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neo4j / neo4j

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Use flat-combining for concurrent application of updates to the LabelScanStore

Merged tinwelint merged 2 commits into neo4j:2.2 from chrisvest:2.2-tx-label-updates May 4, 2015

Conversation 8

Commits 2

Files changed 11

+518 -39



chrisvest commented Apr 22, 2015

Collaborator

This is similar to how we amortise the transaction log fsync cost.
When a transaction processing thread wants to write changes to the LabelScanStore (this is during commit, after they have written their commands to the transaction log), it starts out by adding a unit of work to a concurrent, wait-free batching stack.
Then it attempts to grab a lock (this happens inside the new WorkSync abstraction).
If it gets the lock, then it grabs the entire stack of work in one go, and combines all the units of work into a single unit.
This single unit of work is then applied to a single LabelScanWriter.
This amortises the creation and closure of LabelScanWriters, which are both very costly operations compared to just writing to a LabelScanWriter.

Labels

2.2

kernel

Milestone

No milestone

Assignee

tinwelint

2 participants



chrisvest changed the title from 2.2 tx label updates to Use flat-combining for concurrent application of updates to the LabelScanStore Apr 22, 2015

chrisvest added kernel 2.2 labels Apr 22, 2015

tinwelint commented on an outdated diff Apr 22, 2015 Show outdated diff

tinwelint commented on an outdated diff Apr 22, 2015 Show outdated diff

chrisvest commented on an outdated diff Apr 22, 2015 Show outdated diff

tinwelint self-assigned this Apr 27, 2015

tinwelint commented on an outdated diff Apr 30, 2015 Show outdated diff

tinwelint commented on an outdated diff Apr 30, 2015 Show outdated diff

chrisvest added some commits Apr 22, 2015

Use flat-combining for concurrent application of updates to the Label... 29123b9

Fix flaky BatchInsertTest 80af44f

tinwelint merged commit 3177d80 into neo4j:2.2 May 4, 2015
1 check passed

View details

chrisvest deleted the chrisvest:2.2-tx-label-updates branch May 4, 2015

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