |
| Story Points: | | | |
| Description | | | |
| Synchronization will lock the SystemMetadata PID before create in Metacat. Metacat in create will lock as well. | | | |
| Does put on the Hazelcast SystemMetadata Map block on a locked pid? | | | |
| Are we certain all updates to the SystemMetadata Map will not cause a deadlock? | | | |

History

#1 - 2011-12-06 14:43 - Dave Vieglais

- Position set to 1
- Target version changed from Sprint-2011.48-Block.6 to Sprint-2011.49-Block.6

#2 - 2011-12-19 18:04 - Dave Vieglais

- Target version changed from Sprint-2011.49-Block.6 to Sprint-2011.51-Block.6
- Position deleted (2)
- Position set to 1

#3 - 2012-01-04 18:34 - Chris Jones

- Assignee changed from Chris Jones to Ben Leinfelder

Assigning to Ben for expediency.

#4 - 2012-01-04 18:52 - Matthew Jones

- Target version changed from Sprint-2011.51-Block.6 to Sprint-2012.01-Block.1.1
- Position deleted (14)
- Position set to 320

#5 - 2012-01-04 20:50 - Ben Leinfelder

A few things:

1) I don't see a call to "lock" a PID on the Hazelcast SystemMetadata map in d1_synchronization.

2) I'm not sure why d1_synchronization needs to interact directly with the Hazelcast SystemMetadata map. There are methods to get(), create() and registerSystemMetadata() on the CN and it seems reasonable for this d1_synchronization process to use those API methods instead of going through the "backdoor" of the HZ map.

(Perhaps there is a reason for calling the shared map directly and I am missing the point?)

If all interactions with the SystemMetadata map were limited to the CN implementation, I think we would not be at risk for deadlock behavior.

#6 - 2012-01-13 19:39 - Ben Leinfelder

- Status changed from New to Closed

chris and robert say:

The synchronization process gets a system metadata lock from ILock in the processing cluster rather than the "storeage" cluster (that is shared with Metacat)