git_comments:

- 1. after setting the xAttr on the file, the value should be retrievable
- 2. after creating a file, the xAttr should not be present
- 3. after creating a file, it must be possible to create a new xAttr
- 4. * * Test attribute operations.
- 5. after creating a file, it must not be possible to replace an xAttr
- 6. after setting a second xAttr on the file, the first xAttr values should not be overwritten
- 7. however after the xAttr is created, replacing it must succeed
- 8. * * Licensed to the Apache Software Foundation (ASF) under one * or more contributor license agreements. See the NOTICE file * distributed with this work for additional information * regarding copyright ownership. The ASF licenses this file * to you under the Apache License, Version 2.0 (the * "License"); you may not use this file except in compliance * with the License. You may obtain a copy of the License at * * http://www.apache.org/licenses/LICENSE-2.0 * * Unless required by applicable law or agreed to in writing, software * distributed under the License is distributed on an "AS IS" BASIS, * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. * See the License for the specific language governing permissions and * limitations under the License.
- 9. however after the xAttr is created, creating it again must fail
- 10. We have to URL encode the attribute as it could
- 11. Attribute names must be valid C# identifiers so we have to convert the namespace dots (e.g. "user.something") in the attribute names. Using underscores here to be consistent with the constant metadata keys defined earlier in the file
- 12. ** Get the value of an attribute for a path. ** @param path The path on which to get the attribute *
 @param xAttrName The attribute to get * @return The bytes of the attribute's value (encoded in utf-8) *
 or null if the attribute does not exist * @throws IOException If there was an issue getting the attribute
 from Azure
- 13. * * Set the value of an attribute for a path. * * @param path The path on which to set the attribute * @param xAttrName The attribute to set * @param value The byte value of the attribute to set (encoded in utf-8) * @param flag The mode in which to set the attribute * @throws IOException If there was an issue setting the attribute on Azure
- 14. * * Check for the stream being open. * @throws IOException if the stream is closed.
- 15. * * Get the value of an attribute for a path. * * @param path The path on which to get the attribute * @param name The attribute to get * @return The bytes of the attribute's value (encoded in latin-1) * or null if the attribute does not exist * @throws IOException If there was an issue getting the attribute from Azure * @throws IllegalArgumentException If name is null or empty
- 16. * * Set the value of an attribute for a path. * * @param path The path on which to set the attribute * @param name The attribute to set * @param value The byte value of the attribute to set (encoded in latin-1) * @param flag The mode in which to set the attribute * @throws IOException If there was an issue setting the attribute on Azure * @throws IllegalArgumentException If name is null or empty or if value is null
- 17. to avoid HTTP 400 Bad Request, InvalidPropertyName
- 18. Problems surface in try-with-resources clauses if the exception thrown in a close == the one already thrown -so we wrap any exception with a new one. See HADOOP-16785
- 19. * * Attempts to write to the azure stream after it is closed will raise * an IOException.
- 20. after setting the xAttr on the file, the value should be retrievable
- 21. after creating a file, it must be possible to create a new xAttr
- 22. after creating a file, the xAttr should not be present
- 23. after creating a file, it must not be possible to replace an xAttr
- 24. after setting a second xAttr on the file, the first xAttr values should not be overwritten
- 25. however after the xAttr is created, replacing it must succeed
- 26. however after the xAttr is created, creating it again must fail
- 27. hsync is not ignored on a closed stream out.hsync();
- 28. * * Attempts to use to the ABFS stream after it is closed.
- 29. * * Attempts to double close an ABFS output stream from within a * FilterOutputStream. * That class handles a double failure on close badly if the second * exception rethrows the first.
- 30. this will cause the next write to failAll
- 31. * * Attempts to write to the azure stream after it is closed will raise * an IOException.

- 32. trigger the first failure
- 33. the exception raised in close() must be in the caught exception's suppressed list

git_commits:

1. **summary:** HADOOP-17336. Backport HADOOP-16005 NativeAzureFileSystem does not support setXAttr and HADOOP-16785. Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix to branch-2.10. Contributed by Sally Zuo.

message: HADOOP-17336. Backport HADOOP-16005 NativeAzureFileSystem does not support setXAttr and HADOOP-16785. Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix to branch-2.10. Contributed by Sally Zuo.

| github_issues: |
|-------------------------|
| github_issues_comments: |
| github_pulls: |
| github_pulls_comments: |
| github_pulls_reviews: |
| jira_issues: |

1. **summary:** Backport HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" and HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." to branch-2.10

description: Backport: HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" to branch-2.10 HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." from branch-3.2 to branch-2.10

2. **summary:** Backport HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" and HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." to branch-2.10

description: Backport: HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" to branch-2.10 HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." from branch-3.2 to branch-2.10

3. **summary:** Backport HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" and HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." to branch-2.10

description: Backport: HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" to branch-2.10 HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." from branch-3.2 to branch-2.10

4. **summary:** Backport HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" and HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." to branch-2.10

description: Backport: HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" to branch-2.10 HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." from branch-3.2 to branch-2.10

label: code-design

5. **summary:** Backport HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" and HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." to branch-2.10

description: Backport: HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" to branch-2.10 HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." from branch-3.2 to branch-2.10

6. **summary:** Backport HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" and HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." to branch-2.10

description: Backport: HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" to branch-2.10 HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs

- close() fix." from branch-3.2 to branch-2.10
- 7. **summary:** Backport HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" and HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." to branch-2.10
 - **description:** Backport: HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" to branch-2.10 HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." from branch-3.2 to branch-2.10
- 8. **summary:** Backport HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" and HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." to branch-2.10
 - **description:** Backport: HADOOP-16005-"NativeAzureFileSystem does not support setXAttr" to branch-2.10 HADOOP-16785. "Improve wasb and abfs resilience on double close() calls. followup to abfs close() fix." from branch-3.2 to branch-2.10

jira_issues_comments:

1. $|(x) *\{color:red\}-1 \text{ overall}\{color}*| \setminus \setminus \| \text{ Vote } \| \text{ Subsystem } \| \text{ Runtime } \| \text{ Logfile } \| \text{ Comment } \| \|$ {color:blue}0{color} | {color:blue} reexec {color} | {color:blue} 17m 12s{color} | | {color:blue} Docker mode activated. {color} | | | | | | | {color:brown} Prechecks {color} | | | | | {color:green} + 1{color} | {color:green} dupname {color} | {color:green} 0m 1s{color} | | {color:green} No case conflicting files found. {color} | | {color:green} +1{color} | {color:green} @author {color} | {color:green} 0m 0s{color} | | {color:green} The patch does not contain any @author tags. {color} || {color:green}+1{color} | {color:green} test4tests {color} | {color:green} 0m 0s{color} | | {color:green} The patch appears to include 6 new or modified test files. {color} | || || || || {color:brown} branch-2.10 Compile Tests {color} || || | {color:blue}0{color} | {color:blue} mvndep {color} | {color:blue} 2m 52s{color} | | {color:blue} Maven dependency ordering for branch {color} || {color:green}+1{color} | {color:green} mvninstall {color} | {color:green} 13m 47s{color} | | {color:green} branch-2.10 passed {color} | | {color:green}+1{color} | {color:green} compile {color} | {color:green} 13m 41s{color} | | {color:green} branch-2.10 passed with JDK Oracle Corporation-1.7.0_95-b00 {color} | | {color:green}+1{color} | {color:green} compile {color} | {color:green} 11m 14s{color} | | {color:green} branch-2.10 passed with JDK Private Build-1.8.0_272-8u272-b10-0ubuntu1~16.04-b10 {color} | | {color:green}+1{color} | {color:green} checkstyle {color} | {color:green} 1m 56s{color} || {color:green} branch-2.10 passed {color} | | {color:green} +1{color} | {color:green} mvnsite {color} | {color:green} 1m 54s{color} | | {color:green} branch-2.10 passed {color} || {color:green}+1{color} | {color:green} javadoc {color} | {color:green} 1m 43s{color} || {color:green} branch-2.10 passed with JDK Oracle Corporation-1.7.0_95-b00 {color} | | {color:green}+1{color} | {color:green} javadoc {color} | {color:green} 1m 25s{color} | | {color:green} branch-2.10 passed with JDK Private Build-1.8.0_272-8u272-b10-Oubuntu1~16.04-b10 {color} || {color:blue} 0{color} | {color:blue} spotbugs {color} | {color:blue} 0m 56s{color} | | {color:blue} Used deprecated FindBugs config; considering switching to SpotBugs. {color} || {color:green}+1{color} | {color:green} findbugs {color} | {color:green} 2m 54s{color} || {color:green} branch-2.10 passed {color} | || || || || {color:brown} Patch Compile Tests {color} || || || {color:blue}0{color} | {color:blue} mvndep {color} | {color:blue} 0m 18s{color} | | {color:blue} Maven dependency ordering for patch {color} || {color:green}+1{color} | {color:green} mvninstall {color} | {color:green} 1m 12s{color} || {color:green} the patch passed {color} || {color:green}+1{color} | {color:green} compile {color} | {color:green} 13m 5s{color} | | {color:green} the patch passed with JDK Oracle Corporation-1.7.0_95-b00 {color} || {color:green}+1{color} | {color:green} javac {color} | {color:green} 13m 5s{color} || {color:green} the patch passed {color} || {color:green}+1{color} | {color:green} compile {color} | {color:green} 11m 12s{color} | | {color:green} the patch passed with JDK Private Build-1.8.0_272-8u272-b10-0ubuntu1~16.04-b10 {color} | | {color:green}+1{color} | {color:green} javac {color} | {color:green} 11m 12s{color} || {color:green} the patch passed {color} || {color:green}+1{color} | {color:green} blanks {color} | {color:green} 0m 0s{color} | | {color:green} The patch has no blanks issues. {color} || {color:orange}-0{color} | {color:orange} checkstyle {color} | {color:orange} 1m 55s{color} | [/results-checkstyle-root.txt|https://ci-hadoop.apache.org/job/PreCommit-HADOOP-Build/106/artifact/out/results-checkstyle-root.txt] | {color:orange} root: The patch generated 4 new + 94 unchanged - 0 fixed = 98 total (was 94) {color} || {color:green}+1{color} | {color:green} mvnsite {color} | {color:green} 1m 52s{color} | | {color:green} the patch passed {color} | | {color:green}+1{color} | {color:green} javadoc {color} | {color:green} 1m 40s{color} || {color:green} the patch passed with JDK Oracle Corporation-1.7.0_95-b00 {color} | | {color:green}+1{color} | {color:green} javadoc {color} | {color:green} 1m 24s{color} | | {color:green} the patch passed with JDK

```
{color:green} findbugs {color} | {color:green} 3m 9s{color} | | {color:green} the patch passed {color} | ||
|| || || {color:brown} Other Tests {color} || || || {color:red}-1{color} || {color:red} unit {color} || {color:red}
9m 37s{color} | [/patch-unit-hadoop-common-project_hadoop-common.txt|https://ci-
hadoop.apache.org/job/PreCommit-HADOOP-Build/106/artifact/out/patch-unit-hadoop-common-
project_hadoop-common.txt] | {color:red} hadoop-common in the patch failed. {color} | |
{color:green}+1{color} | {color:green} unit {color} | {color:green} 1m 21s{color} | {color:green}
hadoop-azure in the patch passed. {color} | {color:green}+1{color} | {color:green} asflicense {color} |
{color:green} 0m 45s{color} | | {color:green} The patch does not generate ASF License warnings.
{color} | | {color:black} {color} | {color:black} 121m 12s{color} | | {color:black}
{color} | \\ \\ | Reason | Tests || | Failed junit tests | hadoop.security.TestLdapGroupsMapping | | |
hadoop.log.TestLogLevel | \\ \\ | Subsystem || Report/Notes || | Docker | ClientAPI=1.40 ServerAPI=1.40
base: https://ci-hadoop.apache.org/job/PreCommit-HADOOP-Build/106/artifact/out/Dockerfile | | JIRA
Issue | HADOOP-17336 | | JIRA Patch URL |
https://issues.apache.org/jira/secure/attachment/13014306/Hadoop-17336-branch-2.10.001.patch | |
Optional Tests | dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs
checkstyle | | uname | Linux 0e969365977e 4.15.0-112-generic #113-Ubuntu SMP Thu Jul 9 23:41:39
UTC 2020 x86_64 x86_64 x86_64 GNU/Linux | | Build tool | maven | | Personality |
personality/hadoop.sh | | git revision | branch-2.10 / 6f436a67766f8e25022b76b228941a69e94c1cc3 | |
Default Java | Private Build-1.8.0_272-8u272-b10-0ubuntu1~16.04-b10 | | Multi-JDK versions |
/usr/lib/jvm/java-7-openjdk-amd64:Oracle Corporation-1.7.0_95-b00 /usr/lib/jvm/java-8-openjdk-
amd64:Private Build-1.8.0_272-8u272-b10-0ubuntu1~16.04-b10 | | Test Results | https://ci-
hadoop.apache.org/job/PreCommit-HADOOP-Build/106/testReport/ | | Max. process+thread count | 1414
(vs. ulimit of 5500) | | modules | C: hadoop-common-project/hadoop-common hadoop-tools/hadoop-azure
U: . | | Console output | https://ci-hadoop.apache.org/job/PreCommit-HADOOP-Build/106/console | |
versions | git=2.7.4 maven=3.3.9 findbugs=3.0.1 | | Powered by | Apache Yetus 0.14.0-SNAPSHOT
https://yetus.apache.org | This message was automatically generated.
```

Private Build-1.8.0_272-8u272-b10-0ubuntu1~16.04-b10 {color} || {color:green}+1{color} |

2. The two failing tests seem to be unrelated to this patch. All hadoop-azure test passed.

```
3. | (x) *{color:red}-1 overall{color}* | \\ \\ || Vote || Subsystem || Runtime || Logfile || Comment || |
    {color:blue}0{color} | {color:blue} reexec {color} | {color:blue} 1m 35s{color} | | {color:blue} Docker
    mode activated. {color} | | | | | | | | {color:brown} Prechecks {color} | | | | | {color:green} + 1{color}
    {color:green} dupname {color} | {color:green} 0m 0s{color} | | {color:green} No case conflicting files
    found. {color} | | {color:green} +1{color} | {color:green} @author {color} | {color:green} 0m 0s{color} |
    | {color:green} The patch does not contain any @author tags. {color} || {color:green}+1{color} |
     \{color: green\} \ test 4 tests \ \{color\} \ | \ \{color: green\} \ 0 m \ 0 s \{color\} \ | \ | \ \{color: green\} \ The \ patch \ appears \ to \ patch \ pa
    include 6 new or modified test files. {color} | || || || || {color:brown} branch-2.10 Compile Tests {color} || ||
    | {color:blue}0{color} | {color:blue} mvndep {color} | {color:blue} 0m 56s{color} | | {color:blue}
    Maven dependency ordering for branch {color} || {color:green}+1{color} | {color:green} mvninstall
    {color} | {color:green} 9m 44s{color} | | {color:green} branch-2.10 passed {color} | |
    {color:green}+1{color} | {color:green} compile {color} | {color:green} 13m 44s{color} | | {color:green}
    branch-2.10 passed with JDK Oracle Corporation-1.7.0_95-b00 {color} | | {color:green}+1{color} |
    {color:green} compile {color} | {color:green} 11m 16s{color} | | {color:green} branch-2.10 passed with
    JDK Private Build-1.8.0_272-8u272-b10-0ubuntu1~16.04-b10 {color} || {color:green}+1{color} |
    {color:green} checkstyle {color} | {color:green} 1m 54s{color} | | {color:green} branch-2.10 passed
    {color} | | {color:green} +1{color} | {color:green} mvnsite {color} | {color:green} 1m 50s{color} |
    {color:green} branch-2.10 passed {color} || {color:green}+1{color} | {color:green} javadoc {color} |
    {color:green} 1m 40s{color} | | {color:green} branch-2.10 passed with JDK Oracle Corporation-
    1.7.0_95-b00 {color} | | {color:green}+1{color} | {color:green} javadoc {color} | {color:green} 1m
    24s{color} | | {color:green} branch-2.10 passed with JDK Private Build-1.8.0_272-8u272-b10-
    Oubuntu1~16.04-b10 {color} || {color:blue} 0{color} | {color:blue} spotbugs {color} | {color:blue} 0m
    55s{color} | | {color:blue} Used deprecated FindBugs config; considering switching to SpotBugs. {color}
    || {color:green}+1{color} | {color:green} findbugs {color} | {color:green} 2m 53s{color} ||
    {color:green} branch-2.10 passed {color} | || || || || {color:brown} Patch Compile Tests {color} || || ||
    {color:blue}0{color} | {color:blue} mvndep {color} | {color:blue} 0m 16s{color} | | {color:blue} Maven
    dependency ordering for patch {color} | | {color:green}+1{color} | {color:green} mvninstall {color} |
    {color:green} 1m 9s{color} || {color:green} the patch passed {color} || {color:green}+1{color} |
    {color:green} compile {color} | {color:green} 13m 5s{color} | | {color:green} the patch passed with JDK
    Oracle Corporation-1.7.0_95-b00 {color} || {color:green}+1{color} | {color:green} javac {color} |
    {color:green} 13m 6s{color} || {color:green} the patch passed {color} || {color:green}+1{color} |
```

{color:green} compile {color} | {color:green} 11m 9s{color} | | {color:green} the patch passed with JDK Private Build-1.8.0_272-8u272-b10-0ubuntu1~16.04-b10 {color} | | {color:green}+1{color} | {color:green} javac {color} | {color:green} 11m 9s{color} | | {color:green} the patch passed {color} | | {color:green}+1{color} | {color:green} blanks {color} | {color:green} 0m 0s{color} | | {color:green} The patch has no blanks issues. {color} || {color:green}+1{color} | {color:green} checkstyle {color} | {color:green} 1m 54s{color} || {color:green} the patch passed {color} || {color:green}+1{color} | {color:green} mvnsite {color} | {color:green} 1m 50s{color} | | {color:green} the patch passed {color} | | {color:green}+1{color} | {color:green} javadoc {color} | {color:green} 1m 41s{color} | | {color:green} the patch passed with JDK Oracle Corporation-1.7.0_95-b00 {color} | | {color:green}+1{color} | {color:green} javadoc {color} | {color:green} 1m 27s{color} | | {color:green} the patch passed with JDK Private Build-1.8.0_272-8u272-b10-0ubuntu1~16.04-b10 {color} | | {color:green}+1{color} | {color:green} findbugs {color} | {color:green} 3m 8s{color} | | {color:green} the patch passed {color} | || || || || {color:brown} Other Tests {color} || || || {color:red}-1{color} || {color:red} unit {color} || {color:red} 9m 36s{color} | [/patch-unit-hadoop-common-project_hadoop-common.txt|https://cihadoop.apache.org/job/PreCommit-HADOOP-Build/107/artifact/out/patch-unit-hadoop-commonproject_hadoop-common.txt] | {color:red} hadoop-common in the patch failed. {color} | | {color:green}+1{color} | {color:green} unit {color} | {color:green} 1m 22s{color} | | {color:green} hadoop-azure in the patch passed. {color} | {color:green}+1{color} | {color:green} asflicense {color} | {color:green} 0m 43s{color} | | {color:green} The patch does not generate ASF License warnings. {color} | | {color:black} {color} | {color:black} {color} | {color:black} 99m 21s{color} | | {color:black} {color} | \\ \\ | Reason || Tests || | Failed junit tests | hadoop.security.TestLdapGroupsMapping | | | hadoop.log.TestLogLevel | \\ \\ || Subsystem || Report/Notes || | Docker | ClientAPI=1.40 ServerAPI=1.40 base: https://ci-hadoop.apache.org/job/PreCommit-HADOOP-Build/107/artifact/out/Dockerfile | | JIRA Issue | HADOOP-17336 | | JIRA Patch URL | https://issues.apache.org/jira/secure/attachment/13014389/Hadoop-17336-branch-2.10.002.patch | | Optional Tests | dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle | | uname | Linux 2a211c6ed129 4.15.0-112-generic #113-Ubuntu SMP Thu Jul 9 23:41:39 UTC 2020 x86_64 x86_64 x86_64 GNU/Linux | | Build tool | maven | | Personality | personality/hadoop.sh | | git revision | branch-2.10 / 6f436a67766f8e25022b76b228941a69e94c1cc3 | | Default Java | Private Build-1.8.0_272-8u272-b10-0ubuntu1~16.04-b10 | | Multi-JDK versions | /usr/lib/jvm/java-7-openjdk-amd64:Oracle Corporation-1.7.0_95-b00 /usr/lib/jvm/java-8-openjdkamd64:Private Build-1.8.0_272-8u272-b10-0ubuntu1~16.04-b10 | | Test Results | https://cihadoop.apache.org/job/PreCommit-HADOOP-Build/107/testReport/ | | Max. process+thread count | 1516 (vs. ulimit of 5500) | | modules | C: hadoop-common-project/hadoop-common hadoop-tools/hadoop-azure U: . | | Console output | https://ci-hadoop.apache.org/job/PreCommit-HADOOP-Build/107/console | | versions | git=2.7.4 maven=3.3.9 findbugs=3.0.1 | | Powered by | Apache Yetus 0.14.0-SNAPSHOT https://yetus.apache.org | This message was automatically generated.

4. **body:** The new patch removed the errors from checkstyle.

label: code-design

- 5. +1 the backport looks good to me.
- 6. I have committed v002 patch to branch-2.10. Thanks [~salsally] for the contribution and [~shv] for the review!