



# T2 FR-cloud report

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Calcul ATLAS France (CAF) meeting  
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# T2 squad report

- See slides from Emmanuel  
(cpu usage by cloud, by activities, by number of cores, inside FR-cloud, inside French sites, SAM tests transfers, availability, ASAP)

# Information of/for sites

<https://twiki.cern.ch/twiki/bin/view/AtlasComputing/SitesSetupAndConfiguration>

See also report from Jamboree meeting

- **Computing Element** (from *AG/S*)

→ the recommended CEs for ATLAS are CondorCE and ARC-CE

site	CE
CC	CREAM, HT-Condor (not in prod)
CPPM	CREAM, ARC
GRIF-IRFU	CREAM, ARC
GRIF-LAL	CREAM
GRIF-LPNHE	CREAM
LAPP	CREAM
LPC	CREAM
LPSC	CREAM

site	CE
BEIJING	CREAM
RO-02	CREAM
RO-07	CREAM, ARC
RO-14	CREAM, ARC
R0-16	CREAM, ARC
TOKYO	ARC

- **Batch system** (from *AG/S*)

→ most of the sites have migrated to HTCondor or SLURM

- some are planning to do so this or next year - in some cases it is coupled to migration to CentOS 7
- other batch systems are considered deprecated by ATLAS

site	batch
CC	sge, arc
CPPM	pbs, arc
GRIF-IRFU	pbs, arc
GRIF-LAL	pbs, condor
GRIF-LPNHE	pbs
LAPP	pbs
LPC	pbs
LPSC	pbs

site	batch
BEIJING	pbs
RO-02	pbs
RO-07	pbs, arc, slurm, condor
RO-14	pbs, arc
R0-16	pbs, arc
TOKYO	arc

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- **CentOS7 migration**

Deadline from ATLAS June 1st

- All but Romania x4, LPNHE, LPSC, LPC

- **Production unified queues (score/mcore→UCORE)**

All sites except Beijing, RO-02, RO-14, RO-16

- **Harvester submission**

Some sites (CPPM, RO-07) had lack of production jobs for some days on their ARC queues

Technical solution was found by ADC but sites should not wait if they see some queues without jobs ; squad is looking, but is not doing shifts, and can miss it as well

- **IPv6 deployment**

Deadline for T2s was 31/12/2018 - All FR sites are done

# Information for sites

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See also report from Jamboree meeting

- **DOME migration**

in ADC weekly 13 Feb [*link*]

"DPM DOME upgrade: ATLAS still sees instabilities in the DPM DOME sites used already in production. This first has to stabilize before a larger deployment of DPM DOME can be considered in a few month from now."

- **Lightweightsites**

Recommendation (ICB-2018 ) + see Jamboree report  
to redirect funding from storage to CPUs for lightweight Grid site

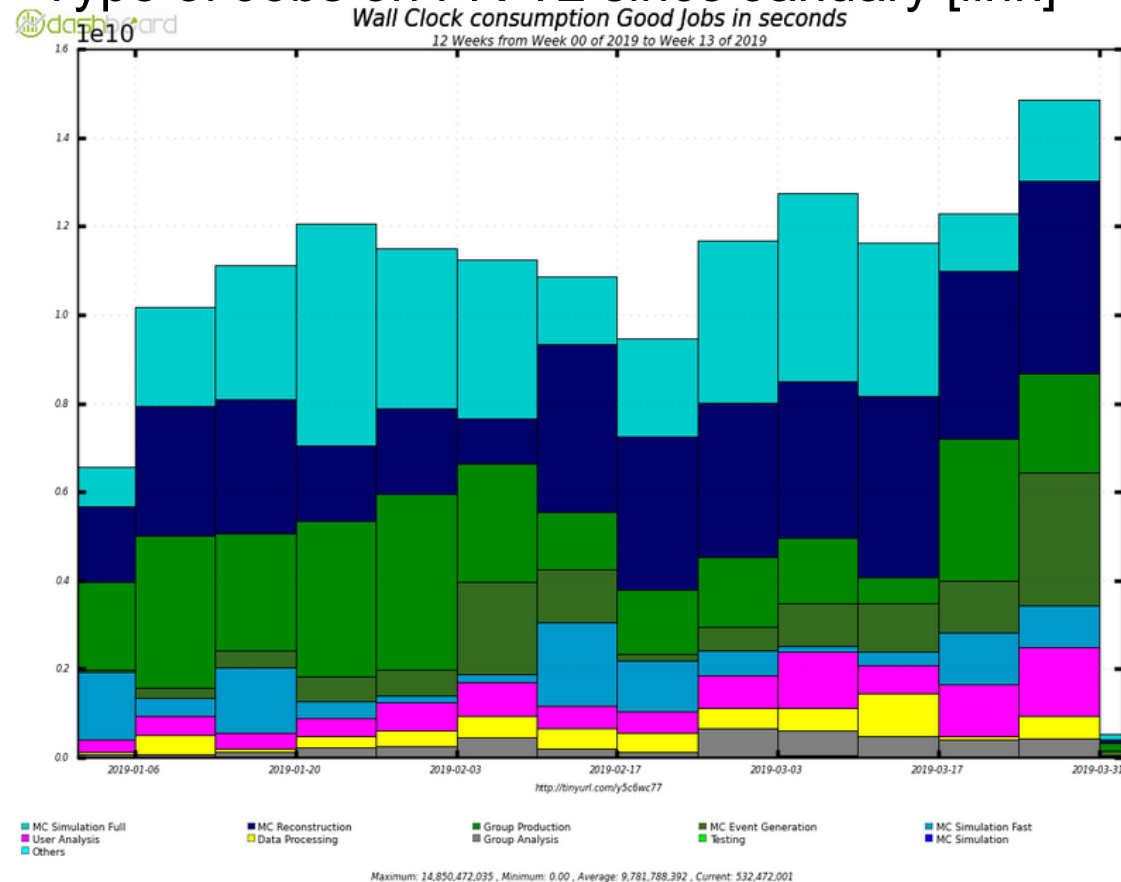
2018 limit : 460 TB, 2019 (+15%): 520 TB

For FR : Beijing-LCG2 (370 TB), RO-02 (335 TB), HK-LCG2 (440 TB)

# Analysis vs Production

- It was reported at previous CAF meeting that the ratio Analysis/Production which should be 25-75 %, was much lower (~10%) in general, even lower for some particular sites (e.g GRIF sites), and sometimes much higher (LPC)

## Type of Jobs on FR-T2 since January [[link](#)]



Look at « **User analysis** » and to a lower extent « Group Analysis »

# Analysis vs Production

site	Prod	Jan	Feb	Mar
CPPM	user	2.5	7.0	12.7
	group	0.6	1.1	3.6
GRIF-IRFU	user	0.9	2.8	6.3
	group	0.1	1.1	2.2
GRIF-LAL	user	1.1	2.6	12.3
	group	0.2	0.7	3.9
GRIF-LPNHE	user	0.9	2.6	4.9
	group	1.1	0.6	0.5
LAPP	user	5.3	6.1	10.8
	group	1.9	4.2	4.0
LPC	user	39.9	11.2	10.5
	group	13.6	2.3	3.0
LPSC	user	1.9	2.7	3.6
	group	0.9	0.7	0.8

site	Prod	Jan	Feb	Mar
BEIJING	user	4.2	8.8	4.3
	group	0.5	0.9	2.1
RO-02	user	0	2.0	2.0
	group	0	0.8	0.8
RO-07	user	15.8	29.1	28.6
	group	1.7	6.2	6.2
TOKYO	user	5.7	6.3	7.7
	group	2.3	5.5	7.6

Fraction [%] of user analysis and group analysis jobs is increasing in March

⇒ continue to check but less pressure

# List of longterm blacklisted queues (1/2)

- Message of A. Forti (11/03) to atlas-adc-cloud-all to have a look at longterm blacklisted queues
    - see [https://hc-ai-core.cern.ch/testdirs/atlas/longterm\\_blacklisted.html](https://hc-ai-core.cern.ch/testdirs/atlas/longterm_blacklisted.html)
    - there were 10 such queues at CC and 2 at LAPP
    - now 2 at CC and 2 at LAPP (for DOMA tests) + need same for LPSC ?
- ⇒ answered a week ago

PanDA Site: IN2P3-CC-T3\_SL7

IN2P3-CC-T3\_CONDOR (DISABLED)

IN2P3-CC-T3\_CONDOR8 (DISABLED)

IN2P3-CC-T3\_HTC (DISABLED)

IN2P3-CC-T3\_HTC8b (DISABLED)

IN2P3-CC-T3\_HTC8\_UCORE (ONLINE)

This is the unified queue for condor tests



# List of longterm blacklisted queues (2/2)

PanDA Site: IN2P3-CC-T3

IN2P3-CC-T3\_MCORE

IN2P3-CC-T3\_MCORE\_CSP01

IN2P3-CC-T3\_MCORE\_CSP02

keep it active and offline for the moment

PanDA Site: IN2P3-CC

IN2P3-CC-all-ce-sge-long THIS QUEUE should be stay active and offline for GRID SITE IN2P3-CC we have 2 panda sites the IN2P3-CC and the IN2P3-CC\_CL7 looks that in the panda they is a hard-copy conf related to the name of the site "IN2P3-CC"( something which is not included in AGIS) and if we disable this queue we have problem ininteroperability between the Nucleus - satellite and ddm end point (ddm endpoint belong to IN2P3-CC site and not on IN2P3-CC\_CL7) When we will pass to unified queues ( with htcondor perhaps), we could correct all this

PanDA Site: IN2P3-CC\_CL7

ANALY\_IN2P3-CC\_CL7\_RUCIO (DISABLED)

not real protocol activity, We do not need this queue for the moment.

IN2P3-LAPP-TEST and ANALY\_LAPP\_TEST are used to run HC jobs to test new SE organisation for DOMA R&D

# Sites issues and GGUS tickets

- List of tickets : [*tickets NGI\_France*]
- 22 tickets for NGI\_FRANCE since beginning of February mostly for transfer and deletion errors
  - CPPM (1) : communication error, linked to LHCONE issues
  - GRIF :
    - Unknown site (1), lost heartbeat (1)
    - IRFU (8), pilots (1), deletion error (3), cvmfs (1), transfer (1), destination – rename of space token (2)
    - LAL (2), deletion error (2)
    - LPNHE (0), but need to restart xrootd server few days ago
  - LAPP (2), deletion error (1), transfer (1) – solved around previous CAF
  - LPC (4), file issue + root server restart (1), transfer error (1), deletion error (2)
  - LPSC (4), certificate (1), file issue + restart of server (1), communication + restart srm (1), deletion error + disk restart (1)

# Sites issues and GGUS tickets

- List of tickets :  
[[tickets NGI\\_RO](#)], [[ticket NGI\\_CHINA](#)], [[tickets Tokyo](#)]
- 8 tickets for NGI\_RO since beginning of February
  - RO-2 (2) : (1) squid, (2) transfer pb (in progress)
  - RO-7 (6) : (1) gfal2 dependency missing, (1) ARC pilot,  
(2) file issues (1 in progress)  
(1) transfer (in progress), (1) grid error (in progress)
- 4 tickets for NGI\_CHINA since beginning of February
  - BEIJING (3), USTC-T3 (1)
- But also many discussions not through tickets but using mails ....

# AOB

- **PERFMUON tokens** :

constantly DDM excluded as full [*link*]

in contact with perf-muon conveners who promised (since >3 weeks)  
to clean these areas

To be followed ...

- **Files out of token**

reported to squad-FR by GRIF-IRFU and GRIF-LPNHE

old directories/files (many years), small storage but sometimes many files  
examples :

<https://lpnse1.in2p3.fr/dpm/in2p3.fr/home/atlas/atlasgroupdisk/>

<https://node12.datagrid.cea.fr:26633/dpm/datagrid.cea.fr/home/atlas/atlasgroupdisk/>

Checked with Cedric Serfon that they can be deleted

# Google cloud at TOKYO

- see presentation of M. Kaneda at previous ADC weekly [[link](#)]

- Current system (Starting from Jan/2019):

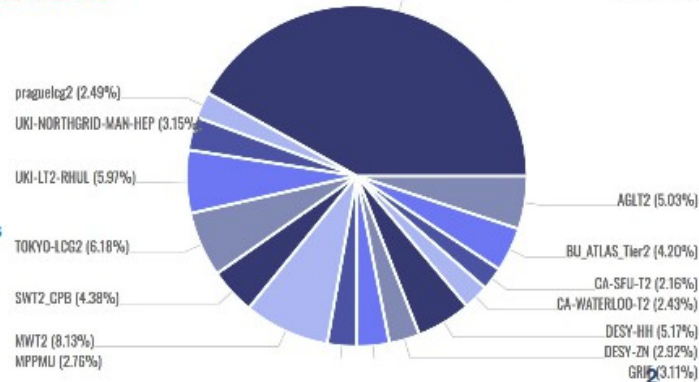
→ Worker node: **10,752cores (HS06: 18.97)**

(7,680 for WLCG, 145689.6 HS06\*cores), Tier 2 Grid Accounting (Jan-Mar 2019)

**3.0GB/core** → High Mem Queue **SUM Wallclock Work (cores \* HS06 hours) by Site** Other (41.93%)

→ File server: **15,840TB**,  
(10,560TB for WLC)

TOKYO-LCG2 provides  
6% of Tier 2



- The cost using GCP is reasonable
  - Same order compared with on-premises, if preemptible instances are used
  - If special prices are offered (~1/10), GCP can be much cheaper than on-premises systems
- Hybrid system with GCPM works in ATLAS Production System
- Higher failure rates observed with preemptible instances
  - 10~30% higher rates
  - Shorter jobs are less affected
- If we want to use GCP effectively...
  - Submit only short jobs
  - Submit more 1 core jobs

# FR-cloud pilot jobs

<http://apfmon.lancs.ac.uk/cloud/FR>

GRIF	ANALY_GRIF-IRFU (p)	online	no active blacklisting rules defined
	ANALY_GRIF-LAL_HTCondor (p)	test	HC.Blacklist.set.test
	ANALY_GRIF-LPNHE (p)	online	no active blacklisting rules defined
	GRIF-IRFU_UCORE (p)	online	no active blacklisting rules defined
	GRIF-LAL_HTCondor_CL7_UCORE (p)	online	no active blacklisting rules defined
HK-LCG2	GRIF-LPNHE_UCORE (p)	online	no active blacklisting rules defined
	ANALY_HK-LCG2_ARC (p)	online	no active blacklisting rules defined
IN2P3-CC	HK-LCG2_ARC_UCORE (p)	online	no active blacklisting rules defined
	ANALY_IN2P3-CC_CL7 (p)	online	no active blacklisting rules defined
IN2P3-CC-T2	IN2P3-CC-all-ce-sge-long (p)	offline	decommissioning
	IN2P3-CC-T3_HTC8_UCORE (p)	online	no active blacklisting rules defined
	IN2P3-CC-T3_MCORE (p)	offline	manual
	IN2P3-CC-T3_MCORE_CSP01 (p)	offline	manual
	IN2P3-CC-T3_MCORE_CSP02 (p)	offline	manual
	IN2P3-CC_CL7 (p)	online	no active blacklisting rules defined
	IN2P3-CC_CL7_HIMEM (p)	online	no active blacklisting rules defined
	IN2P3-CC_CL7_MCORE (p)	online	no active blacklisting rules defined
	IN2P3-CC_CL7_MCORE_HIMEM (p)	online	no active blacklisting rules defined
	IN2P3-CC_CL7_UCORE (p)	brokeroff	stayoff
	IN2P3-CC_CL7_VVL (p)	online	no active blacklisting rules defined
IN2P3-CPPM	ANALY_CPPM (p)	online	no active blacklisting rules defined
	ANALY_CPPM_CL7_ARC (p)	online	no active blacklisting rules defined
	IN2P3-CPPM_CL7_ARC_MCORE (p)	online	no active blacklisting rules defined
	IN2P3-CPPM_MCORE (p)	online	no active blacklisting rules defined
IN2P3-LAPP	ANALY_LAPP_CL7 (p)	online	no active blacklisting rules defined
	ANALY_LAPP_TEST (p)	test	HC.Test.Me.
	IN2P3-LAPP-TEST (p)	test	HC.Test.Me
	LAPP_UCORE_CL7 (p)	online	no active blacklisting rules defined
IN2P3-LPC	ANALY_LPC (p)	online	no active blacklisting rules defined
	LPC_UCORE (p)	online	no active blacklisting rules defined
IN2P3-LPSC	ANALY_LPSC (p)	online	no active blacklisting rules defined
	IN2P3-LPSC_UCORE (p)	online	no active blacklisting rules defined

analysis

# FR-cloud pilot jobs

<http://apfmon.lancs.ac.uk/cloud/FR>

Site	panda queue	state	comment
BEIJING-LCG2	ANALY_BEIJING (p)	online	no active blacklisting rules defined
	BEIJING-LCG2-creamce-atlas-lcgpbs (p)	online	no active blacklisting rules defined
	BEIJING-LCG2-creamce-atlascore-lcgpbs (p)	online	no active blacklisting rules defined
CDTC			
RO-02-NIPNE	ANALY_ROMANIA02 (p)	online	no active blacklisting rules defined
	RO-02-NIPNE-tbat03-atlas-lcgpbs (p)	online	no active blacklisting rules defined
	RO-02-NIPNE-tbat03-atlas-lcgpbs_MCORE (p)	online	no active blacklisting rules defined
	ROMANIA02_UCORE (p)	online	no active blacklisting rules defined
RO-07-NIPNE	ANALY_ROMANIA07 (p)	online	no active blacklisting rules defined
	ANALY_ROMANIA07_ARC (p)	online	no active blacklisting rules defined
	RO-07-NIPNE_ARC (p)	online	no active blacklisting rules defined
	ROMANIA07_ARC_UCORE (p)	online	no active blacklisting rules defined
	ROMANIA07_UCORE (p)	online	no active blacklisting rules defined
RO-14-ITIM	RO-14-ITIM-ARC (p)	online	no active blacklisting rules defined
	RO-14-ITIM-ARC_MCORE (p)	online	no active blacklisting rules defined
	RO-14-ITIM-cream-atlas-pbs (p)	online	no active blacklisting rules defined
	RO-14-ITIM-cream-atlas-pbs_MCORE (p)	online	no active blacklisting rules defined
RO-16-UAIC	RO-16-UAIC-cream-grid-atlas-lcgpbs (p)	online	no active blacklisting rules defined
	RO-16-UAIC-cream-grid-atlas-lcgpbs_ARC (p)	online	no active blacklisting rules defined
	RO-16-UAIC-cream-grid-atlas-lcgpbs_ARC_MCORE (p)	online	no active blacklisting rules defined
	RO-16-UAIC-cream-grid-atlas-lcgpbs_MCORE (p)	online	no active blacklisting rules defined
TOKYO-LCG2	ANALY_TOKYO_GCP_SL7 (p)	online	no active blacklisting rules defined
	ANALY_TOKYO_SL7 (p)	online	no active blacklisting rules defined
	TOKYO_GCP_SL7 (p)	online	no active blacklisting rules defined
	TOKYO_SL7 (p)	online	no active blacklisting rules defined

production