

Cloud Monitoring in DE Cloud

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The motivation for cloud monitoring is:

- To have simple interface, which evaluates the information related to different cloud resources
- To provide a coherent and comprehensive view of the cloud
- To have quick look insight the problem
- To allow identification of correlated problems

The main areas to be covered with cloud monitoring:

- Data transfers
- Service Availability Monitoring
- Site batch systems
- GangaRobot tests
- Software installation
- dCache versions
- etc.....



Cloud Monitoring 2.0

| Site | Jobs | | | ATLAS SAM Tests | | OPS SAM Tests | | | Ganga Robot | | Data Transfer | | | | |
|---------------|----------|-----------|---------|-----------------|-------|---------------|-------|-------|-------------|-------|---------------|--------|----------|-------------|----------------|
| | Jobs Run | Jobs Wait | Jobs To | CE | SRMv2 | CE | sBDII | SRMv2 | PROD | PANDA | DATADISK | MCDISK | PRODDISK | SCRATCHDISK | LOCALGROUPDISK |
| CSCS-LCG2 | 1126 | 175 | 1226 | F | ok | ok | ok | ok | 100 | 93 | 8.1 | 0.0 | 100.0 | 0.0 | 0.0 |
| CYFRONET-LCG2 | 1176 | 1244 | 2425 | ok | ok | ok | ok | ok | 63 | 92 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 |
| DESY-HH | 1557 | 2166 | 3719 | ok | ok | ok | ok | ok | 100 | 91 | 0.0 | 0.0 | 100.0 | 100.0 | 0.0 |
| DESY-ZN | 365 | 393 | 762 | ok | ok | ok | ok | ok | 100 | 95 | 7.8 | 0.0 | 85.1 | 0.0 | 87.8 |
| FZK-LCG2 | 5179 | 5591 | 10741 | ok | ok | ok | ok | ok | 0 | 95 | 69.0 | 100.0 | 0.0 | 100.0 | 0.0 |
| GoeGrid | 308 | 2 | 305 | F | ok | ok | ok | ok | 90 | 92 | 11.6 | 0.0 | 94.4 | 0.0 | 0.0 |
| HEPHY-UIBK | 197 | 101 | 295 | ok | ok | ok | ok | ok | -1 | -1 | 6.7 | 0.0 | 100.0 | 0.0 | 0.0 |
| LRZ-LMU | 1374 | 1097 | 2483 | ok | ok | ok | ok | ok | 100 | 92 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MPPMU | 0 | 444444 | 0 | ok | ok | ok | ok | ok | 100 | 98 | 6.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| praguelcg2 | 741 | 53 | 813 | ok | ok | F | ok | ok | 100 | -1 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 |
| PSNC | 802 | 178 | 980 | ok | ok | ok | ok | ok | -1 | -1 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 |
| UNI-FREIBURG | 1662 | 1354 | 3044 | ok | F | ok | ok | ok | 100 | 96 | 17.4 | 0.0 | 100.0 | 0.0 | 0.0 |
| wuppertalprod | 919 | 1751 | 2661 | ok | ok | ok | ok | ok | 97 | 95 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | |
|--|--|---|--|
| Information provided by site BDII, is accessed by querying BDII at FZK using GLUE attrib. Links to GStat site | SAM info accessed by querying SAM DB by programmic interface at | Test efficiency in last 24 hours | Information obtained using dashboard monitoring API. Efficiency for the last 4 hours |
|--|--|---|--|

Current web adress: <http://happyface-goegrid.gwdg.de/cloudmon2/cloudmon.html>

Site Pages

Site GoeGrid

CRITICAL SAM Tests

| End point | Last 12 hours | | | | | | | | | | | |
|----------------------------------|---------------|-----|-----|----|-----|-----|-----|----|-----|----|-----|----|
| | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
| VO:Atlas | | | | | | | | | | | | |
| atlas_CE | | | | | | | | | | | | |
| CE-ATLAS-sft-lcg-tag | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| CE-sft-job | err | ok | err | ok | err | ok | err | ok | err | ok | err | ok |
| CE-sft-vo-swdir | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| atlas_SRMv2 | | | | | | | | | | | | |
| SRMv2-ATLAS-lcg-cp | ok | ok | err | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| SRMv2-ATLAS-lcg-cr | ok | err | ok | ok | ok | ok | err | ok | ok | ok | ok | ok |
| SRMv2-ATLAS-lcg-del | err | ok | ok | ok | ok | err | err | ok | ok | ok | ok | ok |
| VO:OPS | | | | | | | | | | | | |
| ops_CE | | | | | | | | | | | | |
| CE-hr.srce.GRAM-CertLifetime | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| CE-org.sam.CE-JobSubmit | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| CE-org.sam.WN-Bi | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| CE-org.sam.WN-CAver | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| CE-org.sam.WN-Csh | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| CE-org.sam.WN-Rep | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| CE-org.sam.WN-SoftVer | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| ops_SRMv2 | | | | | | | | | | | | |
| SRMv2-hr.srce.SRMv2-CertLifetime | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| SRMv2-org.sam.SRM-Del | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| SRMv2-org.sam.SRM-Get | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| SRMv2-org.sam.SRM-GetSURLs | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| SRMv2-org.sam.SRM-GetTURLs | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| SRMv2-org.sam.SRM-Ls | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| SRMv2-org.sam.SRM-LsDir | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| SRMv2-org.sam.SRM-Put | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| ops_BDII | | | | | | | | | | | | |
| sBDII-org.bdii.Entries | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |
| ops_APEL | | | | | | | | | | | | |
| APEL-org.apel.APEL-Pub | na | na | na | na | na | na | na | na | na | na | na | na |
| ops_RGMA | | | | | | | | | | | | |
| RGMA-hr.srce.RGMA-CertLifetime | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok |

Atlas

OPS

- For each site in the cloud the separate page with detailed SAM test information is constructed.
- Currently only critical tests, will be extended to all available SAM tests for all services
- For two VO ATLAS and OPS
- SAM tests are matched to 12 hours time scale, with one hour resolution:
 - 2 Tests in hour: the latest result shown
- The length of the box defines the validity of the test
- The tests grouped in service types:
 - CE, SRMv2, BDII etc...
- For site with redundant service instances e.g. 2 CE's the best results are shown (not completely tested)

- The url with detailed test results can be reached by clicking on the box result (currently working for Atlas, will be fixed of OPS)



Outlook

- The initial version of new cloud monitoring tool is ready.
 - Python code in SVN, documentation is approaching
 - Some cleanup in colors and styles still need
- Not free from inconsistencies and bugs mostly related to the various site configurations → please contact us if you see some wrong or inconsistent information for your site.
- Will be extended constantly with additional infos:
 - Very soon software releases, dcache versions, blacklists will be added
 - Contacts for Tier sites
 - Space tokens
 - SAM time scale to 12/24 hours?
 - Availability calculations (day, week, month...) ?
 - More info on job statistics?
 - Panda information, production statistics?
 - Database engine? (currently no need)
- Any other proposals are very welcome.

