

SE Transport Test

- To make sure whether data could be transported between SEs.
 - To push each SE to support common protocols (gridftp, xrootd, httpd).
 - HTTP added.
 - JINR-EOS gridftp added.
- Transport commands used:
 - dirac-dms-replicate-lfn
 - gfal-copy (srm, xrootd)
 - xrdcp
 - gfal-copy (gsiftp)
 - globus-url-copy (gsiftp)
 - davix-cp (httpd)
 - gfal-copy (httpd)
 - SEs:
 - CNAF-STORM, (gsiftp)
 - IHEP-STORM, (gsiftp)
 - IN2P3-DCACHE, (gsiftp, httpd)
 - IN2P3-XROOTD, (xrootd, httpd)
 - JINR-JUNO, (gsiftp)
 - JINR-EOS, (gsiftp, xrootd, httpd)

Transport by dirac-dms-replicate-lfn

- Cannot transport data between SRM SE and XROOTD SE.
- Possible reason: JINR-EOS only registered as an XROOTD SE in DIRAC.

dirac-dms-replicate-lfn		From					
		CNAF-STORM	IHEP-STORM	IN2P3-DCACHE	IN2P3-XROOTD	JINR-JUNO	JINR-EOS
TO	CNAF-STORM	-	○	○	○	○	○
	IHEP-STORM	○	-	○	○	○	○
	IN2P3-DCACHE	○	○	-	○	○	○
	IN2P3-XROOTD	X	X	X	-	X	X->○
	JINR-JUNO	○	○	○	○	-	○
	JINR-EOS	X->○	X->○	X->○	X	X->○	-

Transport by gfal-copy (srm, xrootd)

- IN2P3-XROOTD not included.
- All succeeded and transport between SRM SE and XROOTD SE is via local copy.
- srm:// and root:// urls used.

gfal-copy (srm, xrootd)		From				
		CNAF-STORM	IHEP-STORM	IN2P3-DCACHE	JINR-JUNO	JINR-EOS
TO	CNAF-STORM	-	○	○	○	○
	IHEP-STORM	○	-	○	○	○
	IN2P3-DCACHE	○	○	-	○	○
	JINR-JUNO	○	○	○	-	○
	JINR-EOS	○	○	○	○	-

Transport by xrdcp

- Local copy and “TPC only”.
- IN2P3-XROOTD and JINR-EOS has “delegate” problem.

xrdcp		From			
		IN2P3-XROOTD (Local copy/TPC)	JINR-EOS (Local copy/TPC)	IHEP-EOS (Local copy/TPC)	CNAF-XROOTD (Local copy/TPC)
TO	IN2P3-XROOTD	-	O/X	O/X	O/X
	JINR-EOS	O/X	-	O/X	O/X
	IHEP-EOS	O/X	O/X	-	O/X
	CNAF-XROOTD	O/O	O/O	O/O	-

Transport by gfal-copy (gsiftp)

- IN2P3-XROOTD and JINR-EOS not included. gsiftp:// used.
- CNAF-STORM couldn't be written by gfal-copy with gsiftp url.

gfal-copy (gsiftp)		From			
		IHEP-STORM	IN2P3-DCACHE	JINR-JUNO	JINR-EOS
TO	IHEP-STORM	-	○	○	○
	IN2P3-DCACHE	○	-	○	○
	JINR-JUNO	○	X	-	○
	JINR-EOS	X->○	X->○	X->○	-

Transport by “davix” (httpd)

Commands			
	IN2P3-DCACHE	IN2P3-XROOTD	JINR-EOS
davix-ls	O	X(403)	O
davix-put	X	X	X
davix-get	O	X(403)	O

davix-cp		From		
		IN2P3-DCACHE	JINR-JUNO	JINR-EOS
To	IN2P3-DCACHE	X(401)	X(401)	X(409)
	IN2P3-XROOTD	X(403)	X(401)	X(409)
	JINR-EOS	X(403)	X(401)	X(403)

Transport by “gfal2” (httpd)

Commands			
	IN2P3-DCACHE	IN2P3-XROOTD	JINR-EOS
gfal-ls -l	○	X(404)	○
gfal-cp(upload)	○	X(404)	X(502)
gfal-cp(download)	○	X(404)	○

gfal-cp		From		
		IN2P3-DCACHE	IN2P3-XROOTD	JINR-EOS
To	IN2P3-DCACHE	○	X(404)	○
	IN2P3-XROOTD	○	X(404)	X
	JINR-EOS	○	X(404)	X

Transport by globus-url-copy (gsiftp)

- IN2P3-XROOTD and JINR-EOS not included.
- Almost same with gfal-copy except a time out failure.

globus-url-copy (gsiftp)		From			
		CNAF-STORM	IHEP-STORM	IN2P3-DCACHE	JINR-JUNO
TO	CNAF-STORM	-	X	X	X
	IHEP-STORM	O	-	O	O
	IN2P3-DCACHE	O	X (Time Out)	-	O
	JINR-JUNO	O	X	O	-

Conclusion

- IN2P3-XROOTD seems to have accessing problem with listing a directory. Need more check on setting permission.
- Xrootd TPC between IN2P3-XROOTD SE and JINR-EOS SE failed. Should be figured out why.
- CNAF-STORM cannot be written by gsiftp:// url, but can be written by srm://. Why? Permission?
- IN2P3-XROOTD SE and JINR-EOS SE's gsiftp door is needed to do further check.
- More detailed gsiftp configuration in DIRAC should be added, so each SE can use gsiftp to transport.

Back up

Transport by gfal-copy (gsiftp)

- IN2P3-XROOTD and JINR-EOS not included. gsiftp:// used.
- CNAF-STORM couldn't be written by gfal-copy with gsiftp url.

gfal-copy (gsiftp)		From			
		CNAF-STORM	IHEP-STORM	IN2P3-DCACHE	JINR-JUNO
TO	CNAF-STORM	-	X	X	X
	IHEP-STORM	○	-	○	○
	IN2P3-DCACHE	○	○	-	○
	JINR-JUNO	○	X	○	-

JINR-EOS

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123 DEBUG insert gridftp session for gsiftp://eos-gftp01.jinr.ru:2811 in cache ...
124 DEBUG [gfal_gridftp_statG]<-
125 DEBUG -> Gfal::Transfer::FileCopy
126 INFO Event triggered: BOTH GFAL2:CORE:COPY LIST:ENTER
127 INFO Event triggered: BOTH GFAL2:CORE:COPY LIST:ITEM gsiftp://ccdcaccli235.in2p3.fr:2811//pnfs/in2p3.fr/data/juno/dirac/juno/user/z/zhangxt/testfile_dir/testfile_IN2P3-DCACHE.txt => gsiftp://eos-gftp01.jinr.ru:2811//eos/juno/dirac/juno/user/z/zhangxt/testfile_dir/test1230.txt
128 INFO Event triggered: BOTH GFAL2:CORE:COPY LIST:EXIT
129 DEBUG -> [gridftp_plugin_filecopy]
130 INFO Event triggered: BOTH GSIFTP TRANSFER:ENTER (134.158.208.48:2811) gsiftp://ccdcaccli235.in2p3.fr:2811//pnfs/in2p3.fr/data/juno/dirac/juno/user/z/zhangxt/testfile_dir/testfile_IN2P3-DCACHE.txt => (159.93.37.13:2811) gsiftp://eos-gftp01.jinr.ru:2811//eos/juno/dirac/juno/user/z/zhangxt/testfile_dir/test1230.txt
131 INFO Event triggered: BOTH GSIFTP TRANSFER:TYPE 3rd push
132 DEBUG -> [Gridftp_stat_module::globus_gass_stat]
133 DEBUG GSIFTP using certificate /tmp/x509up_u10664
134 DEBUG GSIFTP using private key /tmp/x509up_u10664
135 DEBUG gridftp session for: gsiftp://eos-gftp01.jinr.ru:2811 found in cache !
136 DEBUG Impossible to get integer parameter GRIDFTP_PLUGIN:OPERATION_TIMEOUT, set to default value 1800, err Key file does not have key 'OPERATION_TIMEOUT'
137 DEBUG [GridFTP_Request_state::wait_callback] setup gsiftp timeout to 1800 seconds
138 DEBUG gridFTP operation done
139 DEBUG Stat via MLST
140 DEBUG Impossible to get integer parameter GRIDFTP_PLUGIN:OPERATION_TIMEOUT, set to default value 1800, err Key file does not have key 'OPERATION_TIMEOUT'
141 DEBUG [GridFTP_Request_state::wait_callback] setup gsiftp timeout to 1800 seconds
142 DEBUG gridFTP operation done
143 DEBUG globus_ftp_client: the server responded with an error
144 550 550-GlobusError: v=1 c=PATH_NOT_FOUND^M
145 550-GridFTP-Errno: 2^M
146 550-GridFTP-Reason: System error in stat^M
147 550-GridFTP-Error-String: No such file or directory^M
148 550 End.^M
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