

ALICE

ALICE monitoring is based on MonALISA and SAM is mostly used to allow comparisons with other VOs. Only a few basic **job submission** and **worker node** tests are run; storage is not tested because SAM does not currently support XrootD services. This is expected to change during 2012 allowing MonALISA test results for XrootD and for VO boxes to be forwarded into SAM to provide a more complete picture.

ATLAS

ATLAS uses SAM for **job submission** via **gLite WMS**, allowing to spot CE problems currently almost impossible to see via PanDA. On the other hand it is foreseen to have pilot jobs running the worker node tests and reporting the results to SAM, to have a closer correlation with the ATLAS job management system. Unique to ATLAS are the publication of external test results from **HammerCloud** into SAM and the testing of individual SRM **space tokens**.

Topology and VO feeds

The new SAM framework allows VOs to generate their own **topology** information under the assumption that only the VO knows which sites and services need to be tested. VO feeds are **XML** files periodically generated based on the information relevant to the VO (BDII, VO-specific site databases, etc.).

```
<root>
<title>CMS Topology Information for ATP</title>
<description>
List of CMS site names
</description>
<feed_responsible dn="/DC=ch/DC=cern/OU=Organic Units/OU=Users/CN=psaiz/CN=542764/CN=Pablo Saiz" name="Pablo Saiz"/>
<last_update>2012-05-14T15:10:20Z</last_update>
<vo>cms</vo>
<atp_site name="CERN-PROD">
<service hostname="srm-cms.cern.ch" flavour="SRMv2"/>
<service hostname="ce203.cern.ch" flavour="CREAM-CE"/>
...
<service hostname="ce208.cern.ch" flavour="CREAM-CE"/>
</atp_site>
</root>
```

Visualisation via SUM

The **Site Usability Monitor (SUM)** is an Experiment Dashboard application developed to **visualise** test results, availability and reliability of sites and services for each LHC experiment. SUM obtains all information by direct queries to the **SAM programmatic interface**. Users can drill down from site availability history plots to individual test results.

Reliability history

Site reliability using ATLAS_CRITICAL

Reliability ranking

Site reliability ranking using ATLAS_CRITICAL

Latest results page

<http://dashb-alice-sum.cern.ch>
<http://dashb-atlas-sum.cern.ch>
<http://dashb-cms-sum.cern.ch>
<http://dashb-lhcb-sum.cern.ch>

Future plans and conclusions

The LHC experiments, with the support of the CERN IT department, have successfully migrated their functional tests to the new SAM framework and they are fully profiting from new features like VO feeds and multiple profiles. A strongly desired feature is the possibility to define their own physical and virtual services (Frontier, XrootD, etc.) without the need to register them in OIM/GOCDB. Finally it is foreseen to rethink experiment tests to achieve a better decoupling of site and experiment functionality.

[1] Andrade P *et al* *Service Availability Monitoring framework based on commodity software, CHEP2012*