



Interrupted client may try to fail-over and retry

Details

Type:	Bug	Status:	CLOSED
Priority:	Major	Resolution:	Fixed
Affects Version/s:	None	Fix Version/s:	2.8.0, 2.7.2, 3.0.0-alpha1
Component/s:	ipc		
Labels:	None		
Target Version/s:	2.7.2		
Hadoop Flags:	Reviewed		

Description

When an IPC client is interrupted, it sometimes try to fail-over to a different namenode and retry. We've seen this causing hang during shutdown.

Attachments

HADOOP-12464.patch	2 kB	07/Oct/15 14:33
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Issue Links

is duplicated by		
HADOOP-11624 Prevent fail-over during client shutdown		RESOLVED
relates to		
HDFS-5755 Filesystem close blocks SystemExit if a DFS client is trying to talk to a nonexistent NN		OPEN
HADOOP-10219 ipc.Client.setupIOstreams() needs to check for ClientCache.stopClient requested shutdown...		RESOLVED
HADOOP-12418 TestRPC.testRPCInterruptedSimple fails intermittently		RESOLVED

Activity

Kihwal Lee added a comment - 07/Oct/15 14:31
<p>If an interrupt is noticed while sending the request, <code>Client#call()</code> catches <code>InterruptedException</code>, wrap it in <code>IOException</code> and throw. Since <code>RetryPolicies#FailoverOnNetworkExceptionRetry</code> regards all <code>IOException}s</code> as local exception, it prescribes <code>{{RetryAction.FAILOVER_AND_RETRY</code>. We can make the client bail out early in <code>RetryInvocationHandler</code> before it even consults <code>RetryPolicies</code>.</p> <p>Another potential place of hang is after making the call. In <code>Client#call()</code>, when waiting for a response, it catches <code>InterruptedException</code> to sets a local variable and continues to wait for a response. The connection thread has to either get a response or get shutdown and notify the client for it to exit the loop. It allows graceful termination, but may cause extra delay or hang during shutdown. I am not sure what is the harm in throwing right away when an <code>InterruptedException</code> is received.</p>
Hadoop QA added a comment - 07/Oct/15 15:28


-1 overall

0	pre-patch	17m 49s	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 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.
+1	javac	8m 1s	There were no new javac warning messages.
+1	javadoc	10m 25s	There were no new javadoc warning messages.
-1	release audit	0m 21s	The applied patch generated 1 release audit warnings.
+1	checkstyle	1m 7s	There were no new checkstyle issues.
+1	whitespace	0m 0s	The patch has no lines that end in whitespace.
+1	install	1m 29s	mvn install still works.
+1	eclipse:eclipse	0m 34s	The patch built with eclipse:eclipse.
+1	findbugs	1m 55s	The patch does not introduce any new Findbugs (version 3.0.0) warnings.
-1	common tests	7m 37s	Tests failed in hadoop-common.
		49m 22s	

Reason	Tests
Failed unit tests	hadoop.metrics2.impl.TestGangliaMetrics


Subsystem	Report/Notes
Patch URL	http://issues.apache.org/jira/secure/attachment/12765394/HADOOP-12464.patch
Optional Tests	javadoc javac unit findbugs checkstyle
git revision	trunk / 61b3547
Release Audit	https://builds.apache.org/job/PreCommit-HADOOP-Build/7776/artifact/patchprocess/patchReleaseAuditProblems.txt
hadoop-common test log	https://builds.apache.org/job/PreCommit-HADOOP-Build/7776/artifact/patchprocess/testrun_hadoop-common.txt
Test Results	https://builds.apache.org/job/PreCommit-HADOOP-Build/7776/testReport/
Java	1.7.0_55
uname	Linux asf906.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-HADOOP-Build/7776/console

This message was automatically generated.

▼  Steve Loughran added a comment - 08/Oct/15 12:41


+1

I've seen the situation where a blocked/hanging HDFS client won't shut down...this may be related.


▼  Steve Loughran added a comment - 08/Oct/15 12:45

Linking to the issues I've seen with hanging on shutdown. Do these stack traces match what you've seen?


We could have a test for this BTW: find a free port, create an hdfs client of `hdfs://localhost/$port`, try to use it and then try to shut down the FS

▼  Steve Loughran added a comment - 08/Oct/15 15:44

[HADOOP-12418](#) may be a race condition where this intermittently surfaces (especially on Java8)

▼  Kihwal Lee added a comment - 08/Oct/15 17:40

The client hang during making connection ([HADOOP-10219](#)) is a different problem. The thread that is making connection is never interrupted. I posted a patch there.

▼  [Steve Loughran](#) added a comment - 18/Oct/15 11:21

+1 —I'll let you do the commit

▼  [Kihwal Lee](#) added a comment - 19/Oct/15 16:03

Thanks for the review, stevel@apache.org. I've committed this to trunk, branch-2 and branch-2.7.

▼  [Hudson](#) added a comment - 19/Oct/15 16:30

FAILURE: Integrated in Hadoop-trunk-Commit #8664 (See <https://builds.apache.org/job/Hadoop-trunk-Commit/8664/>) [HADOOP-12464](#). Interrupted client may try to fail-over and retry. (kihwal: rev 6144e0137bb51bd04b46ea5ce42c59c2d4f7657d)

- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/io/retry/RetryInvocationHandler.java`
- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/ipc/Client.java`
- `hadoop-common-project/hadoop-common/CHANGES.txt`

▼  [Hudson](#) added a comment - 19/Oct/15 17:18

FAILURE: Integrated in Hadoop-Mapreduce-trunk-Java8 #551 (See <https://builds.apache.org/job/Hadoop-Mapreduce-trunk-Java8/551/>) [HADOOP-12464](#). Interrupted client may try to fail-over and retry. (kihwal: rev 6144e0137bb51bd04b46ea5ce42c59c2d4f7657d)

- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/io/retry/RetryInvocationHandler.java`
- `hadoop-common-project/hadoop-common/CHANGES.txt`
- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/ipc/Client.java`

▼  [Hudson](#) added a comment - 19/Oct/15 17:57

FAILURE: Integrated in Hadoop-Yarn-trunk-Java8 #567 (See <https://builds.apache.org/job/Hadoop-Yarn-trunk-Java8/567/>) [HADOOP-12464](#). Interrupted client may try to fail-over and retry. (kihwal: rev 6144e0137bb51bd04b46ea5ce42c59c2d4f7657d)

- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/io/retry/RetryInvocationHandler.java`
- `hadoop-common-project/hadoop-common/CHANGES.txt`
- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/ipc/Client.java`

▼  [Hudson](#) added a comment - 19/Oct/15 18:04

SUCCESS: Integrated in Hadoop-Yarn-trunk #1288 (See <https://builds.apache.org/job/Hadoop-Yarn-trunk/1288/>) [HADOOP-12464](#). Interrupted client may try to fail-over and retry. (kihwal: rev 6144e0137bb51bd04b46ea5ce42c59c2d4f7657d)

- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/io/retry/RetryInvocationHandler.java`
- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/ipc/Client.java`
- `hadoop-common-project/hadoop-common/CHANGES.txt`

▼  [Hudson](#) added a comment - 19/Oct/15 21:16

FAILURE: Integrated in Hadoop-Mapreduce-trunk #2500 (See <https://builds.apache.org/job/Hadoop-Mapreduce-trunk/2500/>) [HADOOP-12464](#). Interrupted client may try to fail-over and retry. (kihwal: rev 6144e0137bb51bd04b46ea5ce42c59c2d4f7657d)

- `hadoop-common-project/hadoop-common/CHANGES.txt`
- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/ipc/Client.java`
- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/io/retry/RetryInvocationHandler.java`

▼  [Hudson](#) added a comment - 19/Oct/15 22:09

FAILURE: Integrated in Hadoop-Hdfs-trunk-Java8 #514 (See <https://builds.apache.org/job/Hadoop-Hdfs-trunk-Java8/514/>) [HADOOP-12464](#). Interrupted client may try to fail-over and retry. (kihwal: rev 6144e0137bb51bd04b46ea5ce42c59c2d4f7657d)

- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/ipc/Client.java`
- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/io/retry/RetryInvocationHandler.java`
- `hadoop-common-project/hadoop-common/CHANGES.txt`

▼  [Hudson](#) added a comment - 19/Oct/15 22:27

FAILURE: Integrated in Hadoop-Hdfs-trunk #2451 (See <https://builds.apache.org/job/Hadoop-Hdfs-trunk/2451/>)

[HADOOP-12464](#). Interrupted client may try to fail-over and retry. (kihwal: rev 6144e0137bb51bd04b46ea5ce42c59c2d4f7657d)

- `hadoop-common-project/hadoop-common/CHANGES.txt`
- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/ipc/Client.java`
- `hadoop-common-project/hadoop-common/src/main/java/org/apache/hadoop/io/retry/RetryInvocationHandler.java`

▼ People

Assignee:



Kihwal Lee

Reporter:



Kihwal Lee

Votes:



Vote for this issue

Watchers:



Start watching this issue

▼ Dates

Created:

07/Oct/15 13:56

Updated:

06/Jan/17 07:32

Resolved:

19/Oct/15 16:03