

Public signup for this instance is disabled. Go to our [Self serve sign up page](#) to request an account.



Hadoop YARN / [YARN-9014 runC container runtime](#) / [YARN-9562](#)

Add Java changes for the new RuncContainerRuntime

Details

Type:	Sub-task	Status:	RESOLVED
Priority:	Major	Resolution:	Fixed
Affects Version/s:	None	Fix Version/s:	3.3.0
Component/s:	None		
Labels:	None		

Description

This JIRA will be used to add the Java changes for the new RuncContainerRuntime. This will work off of [YARN-9560](#) to use much of the existing DockerLinuxContainerRuntime code once it is moved up into an abstract class that can be extended.

Attachments

YARN-9562.001.patch	138 kB	28/Jun/19 22:57
YARN-9562.002.patch	202 kB	19/Jul/19 22:49
YARN-9562.003.patch	202 kB	13/Aug/19 14:59
YARN-9562.004.patch	202 kB	14/Aug/19 17:43
YARN-9562.005.patch	202 kB	19/Aug/19 22:38
YARN-9562.006.patch	204 kB	22/Aug/19 22:26
YARN-9562.007.patch	203 kB	23/Aug/19 22:15
YARN-9562.008.patch	203 kB	27/Aug/19 18:23
YARN-9562.009.patch	255 kB	18/Oct/19 22:12
YARN-9562.010.patch	255 kB	24/Oct/19 21:36
YARN-9562.011.patch	270 kB	30/Oct/19 19:01
YARN-9562.012.patch	271 kB	30/Oct/19 21:28
YARN-9562.013.patch	272 kB	31/Oct/19 20:26
YARN-9562.014.patch	274 kB	07/Nov/19 20:45
YARN-9562.015.patch	274 kB	14/Nov/19 22:55

Issue Links

blocks
YARN-9582 Port YARN-8569 to RuncContainerRuntime OPEN

Activity


- [Eric Badger](#) added a comment - 28/Jun/19 23:03
- Attaching patch 001 as an initial patch to give everyone a sense of how the patch will look for the most part. Currently, the RuncContainerRuntime is using Docker configs, but we have decided to split the config into docker and runc separately. So this will need to change in future versions of the patch. Additionally, there are currently no unit tests. An entire suite of new tests will need to be written before this can be committed. Because of this, I'm not going to submit the patch until a later revision.
- Other than that, I'm happy to hear feedback from others while I fix up the patch, add unit tests, and etc.
- To try this out (along with the C code changes from [YARN-9561](#)), you will need to create squashfs layers from all of the layers of a docker image and upload them to the layers directory specified by the configs. The image config will go in the config directory, and the the manifest in the manifests directory. There is also some magic that needs to be done in relation to whiteout and opaque files in the docker image, but you can probably get your image to run without dealing with those. I have a tool that does the whole conversion, but that isn't yet ready to put up for review because there are some bits of code that rely on internal changes that haven't been made to the apache codebase. If you'd like, I could try and put that up before focusing on the unit tests for this JIRA as well as [YARN-9561](#).

- [Eric Yang](#) added a comment - 18/Jul/19 23:26

Thank you for the patch [ebadger](#).

GetContainerRuntimeData is designed to return an object. When the object is actually used in RuncContainerRuntime, object is casted to ContainerRuntimeObject. Would it be cleaner to accept RuncContainerRuntime object only? It may reduce casting errors.

Can you talk about the OCImageTagToManifestPlugin and OCManifestToResourcesPlugin? It would help to understand the usage of plugins. Thanks

▼  [Eric Badger](#) added a comment - 19/Jul/19 21:23


GetContainerRuntimeData is designed to return an object. When the object is actually used in RuncContainerRuntime, object is casted to ContainerRuntimeObject. Would it be cleaner to accept RuncContainerRuntime object only? It may reduce casting errors.

The idea here was that ContainerRuntimeObject is specific to RuncContainerRuntime where container.getContainerRuntimeData() could return any arbitrary object. That way other runtimes could utilize this runtime data with their own unique runtime object.

Can you talk about the OCImageTagToManifestPlugin and OCManifestToResourcesPlugin? It would help to understand the usage of plugins. Thanks

Sure, the plugins are there to turn an image tag into a list of resources to localize. The Docker images that are converted into squashFS layers will have 3 major file types: a manifest, a config, and a list of layers. The OCImageTagToManifestPlugin converts an image tag, such as `hadoop/rhel6:current` into a manifest JSON. The manifest JSON defines what the image looks like. It has data on the config and layers associated with the image. Since you could host the manifest in a docker registry, in hdfs, S3, etc. we made this a plugin so that different implementations could be made.


After you have a manifest, you need to actually find the resources associated with the manifest (the config and layers, maybe more in a different implementation). Again, there are many different places where the config and layers could be held. They could be in a docker registry, hdfs, S3, etc. The plugin takes in the manifest json and gives you back local resources that YARN will localize. We're using a plugin-based approach here so that different implementations can be built and swapped in.

▼  [Eric Yang](#) added a comment - 19/Jul/19 22:27

The idea here was that ContainerRuntimeObject is specific to RuncContainerRuntime where container.getContainerRuntimeData() could return any arbitrary object. That way other runtimes could utilize this runtime data with their own unique runtime object.

When it is passing object, then developer may expect any type of object to work, which is not the case. Many of the good answers argues against passing Object for strong type language can be found [here](#). Can we change to a subclass please?

I think I understand the reason to make container image management as plugins better base on your feedback. Thank you for that. Do we want to define device plugin interface in here? CSI, CNI, GPU are examples that may need some way to define availability of those resource, and claims of using them.

▼  [Eric Badger](#) added a comment - 19/Jul/19 22:55


Uploading patch 002 with unit tests added.

When it is passing object, then developer may expect any type of object to work, which is not the case. Many of the good answers argues against passing Object for strong type language can be found [here](#). Can we change to a subclass please?

I'm open to changing this. What do you have in mind for subclassing instead?

I think I understand the reason to make container image management as plugins better base on your feedback. Thank you for that. Do we want to define device plugin interface in here? CSI, CNI, GPU are examples that may need some way to define availability of those resource, and claims of using them.

I think devices plugins are a little bit different. The plugins in this patch are only for how to get the resources necessary to create a rootfs for the container to run in (basically the docker image files). Device plugins would be what we need to add on to the container to allow it to work with bind-mounts, special runc runtimes. Those are things that we will probably want to add on in the future (as we have with Docker), but I think they are beyond the scope of this JIRA. Let me know if I'm misunderstanding what you're saying here.


▼  [Eric Yang](#) added a comment - 19/Jul/19 23:25

I'm open to changing this. What do you have in mind for subclassing instead?

Runc data structure is based on [OCI runtime-spec](#), maybe we call it RuntimeSpec?

Those are things that we will probably want to add on in the future (as we have with Docker), but I think they are beyond the scope of this JIRA.

Correct me if I am mistaken. I see devices management similar to container image management or seccomp profile. The java code is serializing bits and pieces of RuntimeSpec. Maybe there is a way to provide hooks for devices using the same style of plugins to generate correct output. If it can be added later without breaking the interface. That is fine too.

▼  Hadoop QA added a comment - 20/Jul/19 01:40

 -1 overall


Vote	Subsystem	Runtime	Comment
0	reexec	0m 17s	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 10 new or modified test files.
trunk Compile Tests			
0	mvndep	0m 40s	Maven dependency ordering for branch
+1	mvninstall	17m 44s	trunk passed
+1	compile	8m 25s	trunk passed
+1	checkstyle	1m 25s	trunk passed
+1	mvnsite	1m 32s	trunk passed
+1	shadedclient	13m 45s	branch has no errors when building and testing our client artifacts.
+1	findbugs	2m 42s	trunk passed
+1	javadoc	0m 59s	trunk passed
Patch Compile Tests			
0	mvndep	0m 16s	Maven dependency ordering for patch
+1	mvninstall	1m 10s	the patch passed
+1	compile	7m 56s	the patch passed
+1	javac	7m 56s	the patch passed
-0	checkstyle	1m 19s	hadoop-yarn-project/hadoop-yarn: The patch generated 285 new + 715 unchanged - 1 fixed = 1000 total (was 716)
+1	mvnsite	1m 24s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shadedclient	11m 48s	patch has no errors when building and testing our client artifacts.
-1	findbugs	1m 19s	hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager generated 16 new + 0 unchanged - 0 fixed = 16 total (was 0)
+1	javadoc	1m 12s	the patch passed
Other Tests			
-1	unit	0m 56s	hadoop-yarn-api in the patch failed.
+1	unit	21m 17s	hadoop-yarn-server-nodemanager in the patch passed.
+1	asflicense	0m 43s	The patch does not generate ASF License warnings.
		97m 49s	

Reason	Tests
FindBugs	module:hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager
	Nullcheck of NodeManager.context at line 535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.s At NodeManager.java:535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.serviceStop() At NodeManager.java:[line 532]
	Unused field:NodeManager.java
	Dead store to refreshHdfsCacheThread in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.serviceStart() At ImageTagToManifestPlugin.java:org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.service ImageTagToManifestPlugin.java:[line 320]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader(): new java.io.InputStreamReader(InputStream) At ImageTagToManifestPlugin.java:[line 211]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader(): new java.io.FileReader(File) At ImageTagToManifestPlugin.java:[line 185]

	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NM_RUNC_CACHE_REFRESH isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 92]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NUM_MANIFESTS_TO_CACHE but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 101]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.IMAGE_TAG_TO_MANIFEST_PLUGIN_IMAGE_TAG_TO_MANIFEST_PLUGIN but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 70]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_HDFS_RUNC_IMAGE_TAG_TO_HADOOP isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 76]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_LOCAL_RUNC_IMAGE_TAG_TO_HADOOP isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 82]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_CACHE_REFRESH_INTERVAL but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 89]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_IMAGE_TOPLEVEL_DIR_IMAGE_TAG_TO_MANIFEST_PLUGIN but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 107]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_NUM_MANIFESTS_TO_CACHE final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 98]
	Should org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin\$LRUCache be a <i>static</i> inner class? At ImageTagToManifestPlugin.java:inner class? At ImageTagToManifestPlugin.java:[lines 342-350]
	Unread field:OCIContainerExecutorConfig.java:[line 561]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context):in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context): new String RuncContainerRuntime.java:[line 238]
Failed junit tests	TEST-TestYarnConfigurationFields

Subsystem	Report/Notes
Docker	Client=18.09.8 Server=18.09.8 Image:yetus/hadoop:bdbca0e
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12975297/YARN-9562.002.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux 66b17f6cb912 4.4.0-138-generic #164-Ubuntu SMP Tue Oct 2 17:16:02 UTC 2018 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / 69a46a9
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_212
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/24410/artifact/out/diff-checkstyle-hadoop-yarn-project_hadoop-yarn.txt
findbugs	https://builds.apache.org/job/PreCommit-YARN-Build/24410/artifact/out/new-findbugs-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.html
unit	https://builds.apache.org/job/PreCommit-YARN-Build/24410/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-api.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/24410/testReport/
Max. process+thread count	442 (vs. ulimit of 10000)
modules	C: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager U: hadoop-yarn-project/hadoop-yarn
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/24410/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

🗨️  Eric Yang added a comment - 22/Jul/19 15:45

[ebadger](#) Thank you for the patch. Can we create manifestJson as a json file in src/test/resources, and use TestImageTagToManifestPlugin.class.getResource("manifest.json"); to retrieve the json content, please? This might be easier to manage in the long run. Thanks

Eric Yang added a comment - 30/Jul/19 23:15

[ebadger](#) I couldn't get very far with patch 002 with [YARN-9564](#) patch 002. I have configured the following configs:

```
<property>
  <name>yarn.nodemanager.runtime.linux.allowed-runtimes</name>
  <value>default,docker,runc</value>
  <description>
    Comma separated list of runtimes that are allowed when using
    LinuxContainerExecutor. The allowed values are default, docker, and
    javasandbox.
  </description>
</property>

<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-tag-to-manifest-plugin.local-hash-file</name>
  <value>/tmp/centos</value>
</property>
```

Node manager refused to start with this error:

```
2019-07-30 23:04:56,998 WARN org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.privileged.PrivilegedOperationExecutor:
IOException executing command:
java.io.InterruptedIOException: java.lang.InterruptedIOException
    at org.apache.hadoop.util.Shell.runCommand(Shell.java:1011)
    at org.apache.hadoop.util.Shell.run(Shell.java:901)
    at org.apache.hadoop.util.Shell$ShellCommandExecutor.execute(Shell.java:1213)
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.privileged.PrivilegedOperationExecutor.executePrivilegedOperation(Privil
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime$1.run(RuncContainerRuntime.java:264)
    at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:511)
    at java.util.concurrent.FutureTask.runAndReset(FutureTask.java:308)
    at java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.access$301(ScheduledThreadPoolExecutor.java:180)
    at java.util.concurrent.ScheduledThreadPoolExecutor$ScheduledFutureTask.run(ScheduledThreadPoolExecutor.java:294)
    at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149)
    at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:624)
    at java.lang.Thread.run(Thread.java:748)
Caused by: java.lang.InterruptedIOException
    at java.lang.Object.wait(Native Method)
    at java.lang.Object.wait(Object.java:502)
    at java.lang.UNIXProcess.waitFor(UNIXProcess.java:395)
    at org.apache.hadoop.util.Shell.runCommand(Shell.java:1001)
    at
    11 more
```

It looks like it tries to clean up existing runc mounts but failed to find any and crashed.

1. What are the minimum configs required for this feature to work?
2. What does the Image Tag to Hash file look like?

Eric Badger added a comment - 01/Aug/19 20:45

Hey [eyang](#), thanks for trying out the patch! Here are what I believe are the bare minimum configs necessary to get things up and running. For now, the C code in [YARN-9564](#) uses docker configs from container-executor.cfg, so the only thing that you will need to add to that is feature.oci.enabled=1 and then of course make sure that the mount lists are in line with the mounts you set in yarn-site.xml

Additionally, I have uploaded the docker-to-squash tool to [YARN-9564](#) which should help you create the squashFS images on HDFS. It will also set up the image-tag-to-hash file. See [YARN-9564](#) for more details on that.

Required Configs

```
<property>
  <name>yarn.nodemanager.runtime.linux.allowed-runtimes</name>
  <value>docker,default,runc</value>
</property>

<property>
  <name>yarn.nodemanager.runtime.linux.runc.allowed-images</name>
  <value>$Name of image tag</value>
</property>

<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-name</name>
  <value>$Name of image tag</value>
</property>

<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-tag-to-manifest-plugin.image-toplevel-dir</name>
  <value>/runc-root</value>
</property>
```

Doesn't need to be nscd, but you need some strategy to make sure that your username can be resolved in the container via its uid.

```
<property>
  <name>yarn.nodemanager.runtime.linux.runc.default-rw-mounts</name>
  <value>/var/run/nsd:/var/run/nsd</value>
</property>
```

At least 1 of the following 2 configs needs to be set. If you use the docker-to-squash tool from YARN 9564 then you should only need to set the hdfs hash file

```
<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-tag-to-manifest-plugin.local-hash-file</name>
  <value>/home/ebadger/image-tag-to-hash</value>
</property>

<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-tag-to-manifest-plugin.hdfs-hash-file</name>
  <value>/runc-root/image-tag-to-hash</value>
</property>
```

Eric Yang added a comment - 12/Aug/19 20:17

By combining [YARN-9561](#), [YARN-9562](#), [YARN-9564](#), I got a few steps further that node manager can start with runc runtime enabled and squashfs image stored on hdfs. However, the task failed during localization:

```
2019-08-12 19:58:15,731 WARN org.apache.hadoop.yarn.server.nodemanager.containermanager.container.ContainerImpl: Failed to parse
resource-request
java.io.FileNotFoundException: File does not exist:
/user/yarn/null/manifests/ca58fe458bd94bc6e3072f1cfbd334855858e05elfd633aa07cf7f82b048e66
    at org.apache.hadoop.hdfs.server.namenode.INodeFile.valueOf(INodeFile.java:86)
    at org.apache.hadoop.hdfs.server.namenode.INodeFile.valueOf(INodeFile.java:76)
    at org.apache.hadoop.hdfs.server.namenode.FSDirStatAndListingOp.getBlockLocations(FSDirStatAndListingOp.java:158)
    at org.apache.hadoop.hdfs.server.namenode.FSNamesystem.getBlockLocations(FSNamesystem.java:1974)
    at org.apache.hadoop.hdfs.server.namenode.NameNodeRpcServer.getBlockLocations(NameNodeRpcServer.java:755)
    at org.apache.hadoop.hdfs.protocolPB.ClientNamenodeProtocolServerSideTranslatorPB.getBlockLocations(ClientNamenodeProtocolServerSideTranslatorPB.java:100)
    at org.apache.hadoop.hdfs.protocol.proto.ClientNamenodeProtocolProtos$ClientNamenodeProtocol$2.callBlockingMethod(ClientNamenodeProtocolProtos$ClientNamenodeProtocol$2.java:1070)
    at org.apache.hadoop.ipc.ProtobufRpcEngine$Server$ProtoBufRpcInvoker.call(ProtobufRpcEngine.java:529)
    at org.apache.hadoop.ipc.RPC$Server.call(RPC.java:1070)
    at org.apache.hadoop.ipc.Server$RpcCall.run(Server.java:1001)
    at org.apache.hadoop.ipc.Server$RpcCall.run(Server.java:929)
    at java.security.AccessController.doPrivileged(Native Method)
    at javax.security.auth.Subject.doAs(Subject.java:422)
    at org.apache.hadoop.security.UserGroupInformation.doAs(UserGroupInformation.java:1891)
    at org.apache.hadoop.ipc.Server$Handler.run(Server.java:2921)
```

Eric Badger added a comment - 12/Aug/19 20:56

[eyang](#), could you post your relevant config settings? It looks like `yarn.nodemanager.runtime.linux.runc.image-tag-to-manifest-plugin.image-toplevel-dir` is set to `/user/yarn/null`, but the docker-to-squash tool should've put it in `/runc-root` in HDFS.

Eric Yang added a comment - 12/Aug/19 21:53

[ebadger](#) The config is written as:

```
<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-tag-to-manifest-plugin.hdfs-hash-file</name>
  <value>/runc-root/image-tag-to-hash</value>
</property>

<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-tag-to-manifest-plugin.image-toplevel-dir</name>
  <value>/runc-root</value>
</property>
```

Eric Badger added a comment - 12/Aug/19 22:15

ImageTagToManifestPlugin.java

```
Path manifestPath = new Path(manifestDir + hash);
FileSystem fs = manifestPath.getFileSystem(conf);
FSDataInputStream input;
try {
    input = fs.open(manifestPath);
```

The code is failing on the `fs.open(manifestPath)`, and `manifestPath` is getting set to `manifestDir + hash`.

ImageTagToManifestPlugin.java

```
manifestDir = conf.get(NM_RUNC_IMAGE_TOplevel_DIR) + "/manifests/";
```

manifestDir gets set by the code above. This implies that NM_RUNC_IMAGE_TOplevel_DIR is being set to /user/yarn/null somehow.

```
public static String NM_RUNC_IMAGE_TOplevel_DIR =
    IMAGE_TAG_TO_MANIFEST_PLUGIN_PREFIX + "image-toplevel-dir";
```

NM_RUNC_IMAGE_TOplevel_DIR is set as such.

I'm not quite sure how it's possible that your config was set to /runc-root, yet you got the /user/yarn/null path in your manifestPath. Are you sure that the config was loaded correctly?

Eric Yang added a comment - 12/Aug/19 23:19

ebadger

I'm not quite sure how it's possible that your config was set to /runc-root, yet you got the /user/yarn/null path in your manifestPath. Are you sure that the config was loaded correctly?

```
+ public static String NM_RUNC_IMAGE_TOplevel_DIR =
+     RUNC_CONTAINER_RUNTIME_PREFIX + "image-toplevel-dir";
```

Is this supposed to be:

```
+ public static String NM_RUNC_IMAGE_TOplevel_DIR =
+     IMAGE_TAG_TO_MANIFEST_PLUGIN_PREFIX + "image-toplevel-dir";
```

Without making this change in patch, the expected config is:

```
<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-toplevel-dir</name>
  <value>/runc-root</value>
</property>
```

Eric Badger added a comment - 13/Aug/19 15:01

eyang, yes that's the error. I caught this error awhile ago, but I guess I never uploaded a patch with the fix. Patch 003 fixes the issue.

Hadoop QA added a comment - 13/Aug/19 17:47

 -1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 36s	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 10 new or modified test files.
			trunk Compile Tests
0	mvndep	1m 16s	Maven dependency ordering for branch
+1	mvninstall	18m 6s	trunk passed
+1	compile	8m 36s	trunk passed
+1	checkstyle	1m 24s	trunk passed
+1	mvnsite	1m 35s	trunk passed
+1	shadedclient	14m 34s	branch has no errors when building and testing our client artifacts.
+1	findbugs	2m 28s	trunk passed
+1	javadoc	1m 19s	trunk passed
			Patch Compile Tests
0	mvndep	0m 16s	Maven dependency ordering for patch
+1	mvninstall	1m 7s	the patch passed
+1	compile	7m 37s	the patch passed
+1	javac	7m 37s	the patch passed
-0	checkstyle	1m 25s	hadoop-yarn-project/hadoop-yarn: The patch generated 283 new + 689 unchanged - 1 fixed = 972 total (was 690)
+1	mvnsite	1m 29s	the patch passed

+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shadedclient	12m 17s	patch has no errors when building and testing our client artifacts.
-1	findbugs	1m 16s	hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager generated 16 new + 0 unchanged - 0 fixed = 16 total (was 0)
+1	javadoc	1m 3s	the patch passed
Other Tests			
-1	unit	0m 57s	hadoop-yarn-api in the patch failed.
-1	unit	21m 5s	hadoop-yarn-server-nodemanager in the patch failed.
+1	asflicense	0m 38s	The patch does not generate ASF License warnings.
		100m 13s	

Reason	Tests
FindBugs	module:hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager
	Nullcheck of NodeManager.context at line 535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.s At NodeManager.java:535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.serviceStop() At NodeManager.java:[line 532]
	Unused field:NodeManager.java
	Dead store to refreshHdfsCacheThread in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.serviceStart() At ImageTagToManifestPlugin.java:org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.service ImageTagToManifestPlugin.java:[line 320]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader(): new java.io.InputStreamReader(InputStream) At ImageTagToManifestPlugin.java:[line 211]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader(): new java.io.FileReader(File) At ImageTagToManifestPlugin.java:[line 185]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NM_RUNC_CACHE_REFRES isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 92]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NUM_MANIFESTS_TO_CAC but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 101]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.IMAGE_TAG_TO_MANIFEST_PLUGIN_I final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 70]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_HDFS_RUNC_IMAGE_TAG_TO_H/ isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 76]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_LOCAL_RUNC_IMAGE_TAG_TO_H/ isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 82]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_CACHE_REFRESH_INTERV but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 89]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_IMAGE_TOPLEVEL_DIR isn should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 107]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_NUM_MANIFESTS_TO_CA final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 98]
	Should org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin\$LRUCache be a <i>static</i> inner cla ImageTagToManifestPlugin.java:inner class? At ImageTagToManifestPlugin.java:[lines 342-350]
	Unread field:OCIContainerExecutorConfig.java:[line 561]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context):in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context): new Stri RuncContainerRuntime.java:[line 238]
Failed junit tests	hadoop.yarn.conf.TestYarnConfigurationFields
	hadoop.yarn.server.nodemanager.amrmproxy.TestFederationInterceptor
	hadoop.yarn.server.nodemanager.containermanager.linux.runtime.TestHdfsManifestToResourcesPlugin

Subsystem	Report/Notes
Docker	Client=19.03.1 Server=19.03.1 Image:yetus/hadoop:bdbca0e
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12977499/YARN-9562.003.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux 5b519034cd5b 4.4.0-138-generic #164-Ubuntu SMP Tue Oct 2 17:16:02 UTC 2018 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / 274966e
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/24554/artifact/out/diff-checkstyle-hadoop-yarn-project_hadoop-yarn.txt
findbugs	https://builds.apache.org/job/PreCommit-YARN-Build/24554/artifact/out/new-findbugs-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.html
unit	https://builds.apache.org/job/PreCommit-YARN-Build/24554/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-api.txt
unit	https://builds.apache.org/job/PreCommit-YARN-Build/24554/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/24554/testReport/
Max. process+thread count	468 (vs. ulimit of 10000)
modules	C: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager U: hadoop-yarn-project/hadoop-yarn
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/24554/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

Eric Yang added a comment - 13/Aug/19 22:10

ebadger

1. Node manager crashes if the defined images-tag-to-hash-files does not exist. It would be nice, if this is a warning instead.

```
java.lang.RuntimeException: Couldn't load any image-tag-to-hash-files
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.serviceStart(ImageTagToManifestPlugin.j
    at org.apache.hadoop.service.AbstractService.start(AbstractService.java:194)
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.start(RuncContainerRuntime.java:277)
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.DelegatingLinuxContainerRuntime.start(DelegatingLinuxContainerRu
    at org.apache.hadoop.yarn.server.nodemanager.LinuxContainerExecutor.start(LinuxContainerExecutor.java:351)
    at org.apache.hadoop.yarn.server.nodemanager.NodeManager.serviceInit(NodeManager.java:519)
    at org.apache.hadoop.service.AbstractService.init(AbstractService.java:164)
    at org.apache.hadoop.yarn.server.nodemanager.NodeManager.initAndStartNodeManager(NodeManager.java:989)
    at org.apache.hadoop.yarn.server.nodemanager.NodeManager.main(NodeManager.java:1069)
2019-08-13 21:07:03,002 INFO org.apache.hadoop.service.AbstractService: Service NodeManager failed in state INITED
java.lang.RuntimeException: Couldn't load any image-tag-to-hash-files
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.serviceStart(ImageTagToManifestPlugin.j
    at org.apache.hadoop.service.AbstractService.start(AbstractService.java:194)
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.start(RuncContainerRuntime.java:277)
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.DelegatingLinuxContainerRuntime.start(DelegatingLinuxContainerRu
    at org.apache.hadoop.yarn.server.nodemanager.LinuxContainerExecutor.start(LinuxContainerExecutor.java:351)
```

2. Running mapreduce job using runc container, the patch still reference to incorrect path:

```
java.io.IOException: java.util.concurrent.ExecutionException: java.io.FileNotFoundException: File does not exist: hdfs://eyang-
1.openstacklocal:9000/user/yarn/null/config/9f38484d220fa527b1fb19747638497179500a1bed8bf0498eb788229229e6e1
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.HdfsManifestToResourcesPlugin.getResource(HdfsManifestToResource
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.HdfsManifestToResourcesPlugin.getConfigResource(HdfsManifestToRe
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.getLocalResources(RuncContainerRuntime.java
```

```
at
org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.DelegatingLinuxContainerRuntime.getLocalResources(DelegatingLinux
at org.apache.hadoop.yarn.server.nodemanager.LinuxContainerExecutor.getLocalResources(LinuxContainerExecutor.java:1062)
at
org.apache.hadoop.yarn.server.nodemanager.containermanager.container.ContainerImpl$RequestResourcesTransition.transition(ContainerImpl.java
at
org.apache.hadoop.yarn.server.nodemanager.containermanager.container.ContainerImpl$RequestResourcesTransition.transition(ContainerImpl.java
at org.apache.hadoop.yarn.state.StateMachineFactory$MultipleInternalArc.doTransition(StateMachineFactory.java:385)
at org.apache.hadoop.yarn.state.StateMachineFactory.doTransition(StateMachineFactory.java:302)
at org.apache.hadoop.yarn.state.StateMachineFactory.access$500(StateMachineFactory.java:46)
at org.apache.hadoop.yarn.state.StateMachineFactory$InternalStateMachine.doTransition(StateMachineFactory.java:487)
at org.apache.hadoop.yarn.server.nodemanager.containermanager.container.ContainerImpl.handle(ContainerImpl.java:2129)
at org.apache.hadoop.yarn.server.nodemanager.containermanager.container.ContainerImpl.handle(ContainerImpl.java:101)
at
```

Eric Badger added a comment - 14/Aug/19 17:51

Required Configs

```
<property>
  <name>yarn.nodemanager.runtime.linux.allowed-runtimes</name>
  <value>docker,default,runc</value>
</property>

<property>
  <name>yarn.nodemanager.runtime.linux.runc.allowed-images</name>
  <value>$Name of image tag</value>
</property>

<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-name</name>
  <value>$Name of image tag</value>
</property>

<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-toplevel-dir</name>
  <value>/runc-root</value>
</property>
```

Doesn't need to be nscd, but you need some strategy to make sure that your username can be resolved in the container via its uid.

```
<property>
  <name>yarn.nodemanager.runtime.linux.runc.default-rw-mounts</name>
  <value>/var/run/nscd:/var/run/nscd</value>
</property>
```

At least 1 of the following 2 configs needs to be set. If you use the docker-to-squash tool from YARN 9564 then you should only need to set the hdfs hash file

```
<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-tag-to-manifest-plugin.local-hash-file</name>
  <value>/home/ebadger/image-tag-to-hash</value>
</property>

<property>
  <name>yarn.nodemanager.runtime.linux.runc.image-tag-to-manifest-plugin.hdfs-hash-file</name>
  <value>/runc-root/image-tag-to-hash</value>
</property>
```

eyang, I went ahead and moved the toplevel config into YarnConfiguration since it is relevant to multiple pieces of the runc runtime. So the config key is now yarn.nodemanager.runtime.linux.runc.image-toplevel-dir. I have copied and edited the original list of configs that I gave. Additionally, I have tested YARN-9562.004.patch with YARN-9564.003.patch and YARN-9564.003.patch together.

```
export vars="YARN_CONTAINER_RUNTIME_TYPE=runc,YARN_CONTAINER_RUNTIME_RUNC_IMAGE=hadoop/rhel6:current"; $HADOOP_HOME/bin/hadoop jar $HADOOP_
```

I successfully ran the above sleep job (after running docker-to-squash.py on hadoop/rhel6:current). Also note that the image that you use will need to include java and any other Hadoop dependencies. We have created our own custom image that is based off of rhel6 that add java, zstandard, lzo, and some other packages.

Hadoop QA added a comment - 14/Aug/19 19:36

 -1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 37s	Docker mode activated.
Precchecks			
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 10 new or modified test files.

trunk Compile Tests			
0	mvn:dep	1m 13s	Maven dependency ordering for branch
+1	mvn:install	20m 55s	trunk passed
+1	compile	11m 16s	trunk passed
+1	checkstyle	1m 30s	trunk passed
+1	mvn:site	1m 25s	trunk passed
+1	shaded:client	14m 49s	branch has no errors when building and testing our client artifacts.
+1	findbugs	2m 27s	trunk passed
+1	javadoc	1m 6s	trunk passed
Patch Compile Tests			
0	mvn:dep	0m 14s	Maven dependency ordering for patch
+1	mvn:install	1m 5s	the patch passed
+1	compile	7m 17s	the patch passed
+1	javac	7m 17s	the patch passed
-0	checkstyle	1m 22s	hadoop-yarn-project/hadoop-yarn: The patch generated 282 new + 689 unchanged - 1 fixed = 971 total (was 690)
+1	mvn:site	1m 22s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shaded:client	12m 23s	patch has no errors when building and testing our client artifacts.
-1	findbugs	1m 12s	hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager generated 15 new + 0 unchanged - 0 fixed = 15 total (was 0)
+1	javadoc	1m 3s	the patch passed
Other Tests			
-1	unit	0m 50s	hadoop-yarn-api in the patch failed.
-1	unit	21m 5s	hadoop-yarn-server-nodemanager in the patch failed.
+1	asf:license	0m 44s	The patch does not generate ASF License warnings.
		104m 49s	

Reason	Tests
FindBugs	module:hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager
	Nullcheck of NodeManager.context at line 535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.s At NodeManager.java:535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.serviceStop() At NodeManager.java:[line 532]
	Unused field:NodeManager.java
	Dead store to refreshHdfsCacheThread in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.serviceStart() At ImageTagToManifestPlugin.java:org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.service ImageTagToManifestPlugin.java:[line 314]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader(): new java.io.InputStreamReader(InputStream) At ImageTagToManifestPlugin.java:[line 205]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader(): new java.io.FileReader(File) At ImageTagToManifestPlugin.java:[line 179]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NM_RUNC_CACHE_REFRES isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 93]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NUM_MANIFESTS_TO_CAC but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 102]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.IMAGE_TAG_TO_MANIFEST_PLUGIN_I final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 71]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_HDFS_RUNC_IMAGE_TAG_TO_H/ isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 77]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_LOCAL_RUNC_IMAGE_TAG_TO_H/ isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 83]

	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_CACHE_REFRESH_INTERV but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 90]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_NUM_MANIFESTS_TO_CA final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 99]
	Should org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin\$LRUCache be a <i>static</i> inner cla ImageTagToManifestPlugin.java:inner class? At ImageTagToManifestPlugin.java:[lines 336-344]
	Unread field:OCContainerExecutorConfig.java:[line 561]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context):in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context): new Stri RuncContainerRuntime.java:[line 238]
Failed junit tests	hadoop.yarn.conf.TestYarnConfigurationFields
	hadoop.yarn.server.nodemanager.containermanager.logaggregation.TestAppLogAggregatorImpl

Subsystem	Report/Notes
Docker	Client=19.03.1 Server=19.03.1 Image:yetus/hadoop:bdbca0e53b4
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12977630/YARN-9562.004.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux a1911ed0d94a 4.15.0-52-generic #56-Ubuntu SMP Tue Jun 4 22:49:08 UTC 2019 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / 167acd8
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/24567/artifact/out/diff-checkstyle-hadoop-yarn-project_hadoop-yarn.txt
findbugs	https://builds.apache.org/job/PreCommit-YARN-Build/24567/artifact/out/new-findbugs-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.html
unit	https://builds.apache.org/job/PreCommit-YARN-Build/24567/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-api.txt
unit	https://builds.apache.org/job/PreCommit-YARN-Build/24567/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/24567/testReport/
Max. process+thread count	294 (vs. ulimit of 5500)
modules	C: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager U: hadoop-yarn-project/hadoop-yarn
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/24567/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

  **Eric Yang** added a comment - 19/Aug/19 21:00

ebadger Node manager can fail to start when configuration defines to use image-tag-to-hash-files on hdfs, and the file does not exist yet. User may run start hadoop cluster, then populate HDFS with necessary files to run the cluster. In the current implementation, it requires user to perform:

- 1. start hdfs
- 2. run squashfs image scripts
- 3. start yarn cluster

If the sequence is not followed, node manager crashes with error that looks like this:

```
2019-08-19 20:26:48,704 INFO org.apache.hadoop.security.UserGroupInformation: Login successful for user nm/eyang-
3.openstacklocal@EXAMPLE.COM using keytab file /etc/security/keytabs/nm.service.keytab. Keytab auto renewal enabled : false
2019-08-19 20:26:48,707 DEBUG org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.privileged.PrivilegedOperationExecutor:
Privileged Execution Command Array: [/usr/local/hadoop-3.3.0-SNAPSHOT/bin/container-executor, --reap-runc-layer-mounts, 100]
2019-08-19 20:26:48,715 DEBUG org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.privileged.PrivilegedOperationExecutor:
```

```
command array:
2019-08-19 20:26:48,715 DEBUG org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.privileged.PrivilegedOperationExecutor:
[/usr/local/hadoop-3.3.0-SNAPSHOT/bin/container-executor, --reap-runc-layer-mounts, 100]
2019-08-19 20:26:48,715 DEBUG org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.privileged.PrivilegedOperationExecutor:
Privileged Execution Operation Output:
2019-08-19 20:26:48,716 DEBUG org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.privileged.PrivilegedOperationExecutor:
2019-08-19 20:26:49,453 INFO org.apache.hadoop.service.AbstractService: Service ImageTagToManifestPluginService failed in state STARTED
java.lang.RuntimeException: Couldn't load any image-tag-to-hash-files
    at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.serviceStart(ImageTagToManifestPlugin.j
        at org.apache.hadoop.service.AbstractService.start(AbstractService.java:194)
        at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.start(RuncContainerRuntime.java:277)
        at
    org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.DelegatingLinuxContainerRuntime.start(DelegatingLinuxContainerRu
        at org.apache.hadoop.yarn.server.nodemanager.LinuxContainerExecutor.start(LinuxContainerExecutor.java:351)
        at org.apache.hadoop.yarn.server.nodemanager.NodeManager.serviceInit(NodeManager.java:519)
```

It would be nice, if this is a warning message instead of hard fail.

Eric Badger added a comment - 19/Aug/19 22:39

It would be nice, if this is a warning message instead of hard fail.

Changed both of the the startup exception in ImageTagToManifestPlugin into warnings in patch 005

Eric Yang added a comment - 19/Aug/19 23:44 - edited

ebadger Thank you for patch 005. Cluster can start without the images now. How about addressing generic type usage in my [previous comment](#)?

Hadoop QA added a comment - 20/Aug/19 01:05

-1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 33s	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 10 new or modified test files.
			trunk Compile Tests
0	mvndep	1m 7s	Maven dependency ordering for branch
+1	mvninstall	18m 36s	trunk passed
+1	compile	8m 41s	trunk passed
+1	checkstyle	1m 11s	trunk passed
+1	mvnsite	1m 21s	trunk passed
+1	shadedclient	14m 4s	branch has no errors when building and testing our client artifacts.
+1	findbugs	2m 30s	trunk passed
+1	javadoc	0m 58s	trunk passed
			Patch Compile Tests
0	mvndep	0m 31s	Maven dependency ordering for patch
+1	mvninstall	1m 6s	the patch passed
+1	compile	7m 25s	the patch passed
+1	javac	7m 25s	the patch passed
-0	checkstyle	1m 18s	hadoop-yarn-project/hadoop-yarn: The patch generated 283 new + 689 unchanged - 1 fixed = 972 total (was 690)
+1	mvnsite	1m 12s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shadedclient	12m 16s	patch has no errors when building and testing our client artifacts.
-1	findbugs	1m 8s	hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager generated 15 new + 0 unchanged - 0 fixed = 15 total (was 0)
+1	javadoc	1m 1s	the patch passed
			Other Tests
-1	unit	0m 50s	hadoop-yarn-api in the patch failed.
+1	unit	21m 54s	hadoop-yarn-server-nodemanager in the patch passed.

+1	asflicense	0m 42s	The patch does not generate ASF License warnings.
		99m 51s	

Reason	Tests
FindBugs	module:hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager
	Nullcheck of NodeManager.context at line 535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.s At NodeManager.java:535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.serviceStop() At NodeManager.java:[line 532]
	Unused field:NodeManager.java
	Dead store to refreshHdfsCacheThread in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.serviceStart() At ImageTagToManifestPlugin.java:org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.service ImageTagToManifestPlugin.java:[line 314]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader(): new java.io.InputStreamReader(InputStream) At ImageTagToManifestPlugin.java:[line 205]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader(): new java.io.FileReader(File) At ImageTagToManifestPlugin.java:[line 179]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NM_RUNC_CACHE_REFRES isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 93]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NUM_MANIFESTS_TO_CAC but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 102]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.IMAGE_TAG_TO_MANIFEST_PLUGIN_I final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 71]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_HDFS_RUNC_IMAGE_TAG_TO_H# isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 77]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_LOCAL_RUNC_IMAGE_TAG_TO_H# isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 83]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_CACHE_REFRESH_INTERV but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 90]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_NUM_MANIFESTS_TO_CA final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 99]
	Should org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin\$LRUCache be a <i>static</i> inner cla ImageTagToManifestPlugin.java:inner class? At ImageTagToManifestPlugin.java:[lines 336-344]
	Unread field:OCIContainerExecutorConfig.java:[line 561]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context):in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context): new Stri RuncContainerRuntime.java:[line 238]
Failed junit tests	hadoop.yarn.conf.TestYarnConfigurationFields

Subsystem	Report/Notes
Docker	Client=19.03.1 Server=19.03.1 Image:yetus/hadoop:bdbca0e
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12978011/YARN-9562.005.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux 8bcff179bb8e 4.4.0-138-generic #164-Ubuntu SMP Tue Oct 2 17:16:02 UTC 2018 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / 4f925af
maven	version: Apache Maven 3.3.9

Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/24598/artifact/out/diff-checkstyle-hadoop-yarn-project_hadoop-yarn.txt
findbugs	https://builds.apache.org/job/PreCommit-YARN-Build/24598/artifact/out/new-findbugs-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.html
unit	https://builds.apache.org/job/PreCommit-YARN-Build/24598/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-api.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/24598/testReport/
Max. process+thread count	447 (vs. ulimit of 10000)
modules	C: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager U: hadoop-yarn-project/hadoop-yarn
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/24598/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

Eric Badger added a comment - 22/Aug/19 22:28

eyang, ccondit, I've added patch 005 which adds a new parameterized class and also parameterized the set function for container runtime data. I'm not quite sure if this is better since there's still an unchecked assignment in launchContainer when the we call getContainerRuntimeData(). Let me know whether or not this is what you had in mind. If not, let me know what you're looking for since I'm not sure how generics helps the situation. If they do help, then I'm clearly missing something so please explain it to me 😊

Hadoop QA added a comment - 23/Aug/19 05:19

 -1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 28s	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 10 new or modified test files.
			trunk Compile Tests
0	mvndep	0m 54s	Maven dependency ordering for branch
+1	mvninstall	21m 14s	trunk passed
+1	compile	8m 26s	trunk passed
+1	checkstyle	1m 10s	trunk passed
+1	mvnsite	1m 16s	trunk passed
+1	shadedclient	13m 38s	branch has no errors when building and testing our client artifacts.
+1	findbugs	2m 25s	trunk passed
+1	javadoc	1m 0s	trunk passed
			Patch Compile Tests
0	mvndep	0m 13s	Maven dependency ordering for patch
+1	mvninstall	0m 59s	the patch passed
+1	compile	7m 26s	the patch passed
+1	javac	7m 26s	the patch passed
-0	checkstyle	1m 13s	hadoop-yarn-project/hadoop-yarn: The patch generated 292 new + 687 unchanged - 2 fixed = 979 total (was 689)
+1	mvnsite	1m 15s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shadedclient	11m 58s	patch has no errors when building and testing our client artifacts.
-1	findbugs	1m 6s	hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager generated 15 new + 0 unchanged - 0 fixed = 15 total (was 0)
+1	javadoc	0m 58s	the patch passed
			Other Tests


-1	unit	0m 49s	hadoop-yarn-api in the patch failed.
+1	unit	21m 22s	hadoop-yarn-server-nodemanager in the patch passed.
-1	asflicense	0m 42s	The patch generated 1 ASF License warnings.
		100m 0s	

Reason	Tests
FindBugs	module:hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager
	Nullcheck of NodeManager.context at line 535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.s At NodeManager.java:535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.serviceStop() At NodeManager.java:[line 532]
	Unused field:NodeManager.java
	Dead store to refreshHdfsCacheThread in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.serviceStart() At ImageTagToManifestPlugin.java:org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.service ImageTagToManifestPlugin.java:[line 314]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader(): new java.io.InputStreamReader(InputStream) At ImageTagToManifestPlugin.java:[line 205]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader(): new java.io.FileReader(File) At ImageTagToManifestPlugin.java:[line 179]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NM_RUNC_CACHE_REFRES isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 93]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NUM_MANIFESTS_TO_CAC but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 102]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.IMAGE_TAG_TO_MANIFEST_PLUGIN_I final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 71]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_HDFS_RUNC_IMAGE_TAG_TO_H/ isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 77]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_LOCAL_RUNC_IMAGE_TAG_TO_H/ isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 83]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_CACHE_REFRESH_INTERV but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 90]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_NUM_MANIFESTS_TO_CA final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 99]
	Should org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin\$LRUCache be a <i>static</i> inner cla ImageTagToManifestPlugin.java:inner class? At ImageTagToManifestPlugin.java:[lines 336-344]
	Unread field:OCIContainerExecutorConfig.java:[line 561]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context):in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context): new Stri RuncContainerRuntime.java:[line 239]
Failed junit tests	hadoop.yarn.conf.TestYarnConfigurationFields

Subsystem	Report/Notes
Docker	Client=19.03.1 Server=19.03.1 Image:yetus/hadoop:bdbca0e
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12978345/YARN-9562.006.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux d5952c1a94f5 4.4.0-138-generic #164-Ubuntu SMP Tue Oct 2 17:16:02 UTC 2018 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh

git revision	trunk / f6af7d0
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/24615/artifact/out/diff-checkstyle-hadoop-yarn-project_hadoop-yarn.txt
findbugs	https://builds.apache.org/job/PreCommit-YARN-Build/24615/artifact/out/new-findbugs-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.html
unit	https://builds.apache.org/job/PreCommit-YARN-Build/24615/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-api.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/24615/testReport/
asflicense	https://builds.apache.org/job/PreCommit-YARN-Build/24615/artifact/out/patch-asflicense-problems.txt
Max. process+thread count	420 (vs. ulimit of 10000)
modules	C: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager U: hadoop-yarn-project/hadoop-yarn
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/24615/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.


▼  **Craig Condit** added a comment - 23/Aug/19 20:57 - edited

I've added patch 005 which adds a new parameterized class and also parameterized the set function for container runtime data. I'm not quite sure if this is better since there's still an unchecked assignment in launchContainer when the we call getContainerRuntimeData(). Let me know whether or not this is what you had in mind. If not, let me know what you're looking for since I'm not sure how generics helps the situation. If they do help, then I'm clearly missing something so please explain it to me.


ebadger, if you change the signatures to:

```
void setContainerRuntimeData(Object containerRuntimeData);
<T> T getContainerRuntimeData(Class<T> runtimeClazz);
```

... then you can validate the type before returning and avoid the cast in the caller (caller passes in the type it expects to receive).

▼  **Eric Badger** added a comment - 23/Aug/19 22:15

Thanks for the explanation, **ccondit**! I've uploaded patch 007, which I believe handles things the way you were suggesting.

▼  **Hadoop QA** added a comment - 24/Aug/19 08:38

 **-1 overall**

Vote	Subsystem	Runtime	Comment
0	reexec	0m 46s	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 10 new or modified test files.
trunk Compile Tests			
0	mvndep	5m 29s	Maven dependency ordering for branch
+1	mvninstall	23m 23s	trunk passed
+1	compile	10m 0s	trunk passed
+1	checkstyle	1m 21s	trunk passed
+1	mvnsite	1m 31s	trunk passed
+1	shadedclient	14m 47s	branch has no errors when building and testing our client artifacts.
+1	findbugs	2m 48s	trunk passed
+1	javadoc	1m 13s	trunk passed
Patch Compile Tests			

0	mvndep	0m 15s	Maven dependency ordering for patch
+1	mvninstall	1m 12s	the patch passed
+1	compile	8m 58s	the patch passed
+1	javac	8m 58s	the patch passed
-0	checkstyle	1m 18s	hadoop-yarn-project/hadoop-yarn: The patch generated 283 new + 689 unchanged - 2 fixed = 972 total (was 691)
+1	mvnsite	1m 19s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shadedclient	11m 43s	patch has no errors when building and testing our client artifacts.
-1	findbugs	1m 19s	hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager generated 15 new + 0 unchanged - 0 fixed = 15 total (was 0)
+1	javadoc	1m 6s	the patch passed
Other Tests			
-1	unit	0m 55s	hadoop-yarn-api in the patch failed.
+1	unit	23m 10s	hadoop-yarn-server-nodemanager in the patch passed.
+1	asflicense	1m 12s	The patch does not generate ASF License warnings.
		115m 0s	


Reason	Tests
FindBugs	module:hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager
	Nullcheck of NodeManager.context at line 535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.s At NodeManager.java:535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.serviceStop() At NodeManager.java:[line 532]
	Unused field:NodeManager.java
	Dead store to refreshHdfsCacheThread in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.serviceStart() At ImageTagToManifestPlugin.java:org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.service ImageTagToManifestPlugin.java:[line 314]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getHdfsImageToHashReader(): new java.io.InputStreamReader(InputStream) At ImageTagToManifestPlugin.java:[line 205]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader():in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.getLocalImageToHashReader(): new java.io.FileReader(File) At ImageTagToManifestPlugin.java:[line 179]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NM_RUNC_CACHE_REFRES isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 93]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.DEFAULT_NUM_MANIFESTS_TO_CAC but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 102]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.IMAGE_TAG_TO_MANIFEST_PLUGIN_I final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 71]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_HDFS_RUNC_IMAGE_TAG_TO_HA isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 77]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_LOCAL_RUNC_IMAGE_TAG_TO_H isn't final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 83]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_CACHE_REFRESH_INTERV but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 90]
	org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin.NM_RUNC_NUM_MANIFESTS_TO_CA final but should be At ImageTagToManifestPlugin.java:be At ImageTagToManifestPlugin.java:[line 99]
	Should org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.ImageTagToManifestPlugin\$LRUCache be a <i>static</i> inner cla ImageTagToManifestPlugin.java:inner class? At ImageTagToManifestPlugin.java:[lines 336-344]
	Unread field:OCIContainerExecutorConfig.java:[line 561]
	Found reliance on default encoding in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context):in org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.RuncContainerRuntime.initialize(Configuration, Context): new Stri RuncContainerRuntime.java:[line 238]

Failed junit tests	hadoop.yarn.conf.TestYarnConfigurationFields
--------------------------	----------------------------------------------

Subsystem	Report/Notes
Docker	Client=19.03.1 Server=19.03.1 Image:yetus/hadoop:bdbca0e
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12978460/YARN-9562.007.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux 700256f2d552 4.4.0-138-generic #164-Ubuntu SMP Tue Oct 2 17:16:02 UTC 2018 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / d2225c8
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/24618/artifact/out/diff-checkstyle-hadoop-yarn-project_hadoop-yarn.txt
findbugs	https://builds.apache.org/job/PreCommit-YARN-Build/24618/artifact/out/new-findbugs-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.html
unit	https://builds.apache.org/job/PreCommit-YARN-Build/24618/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-api.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/24618/testReport/
Max. process+thread count	414 (vs. ulimit of 10000)
modules	C: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager U: hadoop-yarn-project/hadoop-yarn
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/24618/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org


This message was automatically generated.

- ▼

 Eric Badger added a comment - 27/Aug/19 18:24

Patch 008 adds a bunch of checkstyle and findbugs cleanup

- ▼

 Hadoop QA added a comment - 28/Aug/19 03:40

 -1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	1m 37s	Docker mode activated.
			Prechecks
+1	@author	0m 1s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 9 new or modified test files.
			trunk Compile Tests
0	mvndep	1m 13s	Maven dependency ordering for branch
+1	mvninstall	23m 22s	trunk passed
+1	compile	11m 33s	trunk passed
+1	checkstyle	1m 42s	trunk passed
+1	mvnsite	1m 51s	trunk passed
+1	shadedclient	17m 54s	branch has no errors when building and testing our client artifacts.
+1	findbugs	3m 4s	trunk passed
+1	javadoc	1m 25s	trunk passed
			Patch Compile Tests


0	mvndep	0m 19s	Maven dependency ordering for patch
+1	mvninstall	1m 23s	the patch passed
+1	compile	10m 45s	the patch passed
+1	javac	10m 45s	the patch passed
-0	checkstyle	1m 36s	hadoop-yarn-project/hadoop-yarn: The patch generated 37 new + 689 unchanged - 2 fixed = 726 total (was 691)
+1	mvnsite	1m 44s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shadedclient	15m 19s	patch has no errors when building and testing our client artifacts.
-1	findbugs	1m 33s	hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager generated 2 new + 0 unchanged - 0 fixed = 2 total (was 0)
+1	javadoc	1m 12s	the patch passed
Other Tests			
-1	unit	0m 50s	hadoop-yarn-api in the patch failed.
-1	unit	21m 44s	hadoop-yarn-server-nodemanager in the patch failed.
+1	asflicense	0m 37s	The patch does not generate ASF License warnings.
		122m 35s	

Reason	Tests
FindBugs	module:hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager
	Nullcheck of NodeManager.context at line 535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.serviceStop() At NodeManager.java:535 of value previously dereferenced in org.apache.hadoop.yarn.server.nodemanager.NodeManager.serviceStop() At NodeManager.java:[line 532]
	Unused field:NodeManager.java
Failed junit tests	hadoop.yarn.conf.TestYarnConfigurationFields
	hadoop.yarn.server.nodemanager.amrmproxy.TestFederationInterceptor

Subsystem	Report/Notes
Docker	Client=19.03.1 Server=19.03.1 Image:yetus/hadoop:bdbca0e53b4
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12978716/YARN-9562.008.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux ce35f73754e6 4.15.0-54-generic #58-Ubuntu SMP Mon Jun 24 10:55:24 UTC 2019 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / b1eee8b
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/24647/artifact/out/diff-checkstyle-hadoop-yarn-project_hadoop-yarn.txt
findbugs	https://builds.apache.org/job/PreCommit-YARN-Build/24647/artifact/out/new-findbugs-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.html
unit	https://builds.apache.org/job/PreCommit-YARN-Build/24647/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-api.txt
unit	https://builds.apache.org/job/PreCommit-YARN-Build/24647/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/24647/testReport/
Max. process+thread count	307 (vs. ulimit of 5500)
modules	C: hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager U: hadoop-yarn-project/hadoop-yarn

Console output	https://builds.apache.org/job/PreCommit-YARN-Build/24647/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

✓  [Eric Badger](#) added a comment - 18/Oct/19 22:13


Patch 009 adds some light documentation and some other fixes/updates. Together with [YARN-9884](#) patch 004 and [YARN-9561](#) patch 005 this creates a fully working RuncContainerRuntime.

[YARN-9884.004.patch](#)

[YARN-9561.005.patch](#)

[YARN-9562.009.patch](#)

[YARN-9564.004.patch](#)

✓  [Hadoop QA](#) added a comment - 19/Oct/19 01:12

 **-1 overall**

Vote	Subsystem	Runtime	Comment
0	reexec	25m 22s	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 9 new or modified test files.
trunk Compile Tests			
0	mvndep	0m 33s	Maven dependency ordering for branch
+1	mvninstall	20m 16s	trunk passed
+1	compile	17m 27s	trunk passed
+1	checkstyle	3m 1s	trunk passed
+1	mvnsite	3m 32s	trunk passed
+1	shadedclient	20m 44s	branch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	4m 26s	trunk passed
+1	javadoc	2m 45s	trunk passed
Patch Compile Tests			
0	mvndep	0m 24s	Maven dependency ordering for patch
+1	mvninstall	2m 10s	the patch passed
+1	compile	17m 35s	the patch passed
+1	javac	17m 35s	the patch passed
-0	checkstyle	5m 39s	root: The patch generated 71 new + 688 unchanged - 1 fixed = 759 total (was 689)
+1	mvnsite	3m 19s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 2s	The patch has no ill-formed XML file.
+1	shadedclient	12m 58s	patch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
-1	findbugs	1m 16s	hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager generated 1 new + 0 unchanged - 0 fixed = 1 total (was 0)
+1	javadoc	2m 53s	the patch passed
Other Tests			
+1	unit	0m 23s	hadoop-project in the patch passed.
+1	unit	0m 56s	hadoop-yarn-api in the patch passed.
+1	unit	3m 47s	hadoop-yarn-common in the patch passed.
+1	unit	21m 17s	hadoop-yarn-server-nodemanager in the patch passed.
+1	unit	0m 24s	hadoop-yarn-site in the patch passed.
+1	asflicense	0m 42s	The patch does not generate ASF License warnings.

		172m 11s	
--	--	-------------	--

Reason	Tests
FindBugs	module:hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager
	new org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.runtime.runc.OCIContainerExecutorConfig\$OCIRuntimeConfig\$OCIProces int, int[]) may expose internal representation by storing an externally mutable object into OCIContainerExecutorConfig\$OCIRuntimeConfig\$OCIProcessConfig\$User.additionalGids At OCIContainerExecutorConfig.java:expose internal r storing an externally mutable object into OCIContainerExecutorConfig\$OCIRuntimeConfig\$OCIProcessConfig\$User.additionalGids At OCIContainerExecutorConfig.java:[line 500]

Subsystem	Report/Notes
Docker	Client=19.03.4 Server=19.03.4 Image:yetus/hadoop:104ccca9169
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12983477/YARN-9562.009.patch
Optional Tests	dupname asflicense mvnsite xml compile javac javadoc mvninstall unit shadedclient findbugs checkstyle
uname	Linux f724ec721de2 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 / 6d92aa7
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/25020/artifact/out/diff-checkstyle-root.txt
findbugs	https://builds.apache.org/job/PreCommit-YARN-Build/25020/artifact/out/new-findbugs-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.html
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/25020/testReport/
Max. process+thread count	306 (vs. ulimit of 5500)
modules	C: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn- common hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager hadoop-yarn- project/hadoop-yarn/hadoop-yarn-site U: .
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/25020/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

- ▼

 Eric Badger added a comment - 21/Oct/19 21:53

Patch 010 should fix the findbugs.
- ▼

 Eric Badger added a comment - 24/Oct/19 15:56

shanekumpf@gmail.com, would you mind reviewing this JIRA as well as [YARN-9561](#) (and [YARN-9564](#) if you're feeling ambitious)?
- ▼

 Eric Badger added a comment - 24/Oct/19 17:26

Cancelling and resubmitting patch so that hadoopqa will run
- ▼


 Jim Brennan added a comment - 24/Oct/19 21:10

Comment on patch 009:

Nodemanager.java


- ServiceInit() looks like this line is being re-added (so now it is duplicated):

```
(NMContext) context).setContainerExecutor(exec);
```

▼  [Eric Badger](#) added a comment - 24/Oct/19 21:37

Thanks for the review, [Jim_Brennan](#)!

I guess patch 010 never got uploaded? Anyway, uploading a new patch 010 that should also address [Jim_Brennan](#)'s review comments.

▼  [Hadoop QA](#) added a comment - 25/Oct/19 00:29

 **+1 overall**

Vote	Subsystem	Runtime	Comment
0	reexec	28m 57s	Docker mode activated.
Precchecks			
+1	@author	0m 0s	The patch does not contain any @author tags.
+1	test4tests	0m 0s	The patch appears to include 9 new or modified test files.
trunk Compile Tests			
0	mvndep	1m 31s	Maven dependency ordering for branch
+1	mvninstall	17m 6s	trunk passed
+1	compile	15m 16s	trunk passed
+1	checkstyle	2m 39s	trunk passed
+1	mvnsite	3m 48s	trunk passed
+1	shadedclient	19m 16s	branch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	4m 22s	trunk passed
+1	javadoc	3m 29s	trunk passed
Patch Compile Tests			
0	mvndep	0m 27s	Maven dependency ordering for patch
+1	mvninstall	2m 17s	the patch passed
+1	compile	14m 32s	the patch passed
+1	javac	14m 32s	the patch passed
-0	checkstyle	2m 42s	root: The patch generated 71 new + 690 unchanged - 1 fixed = 761 total (was 691)
+1	mvnsite	3m 49s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 2s	The patch has no ill-formed XML file.
+1	shadedclient	11m 51s	patch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	4m 51s	the patch passed
+1	javadoc	3m 25s	the patch passed
Other Tests			
+1	unit	0m 32s	hadoop-project in the patch passed.
+1	unit	1m 7s	hadoop-yarn-api in the patch passed.
+1	unit	4m 2s	hadoop-yarn-common in the patch passed.
+1	unit	21m 42s	hadoop-yarn-server-nodemanager in the patch passed.
+1	unit	0m 32s	hadoop-yarn-site in the patch passed.
+1	asflicense	0m 50s	The patch does not generate ASF License warnings.
		166m 37s	

Subsystem	Report/Notes
Docker	Client=19.03.4 Server=19.03.4 Image=yetus/hadoop:104ccca9169
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12983965/YARN-9562.010.patch
Optional Tests	dupname asflicense mvnsite xml compile javac javadoc mvninstall unit shadedclient findbugs checkstyle
uname	Linux f600412e586d 4.15.0-60-generic #67-Ubuntu SMP Thu Aug 22 16:55:30 UTC 2019 x86_64 x86_64 x86_64 GNU/Linux

Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / a1b4eeb
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/25042/artifact/out/diff-checkstyle-root.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/25042/testReport/
Max. process+thread count	412 (vs. ulimit of 5500)
modules	C: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn- common hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager hadoop-yarn- project/hadoop-yarn/hadoop-yarn-site U: .
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/25042/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

Jim Brennan added a comment - 28/Oct/19 15:18

ebadger, I pulled ~~YARN-9561~~, ~~YARN-9562~~, and ~~YARN-9564~~ into a local branch to verify that I could setup and run with the RUNC run-time. Overall, things went well, but I did run into a few issues that I will note here:

- in container-executor.cfg, `module-enabled=true` in the runc section does not work. You must specify `feature.runc.enabled=true` I think the `is_runc_support_enabled()` check should behave like `is_docker_support_enabled()` and check for `module.enabled` as well.
- We need to document the need for the `image-tag-to-manifest-plugin.hdfs-hash-file` property somewhere - you don't get very far without it.
- Do we not support specifying the mounts via environment variables like docker does? I think people will expect that. I originally tried using `-Dmapreduce.map.env.YARN_CONTAINER_RUNTIME_RUNC_MOUNTS=...` before realizing that I needed to specify default ro/rw mounts in `yarn-site.xml`.

Once I got past these issues, I was able to run jobs using the RunC container run-time on a one-node cluster.
Thanks for all the hard work on this feature!

Eric Yang added a comment - 28/Oct/19 23:55

ebadger Can we do something to reduce the number of checkstyle warnings? Most of them are fixable. Thanks

Eric Badger added a comment - 30/Oct/19 19:02

I just attached path 011 to address Jim_Brennan's review comments as well as clean up some of the checkstyle issues. I have left some of the checkstyle warnings on purpose, as I think it makes less sense to adhere to the checkstyle standard in those instances. If you feel otherwise, let me know.

The patches that work together.
[YARN-9562.011.patch](#)
~~[YARN-9561.008.patch](#)~~
[YARN-9564.004.patch](#)

Eric Badger added a comment - 30/Oct/19 21:29

Uploading patch 012 to add some javadoc unstable annotations and add to the documentation a warning about using this feature.

Hadoop QA added a comment - 30/Oct/19 21:41

-1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 27s	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 9 new or modified test files.


trunk Compile Tests			
0	mvndep	1m 43s	Maven dependency ordering for branch
+1	mvninstall	22m 25s	trunk passed
+1	compile	18m 59s	trunk passed
+1	checkstyle	3m 18s	trunk passed
+1	mvnsite	3m 47s	trunk passed
+1	shadedclient	20m 13s	branch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	4m 27s	trunk passed
+1	javadoc	3m 15s	trunk passed
Patch Compile Tests			
0	mvndep	0m 27s	Maven dependency ordering for patch
+1	mvninstall	2m 23s	the patch passed
+1	compile	15m 26s	the patch passed
+1	javac	15m 26s	the patch passed
-0	checkstyle	2m 44s	root: The patch generated 22 new + 690 unchanged - 1 fixed = 712 total (was 691)
+1	mvnsite	3m 49s	the patch passed
+1	whitespace	0m 1s	The patch has no whitespace issues.
+1	xml	0m 3s	The patch has no ill-formed XML file.
+1	shadedclient	13m 15s	patch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	5m 5s	the patch passed
+1	javadoc	3m 30s	the patch passed
Other Tests			
+1	unit	0m 32s	hadoop-project in the patch passed.
+1	unit	1m 3s	hadoop-yarn-api in the patch passed.
+1	unit	4m 4s	hadoop-yarn-common in the patch passed.
-1	unit	21m 35s	hadoop-yarn-server-nodemanager in the patch failed.
+1	unit	0m 32s	hadoop-yarn-site in the patch passed.
+1	asflicense	0m 50s	The patch does not generate ASF License warnings.
		150m 46s	

Reason	Tests
Failed junit tests	hadoop.yarn.server.nodemanager.amrmproxy.TestFederationInterceptor

Subsystem	Report/Notes
Docker	Client=19.03.4 Server=19.03.4 Image:yetus/hadoop:104ccca9169
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12984400/YARN-9562.011.patch
Optional Tests	dupname asflicense mvnsite xml compile javac javadoc mvninstall unit shadedclient findbugs checkstyle
uname	Linux 9c8cc765b9ab 4.15.0-60-generic #67-Ubuntu SMP Thu Aug 22 16:55:30 UTC 2019 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / 9a2e43e
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/25069/artifact/out/diff-checkstyle-root.txt
unit	https://builds.apache.org/job/PreCommit-YARN-Build/25069/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.txt

Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/25069/testReport/
Max. process+thread count	455 (vs. ulimit of 5500)
modules	C: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-common hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site U: .
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/25069/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

▼  Hadoop QA added a comment - 31/Oct/19 00:12

 +1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	1m 22s	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 9 new or modified test files.
			trunk Compile Tests
0	mvndep	0m 36s	Maven dependency ordering for branch
+1	mvninstall	24m 39s	trunk passed
+1	compile	24m 1s	trunk passed
+1	checkstyle	3m 27s	trunk passed
+1	mvnsite	4m 9s	trunk passed
+1	shadedclient	23m 9s	branch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	5m 18s	trunk passed
+1	javadoc	4m 7s	trunk passed
			Patch Compile Tests
0	mvndep	0m 26s	Maven dependency ordering for patch
+1	mvninstall	3m 13s	the patch passed
+1	compile	15m 58s	the patch passed
+1	javac	15m 58s	the patch passed
-0	checkstyle	2m 48s	root: The patch generated 22 new + 688 unchanged - 1 fixed = 710 total (was 689)
+1	mvnsite	3m 14s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 3s	The patch has no ill-formed XML file.
+1	shadedclient	12m 48s	patch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	4m 39s	the patch passed
+1	javadoc	2m 51s	the patch passed
			Other Tests
+1	unit	0m 24s	hadoop-project in the patch passed.
+1	unit	0m 53s	hadoop-yarn-api in the patch passed.
+1	unit	3m 49s	hadoop-yarn-common in the patch passed.
+1	unit	21m 55s	hadoop-yarn-server-nodemanager in the patch passed.
+1	unit	0m 32s	hadoop-yarn-site in the patch passed.
+1	asflicense	1m 3s	The patch does not generate ASF License warnings.
		161m 47s	

Subsystem	Report/Notes
Docker	Client=19.03.4 Server=19.03.4 Image:yetus/hadoop:104ccca9169
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12984414/YARN-9562.012.patch
Optional Tests	dupname asflicense mvnsite xml compile javac javadoc mvninstall unit shadedclient findbugs checkstyle
uname	Linux fe53d0d0be1c 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 / 9a2e43e
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/25070/artifact/out/diff-checkstyle-root.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/25070/testReport/
Max. process+thread count	307 (vs. ulimit of 5500)
modules	C: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-common hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site U: .
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/25070/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

Eric Badger added a comment - 31/Oct/19 20:26

Patch 013 adds some more documentation changes. Notably, it adds the plugin configs to `RuncContainers.md`

Hadoop QA added a comment - 31/Oct/19 22:49



+1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 46s	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 9 new or modified test files.
			trunk Compile Tests
0	mvndep	0m 24s	Maven dependency ordering for branch
+1	mvninstall	19m 27s	trunk passed
+1	compile	16m 11s	trunk passed
+1	checkstyle	2m 43s	trunk passed
+1	mvnsite	3m 15s	trunk passed
+1	shadedclient	19m 36s	branch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	4m 14s	trunk passed
+1	javadoc	2m 49s	trunk passed
			Patch Compile Tests
0	mvndep	0m 21s	Maven dependency ordering for patch
+1	mvninstall	2m 12s	the patch passed
+1	compile	15m 30s	the patch passed
+1	javac	15m 30s	the patch passed
-0	checkstyle	2m 43s	root: The patch generated 22 new + 688 unchanged - 1 fixed = 710 total (was 689)
+1	mvnsite	3m 14s	the patch passed



+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 2s	The patch has no ill-formed XML file.
+1	shadedclient	12m 55s	patch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	4m 40s	the patch passed
+1	javadoc	2m 51s	the patch passed
			Other Tests
+1	unit	0m 23s	hadoop-project in the patch passed.
+1	unit	0m 54s	hadoop-yarn-api in the patch passed.
+1	unit	3m 47s	hadoop-yarn-common in the patch passed.
+1	unit	21m 30s	hadoop-yarn-server-nodemanager in the patch passed.
+1	unit	0m 28s	hadoop-yarn-site in the patch passed.
+1	asflicense	0m 40s	The patch does not generate ASF License warnings.
		139m 9s	

Subsystem	Report/Notes
Docker	Client=19.03.4 Server=19.03.4 Image:yetus/hadoop:104ccca9169
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12984549/YARN-9562.013.patch
Optional Tests	dupname asflicense mvnsite xml compile javac javadoc mvninstall unit shadedclient findbugs checkstyle
uname	Linux db7e5bc3dac1 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 / f9b99d2
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/25074/artifact/out/diff-checkstyle-root.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/25074/testReport/
Max. process+thread count	306 (vs. ulimit of 5500)
modules	C: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-common hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site U: .
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/25074/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

  [Jim Brennan](#) added a comment - 01/Nov/19 19:31

Thanks for the updates [ebadger](#)! I am +1 (non-binding) on patch 013. I tested it with the patches for [YARN-9561](#) and [YARN-9564](#). I was able to run with the runc container executor on a one node cluster. I verified that I could use the `YARN_CONTAINER_RUNTIME_RUNC_MOUNTS` environment variable to specify the mounts. I also ran all of the relevant unit tests.

  [Shane Kumpf](#) added a comment - 05/Nov/19 22:50

Hey [ebadger](#). Thanks for your (and everyone elses) hard work here. Overall this looks to be coming together nicely.

I've taken a look at the code and have a couple of items, but nothing blocking. However, I'm having a bit of trouble getting runC containers working so far. I'm out of time to continue troubleshooting right now, but this is what I'm seeing, both dshell and MR pi do the same. Docker MR jobs are working. I am running all containers as the nobody user in this case.

```
2019-11-05 22:40:14,225 WARN org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.privileged.PrivilegedOperationExecutor:
Shell execution returned exit code: 35. Privileged Execution Operation Stderr:
Bad/Missing runC int
Could not create container dirs
Could not create local files and directories
Nonzero exit code=35, error message='Could not create work dirs'
Stdout: Can't create directory /tmp/hadoop-yarn/nm-local-
```

```
dir/usercache/hadoopuser/appcache/application_1572993484434_0003/container_e04_1572993484434_0003_01_000002 - Permission denied
Full command array for failed execution:
[/usr/local/hadoop/bin/container-executor, --run-runc-container, /tmp/hadoop-yarn/nm-local-dir/nmPrivate/application_1572993484434_0003/container_e04_1572993484434_0003_01_000002/runc-config.json]
```

Here are some questions/nits on the patch. None of these are blockers IMO.

Questions/Comments:

- 1) Why is the keystore and truststore needed within RuncContainerExecutorConfig?
- 2) I'm not a big fan of hard coded mounts like this. This would also be problematic for systemd based containers where systemd expects /tmp to be a tmpfs.

```
addRuncMountLocation(mounts, containerWorkDir.toString() +
    "/private_slash_tmp", "/tmp", true, true);
addRuncMountLocation(mounts, containerWorkDir.toString() +
    "/private_var_slash_tmp", "/var/tmp", true, true);
```

- 3) It would be great to track these disabled features for future implementation.

```
public String getExposedPorts(Container container) {
    return null;
}

public String[] getIpAndHost(Container container) {
    return null;
}

public IOStreamPair execContainer(ContainerExecContext ctx)
    throws ContainerExecutionException {
    return null;
}

public void reapContainer(ContainerRuntimeContext ctx)
    throws ContainerExecutionException {
}

public void relaunchContainer(ContainerRuntimeContext ctx)
    throws ContainerExecutionException {
}
```

Nits:

- 1) clean up the whitespace around Container#getContainerRuntimeData
- 2) RuncContainerExecutorConfig typo in class javadoc
- 3) YarnConfiguration DEFAULT_NM_RUNC_ALLOWED_CONTAINER_NETWORKS and DEFAULT_NM_RUNC_ALLOWED_CONTAINER_RUNTIMES - copy and paste error on the javadoc
- 4) Many of the tests create tmpDirs but don't appear to clean them up. TestRuncContainerRuntime creates two temp dirs, once via mkdirs and the other via a Rule.

```
TestDockerContainerRuntime mkdirs for tmpDir
TestHdfsManifestToResouvesPlugin creates a tmpDir but doesn't clean it up
TestRuncContainerRuntime has both a tmpDir and TempDir created by a @Rule
```

5) Docs

- Overview: "if created", newline after runC in second paragraph.
- Docker to squash section: first paragraph "Getting" newline.
- I'm fine with leaving reference to the patch to docker_to_squash.py for now until we have a better story, but I did need to do a few steps to get that tool working. 1) Create the hdfs runc-root as root 2) install skopeo, squashfs-tools, and attr.

Eric Badger added a comment - 06/Nov/19 17:30

shane kumpf@gmail.com, thanks for the review!

I am running all containers as the nobody user in this case.

So you're setting `linux-container-executor.nonsecure-mode.limit-users` to true with `linux-container-executor.nonsecure-mode.local-user` set to nobody in your `yarn-site.xml`? Is that the use case here?

I'll address the rest of your comments in a followup patch.

Jim Brennan added a comment - 06/Nov/19 17:35

ebadger, shane kumpf@gmail.com for the record, I ran with `linux-container-executor.nonsecure-mode.limit-users=false`

Shane Kumpf added a comment - 06/Nov/19 17:38

So you're setting `linux-container-executor.nonsecure-mode.limit-users` to true with `linux-container-executor.nonsecure-mode.local-user` set to nobody in your `yarn-site.xml`? Is that the use case here?

Exactly correct

Eric Badger added a comment - 07/Nov/19 20:46

Hey shane.kumpf@gmail.com, [YARN-9562](#) Patch 014 combined with [YARN-9564](#) patch 010 *should* fix the nobody user issue. I also fixed all other issues that you mentioned (except the ones I talk about below).

1) Why is the keystore and truststore needed within `RuncContainerExecutorConfig`?

These variables are used in `create_local_dirs`. I'm not super familiar with the feature, but I was under the impression that they were not tied to any specific runtime. So I added them in `RuncContainerExecutorConfig` so that they would be passed to the container-executor. All variables are passed via that JSON file for the container-executor in the case of `--run-runc-container`

2) I'm not a big fan of hard coded mounts like this. This would also be problematic for systemd based containers where systemd expects `/tmp` to be a tmpfs.

What do you suggest as an alternative? Add both `/tmp` and `/var/tmp` as tmpfs in the runC config?

3) It would be great to track these disabled features for future implementation.

Agreed. Should I file JIRAs for the features or add comments into the code or add documentation or what?

I'm fine with leaving reference to the patch to `docker_to_squash.py` for now until we have a better story, but I did need to do a few steps to get that tool working. 1) Create the hdfs `runc-root` as root 2) install `skopeo`, `squashfs-tools`, and `attr`.

I should be able to fix 1). For 2), I don't want to attempt to install the packages for them. I have checks for the first two to error out early if they aren't installed. I'll add a check for `attr` as well. Is there anything more to do to make this more user-friendly?

Shane Kumpf added a comment - 07/Nov/19 21:33

Thanks again, Eric! I'll give the latest patches a try.

These variables are used in `create_local_dirs`. I'm not super familiar with the feature, but I was under the impression that they were not tied to any specific runtime.

You are correct. I guess I've overlooked this in the past.

What do you suggest as an alternative? Add both `/tmp` and `/var/tmp` as tmpfs in the runC config?

My initial thought would be handling these mounts via the `default-rw-mounts` setting in `yarn-site` vs hard coding it for every container. That said, I do see the challenge that poses, since the mount is inside of the container work dir in the current patch. For this initial cut, I'm fine with leaving it as is and we can open an issue to revisit.

Agreed. Should I file JIRAs for the features or add comments into the code or add documentation or what?

JIRAs under the runC umbrella maybe? or do we want to try to close that out relatively quickly? I can help open the issues, I wasn't intending to put that burden on you. 😊

I don't want to attempt to install the packages for them.

Adding that check sounds like a reasonable solution to me without being intrusive. No other issues to report on usability.

Eric Badger added a comment - 07/Nov/19 23:40

My initial thought would be handling these mounts via the `default-rw-mounts` setting in `yarn-site` vs hard coding it for every container. That said, I do see the challenge that poses, since the mount is inside of the container work dir in the current patch. For this initial cut, I'm fine with leaving it as is and we can open an issue to revisit.

Filed [YARN-9959](#)

JIRAs under the runC umbrella maybe? or do we want to try to close that out relatively quickly? I can help open the issues, I wasn't intending to put that burden on you.

Filed a bunch of JIRAs under [YARN-9014](#) 😊 I didn't file anything for `reapContainer`, because I'm not sure there is anything that needs to be done there. The runC containers are removed once they exit, so there isn't a container around that we need to cleanup. Let me know if I'm missing something.

Adding that check sounds like a reasonable solution to me without being intrusive. No other issues to report on usability.

Added patch 006 to YARN-9564 that adds the package checks as well as a better error message for creating the root. I know it isn't the best because it's throwing exceptions instead of nice error messages, but it should be workable.

Hadoop QA added a comment - 07/Nov/19 23:40

-1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	29m 58s	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 9 new or modified test files.
			trunk Compile Tests
0	mvndep	1m 10s	Maven dependency ordering for branch
+1	mvninstall	18m 37s	trunk passed
+1	compile	15m 12s	trunk passed
+1	checkstyle	2m 37s	trunk passed
+1	mvnsite	3m 46s	trunk passed
+1	shadedclient	19m 17s	branch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	4m 24s	trunk passed
+1	javadoc	3m 28s	trunk passed
			Patch Compile Tests
0	mvndep	0m 26s	Maven dependency ordering for patch
+1	mvninstall	2m 16s	the patch passed
+1	compile	14m 34s	the patch passed
+1	javac	14m 34s	the patch passed
-0	checkstyle	2m 43s	root: The patch generated 23 new + 690 unchanged - 1 fixed = 713 total (was 691)
+1	mvnsite	3m 49s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 3s	The patch has no ill-formed XML file.
+1	shadedclient	13m 24s	patch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	4m 58s	the patch passed
+1	javadoc	3m 6s	the patch passed
			Other Tests
+1	unit	0m 29s	hadoop-project in the patch passed.
+1	unit	1m 0s	hadoop-yarn-api in the patch passed.
+1	unit	4m 1s	hadoop-yarn-common in the patch passed.
-1	unit	21m 56s	hadoop-yarn-server-nodemanager in the patch failed.
+1	unit	0m 27s	hadoop-yarn-site in the patch passed.
+1	asflicense	0m 43s	The patch does not generate ASF License warnings.
		169m 54s	

Reason	Tests
Failed junit tests	hadoop.yarn.server.nodemanager.containermanager.TestContainerManager

Subsystem	Report/Notes
Docker	Client=19.03.4 Server=19.03.4 Image:yetus/hadoop:104ccca9169

JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12985268/YARN-9562.014.patch
Optional Tests	dupname asflicense mvnsite xml compile javac javadoc mvninstall unit shadedclient findbugs checkstyle
uname	Linux 5ecffd59f839 4.15.0-60-generic #67-Ubuntu SMP Thu Aug 22 16:55:30 UTC 2019 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / 247584e
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/25117/artifact/out/diff-checkstyle-root.txt
unit	https://builds.apache.org/job/PreCommit-YARN-Build/25117/artifact/out/patch-unit-hadoop-yarn-project_hadoop-yarn_hadoop-yarn-server_hadoop-yarn-server-nodemanager.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/25117/testReport/
Max. process+thread count	455 (vs. ulimit of 5500)
modules	C: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-common hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site U: .
Console output	https://builds.apache.org/job/PreCommit-YARN-Build/25117/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

Jim Brennan added a comment - 08/Nov/19 16:39

Thanks for the updates [ebadger](#)! I am +1 (non-binding) on patch 014.

Shane Kumpf added a comment - 10/Nov/19 15:06

Thanks for the new patches, [ebadger](#)! I was able to successfully run a dshell and MR PI job leveraging runC with these patches.

```
[root@y7001 ~]# runc list
ID              PID      STATUS    BUNDLE
CREATED          OWNER
container_e02_1573397883403_0003_01_000002  32546    running  /tmp/hadoop-yarn/nm-local-dir/nmPrivate/application_1573397883403_0003/container_e02_1573397883403_0003_01_000002  2019-11-10T15:03:22.810203063Z  root
```

However, clean up of the container resources is failing due to permission denied issues:

```
2019-11-10 15:03:11,637 INFO org.apache.hadoop.yarn.server.nodemanager.LinuxContainerExecutor: Deleting absolute path : /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573397883403_0002/container_e02_1573397883403_0002_01_000002
2019-11-10 15:03:11,653 WARN org.apache.hadoop.yarn.server.nodemanager.containermanager.linux.privileged.PrivilegedOperationExecutor: Shell execution returned exit code: 255. Privileged Execution Operation Stderr:
Nonzero exit code=-1, error message='Unknown error code'

Stdout: main : command provided 3
main : run as user is nobody
main : requested yarn user is hadoopuser
failed to rmdir application_1573397883403_0002: Permission denied
failed to rmdir appcache: Permission denied
failed to rmdir filecache: Permission denied
failed to rmdir hadoopuser: Permission denied
failed to rmdir usercache: Permission denied
failed to rmdir filecache: Permission denied
failed to rmdir nm-local-dir: Permission denied
failed to rmdir hadoop-yarn: Directory not empty
failed to rmdir private_slash_tmp: Directory not empty
Error while deleting /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573397883403_0002/container_e02_1573397883403_0002_01_000002: 39 (Directory not empty)

Full command array for failed execution:
runc local/hadoop/bin/container-executor nobody hadoopuser 3 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573397883403_0002/container_e02_1573397883403_0002_01_000002
```

Eric Badger added a comment - 11/Nov/19 20:29

```
Error while deleting /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573397883403_0002/container_e02_1573397883403
```

So the container-executor is failing to delete this directory. But I'm really confused about the output that it is spitting out.


```
failed to rmdir application_1573397883403_0002: Permission denied
failed to rmdir appcache: Permission denied
failed to rmdir filecache: Permission denied
failed to rmdir hadoopuser: Permission denied
failed to rmdir usercache: Permission denied
failed to rmdir filecache: Permission denied
failed to rmdir nm-local-dir: Permission denied
failed to rmdir hadoop-yarn: Directory not empty
failed to rmdir private_slash_tmp: Directory not empty
```

Why is it trying to delete all of these directories? Do *all* os these directories exist underneath /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573397883403_0002/container_e02_1573397883403_0002_01_000002? If not, why are they trying to be deleted?

[shanekumpf@gmail.com](#), could you send me a recursive ls of the directories prior to them being deleted? I am unable to reproduce this failure and I'm having trouble trying to explain how this could happen.

One idea that may explain it is that I always have to blow away my hadoop dirs when switching between local user mode and non local user mode. Since this code was previously only using local user mode, it might have created some of these directories previously with the wrong ownership and now they can't be deleted. I don't *think* that's what is happening here, but it's worth a look.

Shane Kumpf added a comment - 13/Nov/19 15:54 - edited

Hey Eric, sorry for the delay. Just a note that my patch testing workflow is to always start with a fresh checkout of the source, apply the patches, and start a brand new VM, so there wasn't a switch from local to non-local.

Here is a listing of what remains after I get that exception during cleanup.

```
[root@y7001 ~]# find /tmp/hadoop-yarn/nm-local-dir/ -ls
67826613 0 drwxr-xr-x 5 yarn yarn 57 Nov 13 15:36 /tmp/hadoop-yarn/nm-local-dir/
8703405 0 drwxr-xr-x 3 yarn yarn 24 Nov 13 15:47 /tmp/hadoop-yarn/nm-local-dir/usercache
108869938 0 drwxr-s--- 4 nobody hadoop 39 Nov 13 15:47 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser
70809061 0 drwxr-s--- 3 nobody hadoop 44 Nov 13 15:49 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache
8703450 0 drwxr-s--- 3 nobody hadoop 52 Nov 13 15:50 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573659389683_0003
38635536 0 drwx--s--- 3 nobody hadoop 31 Nov 13 15:50 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573659389683_0003/container_1573659389683_0003_01_000002
8711268 0 drwx--x--- 3 nobody hadoop 25 Nov 13 15:48 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573659389683_0003/container_1573659389683_0003_01_000002/private_slash_tmp
108869950 0 drwxr-xr-x 3 root root 26 Nov 13 15:48 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573659389683_0003/container_1573659389683_0003_01_000002/private_slash_tmp/hadoop-yarn
8711270 0 drwxr-xr-x 4 root root 40 Nov 13 15:48 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573659389683_0003/container_1573659389683_0003_01_000002/private_slash_tmp/hadoop-yarn/nm-local-dir
38635540 0 drwxr-xr-x 3 root root 24 Nov 13 15:48 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573659389683_0003/container_1573659389683_0003_01_000002/private_slash_tmp/hadoop-yarn/nm-local-dir/usercache
70809098 0 drwxr-xr-x 4 root root 39 Nov 13 15:48 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573659389683_0003/container_1573659389683_0003_01_000002/private_slash_tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser
108869951 0 drwxr-xr-x 3 root root 44 Nov 13 15:48 /tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser/appcache/application_1573659389683_0003/container_1573659389683_0003_01_000002/private_slash_tmp/hadoop-yarn/nm-local-dir/usercache/hadoopuser
```

I haven't tested removing it and am out of time at the moment, but it seems related to the private_slash_tmp dir, as that is what remains.

Eric Badger added a comment - 14/Nov/19 01:22

Patch 015 adds a note into the documentation to not mount anything onto /tmp or /var/tmp. [shanekumpf@gmail.com](#) and I discussed in the docker meeting that this is the cause of the error shown above.

Jim Brennan added a comment - 14/Nov/19 22:41

[ebadger](#) I don't see a patch 015...

Eric Badger added a comment - 14/Nov/19 22:55

Huh...that's weird. Must've been an issue with the upload. Uploaded it again.

Hadoop QA added a comment - 15/Nov/19 01:43

+1 overall


Vote	Subsystem	Runtime	Comment
0	reexec	0m 39s	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 9 new or modified test files.

trunk Compile Tests			
0	mvndep	0m 25s	Maven dependency ordering for branch
+1	mvninstall	20m 57s	trunk passed
+1	compile	18m 12s	trunk passed
+1	checkstyle	2m 51s	trunk passed
+1	mvnsite	3m 19s	trunk passed
+1	shadedclient	19m 58s	branch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	4m 44s	trunk passed
+1	javadoc	2m 50s	trunk passed
Patch Compile Tests			
0	mvndep	1m 4s	Maven dependency ordering for patch
+1	mvninstall	3m 1s	the patch passed
+1	compile	22m 34s	the patch passed
+1	javac	22m 34s	the patch passed
-0	checkstyle	3m 51s	root: The patch generated 23 new + 688 unchanged - 1 fixed = 711 total (was 689)
+1	mvnsite	4m 24s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	xml	0m 3s	The patch has no ill-formed XML file.
+1	shadedclient	15m 10s	patch has no errors when building and testing our client artifacts.
0	findbugs	0m 0s	Skipped patched modules with no Java source: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site
+1	findbugs	5m 54s	the patch passed
+1	javadoc	4m 4s	the patch passed
Other Tests			
+1	unit	0m 32s	hadoop-project in the patch passed.
+1	unit	1m 5s	hadoop-yarn-api in the patch passed.
+1	unit	4m 26s	hadoop-yarn-common in the patch passed.
+1	unit	23m 8s	hadoop-yarn-server-nodemanager in the patch passed.
+1	unit	0m 34s	hadoop-yarn-site in the patch passed.
+1	asflicense	0m 59s	The patch does not generate ASF License warnings.
		162m 43s	


Subsystem	Report/Notes
Docker	Client=19.03.5 Server=19.03.5 Image=yetus/hadoop:104ccca9169
JIRA Issue	YARN-9562
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12985894/YARN-9562.015.patch
Optional Tests	dupname asflicense mvnsite xml compile javac javadoc mvninstall unit shadedclient findbugs checkstyle
uname	Linux 0e07bf513e8f 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 / d0302d3
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_222
findbugs	v3.1.0-RC1
checkstyle	https://builds.apache.org/job/PreCommit-YARN-Build/25173/artifact/out/diff-checkstyle-root.txt
Test Results	https://builds.apache.org/job/PreCommit-YARN-Build/25173/testReport/
Max. process+thread count	307 (vs. ulimit of 5500)
modules	C: hadoop-project hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api hadoop-yarn-project/hadoop-yarn/hadoop-yarn-common hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site U: .

Console output	https://builds.apache.org/job/PreCommit-YARN-Build/25173/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org


This message was automatically generated.

✖  [Craig Condit](#) added a comment - 15/Nov/19 16:45


I'm +1 on this one (non-binding). LGTM.

✖  [Jim Brennan](#) added a comment - 15/Nov/19 16:50

I'm +1 on patch 015 (non-binding)

✖  [Shane Kumpf](#) added a comment - 15/Nov/19 19:06

I retested without the private tmp mount and moving my YARN local dirs out of tmp, both will resolve the issue I previously saw around clean up. +1 from me.

✖  [Eric Badger](#) added a comment - 18/Nov/19 21:59

Thanks to [Jim_Brennan](#), [eyang](#), [ccondit](#), shanekumpf@gmail.com, and [jlowe](#) for the reviews and comments!

I committed this to trunk!

✖  [Hudson](#) added a comment - 18/Nov/19 22:24

SUCCESS: Integrated in Jenkins build Hadoop-trunk-Commit #17659 (See <https://builds.apache.org/job/Hadoop-trunk-Commit/17659/>)
[YARN-9562](#). Add Java changes for the new RuncContainerRuntime. (ebadger: rev 0e22e9ab83438af37d821cb2f96e31f9a19ace2c)

- (add) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/test/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/TestRuncContainerRuntime.java
- (add) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/runc/package-info.java
- (add) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/test/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/TestImageTagToManifestPlugin.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/test/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/TestDockerContainerRuntime.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/runtime/ContainerRuntimeConstants.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/test/java/org/apache/hadoop/yarn/server/nodemanager/TestLinuxContainerExecutor.java
- (add) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/runc/ImageManifest.java
- (add) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/runc/RuncManifestToResourcesPlugin.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/test/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/BaseContainerManagerTest.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/LinuxContainerRuntime.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/LinuxContainerRuntimeConstants.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/OCIContainerRuntime.java
- (add) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/runc/RuncContainerExecutorConfig.java
- (add) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/runc/HdfsManifestToResourcesPlugin.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/container/ContainerImpl.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/DelegatingLinuxContainerRuntime.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/privileged/PrivilegedOperation.java
- (add) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/test/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/TestHdfsManifestToResourcesPlugin.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/DockerLinuxContainerRuntime.java
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/LinuxContainerExecutor.java
- (edit) hadoop-project/src/site/site.xml
- (edit) hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/localizer/ResourceLocalizationService.java

- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-common/src/main/resources/yarn-default.xml`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/volume/csi/ContainerVolumePublisher.java`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/test/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/container/TestContainer.java`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/ContainerManager.java`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/launcher/ContainerCleanup.java`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/ContainerManagerImpl.java`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/container/Container.java`
- (add) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/RuncContainerRuntime.java`
- (add) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/runc/ImageTagToManifestPlugin.java`
- (add) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/linux/runtime/runc/RuncImageTagToManifestPlugin.java`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/NodeManager.java`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/test/java/org/apache/hadoop/yarn/server/nodemanager/webapp/MockContainer.java`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/main/java/org/apache/hadoop/yarn/server/nodemanager/ContainerExecutor.java`
- (add) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-site/src/site/markdown/RuncContainers.md`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-api/src/main/java/org/apache/hadoop/yarn/conf/YarnConfiguration.java`
- (edit) `hadoop-yarn-project/hadoop-yarn/hadoop-yarn-server/hadoop-yarn-server-nodemanager/src/test/java/org/apache/hadoop/yarn/server/nodemanager/containermanager/TestContainerManagerRecovery.java`

▼ People

Assignee:

 Eric Badger

Reporter:

 Eric Badger

Votes:

 Vote for this issue

Watchers:

 8 Start watching this issue

▼ Dates

Created:

16/May/19 16:28

Updated:

18/Nov/19 22:24

Resolved:

18/Nov/19 22:00