

# Requirements for Job Monitoring

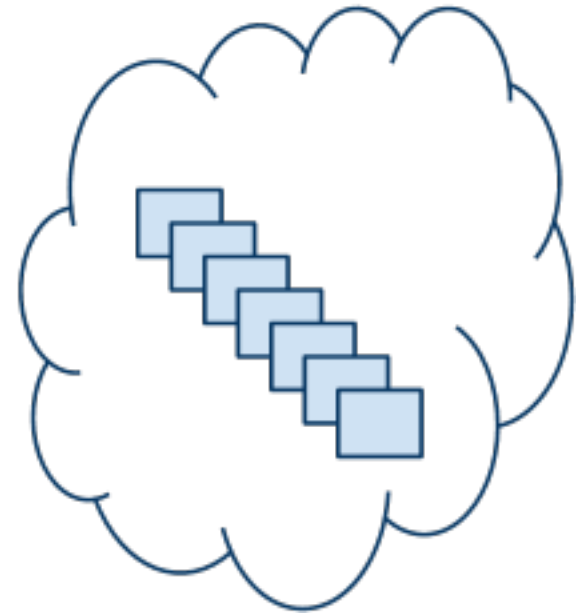
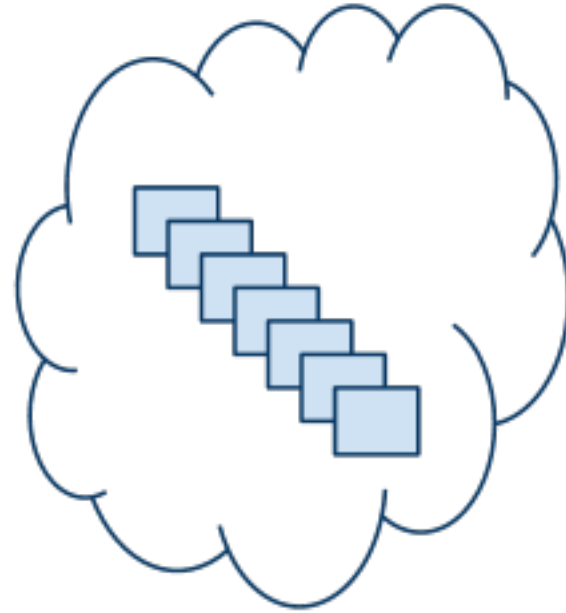
Adam Lyon  
for CD/REX

October 2010 NUCOMP Meeting

YOU



Your Jobs

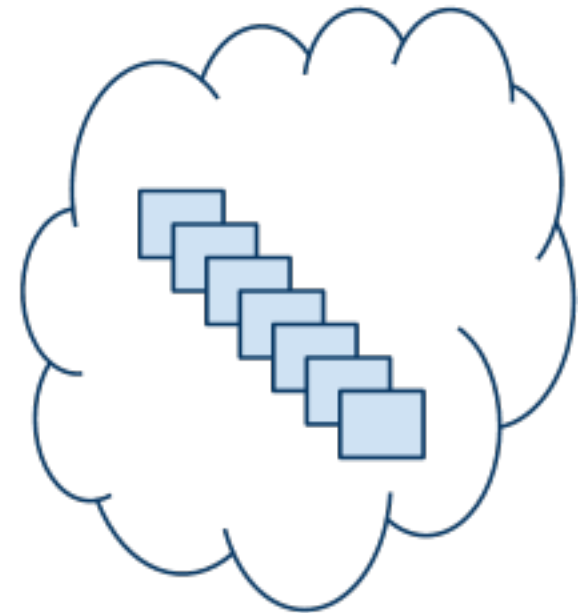
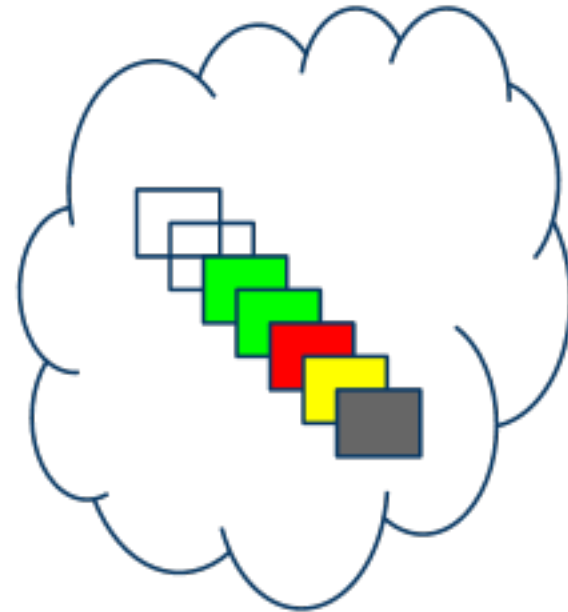


YOU



What  
Are  
They  
Doing  
?????

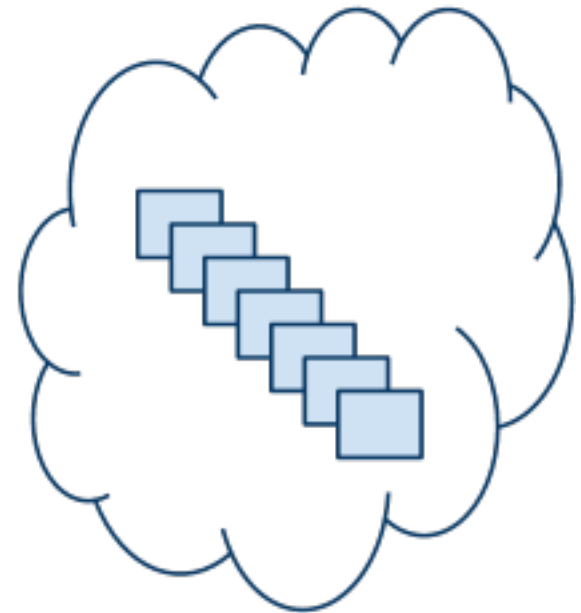
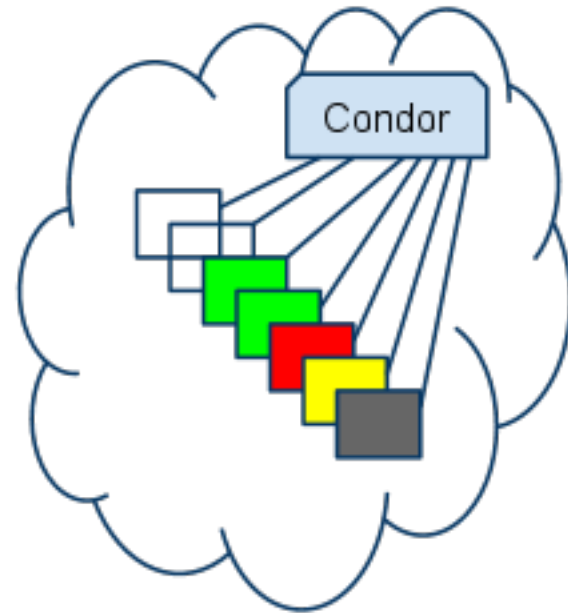
Your Jobs

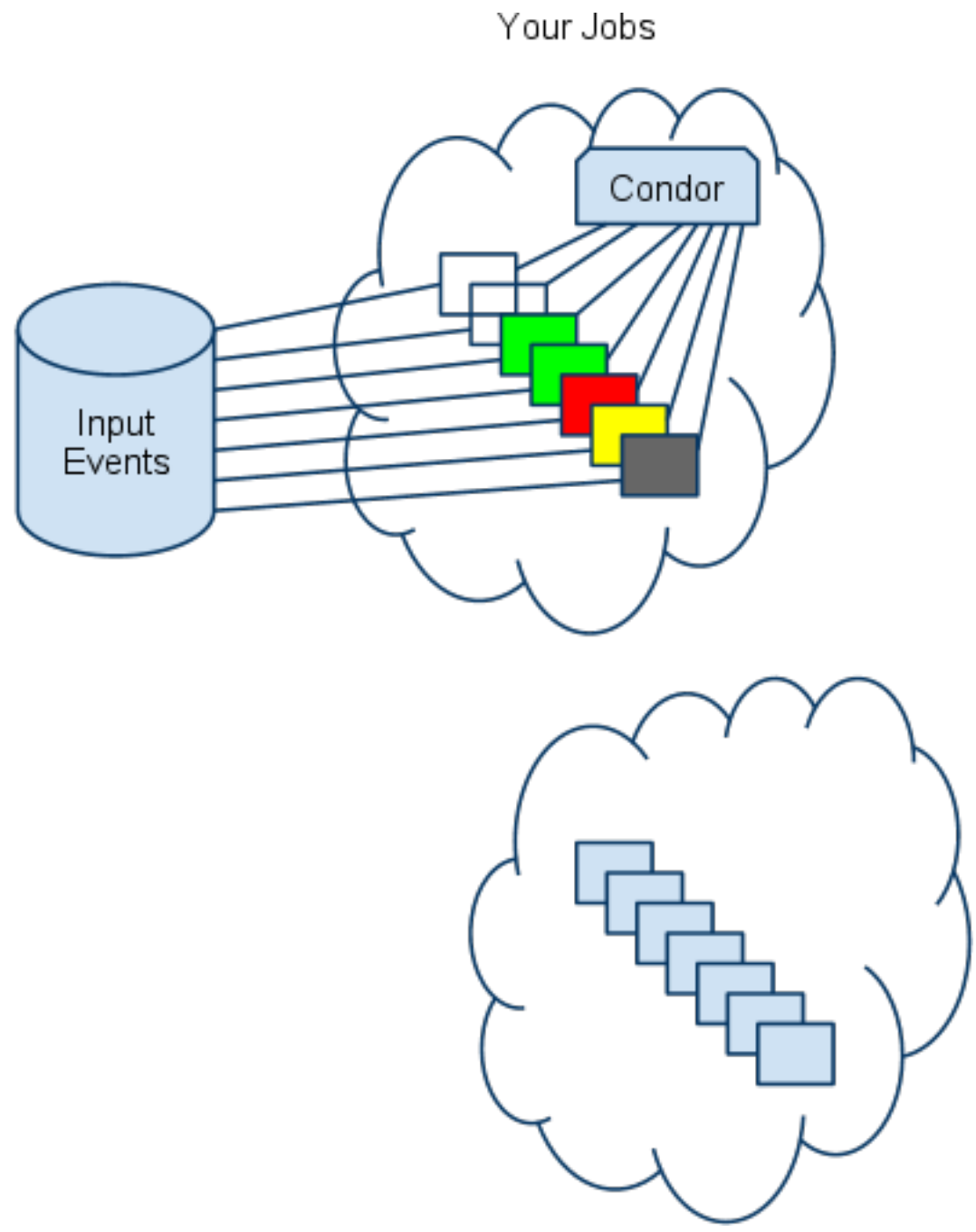


YOU



Your Jobs

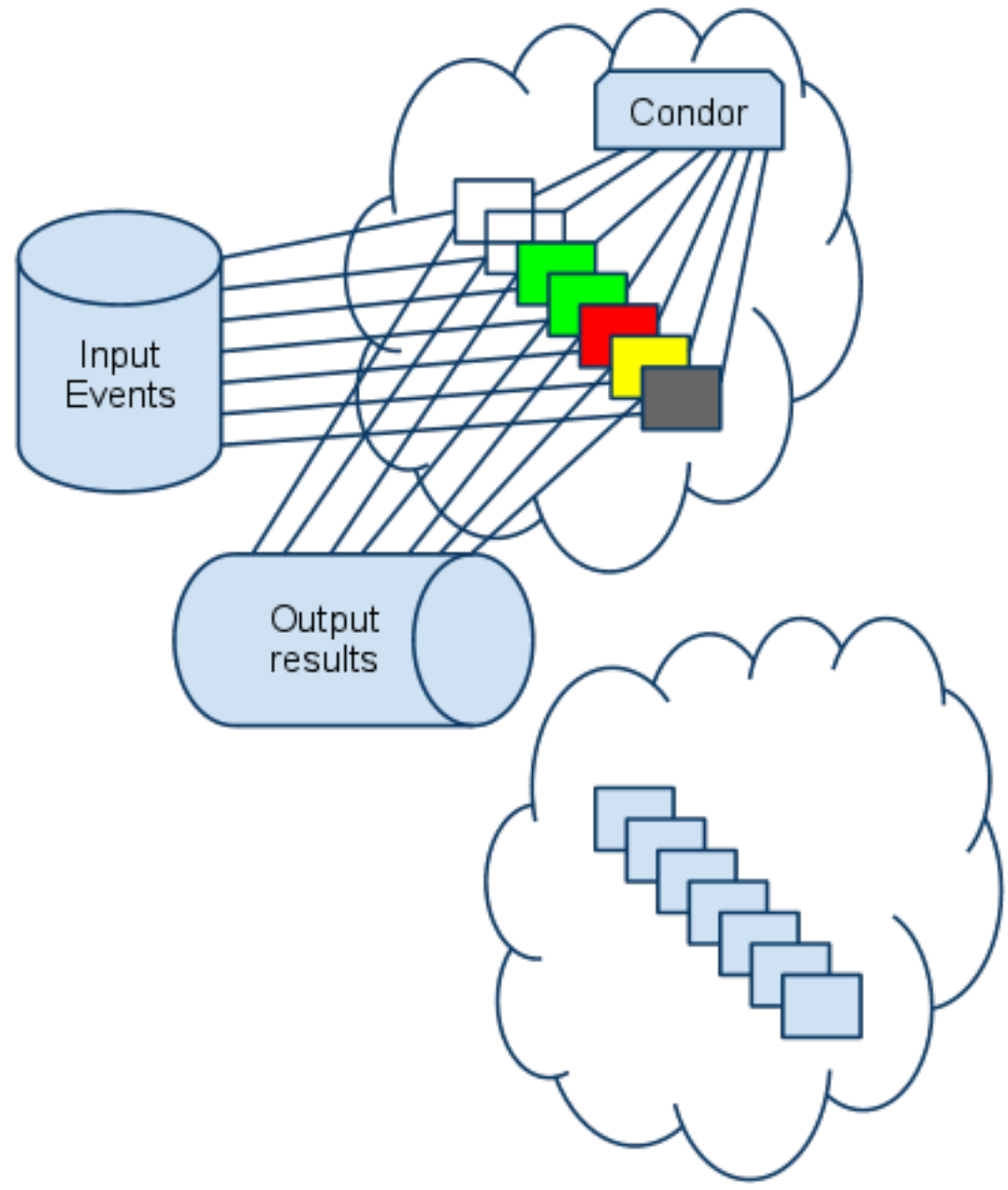


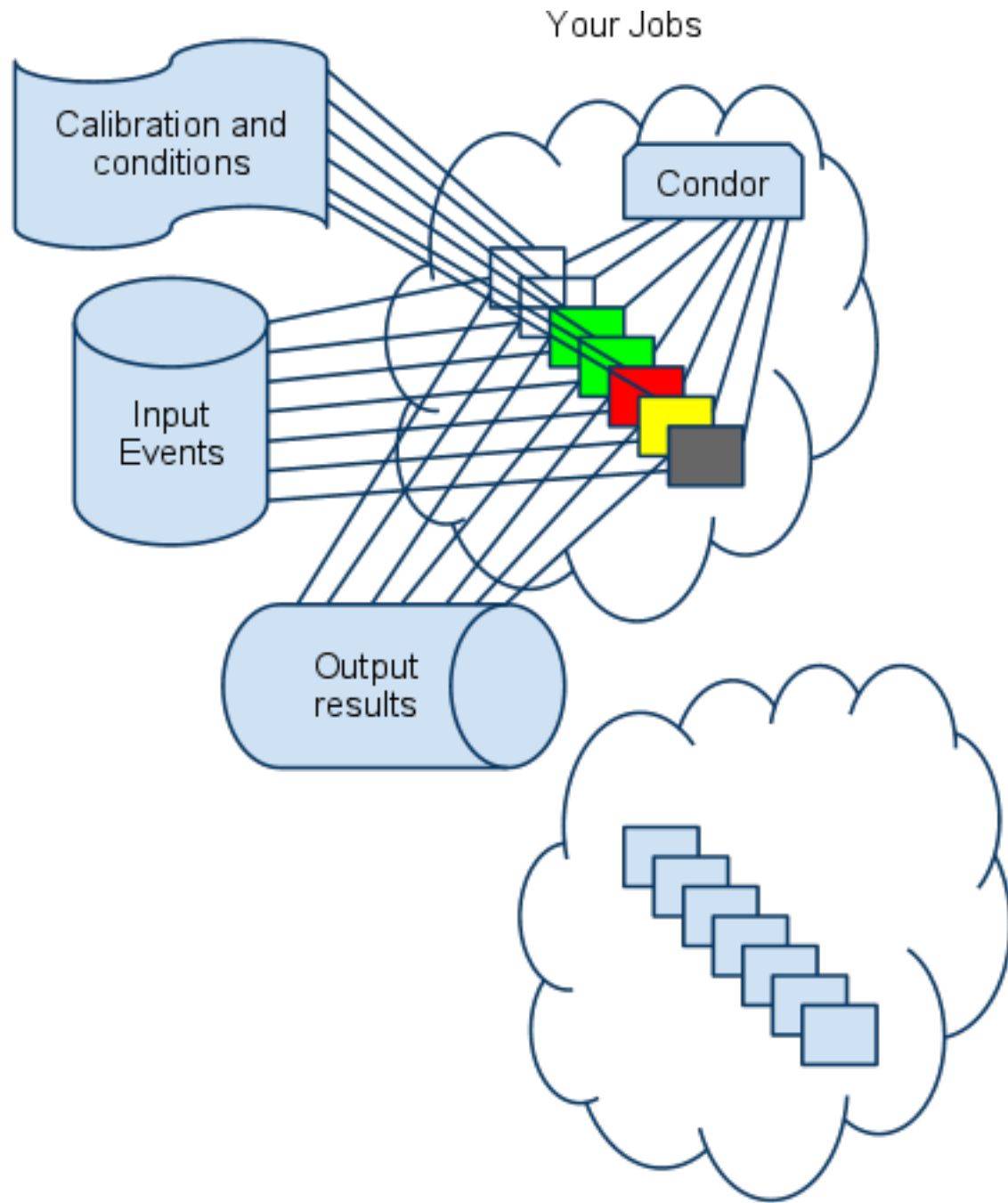


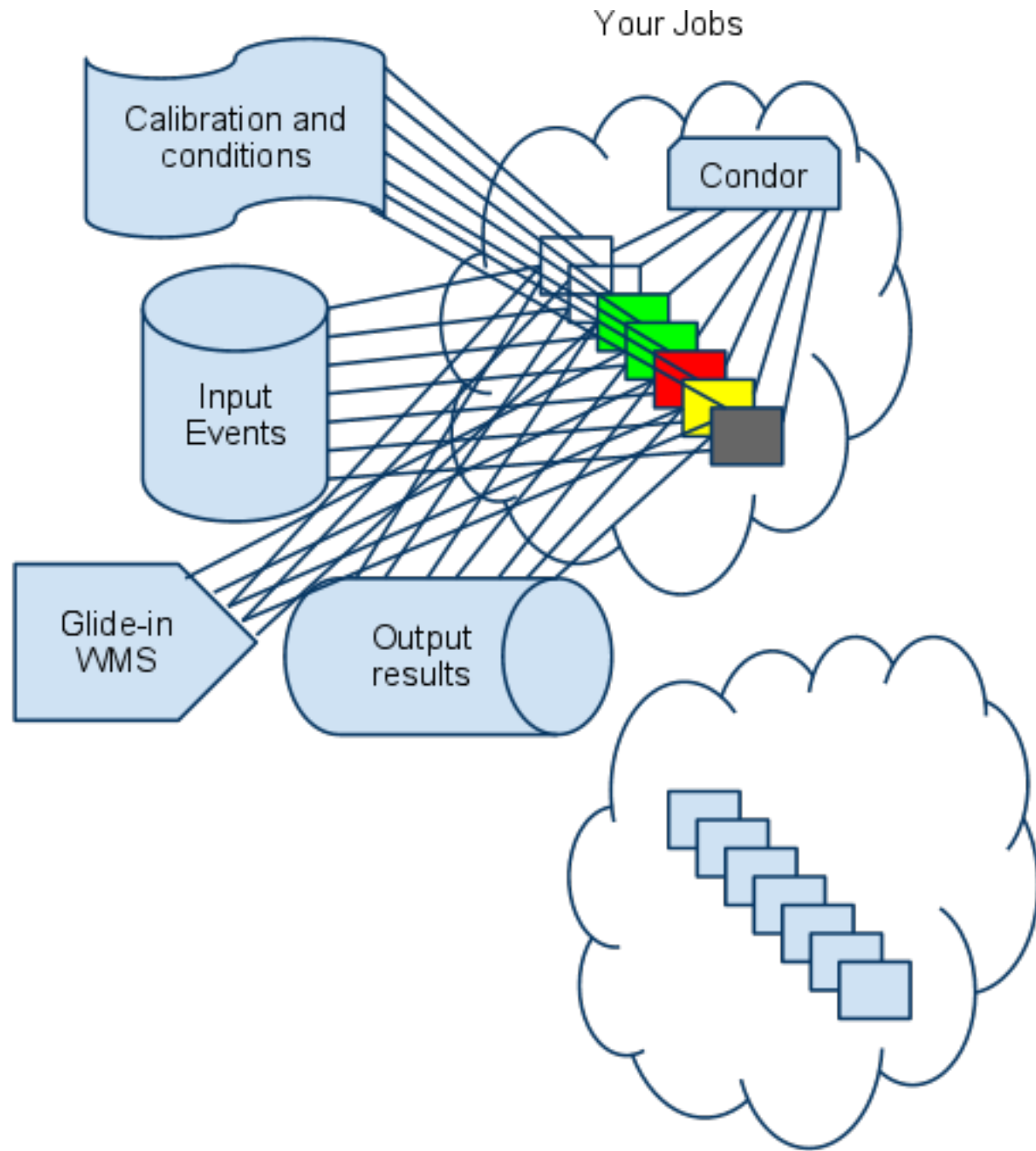
YOU



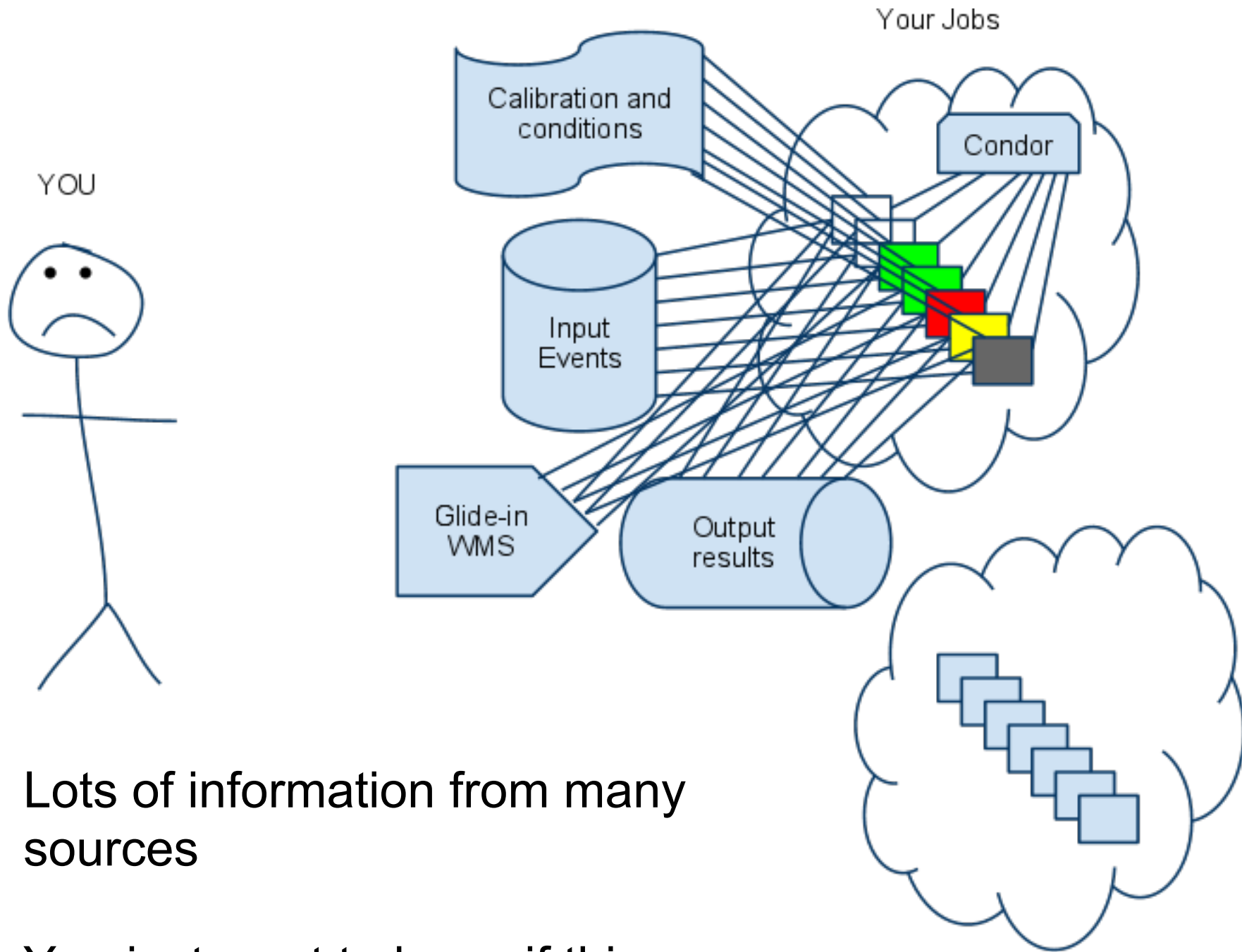
Your Jobs











Lots of information from many sources

You just want to know if things are working!

# Monitoring is not required, but is essential

- A Batch/Grid/Data handling will operate without good monitoring
- ... but it'll be frustrating!
- Monitoring is essential for a smooth running system and (potentially) happier users
- Monitoring is essential for the operations team and management

# As an experimenter, what do you want to know?

- Should I submit my jobs now?
  - Is the system working?
  - Is the system too busy?
- Once jobs are submitted, you want to track their progress
  - **State** (queued, running, completed, failed, unable to start, zombied, mysteriously disappeared)
  - **For queued jobs**, what is your position in the queue? How much longer will you wait?
  - **For running jobs**, are they progressing normally? E.g. are they stuck waiting for data? Infinite loop? How much CPU are they taking?
  - **For completed jobs**, did they finish successfully? Did they store output? How much data did they read, write?

# As an experimenter, what do you want to know?

- Receive summary information when jobs from a submission complete
- You also want to look at other people's jobs
  - Are jobs at this site working or having problems like my jobs?
  - Is a user hogging resources at a site?
  - Is an experiment hogging resources at a site?

# As an operator, what do you want to know?

- "Operators" are REX operations (front-line support) and management (not admins)
- Is the system working? Are jobs running successfully? Data flowing to jobs?
- If jobs are failing: Impact? Distribution of errors? Timing and location of failed jobs?
- If data handling is failing: (same as above)
- Are resources being utilized effectively? Are there lots of low efficiency jobs?
- Is anyone hogging resources?
- Historical information

# Requirements should fulfill those use cases

- Site specific information (slots, downtimes)
- Job information (What jobs are in what states? Efficiency, Job start/stop times, Job exits)
- Data handling information (Tape requests, File requests, Delivery times/errors)
- Individual job information (job info, including access to job logs and real-time VM info, file info, efficiency)

# Requirements should fulfill those use cases

- Very flexible viewing options
  - Tables with multi-level selection and multi-level sorting
  - Historical strip charts with selectable information and overlays
- Access requirements
  - Accessible on the web from offsite (or with VPN if absolutely required)
- Perhaps access to the underlying database for special investigations

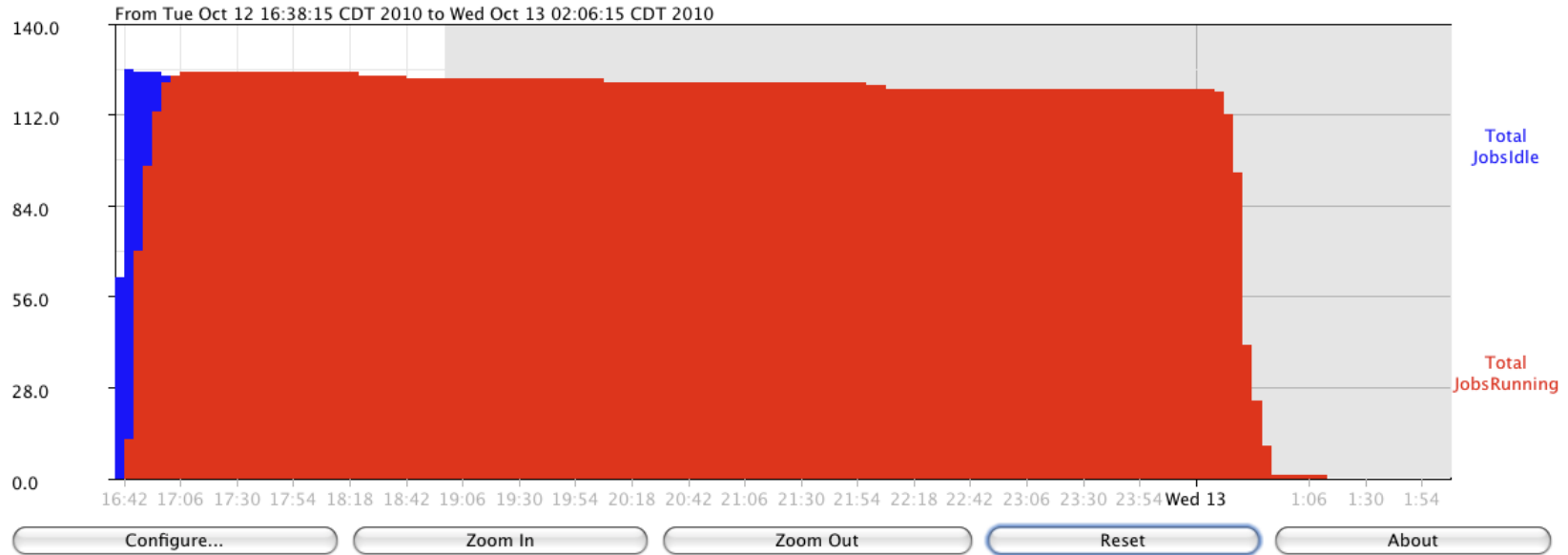
# Examples of job monitoring...

Note the scope of the monitoring



# Condor-view (if05)

## Nova Condor Pool Condor Pool User Statistics for Day



[Graph Hints: The Y-axis is number of jobs, the X-axis is time. When graph finishes updating, press 'Configure..' to view different Architecture or State data. Also, you can use the mouse to draw a rectangle on the graph and then press 'Zoom In'. Press 'Reset' to center/resize the data after Configure or when done zooming. Nighttime shows up on graph background as grey.]

User	Total Allocation Time (Hours)	JobsRunning Average	JobsIdle Average	JobsRunning Peak	JobsIdle Peak
<a href="#">Total</a>	958.6	112.3 (98.7%)	1.7 (1.3%)	125.0 (100.0%)	114.0 (90.5%)
<a href="#">corwin</a> fnal.gov	958.6	112.3 (98.7%)	1.7 (1.3%)	125.0 (100.0%)	114.0 (90.5%)

[dbox@fnal.gov](mailto:dbox@fnal.gov)

Good for operators, good to determine state of system

# Fermigrid Monitoring

[Pbs Monitor Usage](#)

[Pbs Avgloadavg Data](#)

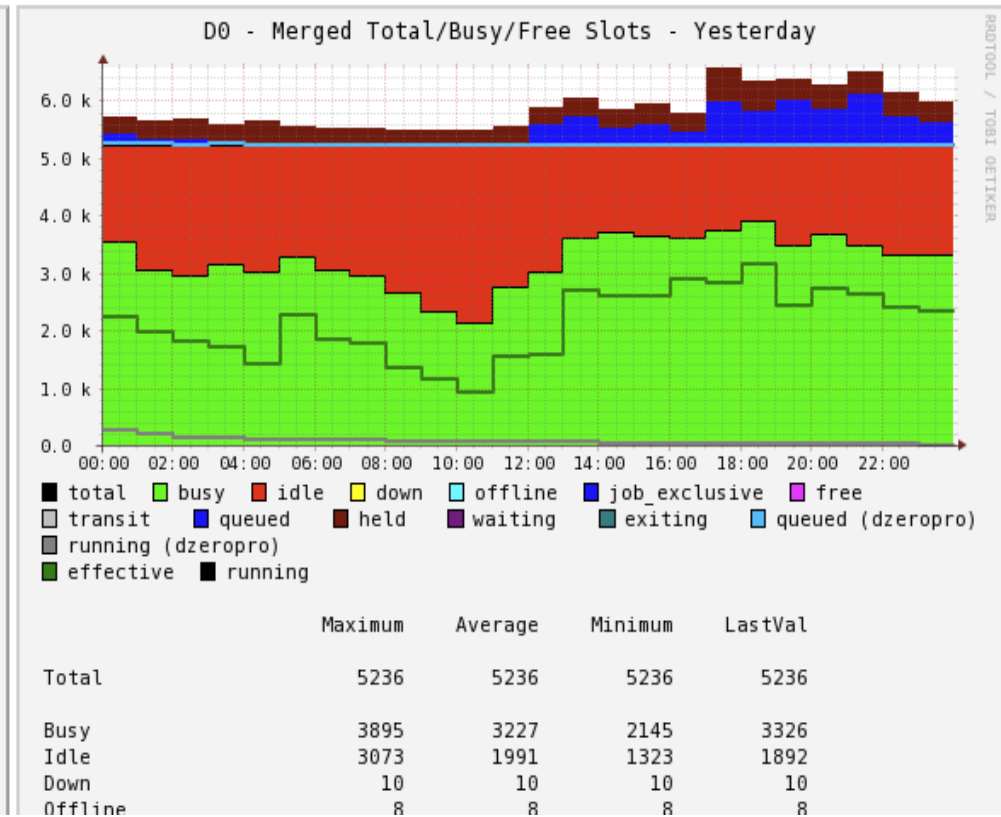
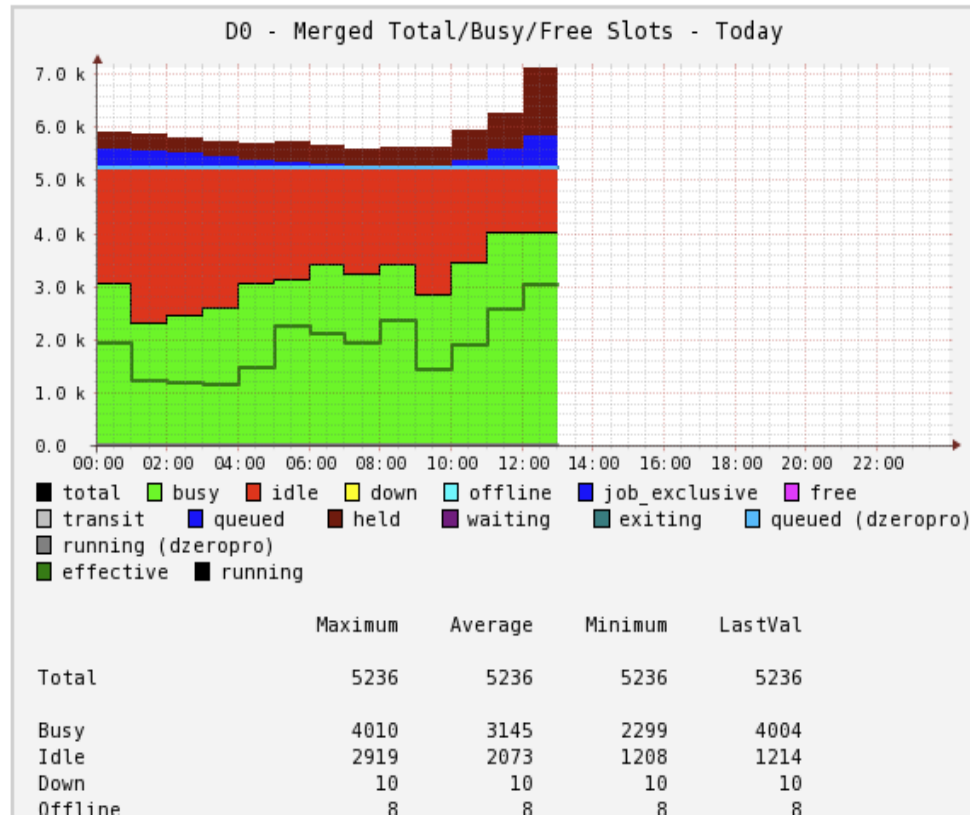
[Major VO Usage](#)

[Fermilab VO Group Usage](#)

[OSG Opportunistic VO Usage](#)

**D0 - Pbs Service Monitor - Today**

**D0 - Pbs Service Monitor - Yesterday**



# OSG Monitoring (Gratia Accounting)



Open Science Grid

## Reports - VO Views

- Usage by VO
- \* Daily Usage by VO
- Daily Usage by Site for VO
- Site Usage by VO

## Reports - VO Views - Weekly History

- Usage By VO
- Usage Metrics - For VO(s)
- Usage Metrics - For Site(s)

## Reports - Site Views

- Usage by Site
- Daily Usage by Site
- Daily Usage by VO for Site

## Reports - by Probe

- Jobs by Probe
- Daily Usage by Probe

## Reports - Display in >30 secs

- 2007 Usage for All VOs

## DCache

- Dcache Probe Table

## SQL Queries

- Custom SQL Report
- Distinct Probe Names
- Probes With Odd SiteName
- Records Without Dates

## Static Reports

- Static Reports (PDF, csv)

## WLCG ATLAS/CMS Tier1/2

- APEL-WLCG Interface Data
- EGEE Accounting Portal - Tier 1
- EGEE Accounting Portal - Tier 2

## Commands

## Daily Usage by VO for Site

Metric for chart: Wallclock Hours

Display Report below

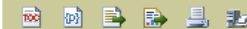
From: 2010-10-06

Display Report in new Window

To: 2010-10-13

Site Name

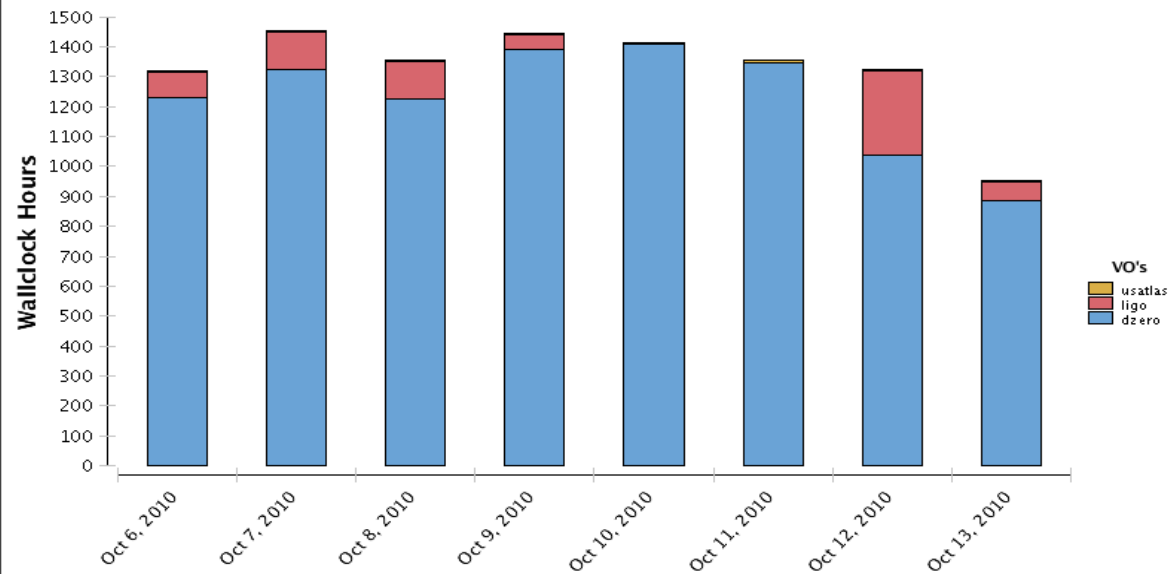
ouhep00.nhn.ou.edu  
ouhep1.nhn.ou.edu  
OUHEP\_OSG  
OU\_OCHEP\_SWT2  
OU\_OSCER\_ATLAS



Showing page 1 of 1

Date range: 2010-10-06 - 2010-10-13  
Site Name: OUHEP\_OSG

## Daily Usage by VO for Site (Wallclock Hours)



[Retrieve Report URL](#)

[Show Query](#)

# LHC Dashboard (dashboard.cern.ch)



## **dashboard**

home page

mailing list

report bug

**wiki**

job exit codes

help on using CMS Dashboard

## **applications statistic**

production server

development server

usage by application

## **Current applications**

Interactive view

History view

Task monitoring for the analysis users

Site availability based on the SAM tests

Production Monitoring

Site status board

CMS Critical services

## **Validation in progress**

Task monitoring for the production users

Interactive view (test)

Input dataset monitoring

Site status board (development)

New site availability based on SAM tests

CMS workflow map

Data Mining on Analysis Job Information

Historical view (development)

## **Old applications**

IO Rate Monitoring

History view (old version)

# CMS current information



JobSUMMARY

[HELP](#) [FAQ](#)

- Waiting time
- Running time
- Overall time
- CPU time
- Job Wrapper time
- Efficiency

Search a job using the GridJobId

- 
- 
- 
- 
- 
- 
- 
- 
- 
- 

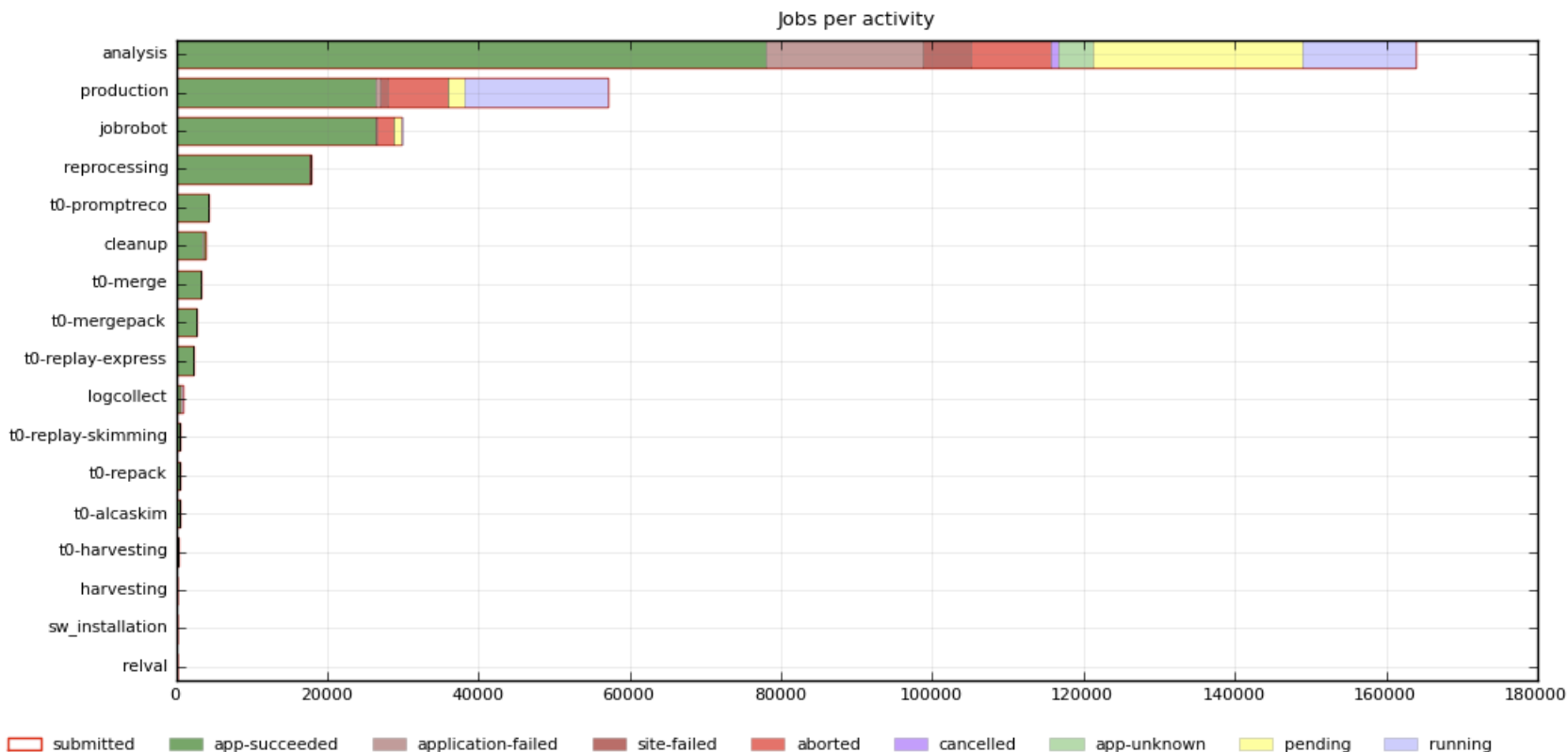
- unk  pend  run  term
- done  canc  abort  g-unk
- succ  site-fail  app-fail
- all-fail  a-unk  donesuccess

- submitted
- terminated

from UTC  
  
 to UTC

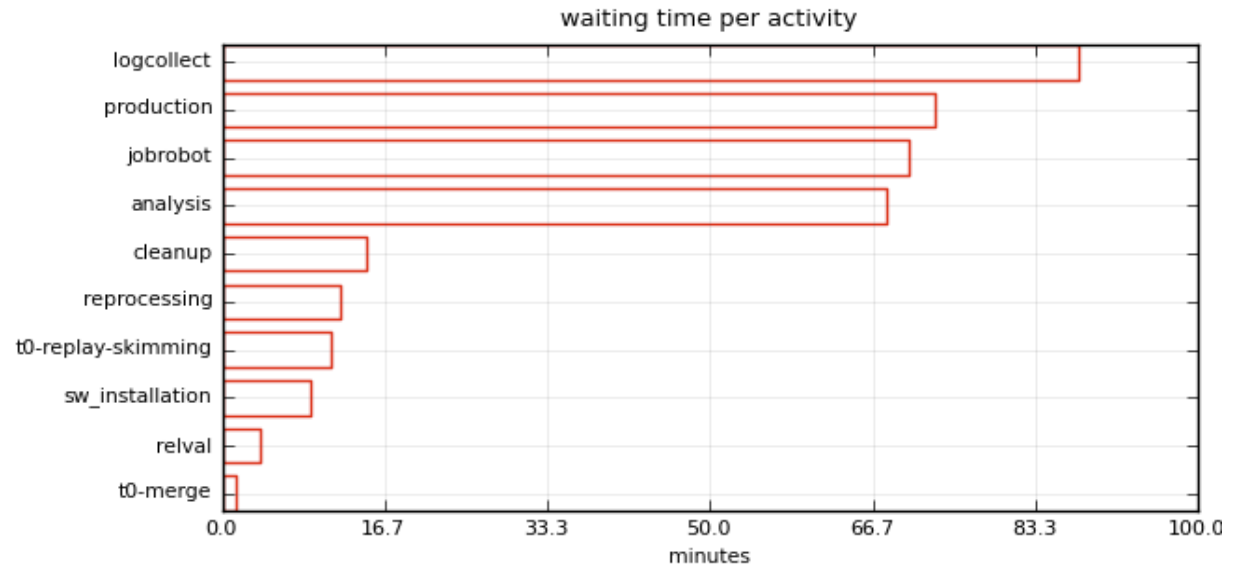
sort by activity

bars in the plot  
 linear  log



activity	current status								grid exit status				application exit status					status		events and	
	Sub	Pend	Run	Term	Done	Canc	Abort	Unk	Grid%	Succ	AppFail	SiteFail	AllFail	Unk	App%	Site%	Overall%	NEvProc	WrapCPU		
analysis	164004	<a href="#">27850</a>	<a href="#">14947</a>	<a href="#">121148</a>	<a href="#">60516</a>	<a href="#">1069</a>	<a href="#">10427</a>	<a href="#">49136</a>	84.04	<a href="#">77910</a>	<a href="#">20812</a>	<a href="#">6451</a>	<a href="#">27263</a>	<a href="#">15975</a>	74.08	94.67	63.9	3581302146	224456272		
cleanup	3935	<a href="#">143</a>	<a href="#">131</a>	<a href="#">3661</a>	<a href="#">1103</a>	<a href="#">0</a>	<a href="#">30</a>	<a href="#">2528</a>	97.35	<a href="#">3508</a>	<a href="#">123</a>	<a href="#">0</a>	<a href="#">123</a>	<a href="#">30</a>	96.61	100	95.82	0	0		
harvesting	120	<a href="#">0</a>	<a href="#">8</a>	<a href="#">112</a>	<a href="#">0</a>	<a href="#">0</a>	<a href="#">0</a>	<a href="#">112</a>	0	<a href="#">85</a>	<a href="#">24</a>	<a href="#">3</a>	<a href="#">27</a>	<a href="#">0</a>	75.89	97.32	75.89	0	0		
jobrobot	29840	<a href="#">975</a>	<a href="#">215</a>	<a href="#">28650</a>	<a href="#">26222</a>	<a href="#">0</a>	<a href="#">2097</a>	<a href="#">331</a>	92.6	<a href="#">26440</a>	<a href="#">17</a>	<a href="#">164</a>	<a href="#">181</a>	<a href="#">2029</a>	99.32	99.43	92.29	13204600	23617075.5		
logcollect	807	<a href="#">216</a>	<a href="#">78</a>	<a href="#">513</a>	<a href="#">478</a>	<a href="#">0</a>	<a href="#">17</a>	<a href="#">18</a>	96.57	<a href="#">464</a>	<a href="#">32</a>	<a href="#">0</a>	<a href="#">32</a>	<a href="#">17</a>	93.55	100	90.45	0	0		

# CMS current information



activity	
logcollect	01:27:41
production	01:13:07
jobrobot	01:10:20
analysis	01:08:01
cleanup	00:14:42
reprocessing	00:12:11
t0-replay-skimming	00:11:12
sw_installation	00:08:59
relval	00:03:59
t0-merge	00:01:28
t0-replay-express	00:00:00
t0-promptreco	00:00:00
t0-mergepack	00:00:00
t0-repack	00:00:00
harvesting	00:00:00
t0-harvesting	00:00:00
t0-alcaskim	00:00:00
average	00:20:41

# CMS historical information



DAILY JOB SUMMARY

DEFINE PARAMETERS

Select Sites... ▾

Select Activities... ▾

Last Week ▾

Sort by Sites

## SHOW PLOT

Terminated, Submitted  
Pending, Running Jobs

CPU and Wall Clock  
consumption Good/All jobs

Efficiency  
Good/All Jobs

Processed Events

Status of Terminated Jobs

Failed/Aborted jobs

Error codes

Activities at the site(s)

## CHOSEN PARAMETERS

Sites:  
All T1s + T0

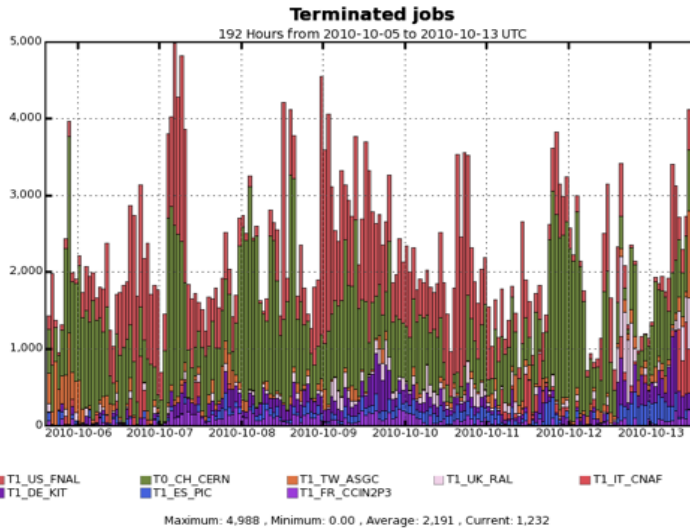
Activities:  
all

Time Range:  
Last Week

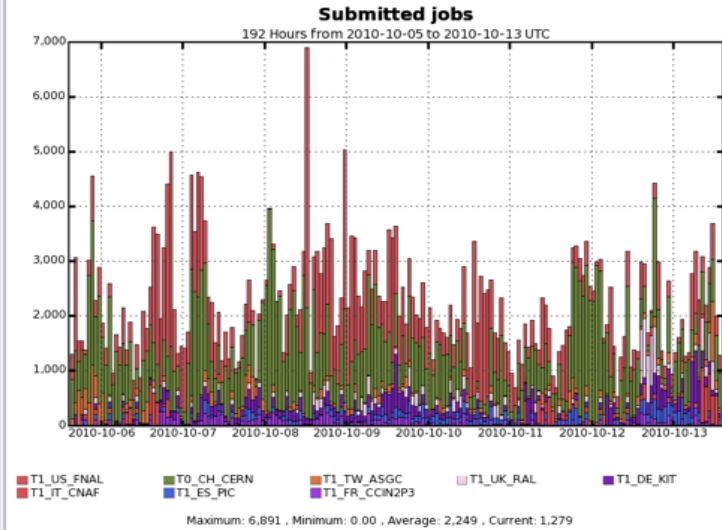
Sort by:  
Sites

[Report a bug or a suggestion](#)

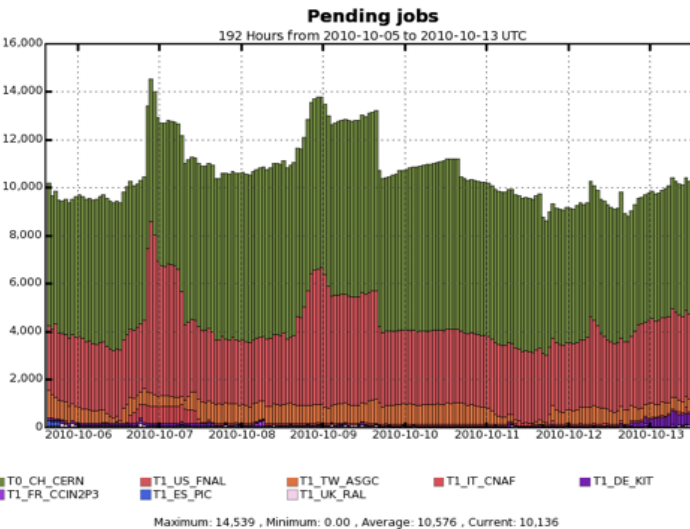
Terminated Jobs (links to data in different formats)



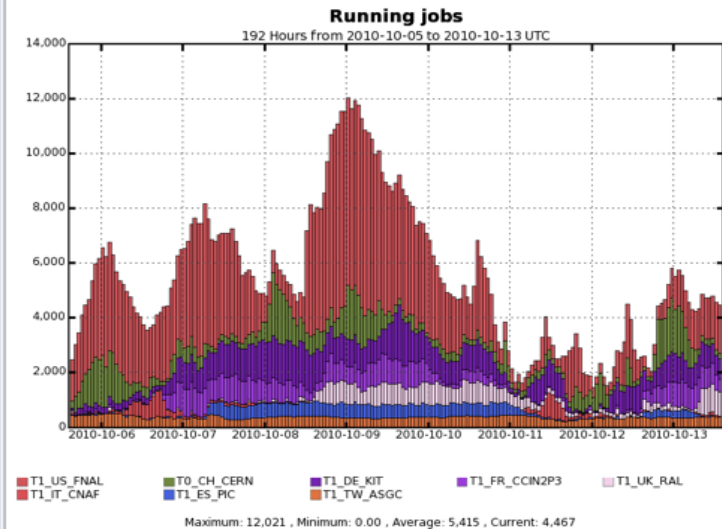
Submitted Jobs (links to data in different formats)



Pending Jobs (links to data in different formats)



Running Jobs (links to data in different formats)



# DØ Data Handling Monitoring (SAM)

## fnal-cabsrv1 station

Generated at 2010-10-13 13:21:59

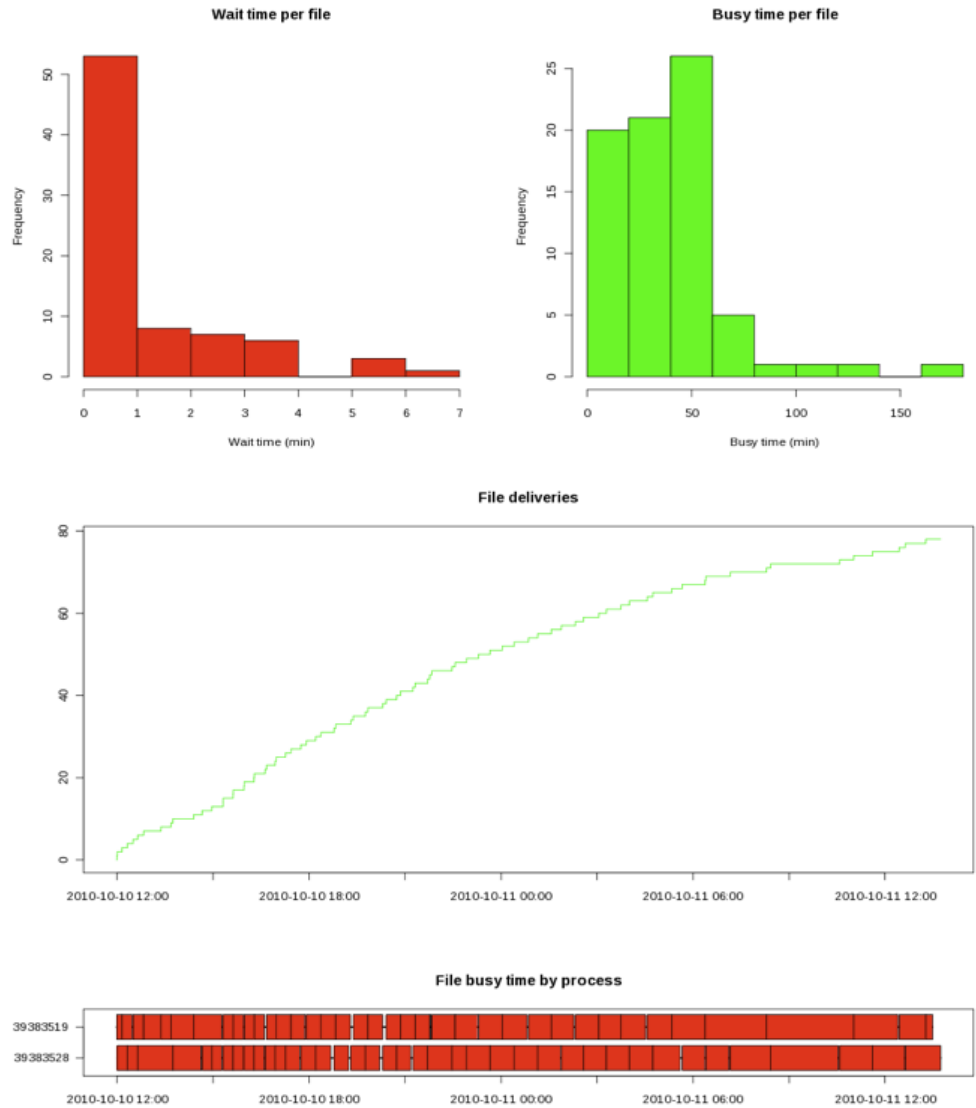
There are 270 running projects

[Show recent completed projects](#) | [List all processes](#)

Project name ▲ ▼	Project Id ▲ ▼	Owner ▲ ▼	Status ▲ ▼	Files in snapshot ▲ ▼	Files seen ▲ ▼	Processes ▲ ▼	Waiting processes ▲ ▼	Last activity ▲ ▼	Longest waiting process ▲ ▼	Mean wait time (per file) ▲ ▼	Mean busy time (per file) ▲ ▼
<a href="#">dprice_12664_20101009115128</a>	4642618	dprice	running	6658	6505	90	-	process ended at 2010-10-10 18:50:03	-	14min 47s	9min 58s
<a href="#">dprice_7814_20101010115520</a>	4644080	dprice	running	81	78	2	-	process ended at 2010-10-11 13:44:06	-	1min 4s	38min 19s
<a href="#">RecoCert_p20.18.00_264982_0</a>	4644357	recocert	running	125	125	63	-	process ended at 2010-10-11 01:51:01	-	1min 48s	215min 17s
<a href="#">RecoCert_p20.18.00_265136_0</a>	4644373	recocert	running	83	83	83	-	process ended at 2010-10-10 21:29:11	-	2min 34s	235min 15s
<a href="#">RecoCert_p20.18.00_265220_0</a>	4644377	recocert	running	112	111	111	-	process ended at 2010-10-10 21:08:18	-	3min 37s	217min 46s
<a href="#">dmenezes_24657_20101011002827</a>	4644951	dmenezes	running	180	0	0	-	project started at 2010-10-11 00:29:14	-	-	-



# DØ Data Handling Monitoring (SAM)



## Processes

Process Id	Node name	Status	Description	Files seen	Last change
<a href="#">39383519</a>	d0cs2026.fnal.gov	error	5649091.d0cabsrv1.fnal.gov	39	2010-10-11 13:29:06 (process ended - error)
<a href="#">39383528</a>	d0cs2035.fnal.gov	error	5649092.d0cabsrv1.fnal.gov	39	2010-10-11 13:44:06 (process ended - error)

# CDF CAF Monitor

## CDFGrid CAF Web Monitor [[History](#)/[Analyze](#)]

[Overview](#)  
[Site Overview](#)

[System status](#)

[Completed jobs](#)

[Jobs status](#)

[Users prio](#)

By accounting group:

- [common](#)
- [group\\_calib](#)
- [group\\_dbg](#)
- [group\\_dqm](#)
- [group\\_fnal](#)
- [group\\_highprio](#)
- [group\\_italy](#)
- [group\\_ntp](#)
- [group\\_prd](#)

By user:

- [amanou](#)
- [benwu](#)
- [brigliad](#)
- [brucken](#)
- [camarda](#)
- [ccox](#)
- [cdfdqm](#)
- [cdfprd](#)
- [cdfprd\\_cal](#)
- [cdfprd\\_ntp](#)
- [corbeo](#)
- [csmoon](#)
- [devoto](#)
- [ebikou](#)
- [giokar](#)
- [hagiwara](#)
- [jameseb](#)
- [kbland](#)
- [kirby](#)
- [kohei](#)
- [kurata](#)
- [loakes](#)
- [lockwitz](#)
- [loreorto](#)
- [marcvog](#)
- [mderrico](#)

### CDFGrid CAF overview [[History](#)]

#### System Info

	Total VMs	Usable	Claimed	Load=0	Load<30	Assigned	Free	VM Load	Load
Current	10172	5084	4927	819	14	0	157	4154	4154
Avg.	6236	3117	2254	711	102	7	854	<a href="#">History</a>	

Total CAFMarks	Claimed CAFMarks	Free CAFMarks	VM Load CAFMarks	Avg. CAFMarks/VM
16648.3k	16108.3k	540.0k	13534.9k	3274.0

/hour	Started sections	Finished sections	Submitted jobs	Terminated jobs
Last 5 mins	350.65	829.87	0.00	11.69
Last 29 mins	201.87	651.87	16.82	10.51

#### Sections by Accounting Group(ordered by AcctGroup)

Accounting Group	Quota	Running	Assigned	Idle	Wait	Held	Completed	Removed	Low0	Low30	Total	Jobs	
<b>common</b>	2405*	3709	0	3	5444	0	8941	101	260	12	18198	104	<a href="#">History</a>
<b>group_calib</b>	213	0	0	0	68	0	0	0	0	0	68	1	<a href="#">History</a>
<b>group_dbg</b>	50	0	0	2	10	0	0	0	0	0	12	2	<a href="#">History</a>
<b>group_dqm</b>	50	0	0	0	2	0	0	0	0	0	2	2	<a href="#">History</a>
<b>group_fnal</b>	213	126	0	0	0	0	45	0	25	2	171	3	<a href="#">History</a>
<b>group_highprio</b>	813	0	0	4	286	0	20	0	0	0	310	86	<a href="#">History</a>
<b>group_italy</b>	172	293	0	0	2	0	2	0	0	0	297	7	<a href="#">History</a>
<b>group_ntp</b>	457	775	0	0	926	0	1847	0	500	0	3548	196	<a href="#">History</a>
<b>group_prd</b>	711	7	0	0	593	0	112	0	6	0	712	5	<a href="#">History</a>
<b>Total (9)</b>		4910	0	9	7331	0	10967	101	0	0	23318	406	

\* - Estimated, no real quota

#### User Sections (ordered by User)

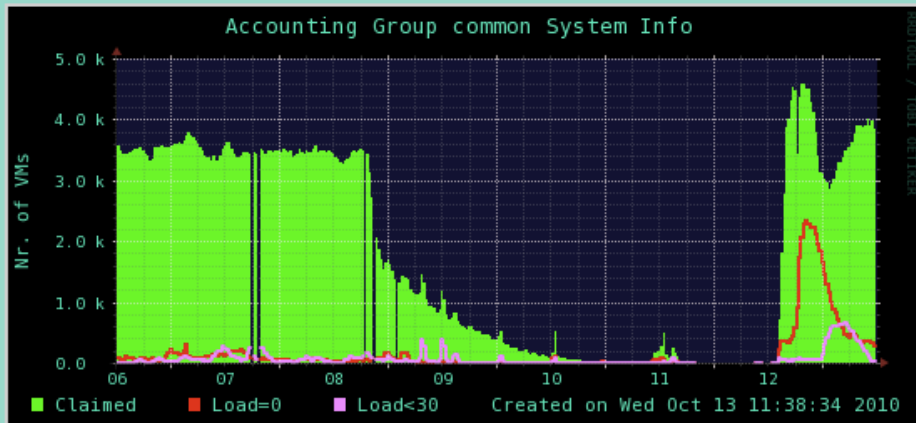
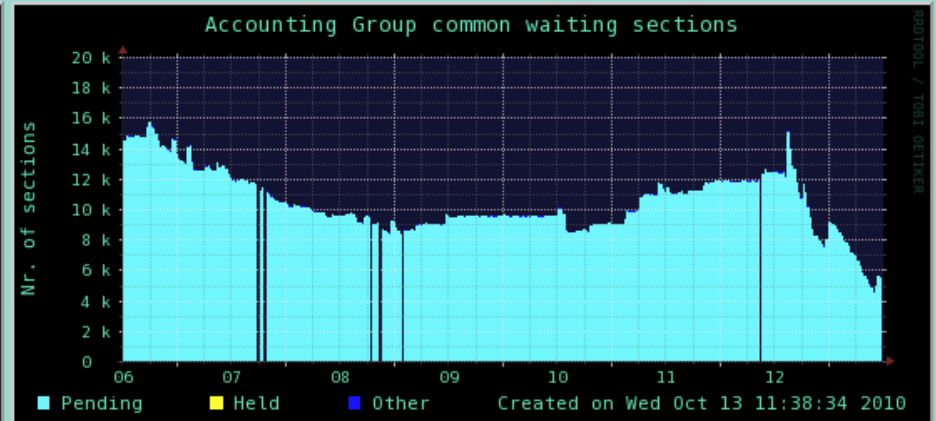
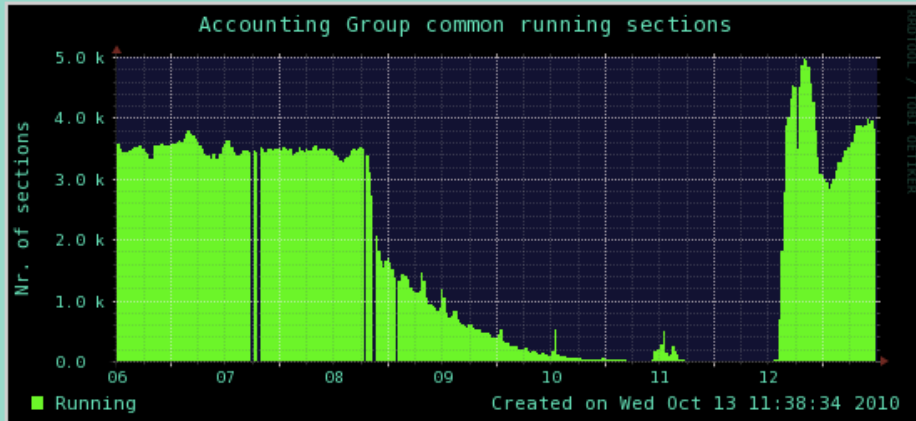
User	Running	Assigned	Idle	Wait	Held	Completed	Removed	Low0	Low30	Total	Jobs
<b>amanou</b>	1	0	0	7	0	0	0	0	0	8	8
<b>benwu</b>	14	0	0	18	0	4	0	9	2	36	2
<b>brigliad</b>	293	0	0	0	0	0	0	0	0	293	3
<b>brucken</b>	0	0	0	8	0	0	0	0	0	8	1
<b>camarda</b>	0	0	0	40	0	0	0	0	0	40	2

# CDF CAF Monitor History

## CDFGrid CAF Web Monitor [History|Analyze]

[Period: [1 hour](#) | [4 hours](#) | [12 hours](#) | [1 day](#) | [3 days](#) | [1 week](#) | [2 weeks](#) | [1 month](#) | [2 months](#) | [3 months](#) | [6 months](#) | [1 year](#) | [2 years](#) ]

[Size: [Tiny](#) | [Small](#) | [Normal](#) | [Large](#) | [XLarge](#) | [Huge](#) | [XHuge](#) | [Poster](#) ]



# CDF CAF Monitor Job Table

## CDFGrid CAF jobs for input SAM

[Status|Long]

Job	Priority	User	Accounting User	Length	Submit Time	Total	Running	Assigned	Idle	Wait	Held	Completed	Removed	Failed	Timeout	Troubled	Restart	Err. Rtc	Back up	Lost	Low0	Low30	Comp time	Comp utime	Run load	Run mem	
523561	1387.26/0	wick	common.wick	long	Oct 09 04:31	345	173	0	0	170	0	2	0	0	0	0	0	0	0	0	0	1	0	8h 39'	4h 32'	0.98	1041M
524529	72.93/0	devoto	common.devoto	long	Oct 11 02:50	75	2	0	0	0	0	73	0	0	0	0	0	0	0	0	0	2	0	1h 53'	0h 6'	0.00	454M
524568	3814.66/0	kohei	common.kohei	long	Oct 11 06:00	150	19	0	0	0	0	131	0	0	0	1	0	1	0	0	0	19	0	8h 7'	0h 35'	0.00	218M
524569	3814.66/0	kohei	common.kohei	long	Oct 11 06:02	150	9	0	0	0	0	141	0	0	0	0	0	0	0	0	0	9	0	8h 21'	0h 36'	0.00	213M
524570	3814.66/0	kohei	common.kohei	long	Oct 11 06:02	150	11	0	0	0	0	139	0	0	0	0	0	0	0	0	0	11	0	8h 27'	0h 34'	0.00	221M
524571	3814.66/0	kohei	common.kohei	long	Oct 11 06:04	95	10	0	0	0	0	85	0	0	0	0	0	0	0	0	0	10	0	8h 44'	0h 31'	0.00	235M
524572	3814.66/0	kohei	common.kohei	long	Oct 11 06:07	148	15	0	0	0	0	133	0	0	0	0	0	0	0	0	0	15	0	8h 4'	0h 29'	0.00	269M
524573	3814.66/0	kohei	common.kohei	long	Oct 11 06:07	122	16	0	0	0	0	106	0	0	0	0	0	0	0	0	0	16	0	7h 30'	0h 27'	0.00	264M
524574	3814.66/0	kohei	common.kohei	long	Oct 11 06:07	186	18	0	0	0	0	168	0	0	0	0	0	0	0	0	0	18	0	6h 55'	0h 17'	0.00	217M
524793	395.85/0	lockwitz	common.lockwitz	long	Oct 11 15:15	22	6	0	0	0	0	16	0	0	0	0	1	0	0	0	0	3	0	15h 57'	3h 53'	0.40	263M

# CDF CAF Monitor Job Detail

## CDFGrid CAF jobs for job 525274

jid detail [[Short](#)] [Status](#)]

<p>- Waiting, display:</p> <p><input type="radio"/> all</p> <p><input type="radio"/> none</p> <p><input checked="" type="radio"/> checked:</p> <p><input checked="" type="checkbox"/> Idle</p> <p><input checked="" type="checkbox"/> Wait</p> <p><input checked="" type="checkbox"/> Held</p>	<p>- Running, display:</p> <p><input type="radio"/> all</p> <p><input type="radio"/> none</p> <p><input checked="" type="radio"/> checked:</p> <p><input checked="" type="checkbox"/> Low 0</p> <p><input checked="" type="checkbox"/> Low 30</p> <p><input checked="" type="checkbox"/> Full Speed</p>	<p>- Completed, display:</p> <p><input type="radio"/> all</p> <p><input type="radio"/> none</p> <p><input checked="" type="radio"/> checked:</p> <p><input checked="" type="checkbox"/> Successfully Completed</p> <p><input checked="" type="checkbox"/> Failed</p> <p><input checked="" type="checkbox"/> Execution Error</p> <p><input checked="" type="checkbox"/> Data Lost</p> <p><input checked="" type="checkbox"/> Data Backuped</p> <p><input checked="" type="checkbox"/> Removed</p>
--	---	--

Submit

Job: **525274** Length: **medium** Real time limit: **40h**  
 User: **ptl** Accounting User: **group\_fnal.ptl** Priority: **415.41/0**  
 Submit time: **Oct 13 05:11** Tarball size: **154.7M**  
 Initial Command: **./sam\_job.csh \$ jpsi\_life jpmm0i\_d**  
 Input Source: **SAM** Dataset: **jpmm0i\_d**  
 Project: **ptl\_cdf-caf\_jpmm0i\_d\_336964\_25222** Station: **cdf-caf**  
 Output File: **ptl@cdfat03.fnal.gov:/cdf/local/disk03/ptl/latest/out\$.tgz**  
 Schedd: **schedd\_1@cdfhead10.fnal.gov**

### SAM\_Start

#### Completed

Ready: Oct 13 05:21  
 Started: Oct 13 05:26  
 Ended: Oct 13 05:26  
 Condor ID: 12809113

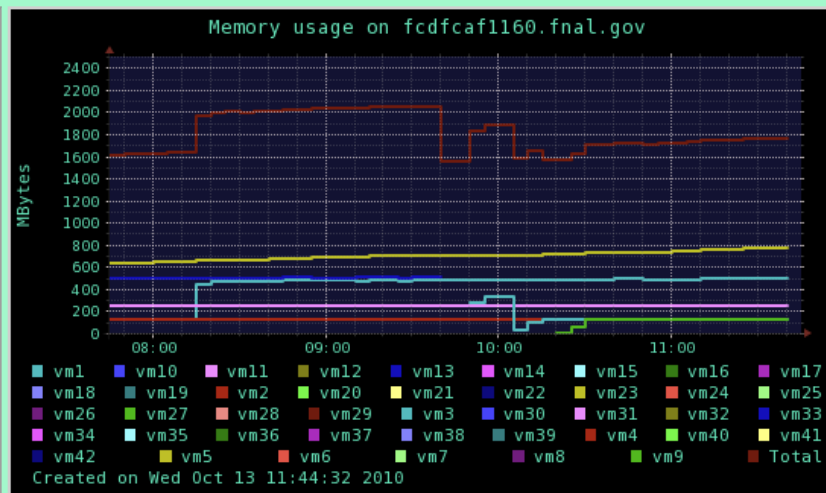
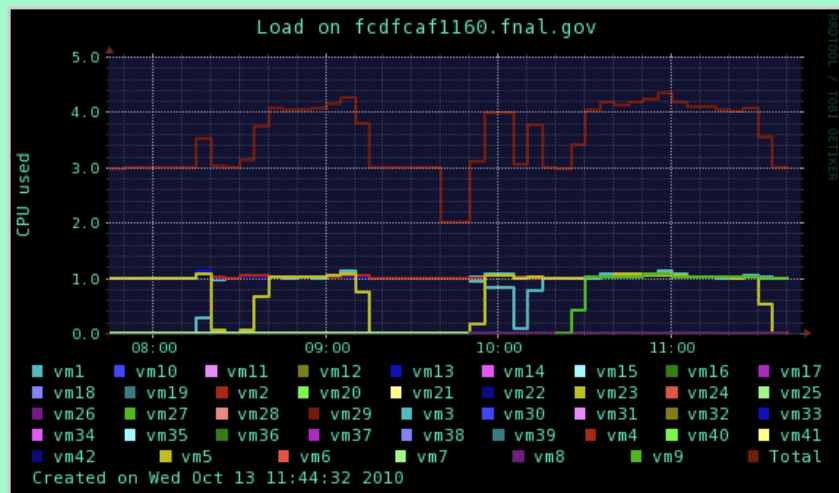
1	2	3	4
<p><b>Completed</b> RetCode: 0            (Real: 0h 11', CPU: 0h)            Ready: Oct 13 05:26            Started: Oct 13 05:33            Ended: Oct 13 05:45            Condor ID: 12809138</p>	<p><b>Running</b> (6h 8')            On: <a href="#">vm5@cdfcaf1160.fnal.gov</a>            (v1_6_2a@cdfosg2)  <b>Load</b> : 0.00 <b>Load0</b> %: 14.67 <b>MemUsed</b>: 770Mb            Ready: Oct 13 05:26            Started: Oct 13 05:33            Condor ID: 12809139</p>	<p><b>Running</b> (6h 8')            On: <a href="#">vm5@cdfcaf1610.fnal.gov</a>            (v1_6_2a@cdfosg3)  <b>Load</b> : 1.00 <b>Load0</b> %: 40.00 <b>MemUsed</b>: 580Mb            Ready: Oct 13 05:26            Started: Oct 13 05:33            Condor ID: 12809140</p>	<p><b>Completed</b> RetCode: 0            (Real: 6h 2', CPU: 2h 10')            Ready: Oct 13 05:27            Started: Oct 13 05:33            Ended: Oct 13 11:36            Condor ID: 12809141</p>
5	6	7	8
<p><b>Running</b> (6h 8')            On: <a href="#">vm1@cdfcaf1705.fnal.gov</a>            (v1_6_2a@cdfosg3)  <b>Load</b> : 1.00 <b>Load0</b> %: 18.67 <b>MemUsed</b>: 679Mb            Ready: Oct 13 05:27            Started: Oct 13 05:33            Condor ID: 12809142</p>	<p><b>Running</b> (6h 8')            On: <a href="#">vm13@cdfcaf1354.fnal.gov</a>            (v1_6_2a@cdfosg1)  <b>Load</b> : 0.00 <b>Load0</b> %: 22.67 <b>MemUsed</b>: 611Mb            Ready: Oct 13 05:27            Started: Oct 13 05:33            Condor ID: 12809145</p>	<p><b>Running</b> (6h 8')            On: <a href="#">vm9@cdfcaf1458.fnal.gov</a>            (v1_6_2a@cdfosg2)  <b>Load</b> : 0.00 <b>Load0</b> %: 12.00 <b>MemUsed</b>: 648Mb            Ready: Oct 13 05:27            Started: Oct 13 05:33            Condor ID: 12809147</p>	<p><b>Running</b> (6h 8')            On: <a href="#">ym4@cdfcaf855.fnal.gov</a>            (v1_6_2a@cdfosg0)  <b>Load</b> : 1.01 <b>Load0</b> %: 25.33 <b>MemUsed</b>: 528Mb            Ready: Oct 13 05:27            Started: Oct 13 05:33            Condor ID: 12809149</p>

# CDF CAF Monitor Node Detail

## CDFGrid CAF system overview for fcdfcf1160.fnal.gov

[Short version]

VM	Node	Site	Status	CAFMarks	Load	Node load	DiskFree	MemUsed	Node MemUsed	User	Group	Job/Section	Cluster	Start time	Node max running	Er
vm5	fcdfcf1160.fnal.gov	fcdfosg2	Claimed	3402.4	0.00	2.99	221365Mb	770Mb	1757Mb	ptl	medium (40h)	525274/2	schedd_1@fcdhead10.fnal.gov#12809139	Wed 05:33 (6h 12')	16h 42'	v1
vm1	fcdfcf1160.fnal.gov	fcdfosg1	Claimed	3384.1	0.99	2.99	221367Mb	490Mb	1757Mb	cdfprd ntp	long (72h)	525293/9	schedd_1@fcdhead10.fnal.gov#12809590	Wed 07:45 (4h)	16h 42'	v1
vm11	fcdfcf1160.fnal.gov	fcdfosg1	Claimed	3435.9	0.00	2.99	221372Mb	247Mb	1757Mb	kohei	long (72h)	524568/58	schedd_1@fcdhead10.fnal.gov#12797409	Tue 19:03 (16h 42')	16h 42'	v1
vm3	fcdfcf1160.fnal.gov	fcdfosg1	Claimed	3388.6	1.00	2.99	221368Mb	124Mb	1757Mb	kurata	long (72h)	525003/360	schedd_1@fcdhead10.fnal.gov#12811618	Wed 10:09 (1h 36')	16h 42'	v1
vm9	fcdfcf1160.fnal.gov	fcdfosg2	Claimed	3379.7	1.00	2.99	221366Mb	124Mb	1757Mb	kurata	long (72h)	525005/191	schedd_1@fcdhead10.fnal.gov#12812242	Wed 10:27 (1h 18')	16h 42'	v1
vm10	fcdfcf1160.fnal.gov	fcdfosg2	Owner	3370.8	0.00	2.99	22136Mb	0Mb	1757Mb						16h 42'	v1
vm12	fcdfcf1160.fnal.gov	fcdfosg1	Owner	3416.5	0.00	2.99	22137Mb	0Mb	1757Mb						16h 42'	v1
vm6	fcdfcf1160.fnal.gov	fcdfosg1	Owner	3431.0	0.00	2.99	22136Mb	0Mb	1757Mb						16h 42'	v1
vm7	fcdfcf1160.fnal.gov	fcdfosg2	Owner	3402.4	0.00	2.99	22137Mb	0Mb	1757Mb						16h 42'	v1
vm8	fcdfcf1160.fnal.gov	fcdfosg1	Owner	3426.1	0.00	2.99	22136Mb	0Mb	1757Mb						16h 42'	v1

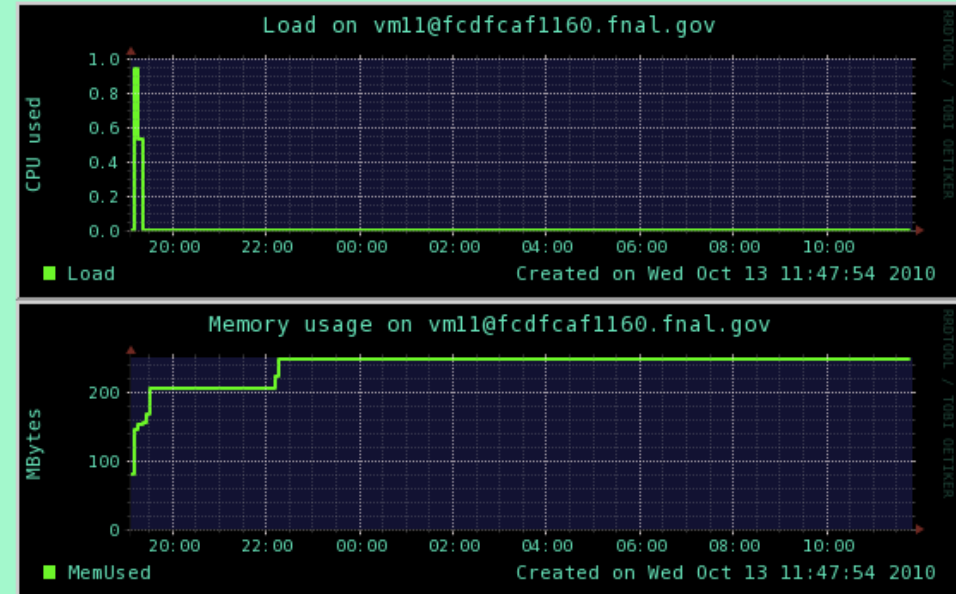


# CDF CAF Monitor Section (subjob) Detail

## CDFGrid CAF Section 524568/58

<b>User:</b>	kohei	<b>Length:</b>	long
<b>Accounting User:</b>	common.kohei		
<b>Input Source:</b>	SAM	<b>Dataset:</b>	etlpam
<b>Status:</b>	Running	<b>Load:</b>	0.00
<b>Submitted:</b>	Oct 11 06:00	<b>Ready:</b>	Oct 12 16:51
<b>Started:</b>	Oct 12 19:03		
<b>Used time:</b>	16h 41'	<b>Limit:</b>	72h
<b>VM:</b>	vm11@fcdcfcaf1160.fnal.gov		
<b>Site:</b>	fcdfosg1	<b>Entry:</b>	v1_6_2a
<b>Condor ID:</b>	12797409	<b>Schedd:</b>	schedd_1@fcdhead10.fnal.gov

Percentage of time in Load 0: 97.52 %



# Monitoring systems are hard to write (well)

- There is no "one system does all" system
- Need to pool information from lots of sources; or view many separate monitoring systems
- Specific monitoring serves different purposes
  - Grid accounting (Gratia)
  - Grid site (Fermigrid, if Condor-view)
  - Data Handling (SAM monitoring)
  - Experiment monitoring (CMS-dashboard, CAF)
- Flexible and easy display of the data is also important



# What monitoring system do we want?

- For users, a CAF/CMS system looks to be closest to what we want
- Short term - Might try to get CAF monitoring working for IF
- Medium term, long term - Don't know
- The CD has had ideas about monitoring solutions, but it's hard
- Incorporating all of the pieces is hard (typically data handling is missing)
- Should writing/maintaining a monitoring system be in the REX strategic plan?
- The dream - a thin layer to glue monitoring "products" together into one coherent system. How can this become a reality?