

Infrastructure - Task #3523

Don't use the byte array to store data in the D1Object class

2013-01-28 18:35 - Jing Tao

Status:	Closed	Start date:	2013-01-28
Priority:	Normal	Due date:	
Assignee:	Rob Nahf	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:		Story Points:	
Milestone:	None		
Product Version:	*		

Description

Currently, the byte array is used to store data in the D1Object. It may cause some memory issue if the data is huge.

The design in this page describes a solution by using the interface DataStore:

<https://repository.dataone.org/documents/Projects/cicore/architecture/api-documentation/source/design/morpho/images/morpho-class-diagram.png>

Some proposed changes in the D1Object class:

- add: getDataOutputStream() and setDataInputStream()
- modify: getData() and setData() to operate without actually storing the byte[]
- Use the DataStore to store the data rather than byte array

I also would like to add org.dataone.client.datastore.DataStore interface and org.dataone.client.datastore.MemoryDataStore class in the d1_libclient_java module. The MemoryDataStore class implements the DataStore interface.

The APIs in the DataStore are:

```
OutputStream get(Identifier identifier);  
void set(Identifier identifier, InputStream data);
```

Any comment and suggestion?

Thanks!

History

#1 - 2013-01-29 18:56 - Jing Tao

Rob would like to use javax.activation.DataSource interface rather than DataStore interface in the D1Object.

<http://docs.oracle.com/javase/5/api/javax/activation/DataSource.html>

He has a code in a branch:

https://repository.dataone.org/software/cicore/branches/d1_libclient_java_rwn_packaging/src/main/java/org/dataone/client/D1Object.java

I think we should keep byte[] getData() and void setData(byte[] data) (without store the byte[] in order to make r client work.

#2 - 2013-02-08 00:55 - Jing Tao

- Status changed from New to Closed
- Assignee changed from Jing Tao to Rob Nahf
- translation missing: en.field_remaining_hours set to 0.0

Now we use the DataSource to store the real data. The java doc for the DataSource locates at: <http://docs.oracle.com/javase/6/docs/api/javax/activation/DataSource.html>

in the D1Object we have those four methods:

```
public DataSource getDataSource();  
public void setDataSource(DataSource dataSource);  
public byte[] getData();  
public void setData(byte[] data);
```

The getData and setData are marked as deprecated. Also they don't store the byte[] in the object.