

# Table of Contents

<b>Test Plan Scenario 26</b> .....	<b>1</b>
Test campaign March 2013.....	1
Tests.....	1
Problems revealed.....	2
Detailed list.....	2
port type.....	2
port type.....	2
port type.....	3
Delegation port type.....	3
port type.....	3
Tests.....	3
Issues.....	4
Deployed Middleware.....	4
ARC.....	4
CREAM.....	4
UNICORE.....	4

# Test Plan Scenario 26

This scenario tests the implementations of EMI-ES in the various middleware stacks. To this end clients of each of the middlewares are used to interact with service endpoints of each of the other middlewares. It is understood that a client of any middleware is capable of communicating with the same middleware's service implementations.

## Test campaign March 2013

During the March of 2013, a final test campaign was conducted with a specific focus on the Java client library (HiLA). Generally, the test results were successful, but also revealed some flaws that were fixed on the way. Whereas activity creation, management, and information had been tested previously, we particularly focused the delegation service.

### Tests

ID	Service involved	Description	Result
01	Delegation, ActivityCreation	Create a delegation, add it's id to the ADL, submit the job. The delegation must be used during job execution, e.g. to transfer files. The ADL shown below guarantees this and involves two GridFTP servers.	SUCCESS
02	ActivityCreation, ActivityInfo	Verify that an activity with clientDataPush=true remains pending until notified to start. Import an additional file into the activity's StageInDirectory.	SUCCESS
03	ActivityManagement	After submission of an ADL that sets clientDataPush=true, start the job and run it successfully.	SUCCESS

We used the following simple ADL to trigger the job and transfers.

```
<adl:ActivityDescription xmlns:adl="http://www.eu-emi.eu/es/2010/12/adl">
  <adl:ActivityIdentification>
    <adl:Name>A Simple copy job.</adl:Name>
  </adl:ActivityIdentification>
  <adl:Application>
    <adl:Executable>
      <adl:Path>/bin/cat</adl:Path>
      <adl:Argument>input</adl:Argument>
    </adl:Executable>
    <adl:Input>input</adl:Input>
    <adl:Output>stdout</adl:Output>
    <adl:Error>stderr</adl:Error>
  </adl:Application>
  <adl:DataStaging>
    <adl:ClientDataPush>true</adl:ClientDataPush>
    <adl:InputFile>
      <adl:Name>input</adl:Name>
      <adl:Source>
        <adl:URI>gsiftp://cream-47.pd.infn.it/var/cream_es_sandbox/testers/CN_Bjoern_Hagemeier_00
      </adl:Source>
    </adl:InputFile>
    <adl:OutputFile>
      <adl:Name>stdout</adl:Name>
      <adl:Target>
        <adl:URI>gsiftp://zam052v07.zam.kfa-juelich.de/home15/bjoernh/tsi_submit_3878.copy</adl:U
      </adl:Target>
    </adl:OutputFile>
    <adl:OutputFile>
```

```

    <adl:Name>stdout</adl:Name>
  </adl:OutputFile>
  <adl:OutputFile>
    <adl:Name>stderr</adl:Name>
  </adl:OutputFile>
</adl:DataStaging>
</adl:ActivityDescription>

```

## Problems revealed

ID	Description	Fixed (Y/N)
1	UNICORE client and server handled proxy certificates incorrectly, or rather incompletely. When using e.g. a VOMS proxy certificate in the client and creating a delegation from it, they did not put the full certificate chain into the Delegation service (PutDelegation). This lead to Problems in the ARC (see #2) and CREAM (see #3) implementations.	Yes, UNICORE clients and servers put the complete delegation chain now, such that it can be verified and used. r16053, r16045, ...
2	Arc server implementation crashes, when incomplete delegation proxy chain is sent in the PutDelegation operation	?
3	CREAM implementation accepts incomplete proxy chain, but globus_copy_cmd fails with a segmentation fault.	? (solution could be WONTFIX, as this is a globus issue)
4	A malformed gsiftp URL containing a colon after the hostname, but no port number (gsiftp://host:/path), leads to the port being interpreted as 0 in Arc. A more detailed warning message will be implemented.	?
5	A malformed gsiftp URL containing a colon after the hostname, but no port number (gsiftp://host:/path), leads to error messages that are difficult to interpret (parsing error) in UNICORE. This is rather a bug in the globus-url-copy command, which should show a more detailed warning.	WONTFIX
6	Some jobs were flagged as successful in the client library due to a wrong mapping of EMI-ES states	Yes (r16055)
7	The HiLA abstract job model had no support for clientDataPush	Yes (r16049)
8	HiLA did not use the delegation client	Yes (r16047)
9	UNICORE EMI-ES server implementation did not publish Delegation endpoint correctly	Yes (r16046)

## Detailed list

### port type

Operation	Test Description
CreateActivity	This has been called successfully in all implementations. We have run jobs with andn without clientDataPush.

### port type

Operation	Test Description
PauseActivity	Not yet implemented for HiLA EMI-ES.
ResumeActivity	Not yet implemented for HiLA EMI-ES.
NotifyService	

	This has been used successfully when running jobs with clientDataPush and actually pushing data from the client into the Activities input directory.
CancelActivity	CREAM tested. ARC tested, shows slow handling, but can be due to asynchronous updates. Tested in UNICORE.
WipeActivity	Tested in all implementations to cleanup after the creation of jobs. Slow in Arc for a cancelled activity.
RestartActivity	Not tested, no mapping in HiLA.
GetActivityStatus	Tested against all implementations. It is called via the HiLA Job.status() method.
GetActivityInfo	Tested against all implementations, this is where we retrieved the information about input/output/session directories.

### port type

HiLA internally manages a reference to the ActivityInfo port type, but does not make use of it. All relevant information is retrieved from the ActivityManagement port type.

Operation	Test Description
ListActivities	
GetActivityStatus	
GetActivityInfo	

### Delegation port type

HiLA uses only two of the methods to handle delegations. The termination time of the proxy is handled internally, but could be retrieved from the server as well. There's room for improvement.

Operation	Test Description
getVersion	
getInterfaceVersion	
getServiceMetadata	
getProxyReq	
getNewProxyRequest	
renewProxyReq	Called in all implementations to initiate the creation of a proxy.
putProxy	Called successfully against all implementations. Proxy was usable, as demonstrated by data staging.
getTerminationTime	
destroy	

### port type

This port type does not have a natural mapping in the HiLA API and was therefore not tested.

Operation	Test Description
GetResourceInfo	
QueryResourceInfo	

## Tests

Test	Description	Expected Result	Result					
			Arc -> CREAM	Arc -> UNICORE	CREAM -> Arc	CREAM -> UNICORE	UNICORE -> Arc	UNICORE -> CREAM
IT-26-NO-AUTHZ	Access services, but authorization is not granted.	Should return an AccessControlFault						Yes

## Issues

Description	Tracker URL	Status (Pending/Solved)
Specify whether PEM header and footer are to be transferred for proxy certificates. The UNICORE implementation sends proxy without, whereas CREAM-Client expects the header and footer.		Solved, will send ----BEGIN... etc. header and footer

## Deployed Middleware

The following endpoints have been used, before EMIR support was fully integrated. A testing campaign in March 2013 used the EMIR endpoint at <http://emitbdsr1.cern.ch:9126/>.

### ARC

2 services are running at

- <https://testbed-emi4.grid.upjs.sk:60000/arex>
- <https://testbed7.grid.upjs.sk:60000/arex>

Services implement all PortTypes of EMI ES and authorize members of testers.eu-emi.eu dteam VOs.

### CREAM

- <https://cream-52.pd.infn.it:8443/ce-cream-es/services/CreationService>
- <https://cream-52.pd.infn.it:8443/ce-cream-es/services/ActivityManagementService>
- <https://cream-52.pd.infn.it:8443/ce-cream-es/services/ActivityInfoService>
- <https://cream-52.pd.infn.it:8443/ce-cream-es/services/DelegationService>

### UNICORE

- <https://zam052v02.zam.kfa-juelich.de:8080/EMI-ES/services/CreateActivityService>
- <https://zam052v02.zam.kfa-juelich.de:8080/EMI-ES/services/ActivityInfoService>
- <https://zam052v02.zam.kfa-juelich.de:8080/EMI-ES/services/ActivityManagementService>
- <https://zam052v02.zam.kfa-juelich.de:8080/EMI-ES/services/DelegationService>
- <https://zam052v02.zam.kfa-juelich.de:8080/EMI-ES/services/ResourceInfoService>

In order to get access, please send Björn Hagemeyer <b.hagemeyer@fz-juelich.de> an email with your DN that you use to access the testbed resources.

-- BjoernHagemeyer - 12-Mar-2012

This topic: EMI > TestPlan26

Topic revision: r13 - 2013-03-12 - BjornHagemeierExCern



Copyright &© 2008-2020 by the contributing authors. All material on this collaboration platform is the property of the contributing authors. Ideas, requests, problems regarding TWiki? Send feedback