Hadoop HDFS / HDFS-10752

Several log refactoring/improvement suggestion in HDFS

⌄ Details

Type:	🔴 Bug	Status:	**RESOLVED**
Priority:	⌃ Major	Resolution:	Fixed
Affects Version/s:	2.7.2	Fix Version/s:	2.8.0, 3.0.0-alpha2
Component/s:	None		
Labels:	easyfix easytest		
Hadoop Flags:	Reviewed		

⌄ Description

As per conversation with vrushalic, we merged HDFS-10749, HDFS-10750, HDFS-10751, HDFS-10753, under this issue.

HDFS-10749

Method invocation in logs can be replaced by variable
Similar to the fix for HDFS-409. In file:

hadoop-rel-release-2.7.2/hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/DFSOutputStream.java

In code block:

```
lastQueuedSeqno = currentPacket.getSeqno();
if (DFSClient.LOG.isDebugEnabled()) {
    DFSClient.LOG.debug("Queued packet " + currentPacket.getSeqno());
}
```

currentPacket.getSeqno() is better to be replaced by variable lastQueuedSeqno.

HDFS-10750

Similar to the fix for AVRO-115. In file:

hadoop-rel-release-2.7.2/hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/NameNode.java

in line 695, the logging code:

```
LOG.info(getRole() + " RPC up at: " + rpcServer.getRpcAddress());
```

In the same class, there is a method in line 907:

```
/**
 * @return NameNode RPC address
 */
public InetSocketAddress getNameNodeAddress() {
  return rpcServer.getRpcAddress();
}
```

We can tell that rpcServer.getRpcAddress() could be replaced by method getNameNodeAddress() for the case of readability and simplicity

HDFS-10751

Similar to the fix for AVRO-115. In file:

hadoop-rel-release-2.7.2/hadoop-hdfs-project/hadoop-hdfs-nfs/src/main/java/org/apache/hadoop/hdfs/nfs/nfs3/OpenFileCtxCache.java

in line 72, the logging code:

```
LOG.trace("openFileMap size:" + openFileMap.size());
```

In the same class, there is a method in line 189:

```
int size() {
  return openFileMap.size();
}
```

We can tell that openFileMap.size() could be replaced by method size() for the case of readability and simplicity

Print variable in byte
Similar to the fix for HBASE-623, in file:

hadoop-rel-release-2.7.2/hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/BackupImage.java

In the following method, the log printed variable data (in byte[]). A possible fix is add Bytes.toString(data).

```
/**
 * Write the batch of edits to the local copy of the edit logs.
 */
private void logEditsLocally(long firstTxId, int numTxns, byte[] data) {
  long expectedTxId = editLog.getLastWrittenTxId() + 1;
  Preconditions.checkState(firstTxId == expectedTxId,
      "received txid batch starting at %s but expected txn %s",
      firstTxId, expectedTxId);
  editLog.setNextTxId(firstTxId + numTxns - 1);
  editLog.logEdit(data.length, data);
  editLog.logSync();
}
```

HDFS-10753

MethodInvocation replaced by variable due to toString method
Similar to the fix in HADOOP-6419, in file:

hadoop-rel-release-2.7.2/hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/blockmanagement/CorruptReplicasMap.java

in line 76, the blk.getBlockName() method invocation is invoked on variable blk. "blk" is the class instance of Block.

```
void addToCorruptReplicasMap(Block blk, DatanodeDescriptor dn,
      String reason, Reason reasonCode) {
...
NameNode.blockStateChangeLog.info(
          "BLOCK NameSystem.addToCorruptReplicasMap: {} added as corrupt on "
          + "{} by {} {}", blk.getBlockName(), dn, Server.getRemoteIp(),
          reasonText);
```

In file: hadoop-rel-release-2.7.2/hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/protocol/Block.java

```
  @Override
  public String toString() {
    return getBlockName() + "_" + getGenerationStamp();
  }
```

The toString() method contain not only getBlockName() but also getGenerationStamp which may be helpful for debugging purpose. Therefore blk.getBlockName() can be replaced by blk

Attachments

📄 HDFS-10752.000.patch	6 kB	17/Oct/16 22:11

Issue Links

supercedes

🔴 HDFS-10749 Log refactoring: method invocation should be replaced by variable	⏫	RESOLVED
🔴 HDFS-10750 Log refactoring: method invocation should be replaced by a shorter method	⏫	RESOLVED
🔴 HDFS-10751 Log refactoring: method invocation should be replaced by a shorter method	⏫	RESOLVED
🔴 HDFS-10753 Method invocation in log can be replaced by variable because the variable's toString method ...	⏫	RESOLVED

Activity

↑

▾ ⬤ Hanisha Koneru added a comment - 17/Oct/16 22:11

■ HDFS-10749 already resolved

- Replaced *rpcServer.getRpcAddress()* with the method *getNameNodeAddress()* in NameNode.java
- Replaced *openFileMap.size()* with the method *size()* in OpenFileCtxCache.java
- Replaced *blk.getBlockName()* with the *blk (toString())* in CorruptReplicasMap.java

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⌄ ◉ Hadoop QA added a comment - 17/Oct/16 23:45

❌ **-1 overall**

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 doesn't appear to include any new or modified tests. Please justify why no new tests are needed for this patch. Also please list what manual steps were performed to verify this patch.
0	mvndep	0m 7s	Maven dependency ordering for branch
+1	mvninstall	7m 0s	trunk passed
+1	compile	1m 28s	trunk passed
+1	checkstyle	0m 34s	trunk passed
+1	mvnsite	1m 17s	trunk passed
+1	mvneclipse	0m 27s	trunk passed
+1	findbugs	2m 22s	trunk passed
+1	javadoc	0m 51s	trunk passed
0	mvndep	0m 6s	Maven dependency ordering for patch
+1	mvninstall	1m 0s	the patch passed
+1	compile	1m 16s	the patch passed
+1	javac	1m 16s	the patch passed
+1	checkstyle	0m 29s	the patch passed
+1	mvnsite	1m 3s	the patch passed
+1	mvneclipse	0m 19s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	findbugs	2m 18s	the patch passed
+1	javadoc	0m 49s	the patch passed
-1	unit	61m 36s	hadoop-hdfs in the patch failed.
+1	unit	1m 44s	hadoop-hdfs-nfs in the patch passed.
+1	asflicense	0m 18s	The patch does not generate ASF License warnings.
		86m 44s	

Reason	Tests
Failed junit tests	hadoop.hdfs.server.namenode.ha.TestHASafeMode

Subsystem	Report/Notes
Docker	Image:yetus/hadoop:9560f25
JIRA Issue	HDFS-10752
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12833821/HDFS-10752.000.patch
Optional Tests	asflicense compile javac javadoc mvninstall mvnsite unit findbugs checkstyle

uname	Linux 6f8d24ed1fa6 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
Build tool	maven
Personality	/testptch/hadoop/patchprocess/precommit/personality/provided.sh
git revision	trunk / f5d9235
Default Java	1.8.0_101
findbugs	v3.0.0
unit	https://builds.apache.org/job/PreCommit-HDFS-Build/17187/artifact/patchprocess/patch-unit-hadoop-hdfs-project_hadoop-hdfs.txt
Test Results	https://builds.apache.org/job/PreCommit-HDFS-Build/17187/testReport/
modules	C: hadoop-hdfs-project/hadoop-hdfs hadoop-hdfs-project/hadoop-hdfs-nfs U: hadoop-hdfs-project
Console output	https://builds.apache.org/job/PreCommit-HDFS-Build/17187/console
Powered by	Apache Yetus 0.4.0-SNAPSHOT http://yetus.apache.org

This message was automatically generated.

Arpit Agarwal added a comment - 18/Oct/16 17:16 - edited

Thanks for the contribution hanishakoneru.

I think we should skip the change in `addToCorruptReplicasMap`. Some of the overrides of `Block#toString()` are expensive. Or at least we should surround the Log call with logging guards like so the overhead of `Block#toString()` is avoided when debug logging is off.

```
if (NameNode.blockStateChangeLog.isDebugEnabled()) {
  NameNode.blockStateChangeLog.debug(...
}
```

+1 for the rest of the changes.

Arpit Agarwal added a comment - 18/Oct/16 18:00

So the log guard is not necessary after all.

+1, I will commit this later today.

Arpit Agarwal added a comment - 20/Oct/16 00:27

Committed for 2.8.0. Thanks for the contribution hanishakoneru!

Hudson added a comment - 20/Oct/16 00:40

SUCCESS: Integrated in Jenkins build Hadoop-trunk-Commit #10639 (See https://builds.apache.org/job/Hadoop-trunk-Commit/10639/)
HDFS-10752. Several log refactoring/improvement suggestion in HDFS. (arp: rev b4564103e4709caa1135f6ccc2864d90e54f2ac9)

- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/namenode/NameNode.java
- (edit) hadoop-hdfs-project/hadoop-hdfs-nfs/src/main/java/org/apache/hadoop/hdfs/nfs/nfs3/OpenFileCtxCache.java
- (edit) hadoop-hdfs-project/hadoop-hdfs/src/main/java/org/apache/hadoop/hdfs/server/blockmanagement/CorruptReplicasMap.java

People

Assignee:
Hanisha Koneru

Reporter:
Nemo Chen

Votes:
0 Vote for this issue

Watchers:

7   Start watching this issue

⌄ Dates

Created:

11/Aug/16 18:13

Updated:

20/Oct/16 00:40

Resolved:

20/Oct/16 00:27