Status of the PPS for SRM 2.2 testing

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- At the moment there are 13 endpoints in PPS for 4 flavors: CASTOR, dCache, DPM, StoRM

- These endpoints are tested daily using the S2 families of tests.

- Most of these endpoints are available for testing in the PPS testbed.

- These are mostly test instances. DPM production instances are also available (LAL, Edinburgh, etc.).

- They publish both SRM v1 and SRM v2 services whenever possible (not available

- CASTOR: CERN, CNAF (new LSF plug-in)

- dCache: BNL, IN2P3, FZK, NDGF, Edinburgh

- DPM: CERN (1.6.5) test, Edinburgh, Glasgow, LAL (1.6.4-3) production.

- StoRM: CNAF, Bristol.

Tests executed

Summary of S2 SRM v2.2 basic test - Monday 4 June 2007 09:20am CEST

All dCache deployment sites expose the same problems.
Difficult configuration:
- storage classes
- security
- handling of top dir
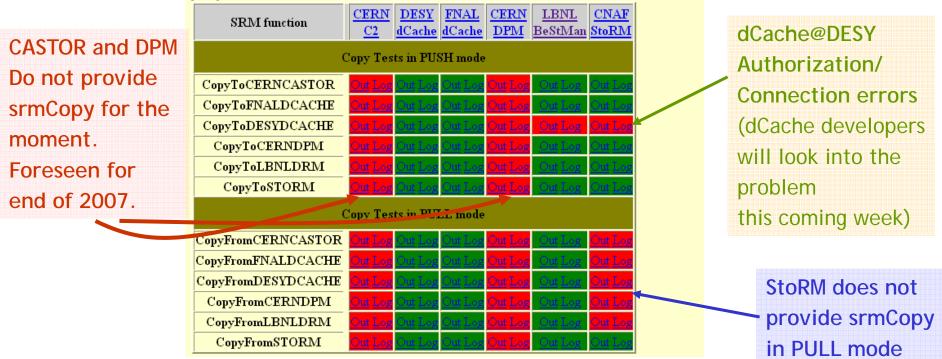- ...

New CASTOR stress endpoint

The S2 result web-pages

Summary of S2 SRM v2.2 cross test - Monday 21 May 2007 12:10pm CEST

In these tests the srmCopy function is exercised. This function should be implemented by all available Storage System by the end of the 3Q of 2007. dCache is required to implement this function as of now. Therefore, it is OK to have red columns for all SRM endpoints except for dCache. However, it is not OK to have red rows since this means that a file cannot be copied between SRMs with simple get and put operations.

SRM function	CERN C2	DESY dCache	FNAL dCache	CERN DPM	LBNL BeStMan	CNAF StoRM
Copy Tests in PUSH mode						
CopyToCERNCASTOR	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
CopyToFNALDCACHE	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
CopyToDESYDCACHE	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
CopyToCERNDPM	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
CopyToLBNLDRM	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
CopyToSTORM	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
Copy Tests in PULL mode						
CopyFromCERNCASTOR	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
CopyFromFNALDCACHE	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
CopyFromDESYDCACHE	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
CopyFromCERNDPM	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
CopyFromLBNLDRM	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log
CopyFromSTORM	Out Log	Out Log	Out Log	Out Log	Out Log	Out Log

CASTOR and DPM Do not provide srmCopy for the moment. Foreseen for end of 2007.

dCache@DESY Authorization/ Connection errors (dCache developers will look into the problem this coming week)

StoRM does not provide srmCopy in PULL mode

dCache support

- The problems with the dCache configuration have stopped us from progressing and releasing a good test environment to experiments:
  - Configuring multiple storage classes
  - Allowing access to all members of a VO without enabling the single DNs
- Greig A. Cowan has volunteered to collect issues and solution in a twiki page pointed to by the GSSD pages:
  - http://www.gridpp.ac.uk/wiki/DCache_SRM_v2.2_Testing
- Please, report problems to the srm tester list: srmtester@lbl.gov or to the GSSD mailing list: storage-classes-wg@cern.ch.
- A privileged channel has been established with the developers for problem reporting (it has to appear in Greig's list)

FTS 2.0 for SRM 2.2

CNAF=StoRM
CERNPPS=DPM
CERNDPM=DPM
CERN=CASTOR Prod
BNLV22=BNL

```
[lxplus203] ~/public > source /afs/cern.ch/project/gd/egee/glite/ui_PPS/etc/prof
ile.d/grid_env.csh
[lxplus203] ~/public > setenv GLITE_SD_PLUGIN bdii
[lxplus203] ~/public > setenv GLITE_SD_SITE CERN_PPS
[lxplus203] ~/public > echo $MYPR
MYPROXY_SERVER          MYPROXY_TCP_PORT_RANGE
[lxplus203] ~/public > echo $MYPROXY_SERVER
px01.lip.pt
[lxplus203] ~/public > glite-transfer-channel-list -v
# Using endpoint https://pps-fts.cern.ch:8443/glite-data-transfer-fts/services/C
hannelManagement
# Service version: 3.3.0
# Interface version: 3.3.0
# Schema version: 3.0.0
# Service features: glite-data-transfer-fts-3.3.0-4
# Client version: 3.4.0
# Client interface version: 3.3.0
CERNPPS-CNAF
CERN-CNAF
CNAF-CERN
CNAF-CERNPPS
BNLV22-CERN
CERN-BNLV22
CERNPPS-BNLV22
BNLV22-CERNPPS
BNLV22-CERNDPM
CERNDPM-BNLV22
CERN-CERNDPM
CERNDPM-CERN
[lxplus203] ~/public > 
```

- Minor problems found with FTS 2.0 for SRM 2.2

  - The delegation service endpoint isn't published correctly in BDII.

  - Authorization for a given role: YAIM does not support it but the code does

  - An idle DB connection in the pool can timeout and then die on the first person that uses it

  - there *is* a -c option on glite-transfer-submit that fills in the space token description already. Wrongly documented in the man

Other problems

- ## CERN CA updated
  - This has introduced a CN=\d\d\d\d\d\d in the user's DN

- ## Myproxy server at LIP with CRLs expired

```
[lxplus203] ~/.globus > myproxy-init -s $MYPROXY_SERVER -d
Your identity: /DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=flcms/CN=388195/CN=Fl
avia Donno
Enter GRID pass phrase for this identity:
Creating proxy ................................................. Done
Proxy Verify OK
Your proxy is valid until: Mon Jun 11 16:45:09 2007
Enter MyProxy pass phrase:
Verifying password - Enter MyProxy pass phrase:
Error authenticating: GSS Major Status: Authentication Failed
GSS Minor Status Error Chain:

init.c:266: globus_gss_assist_init_sec_context: Error during context initializat
ion
init_sec_context.c:171: gss_init_sec_context: SSLv3 handshake problems
globus_i_gsi_gss_utils.c:888: globus_i_gsi_gss_handshake: Unable to verify remot
e side's credentials
globus_i_gsi_gss_utils.c:847: globus_i_gsi_gss_handshake: Unable to verify remot
e side's credentials: Couldn't verify the remote certificate
OpenSSL Error: s3_pkt.c:1046: in library: SSL routines, function SSL3_READ_BYTES
: sslv3 alert bad certificate
```

What is ready

- The FTS channels established are available for all experiments to tests.

- Basic tests have been performed as well with the latest version of the high level tools such as GFAL, lcg-utils.

- The PPS makes available an AFS UI:
    - source /afs/cern.ch/project/gd/egee/glite/ui_PPS/etc/profile.d/grid_env.csh

- It is possible to access the latest version of ROOT as well

Status of PPS for ATLAS

- Main requirements published on the GSSD page:
    - https://twiki.cern.ch/twiki/bin/view/LCG/GSSDATLASPPS

PPS configuration for ATLAS

In order for ATLAS to perform first tests in the PPS the following requirements should be satisfied:

1. Provide both or only one of the following storage classes:
    - **REPLICA-ONLINE** (Tape0Disk1)
    - **CUSTODIAL-NEARLINE** (Tape1Disk0)
2. Define the following space token descriptions:
    - **TAPE** for the CUSTODIAL-NEARLINE storage class
    - **DISK** for the REPLICA-ONLINE storage class
3. Provide resources such that a transfer sustain rate of 40MB/sec is supported by a single Tier-1
4. Make available an ATLAS specific path (ex. /atlas). ATLAS will then create further paths specifying the desired space token, provided that tokens will be decided somewhere in some top levels and will not change for data stored in the leaves of that top directory.
5. Publish in the GLUE schema the ATLAS specific root path (GlueSAPath)
6. Publish the space token descriptions (GlueSATag) and the storage classes supported by your site.
7. Publish the size made available for ATLAS and for a particular storage class/space token description at your site.

For publishing information in the GLUE schema, you can find an example here ? .
As a first step ATLAS will try to move data from CERN CASTOR2 SRM v1 instance to SRM v2 endpoints in the PPS testbed using FTS 2.0.

-- FlaviaDonno - 11 May 2007

Status of PPS for ATLAS

```
[lxplus211] ~ > glite-transfer-channel-list BNLV22-CERNPPS CERNPPS-BNLV22
Channel: BNLV22-CERNPPS
Between: BNL-V22 and CERN_PPS
State: Active
Contact: Konstantin.Skaburskas@cern.ch
Bandwidth: 0
Nominal throughput: 0
Number of files: 10, streams: 10
Number of VO shares: 6
VO 'atlas' share is: 20
VO 'alice' share is: 20
VO 'lhcb' share is: 20
VO 'cms' share is: 20
VO 'dteam' share is: 20
VO 'ops' share is: 20

Channel: CERNPPS-BNLV22
Between: CERN_PPS and BNL-V22
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VO 'cms' share is: 20
VO 'dteam' share is: 20
VO 'ops' share is: 20
```

- The channel CERN-BNLV22 is to transfer data from CASTOR2 production with SRM v1 to BNL with srm v2

- The channels BNLV22-CERNPPS and CERNPPS-BNLV22 are to move data using SRM v2.2 within PPS.

Status of PPS for ATLAS

- ATLAS tests:
  - FTS 2.0 will be used with SRM v1 at CERN production and SRM v2 at BNL to transfer data sets from CERN to BNL
  - An FTS 2.0 channel is configured as well between BNL and CERN DPM SRM v2.2 for further tests.
  - BNL is only offering REPLICA-ONLINE. No sites are at the moment available to offer CUSTODIAL-NEARLINE.
  - Other sites interested in joining the tests for ATLAS are:
    - IN2P3 with a test instance available in the second/third week of June ?
    - NDGF with a test instance available as of now
    - FZK later on with a possible CUSTODIAL-NEARLINE storage class

- Anything else we should be considering for ATLAS ?

How should we proceed ?

- What are the candidate experiments ? Can we define a set of tests to be performed by the experiments ?

- What are the resources required ? Is the PPS a good starting point for the experiments.

- What is the situation with the sites ?

- How can we prepare a roll out plan for SRM v2.2 in production ?