SITEVIEW
CURRENT STATUS AND PLANS

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GDB 08.02.2012

MOTIVATION

- Every experiment does evaluation of the site status and experiment activities at the site
- As a rule the state of the site is exposed through experiment-specific monitoring systems
- Too many information sources, different entry points, different implementation
- The information published by the VO-specific monitoring systems should be integrated in a high level site-centric tool which offers a generic view of the computing activities of the LHC experiments at the site.

HISTORY

- SiteView development started in 2009
- First prototype ready by spring 2009
- It suffered from the instability of the collectors and lack of the LHC VO topology descriptors
- In the end of summer 2009 it was completely redesigned. Common implementation with Site Status Board

INFORMATION SOURCES

Over last years progress in decreasing of number of various information sources

VO	Topology	Status	Job processing	Transfer
ALICE	**VO feed**	MonAlisa	MonAlisa	MonAlisa
ATLAS	**VO feed**	**SSB**	**Job monitoring Dashboard**	**DDM Dashboard (Soon WLCG Transfer Dashboard)**
CMS	**VO feed**	**SSB**	**Job monitoring Dashboard**	Phedex **(Soon WLCG Transfer Dashboard)**
LHCb	**VO feed**	**SUM** (Soon new Dirac site monitoring)	Dirac	Dirac **(Soon WLCG Transfer Dashboard)**

SITEVIEW CURRENT STATUS

- **SiteView collects: global site status, job monitoring information and transfer monitoring information**
- **From the implementation point of view SSB and SiteView is the same system (DB schema, collectors , UI)**
- **Recently many improvements done in SiteView :**

  -Collectors became stable, alarms are raised in case any of collectors is stuck

  - Thanks to appearing of VO-feeds in most cases the problems with inconsistent site names (GOCDB-experiment site name mapping) are solved

  - ATLAS and CMS share many underlying monitoring systems : SSB, Dashboard job monitoring applications

  - The underlying monitoring systems like ATLAS DDM Dashboard, Phedex had improved over last two years (Phedex data service)

  - When new FTS version is deployed to all T1 sites there would be a common monitoring system for data transfers shared by CMS, ATLAS and LHCb which could be used as a source for SiteView

- **So far is used mainly for dissemination purposes (runs behind WLCG GoogleEarth). Not actively used for operations**

CURRENT METRICS (1)

- Overall status
- CMS and ATLAS: as defined in the SSB shifter view (realistic but not necessary all metrics are under site responsibility and not all of them are comprehensive to the sites)
- ALICE: based on the status of the critical services as published in MonAlisa
- LHCb: based on critical SAM tests (does not provide complete picture, all tests are OK, but the site is banned, why?)

LHCb is validating new site monitoring system which will define two statuses for the site, one takes into account only things which are under site responsibility, another one defines overall usability of the site from the LHCb perspective

Should this strategy be applied for all experiments in order to disentangle site-related problems from the problems of other nature?

CURRENT METRICS (2)

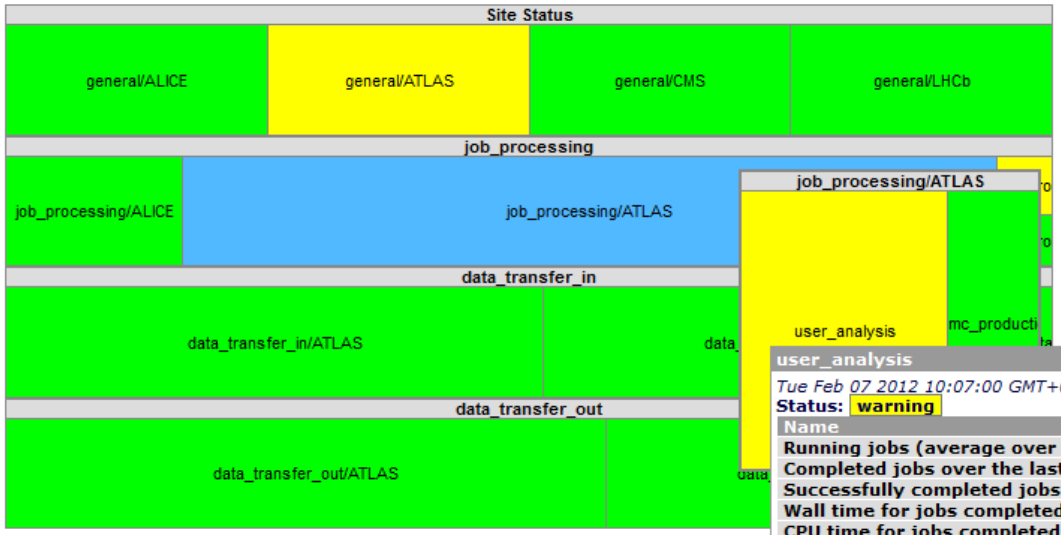
- Job monitoring (where possible split by activity analysis, production, tests, etc…):
  - # of running jobs, average per hour
  - success rate (1,4,24 hours) as ratio of successful jobs to all accomplished jobs
  - CPU and wall clock consumption
- Data transfer (in and out)
  - average transfer rate over last hour
  - success rate as ratio of successfully transferred files to all transfer attempts over last 4 hours

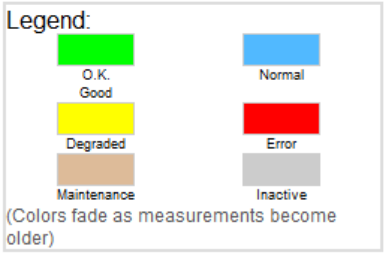
VISUALIZATION (1)

Siteview Gridmap

INFN-T1

Treemap visualization
Per-site snapshot view





Oldest Measurement: Over 4 minutes ago

user_analysis

Tue Feb 07 2012 10:07:00 GMT+0100

Status: warning

Name	Value	Status	Target	Go to
Running jobs (average over the last hour)	2339 jobs	good		URL
Completed jobs over the last hour	2 jobs	good		URL
Successfully completed jobs over the last hour	2 jobs	good		URL
Wall time for jobs completed over the last hour	522 seconds	good		URL
CPU time for jobs completed over the last hour	301.90000000000003 seconds	good		URL
Completed jobs over the last four hours	1619 jobs	warning		URL
Successfully completed jobs over the last four hours	681 jobs	warning		URL
Wall time for jobs completed over the last four hours	3904015 seconds	warning		URL
CPU time for jobs completed over the last four hours	3597736.59 seconds	warning		URL

Siteview	ATLAS	CMS	LHCb	ALICE
User Guide	Site Status Board	Site Status Board	Site Status Board	Site Status Board
Dashboard Homepage	DDM Dashboard	Job Dashboard	Running Jobs (Dirac)	Job Status (ALIMonitor)
	Panda Monitoring	PhEDEx (Production)	Storage Usage T0/T1 (Dirac)	Transfer Status (ALIMonitor)

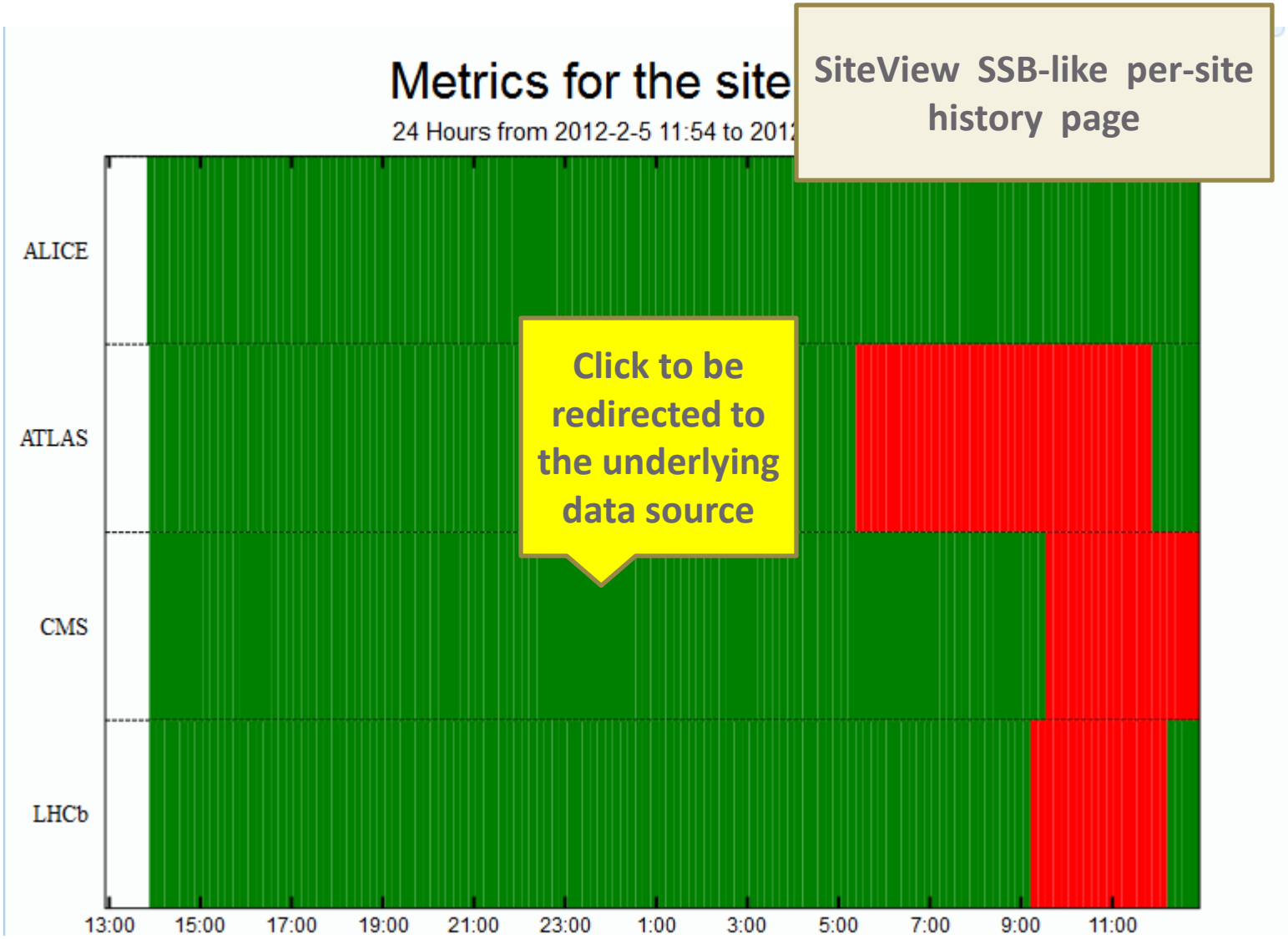
VISUALIZATION (2)

Click on a given site to see 24 hours history

SiteView SSB-like all sites snapshot page

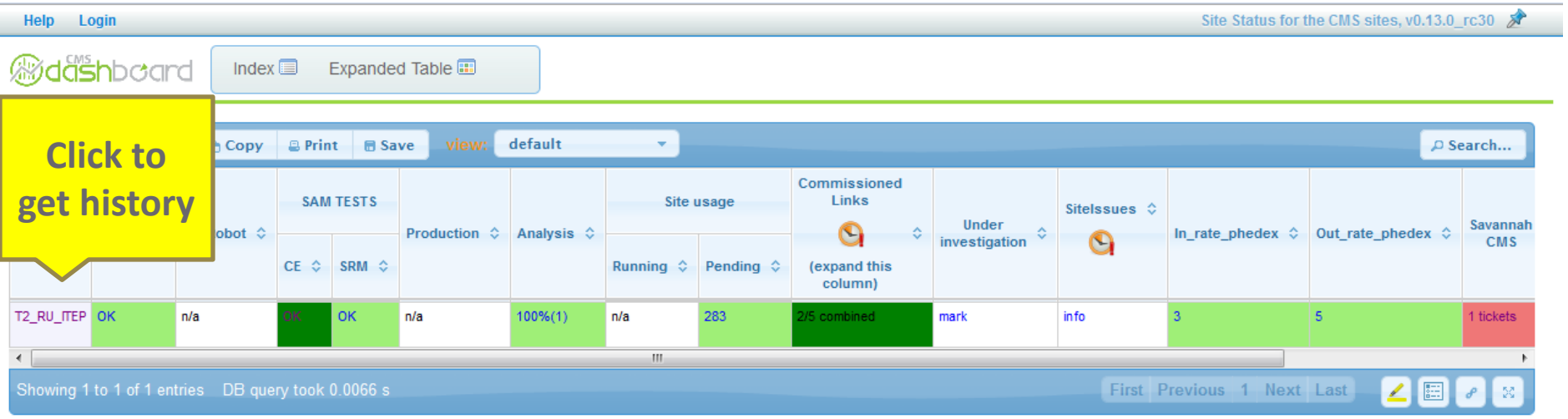
	ATLAS	LHCb	CMS	ALICE
AGLT2		n/a	n/a	n/a
AMD64.PSNC.PL		n/a	n/a	ok
ANALY_BNL_T3		n/a	n/a	n/a
ANL		n/a	n/a	n/a
ANLASC		n/a	n/a	
Australia-ATLAS		n/a	n/a	
AUVERGRID	n/a	ok	n/a	
BEgrid-ULB-VUB	n/a	n/a	ok	
BEIJING-LCG2	ok	n/a	ok	
BelGrid-UCL	n/a	n/a	error	
BELLARMINE-ATLAS-T3	ok	n/a	n/a	
BG01-IPP	n/a	error	n/a	n/a
BG04-ACAD	n/a	n/a	n/a	n/a
BG05-SUGrid	n/a	ok	n/a	n/a
BNL-ATLAS	ok	n/a	n/a	n/a
Brandeis-Atlas-T3	ok	n/a	n/a	n/a
brown-cms	n/a	n/a	ok	n/a
BUDAPEST	n/a	n/a	ok	ok
BU_ATLAS_Tier2	ok	n/a	n/a	n/a
BY-NCPHEP	n/a	n/a	error	n/a
CA-ALBERTA-WESTGRID-T2	ok	n/a	n/a	n/a
CA-MCGILL-CLUMEQ-T2	ok	n/a	n/a	n/a
CA-SCINET-T2	ok	n/a	n/a	n/a
CA-VICTORIA-WESTGRID-T2	ok	n/a	n/a	n/a
CBPF	n/a	n/a	n/a	n/a

VISUALIZATION (3)

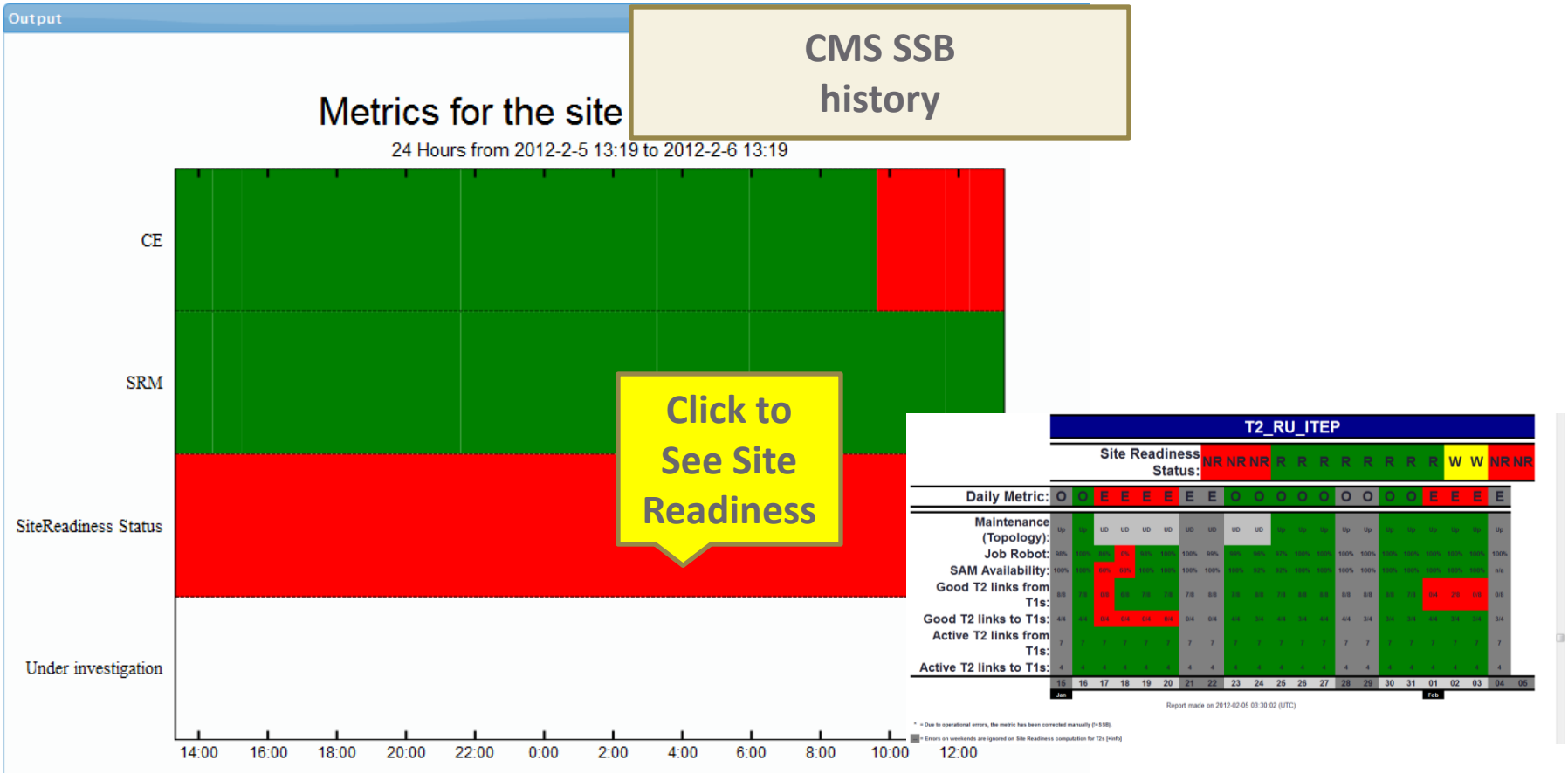


Navigation to the information sources (1)

CMS SSB
Snapshot view

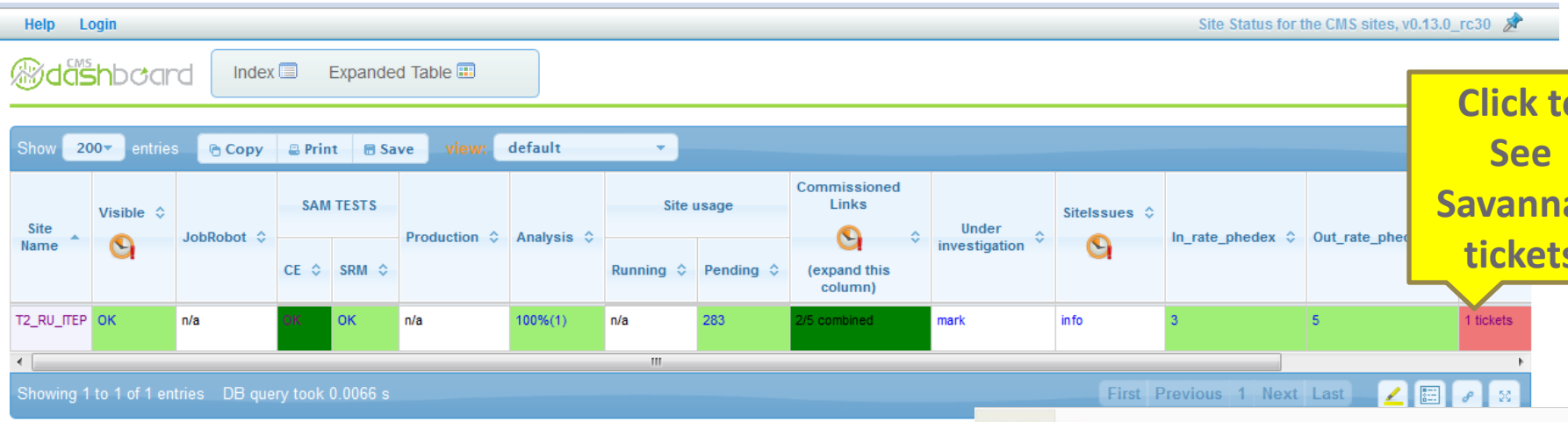


Navigation to the information sources (2)

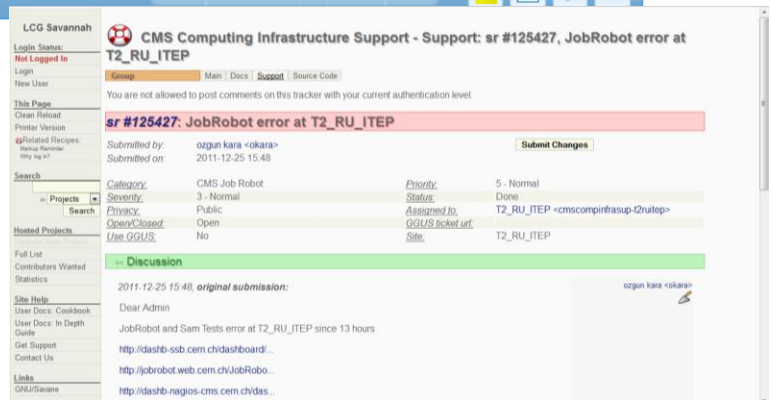


Navigation to the information sources (3)

CMS SSB



Click to See Savannah tickets



ISSUES

- In order to make the system useful for operations serious commitment from the sites and experiments is required
- Question to the sites:

-Is information which is provided by SiteView is what you need?

Is it comprehensive? Is it consistent with local site monitoring?

- Questions to the experiments:

- Is it possible to define realistic status of the site usability based on set of metrics which are under site responsibility and are comprehensive to the site? In case when the cause of the problem is not under site control, how to communicate what is wrong in a clear way?

These questions have to be addressed following the outcome of the Operations TEG. Set of current metrics and status definitions to be reviewed. When the new set of metrics and status definitions is agreed , validation of the SiteView data has to be performed both by sites and experiments.

SUMMARY

- The SiteView application is in place for few years

It has common implementation with Site Status Board.

Number of various information sources used by SiteView is gradually decreasing, though it is not realistic to hope that we can always enforce use of common solutions

- In order to make it useful for operations, commitment of the potential users (sites) and information owners (VOs) is required. Metrics and status definitions have to be reviewed. After changes exposed data needs validation
- In the process of defining new metrics the most complicated task is to disentangle site problems from the problems related to VOs, users, applications, external GRID services…
- This work will be followed up in the scope of Operations TEG

GridMap UI

http://dashb-siteview.cern.ch

SSB-like UI

http://dashb-siteview/dashboard/request.py/siteview