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Hadoop HDFS / HDFS-12191

Provide option to not capture the accessTime change of a file to snapshot if no other modification has been done to this file

Details

Type:	Bug	Status:	RESOLVED
Priority:	Major	Resolution:	Fixed
Affects Version/s:	3.0.0-beta1	Fix Version/s:	2.9.0, 3.0.0-beta1
Component/s:	hdfs, namenode		
Labels:	None		
Hadoop Flags:	Reviewed		

Description

Currently, if the accessTime of a file changed before a snapshot is taken, this accessTime will be captured in the snapshot, even if there is no other modifications made to this file.

Because of this, when we calculate snapshotDiff, more work need to be done for this file, e.g., metadataEquals method will be called, even if there is no modification is made (thus not recorded to snapshotDiff). This can cause snapshotDiff to slow down quite a lot when there are a lot of files to be examined.

This jira is to provide an option to skip capturing accessTime only change to snapshot. Thus snapshotDiff can be done faster.

When accessTime of a file changed, if there is other modification to the file, the access time will still be captured in snapshot.

Sometimes we want accessTime be captured to snapshot, such that when restoring from the snapshot, we know the accessTime of this snapshot. So this new feature is optional, and is controlled by a config property.

Worth to mention is, how accurately the accessTime is captured is dependent on the following config that has default value of 1 hour, which means new access within an hour of previous access will not be captured.

```
public static final String DFS_NAMENODE_ACCESSTIME_PRECISION_KEY =
    HdfsClientConfigKeys.DeprecatedKeys.DFS_NAMENODE_ACCESSTIME_PRECISION_KEY;
public static final long DFS_NAMENODE_ACCESSTIME_PRECISION_DEFAULT = 3600000;
```

Attachments

HDFS-12191.001.patch	15 kB	23/Jul/17 23:43
HDFS-12191.002.patch	15 kB	23/Aug/17 22:36
HDFS-12191.003.patch	19 kB	25/Aug/17 01:27
HDFS-12191.004.patch	20 kB	26/Aug/17 04:25
HDFS-12191.005.patch	20 kB	29/Aug/17 05:26

Activity

[Yongjun Zhang](#) added a comment - 23/Jul/17 23:43

Submitted patch 001.

[Hadoop QA](#) added a comment - 24/Jul/17 01:18


-1 overall

vote	Subsystem	Runtime	Comment
0	reexec	0m 16s	Docker mode activated.
			Prechecks
+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.
			trunk Compile Tests
+1	mvninstall	13m 24s	trunk passed
+1	compile	0m 54s	trunk passed
+1	checkstyle	0m 43s	trunk passed
+1	mvnsite	0m 53s	trunk passed
-1	findbugs	1m 40s	hadoop-hdfs-project/hadoop-hdfs in trunk has 10 extant Findbugs warnings.
+1	javadoc	0m 38s	trunk passed
			Patch Compile Tests
+1	mvninstall	0m 48s	the patch passed
+1	compile	0m 46s	the patch passed
+1	javac	0m 46s	the patch passed
-0	checkstyle	0m 40s	hadoop-hdfs-project/hadoop-hdfs: The patch generated 6 new + 568 unchanged - 0 fixed = 574 total (was 568)
+1	mvnsite	0m 51s	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	1m 47s	the patch passed
+1	javadoc	0m 38s	the patch passed
			Other Tests
+1	unit	64m 36s	hadoop-hdfs in the patch passed.
+1	asflicense	0m 19s	The patch does not generate ASF License warnings.
		90m 13s	

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:14b5c93
JIRA Issue	HDFS-12191
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12878561/HDFS-12191.001.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux 6d550cea3de0 3.13.0-116-generic #163-Ubuntu SMP Fri Mar 31 14:13:22 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / 2054324
Default Java	1.8.0_131
findbugs	v3.1.0-RC1
findbugs	https://builds.apache.org/job/PreCommit-HDFS-Build/20393/artifact/patchprocess/branch-findbugs-hadoop-hdfs-project_hadoop-hdfs-warnings.html
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/20393/artifact/patchprocess/diff-checkstyle-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/20393/testReport/

modules	C: hadoop-hdfs-project/hadoop-hdfs U: hadoop-hdfs-project/hadoop-hdfs
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/20393/console
Powered by	Apache Yetus 0.6.0-SNAPSHOT http://yetus.apache.org


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▼  [Manoj Govindassamy](#) added a comment - 25/Jul/17 18:36 - edited

[jingzhao](#), [zhz](#), Nicholas,

Would like to understand the rational behind "atime" only or "mtime" only change being part of recordModification(). Technically speaking, it makes sense to record modification for any meta data modification, and since setTime() is changing the meta data, it wants to do record modification. So, would like to know what we would be missing if we are going to skip recoding modification for "atime" changes. Your thoughts please?

Also, if we want to skip the "atime" only changes to be recorded, the already existing access precision time configuration sounds like a good approach. Having one more configuration to skip atime in the snap diffs, which will override the existing access precision time doesn't gel well.

▼  [Yongjun Zhang](#) added a comment - 25/Jul/17 19:21

Thanks much [manojg](#) for the comment.

Please notice that this jira is about about providing a config to enable skipping recording atime only change (no other modification than atime), not mtime. So to make snapshotDiff calculation much faster. My understanding is, the original implementation is trying to be complete, that is, any modification to a file including access time is recorded in a snapshot.

The reason this change can potentially make snapshotDiff calc much faster is, not capturing atime only change in snapshot can prevent this kind of files get to metadataEquals method (which is expensive, especially when external auth provider is turned on). But of course we may lose the accurate access time in snapshot (only if access time is the only thing changed about the file).

Notice that snapshotDiff will not report atime only change as diff.

Hi [jingzhao](#), [szetszwo](#) and [zhz](#),

Would appreciate if you guys can help taking a look and comment.

Thanks a lot.

▼  [Manoj Govindassamy](#) added a comment - 26/Jul/17 00:33

If the atime recorded in the snapshots for the files are not useful, I would prefer to avoid recording them without even having a config which would be always turned on.

▼  [Yongjun Zhang](#) added a comment - 26/Jul/17 01:26 - edited

Thanks [manojg](#).

- We don't want to break backward compatibility, so I made the solution only enabled with config, and disabled by default.
- Though it'd be uncommon, some user may still need the atime in snapshot.

▼  [Manoj Govindassamy](#) added a comment - 22/Aug/17 19:04

Thanks for working on this [yzhangal](#). My comments below.

1. DFSConfigKeys

```
DFS_NAMENODE_DONT_CAPTURE_ACCESSTIME_ONLY_CHANGE_IN_SNAPSHOT = "dfs.namenode.dont.capture.accesstime.only.change.in.snapsh
```

1.1 Any other better name for the above new config key? We have one other snapshot related config with the prefix "dfs.namenode.snapshot...". May be we should have all snapshot related one under the same prefix for grouping and consistency. How about "dfs.namenode.snapshot.skip.accesstime-only-diff. Your thoughts?

1.2 Config and the default value lines have checkstyle issue. can you please take care of this?

2. DirectoryWithSnapshotFeature

2.1 new blank line added to line 50 is not needed

2.2

```

    } else {
        if (!dirCopy.metadataEquals(sdiff.snapshotINode)) {
            dirMetadataChanged = true;
        }
    }
}

```

Is this different compared to the existing "else if" block. Doesn't look so. Can be reverted.

3. hdfs-default.xml

3.1 Once the config key is changed, need to be incorporated here

3.2 "...it will not be captured in next snapshot." sounds ambiguous. The access time change history is not preserved. The file is still part of snapshot. Can we reword this? Also, there is typo in "lastest"

4. class INode

```

private static boolean dontCaptureAccessTimeOnlyChangeInSnapshot = false;

public static void setDontCaptureAccessTimeOnlyChangeInSnapshot(boolean s) {
    LOG.info("Setting dontCaptureAccessTimeOnlyChangeInSnapshot to " + s);
    dontCaptureAccessTimeOnlyChangeInSnapshot = s;
}

```

4.1 Any other better ways of doing this instead of adding a static member to the core INode class. Snapshot manager can be the one to read all the configuration related to snapshots and it can take the decision accordingly instead of having the logic at the INode level

```

public static boolean getDontCaptureAccessTimeOnlyChangeInSnapshot() {
    return dontCaptureAccessTimeOnlyChangeInSnapshot;
}

```

4.2 Above method is never used.

5. FSDirAttrOp

```

static boolean unprotectedSetTimes(
    FSDirectory fsd, INodesInPath iip, long mtime, long atime, boolean force)
    throws QuotaExceededException {
    ....
    if (mtime != -1) {
        inode = inode.setModificationTime(mtime, latest);
        status = true;
    }
    ...
    if (atime != -1 && (status || force
        || atime > inode.getAccessTime() + fsd.getAccessTimePrecision())) {
        inode.setAccessTime(atime, latest);
        status = true;
    }
}

```

>> "if there is other modification made to the file, the latest access time will be captured together with the modification in next snapshot."

Looks like accessTime will always be skipped with the config turned on. Please correct me if my understanding from the code is wrong.


Yongjun Zhang added a comment - 23/Aug/17 22:36

Thanks a lot [manojg](#) for the detailed review. I'm uploading new rev 002 to address them.

- 1.1 changed to "dfs.namenode.snapshot.skip.accesstime-only-change"
- 1.2 exceeding 80 chars is consistent in this file, so kept as is. Hard to avoid because of the long string
- 2. reverted. This is the left over from adding/removing debug messages.
- 3. addressed
- 4. This seems the best place to me to have the change. Otherwise we need to change the interface to communicate the value to here somehow. If you have thoughts, would be happy to hear.
- 5. added a test to verify that access time is captured when there is other modification.

Would you please take a look again?

Thanks.

▼  Hadoop QA added a comment - 24/Aug/17 00:14

 -1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 21s	Docker mode activated.
Prechecks			
+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.
trunk Compile Tests			
+1	mvninstall	13m 53s	trunk passed
+1	compile	0m 48s	trunk passed
+1	checkstyle	0m 43s	trunk passed
+1	mvnsite	0m 57s	trunk passed
+1	findbugs	1m 44s	trunk passed
+1	javadoc	0m 43s	trunk passed
Patch Compile Tests			
+1	mvninstall	0m 53s	the patch passed
+1	compile	0m 48s	the patch passed
+1	javac	0m 48s	the patch passed
-0	checkstyle	0m 41s	hadoop-hdfs-project/hadoop-hdfs: The patch generated 4 new + 555 unchanged - 0 fixed = 559 total (was 555)
+1	mvnsite	0m 56s	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 48s	the patch passed
+1	javadoc	0m 39s	the patch passed
Other Tests			
-1	unit	66m 32s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 15s	The patch does not generate ASF License warnings.
		93m 5s	

Reason	Tests
Failed junit tests	hadoop.hdfs.TestDFSStripedInputStreamWithRandomECPolicy
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure140
	hadoop.hdfs.server.blockmanagement.TestUnderReplicatedBlocks

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:14b5c93
JIRA Issue	HDFS-12191
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12883446/HDFS-12191.002.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux ccecd0f39527 3.13.0-117-generic #164-Ubuntu SMP Fri Apr 7 11:05:26 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux

Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / 7e6463d
Default Java	1.8.0_144
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/20830/artifact/patchprocess/diff-checkstyle-hadoop-hdfs-project_hadoop-hdfs.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/20830/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/20830/testReport/
modules	C: hadoop-hdfs-project/hadoop-hdfs U: hadoop-hdfs-project/hadoop-hdfs
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/20830/console
Powered by	Apache Yetus 0.6.0-SNAPSHOT http://yetus.apache.org

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Manoj Govindassamy added a comment - 24/Aug/17 21:01 - edited

Thanks for working on the patch revision [yzhangal](#). Few comments below:

1. INode

```
public abstract class INode {
    ..
    private static boolean dontCaptureAccessTimeOnlyChangeInSnapshot = false;

    public static void setDontCaptureAccessTimeOnlyChangeInSnapshot(boolean s) {
        LOG.info("Setting dontCaptureAccessTimeOnlyChangeInSnapshot to " + s);
        dontCaptureAccessTimeOnlyChangeInSnapshot = s;
    }

    public static boolean getDontCaptureAccessTimeOnlyChangeInSnapshot() {
        return dontCaptureAccessTimeOnlyChangeInSnapshot;
    }
}
```

- Abstract class INode doesn't look a right place for placing the snapshot logic. The callers of `INode#setAccessTime()` can pass in the needed details to skip recording the modifications
- `FSNamesystem#setAccessTimes()` has all the needed details to make the decision whether to record the accesstime changes in the snapshots or not. So, shall we pass in the details from here?

2. Config

- typos in `DFS_NAMENODE_SNAPTHOT_SKIP_ACCESSTIME_ONLY_CHANG_DEFAULT`

3.

```
<description>
4228   <name>dfs.namenode.snapshot.skip.accesstime-only-change</name>
4229   <value>>false</value>
4231   If accessTime of a file changed but there is no other modification
4232   made to the file, the changed accesstime will not be captured in next
4233   snapshot. However, if there is other modification made to the file,
4234   the latest access time will be captured together with the modification
4235   in next snapshot.
4236 </description>
```

- How about something on the below lines?
"When enabled, for access time only modification operations, HDFS snapshots will skip capturing pre modification copy of files/directories metadata. However, for all other metadata modification operations, files/directories latest access time will be captured along with the other metadata."


Yongjun Zhang added a comment - 25/Aug/17 01:30

Thanks a lot for the review [manojg](#).

Uploaded rev3 to address all.

For item 3, per our discussion, I kept my original wording, but changed file to file/directory as you pointed out.

Would you please take a look again? thanks.

▼  Hadoop QA added a comment - 25/Aug/17 03:06

 **-1 overall**

Vote	Subsystem	Runtime	Comment
0	reexec	0m 15s	Docker mode activated.
Prechecks			
+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.
trunk Compile Tests			
+1	mvninstall	16m 39s	trunk passed
+1	compile	0m 54s	trunk passed
+1	checkstyle	0m 43s	trunk passed
+1	mvnsite	0m 57s	trunk passed
+1	findbugs	1m 44s	trunk passed
+1	javadoc	0m 42s	trunk passed
Patch Compile Tests			
+1	mvninstall	0m 51s	the patch passed
+1	compile	0m 47s	the patch passed
+1	javac	0m 47s	the patch passed
-0	checkstyle	0m 41s	hadoop-hdfs-project/hadoop-hdfs: The patch generated 3 new + 567 unchanged - 0 fixed = 570 total (was 567)
+1	mvnsite	0m 53s	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 48s	the patch passed
+1	javadoc	0m 36s	the patch passed
Other Tests			
-1	unit	66m 18s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 16s	The patch does not generate ASF License warnings.
		95m 26s	

Reason	Tests
Failed junit tests	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure160
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure070
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure080
	hadoop.hdfs.server.namenode.TestFSDirAttrOp
	hadoop.hdfs.server.datanode.TestDataNodeVolumeFailureReporting

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:14b5c93
JIRA Issue	HDFS-12191

JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12883638/HDFS-12191.003.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux d961167b8177 3.13.0-123-generic #172-Ubuntu SMP Mon Jun 26 18:04:35 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / 9e2699a
Default Java	1.8.0_144
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/20855/artifact/patchprocess/diff-checkstyle-hadoop-hdfs-project_hadoop-hdfs.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/20855/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/20855/testReport/
modules	C: hadoop-hdfs-project/hadoop-hdfs U: hadoop-hdfs-project/hadoop-hdfs
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/20855/console
Powered by	Apache Yetus 0.6.0-SNAPSHOT http://yetus.apache.org

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Manoj Govindassamy added a comment - 25/Aug/17 18:11

Thanks for working on the patch revision yzhangal. Overall looks good to me. +1 pending following nits:

1. DFSConfigKeys

Typo in DFS_NAMENODE_SNAPHOT_SKIP_CAPTURE_ACCESTIME_ONLY_CHANGE_DEFAULT

2. Unit test TestFSDirAttrOp.testUnprotectedSetTimes() is failing with NPE. Probably the test needs more mock up to avoid NPE.

2. SnapshotManager

```
public boolean skipCaptureAccessTimeOnlyChange() {
    return skipCaptureAccessTimeOnlyChange;
}
```

How about a different method name getSkipCaptureAccessTimeOnlyChange() or isSkipCaptureAccessTimeOnlyChange()?

Yongjun Zhang added a comment - 26/Aug/17 04:30

Thanks much for the review manojg.

Uploaded rev004 to address your comments. Good catch of the typo.

Hadoop QA added a comment - 26/Aug/17 06:35

-1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 15s	Docker mode activated.
			Prechecks
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 2 new or modified test files.
			trunk Compile Tests
+1	mvninstall	14m 23s	trunk passed


+1	compile	0m 48s	trunk passed
+1	checkstyle	0m 44s	trunk passed
+1	mvnsite	0m 53s	trunk passed
+1	findbugs	1m 41s	trunk passed
+1	javadoc	0m 41s	trunk passed
			Patch Compile Tests
+1	mvninstall	0m 49s	the patch passed
+1	compile	0m 46s	the patch passed
+1	javac	0m 46s	the patch passed
-0	checkstyle	0m 41s	hadoop-hdfs-project/hadoop-hdfs: The patch generated 4 new + 567 unchanged - 0 fixed = 571 total (was 567)
+1	mvnsite	0m 51s	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 37s	the patch passed
			Other Tests
-1	unit	98m 8s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 16s	The patch does not generate ASF License warnings.
		124m 36s	

Reason	Tests
Failed junit tests	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure140
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure100
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure060
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure090
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure210
	hadoop.hdfs.TestFileAppendRestart
	hadoop.hdfs.TestReadStripedFileWithMissingBlocks
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure170
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure040
	hadoop.hdfs.TestLeaseRecoveryStriped
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure070
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure120
Timed out junit tests	org.apache.hadoop.hdfs.TestWriteReadStripedFile
	org.apache.hadoop.hdfs.TestReadStripedFileWithDecoding

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:14b5c93
JIRA Issue	HDFS-12191
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12883856/HDFS-12191.004.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml

uname	Linux 9892b18f8413 3.13.0-116-generic #163-Ubuntu SMP Fri Mar 31 14:13:22 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / b89ffcf
Default Java	1.8.0_144
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/20878/artifact/patchprocess/diff-checkstyle-hadoop-hdfs-project_hadoop-hdfs.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/20878/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/20878/testReport/
modules	C: hadoop-hdfs-project/hadoop-hdfs U: hadoop-hdfs-project/hadoop-hdfs
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/20878/console
Powered by	Apache Yetus 0.6.0-SNAPSHOT http://yetus.apache.org

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▼  **Hadoop QA** added a comment - 26/Aug/17 10:32

 **-1 overall**

Vote	Subsystem	Runtime	Comment
0	reexec	0m 15s	Docker mode activated.
Prechecks			
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 2 new or modified test files.
trunk Compile Tests			
+1	mvninstall	14m 15s	trunk passed
+1	compile	0m 49s	trunk passed
+1	checkstyle	0m 44s	trunk passed
+1	mvnsite	0m 54s	trunk passed
+1	findbugs	1m 42s	trunk passed
+1	javadoc	0m 39s	trunk passed
Patch Compile Tests			
+1	mvninstall	0m 51s	the patch passed
+1	compile	0m 46s	the patch passed
+1	javac	0m 46s	the patch passed
-0	checkstyle	0m 40s	hadoop-hdfs-project/hadoop-hdfs: The patch generated 4 new + 567 unchanged - 0 fixed = 571 total (was 567)
+1	mvnsite	0m 57s	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	1m 52s	the patch passed
+1	javadoc	0m 36s	the patch passed
Other Tests			
-1	unit	85m 53s	hadoop-hdfs in the patch failed.


+1	asflicense	0m 16s	The patch does not generate ASF License warnings.
		113m 0s	

Reason	Tests
Failed junit tests	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure130
	hadoop.hdfs.TestDFSStripedInputStreamWithRandomECPolicy
	hadoop.hdfs.TestReadStripedFileWithDecoding
	hadoop.hdfs.TestLeaseRecoveryStriped
	hadoop.hdfs.server.datanode.TestDirectoryScanner
Timed out junit tests	org.apache.hadoop.hdfs.TestWriteReadStripedFile

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:14b5c93
JIRA Issue	HDFS-12191
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12883856/HDFS-12191.004.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux 6726b4986195 3.13.0-119-generic #166-Ubuntu SMP Wed May 3 12:18:55 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / bb6a3c8
Default Java	1.8.0_144
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/20880/artifact/patchprocess/diff-checkstyle-hadoop-hdfs-project_hadoop-hdfs.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/20880/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/20880/testReport/
modules	C: hadoop-hdfs-project/hadoop-hdfs U: hadoop-hdfs-project/hadoop-hdfs
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/20880/console
Powered by	Apache Yetus 0.6.0-SNAPSHOT http://yetus.apache.org


This message was automatically generated.

- ▼

 **Yongjun Zhang**

added a comment - 27/Aug/17 01:00

The failed doesn't seem related. Rerun them manually, all succeeded except TestLeaseRecoveryStriped.testLeaseRecovery, created [HDFS-12369](#).
- ▼


 **Manoj Govindassamy**

added a comment - 28/Aug/17 18:56

LGTM, +1. Thanks [yzhangal](#).

Nits:

- TestSnapshotDiffReport:732 still refers to the the old property name
 - There are quite a few thread sleep for 3sec. You can always call the setTimes() with a constructed time instead of the actual waiting.
- ▼

 **Yongjun Zhang**

added a comment - 29/Aug/17 05:01

Thanks [manojg](#).

There are quite a few thread sleep for 3sec. You can always call the setTimes() with a constructed time instead of the actual waiting.

The sleep is there because the new operation takes the real time. If we use setTimes() to set the time to a later time, the real operation that records real time could move the time back which would be wrong.

Yongjun Zhang added a comment - 29/Aug/17 05:28

Uploaded rev5 to correct the config name in javadoc of the test code:

TestSnapshotDiffReport:732 still refers to the the old property name

Hadoop QA added a comment - 29/Aug/17 07:27

-1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 15s	Docker mode activated.
			Prechecks
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 2 new or modified test files.
			trunk Compile Tests
+1	mvninstall	13m 51s	trunk passed
+1	compile	0m 49s	trunk passed
+1	checkstyle	0m 43s	trunk passed
+1	mvnsite	0m 55s	trunk passed
+1	findbugs	1m 41s	trunk passed
+1	javadoc	0m 39s	trunk passed
			Patch Compile Tests
+1	mvninstall	0m 48s	the patch passed
+1	compile	0m 46s	the patch passed
+1	javac	0m 46s	the patch passed
-0	checkstyle	0m 40s	hadoop-hdfs-project/hadoop-hdfs: The patch generated 3 new + 567 unchanged - 0 fixed = 570 total (was 567)
+1	mvnsite	0m 51s	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 37s	the patch passed
			Other Tests
-1	unit	90m 35s	hadoop-hdfs in the patch failed.
+1	asflicense	0m 17s	The patch does not generate ASF License warnings.
		116m 31s	

Reason	Tests
Failed junit tests	hadoop.hdfs.server.datanode.TestDataNodeVolumeFailureReporting

	hadoop.hdfs.server.blockmanagement.TestUnderReplicatedBlocks
	hadoop.hdfs.TestReadStripedFileWithDecoding
	hadoop.hdfs.TestLeaseRecoveryStriped
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure060
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure010
	hadoop.hdfs.TestClientProtocolForPipelineRecovery
	hadoop.hdfs.TestDFSStripedOutputStreamWithFailure160
	hadoop.hdfs.TestListFilesInFileContext
Timed out junit tests	org.apache.hadoop.hdfs.TestReplication
	org.apache.hadoop.hdfs.TestWriteReadStripedFile

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:14b5c93
JIRA Issue	HDFS-12191
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12884182/HDFS-12191.005.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle xml
uname	Linux 686e2c70db53 3.13.0-119-generic #166-Ubuntu SMP Wed May 3 12:18:55 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / 312b1fd
Default Java	1.8.0_144
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/20906/artifact/patchprocess/diff-checkstyle-hadoop-hdfs-project_hadoop-hdfs.txt
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/20906/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/20906/testReport/
modules	C: hadoop-hdfs-project/hadoop-hdfs U: hadoop-hdfs-project/hadoop-hdfs
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/20906/console
Powered by	Apache Yetus 0.6.0-SNAPSHOT http://yetus.apache.org

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Manoj Govindassamy added a comment - 29/Aug/17 18:43

LGTM, +1. Thanks yzhangal.


Hudson added a comment - 30/Aug/17 00:46

SUCCESS: Integrated in Jenkins build Hadoop-trunk-Commit #12267 (See <https://builds.apache.org/job/Hadoop-trunk-Commit/12267/>)

[HDFS-12191](#). Provide option to not capture the accessTime change of a (yzhang: rev cf93d60d3f032000e5b78a08d320793d78799f3d)

- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSDirAttrOp.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/test/java/org/apache/hadoop/hdfs/server/namenode/TestFSDirAttrOp.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/test/java/org/apache/hadoop/hdfs/server/namenode/snapshot/TestSnapshotDiffReport.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/java/org/apache/hadoop/hdfs/server/namenode/snapshot/SnapshotManager.java`
- (edit) `hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/INode.java`
- (edit) `hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/DFSConfigKeys.java`
- (edit) `hadoop-hdfs-project/hadoop-hdfs/src/main/resources/hdfs-default.xml`

▼  **Yongjun Zhang** added a comment - 30/Aug/17 05:10


Many thanks to [manoj](#) for the review, committed to trunk and branch-2.

▼ **People**

Assignee:

 **Yongjun Zhang**

Reporter:

 **Yongjun Zhang**

Votes:

 **0** Vote for this issue

Watchers:

 **6** Start watching this issue

▼ **Dates**

Created:

23/Jul/17 23:16

Updated:

30/Aug/17 05:10

Resolved:

30/Aug/17 05:10