Activités des sites LCG France

Comité de Direction LCG France
Renaud Vernet – Feb. 2014

Outline

- Activites des expériences
  - … à compléter si nécessaire
- Utilisation des ressources des sites francais
  - Vues globale, T1, T2
- Evolution des pledges pour 2014
- Nouvelles des sites

Activites des expérience en 2013

- ALICE
- ATLAS
- CMS
- LHCb

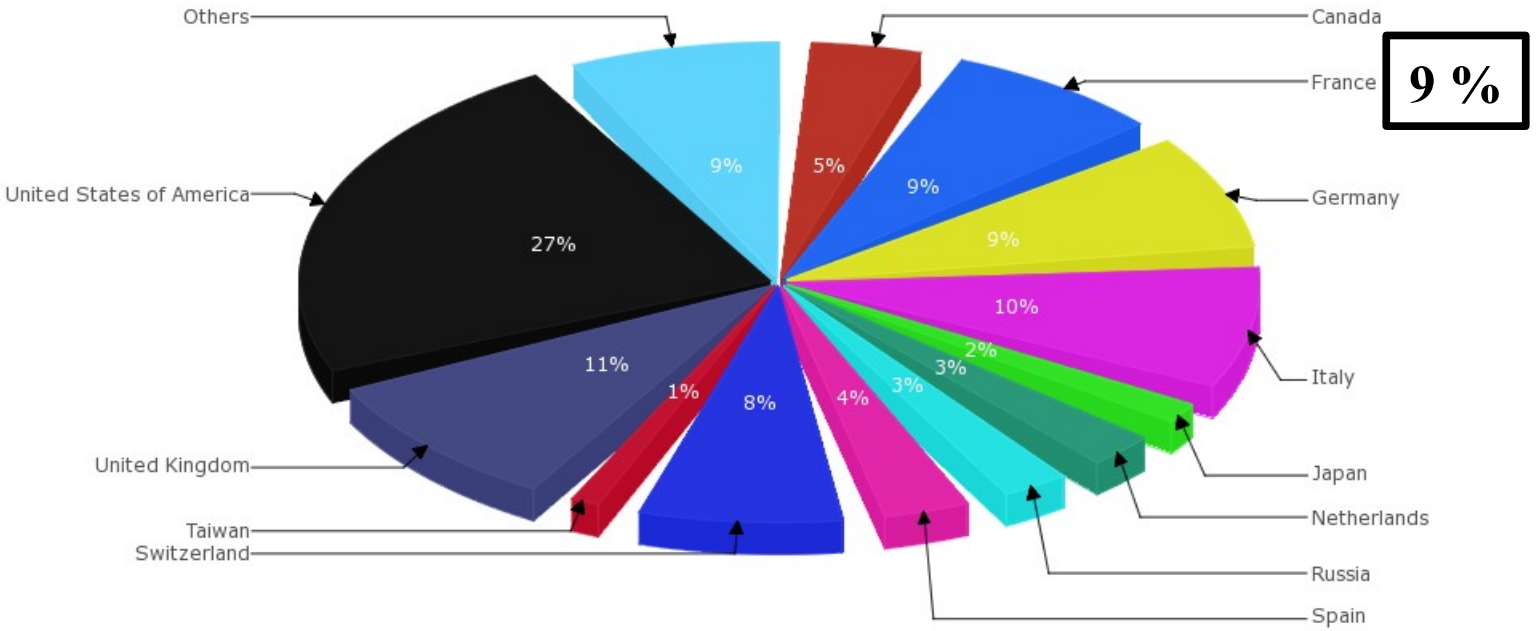
→ Expliquer ce qui s'est passé en 2013...

Consommation CPU (2013)

Developed by CESGA 'EGI View': / normcpu-HEPSPEC06 / 2013:1-2013:12 / COUNTRY-VO / lhc (x) / GRBAR-LIN / x

2014-02-05 21:21

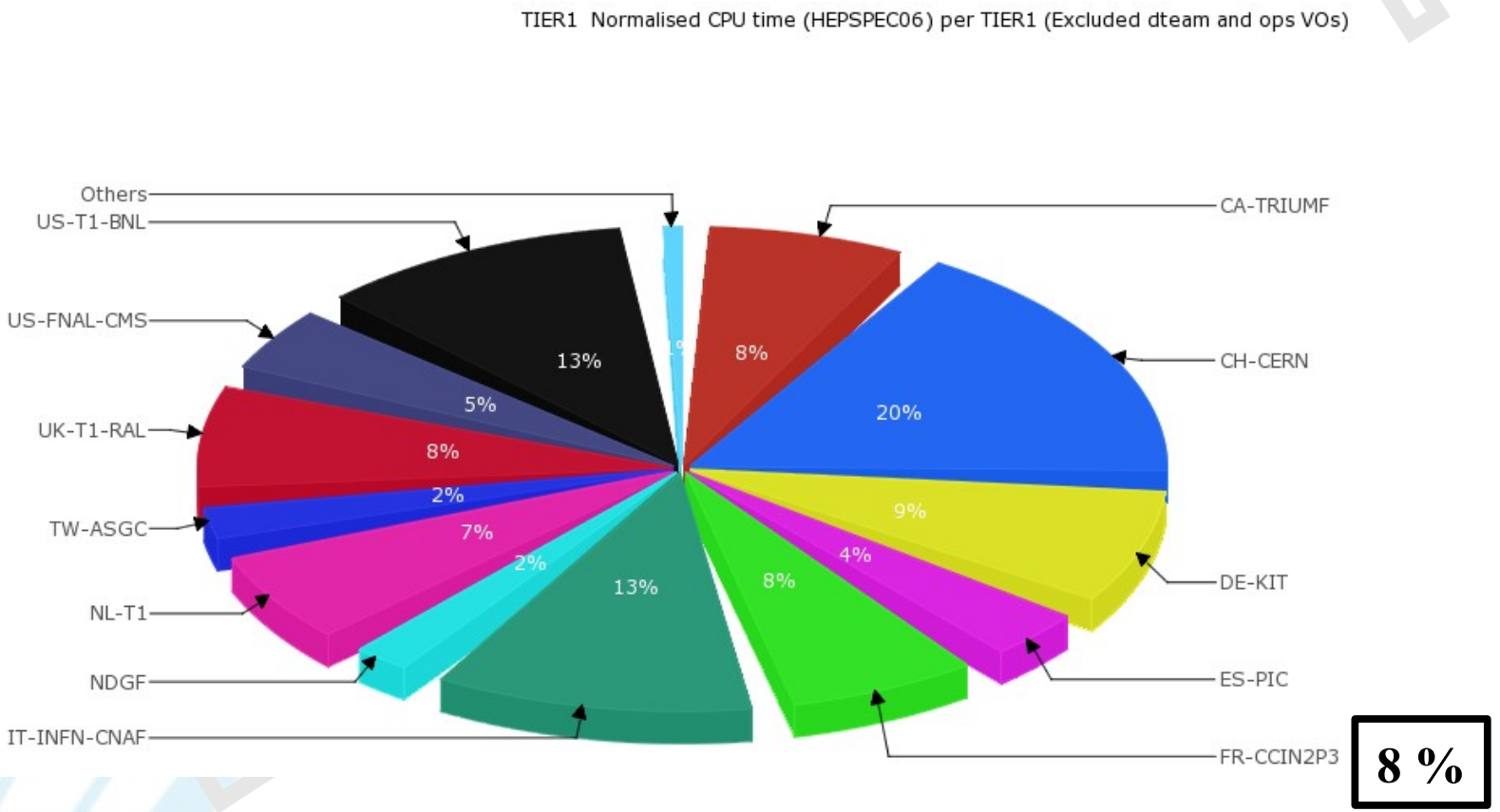
COUNTRY Normalised CPU time (HEPSPEC06) per COUNTRY (Excluded dteam and ops VOs)



9 % du CPU time de la grille WLCG est consommé en France

Consommation CPU T1 (2013)

- Vue des Tier-1

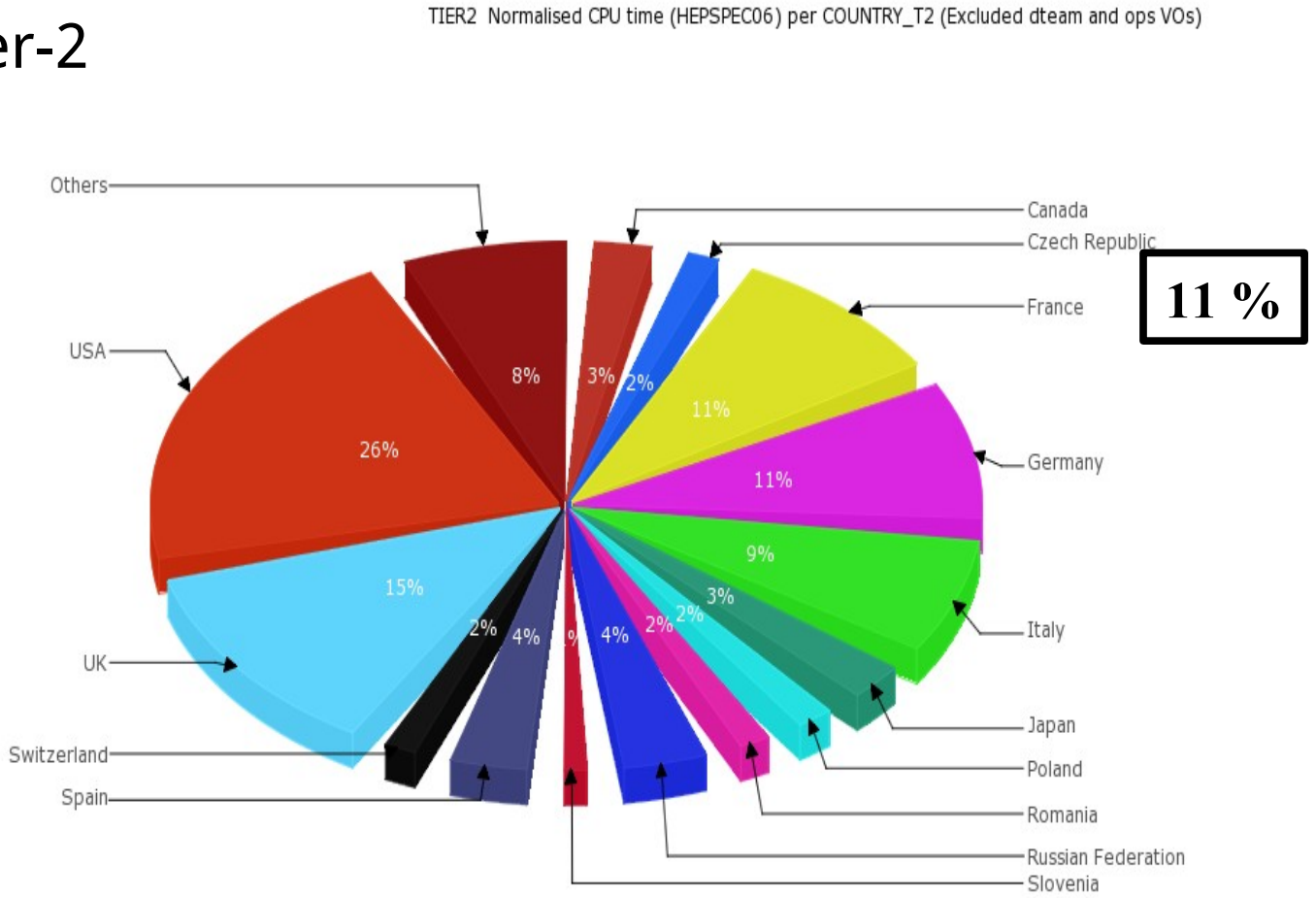


Consommation CPU T2 (2013)

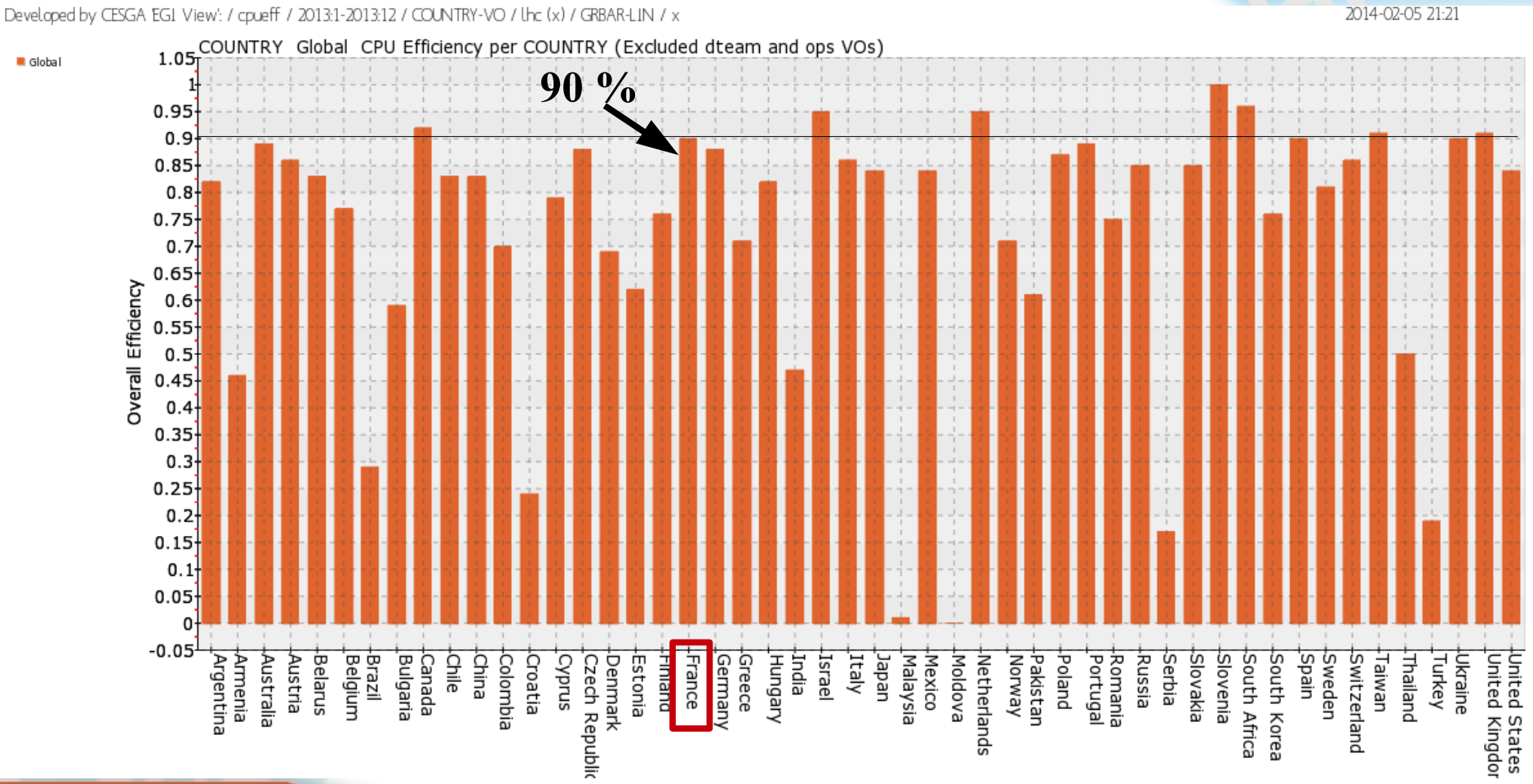
Developed by CESGA 'EGI View': / normcpu-HEPSPEC06 / 2013:1-2013:12 / COUNTRY_T2-VO / lhc (x) / GRBAR-LIN / x

2014-02-05 21:21

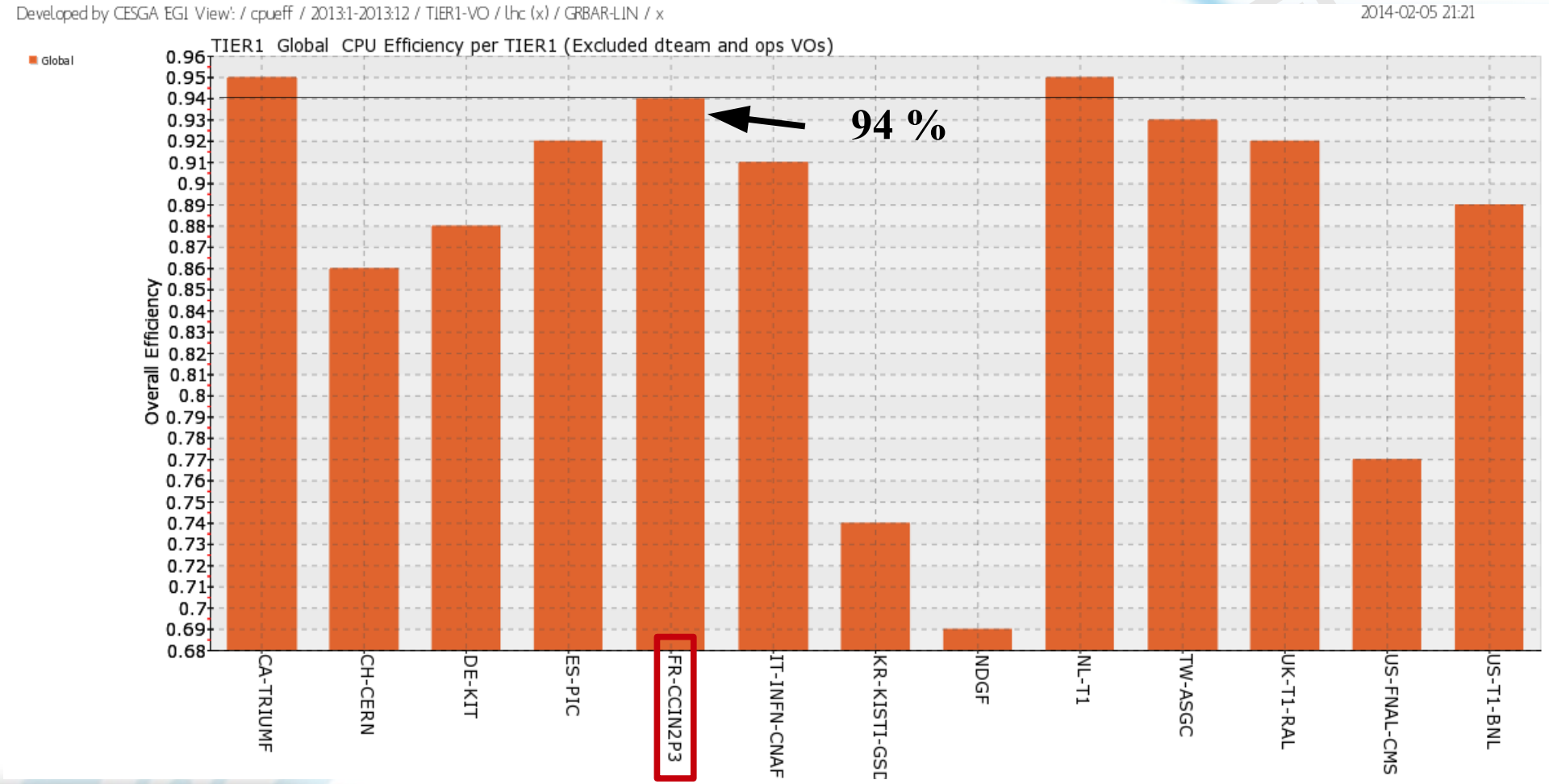
- Vue des Tier-2



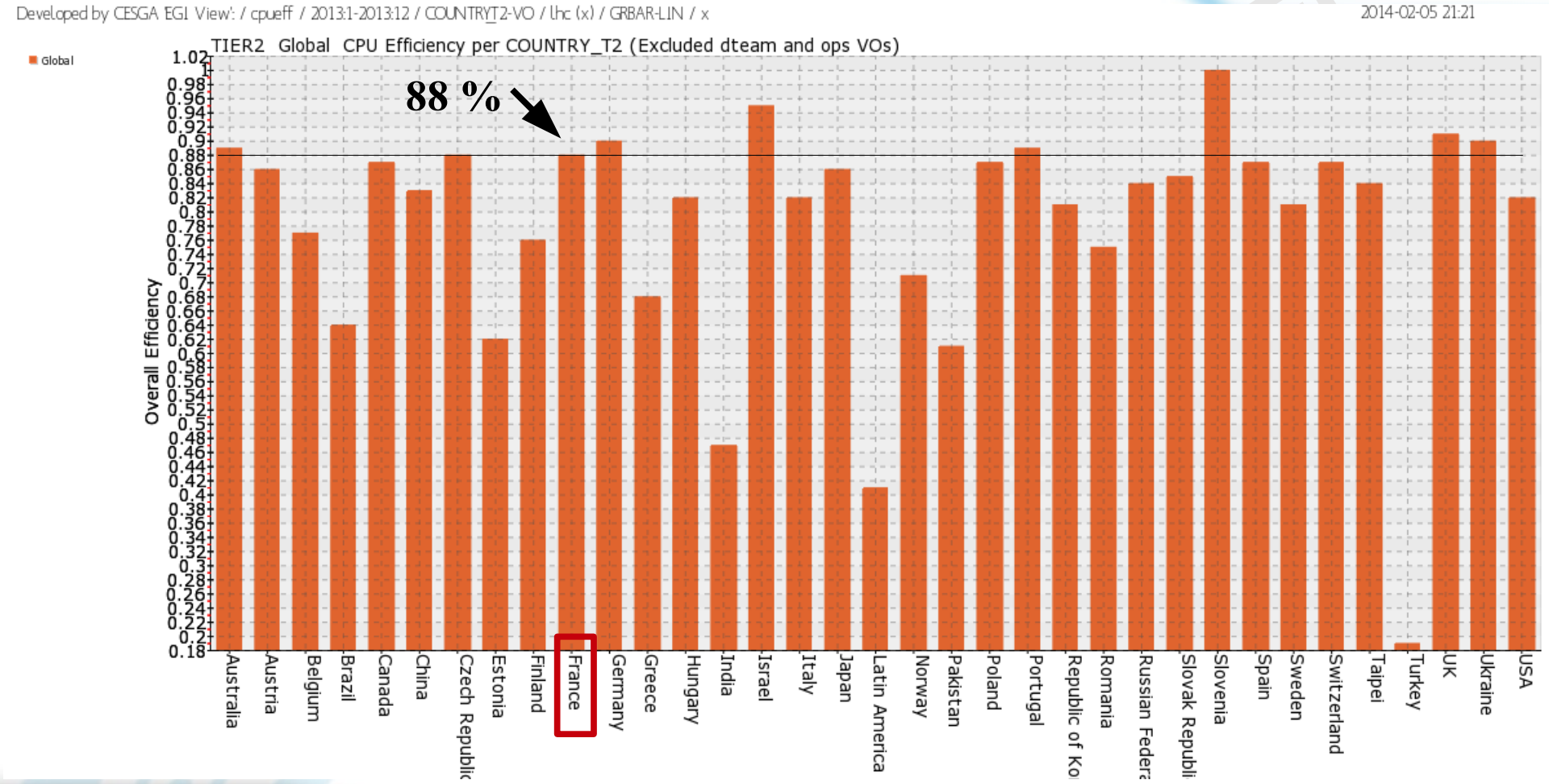
Utilisation du CPU (2013)



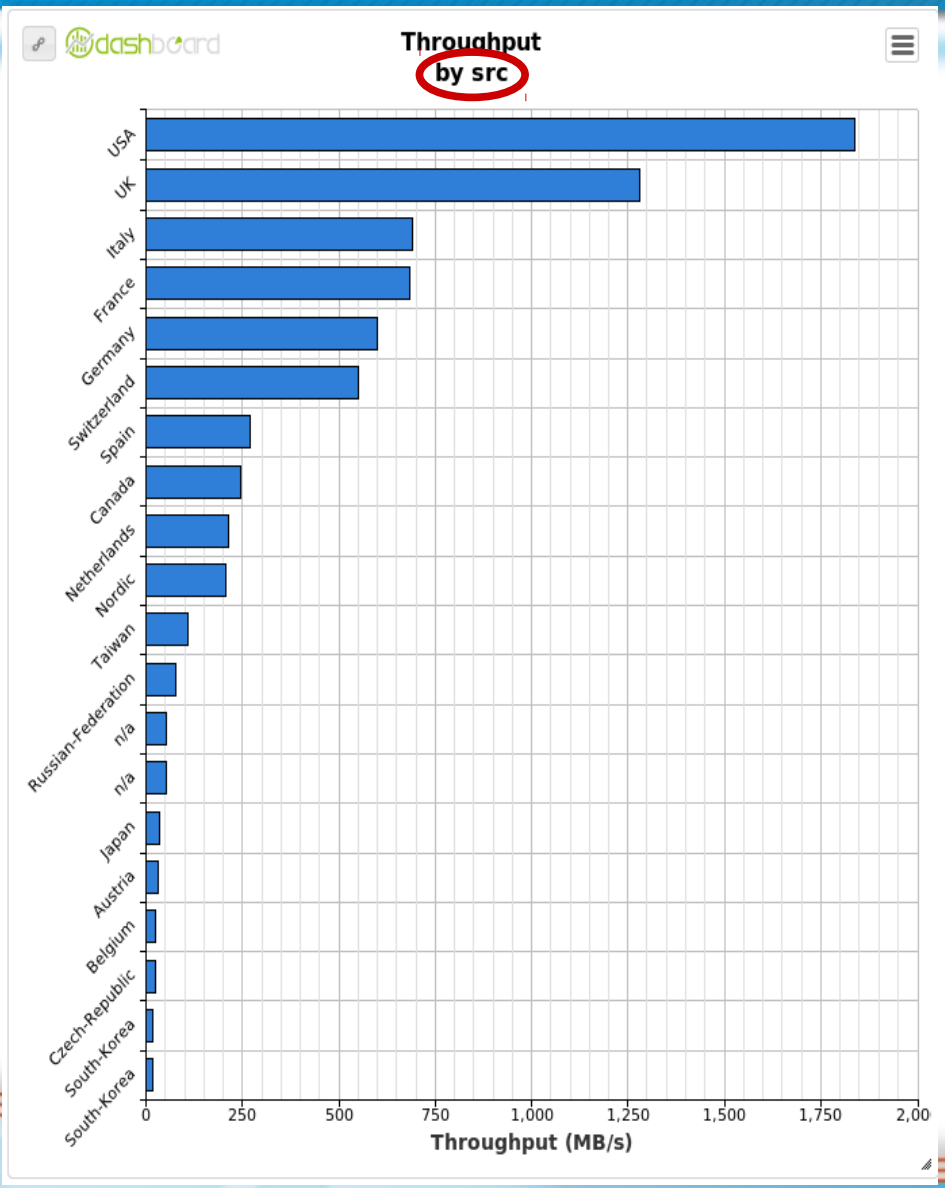
Utilisation du CPU T1 (2013)

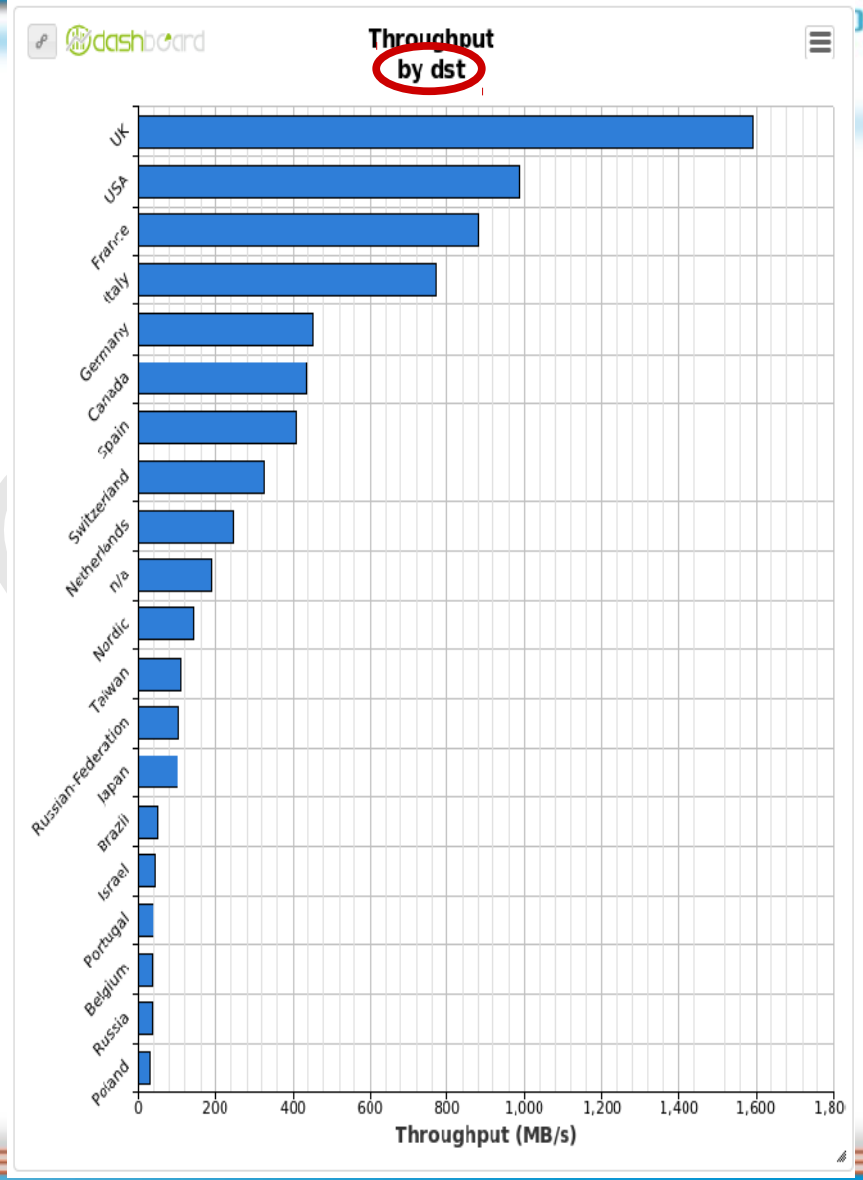


Utilisation du CPU T2 (2013)



Transferts réseau (last month)





Visibilité internationale

- Poids et performances du T1 et des T2 comparables
- 9 % du CPU consommé en 2013 globalement
- Réseau dans le top'5
- Utilisation du CPU efficace
  - ~90 % au T1 et aux T2
  - Peu de pertes : infrastructures adaptées, personnel compétent ☺

Ressources LCG Fr. (2013)

				ALICE		ATLAS		CMS		LHCb		Total	
Tier 1	France	FR-CCIN2P3	CPU (HEP-SPEC06)	7,700	8%	31,350	10%	11,800	7%	16,500	15%	67,350	10%
Tier 1	France	FR-CCIN2P3	Disk (Tbytes)	710	7%	3,540	11%	1,550	6%	1,200	14%	7,000	9%
Tier 1	France	FR-CCIN2P3	Tape (Tbytes)	1,050	18%	3,500	9%	4,075	8%	1,400	13%	10,025	9%
Tier 2	France	CC-IN2P3 AF	CPU (HEP-SPEC06)	2,300	1%	9,750	3%	6,600	2%	5,200	11%	23,850	3%
Tier 2	France	CC-IN2P3 AF	Disk (Tbytes)	300	2%	1,310	3%	510	2%	0		2,120	2%
Tier 2	France	CPPM, Marseille	CPU (HEP-SPEC06)			4,014	1%			2,000	4%	6,014	2%
Tier 2	France	CPPM, Marseille	Disk (Tbytes)			600	1%			4		604	1%
Tier 2	France	GRIF, Paris	CPU (HEP-SPEC06)	5,850	3%	10,527	3%	10,360	3%	4,042	9%	30,779	3%
Tier 2	France	GRIF, Paris	Disk (Tbytes)	474	4%	1,617	3%	770	3%	0		2,861	3%
Tier 2	France	IPHC, Strasbourg	CPU (HEP-SPEC06)	3,500	2%			7,500	2%			11,000	2%
Tier 2	France	IPHC, Strasbourg	Disk (Tbytes)	200	2%			600	2%			800	2%
Tier 2	France	LAPP, Annecy	CPU (HEP-SPEC06)			4,800	1%			1,600	3%	6,400	2%
Tier 2	France	LAPP, Annecy	Disk (Tbytes)			620	1%			2		622	1%
Tier 2	France	LPC, Clermont-Ferrand	CPU (HEP-SPEC06)	2,278	1%	3,360	1%			1,389	3%	7,027	1%
Tier 2	France	LPC, Clermont-Ferrand	Disk (Tbytes)	178	1%	616	1%			2		796	1%
Tier 2	France	LPSC Grenoble	CPU (HEP-SPEC06)	1,252	1%	2,920	1%					4,172	1%
Tier 2	France	LPSC Grenoble	Disk (Tbytes)	125	1%	449	1%					574	1%
Tier 2	France	SUBATECH, Nantes	CPU (HEP-SPEC06)	3,000	2%							3,000	2%
Tier 2	France	SUBATECH, Nantes	Disk (Tbytes)	310	2%							310	2%

<u>9 sites</u>

~160k HS06 (⇔ 16k jobs simultanés)

16 Po de disque utile

10 Po de bandes

Resources 2014

				ALICE		ATLAS		CMS		LHCb		Total	
Tier 1	France	FR-CCIN2P3	CPU (HEP-SPEC06)	11,500	10%	33,560	9%	16,750	10%	21,700	20%	83,510	11%
Tier 1	France	FR-CCIN2P3	Disk (Tbytes)	1,260	12%	3,680	11%	1,550	6%	1,350	12%	7,840	9%
Tier 1	France	FR-CCIN2P3	Tape (Tbytes)	1,050	18%	4,200	8%	4,475	8%	1,800	15%	11,525	9%
Tier 2	France	CC-IN2P3 AF	CPU (HEP-SPEC06)			9,750	3%	7,600	2%			17,350	2%
Tier 2	France	CC-IN2P3 AF	Disk (Tbytes)			1,310	3%	510	2%			1,820	2%
Tier 2	France	CPPM, Marseille	CPU (HEP-SPEC06)			4,014	1%			2,000	4%	6,014	1%
Tier 2	France	CPPM, Marseille	Disk (Tbytes)			600	1%			100	4%	700	1%
Tier 2	France	GRIF, Paris	CPU (HEP-SPEC06)	7,087	4%	13,260	3%	11,778	3%	4,437	9%	36,562	4%
Tier 2	France	GRIF, Paris	Disk (Tbytes)	477	4%	1,666	3%	815	3%	0	0%	2,958	3%
Tier 2	France	IPHC, Strasbourg	CPU (HEP-SPEC06)	3,500	2%			9,000	2%			12,500	2%
Tier 2	France	IPHC, Strasbourg	Disk (Tbytes)	200	2%			600	2%			800	2%
Tier 2	France	LAPP, Annecy	CPU (HEP-SPEC06)			9,000	2%			3,200	7%	12,200	3%
Tier 2	France	LAPP, Annecy	Disk (Tbytes)			940	2%			2	0%	942	2%
Tier 2	France	LPC, Clermont-Ferrand	CPU (HEP-SPEC06)	2,641	1%	5,715	1%			1,414	3%	9,770	2%
Tier 2	France	LPC, Clermont-Ferrand	Disk (Tbytes)	178	1%	718	1%			2	0%	898	1%
Tier 2	France	LPSC Grenoble	CPU (HEP-SPEC06)	2,243	1%	3,901	1%					6,144	1%
Tier 2	France	LPSC Grenoble	Disk (Tbytes)	151	1%	477	1%					628	1%
Tier 2	France	SUBATECH, Nantes	CPU (HEP-SPEC06)	3,000	2%							3,000	2%
Tier 2	France	SUBATECH, Nantes	Disk (Tbytes)	310	2%							310	2%

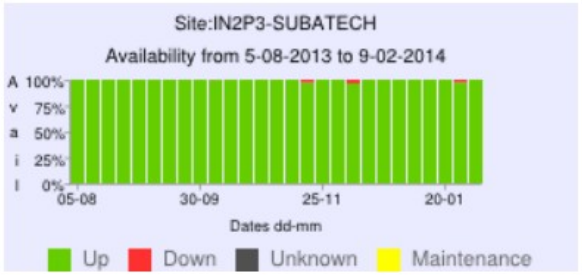
2013 → 2014 :

+ 25 % CPU

+ 6 % disque

+15 % bandes

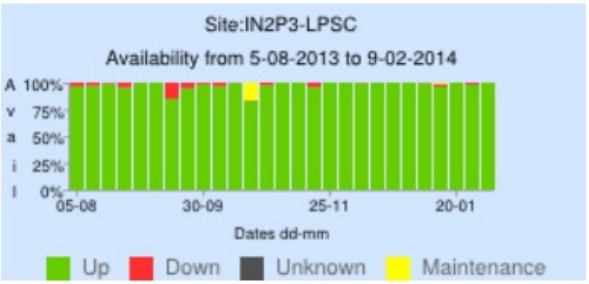
Disponibilité des sites français

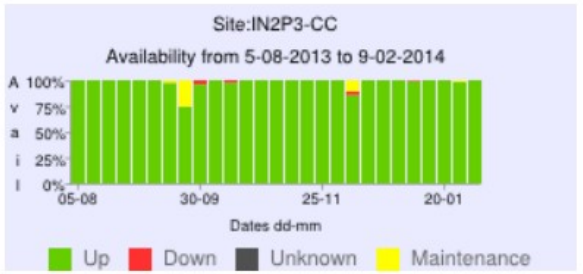


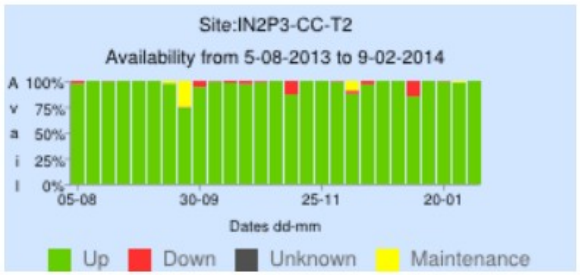
Tests OPS

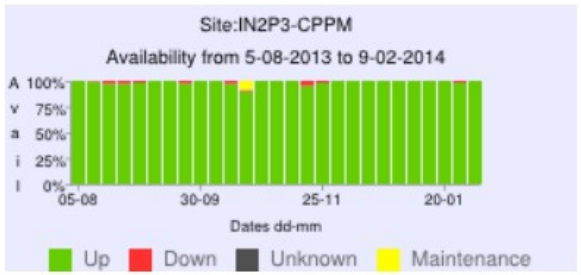
OK en général

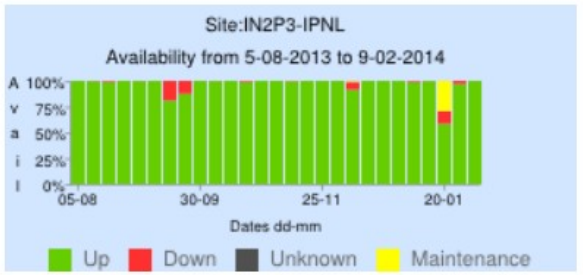
LAPP : nouvelle salle machine (perturbations)

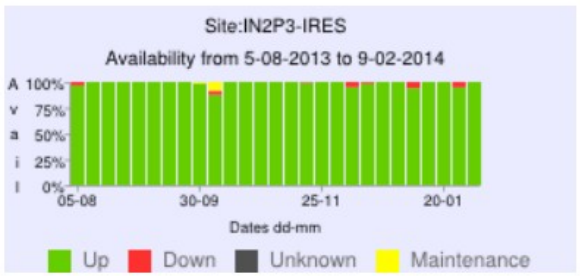


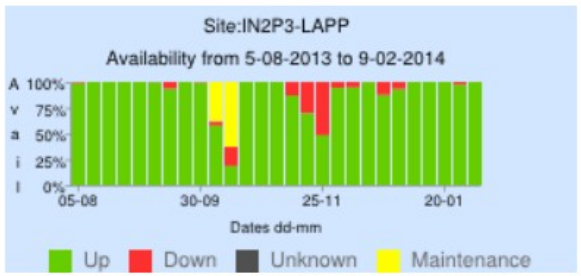


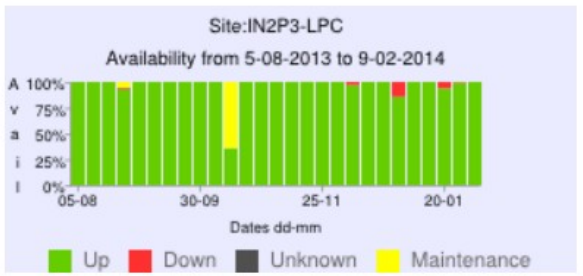












Nouvelles du T1

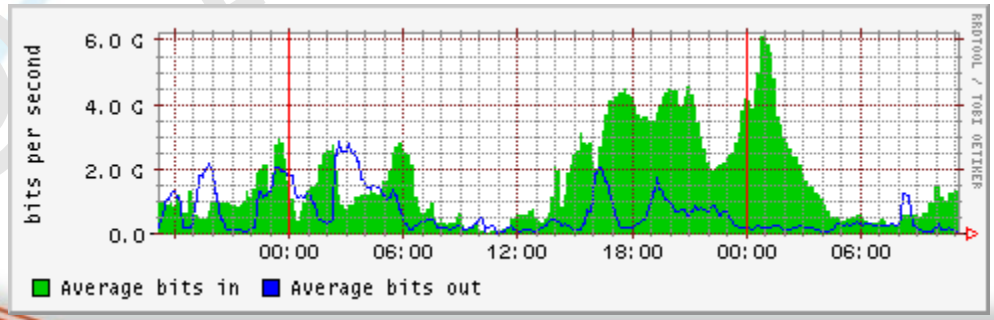
- Transition vers Univa Grid Engine (batch system)
- Middleware à jour
- Deploiement d'une instance FTS3
- Séparation disque/bande CMS
  - Etape importante pour evolution computing model
- Provision d'un Po non pledgé (printemps)
- Multi-core par ATLAS
  - Essentiellement ATLAS, devenu stable
- Mise en place d'une queue ''T3-like'' pour ATLAS sur cloud du CC
  - En-dehors de l'accounting WLCG
- Absorption de la partie « Analysis Facility » dans le T1
  - Concerne ALICE et LHCb

Nouvelles du LAPP

- Passage au Po
- Nouvelle salle machine
- Lien 10 Gbps (tant attendu) depuis cet été
- Ferme pleine → priorité au CPU pour prochains achats

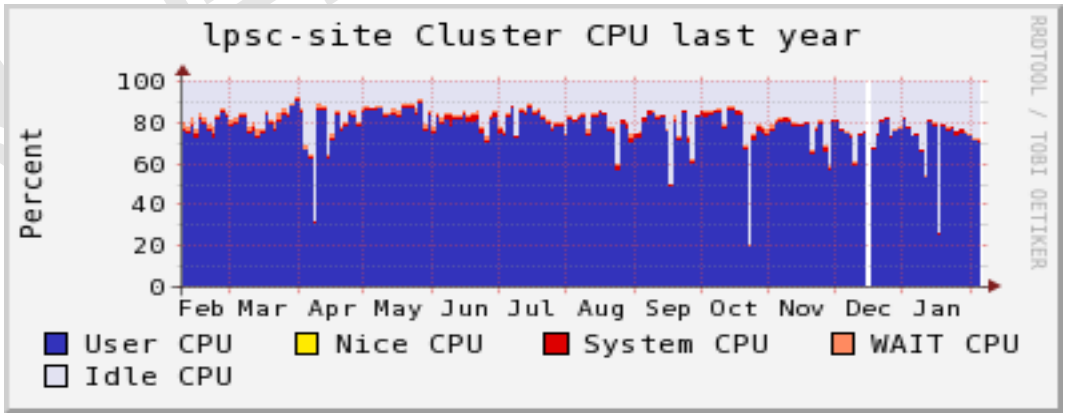
Nouvelles de Subatech

- Nouvelle salle informatique
  - Worker nodes
  - Nouvel onduleur
  - Climatision en racks
- 310 To de disque pleins a 96 % (uniqt. ALICE)
  - Moitié de la capacité en cours de renouvellement
- SAF (proof) très utilisée
- 2 CE + squid/cvmfs disponibles
- Réseau →

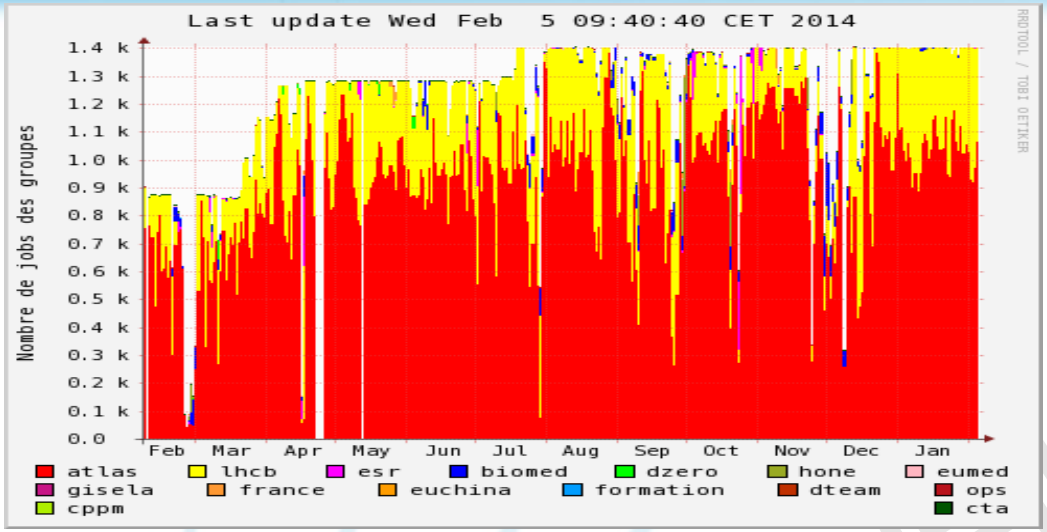


Nouvelles du LPSC

- 3 CREAM-CE
- Problèmes MySQL sur unique CE ALICE
  - disponibilité ALICE affectée (automne)
  - Résolu
- Très bonne utilisation du CPU

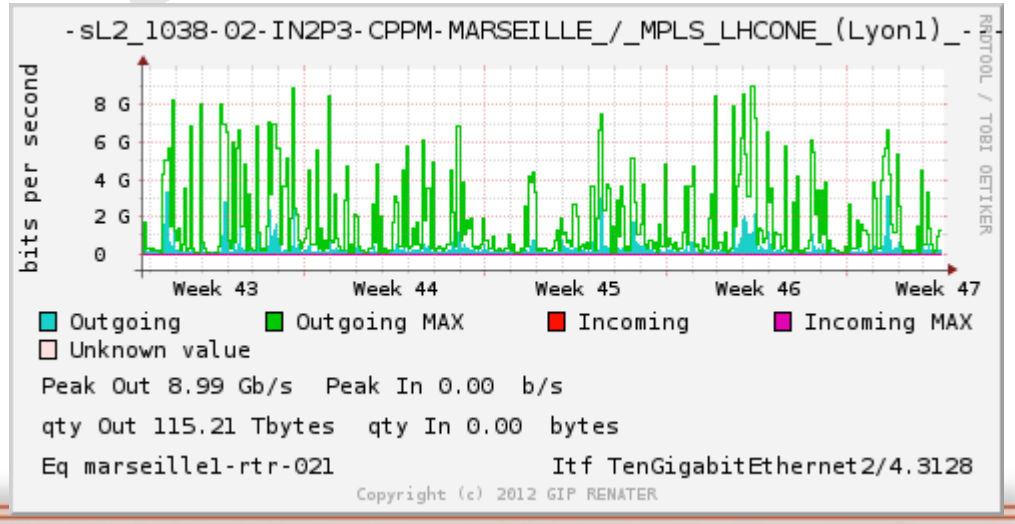


Nouvelles du CPPM



Utilisation de la ferme

Utilisation du réseau



Nouvelles de l'IPNL

- Utilisation du stockage
  - 90 % pour ALICE
  - 80 % pour CMS
- Nouveau backbone
  - Passage a 10 Gbps complètement

Nouvelles de l'IPHC

- Yannick ?

Nouvelles du LPC

- Jean-Claude ?

Nouvelles du GRIF ?

- Les gens du GRIF ?

- Autre chose ?