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Hadoop YARN / YARN-9965

Fix NodeManager failing to start on subsequent times when Hdfs Auxillary Jar is set

Details

Type:	Bug	Status:	RESOLVED
Priority:	Major	Resolution:	Fixed
Affects Version/s:	3.2.0	Fix Version/s:	3.3.0
Component/s:	auxservices , nodemanager		
Labels:	None		

Description

Loading an auxiliary jar from a Hdfs location on a node manager works as expected on first time. The subsequent restart fails with `ClassNotFoundException`

```
2019-11-08 03:59:49,256 INFO org.apache.hadoop.util.ApplicationClassLoader: classpath: []
2019-11-08 03:59:49,256 INFO org.apache.hadoop.util.ApplicationClassLoader: system classes: [java., javax.accessibility.,
javax.activation., javax.activity., javax.annotation., javax.annotation.processing., javax.crypto., javax.imageio.,
javax.jws., javax.lang.model., -javax.management.j2ee., javax.management., javax.naming., javax.net., javax.print.,
javax.rmi., javax.script., -javax.security.auth.message., javax.security.auth., javax.security.cert., javax.security.sasl.,
javax.sound., javax.sql., javax.swing., javax.tools., javax.transaction., -javax.xml.registry., -javax.xml.rpc., javax.xml.,
org.w3c.dom., org.xml.sax., org.apache.commons.logging., org.apache.log4j., -org.apache.hadoop.hbase., org.apache.hadoop.,
core-default.xml, hdfs-default.xml, mapred-default.xml, yarn-default.xml]
2019-11-08 03:59:49,257 INFO org.apache.hadoop.service.AbstractService: Service
org.apache.hadoop.yarn.server.nodemanager.containermanager.AuxServices failed in state INITED
java.lang.ClassNotFoundException: org.apache.auxtest.AuxServiceFromHDFS
    at java.net.URLClassLoader.findClass(URLClassLoader.java:381)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:424)
    at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:335)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:357)
    at org.apache.hadoop.util.ApplicationClassLoader.loadClass(ApplicationClassLoader.java:189)
    at org.apache.hadoop.util.ApplicationClassLoader.loadClass(ApplicationClassLoader.java:157)
    at java.lang.Class.forName0(Native Method)
    at java.lang.Class.forName(Class.java:348)
    at
org.apache.hadoop.yarn.server.nodemanager.containermanager.AuxiliaryServiceWithCustomClassLoader.getInstance(AuxiliaryServiceV
    at org.apache.hadoop.yarn.server.nodemanager.containermanager.AuxServices.serviceInit(AuxServices.java:270)
    at org.apache.hadoop.service.AbstractService.init(AbstractService.java:164)
```

The issue happens when reusing the previous localized auxillary service jar. The localized jar file is appended with `/*` when reusing which has caused the issue.

Attachments

YARN-9965-001.patch	2 kB	08/Nov/19 14:15
YARN-9965-addendum-01.patch	5 kB	13/Nov/19 13:29

Issue Links

is related to

YARN-9967 Fix NodeManager failing to start when Hdfs Auxillary Jar is set	RESOLVED
---	-----------------

relates to

YARN-8223 ClassNotFoundException when auxiliary service is loaded from HDFS	RESOLVED
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Activity



Hadoop QA added a comment - 08/Nov/19 15:49


-1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 40s	Docker mode activated.
			Prechecks
+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.
			trunk Compile Tests
+1	mvninstall	20m 20s	trunk passed
+1	compile	1m 0s	trunk passed
+1	checkstyle	0m 27s	trunk passed
+1	mvnsite	0m 38s	trunk passed
+1	shadedclient	13m 57s	branch has no errors when building and testing our client artifacts.
+1	findbugs	1m 5s	trunk passed
+1	javadoc	0m 28s	trunk passed
			Patch Compile Tests
+1	mvninstall	0m 36s	the patch passed
+1	compile	0m 56s	the patch passed
+1	javac	0m 56s	the patch passed
+1	checkstyle	0m 20s	the patch passed
+1	mvnsite	0m 33s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shadedclient	14m 3s	patch has no errors when building and testing our client artifacts.
+1	findbugs	1m 19s	the patch passed
+1	javadoc	0m 26s	the patch passed
			Other Tests
+1	unit	21m 57s	hadoop-yarn-server-nodemanager in the patch passed.
+1	asflicense	0m 29s	The patch does not generate ASF License warnings.
		79m 30s	

Subsystem	Report/Notes
Docker	Client=19.03.4 Server=19.03.4 Image=yetus/hadoop:104ccca9169
JIRA Issue	YARN-9965
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12985361/YARN-9965-001.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux b81325f64415 4.15.0-66-generic #75-Ubuntu SMP Tue Oct 1 05:24:09 UTC 2019 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / 42fc888

maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/25125/testReport/
Max. process+thread count	306 (vs. ulimit of 5500)
modules	C: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager U: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/25125/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

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▼  [Abhishek Modi](#) added a comment - 11/Nov/19 07:31


Thanks [prabhujoseph](#) for working on this. LGTM. I will commit it shortly.

▼  [Hudson](#) added a comment - 11/Nov/19 10:46

SUCCESS: Integrated in Jenkins build Hadoop-trunk-Commit #17626 (See <https://builds.apache.org/job/Hadoop-trunk-Commit/17626/>)

[YARN-9965](#). Fix NodeManager failing to start when Hdfs Auxillary Jar is (abmodi: rev 516377bfa6faa21f50b7e7c3889e4196c6d464b8)

- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/AuxServices.java


▼  [Prabhu Joseph](#) added a comment - 11/Nov/19 11:11

Thanks [abmodi](#).


▼  [Vinod Kumar Vavilapalli](#) added a comment - 12/Nov/19 04:58

-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.

There's no rationale given from the contributor or committer as to why we have not modified any unit tests. Why is that?

▼  [Abhishek Modi](#) added a comment - 12/Nov/19 05:55

[vinodkv](#) - I think that's a mistake from my end - I should have enforced it to write an UT before committing it. Since this was a very minor fix and I also tested it - I went ahead with the commit. Should I create a separate Jira for writing UT for this - or should we add an addendum patch here only with the UT?

▼  [Prabhu Joseph](#) added a comment - 12/Nov/19 12:57

That's my mistake initially, will remember to submit patch with test case.

Below is the functionality test case done to validate the fix for reference.

Repro

```
1. Prepare a custom auxiliary service jar and place it on hdfs

[hdfs@yarndocker-1 yarn]$ cat TestShuffleHandler2.java
package org;
import org.apache.hadoop.yarn.server.api.AuxiliaryService;
import org.apache.hadoop.yarn.server.api.ApplicationInitializationContext;
import org.apache.hadoop.yarn.server.api.ApplicationTerminationContext;
import java.nio.ByteBuffer;

public class TestShuffleHandler2 extends AuxiliaryService {
    public static final String MAPREDUCE_TEST_SHUFFLE_SERVICEID = "test_shuffle2";
    public TestShuffleHandler2() {
        super("testshuffle2");
    }
}
```

```
}
@Override
public void initializeApplication(ApplicationInitializationContext context) {
}
@Override
public void stopApplication(ApplicationTerminationContext context) {
}
@Override
public synchronized ByteBuffer getMetaData() {
```

After the patch, the issue does not happen.

Prabhu Joseph added a comment - 13/Nov/19 13:30

abmodi Have reopened this Jira to submit addendum patch [YARN-9965-addendum-01.patch](#) which includes the testcase.

Hadoop QA added a comment - 13/Nov/19 14:59

✓


+1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 23s	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	17m 56s	trunk passed
+1	compile	1m 0s	trunk passed
+1	checkstyle	0m 28s	trunk passed
+1	mvnsite	0m 39s	trunk passed
+1	shadedclient	12m 50s	branch has no errors when building and testing our client artifacts.
+1	findbugs	0m 57s	trunk passed
+1	javadoc	0m 31s	trunk passed
			Patch Compile Tests
+1	mvninstall	0m 34s	the patch passed
+1	compile	0m 54s	the patch passed
+1	javac	0m 54s	the patch passed
+1	checkstyle	0m 23s	the patch passed
+1	mvnsite	0m 33s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shadedclient	12m 29s	patch has no errors when building and testing our client artifacts.
+1	findbugs	1m 2s	the patch passed
+1	javadoc	0m 28s	the patch passed
			Other Tests
+1	unit	21m 29s	hadoop-yarn-server-nodemanager in the patch passed.
+1	asflicense	0m 28s	The patch does not generate ASF License warnings.
		73m 25s	

Subsystem	Report/Notes
Docker	Client=19.03.4 Server=19.03.4 Image=yetus/hadoop:104ccca9169
JIRA Issue	YARN-9965

JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12985742/YARN-9965-addendum-01.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux 3325ba6289a0 4.15.0-58-generic #64-Ubuntu SMP Tue Aug 6 11:12:41 UTC 2019 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / df6b316
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/25152/testReport/
Max. process+thread count	454 (vs. ulimit of 5500)
modules	C: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager U: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/25152/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

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▼  Prabhu Joseph added a comment - 14/Nov/19 07:07

abmodi Can you review the [YARN-9965-addendum-01.patch](https://issues.apache.org/jira/secure/attachment/12985742/YARN-9965-addendum-01.patch) which added the testcase when you get time. Thanks.

▼  Abhishek Modi added a comment - 14/Nov/19 08:37

Thanks prabhuJoseph - I will review it by today.

▼  Abhishek Modi added a comment - 19/Nov/19 02:39


Thanks prabhuJoseph. Latest addendum patch looks good to me. Committed it to trunk.

▼  Hudson added a comment - 19/Nov/19 03:01

SUCCESS: Integrated in Jenkins build Hadoop-trunk-Commit #17661 (See <https://builds.apache.org/job/Hadoop-trunk-Commit/17661/>)

~~YARN-9965~~. Fix NodeManager failing to start on subsequent times when (abmodi: rev dc3f4fc2f44c22300cd0b4832469b8cd59a1f228)


- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/test/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/TestAuxServices.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/AuxServices.java

▼  Prabhu Joseph added a comment - 19/Nov/19 06:40

Thanks abmodi.

▼ People

Assignee:

 Prabhu Joseph

Reporter:

 Prabhu Joseph

Votes:

 Vote for this issue

Watchers:

4 Start watching this issue

▼ Dates

Created:

08/Nov/19 12:13

Updated:

19/Nov/19 06:40

Resolved:

19/Nov/19 02:39