Hadoop HDFS / HDFS-8576

Lease recovery should return true if the lease can be released and the file can be closed

⌄ Details

Type:	🟥 Bug	Status:	**CLOSED**
Priority:	≫ Major	Resolution:	Fixed
Affects Version/s:	None	Fix Version/s:	2.8.0, 2.7.1, 3.0.0-alpha1
Component/s:	namenode		
Labels:	None		
Hadoop Flags:	Reviewed		

⌄ Description

FSNamesystem#recoverLease , returns false eventhough lease recover happens.
Hence only on second retry for recovering lease on a file ,returns success after checking if the file is not underconstruction.

⌄ Attachments

📄 HDFS-8576.1.patch		6 kB	12/Jun/15 09:48
📄 HDFS-8576.2.patch		6 kB	15/Jun/15 04:52

⌄ Activity

↑

⌄ ◯ Tsz-wo Sze added a comment - 11/Jun/15 21:05

The javadoc says "@return true if the file is already closed".

What is the expected behavior in your mind?

⌄ ◯ J.Andreina added a comment - 12/Jun/15 09:47

Thanks szetszwo for having a look at this issue.

My expectation on invoking recoverlease is to return true when:
1. File is already closed
2. Lease Recovery is successful and file is closed.

Say consider following scenario
Step 1: Client1 created a file with 0 byte or file with blocks in finalized. Client1 is aborted
Step 2: Explicit Lease recovery is triggered.

As per current implementation , lease recovery will be successful on first try , but still it returns false.

```
Rex@XXXXXXXXX:~/hadoop/bin>./hdfs dfs –appendToFile hadoop /Test_file1
appendToFile: Failed to APPEND_FILE /Test_file1 for DFSClient_NONMAPREDUCE_-899478418_1 on XXXXXXXXX because this file
lease is currently owned by DFSClient_NONMAPREDUCE_1903738807_1 on YYYYYYYYYYYYY

Rex@XXXXXXXXX:~/hadoop/bin> ./hdfs debug recoverLease -path /Test_file1
recoverLease returned false.
Giving up on recoverLease for /Test_file1 after 1 try.

Rex@XXXXXXXXX:~/hadoop/bin> echo $?
1
Rex@XXXXXXXXX:~/hadoop/bin> ./hdfs dfs –appendToFile hadoop /Test_file1
Rex@XXXXXXXXX:~/hadoop/bin> echo $?
0
```

Expected is to return successful on first try. Attached an initial patch for the same.
Please review and give your feedback.

see your point now after checking the patch in more details. The summary "Lease recovery returns false , eventhough recovery happens" is missing leading since there is no lease recovery in this case, it only releases the lease.

Some minor comments on the patch:

- The javadoc is inaccurate as mentioned previously. Let's change it to "if the file is already closed, or if the lease can be released and the file can be closed."

```
+   * @return true if the file is already closed or if lease recovery
+   *          is successful and file is closed.
```

- Rename recoverLeaseInternal to isClosed and declare it as final in recoverLease.
- Let's change the following

```
        boolean isClosed = internalReleaseLease(lease, src, iip, null);
        if(!isClosed)
          throw new RecoveryInProgressException(
              op.getExceptionMessage(src, holder, clientMachine,
                  "lease recovery is in progress. Try again later."));
        return isClosed;
```

to

```
        if (internalReleaseLease(lease, src, iip, null)) {
          return true;
        } else {
          throw new RecoveryInProgressException(
              op.getExceptionMessage(src, holder, clientMachine,
                  "lease recovery is in progress. Try again later."));
        }
```

- asFile() won't return null so that we can change the if-statement in recoverLeaseInternal to:

```
        INodeFile file = iip.getLastINode().asFile();
        if (!file.isUnderConstruction()) {
          return true;
        } else {
          ...
        }
```

Notice that we don't need "return false" at the end.

J.Andreina added a comment - 15/Jun/15 04:52

Thanks szetszwo , I have updated the patch fixing your review comments.
Please review.

Hadoop QA added a comment - 15/Jun/15 08:30

❌ -1 overall

Vote	Subsystem	Runtime	Comment
0	pre-patch	18m 38s	Pre-patch trunk compilation is healthy.
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	tests included	0m 0s	The patch appears to include 1 new or modified test files.
+1	javac	7m 41s	There were no new javac warning messages.
+1	javadoc	9m 49s	There were no new javadoc warning messages.
+1	release audit	0m 23s	The applied patch does not increase the total number of release audit warnings.
-1	checkstyle	2m 17s	The applied patch generated 2 new checkstyle issues (total was 262, now 262).
-1	whitespace	0m 0s	The patch has 1 line(s) that end in whitespace. Use git apply --whitespace=fix.
+1	install	1m 35s	mvn install still works.

+1	eclipse:eclipse	0m 34s	The patch built with eclipse:eclipse.
+1	findbugs	3m 14s	The patch does not introduce any new Findbugs (version 3.0.0) warnings.
+1	native	3m 18s	Pre-build of native portion
+1	hdfs tests	162m 34s	Tests passed in hadoop-hdfs.
		210m 6s	

Subsystem	Report/Notes
Patch URL	http://issues.apache.org/jira/secure/attachment/12739544/HDFS-8576.2.patch
Optional Tests	javadoc javac unit findbugs checkstyle
git revision	trunk / 4c5da9b
checkstyle	https://builds.apache.org/job/PreCommit-HDFS-Build/11352/artifact/patchprocess/diffcheckstylehadoop-hdfs.txt
whitespace	https://builds.apache.org/job/PreCommit-HDFS-Build/11352/artifact/patchprocess/whitespace.txt
hadoop-hdfs test log	https://builds.apache.org/job/PreCommit-HDFS-Build/11352/artifact/patchprocess/testrun_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/11352/testReport/
Java	1.7.0_55
uname	Linux asf904.gq1.ygridcore.net 3.13.0-36-lowlatency #63-Ubuntu SMP PREEMPT Wed Sep 3 21:56:12 UTC 2014 x86_64 x86_64 x86_64 GNU/Linux
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/11352/console

This message was automatically generated.

Tsz-wo Sze added a comment - 15/Jun/15 22:54

+1 the new patch looks good.

(revised Summary)

Tsz-wo Sze added a comment - 15/Jun/15 23:16

I have committed this. Thanks, J.Andreina!

Hudson added a comment - 15/Jun/15 23:16

FAILURE: Integrated in Hadoop-trunk-Commit #8019 (See https://builds.apache.org/job/Hadoop-trunk-Commit/8019/)
HDFS-8576. Lease recovery should return true if the lease can be released and the file can be closed. Contributed by J.Andreina (szetszwo: rev 2cb09e98e392feb5732d0754b539240094edc37a)

- hadoop-hdfs-project/hadoop-hdfs/src/test/java/org/apache/hadoop/hdfs/TestLeaseRecovery.java
- hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSNamesystem.java
- hadoop-hdfs-project/hadoop-hdfs/CHANGES.txt

J.Andreina added a comment - 16/Jun/15 03:22

Thanks szetszwo for the commit.

Hudson added a comment - 16/Jun/15 10:47

FAILURE: Integrated in Hadoop-Yarn-trunk #960 (See https://builds.apache.org/job/Hadoop-Yarn-trunk/960/)
HDFS-8576. Lease recovery should return true if the lease can be released and the file can be closed. Contributed by J.Andreina (szetszwo: rev 2cb09e98e392feb5732d0754b539240094edc37a)

- hadoop-hdfs-project/hadoop-hdfs/src/test/java/org/apache/hadoop/hdfs/TestLeaseRecovery.java
- hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSNamesystem.java
- hadoop-hdfs-project/hadoop-hdfs/CHANGES.txt

Hudson added a comment - 16/Jun/15 10:57

FAILURE: Integrated in Hadoop-Yarn-trunk-Java8 #230 (See https://builds.apache.org/job/Hadoop-Yarn-trunk-Java8/230/)
HDFS-8576. Lease recovery should return true if the lease can be released and the file can be closed. Contributed by J.Andreina
(szetszwo: rev 2cb09e98e392feb5732d0754b539240094edc37a)

- hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSNamesystem.java
- hadoop-hdfs-project/hadoop-hdfs/src/test/java/org/apache/hadoop/hdfs/TestLeaseRecovery.java
- hadoop-hdfs-project/hadoop-hdfs/CHANGES.txt

⌄ ◯ Hudson added a comment - 16/Jun/15 12:46

FAILURE: Integrated in Hadoop-Hdfs-trunk #2158 (See https://builds.apache.org/job/Hadoop-Hdfs-trunk/2158/)
HDFS-8576. Lease recovery should return true if the lease can be released and the file can be closed. Contributed by J.Andreina
(szetszwo: rev 2cb09e98e392feb5732d0754b539240094edc37a)

- hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSNamesystem.java
- hadoop-hdfs-project/hadoop-hdfs/src/test/java/org/apache/hadoop/hdfs/TestLeaseRecovery.java
- hadoop-hdfs-project/hadoop-hdfs/CHANGES.txt

⌄ ◯ Hudson added a comment - 16/Jun/15 14:43

FAILURE: Integrated in Hadoop-Hdfs-trunk-Java8 #219 (See https://builds.apache.org/job/Hadoop-Hdfs-trunk-Java8/219/)
HDFS-8576. Lease recovery should return true if the lease can be released and the file can be closed. Contributed by J.Andreina
(szetszwo: rev 2cb09e98e392feb5732d0754b539240094edc37a)

- hadoop-hdfs-project/hadoop-hdfs/CHANGES.txt
- hadoop-hdfs-project/hadoop-hdfs/src/test/java/org/apache/hadoop/hdfs/TestLeaseRecovery.java
- hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSNamesystem.java

⌄ ◯ Hudson added a comment - 16/Jun/15 15:16

FAILURE: Integrated in Hadoop-Mapreduce-trunk-Java8 #228 (See https://builds.apache.org/job/Hadoop-Mapreduce-trunk-Java8/228/)
HDFS-8576. Lease recovery should return true if the lease can be released and the file can be closed. Contributed by J.Andreina
(szetszwo: rev 2cb09e98e392feb5732d0754b539240094edc37a)

- hadoop-hdfs-project/hadoop-hdfs/src/test/java/org/apache/hadoop/hdfs/TestLeaseRecovery.java
- hadoop-hdfs-project/hadoop-hdfs/CHANGES.txt
- hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSNamesystem.java

⌄ ◯ Hudson added a comment - 16/Jun/15 15:33

FAILURE: Integrated in Hadoop-Mapreduce-trunk #2176 (See https://builds.apache.org/job/Hadoop-Mapreduce-trunk/2176/)
HDFS-8576. Lease recovery should return true if the lease can be released and the file can be closed. Contributed by J.Andreina
(szetszwo: rev 2cb09e98e392feb5732d0754b539240094edc37a)

- hadoop-hdfs-project/hadoop-hdfs/src/test/java/org/apache/hadoop/hdfs/TestLeaseRecovery.java
- hadoop-hdfs-project/hadoop-hdfs/CHANGES.txt
- hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/FSNamesystem.java

⌄ People

Assignee:
◯ J.Andreina

Reporter:
◯ J.Andreina

Votes:
0 Vote for this issue

Watchers:
6 Start watching this issue

⌄ Dates

Created:
11/Jun/15 10:01

Updated:

06/Jan/17 07:27

Resolved:

15/Jun/15 23:16