

Monitoring – What next ?

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GDB

10th October 2007



Finish what we've started...

- Several components in progress
 - Nagios site monitoring prototype
 - SAM Integration for OSG (& NDGF)
 - Gridmap



Nagios Display

Current Network Status

Last Updated: Wed Oct 10 15:24:52 CEST 2007
 Updated every 90 seconds
 Nagios® - www.nagios.org
 Logged in as: *nagiosadmin*

[View History For This Host](#)

[View Notifications For This Host](#)

[View Service Status Detail For All Hosts](#)

Host Status Totals

Up	Down	Unreachable	Pending
1	0	0	0

All Problems	All Types
0	1

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
16	3	0	0	0

All Problems	All Types
3	19

Service Status Details For Host 'ce110.cern.ch'

Host ↑↓	Service ↑↓	Status ↑↓	Last Check ↑↓	Duration ↑↓	Attempt ↑↓	Status Information
ce110.cern.ch	CE-host-cert-valid-OPS-remote	OK	10-10-2007 12:51:40	25d 22h 30m 19s	1/1	SAM status: ok
	CE-sft-brokerinfo-OPS-remote	OK	10-10-2007 13:22:22	25d 22h 4m 18s	1/1	SAM status: ok
	CE-sft-caver-OPS-remote	WARNING	10-10-2007 13:22:29	0d 6h 1m 30s	1/1	SAM status: warn
	CE-sft-csh-OPS-remote	OK	10-10-2007 13:22:24	25d 22h 4m 15s	1/1	SAM status: ok
	CE-sft-job-DTeam-remote	WARNING	10-10-2007 14:25:58	2d 9h 2m 45s	1/1	SAM status: warn
	CE-sft-job-OPS-remote	OK	10-10-2007 13:17:04	14d 8h 7m 30s	1/1	SAM status: ok
	CE-sft-lcg-rm-OPS-remote	OK	10-10-2007 13:22:49	5d 17h 59m 48s	1/1	SAM status: ok
	CE-sft-softver-OPS-remote	OK	10-10-2007 13:22:22	25d 22h 4m 18s	1/1	SAM status: ok
	hr_srce.CAdist-Version	WARNING	10-10-2007 15:23:35	0d 0h 1m 17s	1/4	Official IGTf version is 1.17. Old CA distribution version found, new version is 1 days old.
	hr_srce.GRAM-Auth	OK	10-10-2007 15:20:19	11d 22h 51m 14s	1/4	GRAM Authentication test successful
	hr_srce.GRAM-CertLifetime	OK	10-09-2007 15:26:58	25d 21h 30m 34s	1/4	Certificate will expire in 66.07 days (Dec 14 15:07:39 2007 GMT).
	hr_srce.GRAM-Command	OK	10-10-2007 15:19:49	11d 22h 39m 25s	1/4	GRAM OK: Command successfully executed. Output is: "1192022391". Result matches the expected result.
	hr_srce.GridFTP-Transfer	OK	10-10-2007 15:19:48	11d 22h 39m 19s	1/4	Upload to remote computer succeeded. Download from remote computer succeeded. File successfully removed from remote computer. Received file is valid.
	org.egee.npm.CE-remote	OK	10-10-2007 15:20:05	25d 21h 26m 49s	1/1	OK
	org.nagios.GridFTP-Check	OK	10-10-2007 15:20:07	25d 21h 26m 47s	1/4	FTP OK - 0.022 second response time on port 2811 [220 ce110.cern.ch GridFTP Server 1.12 GSSAPI type Globus/GSI wu-2.6.2 (gcc32dbg, 1062606889-42) ready.]
	org.nagios.LocalLogger-PortCheck	OK	10-10-2007 15:20:08	12d 3h 33m 1s	1/4	TCP OK - 0.001 second response time on port 9002
	org.osg.general.ping-host	OK	10-10-2007 15:20:12	21d 23h 47m 25s	1/4	OK
	org.osg.globus.gram-authentication	OK	10-10-2007 15:20:45	21d 23h 46m 35s	1/4	OK
	org.osg.globus.gridftp-simple	OK	10-10-2007 15:20:52	20d 22h 2m 3s	1/4	OK



SAM OSG integration

Tests Displayed

ops

- OSGCE-org.osg.local.hostcert-expiry
- OSGCE-org.osg.general.ping-host
- OSGCE-org.osg.batch.jobmanagers-available
- OSGCE-org.osg.batch.jobmanager-fork-status
- OSGCE-org.osg.local.httpcert-expiry
- OSGCE-org.osg.batch.jobmanager-condor-status
- OSGCE-org.osg.local.cacerts-expiry

show ops critical tests

Sort by: RegionName

ShowSensorTests

show	stat	description	sum
<input checked="" type="checkbox"/>	NA	no status available	0
<input checked="" type="checkbox"/>	OK	normal status	4
<input checked="" type="checkbox"/>	INFO	useful information	0
<input checked="" type="checkbox"/>	NOTE	important information	0
<input checked="" type="checkbox"/>	WARN	subject may fail soon	2
<input checked="" type="checkbox"/>	ERROR	subject has failed and problem is localized	0
<input checked="" type="checkbox"/>	CRIT	subject has failed and problem is fatal	0
<input checked="" type="checkbox"/>	MAINT	subject is under maintenance	0

testname	desc	crit
hcert	local.httpcert-expiry	CT
gftp	globus.gridftp-simple	CT
crl	certificates.crl-expiry	CT
dirperm	general.osg-directories-CE-permissions	CT
jmv	batch.jobmanagers-available	CT
ca	certificates.cacert-expiry	CT
jmmf	batch.jobmanager-managedfork-status	CT
ping	general.ping-host	CT
jmf	batch.jobmanager-fork-status	CT
jml	batch.jobmanager-loadleveler-status	CT
jmp	batch.jobmanager-pbs-status	CT
ver	general.osg-version	CT
cert	local.hostcert-expiry	CT
ccert	local.containercert-expiry	CT
jmc	batch.jobmanager-condor-status	CT
jml	batch.jobmanager-lsf-status	CT
gram	globus.gram-authentication	CT
lca	local.cacerts-expiry	CT

No	Sitellname	Hostname	Status	ops																
				jml	dirperm	jmp	ca	jmmf	gftp	crl	ccert	jml	gram	ver	cert	ping	jmv	jmf	hcert	jmc
Unknown																				
1	bnl itb test1	gridtest01.racf.bnl.gov	WARN	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
2	cit itb 1	cithep201.ultralight.org	OK	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
3	lbl vtib	osp1.lbl.gov	OK	na	na	na	na	na	na	na	na	na	na	na	ok	na	ok	na	na	na
4	purdue-itb	itb.rcac.purdue.edu	OK	na	na	na	na	na	na	na	na	na	na	na	ok	na	na	na	na	na
5	ttu-testwulf	testwulf.hpcc.ttu.edu	WARN	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
6	uc itb	uct3-edge7.uchicago.edu	OK	na	na	na	na	na	na	na	na	na	na	na	na	na	ok	na	na	na

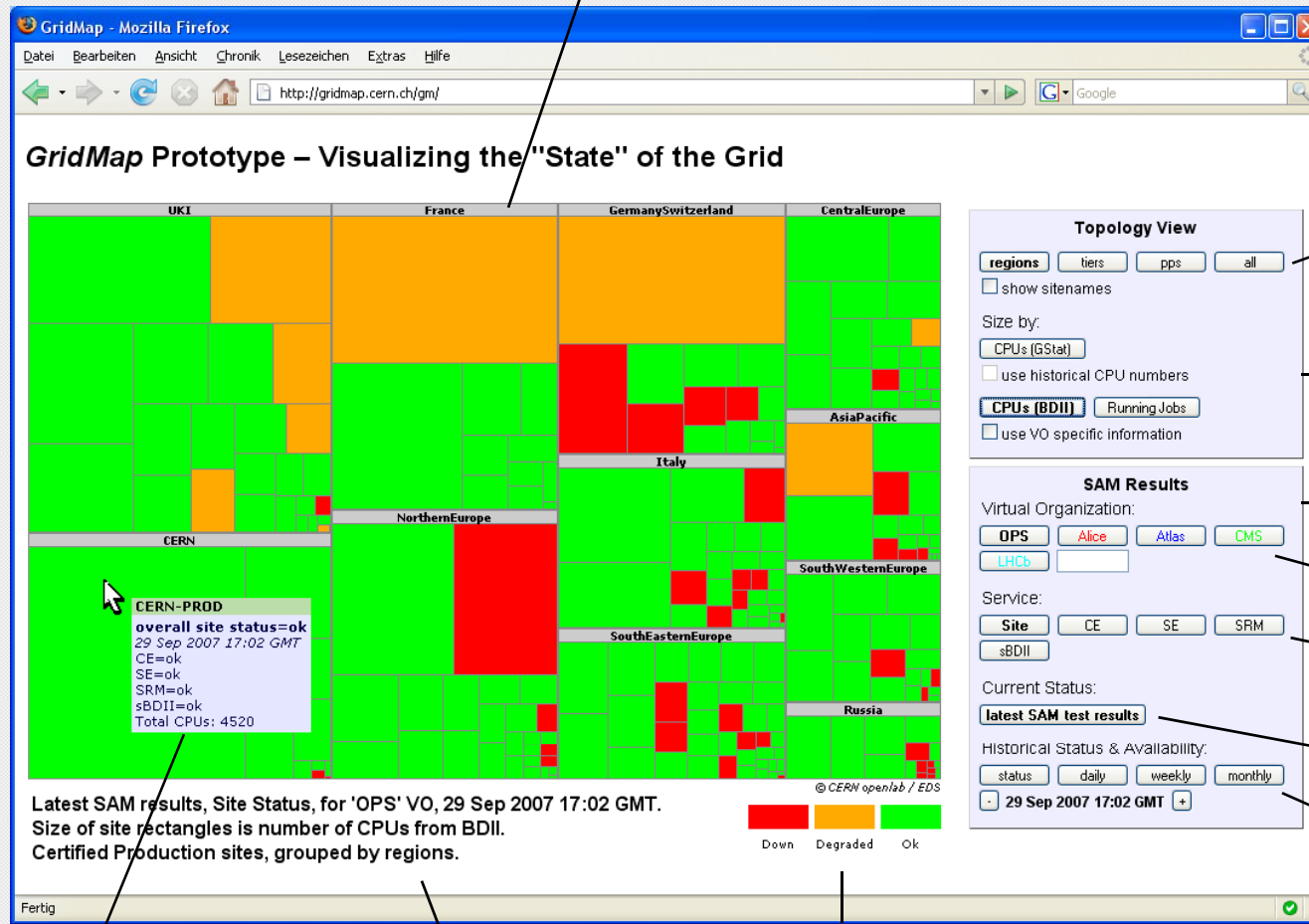
SAM Development Mailing List (<same-devel@cern.ch>
 fied: Oct 09 2007, 16:17



GridMap Prototype View Component

Link: <http://gridmap.cern.ch>

Drilldown into region by clicking on the title



Grid topology view (grouping)

Metric selection for size of rectangles

Metric selection for colour of rectangles

VO selection

Overall Site or Site Service selection

Show SAM status

Show GridView availability data

Context sensitive information

Description of current view

Colour Key



But...

- Lots of communication done
 - Hepix, CHEP, EGEE'07, WLG Workshop
- But we need more feedback !
 - Is this actually helping the site admins?
- How to push adoption?
 - Especially for Nagios site monitoring

- Monitoring is good
 - But what to do when something goes wrong?

- System Management Working Group?



SLA, MoU and Metrics

- Are we gathering the right metrics?
 - Probably, and it's getting better
- Are we making the right calculations?
 - Currently naïve, e.g "1 SE up at site for green in SAM"
 - VOs putting their tests in SAM helps
 - Per-VO availability (or sets of availability numbers)
- How do move to automatically measuring MoU targets ?



And (possibly) coming up

- Visualization improvements
 - Gridview, SAM, Dashboards
 - WLCG Dashboard (???)
 - Management reporting
- Messaging Infrastructure
 - Prototyping messaging system for monitoring
 - To be a "R-GMA replacement" for WLCG
 - Used (transparently) for OSG-SAM integration
 - APEL, Job Monitoring, ...



Summary

- Some new tools and approaches
 - Seem to be on right direction
 - But need feedback
 - AFAWK, lots of interest but little real uptake
- The next (evident) steps are better documentation for site admins
 - "What to do when the grid fails"
- Need direction on where else to go
 - Monitoring is a big field
 - And we've not got infinite effort