

Update on SAM

**COD-17 Meeting
EGEE'08 Conference, Istanbul, 22 September 2008**

- **Sensors:**

- SRMv2 tests in Production (but with alarming turned off)
 - Snapshot of current storage situation
 - Detailed description of tests
 - Current test results
- Data Management Tests
 - Recent Improvements
 - Central/Local LFC
- APEL-pub test (checks that sites are correctly publishing accounting info)
- Other sensors forthcoming (WMS, MyProxy, AMGA)

- **Database:**

- SAM & GridView independent topology database
- Schema updates following Operations Automation Strategy

- **Current situation in EGEE:**
 - ~278 SRMv1s
 - ~296 SRMv2s
 - Site availability calculations currently only take SRMv1 into account, and yet SRMv2s are predominant
- **SAM team have developed SRMv2-specific probes**
 - Used CMS probes as starting point, but completely rewritten (simplified, and timeouts used)
 - Usage of LFC removed, tests decoupled from BDII
 - All 7 tests are currently critical so that history can be viewed in SAM portal, but COD alarms are currently suppressed, and site availability figures are not impacted

- **SRMv2-get-SURLs**
 - get full SRM endpoints and space areas (VO dependent) from BDII
- **SRMv2-ls-dir**
 - check if we can list VO's top level space area(s) in SRM
- **SRMv2-put**
 - copy a local file to the SRM into default space area(s)
- **SRMv2-ls**
 - list (previously copied) file(s) on the SRM
- **SRMv2-gt**
 - get Transport URLs for the file(s) copied to storage
- **SRMv2-get**
 - copy given remote file(s) from SRM to local file(s)
- **SRMv2-del**
 - delete given file(s) from SRM

More details available at <https://twiki.cern.ch/twiki/bin/view/LCG/SAMSensorTests#SRMv2>

51 - ERROR (24 %)

- **3** - *SRMv2-get-SURLs* - either GlueServiceEndpoint and/or GlueSAPath are not published
- **25** - *SRMv2-ls-dir* - “CGSI-gSOAP: Could not open connection !”: endpoint is in IS but nothing listens on the port, or port is firewalled
- **13** - *SRMv2-gt* - inconsistent info published for transport protocols (dCache mostly)
- **10** - different types of problems < 5% of the total number of nodes

sum
0
216
0
0

ops tests		
testname	desc	crit
ls-dir	List content of VO's top level storage area(s) in SRM	CR
get-SURLs	This test retrieves the full endpoint and space tokens from BDI	CR
get	Copy remote file(s) from SRM to local file(s)	CR
gt	Get Transport URLs for the file copied to storage	CR
del	Delete given file(s) from SRM	CR
ls	List (previously copied) file(s) on the SRM	CR
put	Copy a local file to the SRM into default storage area(s)	CR

show ops critical tests
 Sort by: NodeName

<input checked="" type="checkbox"/>	WARN	subject may fail soon	0
<input checked="" type="checkbox"/>	ERROR	subject has failed and problem is localized	51
<input checked="" type="checkbox"/>	CRIT	subject has failed and problem is fatal	0
<input checked="" type="checkbox"/>	MAINT	subject is under maintenance	0

No	RegionName	SiteName	NodeName	Status	ops						
					ls-dir	get-SURLs	put	gt	del	get	ls
1	AsiaPacific	PAKGRID-LCG2	SE.pakgrid.org.pk	OK	ok	ok	ok	ok	ok	ok	ok
2	AsiaPacific	Australia-ATLAS	agh3.atlas.unimelb.edu.au	OK	ok	ok	ok	ok	ok	ok	ok
3	SouthEasternEurope	NIHAM	alice003.nipne.ro	OK	ok	ok	ok	ok	ok	ok	ok
4	Russia	RU-SPbSU	alice20.spbu.ru	OK	ok	ok	ok	ok	ok	ok	ok
5	Italy	INFN-CATANIA	aliserv1.ct.infn.it	ERROR	error	ok	error	error	error	error	error
6	France	GRIF	apcse01.in2p3.fr	ERROR	error	ok	error	error	error	error	error
7	SouthEasternEurope	GR-05-DEMOKRITOS	arxiloxs2.inp.demokritos.gr	OK	ok	ok	ok	ok	ok	ok	ok

- **Timeouts in LFC and SE/SRM sensors**
 - *NB! SE and SRM(v1) sensors still use LFC & tBDII via lcg-cr CLI*
- **From now, tests in LFC/SE/SRM/SRMv2 sensors use the following timeouts on LFC/SE/LDAP:**
 - on LFCs for all tests which make use of LFC via lcg_utils:
 - LFC_CONNTIMEOUT={5,10}, LFC_CONRETRY=1, LFC_CONRETRYINT=2
 - in lcg_utils on BDII (network and search in LDAP):
 - LCG_GFAL_BDII_TIMEOUT=10
 - in lcg_utils connect, send and receive timeouts on SE are set to 60 sec (-t option to lcg-* CLI)

- **Introduce some of the SRMv2 enhancements to SRMv1 sensors**
 - Is it worth it?
- **Differentiation between Central and Local LFCs**
 - Don't try to write to Read-Only LFCs
- **Integration of SRMv2 results in GridView availability calculations**
- **Distinguish between storage implementations?**
 - Aggregating different types of storage end-points per site?
 - Needs implementation name added to topology database
 - AND of different Storage types
 - OR of multiple instances in each storage class
- **Use of Message Bus & WLCG Probe formats**
 - Preliminary work has already started

- **Independent Topology DB**
 - **Separate DB account queried by SAM & GridView to retrieve topology information.**
 - **Data entry points:**
 - **CIC Portal: VOs list**
 - **GOCDB: EGEE node/service mappings**
 - **SAM BDII: VO/node/service mappings**
 - **OIM URL: OSG node/service mappings for OPS vo**
 - **Static list of resources: Alice VOBOXes**
 - **In Testing phase**

- **Studying necessary schema updates according to the Operations Automation Strategy document:**
 - <https://edms.cern.ch/document/927171>
- **Updates required by the Messaging System.**
- **Needed historical views of topology information for availability recomputation.**

- **Additional Slides Follow for those interested...**
 - New tests (APEL, WMS, LFC, AMGA...)
 - Future distributed monitoring architecture

- **Close collaboration between:**
 - GOCDB
 - new APEL service defined & associated with CEs
 - APEL developers
 - testing in Validation, followed by publishing in SAM production infrastructure
 - SAM team
 - Integrate new APEL service in SAM database
 - masking alarms so that there's only one per site
 - APEL-pub & APEL-sync tests, but only APEL-pub is critical
 - 298 sites OK; 49 sites currently flagged as not publishing correctly (warning > 7 days no data; error > 31 days no data)
 - COD & sites now have a better idea of who the culprits are
 - Sites can request help from APEL team to sort things out

- **LFC-ping**
 - New test added to LFC test suite. This test is not currently critical, but should become so at some later stage
 - pings LFC to get its version. Uses 'lfc-ping', even though this command is unnecessarily complex (authentication and authorization performed, and virtual ID for the user is created).

- **gRB and MyProxy sensors (developed by TIC)**
 - integrating the latest changes provided from TIC
- **CREAM CE sensor**
 - in CVS; testing on PPS; basically a replica of current CE sensor
 - do we have to test direct submission to CREAM CE?
- **Expecting a new security test (“unpatched RPMs”) from Operational Security Coordination Team (will go into the set of CE sensor tests)**
- **AMGA - SA3 has a sensor to test AMGA service - we might want to re-use it**