



Enabling Grids for E-science

## Dashboard SAM Web Portal

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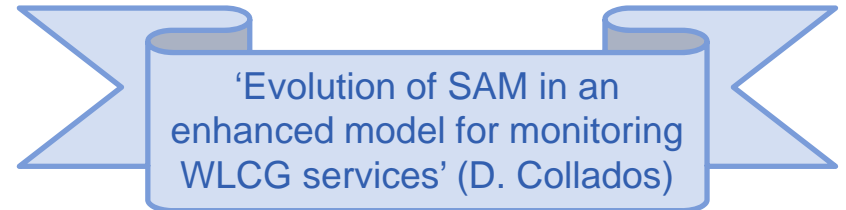
*CHEP 2009*

*26 March 2009*

[www.eu-egee.org](http://www.eu-egee.org)

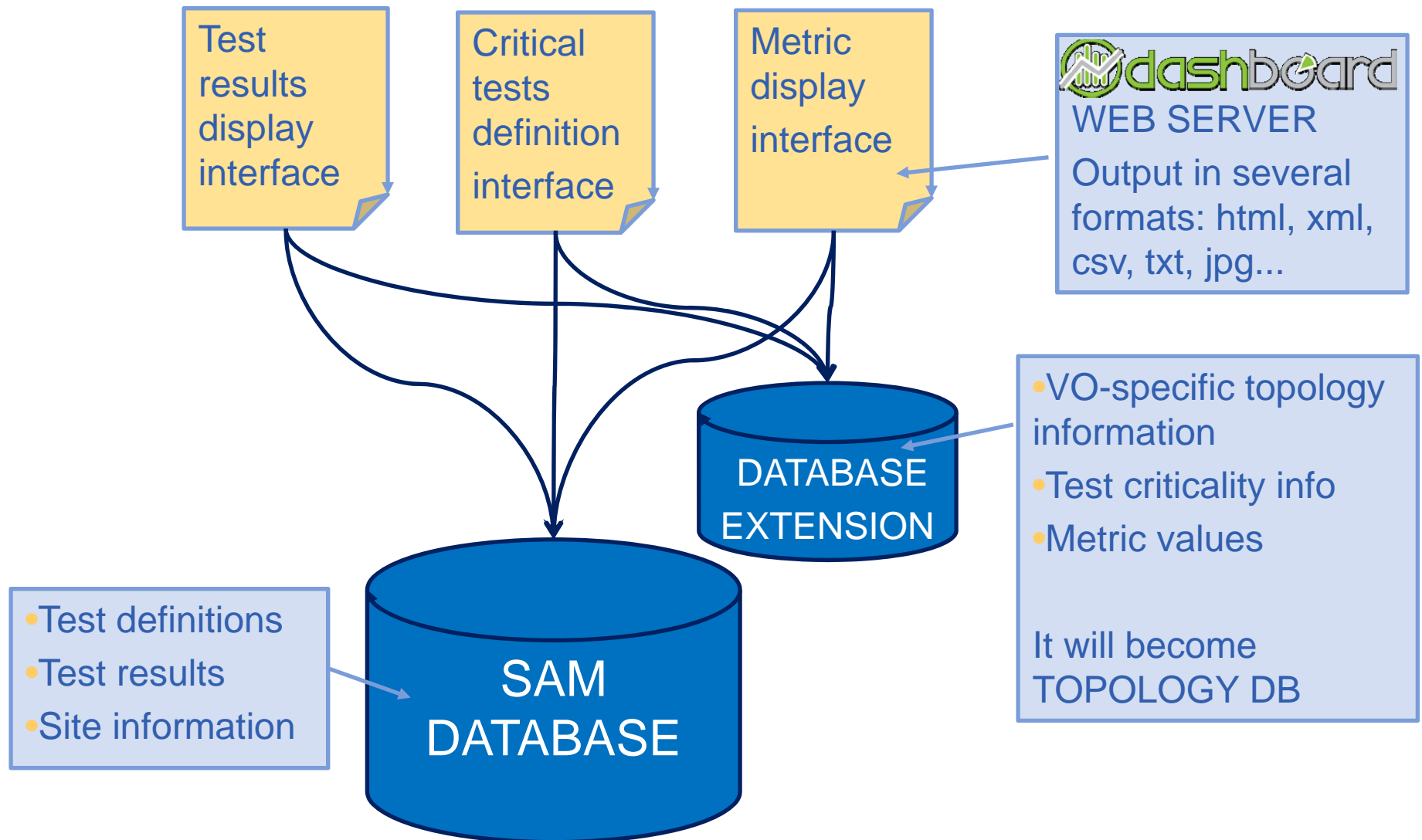


- **An interface to see test results**
  - Latest test results
  - test history for a site, a node
  - Following VO-defined groups
    - Clouds, site names, grouping of sites
- **An interface to define VO-critical tests**
  - Access restricted
  - Multiple availabilities
    - For different services, tiers, sites...
- **An access point to metrics**
  - Availability as defined by GridView
  - Already shown in plenty of talks
- **Stay tuned for some fancy screenshots!**
  - And use the command line interface to get other formats



- **SAM offered its own web portal**
  - Oriented to site administrators
- **CMS requested**
  - With description of CMS topology
  - With availability/reliability of CMS sites
  - Combine SAM database with more CMS info
  - Used by several CMS activities
- **The other experiments liked it**
  - ATLAS, LHCb and ALICE requested it
- **Great opportunity to make a generic portal**
  - Without replication of data
  - With all the functionality for all different clients

- **Using CMS SAM web portal as starting point**
  - Developed by G. Maier
- **Close collaboration with experiments**
  - S. Belforte, A. Di Girolamo, R. Santinelli, A. Sciaba
- **Close collaboration with SAM**
  - D. Collados, J. Shade
- **Using Graph Tool**
  - Nice python image library from B. Bockelman.
  
- **Implementation done by W. Ollivier**



- **Common code for all VOs**
  - Included a degree of customisation
- **Topology**
  - Ex. for ATLAS: Cloud concept
  - Ex. for CMS: specific naming convention (like T0\_CH\_CERN)
- **Per-VO critical tests**
- **Different availabilities can be calculated**
  - Ex.: Reprocessing and Data distribution
- **Just a matter of configuration!**

- Provides a common access point to the end users:
  - VOs (experiments)
  - Site administrators (under development)

- Accessible from everywhere

- Configured for several VOs



## SAM VISUALIZATION

Please select a VO or a site in one of the lists below, and click "See results"

VOs:

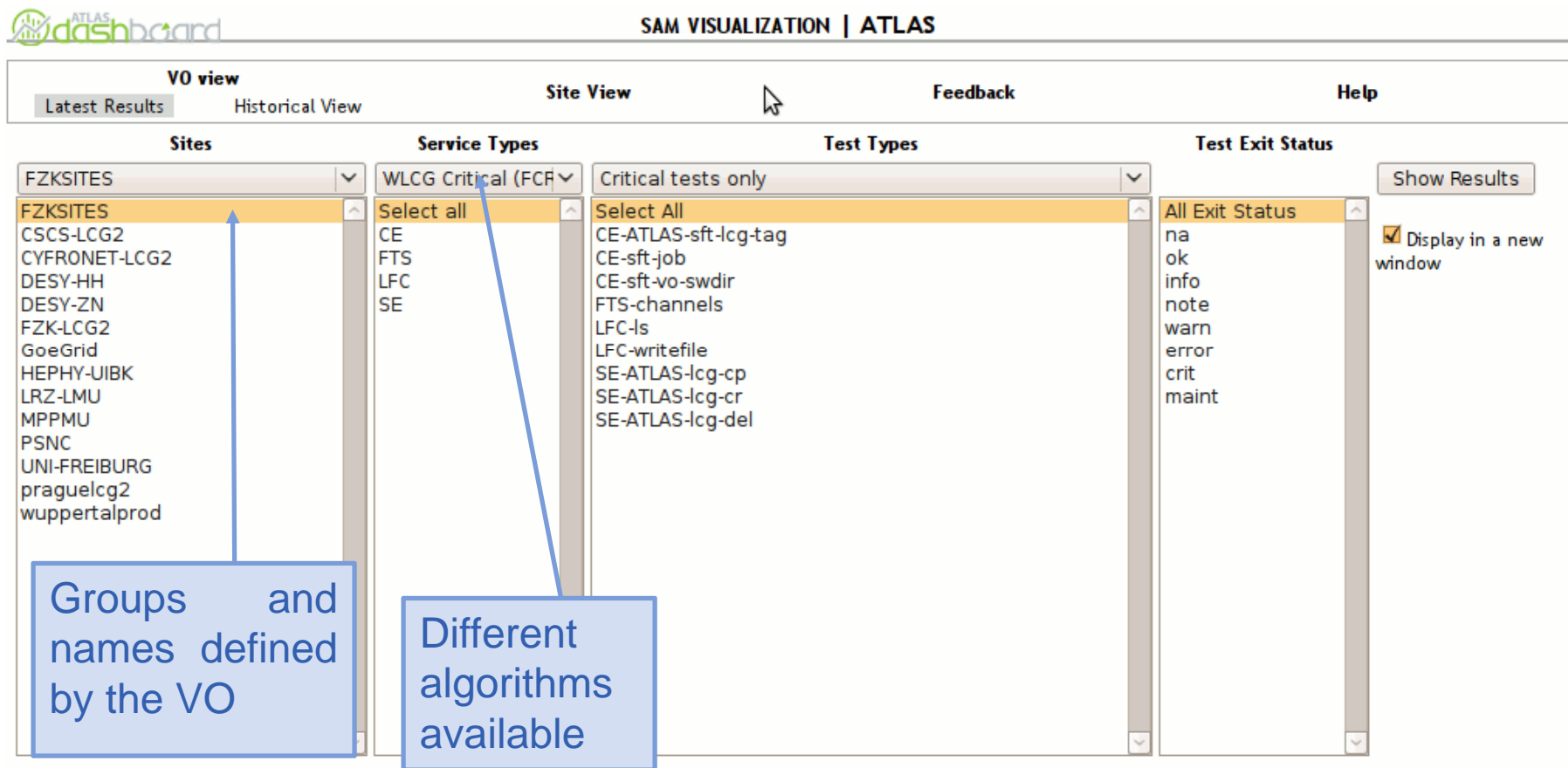
Alice  
 Atlas  
 CMS  
 LHCb  
 OPS

Sites:

AEGIS01-PHY-SCL  
 AEGIS07-PHY-ATLAS  
 AGH-ICSR  
 AGLT2  
 ALBERTA-LCG2  
 AUSTRALIA-ATLAS  
 AUVERGRID  
 BEGRID-KULEUVEN  
 BEGRID-UGENT  
 BEGRID-ULB-VUB

# <http://dashb-sam.cern.ch>

## 1st step: Choose the parameters



The screenshot shows the SAM Visualization | ATLAS interface. At the top, there are tabs for 'VO view' (with sub-tabs 'Latest Results' and 'Historical View'), 'Site View', 'Feedback', and 'Help'. Below these are four filter panels: 'Sites', 'Service Types', 'Test Types', and 'Test Exit Status'. A 'Show Results' button is located to the right of the 'Test Exit Status' panel. A checkbox labeled 'Display in a new window' is checked.

Annotations with blue boxes and arrows point to the 'Sites' and 'Service Types' panels:

- Groups and names defined by the VO**: Points to the 'Sites' panel, which lists various site names like FZKSITES, CSCS-LCG2, etc.
- Different algorithms available**: Points to the 'Service Types' panel, which lists algorithms like CE, FTS, LFC, SE.



## 2nd step: Analyze the results



Sitename	Service Type	Service Name	atlas-lcgtag	js	swdir	ftschn	lfcls	lfcwf	atlas_cp	atlas_cr	atlas_del
IN2P3-CC	CE	cclcgceli01.in2p3.fr	ok	ok	ok						
		cclcgceli02.in2p3.fr	ok	ok	ok						
	FTS	cclcgftsprod.in2p3.fr				ok					
	LFC	lfc-prod.in2p3.fr					ok	ok			
SE	ccsrm.in2p3.fr							ok	ok	ok	
INFN-CNAF	CE	gridit-ce-001.cnaf.infn.it	warn	ok	ok						
NDGF-T1	FTS	fts001.nsc.liu.se				ok					
	SE	srm.ndgf.org							ok	ok	ok
NIKHEF-ELPROD	CE	gazon.nikhef.nl	ok	ok	ok						
		trekker.nikhef.nl	ok	ok	ok						
	LFC	opkamer.nikhef.nl					ok	ok			
	SE	tbn18.nikhef.nl							ok	ok	ok
RAL-LCG2	FTS	lcgfts.gridpp.rl.ac.uk				ok					
	LFC	lcglfc0377.gridpp.rl.ac.uk					error	error			
		lfc.gridpp.rl.ac.uk					ok	ok			
	SE	srm-atlas.gridpp.rl.ac.uk							ok	ok	ok
SARA-MATRIX	CE	ce.gina.sara.nl	ok	ok	ok						
		celisa.grid.sara.nl	ok	ok	ok						
	FTS	fts.grid.sara.nl				ok					
	LFC	lfc-atlas.grid.sara.nl					ok	ok			
	SE										

Node history

Maintenance

Links to the SAM results

- 1st step: Define critical tests
- Only accessible to VO admin
  - <http://dashb-sam-availability.cern.ch>

Django administration Welcome, root. Documentation / Change password / Log out

Home · ATLAS · Availabilities · Add availability

### Add availability

Name:

Tests:

**Available tests**

- FTS-host-cert-valid (cert)
- FTS-infosites (ftsinfo)
- FTS-transfer (xfer)
- FTS-transfer-BNL-LCG2 (BNL-LCG2)
- FTS-transfer-FZK-LCG2 (FZK-LCG2)
- FTS-transfer-IN2P3-CC (IN2P3-CC)
- FTS-transfer-INFN-T1 (INFN-T1)
- FTS-transfer-NDGF-T1 (NDGF-T1)
- FTS-transfer-NIKHEF-ELPROD (NIKHEF-ELPROD)
- FTS-transfer-RAL-LCG2 (RAL-LCG2)
- FTS-transfer-SARA-MATRIX (SARA-MATRIX)
- FTS-transfer-TRIUMF-LCG2 (TRIUMF-LCG2)
- FTS-transfer-Taiwan-LCG2 (Taiwan-LCG2)

➤ Choose all

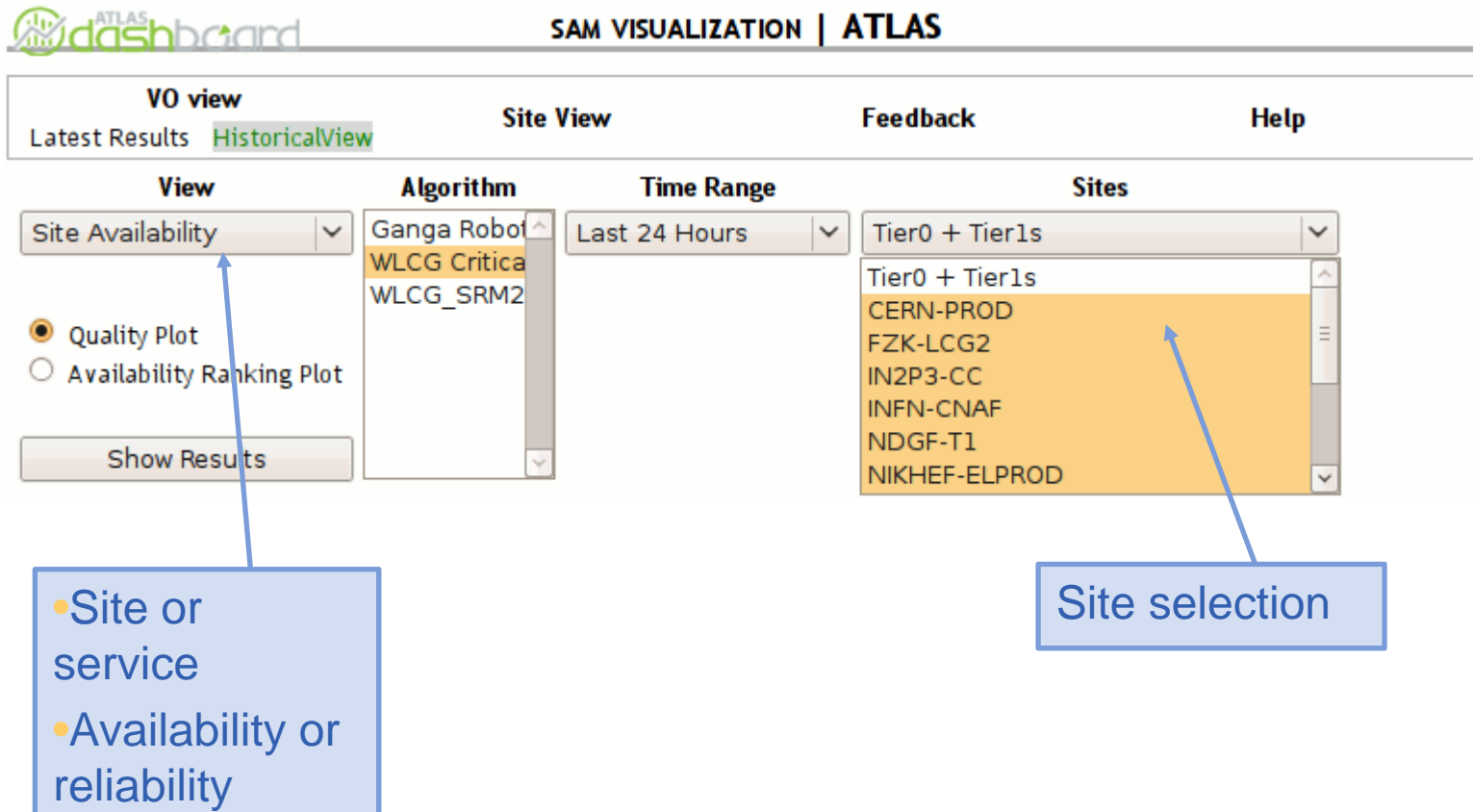
**Chosen tests**

Select your choice(s) and click ➔

- CE-sft-job (js)
- CE-sft-vo-swdir (swdir)
- FTS-channels (ftschn)
- LFC-ls (lfcls)
- LFC-writefile (lfcwf)
- SE-lcg-cp (cp)
- SE-lcg-cr (cr)
- SE-lcg-del (del)

⬅ Clear all

- 2nd step: Ask what you want to see
- Accessible for all users

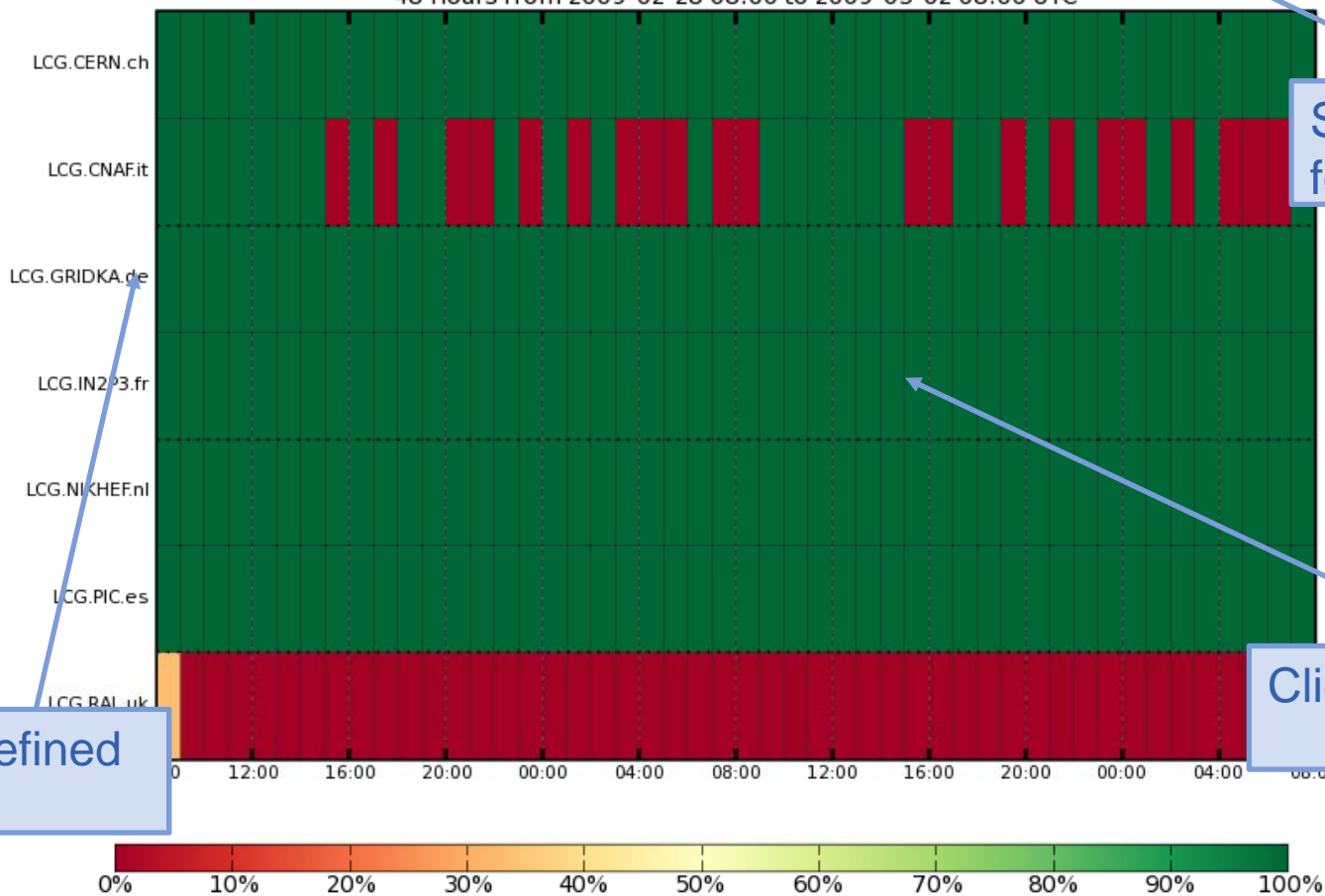


The screenshot shows the ATLAS SAM Visualization interface. At the top, there is a navigation bar with 'VO view' (sub-menu: Latest Results, HistoricalView), 'Site View', 'Feedback', and 'Help'. Below this are four main filter sections: 'View', 'Algorithm', 'Time Range', and 'Sites'. The 'View' section has a dropdown menu set to 'Site Availability' and two radio buttons: 'Quality Plot' (selected) and 'Availability Ranking Plot'. A 'Show Results' button is below. The 'Algorithm' section has a dropdown menu with 'Ganga Robot', 'WLCG Critical', and 'WLCG\_SRM2'. The 'Time Range' section has a dropdown menu set to 'Last 24 Hours'. The 'Sites' section has a dropdown menu set to 'Tier0 + Tier1s' and a list of sites: 'Tier0 + Tier1s', 'CERN-PROD', 'FZK-LCG2', 'IN2P3-CC', 'INFN-CNAF', 'NDGF-T1', and 'NIKHEF-ELPROD'. A blue box with an arrow points to the 'Site Availability' dropdown, containing the text: '• Site or service' and '• Availability or reliability'. Another blue box with an arrow points to the 'Sites' list, containing the text: 'Site selection'.



## Site Availability using LHCb Critical Availability

48 Hours from 2009-02-28 08:00 to 2009-03-02 08:00 UTC

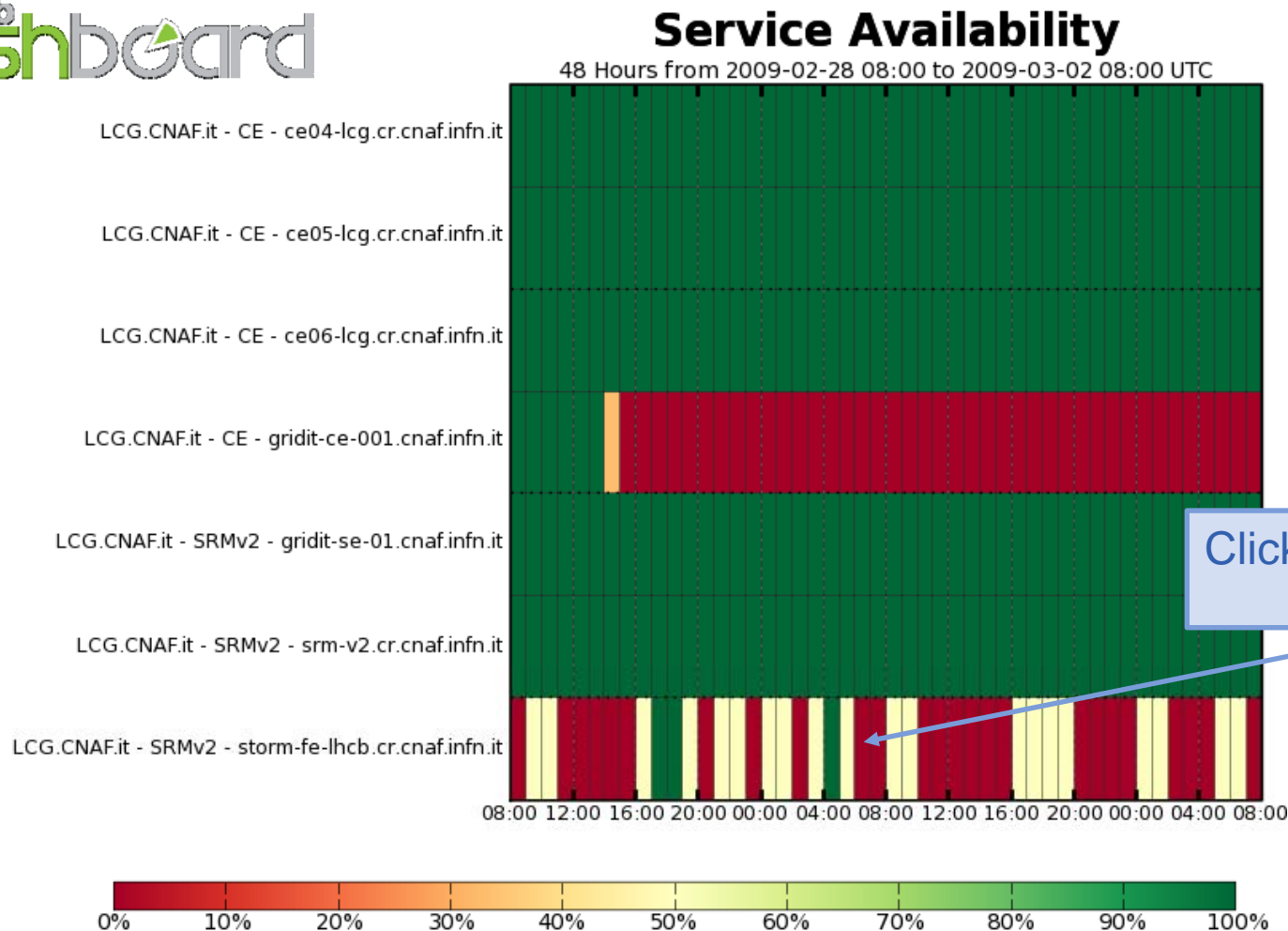


LHCb defined names

Similar plots for reliability

Clickable plot

## Investigating the services at the site



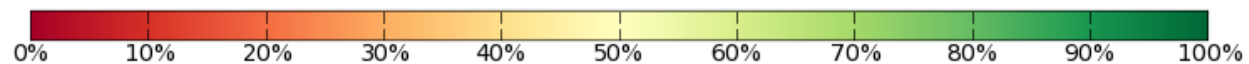
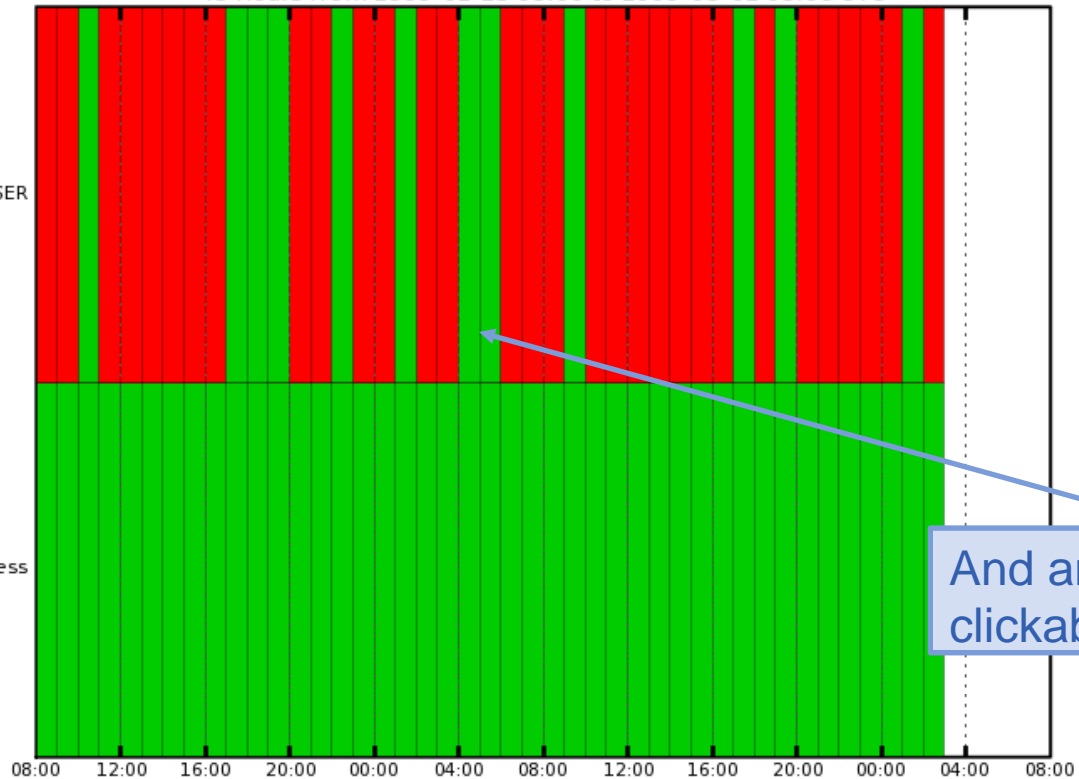
## Test results for storm-fe-lhcb.cr.cnaf.infn.it

48 Hours from 2009-02-28 08:00 to 2009-03-02 08:00 UTC



SRMv2-lhcb-DiracUnitTestUSER

SRMv2-lhcb-FileAccess



And another clickable plot !!

## Going all the way to the test log

**SAM test:** *SRMv2-lhcb-DiracUnitTestU*  
**Submitter VO:** *lhcb*  
**Node:** *storm-fe-lhcb.cr.cnaf.infn.it*  
**Execution time:** *01-Mar-2009 08:33:04*

```
test_createUnitTestDir (__main__.FileTestCase) ... ok
test_putExistsFile (__main__.FileTestCase) ... ok
test_putFilegetTransportURL (__main__.FileTestCase) ... ok
test_putGetFile (__main__.FileTestCase) ... ok
test_putGetFileMetaData (__main__.FileTestCase) ... ok
test_putGetFileSize (__main__.FileTestCase) ... ok
test_putIsFile (__main__.FileTestCase) ... ok
test_putPrestageFile (__main__.FileTestCase) ... FAIL
test_putRemoveFile (__main__.FileTestCase) ... ok
```

```
=====
FAIL: test_putPrestageFile (__main__.FileTestCase)
```

```
-----
Traceback (most recent call last):
```

```
File "/afs/cern.ch/user/s/santinel/scratch0/grid/lhcb/DIRAC/DIRAC3/DIRAC/DataManagementSystem/Client/test/TestStoragePlugIn.py", line 542, in test_putPrestageFile
self.assert_(prestageRes['Value']['Successful'].has_key(destFile))
AssertionError
```

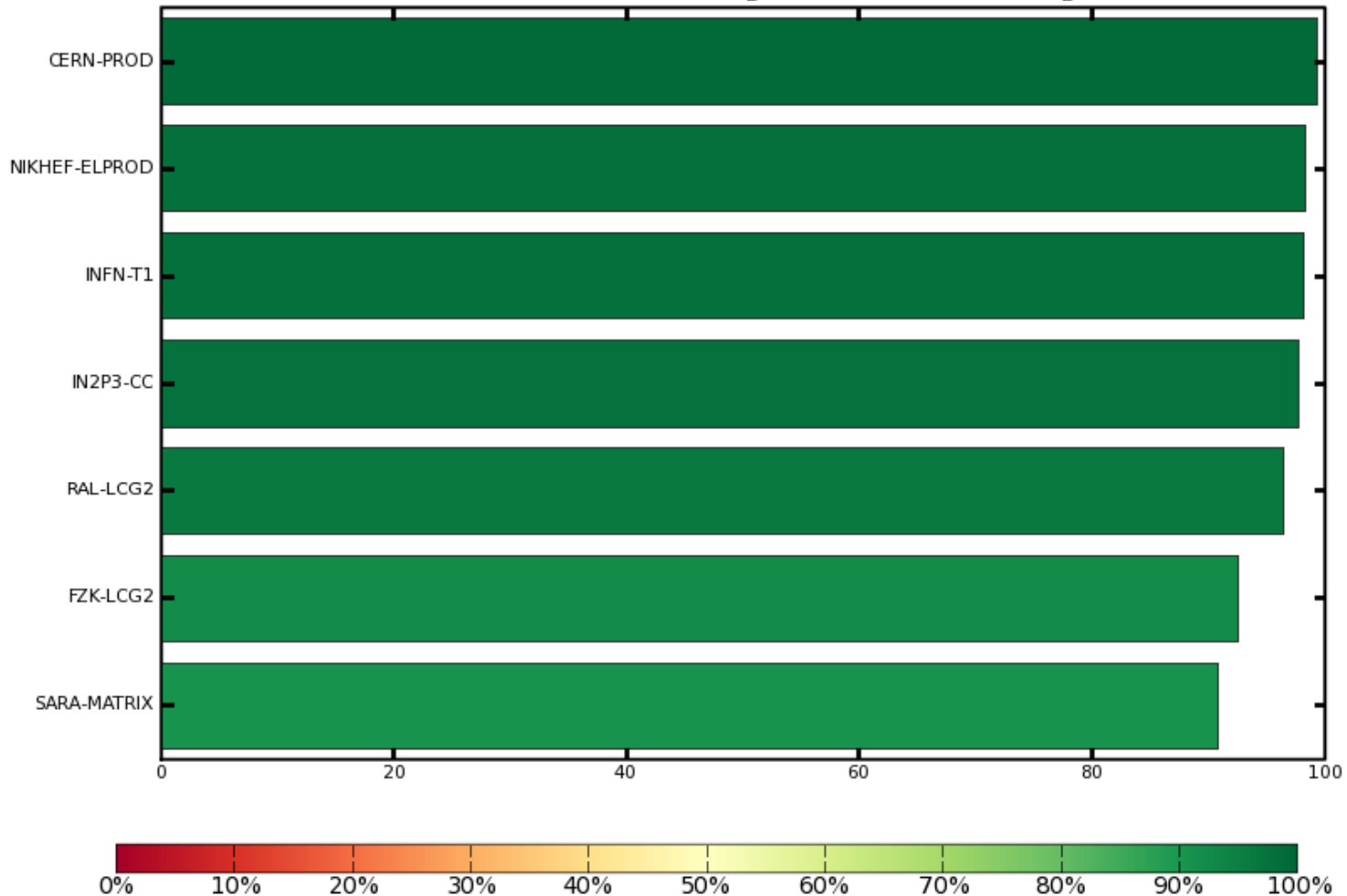
- Different availabilities

Sites	Ganga Robot		WLCG Critical (FCR)		WLCG_SRM2	
	Availability	Reliability	Availability	Reliability	Availability	Reliability
AEGIS01-PHY-SCL	100	100	82.64	82.64	82.64	82.64
AEGIS07-PHY-ATLAS	100	100	100	100	100	100
AGLT2	100	100	0	0	0	0
ALBERTA-LCG2	69.44	69.44	39.58	39.58	0	0
AUVERGRID	100	100	100	100	100	100
Australia-ATLAS	100	100	100	100	0	0
Australia-UNIMELB-LCG2	100	100	0	MAINT	0	MAINT
BEIJING-CNIC-LCG2-IA64	100	100	0	0	0	0
BEIJING-LCG2	100	100	100	100	100	100
BG01-IPP	100	100	100	100	100	100
BG02-IM	100	100	100	100	100	100
BG04-ACAD	100	100	100	100	100	100





## Site Availability, last 31 days



- **View for site admins:**
  - All the VOs running on a site
- **Web server for any VO**
  - At the moment, each VO runs on a virtual host
- **Deprecate old CMS SAM web portal**
- **Include new SAM topology database**
- **Improve maintenance status**
- **Combined ranking plots for several VO**

- **Generic web portal to the SAM test**
  - Latest results, historical views, quality ranks
- **Developed in close collaboration with the experiments**
  - Functionality requested by experiments
  - VO Site topology
- **Close collaboration with SAM group:**
  - Using the SAM database
    - No replication of data
  - Extra tables for topology
    - Will become the topology database
- **Representation of different availabilities and reliabilities**
  - Defined by the experiments

<http://dashb-sam.cern.ch>



Enabling Grids for E-science

- **Evaluated for Service Instance and Sites**
- • **Every 10 minutes**
- • **4 different values**
- – **MAINT: Site/Service under maintenance**
- **(scheduled downtime)**
- – **N/A: Test result for 1+ test not available**
- – **DOWN: 1+ test failed**
- – **OK: All critical test passed**

- **Availability**
- – Hourly and daily
- – Aggregation of Statuses over an hour (day)
- ***Availability=OK / total duration***
- • **Reliability**
- – Same remarks
- ***Reliability= OK / (OK +DOWN)***