#### experiment dashboard

# LCG site reliability ATLAS specific job monitoring ATLAS data management ALICE data transfers

Benjamin Gaidioz, Julia Andreeva on behalf of the dashboard team

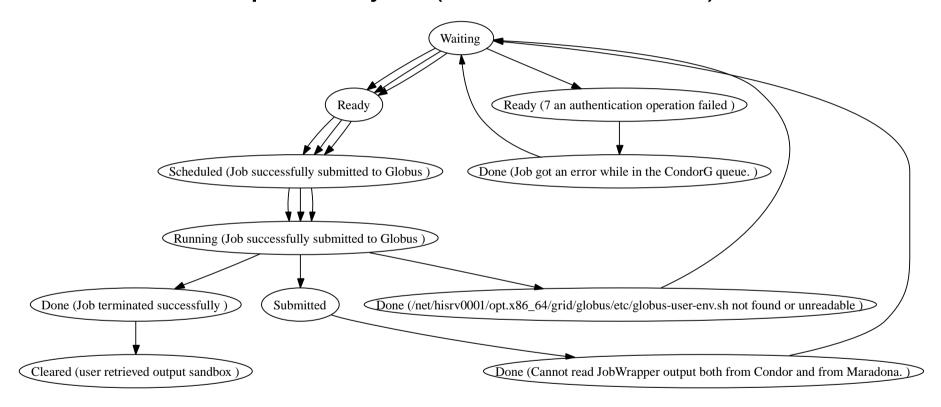
#### introduction

- LCG site reliability (Pablo Saiz)
  - complex processing of LCG/RGMA information (job execution steps) for guessing errors.
- ATLAS job monitoring (Benjamin Gaidioz, Dietrich Liko et al.)
- ATLAS data management (Ricardo Rocha)
  - monitoring of ATLAS distributed data management. Design/implementation close to DDM users and developers,
- ALICE data transfers (Pablo Saiz).

# LCG site reliability

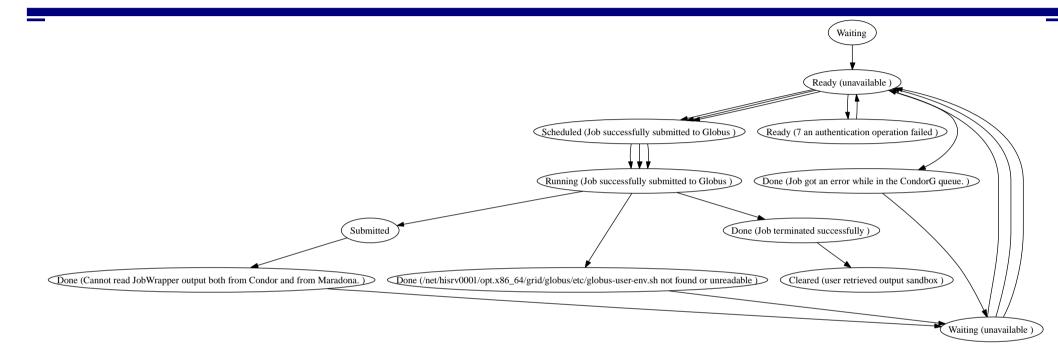
#### an example

successive steps of a job (info from RGMA).



- resubmission, system error messages,
- hidden error messages (authentication error),

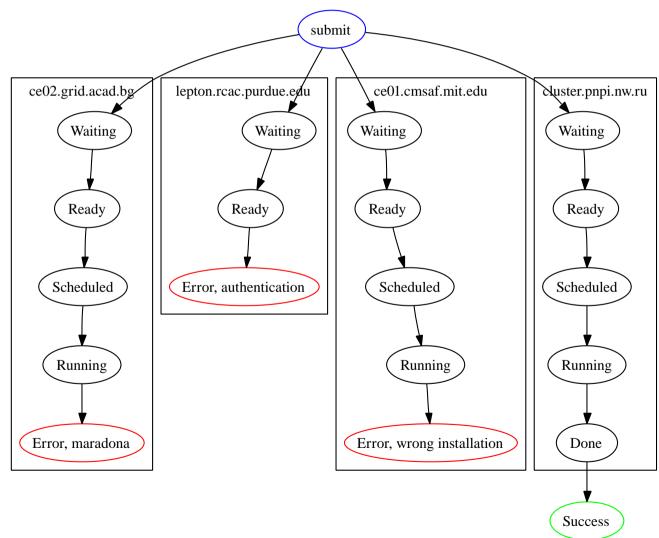
# another example



missing steps.

### split by CE

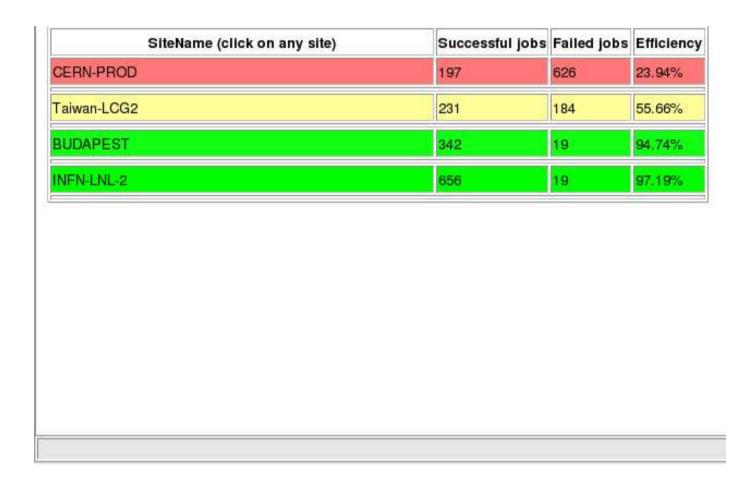
split by CE, simplified.



#### summaries

- execution is split in attempts (successful or not),
- we measure reliability as success/total (attempts, not job),
- grouped by site/ce,
- on each CE, jobs are grouped by path (jobs following exactly the same steps).
- objective: spot system errors in sites.

# web interface (daily view)



# web interface (daily view, CE)

SiteName (click on any site)	Success	ful jobs	Failed jobs	Efficiency
CERN-PROD	197		626	23.94%
ce106.cern.ch:2119/jobmanager-lcglsf-grid_cms	30	10	9 21	.58%
ce106.cern.ch:2119/jobmanager-lcglsf-grid_2nh_cms	12	21	36	.36%
ce105.cern.ch:2119/jobmanager-lcglsf-grid_2nh_cms	16	20	44	.44%
ce105.cern.ch:2119/jobmanager-lcglsf-grid_cms	10	11	8 7.8	31%
ce101.cern.ch:2119/jobmanager-lcglsf-grid_cms	81	16	7 32	.66%
ce102.cern.ch:2119/jobmanager-lcglsf-grid_2nh_cms	12	15	44	.44%
ce101.cern.ch:2119/jobmanager-lcglsf-grid_2nh_cms	13	13	50	.00%
ce102.cern.ch:2119/jobmanager-lcglsf-grid_cms	23	16	3 12	.37%
Taiwan-LCG2	231		184	55.66%
BUDAPEST	342		19	94.74%
INICNI I NIL O	ese		40	07.400/

# web interface (daily view, CE, execution steps)

SiteName (click on any site)		Successful jobs			F		
CERN-PROD			197			626	
e106.cem.ch:2119/jobmanager-lcglsf-grid_cms			30	109	21.58%		
ce106.cem.d	ch:21	19/jobmanage	r-lcglsf-grid_2nh_cms	12	21	36.36%	
ce105.cern.c	ch:21	19/jobmanage	r-lcglsf-grid_2nh_cms	16	20	44.44%	
ce105.cern.c	ch:21	19/jobmanage	r-lcglsf-grid_cms	10	118	7.81%	
Jobids	# jobs	Successful?	Erro	r message			
See all the jobids	1	Ignored	Job successfully submit	ted to Globus	S		
See all the jobids	56	No	Got a job held event reason: Globus error 131: the user proxy expired job is still running				
See all the jobids	18	No	cannot retrieve previous matches for _jobid_				
See all the jobids	15	No	Got a job held event reason: Proxy file missing or corrupted				
See all the jobids	13	No	Got a job held event reason: Globus error 158; the job manager could not lock the state lock file			b	
See all the jobids	4	No	Got a job held event reason: Globus error 158: the job manager could not lock the state lock file			b	
See all the jobids	2	No	Cannot download _file_ from _file_				
See all the	2	No	Job got an error while in the CondorG queue.			exp	

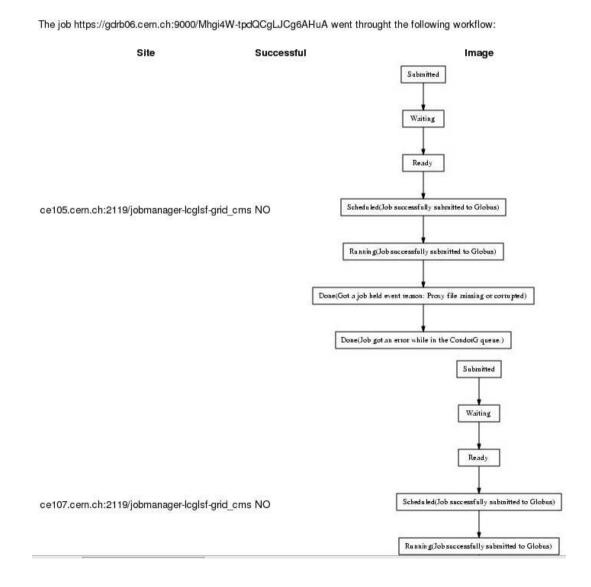
# web interface (daily view, CE, execution steps, details)

	Si	teName (clic	ck on any site)		Successful jo	bs	F
CERN-PROD	)			197			626
ce106.cern.	ch:21	19/jobmanaç	ger-lcglsf-grid_cms	30	109	21.58%	
e106.cem.	ch:21	19/jobmanag	ger-lcglsf-grid_2nh_cms	12	21	36.36%	
e105.cern.	ch:21	19/jobmanaç	ger-lcglsf-grid_2nh_cms	16	20	44.44%	
e105.cern.	ch:21	19/jobmanaç	ger-lcglsf-grid_cms	10	118	7.81%	
Jobids	# Jobs	Successfu s	il? Eri	ror message			
ee all the bids	1	Ignored	Job successfully subn	nitted to Globus	33		
See all the obids	56	No	acor pront	le etill nunnina			
See all the jobids	18	No	cannot retri a job held e	###Waiting### event reason: GI expired job is st	obus error 131:		
See all the jobids	15	No	Got a job herunning###	977 305	an error while in	the	
See all the jobids	13	No	Got a job he expired. manager could not loc	k the state lock	(file		
See all the jobids	4	No	Got a job held event re manager could not loc		a talah dari dari dari dari dari dari dari dari	do	
See all the jobids	2	No	Cannot download _file	_from _file_			
See all the	2	No	Job got an error while	n the CondorG	queue.		expe

# web interface (job list)

Jobld i	# resubmission	Job successful?	Worker Node*
https://gdrb06.cern.ch:9000/38T9_zjAJal3p8MGnObSbQ	3	NO	
https://gdrb06.cern.ch:9000/8nlTDtM0lmQh8UFvw6JCjA	3	NO	
https://gdrb06.cern.ch:9000/A9glQbLFWG6L2xzbleE1Jw	3	NO	
https://gdrb06.cern.ch:9000/Mhgi4W-tpdQCgLJCg6AHuA	3	NO	
https://gdrb06.cern.ch:9000/S5QDD-MxG zxzOwLGmnhIQ	3	NO	
https://gdrb06.cem.ch:9000/ ltqo2-edlTGrfXjHRjCfA	3	NO	
https://gdrb06.cem.ch:9000/a77LH4yQg1BlUg5OT6FPyA	3	NO	
https://gdrb06.cem.ch:9000/bXTH6FxWkZxe9eDqOE-2jg	3	NO	
https://gdrb06.cern.ch:9000/eOcPdQhw9ZSvvHUSJGw65A	3	NO	
https://gdrb06.cern.ch:9000/gbvGBdqoevSRtJO8XYd86Q	3	NO	
https://gdrb06.cern.ch:9000/jVonOSz1i3HtHqDizHMLeQ	3	NO	
https://gdrb06.cern.ch:9000/j b5uqQOrrY4eCiCStt3UA	3	NO	
https://gdrb06.cern.ch:9000/jjy0UI6yK2l4UHJmOKWhNQ	3	NO	
https://gdrb06.cern.ch:9000/xzSgO5ptifqC_rq5DMUGGQ	3	NO	
https://gdrb06.cern.ch:9000/yZAr jR9JCE5eV 7-cWqNw	3	NO	

# web interface (job view)



# ATLAS specific job monitoring

## ATLAS specific job monitoring

- Grid monitoring (RGMA, GridPP) is in place,
- using production job database for application level info (LCG, OSG, Nordugrid),
- current work: instrumentation of Ganga/ATLAS and Panda pilot jobs (OSG), for application and grid level info.

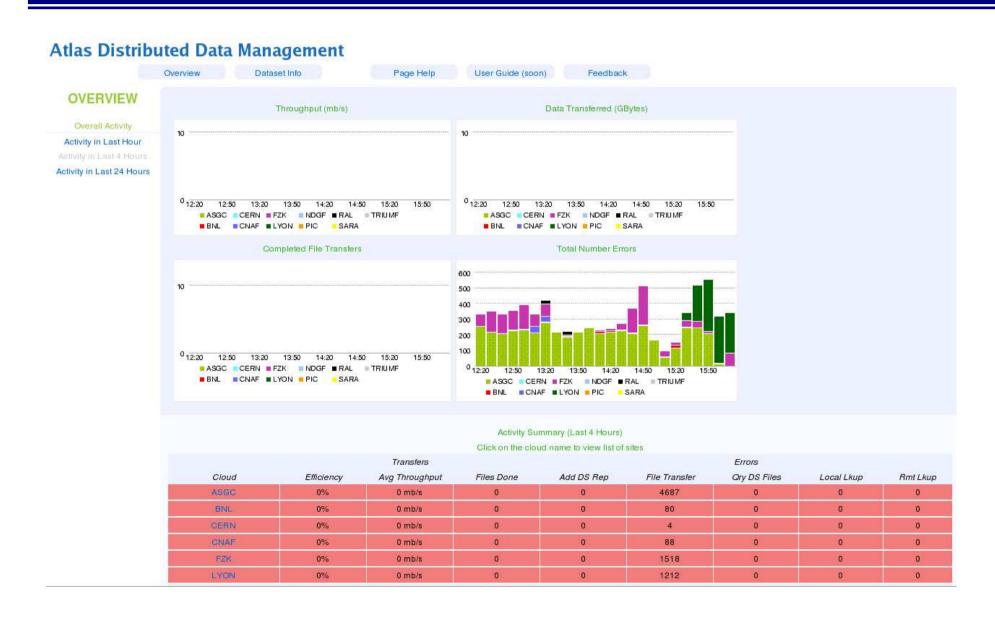


# ATLAS data management monitoring

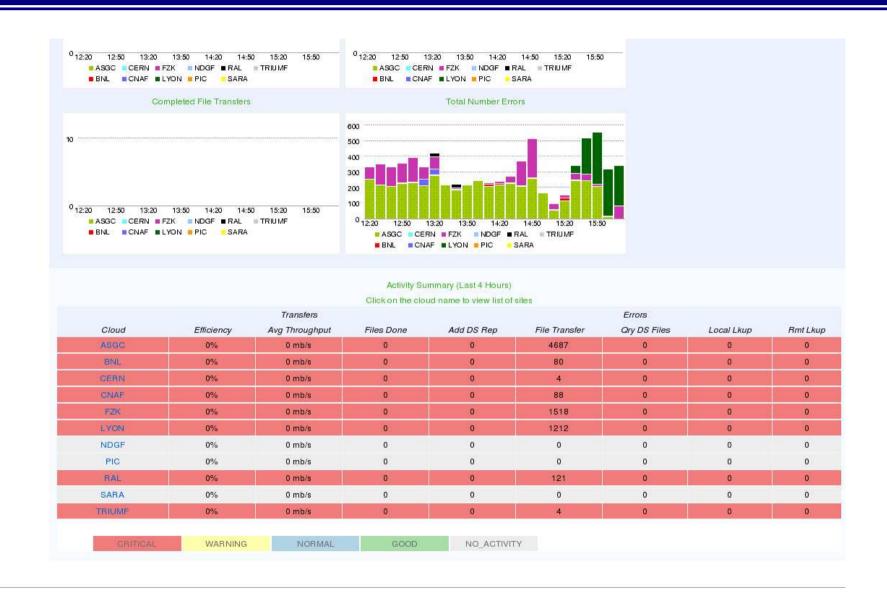
# ATLAS data management monitoring

- dashboard application which is like a component of DDM.
  - DDM servers (running in VOboxes) are contacting the dashboard directly to report events (HTTP, already implemented in DDM),
  - data, interface, plots, actions, have been specified with developers and main users.
- the application handles a lot of data, very optimised database schema and queries,
- latest release before Christmas holidays, a lot of feedback since.

## main page



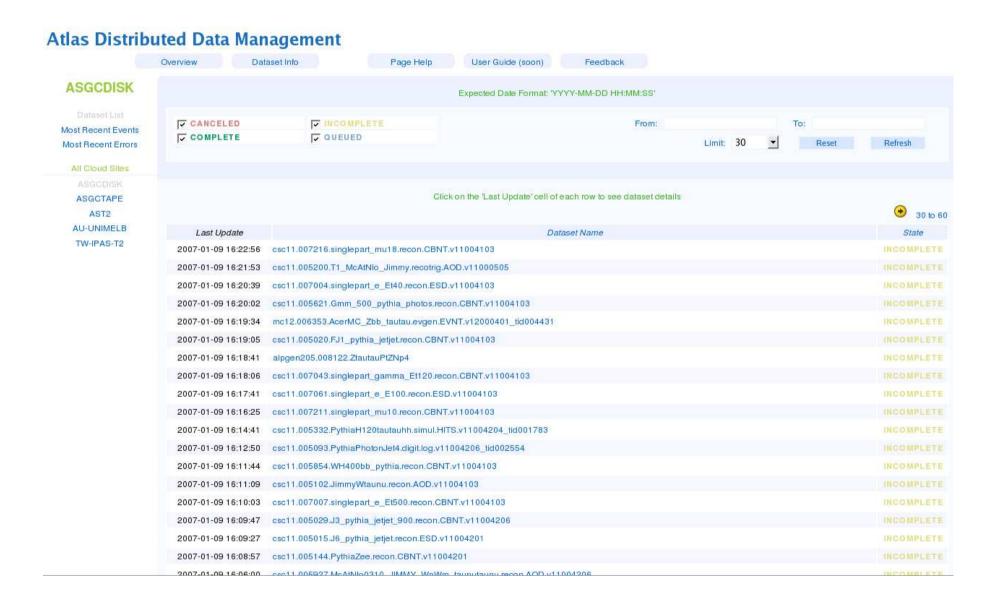
# main table (table)



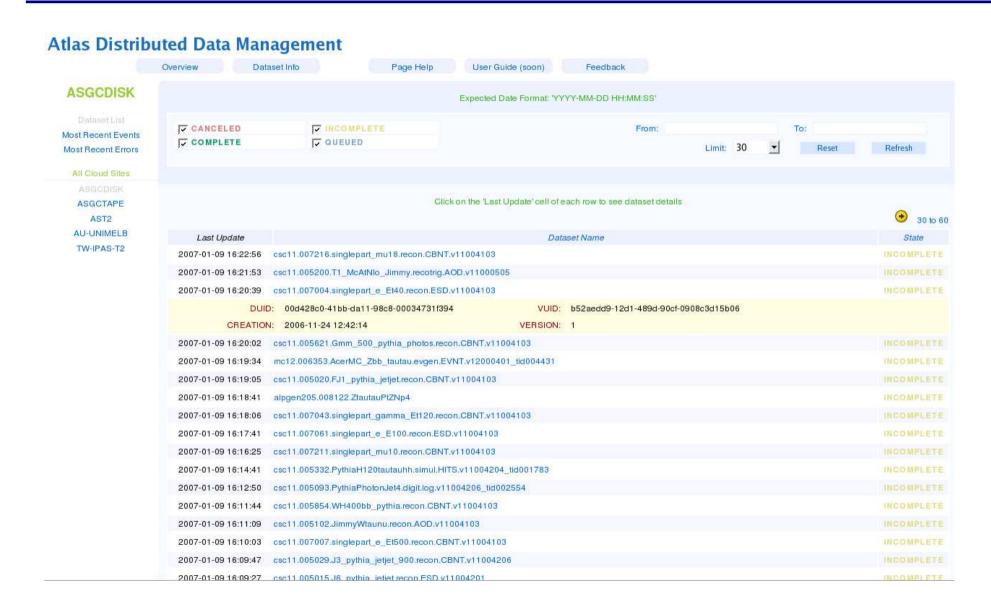
## main page (cloud detail)



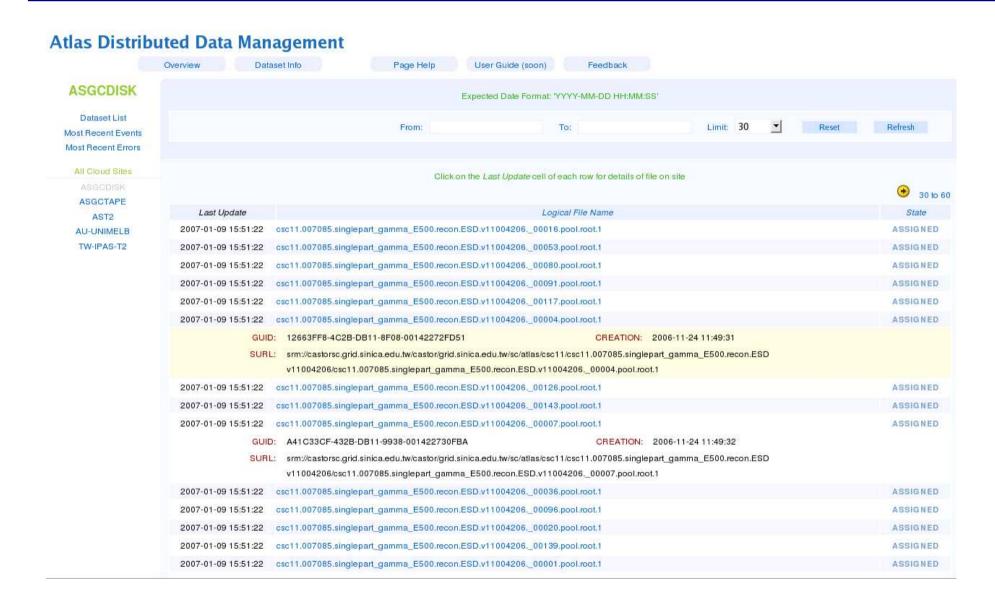
#### datasets at a site



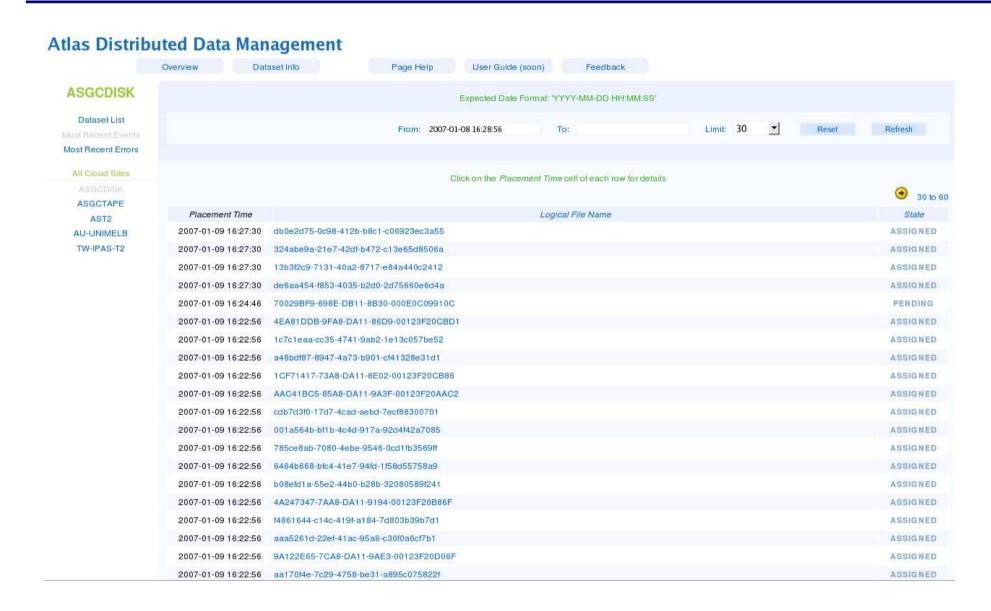
### datasets at a site (detail)



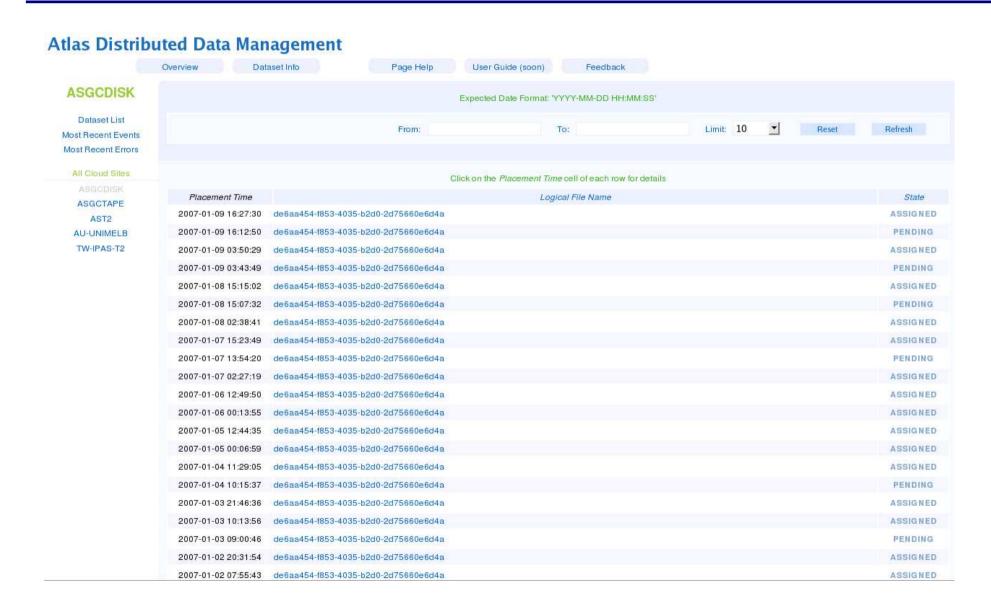
#### files in a dataset



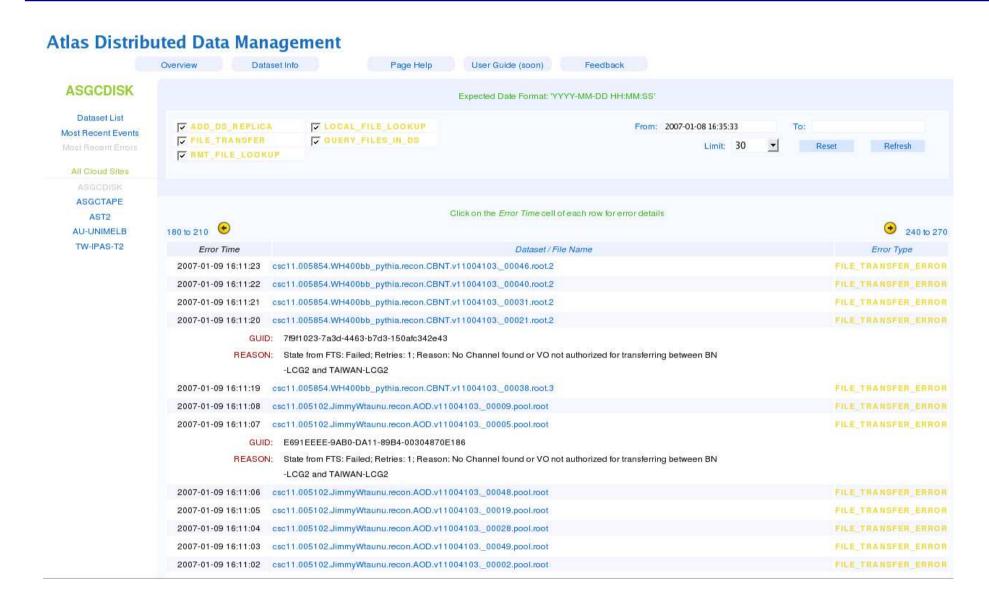
#### recent events in a site



#### recent events for a file



#### recent errors



#### **ALICE** data transfers

#### **ALICE** data transfers

- similar display we saw for site reliability,
- data is taken from ALICE monitoring database and exported to daily summaries.

#### screenshot

data transfers from CERN to ALICE T1.

Fransfers done on: Wed 13 Dec 2006						
Site (click on any site)	Successful transfers	Failed transfers	Efficiency 0.19% 31.91 %			
ALICE::RAL::CASTOR	)	530			0,19%	
ALICE::RAL::LCG	493	1052				
	Error message			Counter		
The FTS transfer_transferid_failed (Failed to ge	et proxy certificate from lcgrbp01.gridpp.rl.ac.uk . Reason	is ERROR from server: Credentials do not ex	rist)	559		
				415		
The FTS transfer _transferid_ failed ( Failed on S	RM get: Cannot Contact SRM Service. Error in srm_pin	g: SOAP-ENV:Client - CGSI-gSOAP: Could	not open connection!)	71		
asking the SE: Inappropriate loctl for device				3		
The FTS transfer _transferid_ failed ( Transfer failed. ERROR an end-of-file was reached)						
The FTS transfer _transferid_ failed ( Failed on S	RM get: Failed SRM get on httpg://castorgridsc.cem.ch:8	443/srm/managerv1		2		
ALICE::CCIN2P3::LCG	1193	912	56.67 %			
ALICE::CCIN2P3::TAPE	1205	788	60.46 %			

#### conclusion

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- VO-oriented tool,
- used by CMS since more than a year,
- ported job monitoring to ATLAS year, plus DDM monitoring,
- specific applications: DDM, site reliability, data transfers,
- now moving to LHCb and ALICE,
- good feedback, collaboration with CMS and ATLAS.

#### future plans:

- software: increase deployment ease,
- alarms, recognition of pathologic patterns.