

Infrastructure - Bug #2934

Time is always 00:00:00 in replicaVerified

2012-06-14 15:32 - Dave Vieglaiss

Status:	Closed	Start date:	2012-06-14
Priority:	Normal	Due date:	2012-10-27
Assignee:	Chris Jones	% Done:	100%
Category:	Metacat	Estimated time:	0.00 hour
Target version:	Sprint-2012.41-Block.6.1	Story Points:	
Milestone:	CCI-1.1		
Product Version:	*		
Description			
The replicaVerified entry in system metadata always has the time portion zeroed out. e.g.			
https://cn.dataone.org/cn/v1/meta/doi%3A10.5063%2FAA%2Fdpennington.159.5			
urn:node:KNB			
completed			
2012-06-14T00:00:00.000+00:00			
urn:node:CN			
completed			
2012-06-14T00:00:00.000+00:00			

History

#1 - 2012-06-15 16:26 - Robert Waltz

Synchronization code is thus:

`@@cnReplica.setReplicaVerified(new Date());`

which should add in the full date/time.

the code is the same for both Data and SciData records

you will notice that on <https://cn-orc-1.dataone.org/cn/v1/meta/doi:10.5063/AA/doc.1190394793078.1>
the timestamp is 0'ed out
note: this record is SCI METADATA inserted with 'CNCore.create' call

while on <https://cn.dataone.org/cn/v1/meta/doi:10.5063/AA/nceasadmin.814.1>
the timestamp is accurate
note: record is SCI DATA inserted with 'CNCore.registerSystemMetadata' call

So, I do not see this as a trivial fix in synchronization

#2 - 2012-06-15 16:49 - Robert Waltz

- Milestone changed from CCI-1.0.1 to CCI-1.0.2

#3 - 2012-06-15 16:50 - Robert Waltz

- Target version changed from Sprint-2012.23-Block.3.4 to Sprint-2012.25-Block.4.1

#4 - 2012-06-20 16:42 - Robert Waltz

- Priority changed from High to Normal

#5 - 2012-07-02 21:41 - Robert Waltz

- Milestone changed from CCI-1.0.2 to CCI-1.0.3

#6 - 2012-07-03 01:56 - Robert Waltz

- Target version changed from Sprint-2012.25-Block.4.1 to Sprint-2012.27-Block.4.2

#7 - 2012-07-03 02:42 - Robert Waltz

- Position set to 1

- Position changed from 1 to 474

- Target version changed from Sprint-2012.27-Block.4.2 to Sprint-2012.29-Block.4.3

#8 - 2012-07-31 00:28 - Dave Vieglais

- Milestone changed from CCI-1.0.3 to CCI-1.0.4

#9 - 2012-08-15 16:28 - Robert Waltz

- Target version changed from Sprint-2012.29-Block.4.3 to Sprint-2012.33-Block.5.1

#10 - 2012-08-29 17:56 - Robert Waltz

- Milestone changed from CCI-1.0.4 to CCI-1.0.5

- Target version changed from Sprint-2012.33-Block.5.1 to Sprint-2012.37-Block.5.3

#11 - 2012-08-31 03:31 - Chris Jones

In Metacat we use Calendar.getTime() in order to get a full timestamp as a Date object. Perhaps try that in d1_synchronization.

#12 - 2012-08-31 03:57 - Chris Jones

- Position set to 1

- Position changed from 1 to 488

- Target version changed from Sprint-2012.37-Block.5.3 to Sprint-2012.35-Block.5.2

- Position deleted (480)

#13 - 2012-09-18 15:46 - Robert Waltz

- Target version changed from Sprint-2012.35-Block.5.2 to Sprint-2012.39-Block.5.4

- Position deleted (487)

- Position set to 2

#14 - 2012-09-26 16:55 - Robert Waltz

- Milestone changed from CCI-1.0.5 to CCI-1.1

#15 - 2012-10-08 16:49 - Robert Waltz

- Target version changed from Sprint-2012.39-Block.5.4 to Sprint-2012.41-Block.6.1

- Due date set to 2012-10-27

- translation missing: en.field_remaining_hours set to 0.0

#16 - 2012-10-09 00:10 - Chris Jones

I've searched through the Metacat codebase and d1_replication, and both are calling `Replica.setReplicaVerified(Calendar.getInstance.getTime());` It looks like `d1_synchronization TransferObjectTask.processSystemMetadata()` and `TransferObjectTask.updateSystemMetadata()` are calling `Replica.setReplicaVerified(new Date())`, which is likely where the problem lies.

#17 - 2012-10-10 17:10 - Robert Waltz

- Category changed from `d1_synchronization` to `Metacat`

I ran a test outside of `d1_synchronization` using `d1_libclient_java create` and then retrieving the `systemMetadata` afterwards. Below is the output of the tests. You will notice that the replica verified date when sent across the wire to `cn-dev-orc-1` has a timestamp; however upon retrieval- it is missing.

```
[DEBUG] 2012-10-10 16:35:25,489 (DefaultClientConnection:sendRequestHeader:268) >> POST /cn/v1/object HTTP/1.1
[DEBUG] 2012-10-10 16:35:25,489 (DefaultClientConnection:sendRequestHeader:271) >> Accept: text/xml
[DEBUG] 2012-10-10 16:35:25,489 (DefaultClientConnection:sendRequestHeader:271) >> Content-Length: 36307
[DEBUG] 2012-10-10 16:35:25,489 (DefaultClientConnection:sendRequestHeader:271) >> Content-Type: multipart/form-data;
boundary=tmarOmLoDz_fb0-VBGZXQP24VDA829n4jjfcEjMC
[DEBUG] 2012-10-10 16:35:25,489 (DefaultClientConnection:sendRequestHeader:271) >> Host: cn-dev-orc-1.test.dataone.org
[DEBUG] 2012-10-10 16:35:25,651 (Wire:wire:77) >> "<?xml version='1.0' encoding='UTF-8'?>1d1Test:152efbfb-55bc-4bb5-9f7e-967befcfe719
...
urn:node:sq1dcompleted2006-05-04T18:13:51.000+00:00/d1:systemMetadata"
```

```
[DEBUG] 2012-10-10 16:50:29,505 (DefaultClientConnection:sendRequestHeader:264) Sending request: GET
/cn/v1/meta/d1Test:152efbfb-55bc-4bb5-9f7e-967befcfe719 HTTP/1.1
[DEBUG] 2012-10-10 16:50:29,506 (Wire:wire:63) >> "GET /cn/v1/meta/d1Test:152efbfb-55bc-4bb5-9f7e-967befcfe719 HTTP/1.1[r][\n]"
[DEBUG] 2012-10-10 16:50:29,508 (Wire:wire:63) >> "Accept: text/xml[r][\n]"
[DEBUG] 2012-10-10 16:50:29,508 (Wire:wire:63) >> "Host: cn-dev-orc-1.test.dataone.org[r][\n]"
[DEBUG] 2012-10-10 16:50:29,508 (Wire:wire:63) >> "Connection: Keep-Alive[r][\n]"
[ INFO] 2012-10-10 16:50:29,870 (RestClient:doRequestNoBody:270) rest call info: GET
https://cn-dev-orc-1.test.dataone.org/cn/v1/meta/d1Test:152efbfb-55bc-4bb5-9f7e-967befcfe719
[ INFO] 2012-10-10 16:50:29,873 (ExceptionHandler:filterErrors:94) response httpCode: 200
[DEBUG] 2012-10-10 16:50:29,916 (Wire:wire:77) << "<?xml version='1.0' encoding='UTF-8'?>1d1Test:152efbfb-55bc-4bb5-9f7e-967befcfe719
...
urn:node:sq1dcompleted2006-05-04T00:00:00.000+00:00/d1:systemMetadata"
```

#18 - 2012-10-11 17:48 - Chris Jones

Whenever system metadata is changed in Metacat, the call goes through Hazelcast as a `put()` to the `hzSystemMetadata` map. This event is picked up by `HazelcastService`, which saves the system metadata locally by calling `IdentifierManager.insertOrUpdateSystemMetadata()`. Within this call, we convert from a `java.util.Date` to a `java.sql.Date` by calling `Replica.getReplicaVerified()` to pull the date from the replica in the list. We can verify the precision of the timestamp during the subsequent SQL call with debugging turned on.

Line 1155 of IdentifierManager has:

```
logMetacat.debug("smReplicationStatus sql: " + insertStatement.toString());
```

I've turned on debugging for IdentifierManager on cn-dev-orc-1, so Robert, you should be able to run your create test again, and grep the knb.log for "smreplicationStatus sql". Perhaps that will tell us if it changed before the insert statement, or after.

#19 - 2012-10-11 23:13 - Robert Waltz

- Assignee changed from Robert Waltz to Chris Jones

In the method call insertReplicationStatus of the IdentifierManager change the following lines to be:

```
1157:
from -- java.sql.Date sqlDate = new java.sql.Date(replica.getReplicaVerified().getTime());
to   -- java.sql.Timestamp sqlTimestamp = new java.sql.Timestamp(replica.getReplicaVerified().getTime());

1161:
from -- insertStatement.setTimestamp(4, sqlDate);
to   -- insertStatement.setTimestamp(4, sqlTimestamp);
```

In the method call getReplicationStatus of the IdentifierManager change the following lines to be:

```
441:
from --      java.sql.Date verified = rs.getDate(4);
to   --      java.sql.Timestamp verified = rs.getTimestamp(4);
```

#20 - 2012-10-15 23:42 - Chris Jones

- Status changed from New to Closed

Updated the IdentifierManager class in Metacat, and tested in sandbox. The date verified field is now being stored to the millisecond.