

application level monitoring for LHC experiments with the experiment dashboard

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Hepix fall 2007

the experiment dashboard project

- ▶ a monitoring project, showing the activity of VOs on the grid,
 - ▶ integration of several informations. For example:
 - ▶ grid info: jobs, computing/storage resources, topology,
 - ▶ VO info: type of job, application exit code, datasets.
- ▶ a project from EGEE/ARDA (CERN),
- ▶ a framework for collecting and showing information.

▶ "home page"

outline

the project

- the dashboard framework
- operations

the applications

- job monitoring
- data management monitoring

conclusion

- conclusion & future plans

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the applications

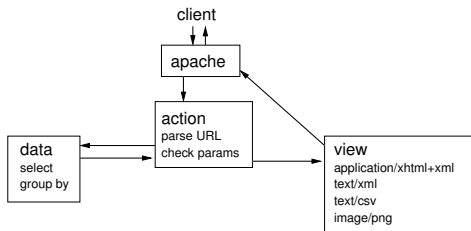
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the dashboard framework

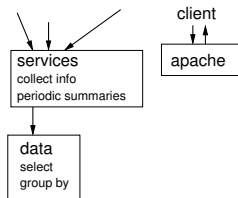
- ▶ most of the applications are implemented using a common Python framework.
 - ▶ clear distinction between information storage, information queries and rendering:



- ▶ support for API, CLI.
- ▶ performance: thread safety + session pooling + apache/mod_python,
- ▶ even a developer's guide is available, with examples.

the dashboard framework

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features

- ▶ based on HTTP,
- ▶ multiple output formats (text/xml and text/csv coming for free),

```
curl -H 'Accept: text/xml' http://...
```

- ▶ framework for API and CLI: based on HTTP, man pages, build of the command-line tool, common options,

```
from dashboard.api.production.ProductionQuery import ProductionQuery
query = ProductionQuery('dashb-atlas-prodsys-test.cern.ch', 80)
sites = query.errors(error='WRAPLCG_STAGEOUT_LCGCR',
                    grouping='site', grid='LCG')
```

- ▶ framework for permanent *services* (info collectors, computation of summaries, etc.): monitoring, babysitting, common configuration, etc.
 - ▶ status exported to our main web server,
 - ▶ simple alerts in case of warning status: e-mail or SMS.

releasing and build system

- ▶ a project module has a stable/unstable/nightly release,
 - ▶ RPMs are currently distributed using apt,
 - ▶ we also distribute some external RPMs (javascript toolkits, python packages not available in SLC4),
- ▶ the build system is based on the python distutils,
 - ▶ automatic building of SLC4 RPMs running at night,
 - ▶ also builds and installs the latest documentation (docbook),
 - ▶ (doesn't run the unit tests yet.)
 - ▶ possibility to trigger the build at anytime if needed.

operations

- ▶ applications using the common framework:
 - ▶ same tools maintenance, same log files, similar services, etc.
 - ▶ maintenance guides, documentation.
- ▶ hosts are SLC4 and are quattor managed,
- ▶ about maintenance, some recent developments:
 - ▶ dashboard services and Apache now running as “dashbop” UNIX user,
 - ▶ definition of an operator quattor role,
 - ▶ operators can run a limited set of commands: restart httpd, restart dashboard services,
 - ▶ permits to implement some simple and safe maintenance by non-experts.
- ▶ but still some legacy applications (no framework, SLC3, etc.).

operations (coming)

- ▶ most of our applications don't generate much load on the same host:
 - ▶ but it's not practical to run several per host,
 - ▶ applications *A* and *B* may require at some point different releases of a common dashboard RPM,
 - ▶ maintenance of *A* impacts *B* (restart httpd, same configuration files, same log files.),
 - ▶ it's a limit of our framework (not easy to have two configurations).
- ▶ dashboard applications are probably good candidates for hardware virtualization,
 - ▶ it could probably be practical for testing purposes (check the installation on a new host or maintenance procedure, run full functionality tests).

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the project

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- job monitoring
- data management monitoring

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grid job monitoring

- ▶ show what the jobs are doing on the Grid from the *VO point of view*:



- ▶ grid info taken from RGMA, GridPP XML files, LCG BDII,
- ▶ VO info: sent by jobs (using Monalisa, or read bookkeeping DB,
- ▶ installed for all four main experiments, plus the “vmed” VO.

grid job monitoring

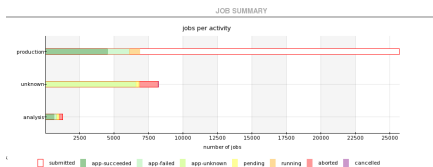
- ▶ show what the jobs are doing on the Grid from the *VO point of view*:

activity:	current status						grid exit status				application exit status				overall	
	Sub	Unk	Pend	Run	Term	Done	Canc	Abort	Unk	Grid%	Succ	Fail	Unk	App%	D/S	Overall%
analysis	1252	0	261	23	1082	808	0	227	53	77.92	518	164	218	79.8	514	56.62
production	25128	18842	0	238	5022	0	0	5892	0	6528	2552	0	74.34	0	0	0
unknown	8234	0	204	82	7871	5561	48	1269	0	81.1	0	0	7871	0	0	0
total	35209	18842	395	891	15151	7399	40	1577	615	82.43	5177	1727	8247	74.99	614	4.07

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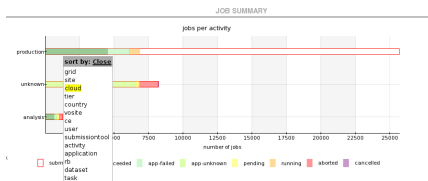
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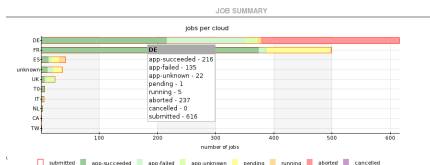
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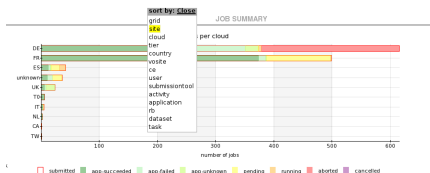
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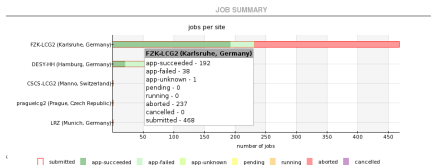
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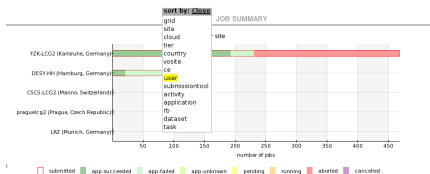
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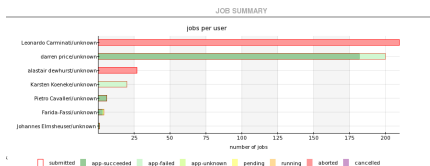
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site	current status							grid exit status				application exit status				overall	
	Sub	Unk	Pend	Run	Term	Done	Canc	Abort	Unk	Grid%	Succ	Fail	Unk	App%	D/S	Overall%	
CSCS-CCG2 (Manno, Switzerland)	1	0	0	0	1	0	0	0	1	0	1	0	0	100	0	0	
DESY-HH (Hamburg, Germany)	145	0	4	0	182	179	0	0	0	100	41	0	14	17.4	21	15.11	
PKZ-CCG2 (Karlsruhe, Germany)	468	0	0	0	168	230	0	227	1	49.25	132	38	238	83.48	151	40.81	
LMZ (Munich, Germany)	1	0	0	0	1	0	0	0	1	0	1	0	0	100	0	0	
prague1g2 (Prague, Czech Republik)	1	0	0	0	1	0	0	0	1	0	1	0	0	100	0	0	
total	626	0	1	0	810	369	0	227	4	60.89	216	135	259	61.54	212	34.75	

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APPLICATION EXIT CODE SUMMARY

exitcode	number of jobs
139	95
134	1
87	

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grid job monitoring: user tasks

- ▶ view of the same data from a user running analysis:

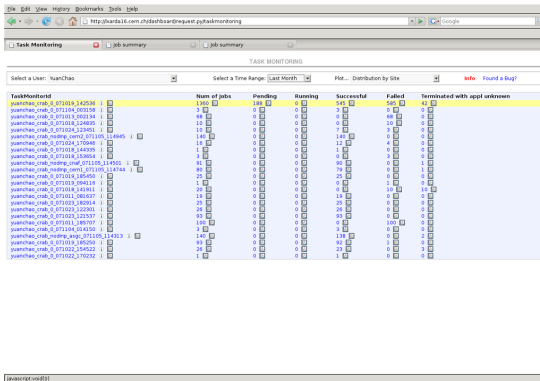
The screenshot displays a web browser window with the following elements:

- Browser address bar: `http://kanda16.com.chpds@boardrequest.pytaskmonitoring`
- Page title: **TASK MONITORING**
- Form fields:
 - Select a User:** A dropdown menu with a list of names including: AglkeKraam, VikiPissaras, ChristoSiarvros, Chung, ClaudeLepherdTheristocleous, ClaretLynch, ClaudeChelut, ClausUlrichAlmann, ClemensZaefler, Colibernet, Cono, Croust, **Crucian** (highlighted), Crisand, CristinaPicardi, Crivelli, CTrinzi, Cuevas, Daehestein, DankaTomar, Dakanglu.
 - Select a Time Range:** A dropdown menu set to `Last 2 Weeks`.
 - Plot... Distribution by Site**: A dropdown menu.
- Status bar: `Done`

- ▶ show “my tasks”,
- ▶ progress of each, investigate the reasons of the failures.

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grid job monitoring: user tasks

- ▶ view of the same data from a user running analysis:

Pending	Running	Successful	Failed	Terminated with appli
188	0	545	585	42
0	0	3	0	0
0	0	0	68	0

- ▶ show “my tasks”,
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grid job monitoring: user tasks

- ▶ view of the same data from a user running analysis:

SchedulerJobId	EventRange	Submission Attempts	Appl Exit Code	Grid End Status	Site	Submitted	Started	Finished
https://lbf03.com.ch:9000/259/79bQ4f3c3eb5aaQ	6	2	10034	DONE	CERN-PRD	unknown	2007-11-09 21:10:59	2007-11-09 21:10:59
https://lbf03.com.ch:9000/262/2c028H4Edf8P91w	9	2	10034	DONE	CERN-PRD	unknown	2007-11-05 16:56:17	2007-11-05 16:56:19
https://lbf03.com.ch:9000/262/2c028H4Edf8P91w	12	2	10034	DONE	CERN-PRD	unknown	2007-11-05 16:57:38	2007-11-05 16:57:39
https://lbf03.com.ch:9000/D94860N49008P4u3dQ	36	2	10034	DONE	CERN-PRD	unknown	2007-11-05 21:10:26	2007-11-05 21:10:26
https://lbf03.com.ch:9000/947854W4P4gT4pTa	37	2	10034	DONE	CERN-PRD	unknown	2007-11-05 16:56:01	2007-11-05 16:56:02
https://lbf03.com.ch:9000/Cd39D145V3or4pHw	45	1	1	UNDEFINED	FZK-CG2	2007-10-19 17:07:10	2007-10-19 17:07:10	2007-10-19 17:07:10
https://lbf03.com.ch:9000/94ed45274MALV9M3C	63	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:01:13	2007-10-19 18:01:13	2007-10-19 18:01:13
https://lbf03.com.ch:9000/5H40D34k4Cp48V4M4E4	65	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/67_jn_4f3Coc7C484rV_c	69	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/947854W4P4gT4pTa	70	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/A24p3_Q1r4nj4G4B4F4	74	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/4c5y4F4gV4r4M4c4B4Q	77	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/715d4W4B433b2Z7F4B4C4Q4	80	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/P4o4304Q4M434p4d4H4W4	81	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/44484Q4M434p4d4H4W4	82	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/2L12W232V4q4b4E4Q4	83	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/44484Q4M434p4d4H4W4	86	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/44484Q4M434p4d4H4W4	87	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/44484Q4M434p4d4H4W4	90	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06
https://lbf03.com.ch:9000/2p4P4444444444444444	95	1	136	UNDEFINED	RZPC-CC	2007-10-19 18:05:06	2007-10-19 18:05:06	2007-10-19 18:05:06

- ▶ show “my tasks”,
- ▶ progress of each, investigate the reasons of the failures.

grid job monitoring: user tasks

- ▶ view of the same data from a user running analysis:

The screenshot shows a web browser window displaying a task monitoring interface. The browser address bar shows the URL: `http://kanda16.com.chyds@bsardrequest.pytaskmonitoring`. The page title is "Task Monitoring" and the current view is "Job summary".

At the top of the dashboard, there are controls for user selection and time range. The user is set to "YuanChao" and the time range is "Last Month". There are also options for "Plot..." and "Distribution by Site", along with a "Info" link and a "Found a Bug?" link.

Below these controls, there are navigation buttons: "Task: yuanchao_craab_0_071019_142598", "Failed jobs", "Back to all Tasks", "Back to jobs", and "This Task".

The main data is presented in a table with the following columns: SchedId, EventRange, Appt, Exit Code, Grid End Status, Site, Submitted, Started, and Finished.

SchedId	EventRange	Appt	Exit Code	Grid End Status	Site	Submitted	Started	Finished
https://k2.o3.com.ch:9000/255g79p0q4T5o3d8esa/	6	10034		DONE	CERN-PROD	unknown 1978-01-01 00:00:00	2007-11-05 21:18:00	2007-11-05 21:18:05
https://k2.o3.com.ch:9000/w0p9h3c4wfd5uqef8e/	6	0		ABORTED	FZJ-LCG2	2007-10-19 16:34:10	2007-10-19 17:01:23	2007-10-19 17:58:19

At the bottom of the browser window, there is a terminal-like area with the text: `[javascript:void(0)]`.

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	EventRange	Appl Exit Code	Grid End Status	Site	Subm
9000U25Sg7XpjbQ4TS03e8esaQ	6	10034	DONE	CERN-PROD	Unlnw
9000WkXBVshclUehSVLWepfw	6	0	ABORTED	FZKLCG2	2007-1

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grid job monitoring: user tasks

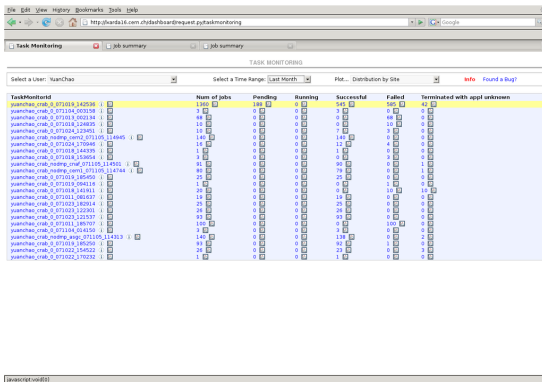
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EventRange	Appl Exit Code	Grid End Status	Site	Subm
9000U25Sg7Xpj04TS03eRes0	6	10034	DONE	KERN-PROD_unbr09
9000WkXBvshclUehSVLWepfw	6	0	Required application version is not found at the site	97-3

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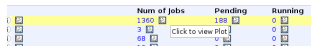
- ▶ view of the same data from a user running analysis:

	Num of jobs	Pending	Running
1	1360	188	0
2	3	0	0
3	58	0	0
4	--	-	-

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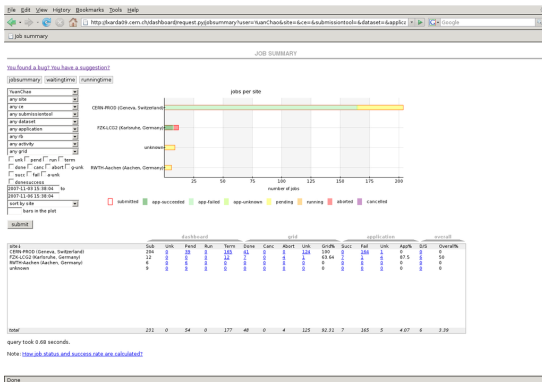
	Num of jobs	Pending	Running
1	1360	188	0
2	3	0	0
3	68	0	0
4

Click to view Plot

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grid job monitoring: summaries

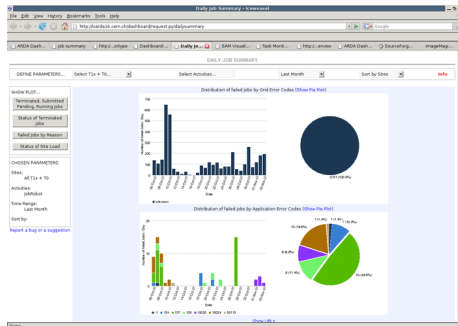
- ▶ permits to show precompute summaries (faster queries),



- ▶ for application exit codes, VO activities, etc.
- ▶ same information as before.

grid job monitoring: summaries

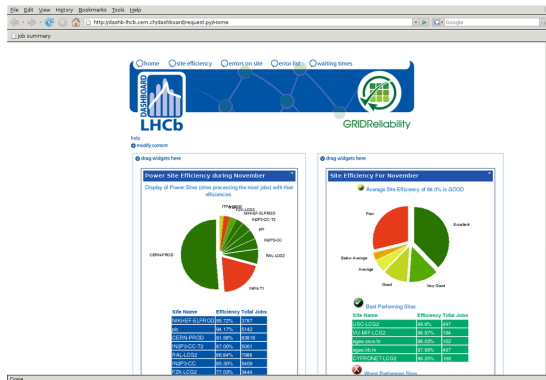
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grid site reliability

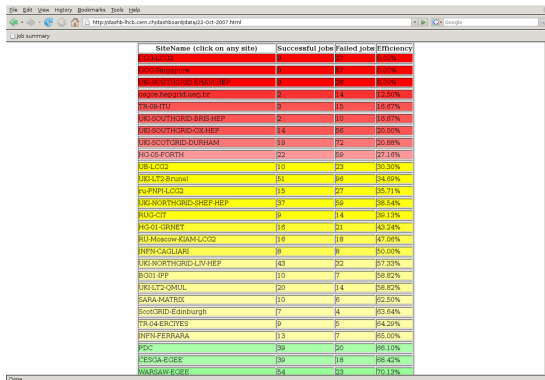
- ▶ uses RGMA and IC-XML info for computing efficiency of sites,
- ▶ aware of *middleware resubmissions* to sites A, B and C,



- ▶ computation of daily rates, possibility to dig in the information.

grid site reliability

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- ▶ aware of *middleware resubmissions* to sites A, B and C,

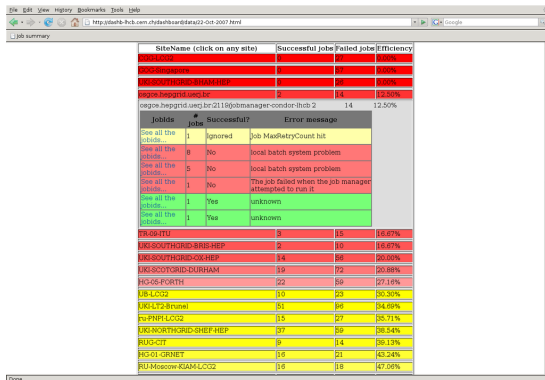


SiteName (click on any site)	Successful jobs	Failed jobs	Efficiency
UK-LCC2	2	39	4.80%
UK-ORCA-ORCA	2	39	4.80%
UK-SOUTHGRID-SHAM-HEP	2	39	4.80%
esgoc.besgrid.ucc.ie	2	14	12.50%
TR-09-ITU	3	15	16.67%
UK-SOUTHGRID-BRIS-HEP	2	10	16.67%
UK-SOUTHGRID-COX-HEP	14	56	20.00%
UK-SCOTGRID-DURHAM	19	72	20.88%
HG-05-FORTH	22	59	27.16%
US-LCC2	10	23	30.30%
UK-LT2-Stran	51	96	34.69%
us-PNPLCC2	15	27	35.71%
UK-NORTHGRID-SHEP-HEP	37	59	38.54%
UK-CIT	9	14	39.13%
UK-01-ORNET	16	21	43.24%
RU-Moscow-KAM-LCC2	16	18	47.06%
INFN-CAGLIARI	8	8	50.00%
UK-NORTHGRID-LIV-HEP	43	52	57.33%
B-G01-IPP	10	7	58.82%
UK-LT2-QMUL	20	14	58.82%
SARA-MATRX	10	6	62.50%
ScotGRID-Edinburgh	7	4	63.64%
TR-04-ERCIIYS	9	5	64.29%
INFN-FERPARA	13	7	65.00%
PDC	39	20	66.10%
CESCA-EGEE	39	19	68.42%
WARSAW-EGEE	54	23	70.13%

- ▶ computation of daily rates, possibility to dig in the information.

grid site reliability

- ▶ uses RGMA and IC-XML info for computing efficiency of sites,
- ▶ aware of *middleware resubmissions* to sites A, B and C,



SiteName (click on any site)	Successful jobs	Failed jobs	Efficiency
UK-LCG2	2	39	5.00%
UK-SOUTHORIS	2	39	5.00%
UK-SOUTHORIS-BHAM-HEP	2	39	5.00%
oegoe.hepgrid.usg.br/211@jobmanager-condor-lhcb-2	2	14	12.50%
oegoe.hepgrid.usg.br/211@jobmanager-condor-lhcb-2	14	12.50%	

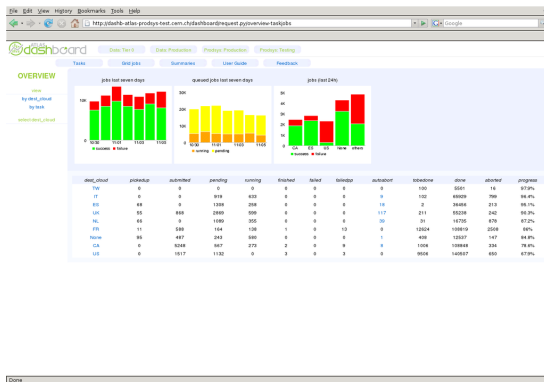
Jobs	Successful?	Error message
See all the jobs...	1 ignored	job MaxRetryCount hit
See all the jobs...	8 No	local batch system problem
See all the jobs...	5 No	local batch system problem
See all the jobs...	1 No	The job failed when the job manager attempted to run it
See all the jobs...	1 Yes	unknown
See all the jobs...	1 Yes	unknown

FR-OR-TU	5	15	16.67%
UK-SOUTHORIS-BRD-HEP	2	10	16.67%
UK-SOUTHORIS-OK-HEP	14	56	20.00%
UK-SCOTRID-DURHAM	19	72	20.89%
EG-05-FORTH	22	59	27.14%
UK-LCG2	10	23	30.30%
UK-LT2-@rune	61	96	34.69%
ru-PNH-LCG2	15	27	35.71%
UK-NORTHORIS-SHEP-HEP	37	59	38.54%
RUG-CIT	9	14	36.13%
EG-01-GRNET	16	21	43.24%
RU-Moscow-KIAM-LCG2	16	18	47.06%

- ▶ computation of daily rates, possibility to dig in the information.

grid job monitoring: ATLAS production

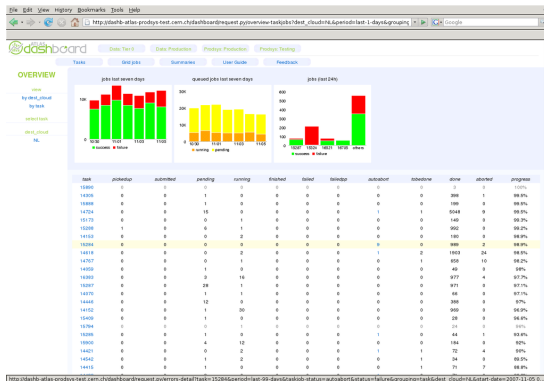
- ▶ monitoring offloaded to the dashboard,
- ▶ target: “shifters”,



- ▶ under “review” by master-shifters.

grid job monitoring: ATLAS production

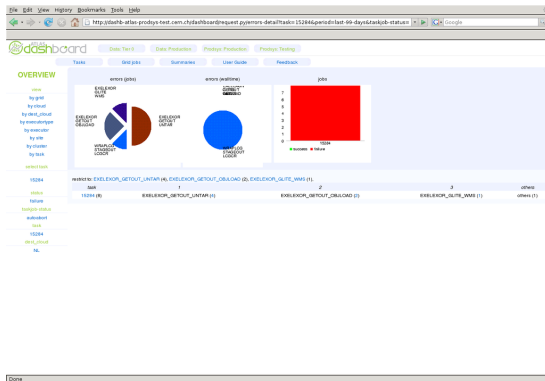
- ▶ monitoring offloaded to the dashboard,
- ▶ target: “shifters”,



- ▶ under “review” by master-shifters.

grid job monitoring: ATLAS production

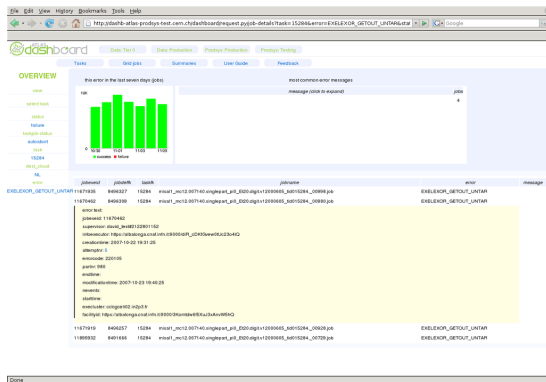
- ▶ monitoring offloaded to the dashboard,
- ▶ target: “shifters”,



- ▶ under “review” by master-shifters.

grid job monitoring: ATLAS production

- ▶ monitoring offloaded to the dashboard,
- ▶ target: “shifters”,



- ▶ under “review” by master-shifters.

grid job monitoring: ATLAS production

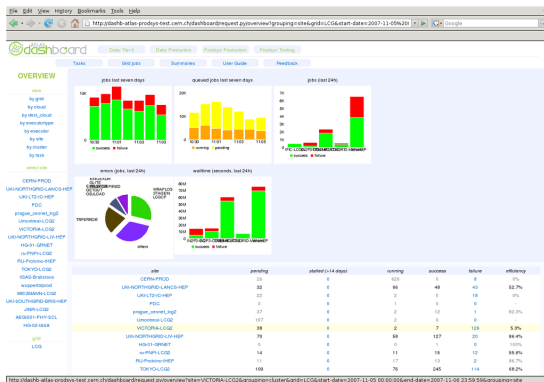
- ▶ monitoring offloaded to the dashboard,
- ▶ target: “shifters”,



- ▶ under “review” by master-shifters.

grid job monitoring: ATLAS production

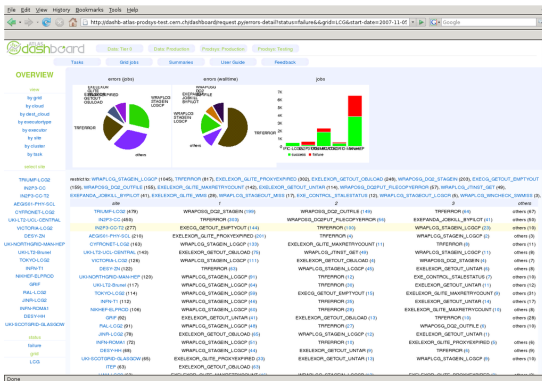
- ▶ monitoring offloaded to the dashboard,
- ▶ target: “shifters”,



- ▶ under “review” by master-shifters.

grid job monitoring: ATLAS production

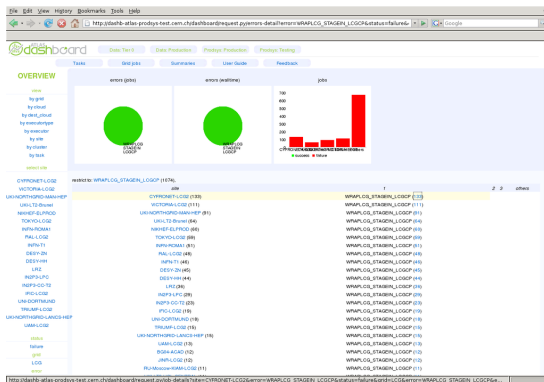
- ▶ monitoring offloaded to the dashboard,
- ▶ target: “shifters”,



- ▶ under “review” by master-shifters.

grid job monitoring: ATLAS production

- ▶ monitoring offloaded to the dashboard,
- ▶ target: “shifters”,



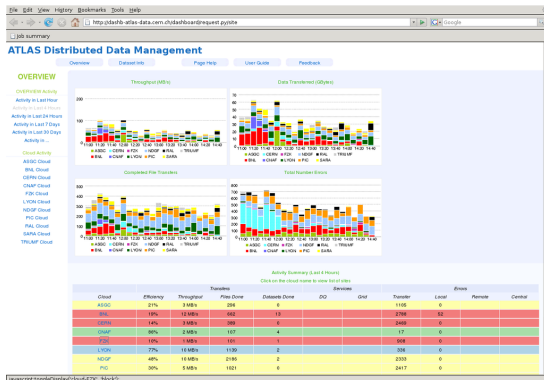
- ▶ under “review” by master-shifters.

grid job monitoring: CMS production

- ▶ close collaboration between CMS and the dashboard,
- ▶ the CMS production agents publish their status in the dashboard (HTTP POST) in real time,
- ▶ dashboard services are computing periodic statistics,
- ▶ the *view* is *not* implemented with the dashboard:
 - ▶ info is retrieved using the dashboard interface,
 - ▶ CMS will make their own interface on top.

grid data transfers monitoring

- ▶ activity conducted with ATLAS DDM (distributed data management),
- ▶ show the status and performance of the DDM system:



- ▶ topology and names are specific to ATLAS, ATLAS datasets,
- ▶ info is published *directly* by the DDM servers, using a specific API (a dashboard API based on HTTP).

grid data transfers monitoring

- ▶ activity conducted with ATLAS DDM (distributed data management),
- ▶ show the status and performance of the DDM system:

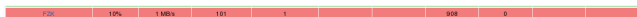
Activity Summary (Last 4 Hours)
Click on the cloud name to view list of sites

Cloud	Transfers				Services		Errors			
	Efficiency	Throughput	Files Done	Datasets Done	DG	Grid	Transfer	Local	Remote	Central
ASGC	21%	3 MB/s	296	0			1195	0		
BNL	19%	12 MB/s	662	13			2799	52		
CEPH	14%	3 MB/s	389	0			2469	0		
CNAF	88%	2 MB/s	107	4			17	0		
FDX	19%	1 MB/s	101	1			908	0		
LYON	77%	10 MB/s	1139	2			336	0		
NDGF	46%	10 MB/s	2186	2			2333	0		
PIC	30%	5 MB/s	1021	0			2417	0		
PNL	36%	4 MB/s	345	1			621	0		
SARA	66%	5 MB/s	530	1			274	4		
TRUMF	64%	1 MB/s	224	9			128	0		

- ▶ topology and names are specific to ATLAS, ATLAS datasets,
- ▶ info is published *directly* by the DDM servers, using a specific API (a dashboard API based on HTTP).

grid data transfers monitoring

- ▶ activity conducted with ATLAS DDM (distributed data management),
- ▶ show the status and performance of the DDM system:



- ▶ topology and names are specific to ATLAS, ATLAS datasets,
- ▶ info is published *directly* by the DDM servers, using a specific API (a dashboard API based on HTTP).

grid data transfers monitoring

- ▶ activity conducted with ATLAS DDM (distributed data management),
- ▶ show the status and performance of the DDM system:

FDK	10%	1 MB/s	101	1		908	0		
Click on the site name to go to the site page									
FDDBX	0%	0 MB/s	0	0	OK	0	0		
FDCTAPE	0%	0 MB/s	0	0	OK	0	0		

- ▶ topology and names are specific to ATLAS, ATLAS datasets,
- ▶ info is published *directly* by the DDM servers, using a specific API (a dashboard API based on HTTP).

grid data transfers monitoring

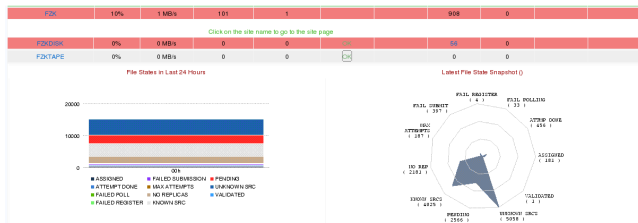
- ▶ activity conducted with ATLAS DDM (distributed data management),
- ▶ show the status and performance of the DDM system:

F2K	10%	1 MB/s	101	1		908	0		
Click on the site name to go to the site page									
F2KDRK	0%	0 MB/s	0	0	OK	0	0		
State from FTS: Failed. Retries: 1. Reason: DESTINATION error during PREPARATION phase: [CONNECTION] failed to contact on remote SPM [http://gridka-dcache.fds.de:8443/admin/manager/1]. Givein' up after 3 tries									
F2KTAPE	0%	0 MB/s	0	0	OK	0	0		56

- ▶ topology and names are specific to ATLAS, ATLAS datasets,
- ▶ info is published *directly* by the DDM servers, using a specific API (a dashboard API based on HTTP).

grid data transfers monitoring

- ▶ activity conducted with ATLAS DDM (distributed data management),
- ▶ show the status and performance of the DDM system:



- ▶ topology and names are specific to ATLAS, ATLAS datasets,
- ▶ info is published *directly* by the DDM servers, using a specific API (a dashboard API based on HTTP).

grid data transfers monitoring

- ▶ activity conducted with ATLAS DDM (distributed data management),
- ▶ show the status and performance of the DDM system:

2007-11-06 14:56:00	trg1_misal1_mc12.005108.PythiaWuHadHadEP_recon.ACD.v12000605_id015507	INCOMPLETE
2007-11-06 14:56:01	trg1_misal1_mc12_v1_005802_JF17_pythia_jet_filter_recon.ESD.v13003002_3d016448	INCOMPLETE
2007-11-06 14:55:13	trkcond.000016.coord80ns_recon.pool.v0000	INCOMPLETE
2007-11-06 14:53:39	misall_csc11_005353_Atautau_direct_filter_recon.ACD.v13003001_id015182	INCOMPLETE
2007-11-06 14:52:38	trg1_misal1_mc12.008138.AlggenJimmyZeeNpZVBFcut_recon.ACD.v12000605_id012228	INCOMPLETE
2007-11-06 14:51:38	trg1_misal1_mc12.008240.AlggenJimmyWernuNp2_pid0_fitjet_recon.ACD.v12000605_id014769	INCOMPLETE
2007-11-06 14:51:31	trg1_pile1_H02_misal1_csc11_005015_J6_pythia_jet_recon.ACD.v12000605_id014427	INCOMPLETE
2007-11-06 14:50:30	mc12.008062_pythia_J6_Np2_PMET1D0_sffast_NTUP.v12000604_id010232	INCOMPLETE
2007-11-06 14:48:24	trg1_misal1_mc12.005188.A3_Zautau_filter_smerge.HPTV.v12000605_id013387	INCOMPLETE
2007-11-06 14:47:19	trg1_misal1_mc12.008949.HerwigVBPH125iautau_recon.ACD.v12000604_id012870	INCOMPLETE
2007-11-06 14:47:06	mc12.008131_AlggenJimmyZeeNpZVBFcut_recon.EVNT.v12000604_id013910	INCOMPLETE
2007-11-06 14:46:24	sheipa108.005198_Zjetsbse	INCOMPLETE

- ▶ topology and names are specific to ATLAS, ATLAS datasets,
- ▶ info is published *directly* by the DDM servers, using a specific API (a dashboard API based on HTTP).

grid data transfers monitoring

- ▶ activity conducted with ATLAS DDM (distributed data management),
- ▶ show the status and performance of the DDM system:

2007-11-06 14:55:00	trg1_misal1_mc12.005108.PythraWauhadhaEP_recon.ACD.v12000605_id015507	INCOMPLETE
2007-11-06 14:56:02	trg1_misal1_mc12.005108.PythraWauhadhaEP_recon.ACD.v12000605_id015507	INCOMPLETE
2007-11-06 14:56:01	trg1_misal1_mc12_v1.005802_JF17_pythia_jet_filter.recon.ESD.v13003002_id016448	INCOMPLETE
	DUID: 8e958f0-838f11dc-b28c-00034731094	UUID: 8e958f09-838f11dc-b03a-00034731094
	CREATION: 2007-10-26 16:35:27	VERSION: 1
2007-11-06 14:55:13	lesbond.000016.cardsfoms_recon.pool.v0000	INCOMPLETE
2007-11-06 14:53:39	misal1_scc11.005953.Atsutau_direct_filter.recon.ACD.v13003001_id015182	INCOMPLETE
2007-11-06 14:52:38	trg1_misal1_mc12.008138.AlggenJmmyZaeNpZVBFCut.recon.ACD.v12000605_id012228	INCOMPLETE
2007-11-06 14:51:38	trg1_misal1_mc12.008240.AlggenJmmyWenuNp2_pid0_fitjet.recon.ACD.v12000605_id014769	INCOMPLETE
2007-11-06 14:51:31	trg1_pile1_tf02_misal1_scc11.005015_j6_pythia_jet_filter.recon.ACD.v12000605_id014827	INCOMPLETE
2007-11-06 14:50:30	mc12.008082.pythia_j6_Np2_FMET105.atlas.NTUP.v12000604_id010232	INCOMPLETE
2007-11-06 14:49:24	trg1_misal1_mc12.005188.A3_2autoc_filter.merge.HP.VV.v12000605_id013387	INCOMPLETE
2007-11-06 14:47:19	trg1_misal1_mc12.006849.HerwigVBFH125autoc_recon.ACD.v12000604_id012870	INCOMPLETE

- ▶ topology and names are specific to ATLAS, ATLAS datasets,
- ▶ info is published *directly* by the DDM servers, using a specific API (a dashboard API based on HTTP).

grid data transfers monitoring

- ▶ activity conducted with ATLAS DDM (distributed data management),
- ▶ show the status and performance of the DDM system:

2007-11-06 14:53:45	ESD_016468_06338.pool.root.2	PENDING
2007-11-06 14:53:45	ESD_016468_06341.pool.root.2	PENDING
2007-11-06 14:31:35	ESD_016468_06263.pool.root.4	PENDING
2007-11-06 14:31:35	ESD_016468_06075.pool.root.4	PENDING
2007-11-04 16:07:59	ESD_016468_06443.pool.root.2	FILE_DONE
2007-11-04 14:55:01	ESD_016468_06422.pool.root.2	FILE_DONE
2007-11-04 12:46:06	ESD_016468_06448.pool.root.2	FILE_DONE
2007-11-04 07:45:00	ESD_016468_06154.pool.root.3	FILE_DONE
2007-11-04 04:19:31	ESD_016468_06322.pool.root.2	FILE_DONE
2007-11-04 04:19:31	ESD_016468_06303.pool.root.4	FILE_DONE
2007-11-04 04:19:31	ESD_016468_06288.pool.root.3	FILE_DONE
2007-11-04 04:19:31	ESD_016468_06440.pool.root.2	FILE_DONE

- ▶ topology and names are specific to ATLAS, ATLAS datasets,
- ▶ info is published *directly* by the DDM servers, using a specific API (a dashboard API based on HTTP).

grid data transfers monitoring

- ▶ activity conducted with ATLAS DDM (distributed data management),
- ▶ show the status and performance of the DDM system:

2007-11-06 14:53:45	ESD_016468_06338.pool.root.2	PENDING
2007-11-06 14:53:45	ESD_016468_06341.pool.root.2	PENDING
2007-11-06 14:31:35	ESD_016468_06283.pool.root.4	PENDING
2007-11-06 14:31:35	ESD_016468_06075.pool.root.4	PENDING
2007-11-04 16:07:59	ESD_016468_06443.pool.root.2	FILE_DONE
GUID: A4548508-2389-DC11-937F-00E081401061 CREATION: 2007-11-04 14:38:30		
FILE SIZE: 1016090104 bytes		
SUPL: sm:/gridka-dcache.fzk.de/prfn/grndka.de/atlascdisk-only/frig1_misat1_nc12_V1:ESD/frig1_misat1_nc12_V1.005802_#F17_pyl his_h1_filter_recon.ESD.v1.3003002_sd016468.ESD.016468_06443.pool.root.2__DC0-1194187402		
CHECKSUM: md5:569b6125a0eddb0491b42c79b58903		
2007-11-04 14:55:01	ESD_016468_06422.pool.root.2	FILE_DONE
2007-11-04 12:46:06	ESD_016468_06448.pool.root.2	FILE_DONE
2007-11-04 07:45:00	ESD_016468_06154.pool.root.3	FILE_DONE

- ▶ topology and names are specific to ATLAS, ATLAS datasets,
- ▶ info is published *directly* by the DDM servers, using a specific API (a dashboard API based on HTTP).

outline

the project

- the dashboard framework
- operations

the applications

- job monitoring
- data management monitoring

conclusion

- conclusion & future plans

conclusion & future plans

▶ dashboard home page

- ▶ framework and operations:
 - ▶ installation, maintenance procedures,
 - ▶ systematic testing (unit tests).
- ▶ applications:
 - ▶ grid jobs: more info sources and support for pilot jobs,
 - ▶ integrate more our applications with themselves (!),
 - ▶ develop the integration with external tools (python API),
 - ▶ alert systems.