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Hadoop HDFS / HDFS-10475 Adding metrics for long FSNamesystem read and write locks / HDFS-10872

Add MutableRate metrics for FSNamesystemLock operations

Details

Type: □ Sub-task
Priority: ⋒ Major

Affects Version/s: None

Component/s: namenode
Labels: None
Target Version/s: 2.7.4
Hadoop Flags: Reviewed

Status: RESOLVED

Resolution: Fixed

Fix Version/s: 2.8.0, 2.7.4, 3.0.0-alpha2

Description

Add metrics for FSNamesystemLock operations to see, overall, how long each operation is holding the lock for. Use MutableRate metrics for now.

Attachments

SSLockPerf.java	9 kB	04/Oct/16 00:22
■ HDFS-10872.000.patch	54 kB	30/Sep/16 23:27
■ HDFS-10872.001.patch	90 kB	17/Oct/16 17:41
■ HDFS-10872.002.patch	90 kB	17/Oct/16 20:05
■ HDFS-10872.003.patch	90 kB	18/Oct/16 18:09
■ HDFS-10872.004.patch	90 kB	18/Oct/16 23:50
■ HDFS-10872.005.patch	85 kB	10/Nov/16 01:20
■ HDFS-10872.006.patch	85 kB	10/Nov/16 17:18
■ HDFS-10872.007.patch	84 kB	10/Nov/16 19:43
■ HDFS-10872.008.patch	222 kB	11/Nov/16 18:18
	84 kB	11/Nov/16 19:27
HDFS-10872.009.patch HDFS-10872.010.patch	84 kB 86 kB	11/Nov/16 19:27 11/Nov/16 23:55
■ HDFS-10872.010.patch	86 kB	11/Nov/16 23:55
HDFS-10872.010.patch HDFS-10872.011.patch	86 kB	11/Nov/16 23:55 12/Nov/16 06:19
HDFS-10872.010.patch HDFS-10872.011.patch HDFS-10872.012.patch	86 kB 86 kB 85 kB	11/Nov/16 23:55 12/Nov/16 06:19 14/Nov/16 16:10
 ☐ HDFS-10872.010.patch ☐ HDFS-10872.011.patch ☐ HDFS-10872.012.patch ☐ HDFS-10872-branch-2.012.patch 	86 kB 86 kB 85 kB 80 kB	11/Nov/16 23:55 12/Nov/16 06:19 14/Nov/16 16:10 14/Nov/16 19:50

✓ Issue Links

depends upon

HDFS-10896 Move lock logging logic from FSNamesystem into FSNamesystemLock



duplicates

HDFS-9952 Expose FSNamesystem lock wait time as metrics



is depended upon by

HDFS-10873 Add histograms for FSNamesystemLock Metrics	≋	OPEN
HDFS-11021 Add FSNamesystemLock metrics for BlockManager operations	\$	OPEN
is related to		
□ HDFS-11261 Document missing NameNode metrics	*	RESOLVED

Show 4 more links (1 is related to, 2 relates to, 1 requires)

Activity

▼ ○ Erik Krogen added a comment - 30/Sep/16 23:22

Attaching v000 patch.

This makes FSNamesystemLock into a MetricsSource. When the lock is released, the amount of time for which the lock was held is recorded as a metric corresponding to the specific operation which caused the lock to be held. This was achieved by manually specifying the operation in calls to FSNamesystemLock.read/writeLock since there is no easy way to tell what operation caused the lock's acquisition from within FSNamesystemLock. Lock releases which do not specify an operation are filed under "OTHER". There are a number of lock usages within BlockManager which have this classification because BlockManager only views the Namesystem API, not FSNamesystem, and I did not want to modify that API. I am open to suggestions here.

Since this occurs along the critical path and may add overhead, it is disabled by default. To minimize overhead, each thread stores a local copy of the metrics. Every so often, set by a configurable interval, each thread will insert the metrics it has accumulated into a shared MetricsRegistry. I am doing some microbenchmark performance testing now and will post results when they are available.

Erik Krogen added a comment - 04/Oct/16 00:22

Some comments on performance considerations...

I am attaching code (FSLockPerf.java) that I used to do somewhat rudimentary microbenchmarking. It's not perfect but hopefully it gives a bit of an idea of what kind of overhead this may incur. If anyone is interested in seeing other numbers let me know and I will do my best to generate them. Note that this feature is disabled by default, so no overhead is incurred for those not actively opting in to the feature.

I include two different tests, "overall" and "aggTime". In both I focus on the worst case scenario in which all threads are reader threads, i.e. they are not hindered by the Namesystem lock and contend solely on metrics. In both cases I use 200 threads to model what would occur in a highly contested system. Also, all aggregations involve 50 operations, emulating 50 distinct operation types occurring at each thread since the last aggregation, which seems a conservatively high upper bound since most operations are uncommon.

overall tries to be more wholistic but involves a higher degree of variability since there are actually locks being held and such. This test sets the aggregation interval at various intervals (including completely disabled and a high enough interval that aggregation is never triggered) and tests the overall time it takes each of the 200 threads to complete 500,000 cycles of read lock/unlock (including all metrics-related operations). Over 1,000 iterations I got:

```
Agg Interval
                Total Time MS (Avg)
                                         Total Time MS (StdDev)
        30518
                1777
9999999 30825
                1673
20000
       30183
                1709
10000
        30272
                1681
5000
        30278
                1740
1000
        30307
                1702
10
        30350
                1692
```

Clearly the metrics processing fits within the noise of locking and such, especially given that the average of the runs with the logic disabled ended up being higher than with the logic enabled. Still, these results were not very satisfying, so I tried to be more specific with aggTime.

aggTime is the more narrow of the two. I assume the local tracking of metrics is very cheap, simply incrementing a counter within a ThreadLocal, so I focus on the time to do the more expensive aggregate (involving a synchronized method to update the MutableRate metric). First I run a test with only a single thread updating metrics, then do the full 200 threads under a few different conditions: turning on and off aggregation (to get a baseline figure of performance with many threads running), and including a 1-

1

millisecond sleep between operations (to emulate slightly less pessimistic conditions of lock contention). Each thread does 10,000 aggregations and I measure the time per operation; over 10 trials I got:

```
10000 aggregation per thread over 100 trials
Test Average Time (ns) Std Dev (ns)
Single Thread 3107 606
No Agg, No Wait 551 551
Agg, No Wait 235850 24059
No Agg, Wait 1065525 625
Agg, Wait 1158477 8743
```

So it seems that even under highly contested conditions an aggregation adds ~100-200 microseconds to the execution path, and without contention only ~3-4 microseconds. Given that a typical aggregation period would be the same as the metrics collection interval, say 10-60 seconds, this seems reasonable for a disabled-by-default feature.

Zhe Zhang added a comment - 13/Oct/16 18:23

Thanks Erik for the patch! The structure looks good overall. A few comments:

- 1. Since block reporting is a major factor of write locking, I think we should add the new unlock API to BlockManager. We are not removing any existing APIs so compatibility shouldn't be a concern. Due the size of the current patch we can probably do that in a separate JIRA though.
- 2. Interesting that we are almost aligned with how audit logs are recorded. On the one hand this confirms that there's probably no easier way to get the method name. On the other hand we should construct a String variable that can be reused by audit logging and this locking metrics logic. This avoids one temporary variable for each method call.
- 3. Have you considered integrating the Metrics logic into NameNodeMetrics?
- Erik Krogen added a comment 17/Oct/16 17:41

Thanks for the review, zhz.

- 1. I agree. Created HDFS-11021 to track.
- 2. Used a final String variable for each operation whose name is used more than once.
- 3. Per our offline discussion the best place for these metrics to live is actually FSNamesystem's metrics. Thank you for bringing up the issue.

Attaching v001 patch with the above changes and some bug fixes.

✓ ○ Hadoop QA added a comment - 17/Oct/16 19:27

Vote	Subsystem	Runtime	Comment
0	reexec	0m 23s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.
+1	mvninstall	7m 58s	trunk passed
+1	compile	0m 47s	trunk passed
+1	checkstyle	0m 36s	trunk passed
+1	mvnsite	0m 52s	trunk passed
+1	mvneclipse	0m 13s	trunk passed
+1	findbugs	1m 41s	trunk passed
+1	javadoc	0m 40s	trunk passed
+1	mvninstall	0m 45s	the patch passed
+1	compile	0m 42s	the patch passed
+1	javac	0m 42s	the patch passed
-0	checkstyle	0m 34s	hadoop-hdfs-project/hadoop-hdfs: The patch generated 6 new + 830 unchanged - 0 fixed = 836 total (was 830)
+1	mvnsite	0m 52s	the patch passed

+1	mvneclipse	0m 10s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 1s	The patch has no ill-formed XML file.
-1	findbugs	1m 49s	hadoop-hdfs-project/hadoop-hdfs generated 1 new + 0 unchanged - 0 fixed = 1 total (was 0)
+1	javadoc	0m 40s	the patch passed
-1	unit	77m 35s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 19s	The patch does not generate ASF License warnings.
		98m 2s	

Reason	Tests
FindBugs	module:hadoop-hdfs-project/hadoop-hdfs
	Should org.apache.hadoop.hdfs.server.namenode.FSNamesystemLock\$LocalMetric be a <i>static</i> inner class? At FSNamesystemLock.java:[lines 359-376]
Failed junit tests	hadoop.hdfs.server.blockmanagement.TestReconstructStripedBlocksWithRackAwareness

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:9560f25
JIRA Issue	HDFS-10872
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12833771/HDFS-10872.001.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux ae23194037c7 3.13.0-96-generic #143-Ubuntu SMP Mon Aug 29 20:15:20 UTC 2016 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / ed9fcbe
Default Java	1.8.0_101
findbugs	v3.0.0
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17183/artifact/patchprocess/diff-checkstyle-hadoop-hdfs-project_hadoop-hdfs.txt
findbugs	https://builds.apache.org/job/PreCommit-HDFS-Build/17183/artifact/patchprocess/new-findbugs-hadoop-hdfs-project_hadoop-hdfs.html
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17183/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17183/testReport/
modules	C: hadoop-hdfs-project/hadoop-hdfs U: hadoop-hdfs-project/hadoop-hdfs
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17183/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

➤ ○ Erik Krogen added a comment - 17/Oct/16 20:05

Attaching v002 patch addressing findbugs and checkstyle. Unit test failure doesn't seem related; passes fine locally.

➤ ○ Zhe Zhang added a comment - 17/Oct/16 23:13

Thanks Erik for the updated patch. I think we are pretty close.

About the main change in FSNamesystemLock

- 1. If a thread lives shorter than the configured metricAggregationInterval, are we gonna lose its locking metrics? In reality it's probably not a big concern since RPC handler threads are reused. But putting a comment here for more thoughts.
- 2. Selecting a *real* default aggregation interval is not easy. Maybe we should document it in hdfs-default.xml. Alternatively we can have 2 config knobs, one binary and one integer.
- 3. Agreed that the overhead with the current implementation is pretty small (say with 10 sec interval). As a follow-on optimization (depending on experience from production deployment) maybe we can consider a combination of hard-deadline and opportunistic try-and-backoff. E.g. at a higher frequency than metricAggregationInterval we can try the lock for opHoldtimeMetrics; if lock is free, dump the metrics, otherwise try lock in some more time.

A few minors about naming:

1. The below mapping merges the yield() locking time into the contentSummary category. It looks a reasonable approximation to me. But more opinions would be helpful.

```
@@ -115,7 +115,7 @@ public boolean yield() {
    // unlock
    dir.readUnlock();
- fsn.readUnlock();
+ fsn.readUnlock("contentSummary");
```

- 2. getBlockLocations currently appears as open in audit logging. It could be an existing bug. But since it has been audit logged that way it doesn't make sense to change here. I'll create a separate JIRA to discuss.
- 3. writeUnlock("clearCorruptLazyPersistFile"); should be "clearCorruptLazyPersistFiles"
- 4. Maybe the checkLease category should be leasesMonitor? There's a one-off checkLease() method in FSN
- 5. The one in NamenodeFsck#getBlockLocations, maybe we should use "fsckGetBlockLocations" to differentiate from regular getBlockLocations RPC call?
- ➤ Erik Krogen added a comment 18/Oct/16 18:09

zhz thanks for the detailed review!

- 1. Yes, if it lives shorter than the aggregation interval, its metrics will be lost. I was thinking the same that the threads are re-used so very few metrics should be lost, and also from within the FSNamesystemLock there wouldn't be any easy way to detect that the thread is exiting to flush its metrics. I think this is worth documenting though; I've added some discussion on the FSNamesystemLock Javadoc.
- 2. Good point. I've added some guidance about a good default in hdfs-default.xml.
- 3. This seems like a pretty interesting idea. It could be pretty simple / little implementation effort, but I think there is some question of if it will actually be helpful. I can code something up for this patch or leave it... Let me know what you think.
- 1. Right. That yield() is only called as part of the contentSummary operation, just quickly releasing and reacquiring the lock which contentSummary originally held. The yield could make a single contentSummary appear as multiple operations instead of a single one, but the total time should still be accurate.
- 2. For any operation that already had an audit log name I kept that for consistency. Agreed that it doesn't make sense to change here.
- 3. Thanks, fixed.
- 4. Yes, agreed. Not sure why I originally went with checkLease. I've changed it to leaseManager to be consistent with the name of the class.
- 5. Agreed, changed. Good catch.

Attaching v003 patch with changes discussed.

O Hadoop QA added a comment - 18/Oct/16 19:57



Vote	Subsystem	Runtime	Comment
0	reexec	0m 24s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.

+1	mvninstall	8m 44s	trunk passed
+1	compile	0m 48s	trunk passed
+1	checkstyle	0m 38s	trunk passed
+1	mvnsite	0m 55s	trunk passed
+1	mvneclipse	0m 14s	trunk passed
+1	findbugs	1m 43s	trunk passed
+1	javadoc	0m 44s	trunk passed
+1	mvninstall	0m 50s	the patch passed
+1	compile	0m 46s	the patch passed
+1	javac	0m 46s	the patch passed
-0	checkstyle	0m 36s	hadoop-hdfs-project/hadoop-hdfs: The patch generated 1 new + 830 unchanged - 0 fixed = 831 total (was 830)
+1	mvnsite	0m 54s	the patch passed
+1	mvneclipse	0m 11s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 1s	The patch has no ill-formed XML file.
+1	findbugs	1m 50s	the patch passed
+1	javadoc	0m 39s	the patch passed
-1	unit	77m 48s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 18s	The patch does not generate ASF License warnings.
		99m 25s	

Reason	Tests
Failed junit tests	hadoop.hdfs.TestRollingUpgrade

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:9560f25
JIRA Issue	HDFS-10872
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12833997/HDFS-10872.003.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux 054dc15365c5 3.13.0-96-generic #143-Ubuntu SMP Mon Aug 29 20:15:20 UTC 2016 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / b733a6f
Default Java	1.8.0_101
findbugs	v3.0.0
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17205/artifact/patchprocess/diff-checkstyle-hadoop-hdfs-project_hadoop-hdfs.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17205/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17205/testReport/
modules	C: hadoop-hdfs-project/hadoop-hdfs U: hadoop-hdfs-project/hadoop-hdfs
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17205/console

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This message was automatically generated.

Zhe Zhang added a comment - 18/Oct/16 23:35

Thanks Erik! The v3 patch LGTM. +1 pending fixing the long line checkstyle issue.

* {@link org.apache.hadoop.hdfs.DFSConfigKeys#DFS_NAMENODE_LOCK_METRIC_AGG_INTERVAL_MS_KEY}

I think we should leave the try-and-backoff as a potential optimization.

I will hold off committing the patch until EOD Thursday to collect more feedbacks. kihwal Do you think the patch addresses your use cases? andrew.wang Do you think the aggregation method addresses your concern on performance (see benchmark above)? liuml07 Any comments on the form of output?

💌 🔘 Erik Krogen added a comment - 18/Oct/16 23:50

Attaching v004 to fix checkstyle.

Waiting sounds good. Thanks Zhe.

Andrew Wang added a comment - 18/Oct/16 23:55

Thanks for working on this folks, and sorry for coming to this review late. I have a few comments looking at this patch:

- I'd prefer we use try/finally to do the lock/unlocks in aggregateMetrics for safety.
- We're doing the thread-local increment and aggregate outside of the metrics system right now. Did we look into making the
 metrics classes themselves multi-threading friendly? Then we could more easily reuse this code in other places.
- Related, the aggregation right now is done periodically on increment. I think what we'd really like is aggregate-on-read. The metrics classes support this via setChanged and snapshot. Otherwise, occasionally one operation is getting hit with the penalty of aggregating all the metrics, and possibly for no reason if it's not being read.

I might have mentioned this before, but the LongAdder code in JDK8 is basically what I'm thinking of, and the performance is quite good. The license is friendly, so we could copy-paste this into Hadoop for the branch-2's, and use the built-in JDK8 version for trunk.

Erik Krogen added a comment - 19/Oct/16 01:22

andrew.wang, thanks for the comment.

I actually did not think to modify the metrics classes rather than working around their current limitations but this is definitely good to consider. We are specifically interested in the MutableRate metric here, which is currently synchronized since it requires updating of multiple values atomically. For something like MutableCounter a LongAdder would be great, but I am wondering if we can make it apply here? I particularly note the Javadoc which says, of resets,

Because this method is intrinsically racy, it should only be used when it is known that no threads are concurrently updating.

But we would need the ability to do resets for MutableRate. I suppose we could potentially read lock around a normal increment of a LongAdder and write lock upon snapshotting; or, probably more performant, use an AtomicReference to store the LongAdder and create a new one when we snapshot rather than attempting to reset. Any thoughts on that?

O Hadoop QA added a comment - 19/Oct/16 01:24

Vote	Subsystem	Runtime	Comment
0	reexec	0m 8s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.
+1	mvninstall	6m 40s	trunk passed
+1	compile	0m 49s	trunk passed

+1	checkstyle	0m 36s	trunk passed
+1	mvnsite	0m 51s	trunk passed
+1	mvneclipse	0m 12s	trunk passed
+1	findbugs	1m 39s	trunk passed
+1	javadoc	0m 40s	trunk passed
+1	mvninstall	0m 44s	the patch passed
+1	compile	0m 42s	the patch passed
+1	javac	0m 42s	the patch passed
-0	checkstyle	0m 33s	hadoop-hdfs-project/hadoop-hdfs: The patch generated 1 new + 830 unchanged - 0 fixed = 831 total (was 830)
+1	mvnsite	0m 48s	the patch passed
+1	mvneclipse	0m 9s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 1s	The patch has no ill-formed XML file.
+1	findbugs	1m 45s	the patch passed
+1	javadoc	0m 36s	the patch passed
-1	unit	67m 28s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 17s	The patch does not generate ASF License warnings.
		85m 53s	

Reason	Tests
Failed junit tests	hadoop.hdfs.server.datanode.TestDataNodeUUID
	hadoop.hdfs.server.datanode.TestDataNodeMultipleRegistrations
	hadoop.hdfs.server.datanode.TestDirectoryScanner
	hadoop.hdfs.server.datanode.fsdataset.impl.TestSpaceReservation
	hadoop.hdfs.server.datanode.TestDataNodeLifeline
	hadoop.hdfs.server.datanode.TestDataNodeVolumeFailure

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:9560f25
JIRA Issue	HDFS-10872
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12834065/HDFS-10872.004.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux e0ae13c476f1 3.13.0-95-generic #142-Ubuntu SMP Fri Aug 12 17:00:09 UTC 2016 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / c62ae71
Default Java	1.8.0_101
findbugs	v3.0.0
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17210/artifact/patchprocess/diff-checkstyle-hadoop-hdfs-project_hadoop-hdfs.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17210/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17210/testReport/

modules	C: hadoop-hdfs-project/hadoop-hdfs U: hadoop-hdfs-project/hadoop-hdfs
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17210/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

Zhe Zhang added a comment - 19/Oct/16 18:47

Thanks for the discussion Andrew and Erik.

I agree that moving the multi-threading logic to Metrics classes is a good idea. I'm actually pretty curious how that will improve the performance of existing RPC metrics collection; it seems pretty expensive. We should probably do that as a prerequisite and then rebase this patch.

Using LongAdder is an interesting idea. andrew.wang This is actually the first time I learn about it end are we aware of any production usage of this library? I took a look at the test coverage; it seems a little weak considering the complexity of the main logic. We can probably consider adding some more unit tests in Hadoop to cover cases we are most interested in.

I expect that a few minutes after the NN starts, the set of operations (keys) in the opHoldtimeMetrics map is stablized. Afterwards, each entry is essentially a counter to be incremented. So on the high level I think we should be able to make it work with LongAdder. Agreed with xkrogen that snapshotting/resetting is probably the trickiest part. Creating a new LongAdder in snapshot sounds reseaonable to me.

Andrew Wang added a comment - 19/Oct/16 21:28

Thanks for the replies, Erik, Zhe, inline:

Are we aware of any production usage of this library?

The popular codahale/Dropwizard metrics library pulls in LongAdder in the manner I suggested, so it might be easiest to add that as a dependency. I'm pretty sure we already have it floating around in Hadoop somewhere. The quality of JDK code is also well regarded.

For something like MutableCounter a LongAdder would be great, but I am wondering if we can make it apply here?

Looking at EWMA in codahale, they reset a LongAdder without additional synchronization with updates. Metrics don't need to be super precise, so as long as there isn't a disastrous concurrent failure mode, this is okay.

Unless we really need the additional bits of MutableRate, the simplest thing might be to wrap the Dropwizard metrics classes like Histogram and EWMA to fit in the Hadoop metrics system.

Erik Krogen added a comment - 21/Oct/16 17:21

andrew.wang I did some profiling and it seems that the performance hit to keeping a consistent view and using an atomic reference is pretty negligible. Benchmark results below, running each benchmark for 20 seconds with 100 competing reader threads incrementing the counter as quickly as they can and a varying snapshot interval:

Benchmark	(metricType)	(snapshotIntervalMs)	Mode	Cnt	Score	Error	Units
MetricBenchmark.increment	Synchronized	100	avgt	10	10802.943	± 366.821	ns/op
MetricBenchmark.increment	Synchronized	1000	avgt	10	8991.085	± 224.738	ns/op
MetricBenchmark.increment	Synchronized	5000	avgt	10	9780.644	± 258.482	ns/op
MetricBenchmark.increment	Synchronized	10000	avgt	10	8864.450	± 239.349	ns/op
MetricBenchmark.increment	RWLockAdder	100	avgt	10	31546.824	± 203.405	ns/op
MetricBenchmark.increment	RWLockAdder	1000	avgt	10	31350.341	± 156.414	ns/op
${\tt MetricBenchmark.increment}$	RWLockAdder	5000	avgt	10	33338.370	± 234.421	ns/op
${\tt MetricBenchmark.increment}$	RWLockAdder	10000	avgt	10	31057.551	± 211.002	ns/op
${\tt MetricBenchmark.increment}$	AtomicReferenceAdder	100	avgt	10	172.594	± 1.478	ns/op
MetricBenchmark.increment	AtomicReferenceAdder	1000	avgt	10	171.760	± 0.647	ns/op
MetricBenchmark.increment	AtomicReferenceAdder	5000	avgt	10	172.942	± 2.991	ns/op
${\tt MetricBenchmark.increment}$	AtomicReferenceAdder	10000	avgt	10	186.659	± 23.906	ns/op
${\tt MetricBenchmark.increment}$	UnprotectedAdder	100	avgt	10	202.249	± 0.371	ns/op
${\tt MetricBenchmark.increment}$	UnprotectedAdder	1000	avgt	10	166.536	± 0.273	ns/op
${\tt MetricBenchmark.increment}$	UnprotectedAdder	5000	avgt	10	179.672	± 0.335	ns/op
MetricBenchmark.increment	UnprotectedAdder	10000	avgt	10	168.062	± 2.149	ns/op

Synchronized is basically the current approach (a synchronized method), RWLockAdder uses a ReadWriteLock to protect a LongAdder, AtomicReferenceAdder uses an AtomicReference to protect a LongAdder, and UnprotectedAdder simply uses a

LongAdder with an unprotected sumThenReset. It seems based off of this that using an AtomicReference to protect a LongAdder (or, an object containing a small number of LongAdders for e.g. MutableRate which needs to maintain multiple counters) would provide a consistent snapshot and be much more performant than our current solution.

Thoughts?

Zhe Zhang added a comment - 21/Oct/16 17:35

Thanks for the benchmark xkrogen! Results look very interesting. I think it's time to move the discussion to a separate metrics JIRA. Just created HADOOP-13747.

Andrew Wang added a comment - 21/Oct/16 18:25

This looks great, thanks Erik! I was a bit worried since LongAdder needs to expand the hashtable as it warms up, but the hit looks marginal. Let's pursue this further in HADOOP-13747.

Erik Krogen added a comment - 10/Nov/16 01:20

Now that HADOOP 13782 has provided us with a metrics class which provides fast concurrent access to MutableRate metrics (MutableRatesWithAggregation), the patch has been refactored to make use of this. This required a minor modification to MetricsRegistry to export a newMutableRatesWithAggregation method to create a new metrics object in FSNamesystem to be able to pass into FSNamesystemLock. This is necessary since we want the lock hold metrics to be emitted within the FSNamesystem metrics registry but they are generated within FSNamesystemLock, so we pass the metric object down into the lock for modification.

Attaching v005 patch.

➤ ○ Hadoop QA added a comment - 10/Nov/16 03:34

Vote	Subsystem	Runtime	Comment
0	reexec	0m 11s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.
0	mvndep	0m 23s	Maven dependency ordering for branch
+1	mvninstall	7m 21s	trunk passed
+1	compile	12m 0s	trunk passed
+1	checkstyle	1m 48s	trunk passed
+1	mvnsite	2m 17s	trunk passed
+1	mvneclipse	0m 44s	trunk passed
+1	findbugs	3m 34s	trunk passed
+1	javadoc	1m 41s	trunk passed
0	mvndep	0m 16s	Maven dependency ordering for patch
+1	mvninstall	1m 44s	the patch passed
+1	compile	10m 38s	the patch passed
+1	javac	10m 38s	the patch passed
-0	checkstyle	1m 49s	root: The patch generated 2 new + 862 unchanged - 0 fixed = 864 total (was 862)
+1	mvnsite	2m 6s	the patch passed
+1	mvneclipse	0m 45s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 2s	The patch has no ill-formed XML file.
+1	findbugs	3m 41s	the patch passed
+1	javadoc	1m 41s	the patch passed

+1	unit	9m 7s	hadoop-common in the patch passed.
-1	unit	67m 41s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 49s	The patch does not generate ASF License warnings.
		131m 44s	

Reason	Tests
Failed junit tests	hadoop.hdfs.tools.TestDFSAdmin
	hadoop.hdfs.server.namenode.TestMetaSave

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:e809691
JIRA Issue	HDFS-10872
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838271/HDFS-10872.005.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux ec833f598ec1 3.13.0-93-generic #140-Ubuntu SMP Mon Jul 18 21:21:05 UTC 2016 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / 71adf44
Default Java	1.8.0_101
findbugs	v3.0.0
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17494/artifact/patchprocess/diff-checkstyle-root.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17494/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17494/testReport/
modules	C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs U: .
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17494/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

▼ ○ Erik Krogen added a comment - 10/Nov/16 17:18 - edited.

Test failures don't seem related and pass fine locally.

Checkstyle is complaining about an import only used within a Javadoc (marking as unused) - changed it slightly so that checkstyle won't complain. Attaching v006 patch.

Zhe Zhang added a comment - 10/Nov/16 19:31

Thanks Erik for the patch! LGTM overall. I think the added newMutableRatesWithAggregation constructor is reasonable. Some minors:

1. Below change doesn't seem necessary

```
- private final MetricsRegistry registry = new MetricsRegistry("FSNamesystem");
+ private final MetricsRegistry registry =
+ new MetricsRegistry("FSNamesystem").setContext("dfs");
```

2. We could have the @link have its own line, right now the link is broken:

- * If metrics are enabled by setting {@link org.apache.hadoop.hdfs.DFSConfigKeys
- * #DFS_NAMENODE_LOCK_DETAILED_METRICS_KEY} to be true, metrics will be emitted
- 3. Follow-on: maybe we can consider consolidating the code in readUnlock and writeUnlock

andrew.wang Any further comments? Thanks.

➤ ○ Hadoop QA added a comment - 10/Nov/16 19:32

Vote	Subsystem	Runtime	Comment
0	reexec	0m 38s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.
0	mvndep	2m 5s	Maven dependency ordering for branch
+1	mvninstall	12m 15s	trunk passed
-1	compile	7m 7s	root in trunk failed.
+1	checkstyle	1m 47s	trunk passed
+1	mvnsite	2m 9s	trunk passed
+1	mvneclipse	2m 0s	trunk passed
+1	findbugs	8m 32s	trunk passed
+1	javadoc	4m 56s	trunk passed
0	mvndep	0m 14s	Maven dependency ordering for patch
+1	mvninstall	1m 28s	the patch passed
-1	compile	5m 39s	root in the patch failed.
-1	javac	5m 39s	root in the patch failed.
-0	checkstyle	1m 45s	root: The patch generated 1 new + 862 unchanged - 0 fixed = 863 total (was 862)
+1	mvnsite	2m 1s	the patch passed
+1	mvneclipse	0m 40s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 2s	The patch has no ill-formed XML file.
+1	findbugs	3m 28s	the patch passed
+1	javadoc	1m 35s	the patch passed
+1	unit	7m 21s	hadoop-common in the patch passed.
-1	unit	55m 31s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 37s	The patch does not generate ASF License warnings.
		123m 45s	

Reason	Tests
Failed junit tests	hadoop.hdfs.tools.TestDFSAdmin

Subsystem	Report/Notes	
Docker	Image:yetus/hadoop:e809691	
JIRA Issue	HDFS-10872	

JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838401/HDFS-10872.006.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux 4cd2b8c865a8 3.13.0-95-generic #142-Ubuntu SMP Fri Aug 12 17:00:09 UTC 2016 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / 89354f0
Default Java	1.8.0_101
compile	https://builds.apache.org/job/PreCommit-HDFS-Build/17509/artifact/patchprocess/branch-compile-root.txt
findbugs	v3.0.0
compile	https://builds.apache.org/job/PreCommit-HDFS-Build/17509/artifact/patchprocess/patch-compile-root.txt
javac	https://builds.apache.org/job/PreCommit-HDFS-Build/17509/artifact/patchprocess/patch-compile-root.txt
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17509/artifact/patchprocess/diff-checkstyle-root.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17509/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17509/testReport/
modules	C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs U: .
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17509/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

▼ ○ Erik Krogen added a comment - 10/Nov/16 19:42

zhz, thanks for the review.

- (1) Yes, you are right, that is unnecessary.
- (2) Fixed. I'm surprised my IDE didn't warn me of this.
- (3) Agreed that this could be a good follow-up, there is a lot of duplicated logic. Could be good to do something to consolidate with HADOOP-13702 as well.

Attaching v007 patch.

➤ ○ Hadoop QA added a comment - 10/Nov/16 21:44



Vote	Subsystem	Runtime	Comment
0	reexec	0m 16s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.
0	mvndep	0m 17s	Maven dependency ordering for branch
+1	mvninstall	8m 58s	trunk passed
-1	compile	7m 21s	root in trunk failed.
+1	checkstyle	1m 48s	trunk passed
+1	mvnsite	2m 5s	trunk passed
+1	mvneclipse	0m 43s	trunk passed
+1	findbugs	3m 21s	trunk passed
+1	javadoc	1m 53s	trunk passed
0	mvndep	0m 16s	Maven dependency ordering for patch

+1	mvninstall	1m 33s	the patch passed
-1	compile	6m 14s	root in the patch failed.
-1	javac	6m 14s	root in the patch failed.
-0	checkstyle	1m 49s	root: The patch generated 2 new + 862 unchanged - 0 fixed = 864 total (was 862)
+1	mvnsite	2m 9s	the patch passed
+1	mvneclipse	0m 42s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 1s	The patch has no ill-formed XML file.
+1	findbugs	3m 36s	the patch passed
+1	javadoc	1m 42s	the patch passed
+1	unit	8m 2s	hadoop-common in the patch passed.
-1	unit	60m 35s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 42s	The patch does not generate ASF License warnings.
		115m 27s	

Reason	Tests
Failed junit tests	hadoop.hdfs.TestEncryptionZones
	hadoop.hdfs.TestMissingBlocksAlert
	hadoop.hdfs.server.block management. Test Pending Invalidate Block
	hadoop.hdfs.tools.TestDFSAdmin

Subsystem	Report/Notes		
Docker	Image:yetus/hadoop:e809691		
JIRA Issue	HDFS 10872		
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838420/HDFS-10872.007.patch		
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml		
uname	Linux cfea7118d697 3.13.0-92-generic #139-Ubuntu SMP Tue Jun 28 20:42:26 UTC 2016 x86_64 x86_64 x86_64 GNU/Linux		
Build tool	maven		
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh		
git revision	trunk / 89354f0		
Default Java	1.8.0_101		
compile	https://builds.apache.org/job/PreCommit-HDFS-Build/17513/artifact/patchprocess/branch-compile-root.txt		
findbugs	v3.0.0		
compile	https://builds.apache.org/job/PreCommit-HDFS-Build/17513/artifact/patchprocess/patch-compile-root.txt		
javac	https://builds.apache.org/job/PreCommit-HDFS-Build/17513/artifact/patchprocess/patch-compile-root.txt		
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17513/artifact/patchprocess/diff-checkstyle-root.txt		
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17513/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt		
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17513/testReport/		
modules	C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs U: .		
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17513/console		
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org		

Zhe Zhang added a comment - 10/Nov/16 23:02

Thanks Erik, +1 on v7 patch pending a successful Jenkins run (I just re-triggerred).

Will also wait for a day before committing so others can comment.

➤ ○ Hadoop QA added a comment - 10/Nov/16 23:45

Vote	Subsystem	Runtime	Comment
0	reexec	0m 16s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.
0	mvndep	0m 16s	Maven dependency ordering for branch
+1	mvninstall	7m 24s	trunk passed
-1	compile	7m 35s	root in trunk failed.
+1	checkstyle	1m 47s	trunk passed
+1	mvnsite	2m 10s	trunk passed
+1	mvneclipse	0m 42s	trunk passed
+1	findbugs	3m 19s	trunk passed
+1	javadoc	1m 40s	trunk passed
0	mvndep	0m 15s	Maven dependency ordering for patch
+1	mvninstall	1m 27s	the patch passed
-1	compile	5m 59s	root in the patch failed.
-1	javac	5m 59s	root in the patch failed.
-0	checkstyle	1m 44s	root: The patch generated 2 new + 862 unchanged - 0 fixed = 864 total (was 862)
+1	mvnsite	2m 7s	the patch passed
+1	mvneclipse	0m 39s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 1s	The patch has no ill-formed XML file.
+1	findbugs	3m 35s	the patch passed
+1	javadoc	1m 38s	the patch passed
+1	unit	7m 44s	hadoop-common in the patch passed.
-1	unit	57m 20s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 38s	The patch does not generate ASF License warnings.
		109m 51s	

Reason	Tests
Failed junit tests	hadoop.hdfs.tools.TestDFSAdmin

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:e809691
JIRA Issue	HDFS-10872

	[
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838420/HDFS-10872.007.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux 8c888dce6de0 3.13.0-92-generic #139-Ubuntu SMP Tue Jun 28 20:42:26 UTC 2016 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / 89354f0
Default Java	1.8.0_101
compile	https://builds.apache.org/job/PreCommit-HDFS-Build/17517/artifact/patchprocess/branch-compile-root.txt
findbugs	v3.0.0
compile	https://builds.apache.org/job/PreCommit-HDFS-Build/17517/artifact/patchprocess/patch-compile-root.txt
javac	https://builds.apache.org/job/PreCommit-HDFS-Build/17517/artifact/patchprocess/patch-compile-root.txt
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17517/artifact/patchprocess/diff-checkstyle-root.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17517/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17517/testReport/
modules	C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs U: .
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17517/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

Erik Krogen added a comment - 11/Nov/16 18:18 - edited

Attaching v008 patch which includes the changes within $\frac{\text{YARN-5868}}{\text{YARN-5868}}$ (fixing an issue with npm during the build process, entirely unrelated to this ticket) just to be able to get a clean Jenkins build. Patch is otherwise identical to v007.

Erik Krogen added a comment - 11/Nov/16 19:27

Looks like YARN 5868 went through faster than expected, reuploading v007 patch as v009 to trigger Jenkins.

✓ ○ Hadoop QA added a comment - 11/Nov/16 21:26

Vote	Subsystem	Runtime	Comment
0	reexec	0m 11s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.
0	mvndep	0m 17s	Maven dependency ordering for branch
+1	mvninstall	6m 45s	trunk passed
+1	compile	10m 14s	trunk passed
+1	checkstyle	1m 45s	trunk passed
+1	mvnsite	2m 16s	trunk passed
+1	mvneclipse	0m 33s	trunk passed
+1	findbugs	3m 32s	trunk passed
+1	javadoc	1m 40s	trunk passed
0	mvndep	0m 15s	Maven dependency ordering for patch
+1	mvninstall	1m 43s	the patch passed

+1	compile	10m 55s	the patch passed
+1	javac	10m 55s	the patch passed
-0	checkstyle	1m 44s	root: The patch generated 2 new + 862 unchanged - 0 fixed = 864 total (was 862)
+1	mvnsite	2m 2s	the patch passed
+1	mvneclipse	0m 36s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 2s	The patch has no ill-formed XML file.
+1	findbugs	3m 31s	the patch passed
+1	javadoc	1m 30s	the patch passed
+1	unit	8m 29s	hadoop-common in the patch passed.
-1	unit	58m 10s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 32s	The patch does not generate ASF License warnings.
		117m 53s	

Reason	Tests
Failed junit tests	hadoop.hdfs.tools.TestDFSAdmin
	hadoop.hdfs.tools.TestDelegationTokenFetcher
	hadoop.hdfs.TestRenameWhileOpen

Subsystem	Report/Notes		
Docker	Image:yetus/hadoop:a9ad5d6		
JIRA Issue	HDFS 10872		
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838602/HDFS-10872.009.patch		
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml		
uname	Linux 621f3278cf6d 3.13.0-93-generic #140-Ubuntu SMP Mon Jul 18 21:21:05 UTC 2016 x86_64 x86_64 x86_64 GNU/Linux		
Build tool	maven		
Personality /testptch/hadoop/patchprocess/precommit/personality/provided.sh			
git revision	trunk / 5c61ad2		
Default Java	1.8.0_101		
findbugs	v3.0.0		
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17533/artifact/patchprocess/diff-checkstyle-root.txt		
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17533/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt		
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17533/testReport/		
modules	C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs U: .		
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17533/console		
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org		

➤ ○ Erik Krogen added a comment - 11/Nov/16 21:41

TestDFSAdmin is a known issue tracked in HDFS_11122. TestRenameWhileOpen/TestDelegationTokenFetcher pass locally and seem unrelated.

Zhe Zhang added a comment - 11/Nov/16 21:59

Thanks wangda for helping fix the npm error. Thanks Erik for verifying pre-commit.

- +1 on the patch, will work on trunk~branch-2.7 commit now.
- Mingliang Liu added a comment 11/Nov/16 22:01

+1

Zhe Zhang added a comment - 11/Nov/16 22:24

Sorry, just realized an issue with the names of the metrics, can we more explicitly specify those metrics are for locks?

Mingliang Liu added a comment - 11/Nov/16 22:28

That's a good point. We can add prefix (e.g. FSNLock) in FSNamesystemLock#addMetric().

✓ ○ Hadoop QA added a comment - 11/Nov/16 22:36

Vote	Subsystem	Runtime	Comment
0	reexec	0m 26s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 23 new or modified test files.
0	mvndep	0m 20s	Maven dependency ordering for branch
+1	mvninstall	9m 22s	trunk passed
-1	compile	9m 10s	root in trunk failed.
+1	checkstyle	2m 31s	trunk passed
+1	mvnsite	11m 32s	trunk passed
+1	mvneclipse	4m 34s	trunk passed
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site hadoop-yarn-project/hadoop-yarn/hadoop-yarn-ui hadoop-cloud-storage-project hadoop-cloud-storage-project/hadoop-cloud-storage
-1	findbugs	0m 18s	branch/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-tests no findbugs output file (hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-tests/target/findbugsXml.xml)
+1	javadoc	5m 41s	trunk passed
0	mvndep	0m 18s	Maven dependency ordering for patch
+1	mvninstall	15m 30s	the patch passed
-1	compile	5m 57s	root in the patch failed.
-1	СС	5m 57s	root in the patch failed.
-1	javac	5m 57s	root in the patch failed.
-0	checkstyle	2m 38s	root: The patch generated 39 new + 2837 unchanged - 11 fixed = 2876 total (was 2848)
+1	mvnsite	9m 55s	the patch passed
+1	mvneclipse	1m 7s	the patch passed
-1	whitespace	0m 0s	The patch has 10 line(s) that end in whitespace. Use git applywhitespace=fix < <patch_file>>. Refer https://git-scm.com/docs/git-apply</patch_file>
+1	xml	0m 5s	The patch has no ill-formed XML file.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site hadoop-yarn-project/hadoop-yarn/hadoop-yarn-ui.
-1	findbugs	0m 16s	patch/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-tests no findbug output file (hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-

			tests/target/findbugsXml.xml)
-1	javadoc	4m 23s	root generated 11198 new + 0 unchanged - 0 fixed = 11198 total (was 0)
-1	unit	140m 5s	root in the patch failed.
-1	asflicense	0m 26s	The patch generated 9 ASF License warnings.
		247m 41s	

Reason	Tests
Failed junit tests	hado op.hdfs. Test Safe Mode With Striped File
	hado op.hdfs. server. data node. Test Data Node MXB ean
	hadoop.hdfs.server.datanode.TestDirectoryScanner
Timed out junit tests	org.apache.hadoop.hdfs.TestLeaseRecovery2

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:e809691
JIRA Issue	HDFS 10872
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838594/HDFS-10872.008.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit xml findbugs checkstyle cc
uname	Linux e968e550d708 3.13.0-96-generic #143-Ubuntu SMP Mon Aug 29 20:15:20 UTC 2016 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / 503e73e
Default Java	1.8.0_101
compile	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/branch-compile-root.txt
findbugs	v3.0.0
findbugs	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/branch-findbugs-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server_tests.txt
compile	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/patch-compile-root.txt
сс	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/patch-compile-root.txt
javac	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/patch-compile-root.txt
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/diff-checkstyle-root.txt
whitespace	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/whitespace-eol.txt
findbugs	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/patch-findbugs-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-tests.txt
javadoc	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/diff-javadoc-javadoc-root.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/patch-unit-root.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/testReport/
asflicense	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/artifact/patchprocess/patch-asflicense-problems.txt
modules	C: hadoop-project hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-common hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoo

	resourcemanager hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-tests hadoop-yarn-project/hadoop-yarn/hadoop-yarn-client hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site hadoop-yarn-project/hadoop-yarn/hadoop-yarn-ui hadoop-tools/hadoop-openstack . U: .
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17530/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

Erik Krogen added a comment - 11/Nov/16 23:55

Thanks for looking, liuml07.

Attaching v010 patch with updated names for the metrics: FSN(Read|Write)LockOperationName. I've also attached an example of what the outputted metrics look like on the JMX page (jmx-output).

✓ O Mingliang Liu added a comment - 12/Nov/16 00:14

still +1 Thanks for updating the code.

Zhe Zhang added a comment - 12/Nov/16 06:19

Looks like Yetus was confused because the newest file was the JMX output. I'm attaching v11 patch which is a dup of v10.

Mingliang Liu added a comment - 12/Nov/16 06:21

Thanks for taking care of this. I usually don't bump the patch version number; the JIRA will show old patch of same version (well, name) as gray so it's not confusing anyway.

➤ ○ Hadoop QA added a comment - 12/Nov/16 09:09

Vote	Subsystem	Runtime	Comment
0	reexec	0m 18s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.
0	mvndep	1m 36s	Maven dependency ordering for branch
+1	mvninstall	6m 58s	trunk passed
+1	compile	11m 45s	trunk passed
+1	checkstyle	1m 48s	trunk passed
+1	mvnsite	2m 22s	trunk passed
+1	mvneclipse	0m 38s	trunk passed
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-ui
+1	findbugs	3m 21s	trunk passed
+1	javadoc	1m 40s	trunk passed
0	mvndep	0m 18s	Maven dependency ordering for patch
+1	mvninstall	1m 44s	the patch passed
-1	compile	5m 5s	root in the patch failed.
-1	javac	5m 5s	root in the patch failed.
-0	checkstyle	1m 45s	root: The patch generated 2 new + 862 unchanged - 0 fixed = 864 total (was 862)
+1	mvnsite	2m 14s	the patch passed
+1	mvneclipse	0m 36s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.

+1	xml	0m 3s	The patch has no ill-formed XML file.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-ui
+1	findbugs	3m 41s	the patch passed
+1	javadoc	1m 35s	the patch passed
+1	unit	9m 14s	hadoop-common in the patch passed.
-1	unit	108m 43s	hadoop-hdfs in the patch failed.
-1	unit	0m 16s	hadoop-yarn-ui in the patch failed.
+1	asflicense	0m 32s	The patch does not generate ASF License warnings.
		167m 8s	

Reason	Tests
Failed junit tests	hadoop.hdfs.tools.TestDelegationTokenFetcher
	hadoop.hdfs.server.namenode.ha.TestEditLogTailer
	hadoop.hdfs.server.datanode.TestDataNodeHotSwapVolumes
	hadoop.hdfs.server.namenode.ha.TestHAAppend
	hadoop.hdfs.server.datanode.TestDirectoryScanner
Timed out junit tests	org.apache.hadoop.hdfs.TestLeaseRecovery2

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:a9ad5d6
JIRA Issue	HDFS 10872
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838646/HDFS-10872.011.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux eeaf5da60b3b 3.13.0-96-generic #143-Ubuntu SMP Mon Aug 29 20:15:20 UTC 2016 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / 2ee18fc
Default Java	1.8.0_101
findbugs	v3.0.0
compile	https://builds.apache.org/job/PreCommit-HDFS-Build/17541/artifact/patchprocess/patch-compile-root.txt
javac	https://builds.apache.org/job/PreCommit-HDFS-Build/17541/artifact/patchprocess/patch-compile-root.txt
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17541/artifact/patchprocess/diff-checkstyle-root.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17541/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17541/artifact/patchprocess/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-ui.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17541/testReport/
modules	C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs hadoop-yarn-project/hadoop-yarn/hadoop-yarn-ui U: .
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17541/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

➤ ○ Hadoop QA added a comment - 12/Nov/16 09:11

Vote	Subsystem	Runtime	Comment
0	reexec	0m 22s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.
0	mvndep	1m 38s	Maven dependency ordering for branch
+1	mvninstall	8m 6s	trunk passed
+1	compile	11m 3s	trunk passed
+1	checkstyle	1m 45s	trunk passed
+1	mvnsite	2m 33s	trunk passed
+1	mvneclipse	0m 39s	trunk passed
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-ui
+1	findbugs	3m 29s	trunk passed
+1	javadoc	1m 38s	trunk passed
0	mvndep	0m 16s	Maven dependency ordering for patch
+1	mvninstall	1m 37s	the patch passed
-1	compile	5m 17s	root in the patch failed.
-1	javac	5m 17s	root in the patch failed.
-0	checkstyle	1m 40s	root: The patch generated 2 new + 862 unchanged - 0 fixed = 864 total (was 862)
+1	mvnsite	2m 11s	the patch passed
+1	mvneclipse	0m 36s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 2s	The patch has no ill-formed XML file.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-ui
+1	findbugs	3m 47s	the patch passed
+1	javadoc	1m 43s	the patch passed
+1	unit	9m 27s	hadoop-common in the patch passed.
-1	unit	103m 58s	hadoop-hdfs in the patch failed.
-1	unit	0m 11s	hadoop-yarn-ui in the patch failed.
+1	asflicense	0m 22s	The patch does not generate ASF License warnings.
		163m 15s	

Reason	Tests
Failed junit tests	hadoop.hdfs.tools.TestDelegationTokenFetcher
	had oop. hdfs. server. data node. Test Data Node Volume Failure
	hadoop.hdfs.TestSafeModeWithStripedFile
	hadoop.hdfs.server.namenode.ha.TestHAAppend

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:a9ad5d6

HDFS-10872			
https://issues.apache.org/jira/secure/attachment/12838646/HDFS-10872.011.patch			
asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml			
Linux f3b1c71a79c8 3.13.0-96-generic #143-Ubuntu SMP Mon Aug 29 20:15:20 UTC 2016 x86_64 x86_64 x86_64 GNU/Linux			
maven			
/testptch/hadoop/patchprocess/precommit/personality/provided.sh			
trunk / 2ee18fc			
1.8.0_101			
v3.0.0			
https://builds.apache.org/job/PreCommit-HDFS-Build/17542/artifact/patchprocess/patch-compile-root.txt			
https://builds.apache.org/job/PreCommit-HDFS-Build/17542/artifact/patchprocess/patch-compile-root.txt			
https://builds.apache.org/job/PreCommit-HDFS-Build/17542/artifact/patchprocess/diff-checkstyle-root.txt			
https://builds.apache.org/job/PreCommit-HDFS-Build/17542/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt			
https://builds.apache.org/job/PreCommit-HDFS-Build/17542/artifact/patchprocess/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-ui.txt			
https://builds.apache.org/job/PreCommit-HDFS-Build/17542/testReport/			
C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs hadoop-yarn-project/hadoop-yarn/hadoop-yarn-ui U: .			
https://builds.apache.org/job/PreCommit-HDFS-Build/17542/console			
Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org			

➤ ○ Erik Krogen added a comment - 14/Nov/16 16:10

Looks like when going from v009 to v010 patch I accidentally re-included the $\frac{\text{YARN}-5868}{\text{Fix}}$ fix. Attaching v012 patch with that removed. Sorry for the mixup.

Zhe Zhang added a comment - 14/Nov/16 16:53

Thanks for the tip Mingliang (2)

► O Hadoop QA added a comment - 14/Nov/16 18:35



Vote	Subsystem	Runtime	Comment	
0	reexec	0m 21s	Docker mode activated.	
+1	@author	0m 0s	The patch does not contain any @author tags.	
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.	
0	mvndep	1m 35s	Maven dependency ordering for branch	
+1	mvninstall	6m 49s	trunk passed	
+1	compile	9m 30s	trunk passed	
+1	checkstyle	1m 43s	trunk passed	
+1	mvnsite	1m 59s	trunk passed	
+1	mvneclipse	0m 36s	trunk passed	
+1	findbugs	3m 11s	trunk passed	

+1	javadoc	1m 33s	trunk passed	
0	mvndep	0m 15s	Maven dependency ordering for patch	
+1	mvninstall	1m 23s	the patch passed	
+1	compile	9m 14s	the patch passed	
+1	javac	9m 14s	the patch passed	
-0	checkstyle	1m 43s	root: The patch generated 2 new + 862 unchanged - 0 fixed = 864 total (was 862)	
+1	mvnsite	1m 54s	the patch passed	
+1	mvneclipse	0m 37s	the patch passed	
+1	whitespace	0m 0s	The patch has no whitespace issues.	
+1	xml	0m 1s	The patch has no ill-formed XML file.	
+1	findbugs	3m 25s	the patch passed	
+1	javadoc	1m 32s	the patch passed	
+1	unit	8m 23s	hadoop-common in the patch passed.	
-1	unit	79m 18s	hadoop-hdfs in the patch failed.	
+1	asflicense	0m 34s	The patch does not generate ASF License warnings.	
		136m 50s		

Reason	Tests
Failed junit tests	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure060

Subsystem	Report/Notes		
Docker	Image:yetus/hadoop:a9ad5d6		
JIRA Issue	HDFS 10872		
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838788/HDFS-10872.012.patch		
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml		
uname	Linux 5c6ac6a2acba 3.13.0-96-generic #143-Ubuntu SMP Mon Aug 29 20:15:20 UTC 2016 x86_64 x86_64 GNU/Linux		
Build tool	maven		
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh		
git revision	trunk / 6efb8c9		
Default Java	1.8.0_101		
findbugs	v3.0.0		
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17552/artifact/patchprocess/diff-checkstyle-root.txt		
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17552/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt		
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17552/testReport/		
modules	C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs U: .		
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17552/console		
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org		

Thanks Erik. +1 on v12 patch. I did another check of the metrics from local cluster, they look good. I just pushed to trunk, working on branch backports. Thanks for the great work!

^{➤ ○} Zhe Zhang added a comment - 14/Nov/16 19:06

Zhe Zhang added a comment - 14/Nov/16 19:10

Actually FSNamesystem has many conflicts – though most of them look pretty mechanical. xkrogen Do you mind creating a branch-2 patch? I guess we should also wait for branch-2 Jenkins precommit run.

✓ ○ Hudson added a comment - 14/Nov/16 19:20

SUCCESS: Integrated in Jenkins build Hadoop-trunk-Commit #10832 (See https://builds.apache.org/job/Hadoop-trunk-Commit/10832/)

HDFS-10872. Add MutableRate metrics for FSNamesystemLock operations. (zhz: rev ff0b99eafeda035ebe0dc82cfe689808047a8893)

- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/DFSConfigKeys.java
- (edit) hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/metrics2/lib/MetricsRegistry.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/Checkpointer.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSNamesystemLock.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/test/java/org/apache/hadoop/hdfs/server/namenode/TestFSNamesystemLock.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/CacheManager.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSEditLogLoader.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/resources/hdfs-default.xml
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSNamesystem.java
- (edit) hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/metrics2/lib/MutableMetricsFactory.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/NamenodeFsck.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/LeaseManager.java
- (edit) hadoop-hdfs-project/hadoophdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/ContentSummaryComputationContext.java
- ▼ Erik Krogen added a comment 14/Nov/16 19:50

Thank you for the commit, zhz!

I've attached a branch-2 patch. You were correct that the conflicts were just mechanical fixes - touching so many lines in FSNamesystem in a trivial way (just adding the operation name) caused many code conflicts but no real logical conflicts.

Hadoop QA added a comment - 14/Nov/16 19:59

Vote	Subsystem Runtime		Comment
0	reexec	0m 0s	Docker mode activated.
-1	docker	0m 2s	Docker failed to build yetus/hadoop:b59b8b7.

Subsystem	Report/Notes
JIRA Issue HDFS 10872	
JIRA Patch URL https://issues.apache.org/jira/secure/attachment/12838829/HDFS-10872-branch-2.0	
Console output https://builds.apache.org/job/PreCommit-HDFS-Build/17556/console	
Powered by Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org	

This message was automatically generated.

Zhe Zhang added a comment - 14/Nov/16 20:35

Thanks Erik. Local cluster on branch-2 patch looks good. I just retriggered Jenkins.

Hadoop QA added a comment - 15/Nov/16 00:12



Vote	Subsystem	Runtime	Comment	
0	reexec	0m 30s	Docker mode activated.	
+1	@author	0m 0s	The patch does not contain any @author tags.	
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.	
0	mvndep	1m 12s	Maven dependency ordering for branch	
+1	mvninstall	6m 47s	branch-2 passed	
+1	compile	6m 31s	branch-2 passed with JDK v1.8.0_101	
+1	compile	6m 57s	branch-2 passed with JDK v1.7.0_111	
+1	checkstyle	1m 36s	branch-2 passed	
+1	mvnsite	1m 54s	branch-2 passed	
+1	mvneclipse	0m 29s	branch-2 passed	
+1	findbugs	3m 41s	branch-2 passed	
+1	javadoc	1m 51s	branch-2 passed with JDK v1.8.0_101	
+1	javadoc	2m 36s	branch-2 passed with JDK v1.7.0_111	
0	mvndep	0m 14s	Maven dependency ordering for patch	
+1	mvninstall	1m 25s	the patch passed	
+1	compile	5m 57s	the patch passed with JDK v1.8.0_101	
+1	javac	5m 57s	the patch passed	
+1	compile	6m 56s	the patch passed with JDK v1.7.0_111	
+1	javac	6m 56s	the patch passed	
-0	checkstyle	1m 41s	root: The patch generated 4 new + 859 unchanged - 0 fixed = 863 total (was 859)	
+1	mvnsite	2m 1s	the patch passed	
+1	mvneclipse	0m 33s	the patch passed	
+1	whitespace	0m 0s	The patch has no whitespace issues.	
+1	xml	0m 0s	The patch has no ill-formed XML file.	
+1	findbugs	4m 3s	the patch passed	
+1	javadoc	1m 51s	the patch passed with JDK v1.8.0_101	
+1	javadoc	2m 47s	the patch passed with JDK v1.7.0_111	
+1	unit	10m 6s	hadoop-common in the patch passed with JDK v1.7.0_111.	
+1	unit	67m 47s	hadoop-hdfs in the patch passed with JDK v1.7.0_111.	
+1	asflicense	0m 23s	The patch does not generate ASF License warnings.	
		223m 50s		

Reason	Tests
JDK v1.8.0_101 Failed junit tests	hadoop.hdfs.server.datanode.TestDataNodeMultipleRegistrations
JDK v1.8.0_101 Timed out junit tests	org. apache. hado op. hdfs. server. data node. fsdataset. impl. Test Data node Restart

Subsystem	Report/Notes	
Docker Image:yetus/hadoop:b59b8b7		
JIRA Issue	HDFS-10872	
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838829/HDFS-10872-branch-2.012.patch	
Optional Tests asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml		

	(~
uname	Linux 4873aa8f19f3 3.13.0-96-generic #143-Ubuntu SMP Mon Aug 29 20:15:20 UTC 2016 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	branch-2 / 399abe7
Default Java	1.7.0_111
Multi-JDK versions	/usr/lib/jvm/java-8-oracle:1.8.0_101 /usr/lib/jvm/java-7-openjdk-amd64:1.7.0_111
findbugs	v3.0.0
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17557/artifact/patchprocess/diff-checkstyle-root.txt
JDK v1.7.0_111 Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17557/testReport/
modules	C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs U: .
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17557/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

➤ ○ Erik Krogen added a comment - 15/Nov/16 00:16

Looks like I introduced two small checkstyle issues when I fixed branch-2 conflicts. Attaching branch-2 v13 patch to fix.

➤ ○ Zhe Zhang added a comment - 15/Nov/16 00:33

Thanks Erik! I manually verified the 2 checkstyle issues. I just committed to branch-2.

➤ ○ Erik Krogen added a comment - 15/Nov/16 01:16

Attaching patch for branch-2.7 (v13).

➤ ○ Hadoop QA added a comment - 15/Nov/16 04:24

Vote	Subsystem	Runtime	Comment	
0	reexec	0m 24s	Docker mode activated.	
+1	@author	0m 0s	The patch does not contain any @author tags.	
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.	
0	mvndep	0m 43s	Maven dependency ordering for branch	
+1	mvninstall	7m 2s	branch-2 passed	
+1	compile	7m 13s	branch-2 passed with JDK v1.8.0_101	
+1	compile	7m 44s	branch-2 passed with JDK v1.7.0_111	
+1	checkstyle	1m 47s	branch-2 passed	
+1	mvnsite	2m 3s	branch-2 passed	
+1	mvneclipse	0m 35s	branch-2 passed	
+1	findbugs	3m 54s	branch-2 passed	
+1	javadoc	2m 0s	branch-2 passed with JDK v1.8.0_101	
+1	javadoc	3m 2s	branch-2 passed with JDK v1.7.0_111	
0	mvndep	0m 17s	Maven dependency ordering for patch	
+1	mvninstall	1m 47s	the patch passed	
+1	compile	7m 18s	the patch passed with JDK v1.8.0_101	
+1	javac	7m 18s	the patch passed	

+1	compile	7m 47s	the patch passed with JDK v1.7.0_111
+1	javac	7m 47s	the patch passed
-0	checkstyle	1m 55s	root: The patch generated 2 new + 859 unchanged - 0 fixed = 861 total (was 859)
+1	mvnsite	2m 8s	the patch passed
+1	mvneclipse	0m 35s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 0s	The patch has no ill-formed XML file.
+1	findbugs	4m 30s	the patch passed
+1	javadoc	2m 3s	the patch passed with JDK v1.8.0_101
+1	javadoc	2m 59s	the patch passed with JDK v1.7.0_111
+1	unit	10m 21s	hadoop-common in the patch passed with JDK v1.7.0_111.
-1	unit	85m 34s	hadoop-hdfs in the patch failed with JDK v1.7.0_111.
+1	asflicense	0m 28s	The patch does not generate ASF License warnings.
		245m 47s	

Reason	Tests
JDK v1.8.0_101 Failed junit tests	hadoop.hdfs.TestRollingUpgrade
JDK v1.7.0_111 Failed junit tests	hadoop.hdfs.server.namenode.ha.TestBootstrapStandby
	hadoop.hdfs.server.datanode.TestDataNodeVolumeFailure

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:b59b8b7
JIRA Issue	HDFS 10872
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838876/HDFS-10872-branch-2.013.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux 7cb452bee571 3.13.0-96-generic #143-Ubuntu SMP Mon Aug 29 20:15:20 UTC 2016 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	branch-2 / 5ffb26c
Default Java	1.7.0_111
Multi-JDK versions	/usr/lib/jvm/java-8-oracle:1.8.0_101 /usr/lib/jvm/java-7-openjdk-amd64:1.7.0_111
findbugs	v3.0.0
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17564/artifact/patchprocess/diff-checkstyle-root.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17564/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs-jdk1.7.0_111.txt
JDK v1.7.0_111 Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17564/testReport/
modules	C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs U: .
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17564/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

➤ ○ Hadoop QA added a comment - 15/Nov/16 05:00



Vote	Subsystem	Runtime	Comment
0	reexec	12m 50s	Docker mode activated.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 1 new or modified test files.
0	mvndep	0m 15s	Maven dependency ordering for branch
+1	mvninstall	8m 14s	branch-2.7 passed
+1	compile	6m 20s	branch-2.7 passed with JDK v1.8.0_111
+1	compile	6m 47s	branch-2.7 passed with JDK v1.7.0_111
+1	checkstyle	1m 38s	branch-2.7 passed
+1	mvnsite	1m 55s	branch-2.7 passed
+1	mvneclipse	0m 33s	branch-2.7 passed
-1	findbugs	1m 49s	hadoop-common-project/hadoop-common in branch-2.7 has 3 extant Findbugs warnings.
+1	javadoc	1m 55s	branch-2.7 passed with JDK v1.8.0_111
+1	javadoc	2m 53s	branch-2.7 passed with JDK v1.7.0_111
0	mvndep	0m 13s	Maven dependency ordering for patch
+1	mvninstall	1m 43s	the patch passed
+1	compile	6m 22s	the patch passed with JDK v1.8.0_111
+1	javac	6m 22s	the patch passed
+1	compile	7m 7s	the patch passed with JDK v1.7.0_111
+1	javac	7m 7s	the patch passed
-0	checkstyle	1m 36s	root: The patch generated 5 new + 1115 unchanged - 1 fixed = 1120 total (was 1116)
+1	mvnsite	1m 48s	the patch passed
+1	mvneclipse	0m 29s	the patch passed
-1	whitespace	0m 0s	The patch has 7079 line(s) that end in whitespace. Use git applywhitespace=fix < <patch_file>>. Refer https://git-scm.com/docs/git-apply</patch_file>
-1	whitespace	3m 34s	The patch 185 line(s) with tabs.
+1	xml	0m 1s	The patch has no ill-formed XML file.
+1	findbugs	5m 22s	the patch passed
+1	javadoc	1m 56s	the patch passed with JDK v1.8.0_111
+1	javadoc	2m 56s	the patch passed with JDK v1.7.0_111
-1	unit	21m 14s	hadoop-common in the patch failed with JDK v1.7.0_111.
-1	unit	46m 32s	hadoop-hdfs in the patch failed with JDK v1.7.0_111.
-1	asflicense	0m 21s	The patch generated 3 ASF License warnings.
		221m 33s	

Reason	Tests
JDK v1.8.0_111 Failed junit tests	hadoop.util.bloom.TestBloomFilters
	hadoop.io.TestBloomMapFile
	hadoop.ha.TestZKFailoverControllerStress
	hadoop.ipc.TestCallQueueManager
	hadoop.hdfs.TestAppendSnapshotTruncate
	hadoop.hdfs.server.namenode.snapshot.TestRenameWithSnapshots
	hadoop.hdfs.server.blockmanagement.TestPendingReplication

JDK v1.8.0_111 Timed out junit tests	org.apache.hadoop.conf.TestConfiguration
JDK v1.7.0_111 Failed junit tests	hadoop.util.bloom.TestBloomFilters
	hadoop.io.TestBloomMapFile
	hadoop.ha.TestZKFailoverControllerStress
	hadoop.io.TestMapFile
	hadoop.hdfs.web.TestWebHdfsFileSystemContract
	hadoop.hdfs.server.namenode.snapshot.TestRenameWithSnapshots
JDK v1.7.0_111 Timed out junit tests	org. apache. hado op. security. token. delegation. web. Test Web Delegation Token
	org.apache.hadoop.conf.TestConfiguration

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:c420dfe
JIRA Issue	HDFS-10872
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12838888/HDFS-10872-branch-2.7.013.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux ce0fe652df32 3.13.0-92-generic #139-Ubuntu SMP Tue Jun 28 20:42:26 UTC 2016 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	branch-2.7 / 81bf6f2
Default Java	1.7.0_111
Multi-JDK versions	/usr/lib/jvm/java-8-oracle:1.8.0_111 /usr/lib/jvm/java-7-openjdk-amd64:1.7.0_111
findbugs	v3.0.0
findbugs	https://builds.apache.org/job/PreCommit-HDFS-Build/17566/artifact/patchprocess/branch-findbugs-hadoop-common-project_hadoop-common-warnings.html
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/17566/artifact/patchprocess/diff-checkstyle-root.txt
whitespace	https://builds.apache.org/job/PreCommit-HDFS-Build/17566/artifact/patchprocess/whitespace-eol.txt
whitespace	https://builds.apache.org/job/PreCommit-HDFS-Build/17566/artifact/patchprocess/whitespace-tabs.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17566/artifact/patchprocess/patch-unit-hadoop-common-project_hadoop-common-jdk1.7.0_111.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17566/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs-jdk1.7.0_111.txt
JDK v1.7.0_111 Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17566/testReport/
asflicense	https://builds.apache.org/job/PreCommit-HDFS-Build/17566/artifact/patchprocess/patch-asflicense-problems.txt
modules	C: hadoop-common-project/hadoop-common hadoop-hdfs-project/hadoop-hdfs U: .
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17566/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

Zhe Zhang added a comment - 15/Nov/16 07:12

Thanks Erik! I just verified the reported branch-2.7 test failures (non reproducible locally), as well as local cluster, and committed to branch-2.7.

People

Assignee:



Reporter:



Erik Krogen

Votes:

• Vote for this issue

Watchers:

15 Start watching this issue

Dates

Created:

19/Sep/16 20:37

Updated:

03/Aug/18 20:50

Resolved:

15/Nov/16 07:12