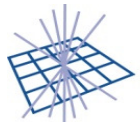

Tier1 Tools

Tiju Idiculla, STFC RAL

UK HEP SYSMAN – 3 June 2014

Dashboard

- Changes since last presentation(June 2010),
  - Twitter updates
  - Plot of the number of jobs on the farm (from BDII)
  - List of open GGUS tickets, with visual indication of new tickets
  - Capacity information from REBUS
  - Notifier contacts grouped for easy operations

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OPS SAM Tests
APEL
ARC-CE
CREAM-CE
Central-LFC
FTS
LB
Local-LFC
MyProxy
SRMv2
Site-BDII
Top-BDII
VO-box
WMS
eMI.ARGUS

ATLAS SAM Tests
ARC-CE
SRMv2

ALICE SAM Tests
CREAM-CE

CMS SAM Tests
ARC-CE
CREAM-CE
SRMv2

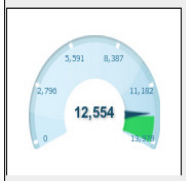
LHCB SAM Tests
CREAM-CE
SRMv2

Key

OK
WARNING
CRITICAL
UNKNOWN
MISSING
REMOVED

Jobs on the farm

HTCondor Farm



Capacity (REBUS)

Type	Pledge (2014)
CPU (HEP-SPEC06)	95,230
Disk (Tbytes)	10,030
Tape (Tbytes)	12,410

Type	Installed (2014-06)
Physical CPU	1,588
Logical CPU	13,488

Notices

Date	Added by	Subject	Description
28/05/2014 11:49	Gareth Smith	Intervention on Network Completed.	Planned network reconfiguration completed this morning. Some problems with access to some disk servers 09:50 - 10:15. Castor recovered OK.
lcgfts.gridpp.rl.ac.uk :57	Gareth Smith	Status Update	Status Update: No problems reported over the bank holiday weekend and all systems running OK now.
29/04/2014 14:54	Gareth Smith	Network Intervention Complete.	Today's planned network intervention has been completed successfully. All services have been restarted and being monitored closely.
04/04/2014 09:42	John Kelly	WMS Problems	The WMS problems are resolved. We believe that the problems were due to some rogue jobs / proxies. We will continue to monitor the servers.
03/04/2014 17:09	Gareth Smith	WMS Problems	We are experiencing some problems with our WMS services. This is under investigation.

[Click here to add]

Disk servers in Intervention

No machines in intervention

Downtimes

Ongoing downtimes

Downtime ID	Hosts	Start time	End time	Severity	Description
14461	List of machine(s)	02/06/2014 14:30	19/06/2014 13:00	UNSCHEDULED OUTAGE	System being decommissioned.

Downtimes during next 2 weeks

Downtime ID	Hosts	Start time	End time	Severity	Description
14462	List of machine(s)	04/06/2014 08:00	04/06/2014 17:00	SCHEDULED WARNING	Warning (At Risk) on tape systems during testing of new tape library controller.
14404	List of machine(s)	10/06/2014 08:50	10/06/2014 15:00	SCHEDULED OUTAGE	Castor and batch services down during upgrade of Castor Nameserver to version 2.1.14.

Open GGUS tickets

Ticket#	Priority	Status	VO	Problem Type	Last Update (UTC)	Subject
105571	less urgent	in progress	lhcb	Information System	2014-06-03 07:20:00	BDII and SRM publish inconsistent storage capacity numbers
105405	urgent	in progress	none	Other	2014-05-27 08:22:00	please check your Vidyo router firewall configuration
105161	less urgent	on hold	none	Middleware	2014-05-29 15:20:00	none Jobs submitted into CREAM queues through lcgwms05.gridpp.rl.ac.uk & lcgwms06.gridpp.rl.ac.uk WMSs are are Ready status long time (more as 5 hours)
105100	less urgent	in progress	cms	CMS_Data Transfers	2014-05-30 13:35:00	T1_UK_RAL Consistency Check (May14)
88249	urgent	waiting for reply	snoplus.snolab.ca	VO Specific Software	2014-06-02 08:57:00	please configure cvmfs stratum-0 for SNO+ at RAL T1

Storage Usage (in GB)

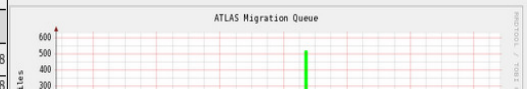
Accounting information

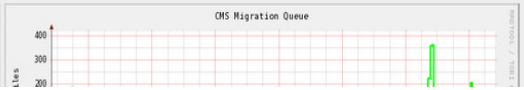
VO/DiskPool	Disk Used		Disk Free	Disk Total	Tape Used
alice	94.29 %	221,774		235,193	364,662
atlas	86.05 %	4,361,660		5,068,462	5,148,413
cms	70.42 %	1,677,160		2,381,573	3,597,278
lhcb	77.94 %	2,010,710		2,579,750	1,395,939
none	74.99 %	26,403		35,210	28
ilc	74.99 %	26,403		35,210	196,543
mice	74.99 %	66,009		88,026	4,223
minos	74.99 %	26,403		35,210	11,912
na62	29.05 %	34,119		117,462	0
snoplus	74.98 %	13,201		17,605	4,413
t2k	74.99 %	26,403		35,210	549,243
superb	74.99 %	26,403		35,210	2,095

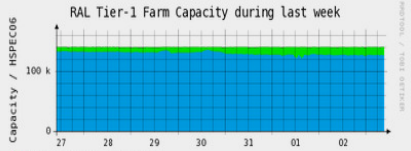
Click on VO name for details

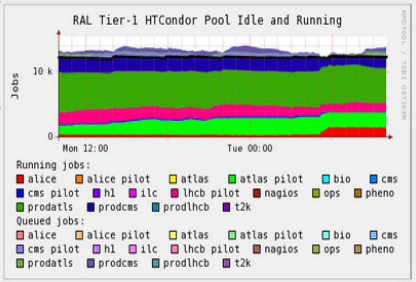
Castormon

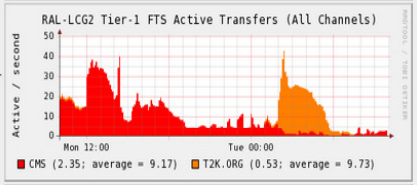
Migration Queues

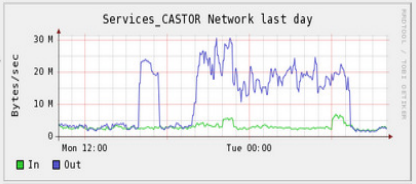


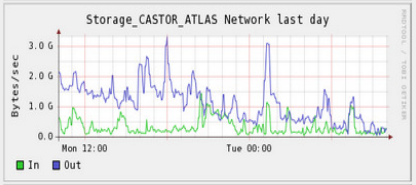


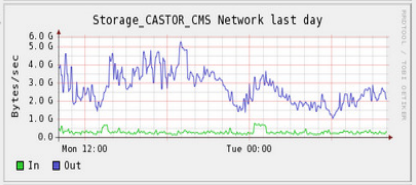












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From	RAL Tier1 Duty Administrator <dutyadm@gridpp.rl.ac.uk>
X-RAL-Tier1-Sender-DN	/C=UK/O=eScience/OU=CLRC/L=RAL/CN=tiju idiculla
CC	
Subject	
Message	0 characters entered.
Ops Blog	
Dashboard	(Will be posted to Twitter as well, truncated to 140 characters)
Create OnCall ticket	
Twitter update	(Character limit = 140)

Group	Contact	Add	Comment
Tier1 Contacts	Duty Admin		
	ESC PSCS CASTOR Team		
	ESC PSCS Fabric Team		
	ESC PSCS Grid Services Team		
	ESC PSCS Production Team		
	Tiju GridPP		
GridPP	GridPP-Users Mailing List		
Alice	Lee Barnby		
	Latchezar Betev		
Atlas	Atlas Cloud Squad		Questions etc.
	Atlas ADC Ops & Point 1 Shifts		Report most operational problems (includes Cloud Squad)
	Atlas ADC Experts		Major problems that need ATLAS input (CC during CERN hols) (includes Cloud Squad)
BaBar	Tim Adye		
	Fergus Wilson		
CMS	Andrew Lahiff		
	Chris Brew		
	David Colling		
LHCb	Raja Nandakumar		
	Renato Santana		data loss only
	LHCb Grid Expert On-Call		
	LHCb Data Management		Notify of Data Loss
MICE	MICE Data Manager		
	Paul Kyberd		
	Chris Rogers		MICE Head of Computing
MINOS	Alfons Weber		
ILC	Steve Worm		
T2K.org	Ben Still		
	Jonathan Perkin		
SNO	Steven Biller		
NA62	Janusz Martyniak		
Diamond	Alun Ashton		
	Ghita Kouadri Mostefaoui		
	Greg Matthews		
	Nick Rees		
	Tina Friedrich		

Availability plots

- JSON data from EGI and WLCG SAM PI
- Amcharts used for the plots

Site Availability charts

- Month(daily)
- Week(daily)
- Week(Hourly)
- Day

Service availability charts

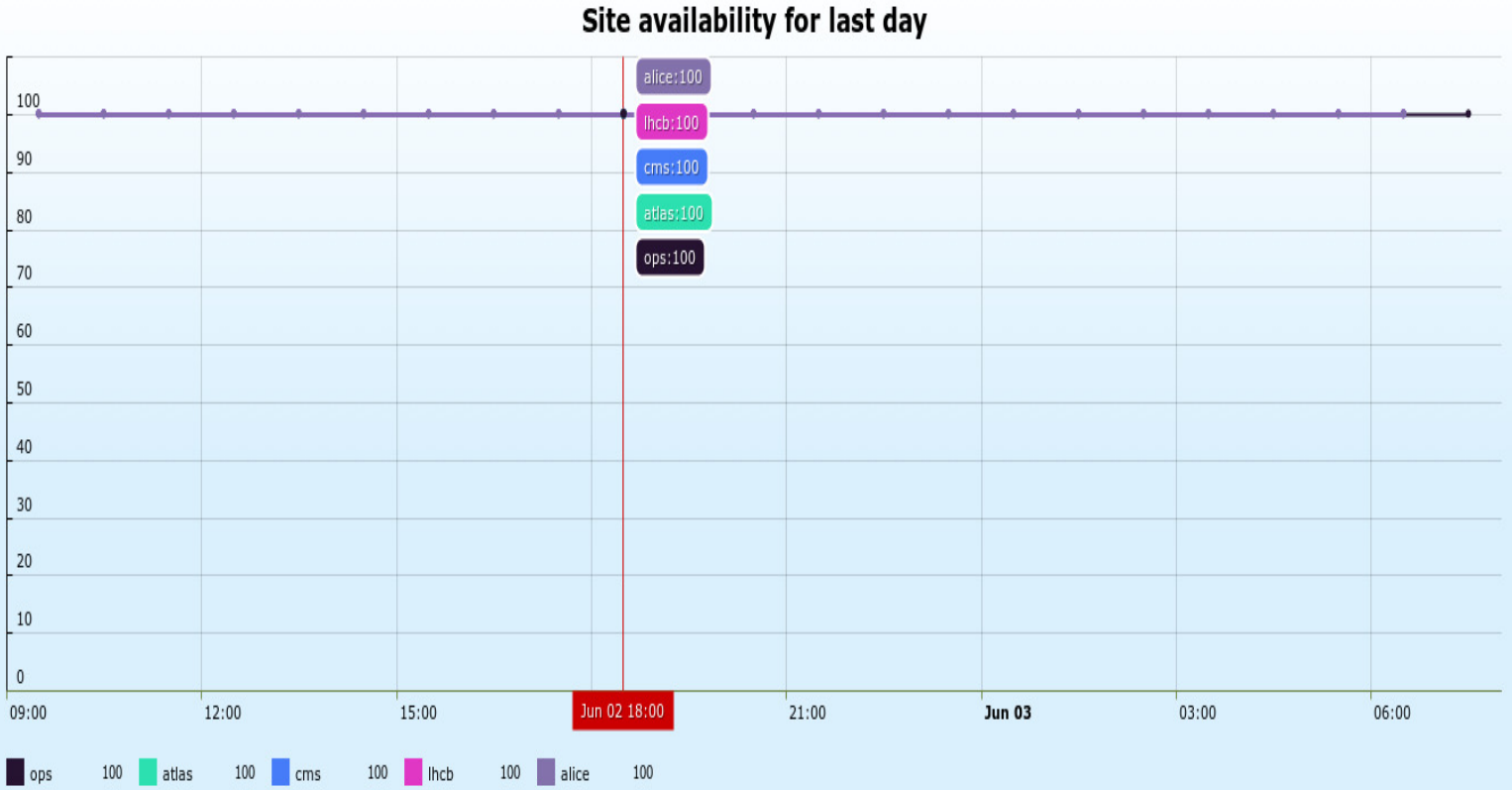
- Alice
- ATLAS
- CMS
- LHCb
- OPS [This could crash your browser]

Service availability charts (SRM Only)

- ATLAS
- CMS
- LHCb
- OPS

Monthly Data

- Availability of all Tier1s
- Site
- Castor
- Grid Services (Old)



Links to VO Results

- ALICE
- Atlas
- CMS
- LHCb

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Site Availability charts

- Month(daily)
- Week(daily)
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Monthly Data

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- Site
- Castor
- Grid Services (Old)

Site availability for last week

Links to VO Results

- ALICE
- Atlas
- CMS
- LHCb

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Site Availability charts

- Month(daily)
- Week(daily)
- Week(Hourly)
- Day

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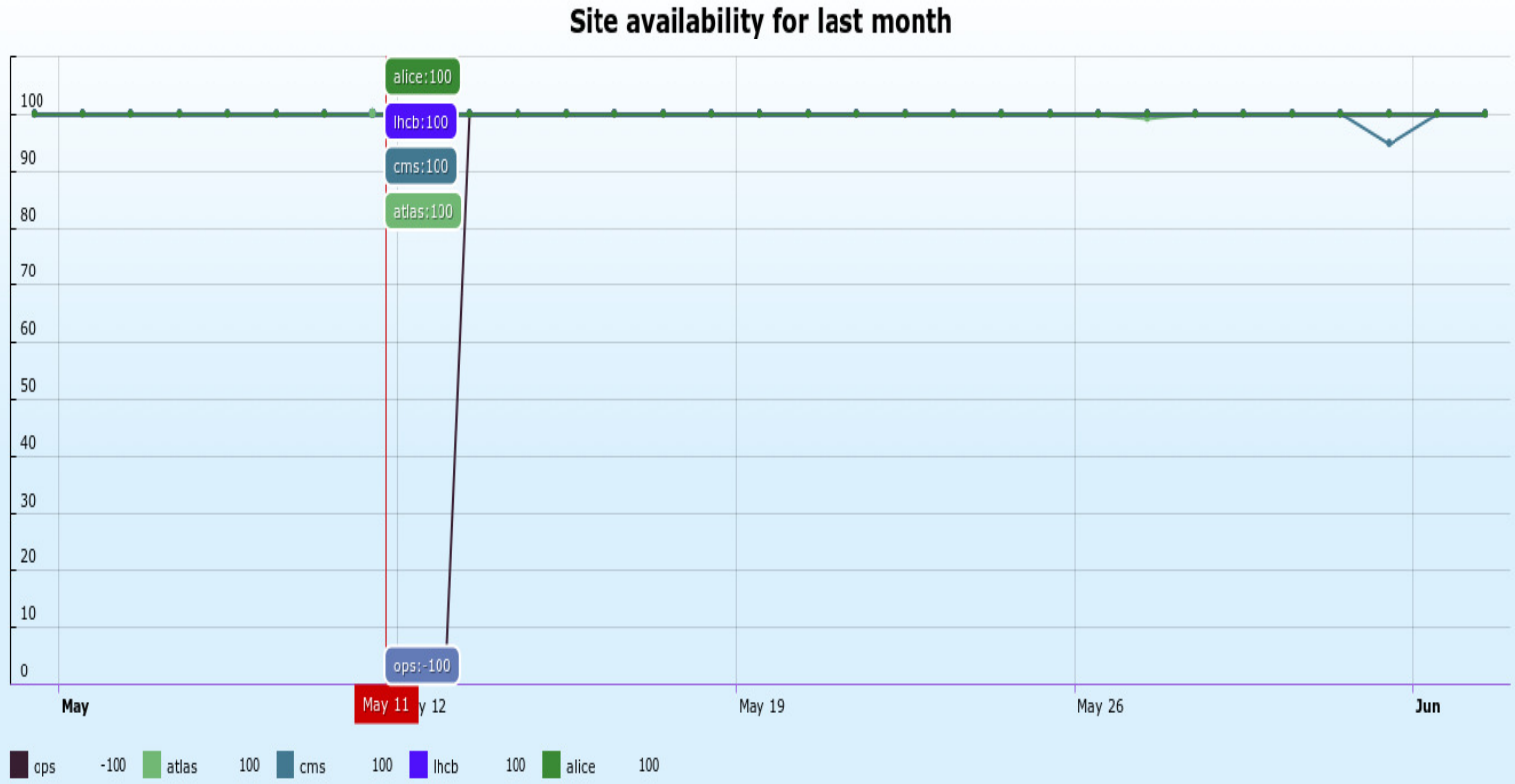

Links to VO Results

- ALICE
- Atlas
- CMS
- LHCb

SAM PI

- Source
  - WLCG for VOs [http://grid-monitoring.cern.ch/myegi/sam-pi/]
  - EGI for OPS [http://mon.egi.eu/myegi/sam-pi/]
- Used in
  - Dashboard
  - Availability plots
  - Hourly cron to feed results into Nagios

Livestatus and Thruk

- Livestatus installed on all nagios/icinga instances
  - Nagios database decommissioned. All internal tools updated to use livestatus.
  - Access controlled using xinetd
- Thruk with single backend now, but will be updated with multiple backends soon

Thruk

General
Home
Documentation

Current Status
Tactical Overview
Map
Hosts
Services
Host Groups
Summary
Grid
Service Groups
Summary
Grid
Mine Map
Problems
Services (Unhandled)
Hosts (Unhandled)
Network Outages

Reports
Availability
Trends
Alerts
History
Summary
Notifications
Event Log

System
Comments
Downtime
Process Info
Performance Info
Scheduling Queue
Configuration
Config Tool

Tier1
Check Callouts
Check CVMFS
Host SSH Keys
NoQuattor
HW-RAID
IP-Check
Downtime History

Hardware RAID Check

Hostname	State	State Changed at	Output
gdss512	Warning	2014-06-03 11:16:29	Logical Device 0 Optimal,Logical Device 1 Optimal,Controller Optimal,Battery Status Charging,Battery Capacity 100%,Battery Time 74hours
gdss685	Critical	2014-06-02 11:05:53	RAID CRITICAL - Degraded : 1
gdss671	Warning	2014-05-31 09:13:55	DISK CRITICAL - Critical Disks : 1
gdss600	Warning	2014-05-21 12:47:42	Logical Device 0 Optimal,Logical Device 1 Optimal,Controller Optimal,Battery Status Charging,Battery Capacity 100%,Battery Time 82hours
gdss534	Critical	2014-05-20 14:57:43	Logical Device 0 Optimal,Logical Device 1 Impacted,Controller Optimal,Battery Status Optimal,Battery Capacity 99%,Battery Time 72hours
gdss525	Critical	2014-05-16 14:31:59	CHECK_NRPE: Socket timeout after 60 seconds.
gdss611	Critical	2014-05-15 12:12:55	Logical Device 0 Optimal,Logical Device 1 Degraded,Controller Optimal,Degraded drives 1,Battery Status Optimal,Battery Capacity 99%,Battery Time 73hours
gdss581	Critical	2014-03-27 14:29:47	ERROR: Controller 0, Wrong firmware version (FE9X 4.10.00.021).
gdss679	Warning	2014-02-27 02:00:00	DISK CRITICAL - Critical Disks : 1
gdss585	Critical	2013-04-19 14:04:08	ERROR: Controller 0, Wrong firmware version (FE9X 4.10.00.027).

Note:

- Entries are ordered in reverse time order, with the latest failure on top
- Greyed rows indicate hosts currently in downtime

```
GET services
Columns: host_name state last_state_change plugin_output host_downtimes
Filter: state = 1
Filter: state = 2
Or: 2
Filter: service_description = Check hardware raid interface
Filter: plugin_output !~ timed
Filter: plugin_output !~ refused
Filter: plugin_output !~ check_tw_raid.py
And: 5
```

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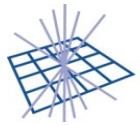

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Thruk

Enter hostname (or partof)

Search

General
- Home
- Documentation

Current Status
- Tactical Overview
- Map
- Hosts
- Services
- Host Groups
  - Summary
  - Grid
- Service Groups
  - Summary
  - Grid
  - Mine Map
- Problems
  - Services (Unhandled)
  - Hosts (Unhandled)
  - Network Outages

Reports
- Availability
- Trends
- Alerts
  - History
  - Summary
- Notifications
- Event Log

System
- Comments
- Downtime
- Process Info
- Performance Info
- Scheduling Queue
- Configuration
- Config Tool

Tier1
- Check Callouts
- Check CVMFS
- Host SSH Keys
- NoQuattor
- HW-RAID
- IP-Check
- Downtime History

Hosts

Hostname	Enabled?	Event handler
arc-ce01	1	
arc-ce02	1	
arc-ce03	1	
arc-ce04	1	

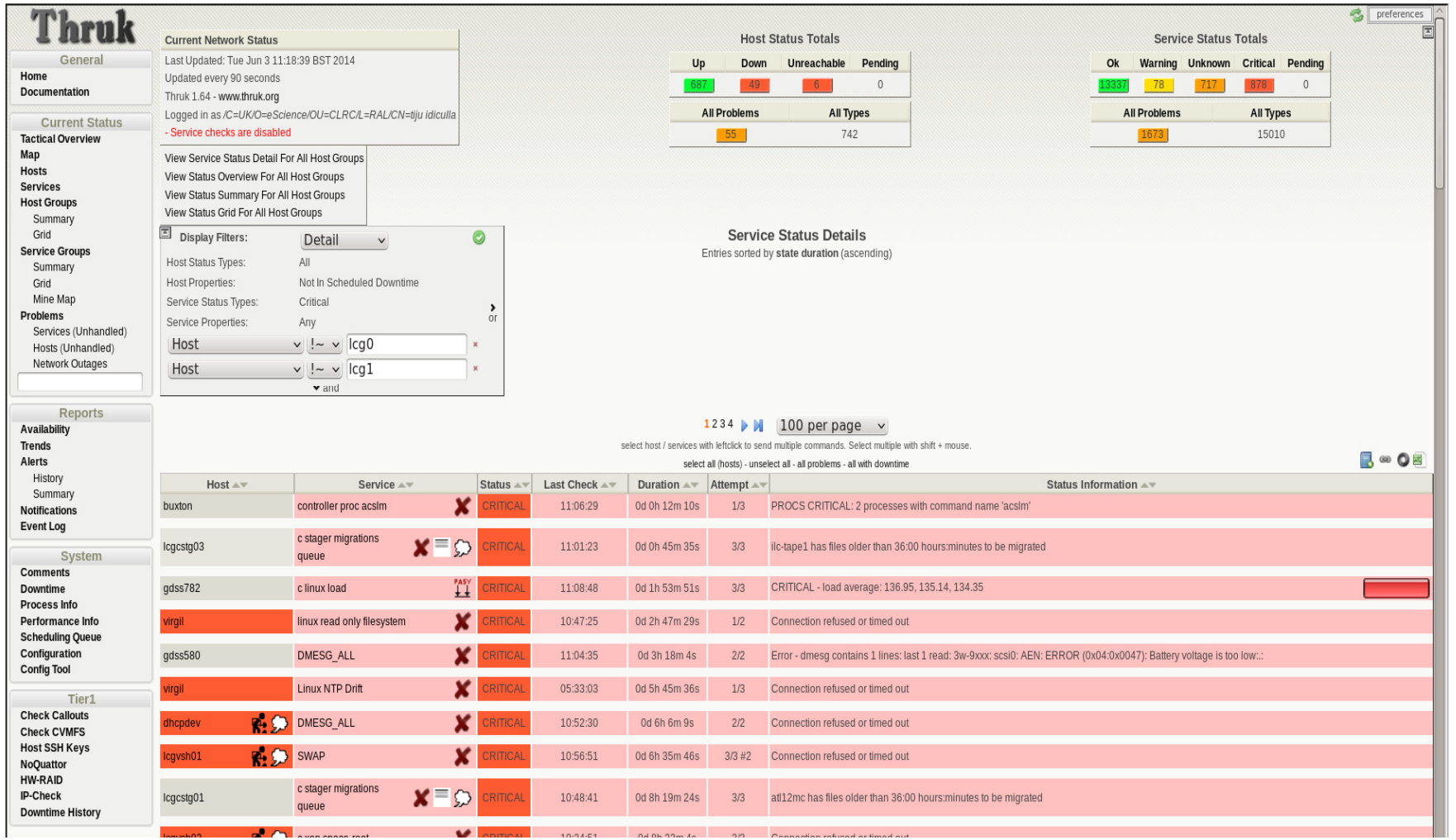
Services

Hostname	Service	Enabled?	Event handler	Check Period
arc-ce01	Check ARGUS status	1	issue_sure_service_alarm	non_sleep_time
arc-ce01	Check Condor CE Schedd	1	issue_sure_service_alarm	non_sleep_time
arc-ce01	Check proc a-rex	1	issue_sure_service_alarm	non_sleep_time
arc-ce01	Check proc condor_master	1	issue_sure_service_alarm	24x7
arc-ce01	Check proc gridftpd	1	issue_sure_service_alarm	non_sleep_time
arc-ce01	Check proc nordugrid-arc-bdii	1	issue_sure_service_alarm	non_sleep_time
arc-ce01	Check proc nordugrid-arc-slapd	1	issue_sure_service_alarm	non_sleep_time
arc-ce01	LOAD	1	issue_sure_service_alarm	24x7
arc-ce01	OPT	1	issue_sure_service_alarm	24x7
arc-ce01	SPACE_ROOT	1	issue_sure_service_alarm	24x7
arc-ce01	SPACE_TMP	1	issue_sure_service_alarm	24x7
arc-ce01	SPACE_VAR	1	issue_sure_service_alarm	24x7
arc-ce02	Check ARGUS status	1	issue_sure_service_alarm	non_sleep_time
arc-ce02	Check Condor CE Schedd	1	issue_sure_service_alarm	non_sleep_time
arc-ce02	Check proc a-rex	1	issue_sure_service_alarm	non_sleep_time
arc-ce02	Check proc condor_master	1	issue_sure_service_alarm	24x7
arc-ce02	Check proc gridftpd	1	issue_sure_service_alarm	non_sleep_time
arc-ce02	Check proc nordugrid-arc-bdii	1	issue_sure_service_alarm	non_sleep_time
arc-ce02	Check proc nordugrid-arc-slapd	1	issue_sure_service_alarm	non_sleep_time
arc-ce02	LOAD	1	issue_sure_service_alarm	24x7
arc-ce02	OPT	1	issue_sure_service_alarm	24x7
arc-ce02	SPACE_ROOT	1	issue_sure_service_alarm	24x7
arc-ce02	SPACE_TMP	1	issue_sure_service_alarm	24x7
arc-ce02	SPACE_VAR	1	issue_sure_service_alarm	24x7
arc-ce03	Check ARGUS status	1	issue_sure_service_alarm	non_sleep_time
arc-ce03	Check Condor CE Schedd	1	issue_sure_service_alarm	non_sleep_time
arc-ce03	Check proc a-rex	1	issue_sure_service_alarm	non_sleep_time
arc-ce03	Check proc condor_master	1	issue_sure_service_alarm	24x7
arc-ce03	Check proc gridftpd	1	issue_sure_service_alarm	non_sleep_time
arc-ce03	Check proc nordugrid-arc-bdii	1	issue_sure_service_alarm	non_sleep_time
arc-ce03	Check proc nordugrid-arc-slapd	1	issue_sure_service_alarm	non_sleep_time
arc-ce03	LOAD	1	issue_sure_service_alarm	24x7
arc-ce03	OPT	1	issue_sure_service_alarm	24x7
arc-ce03	SPACE_ROOT	1	issue_sure_service_alarm	24x7

Customised searches in Thruk

- Versatile
  - e.g: List of all WNs where dmesg check is CRITICAL due to OOM killer
- Used in the internal dashboard

DiskServer Interventions | Nagios - Castor Head Nodes | Nagios - Repack | Nagios - Warning Alerts | **Nagios - Critical Alerts** | FDS Nagios - Critical Alerts | Condor Jobs



GOCDB Report Extractor

Select range

Start date: Day Month Year End date: Day Month Year Get the report Require wiki table?

Downtimes between 2014-05-01 and 2014-05-31

Service	Classification	Severity	Start time	End time	Duration	Description
arc-ce01.gridpp.rl.ac.uk arc-ce01.gridpp.rl.ac.uk	SCHEDULED	WARNING	28/05/2014 10:00	28/05/2014 12:00	2 hours	Upgrade of ARC CE to version 4.1.0.
srm-alice.gridpp.rl.ac.uk srm-atlas.gridpp.rl.ac.uk srm-biomed.gridpp.rl.ac.uk srm-cert.gridpp.rl.ac.uk srm-cms.gridpp.rl.ac.uk srm-dteam.gridpp.rl.ac.uk srm-hone.gridpp.rl.ac.uk srm-ilc.gridpp.rl.ac.uk srm-lhcb.gridpp.rl.ac.uk srm-mice.gridpp.rl.ac.uk srm-minos.gridpp.rl.ac.uk srm-na62.gridpp.rl.ac.uk srm-preprod.gridpp.rl.ac.uk srm-snoplus.gridpp.rl.ac.uk srm-superb.gridpp.rl.ac.uk srm-t2k.gridpp.rl.ac.uk	SCHEDULED	WARNING	28/05/2014 09:30	28/05/2014 11:30	2 hours	At Risk on Castor (All SRM endpoints) during small internal network change.
srm-lhcb-tape.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	20/05/2014 08:00	20/05/2014 11:00	3 hours	Outage of tape system for update of tape library controller. (Postponed from 13th May).
srm-alice.gridpp.rl.ac.uk srm-atlas.gridpp.rl.ac.uk srm-biomed.gridpp.rl.ac.uk srm-cert.gridpp.rl.ac.uk srm-cms.gridpp.rl.ac.uk srm-dteam.gridpp.rl.ac.uk srm-hone.gridpp.rl.ac.uk srm-ilc.gridpp.rl.ac.uk srm-lhcb.gridpp.rl.ac.uk srm-mice.gridpp.rl.ac.uk srm-minos.gridpp.rl.ac.uk srm-na62.gridpp.rl.ac.uk srm-preprod.gridpp.rl.ac.uk srm-snoplus.gridpp.rl.ac.uk srm-superb.gridpp.rl.ac.uk srm-t2k.gridpp.rl.ac.uk	SCHEDULED	WARNING	20/05/2014 08:00	20/05/2014 11:00	3 hours	Outage of tape system for update of tape library controller. (Postponed from 13th May).
lcgvo08.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	15/05/2014 15:00	15/05/2014 16:00	1 hour	Downtime for system maintenance
lcgvo07.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	15/05/2014 14:00	15/05/2014 15:00	1 hour	Downtime for system maintenance
lcglb02.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	15/05/2014 13:00	15/05/2014 14:00	1 hour	Downtime for system maintenance
lcglb01.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	15/05/2014 10:45	15/05/2014 11:45	1 hour	Downtime for system maintenance
lcglb04.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	15/05/2014 09:30	15/05/2014 10:30	1 hour	Downtime for system maintenance
lcgwms06.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	14/05/2014 14:00	14/05/2014 15:20	1 hour and 20 minutes	Downtime for system maintenance
lcgwms05.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	14/05/2014 11:30	14/05/2014 13:30	2 hours	Downtime for system maintenance
lcgfts3.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	14/05/2014 10:00	14/05/2014 12:00	2 hours	FTS3 service at RAL unavailable for update to version 3.2.22
lcgwms04.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	14/05/2014 09:30	14/05/2014 10:46	1 hour and 16 minutes	Downtime for system maintenance
lcgui02.gridpp.rl.ac.uk	SCHEDULED	OUTAGE	30/04/2014 14:00	29/05/2014 13:00	28 days, 23 hours	Service being decommissioned.

Questions / Comments ?