Hadoop YARN / YARN-1839

Capacity scheduler preempts an AM out. AM attempt 2 fails to launch task container with SecretManager$InvalidToken: No NMToken sent

∨ Details

Type:	🟥 Bug	Status:	**CLOSED**
Priority:	🔺 Critical	Resolution:	Fixed
Affects Version/s:	2.3.0	Fix Version/s:	2.4.0
Component/s:	applications, capacityscheduler		
Labels:	None		
Hadoop Flags:	Reviewed		

∨ Description

Use single-node cluster. Turn on capacity scheduler preemption. Run MR sleep job as app 1. Take entire cluster. Run MR sleep job as app 2. Preempt app1 out. Wait till app 2 finishes. App 1 AM attempt 2 will start. It won't be able to launch a task container with this error stack trace in AM logs:

```
2014-03-13 20:13:50,254 INFO [AsyncDispatcher event handler] org.apache.hadoop.mapreduce.v2.app.job.impl.TaskAttemptImpl:
Diagnostics report from attempt_1394741557066_0001_m_000000_1009: Container launch failed for
container_1394741557066_0001_02_000021 : org.apache.hadoop.security.token.SecretManager$InvalidToken: No NMToken sent for
<host>:45454
        at
org.apache.hadoop.yarn.client.api.impl.ContainerManagementProtocolProxy$ContainerManagementProtocolProxyData.newProxy(Containe
        at org.apache.hadoop.yarn.client.api.impl.ContainerManagementProtocolProxy$ContainerManagementProtocolProxyData.
<init>(ContainerManagementProtocolProxy.java:196)
        at
org.apache.hadoop.yarn.client.api.impl.ContainerManagementProtocolProxy.getProxy(ContainerManagementProtocolProxy.java:117)
        at org.apache.hadoop.mapreduce.v2.app.launcher.ContainerLauncherImpl.getCMProxy(ContainerLauncherImpl.java:403)
        at org.apache.hadoop.mapreduce.v2.app.launcher.ContainerLauncherImpl$Container.launch(ContainerLauncherImpl.java:138)
        at
org.apache.hadoop.mapreduce.v2.app.launcher.ContainerLauncherImpl$EventProcessor.run(ContainerLauncherImpl.java:369)
        at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1145)
        at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:615)
        at java.lang.Thread.run(Thread.java:722)
```

∨ Attachments

📄 YARN-1839.1.patch	12 kB	17/Mar/14 17:37
📄 YARN-1839.2.patch	12 kB	17/Mar/14 20:04
📄 YARN-1839.3.patch	12 kB	17/Mar/14 21:15

∨ Issue Links

is duplicated by

🟥 YARN-1795 After YARN-713, using FairScheduler can cause an InvalidToken Exception for NMTokens	⛔	**RESOLVED**

is related to

🟥 YARN-713 ResourceManager can exit unexpectedly if DNS is unavailable	🔺	**CLOSED**

∨ Activity

↑

⚪ Jian He added a comment - 15/Mar/14 00:05

```
            // The node set here is used for differentiating whether the NMToken
            // has been issued for this node from the client's perspective. If
            // this is an AM container, the NMToken is issued only for RM and so
```

```
            // we should not update the node set.
            if (container.getId().getId() != 1) {
              nodeSet.add(container.getNodeId());
```

This piece of code is flawed. We cannot assume AM container Id always equal to 1. If AM container Id doesn't equal to one and it's added into the node set, RM will think this NMToken has already been sent and won't sent for other normal containers which AM asks.

⌄ ◯ Jian He added a comment - 17/Mar/14 17:42

Uploaded a patch:

- Removed the containerId != 1 check, changed RMAppAttempt to clear the node set after AM container is allocated.
- Changed some NMToken related debug level to info so as to make debug easier.

⌄ ◯ Hadoop QA added a comment - 17/Mar/14 18:31

-1 overall. Here are the results of testing the latest attachment
http://issues.apache.org/jira/secure/attachment/12635122/YARN-1839.1.patch
against trunk revision .

+1 @author. The patch does not contain any @author tags.

+1 tests included. The patch appears to include 2 new or modified test files.

+1 javac. The applied patch does not increase the total number of javac compiler warnings.

+1 javadoc. There were no new javadoc warning messages.

+1 eclipse:eclipse. The patch built with eclipse:eclipse.

-1 findbugs. The patch appears to introduce 1 new Findbugs (version 1.3.9) warnings.

+1 release audit. The applied patch does not increase the total number of release audit warnings.

-1 core tests. The patch failed these unit tests in hadoop-yarn-project/hadoop-yarn/hadoop-yarn-client hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager:

org.apache.hadoop.yarn.server.resourcemanager.TestRMRestart
org.apache.hadoop.yarn.server.resourcemanager.TestResourceTrackerService
org.apache.hadoop.yarn.server.resourcemanager.rmapp.attempt.TestRMAppAttemptTransitions

+1 contrib tests. The patch passed contrib unit tests.

Test results: https://builds.apache.org/job/PreCommit-YARN-Build/3378//testReport/
Findbugs warnings: https://builds.apache.org/job/PreCommit-YARN-Build/3378//artifact/trunk/patchprocess/newPatchFindbugsWarningshadoop-yarn-server-resourcemanager.html
Console output: https://builds.apache.org/job/PreCommit-YARN-Build/3378//console

This message is automatically generated.

⌄ ◯ Jian He added a comment - 17/Mar/14 20:04

Fixed the Jenkins issues.

⌄ ◯ Hadoop QA added a comment - 17/Mar/14 21:09

-1 overall. Here are the results of testing the latest attachment
http://issues.apache.org/jira/secure/attachment/12635154/YARN-1839.2.patch
against trunk revision .

+1 @author. The patch does not contain any @author tags.

+1 tests included. The patch appears to include 2 new or modified test files.

+1 javac. The applied patch does not increase the total number of javac compiler warnings.

+1 javadoc. There were no new javadoc warning messages.

+1 eclipse:eclipse. The patch built with eclipse:eclipse.

-1 findbugs. The patch appears to introduce 1 new Findbugs (version 1.3.9) warnings.

+1 release audit. The applied patch does not increase the total number of release audit warnings.

-1 core tests. The patch failed these unit tests in hadoop-yarn-project/hadoop-yarn/hadoop-yarn-client hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager:

org.apache.hadoop.yarn.server.resourcemanager.TestResourceTrackerService

+1 contrib tests. The patch passed contrib unit tests.

Test results: https://builds.apache.org/job/PreCommit-YARN-Build/3382//testReport/
Findbugs warnings: https://builds.apache.org/job/PreCommit-YARN-Build/3382//artifact/trunk/patchprocess/newPatchFindbugsWarningshadoop-yarn-server-resourcemanager.html
Console output: https://builds.apache.org/job/PreCommit-YARN-Build/3382//console

This message is automatically generated.

Hadoop QA added a comment - 17/Mar/14 22:13

-1 overall. Here are the results of testing the latest attachment
http://issues.apache.org/jira/secure/attachment/12635166/YARN-1839.3.patch
against trunk revision .

+1 @author. The patch does not contain any @author tags.

+1 tests included. The patch appears to include 2 new or modified test files.

+1 javac. The applied patch does not increase the total number of javac compiler warnings.

+1 javadoc. There were no new javadoc warning messages.

+1 eclipse:eclipse. The patch built with eclipse:eclipse.

+1 findbugs. The patch does not introduce any new Findbugs (version 1.3.9) warnings.

+1 release audit. The applied patch does not increase the total number of release audit warnings.

-1 core tests. The following test timeouts occurred in hadoop-yarn-project/hadoop-yarn/hadoop-yarn-client hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager:

org.apache.hadoop.yarn.client.api.impl.TestNMClient
org.apache.hadoop.yarn.server.resourcemanager.TestResourceTrackerService

+1 contrib tests. The patch passed contrib unit tests.

Test results: https://builds.apache.org/job/PreCommit-YARN-Build/3384//testReport/
Console output: https://builds.apache.org/job/PreCommit-YARN-Build/3384//console

This message is automatically generated.

Vinod Kumar Vavilapalli added a comment - 17/Mar/14 22:20

The patch looks good to me. +1. The test failures are already tracked elsewhere.. Checking this in..

Vinod Kumar Vavilapalli added a comment - 17/Mar/14 22:23

Committed this to trunk, branch-2 and branch-2.4. Thanks Jian!

Hudson added a comment - 17/Mar/14 22:45

SUCCESS: Integrated in Hadoop-trunk-Commit #5348 (See https://builds.apache.org/job/Hadoop-trunk-Commit/5348/)
YARN-1839. Fixed handling of NMTokens in ResourceManager such that containers launched by AMs running on the same machine as the AM are correctly propagated. Contributed by Jian He. (vinodkv: http://svn.apache.org/viewcvs.cgi/?root=Apache-SVN&view=rev&rev=1578631)

- /hadoop/common/trunk/hadoop-yarn-project/CHANGES.txt
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-client/src/main/java/org/apache/hadoop/yarn/client/api/impl/AMRMClientImpl.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/rmapp/attempt/RMAppAttemptImpl.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/scheduler/capacity/CapacityScheduler.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/security/NMTokenSecretManagerInRM.java

- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/test/java/org/apache/hadoop/yarn/server/resourcemanager/TestRM.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/test/java/org/apache/hadoop/yarn/server/resourcemanager/rmapp/attempt/TestRMAppAttemptTransitions.java

Hudson added a comment - 18/Mar/14 11:07

FAILURE: Integrated in Hadoop-Yarn-trunk #513 (See https://builds.apache.org/job/Hadoop-Yarn-trunk/513/)
YARN-1839. Fixed handling of NMTokens in ResourceManager such that containers launched by AMs running on the same machine as the AM are correctly propagated. Contributed by Jian He. (vinodkv: http://svn.apache.org/viewcvs.cgi/?root=Apache-SVN&view=rev&rev=1578631)

- /hadoop/common/trunk/hadoop-yarn-project/CHANGES.txt
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-client/src/main/java/org/apache/hadoop/yarn/client/api/impl/AMRMClientImpl.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/rmapp/attempt/RMAppAttemptImpl.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/scheduler/capacity/CapacityScheduler.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/security/NMTokenSecretManagerInRM.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/test/java/org/apache/hadoop/yarn/server/resourcemanager/TestRM.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/test/java/org/apache/hadoop/yarn/server/resourcemanager/rmapp/attempt/TestRMAppAttemptTransitions.java

Hudson added a comment - 18/Mar/14 13:55

SUCCESS: Integrated in Hadoop-Hdfs-trunk #1705 (See https://builds.apache.org/job/Hadoop-Hdfs-trunk/1705/)
YARN-1839. Fixed handling of NMTokens in ResourceManager such that containers launched by AMs running on the same machine as the AM are correctly propagated. Contributed by Jian He. (vinodkv: http://svn.apache.org/viewcvs.cgi/?root=Apache-SVN&view=rev&rev=1578631)

- /hadoop/common/trunk/hadoop-yarn-project/CHANGES.txt
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-client/src/main/java/org/apache/hadoop/yarn/client/api/impl/AMRMClientImpl.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/rmapp/attempt/RMAppAttemptImpl.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/scheduler/capacity/CapacityScheduler.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/security/NMTokenSecretManagerInRM.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/test/java/org/apache/hadoop/yarn/server/resourcemanager/TestRM.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/test/java/org/apache/hadoop/yarn/server/resourcemanager/rmapp/attempt/TestRMAppAttemptTransitions.java

Hudson added a comment - 18/Mar/14 15:02

SUCCESS: Integrated in Hadoop-Mapreduce-trunk #1730 (See https://builds.apache.org/job/Hadoop-Mapreduce-trunk/1730/)
YARN-1839. Fixed handling of NMTokens in ResourceManager such that containers launched by AMs running on the same machine as the AM are correctly propagated. Contributed by Jian He. (vinodkv: http://svn.apache.org/viewcvs.cgi/?root=Apache-SVN&view=rev&rev=1578631)

- /hadoop/common/trunk/hadoop-yarn-project/CHANGES.txt
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-client/src/main/java/org/apache/hadoop/yarn/client/api/impl/AMRMClientImpl.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/rmapp/attempt/RMAppAttemptImpl.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/scheduler/capacity/CapacityScheduler.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/main/java/org/apache/hadoop/yarn/server/resourcemanager/security/NMTokenSecretManagerInRM.java
- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/test/java/org/apache/hadoop/yarn/server/resourcemanager/TestRM.java

- /hadoop/common/trunk/hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-resourcemanager/src/test/java/org/apache/hadoop/yarn/server/resourcemanager/rmapp/attempt/TestRMAppAttemptTransitions.java

˅ People

Assignee:

🔘 Jian He

Reporter:

🔘 Tassapol Athiapinya

Votes:

0 Vote for this issue

Watchers:

8 Start watching this issue

˅ Dates

Created:

14/Mar/14 23:52

Updated:

10/Apr/14 13:11

Resolved:

17/Mar/14 22:23