

JOB-MONITORING OVER THE GRID WITH GRIDICE INFRASTRUCTURE

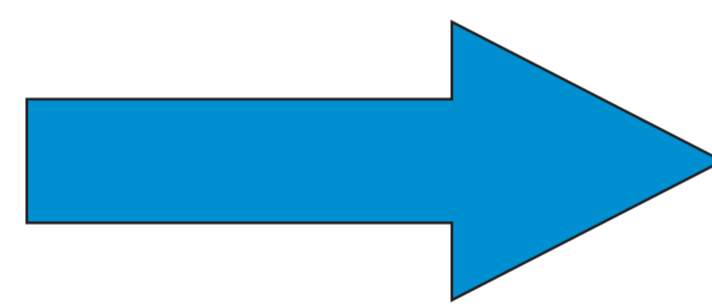
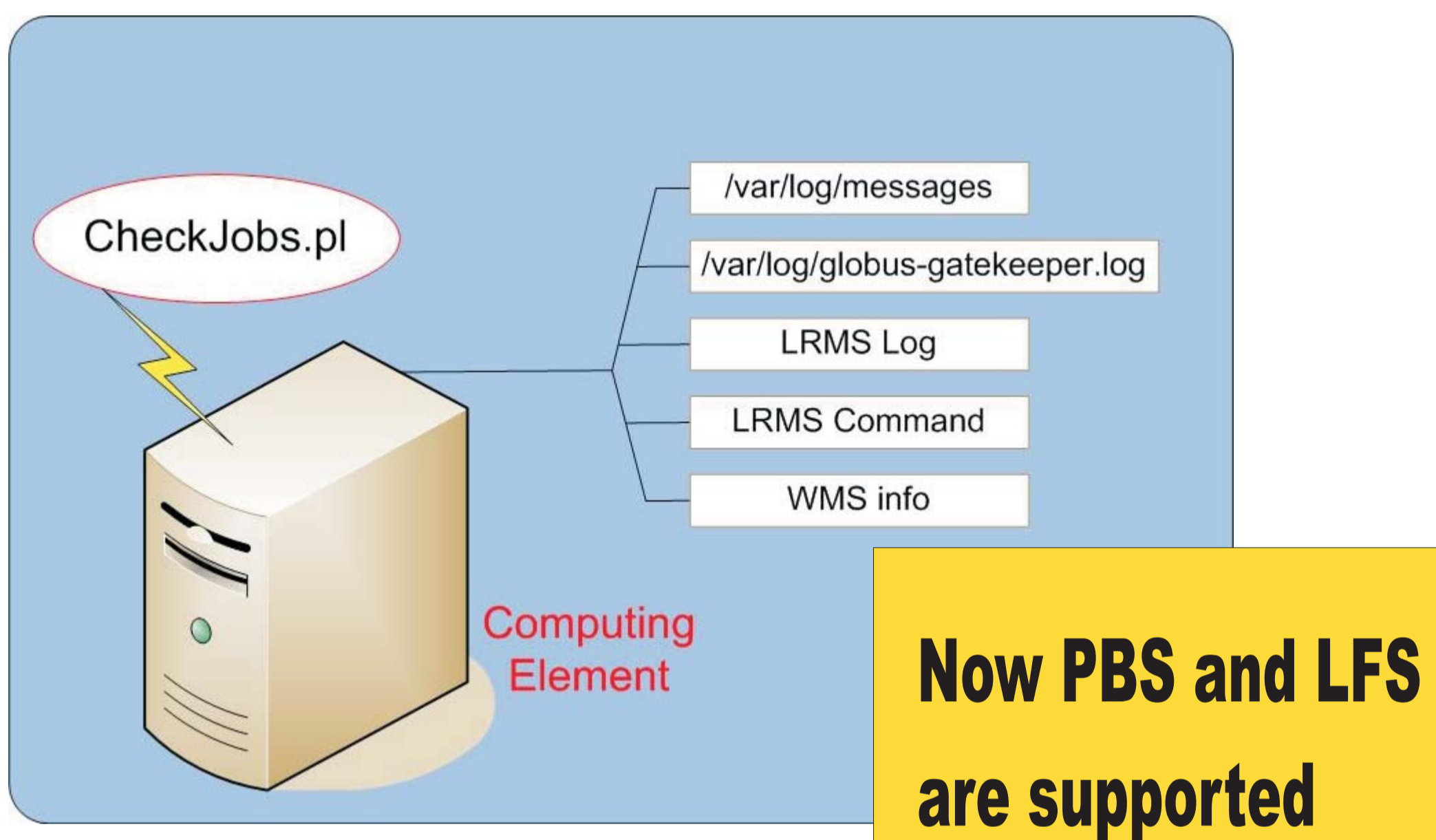
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¹Dipartimento Interateneo di Fisica di Bari e INFN sezione di Bari (Italy) - ²INFN Napoli (Italy) - ³DEE Politecnico Di Bari (Italy)

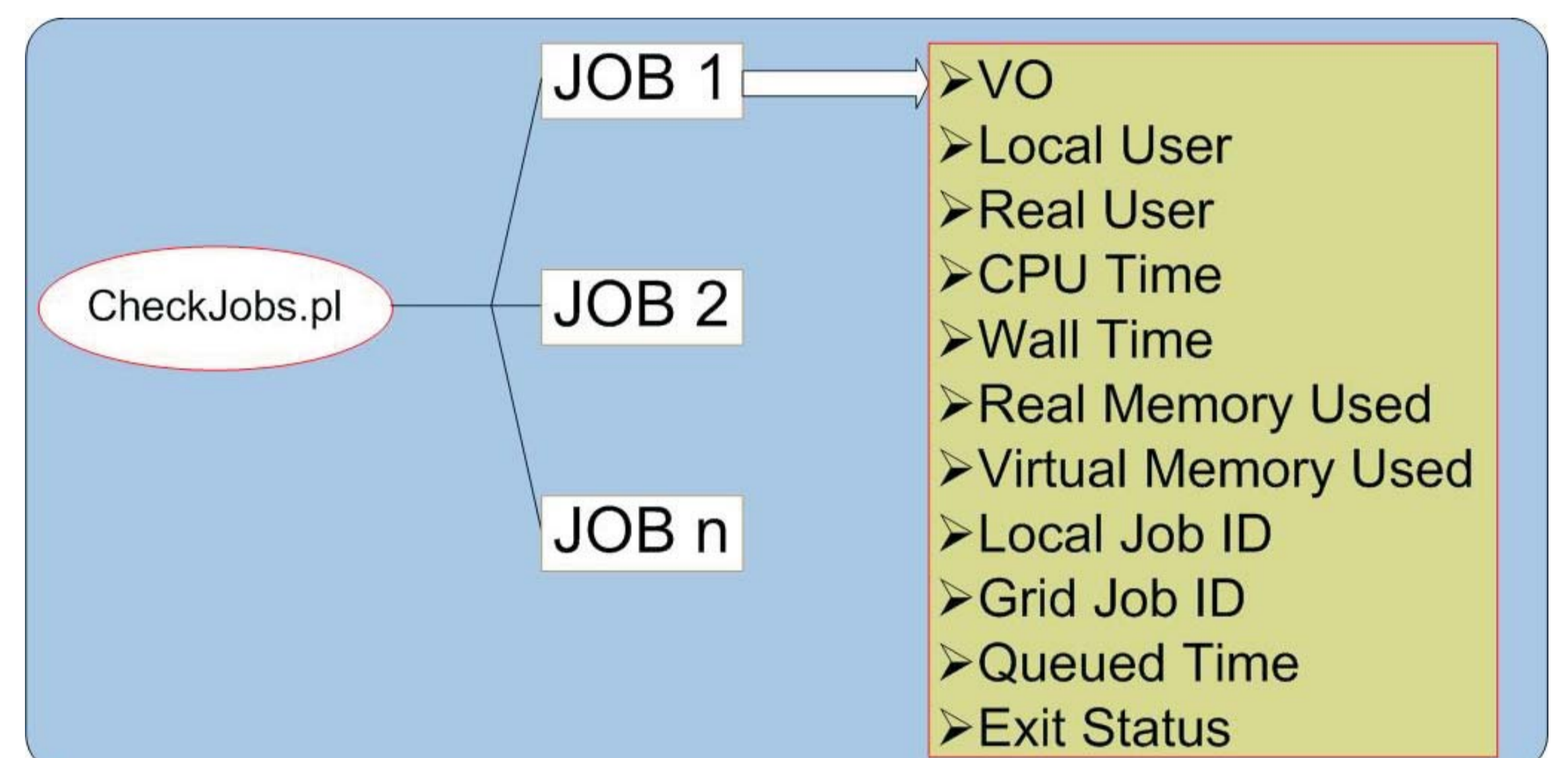
What Job Monitoring can do:

- ▶ Control the status of each job over the Grid
- ▶ Detect the "exit_status" of each job
- ▶ Measure how many resource the job is consuming (CPU Time, Resource Time, Real Memory, Virtual Memory)
- ▶ Group the informations of jobs by Virtual Organizations
- ▶ Group the informations of jobs by farm
- ▶ Group the informations of jobs by Real User
- ▶ The host information can be associated with job information
- ▶ Detailed historical graphics about all the information

Retrieving the information



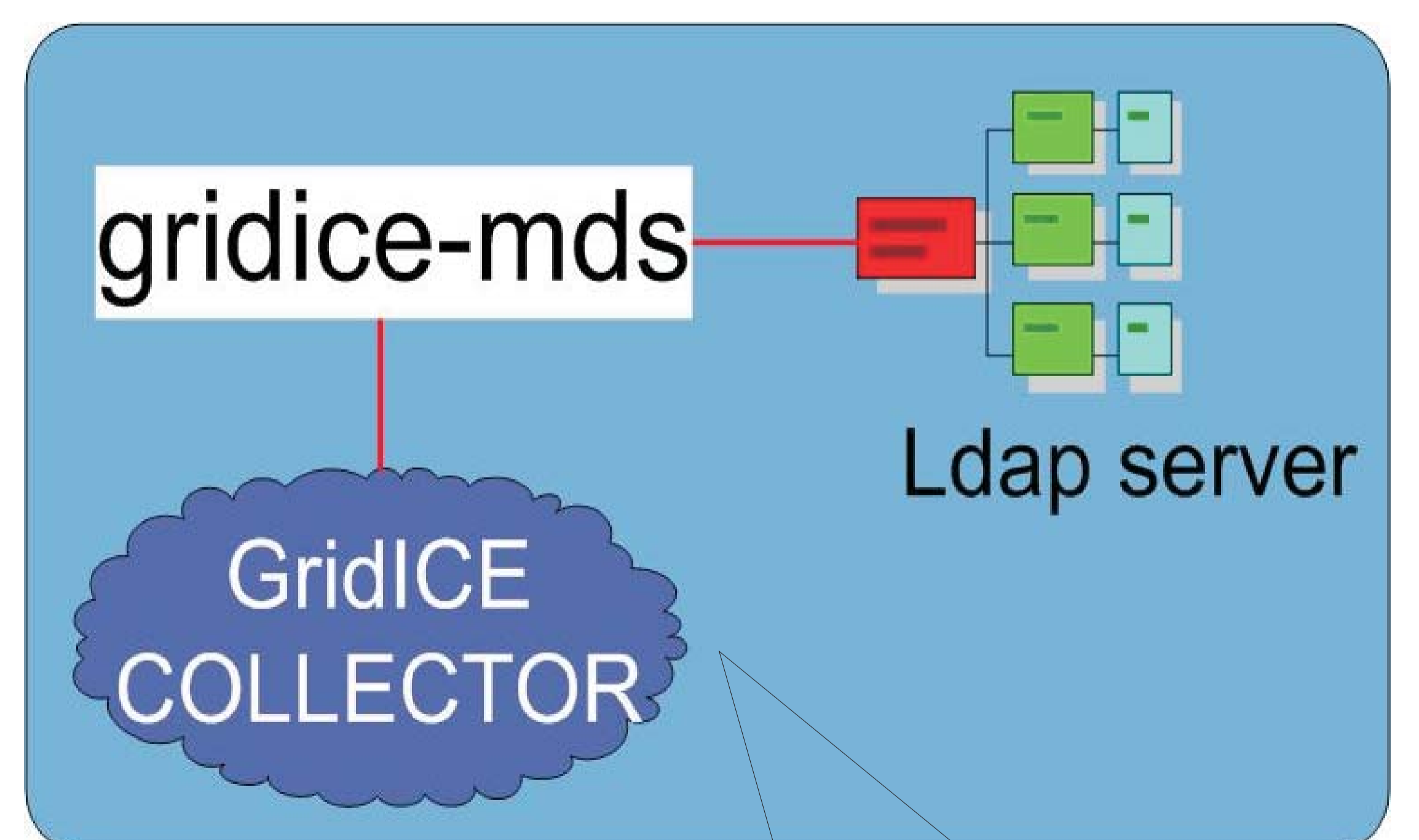
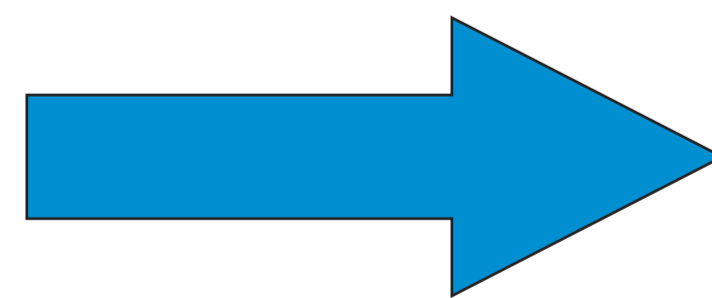
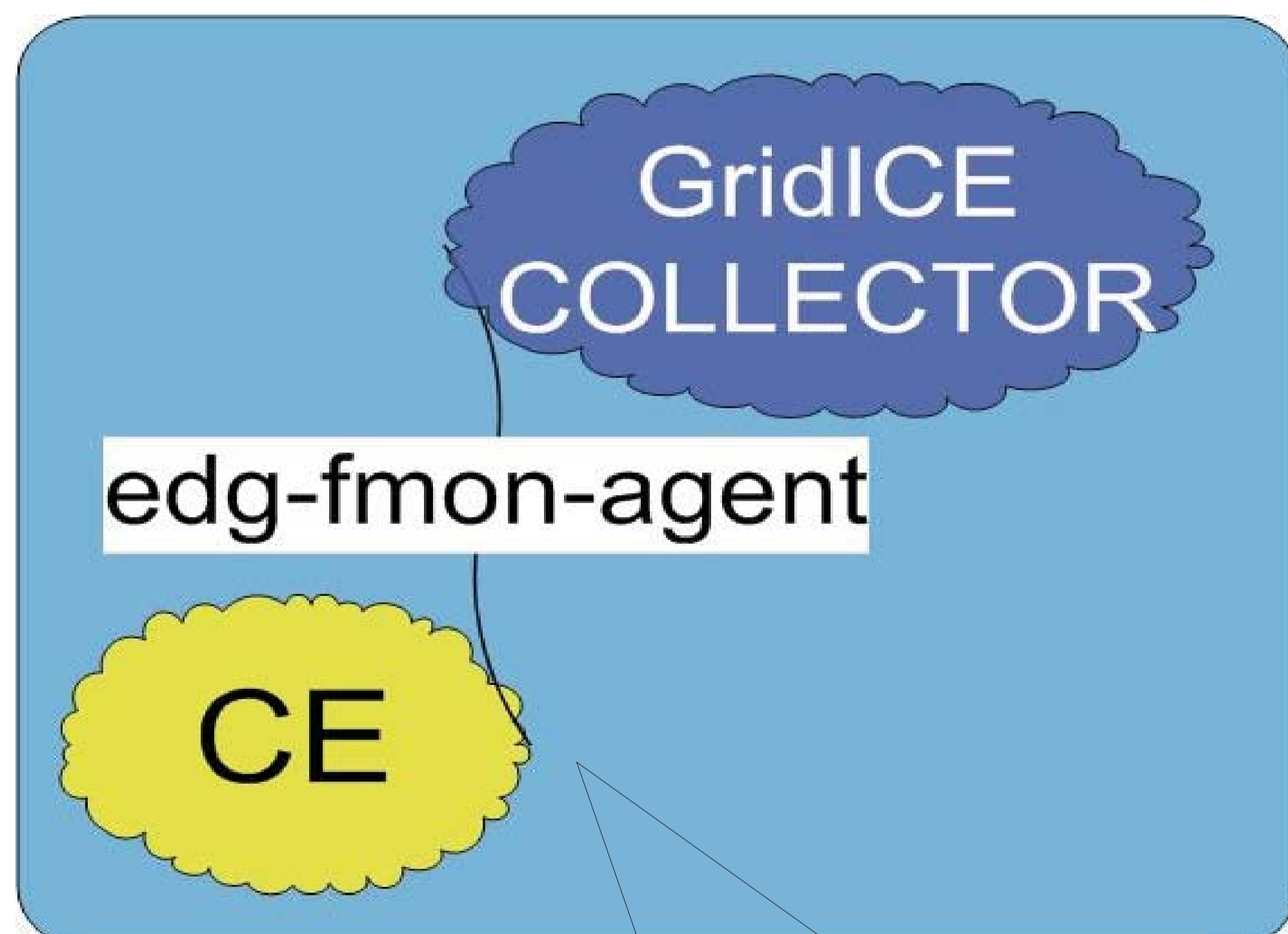
Job's Information



The informations about the jobs are retrieved on each CE from the logs and some commands. There is a perl script that runs periodically and check the logs.

The CheckJob.pl retrieves many informations about each job

Publishing Informations



The informations about the jobs are sent from the CE to the GridICE collector (normally the SE) via "edg-fmon-agent"

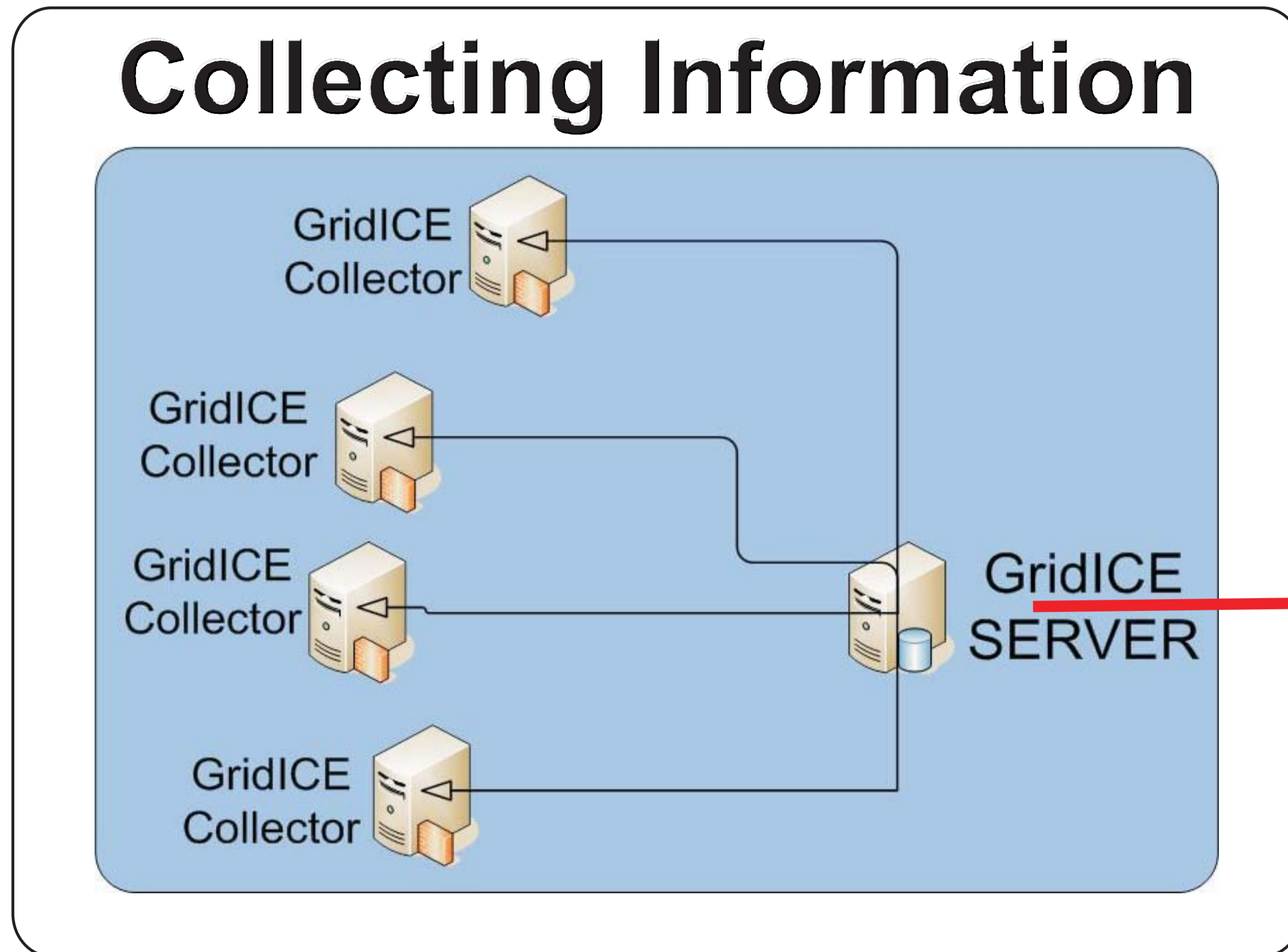
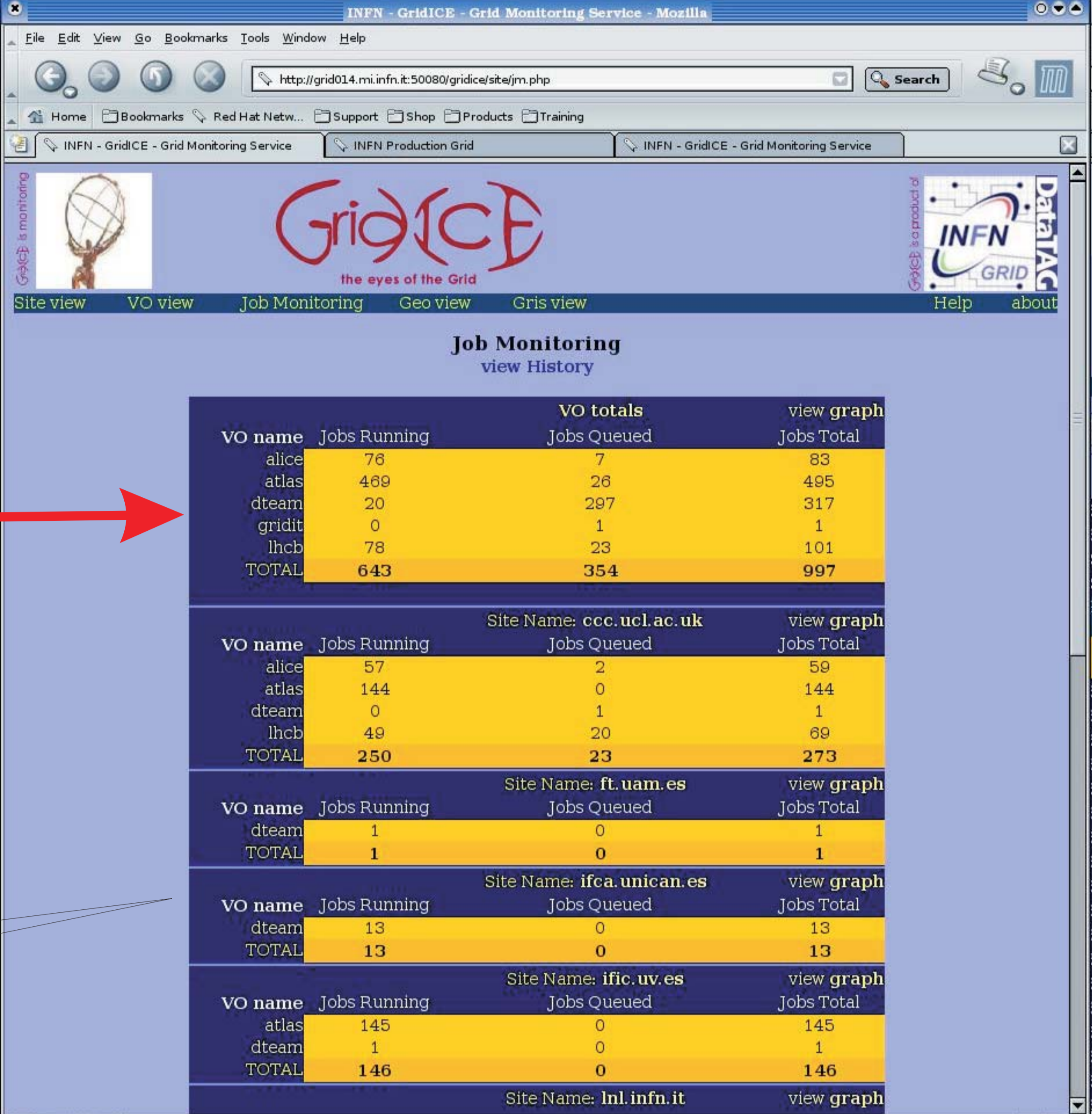
The GridICE collector publish all monitoring informations (including Job Monitoring Informations) via LDAP server

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Web Page of Job Monitoring

The screenshot shows the 'Job Monitoring' page with a table of job statistics:

VO name	Jobs Running	Jobs Queued	Jobs Total
alice	78	7	83
atlas	469	26	495
dteam	20	297	317
gritit	0	1	1
lhcb	78	23	101
TOTAL	643	354	997

The page also shows detailed views for specific sites like 'ccc.ucl.ac.uk', 'ft.uam.es', 'ifca.unican.es', 'ific.uv.es', and 'inl.infn.it'.

The run-time information on the web page are grouped for Virtual Organization of jobs or for farm in which they are discovered. It is, also, possible to group by the real owner of the job.

It is available a detailed view for each job; that can be grouped also by "job-status", or by date of submission, start or end


There is also a historical view of the job grouped by farm and VO.



The screenshot shows the 'JOB details' page for a job with Local ID: 65563. The job is running on site 'ba.infn.it' with VO 'lhcb'. The table below shows job details:

Local ID	VO	Site	Job Name	Job Status	Local Owner	Creation Time	Start Time	End Time
65563	lhcb	ba.infn.it	STDIN	Running	lhcb001	15/09/2004-12:53:28	15/09/2004-12:53:29	not finished

Additional metrics shown include Execution Target (pocms16), CPU Time (53272s), Wall Time (57742s), Exit Status (Not Available), RAM Used (202964 KB), and Virtual Memory Used (323824 KB).



The screenshot shows the 'Job Monitoring History' page, which displays a grid of job data grouped by site and VO. The data is organized into columns for different sites and rows for different VOs.

Site	alice	atlas	babar	bio	cdf	cms	dteam	egrid	gritit	infn	infngrid	ingv	lhcb	n/a	virgo	zeus
ba.infn.it		atlas	babar	bio		cms			gritit	infn	infngrid	ingv	lhcb			
bo.infn.it	alice		babar		cdf	cms			gritit		infngrid		lhcb	n/a		
cern.ch																
cnaf.infn.it	alice	atlas	babar	bio	cdf	cms	dteam		gritit		infngrid		lhcb		zeus	
cr.infn.it	alice	atlas				cms	dteam						lhcb			
ct.infn.it	alice	atlas	babar	bio		cms	dteam		gritit	infn	infngrid		lhcb			
fe.infn.it			babar		cdf	cms					infn	infngrid	ingv	lhcb		
inl.infn.it	alice	atlas				cms	dteam				infngrid		lhcb			
mi.infn.it			atlas				dteam									
na.infn.it	alice	atlas	babar	bio		cms	dteam		gritit	infn	infngrid	ingv	lhcb			
oat.ts	astro.it								gritit	infn	infngrid		lhcb			
pd.infn.it	alice		babar	bio	cdf	cms		egrid	gritit	infn	infngrid	ingv	lhcb			
pg.infn.it							cms									
pi.infn.it		atlas					cms		gritit		infngrid		lhcb			
roma1.infn.it		atlas	babar	bio			dteam		gritit		infngrid		lhcb		virgo	
to.infn.it	alice	atlas				cms	dteam				infngrid		lhcb			
ts.infn.it						cms			gritit		infngrid		lhcb			