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Hadoop Common / HADOOP-15681

# AuthenticationFilter should generate valid date format for Set-Cookie header regardless of default Locale

#### Details

Type: □ Bug Status: RESOLVED

Priority: ♥ Minor Resolution: Fixed

Affects Version/s: 3.2.0 Fix Version/s: 3.3.0, 3.2.1, 3.1.3

Component/s: security
Labels: None

## Description

Hi guys,

When I try to set up Hadoop Kerberos authentication for Solr (HTTP2), I met this exception:

```
java.lang.IllegalArgumentException: null
                   at org.eclipse.jetty.http2.hpack.Huffman.octetsNeeded(Huffman.java:435) ~[http2-hpack-
9.4.11.v20180605.jar:9.4.11.v201806051
                   at org.eclipse.jetty.http2.hpack.Huffman.octetsNeeded(Huffman.java:409) ~[http2-hpack-
9.4.11.v20180605.jar:9.4.11.v20180605]
                   at org.eclipse.jetty.http2.hpack.HpackEncoder.encodeValue(HpackEncoder.java:368) ~[http2-hpack-
9.4.11.v20180605.jar:9.4.11.v201806051
                  at org.eclipse.jetty.http2.hpack.HpackEncoder.encode(HpackEncoder.java:302) ~[http2-hpack-
9.4.11.v20180605.jar:9.4.11.v20180605]
                  at org.eclipse.jetty.http2.hpack.HpackEncoder.encode(HpackEncoder.java:179) ~[http2-hpack-
9.4.11.v20180605.jar:9.4.11.v20180605]
                  \verb|at org.eclipse.jetty.http2.generator.HeadersGenerator.generateHeaders(HeadersGenerator.java:72)| \sim \texttt{[http2-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-common-commo-common-common-common-common-common-common-common-common-common-common-common-commo-commo-commo-commo-commo-commo-commo-commo-commo-commo-commo-commo-commo-commo-commo-commo-commo-commo-commo-c
9.4.11.v20180605.jar:9.4.11.v201806051
                   at org.eclipse.jetty.http2.generator.HeadersGenerator.generate(HeadersGenerator.java:56) ~[http2-common-
9.4.11.v20180605.jar:9.4.11.v201806051
                   at org.eclipse.jetty.http2.generator.Generator.control(Generator.java:80) ~[http2-common-
9.4.11.v20180605.jar:9.4.11.v20180605]
                   at org.eclipse.jetty.http2.HTTP2Session$ControlEntry.generate(HTTP2Session.java:1163) ~[http2-common-
9.4.11.v20180605.jar:9.4.11.v201806051
                  at org.eclipse.jetty.http2.HTTP2Flusher.process(HTTP2Flusher.java:184) ~[http2-common-
9.4.11.v20180605.jar:9.4.11.v20180605]
                  at org.eclipse.jetty.util.IteratingCallback.processing(IteratingCallback.java:241) ~[jetty-util-
```

This error comes from Jetty Hpack when it tries to compress this header

```
Set-Cookie: hadoop.auth=; Path=/; Domain=127.0.0.1; Expires=Déar, 01-Ean-1970 00:00:00 GMT; HttpOnly
```

Déar mean Thursday in Ireland and Jetty Hpack can't encode Unicode character. That header is generated by org.apache.hadoop.security.authentication.server.AuthenticationFilter.createAuthCookie()

I posted this problem to the Jetty community and Greg said that (https://github.com/eclipse/jetty.project/issues/2815)

I'm pretty sure that unicode characters are not legal for HTTP field values, as RFC7230 says:

Historically, HTTP has allowed field content with text in the ISO-8859-1 charset [ISO-8859-1], supporting other charsets only through use of [RFC2047] encoding. In practice, most HTTP header field values use only a subset of the US-ASCII charset [USASCII]. Newly defined header fields SHOULD limit their field values to US-ASCII octets. A recipient SHOULD treat other octets in field content (obs-text) as opaque data.

So I don't think that header is legal... but it should not fail in hpack, whose RFC says it should treat fields as opaque octets!

Therefore I think preventing Unicode character generated from AuthenticationFilter should be a good idea.



■ HADOOP-15681.patch

1.0 kB

20/Aug/18 08:21

### Issue Links

#### relates to

HADOOP-14115 SimpleDateFormatter's are construted w/default Locale, causing malformed dates on som... 🔶 OPEN

## Activity

Cao Manh Dat added a comment - 20/Aug/18 08:24

After digging deeper into RFC specification, it seems that the valid date locale format we should use for "Expires" in "Set-Cookie" header is Locale.US. See: https://tools.ietf.org/html/rfc7231#section-7.1.1.1

Therefore the changes in the patch are sufficient for fixing the problem.

Cao Manh Dat added a comment - 24/Aug/18 12:40

I think the patch is ready to commit. Any other ideas?

Cao Manh Dat added a comment - 03/Sep/18 03:30

Any objection for not commit this?

Cao Manh Dat added a comment - 14/Sep/18 02:35

Any guys here would like to handle this?

Steve Loughran added a comment - 13/Nov/18 10:10

just hit the submit button to see what jenkins says

O Hadoop QA added a comment - 13/Nov/18 11:49

-1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 22s	Docker mode activated.
			Prechecks
+1	@author	0m 0s	The patch does not contain any @author tags.
-1	test4tests	0m 0s	The patch doesn't appear to include any new or modified tests. Please justify why no new tests are needed for this patch. Also please list what manual steps were performed to verify this patch.
			trunk Compile Tests
+1	mvninstall	22m 8s	trunk passed
+1	compile	16m 37s	trunk passed
+1	checkstyle	0m 25s	trunk passed
+1	mvnsite	0m 36s	trunk passed
+1	shadedclient	13m 11s	branch has no errors when building and testing our client artifacts.
+1	findbugs	0m 40s	trunk passed
+1	javadoc	0m 28s	trunk passed
			Patch Compile Tests
+1	mvninstall	0m 25s	the patch passed
+1	compile	15m 8s	the patch passed

+1	javac	15m 8s	the patch passed
+1	checkstyle	0m 25s	the patch passed
+1	mvnsite	0m 34s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shadedclient	12m 9s	patch has no errors when building and testing our client artifacts.
+1	findbugs	0m 50s	the patch passed
+1	javadoc	0m 26s	the patch passed
			Other Tests
+1	unit	3m 13s	hadoop-auth in the patch passed.
+1	asflicense	0m 41s	The patch does not generate ASF License warnings.
		89m 12s	

Subsystem	Report/Notes
Docker	Client=17.05.0-ce Server=17.05.0-ce Image:yetus/hadoop:8f97d6f
JIRA Issue	HADOOP-15681
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12936239/HADOOP-15681.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux 5e7cf1396bb7 3.13.0-144-generic #193-Ubuntu SMP Thu Mar 15 17:03:53 UTC 2018 x86_64 x86_64 x86_64 GNU/Linux
Build tool	maven
Personality	/testptch/patchprocess/precommit/personality/provided.sh
git revision	trunk / e7b63ba
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_181
findbugs	v3.1.0-RC1
Test Results	https://builds.apache.org/job/PreCommit-HADOOP-Build/15510/testReport/
Max. process+thread count	339 (vs. ulimit of 10000)
modules	C: hadoop-common-project/hadoop-auth U: hadoop-common-project/hadoop-auth
Console output	https://builds.apache.org/job/PreCommit-HADOOP-Build/15510/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

▼ ○ Wei-Chiu Chuang added a comment - 31/Jul/19 21:30

Looks like a good fix. stevel@apache.org if you have no objection I'll +1 and commit this one.

➤ ○ Hadoop QA added a comment - 31/Jul/19 23:28

-1 overall

Vote	Subsystem	Runtime	Comment
0	reexec	0m 20s	Docker mode activated.
			Prechecks
+1	@author	0m 0s	The patch does not contain any @author tags.
-1	test4tests	0m 0s	The patch doesn't appear to include any new or modified tests. Please justify why no new tests are needed for this patch. Also please list what manual steps were performed to verify this patch.

7 1 1 1 1 1	[11711	7001 1000	Tyrutioniteation net should generate valid date format for set-cookie header regardless of default blocate - AST SHAP
			trunk Compile Tests
+1	mvninstall	26m 13s	trunk passed
+1	compile	18m 13s	trunk passed
+1	checkstyle	0m 24s	trunk passed
+1	mvnsite	0m 35s	trunk passed
+1	shadedclient	11m 46s	branch has no errors when building and testing our client artifacts.
+1	findbugs	0m 48s	trunk passed
+1	javadoc	0m 30s	trunk passed
			Patch Compile Tests
+1	mvninstall	0m 23s	the patch passed
+1	compile	17m 58s	the patch passed
+1	javac	17m 58s	the patch passed
+1	checkstyle	0m 21s	the patch passed
+1	mvnsite	0m 35s	the patch passed
+1	whitespace	0m 0s	The patch has no whitespace issues.
+1	shadedclient	10m 38s	patch has no errors when building and testing our client artifacts.
+1	findbugs	0m 45s	the patch passed
+1	javadoc	0m 24s	the patch passed
			Other Tests
+1	unit	3m 2s	hadoop-auth in the patch passed.
+1	asflicense	0m 44s	The patch does not generate ASF License warnings.
		94m 35s	

Subsystem	Report/Notes
Docker	Client=19.03.1 Server=19.03.1 Image:yetus/hadoop:bdbca0e
JIRA Issue	HADOOP-15681
JIRA Patch URL	https://issues.apache.org/jira/secure/attachment/12936239/HADOOP-15681.patch
Optional Tests	dupname asflicense compile javac javadoc mvninstall mvnsite unit shadedclient findbugs checkstyle
uname	Linux 64ff11398e41 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 / b008072
maven	version: Apache Maven 3.3.9
Default Java	1.8.0_212
findbugs	v3.1.0-RC1
Test Results	https://builds.apache.org/job/PreCommit-HADOOP-Build/16440/testReport/
Max. process+thread count	413 (vs. ulimit of 10000)
modules	C: hadoop-common-project/hadoop-auth U: hadoop-common-project/hadoop-auth
Console output	https://builds.apache.org/job/PreCommit-HADOOP-Build/16440/console
Powered by	Apache Yetus 0.8.0 http://yetus.apache.org

This message was automatically generated.

<sup>▼ ○</sup> Wei-Chiu Chuang added a comment - 02/Aug/19 00:36

Pushed to trunk. Thanks caomanhdat and stevel@apache.org.

▼ ○ Wei-Chiu Chuang added a comment - 02/Aug/19 00:37

and branch-3.2 branch-3.1 too.

O Hudson added a comment - 02/Aug/19 05:58

FAILURE: Integrated in Jenkins build Hadoop-trunk-Commit #17022 (See https://builds.apache.org/job/Hadoop-trunk-Commit/17022/)

HADOOP-15681. AuthenticationFilter should generate valid date format for (weichiu: rev e20b19543ba148cf0242884a3e553ad2f39421b3)

- (edit) hadoop-common-project/hadoopauth/src/main/java/org/apache/hadoop/security/authentication/server/AuthenticationFilter.java
- Kevin Risden added a comment 01/Dec/20 14:08

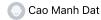
HADOOP-14115 might be related/duplicate/resolved because of this ticket.

### People

Assignee:



Reporter:



Votes:

Vote for this issue

Watchers:

8 Start watching this issue

## Dates

Created:

16/Aug/18 14:05

Updated:

01/Dec/20 14:08

Resolved:

02/Aug/19 00:36