

# CDF Computing Status

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for CDF Italian Computing Group

## Outline

- Status of Computing
- Status of computing @ Tier1 and Grid.it
- Requests for 2009

# Group Structure & people

Since January due to budget cut we have in CDF:

Margaret Votava, Robert Kennedy and Jerry Guglielmo from CD.

They help to review:

- offline group organization
- operations
- monitor of all activities

Rob wrote a WBS describing all our projects with milestones and dead lines.

Margaret set up for CDF offline and issue tracker, JIRA.

Now we work and communicate with via tickets no emails anymore.

This helps to analyze the distribution of errors, where we need more support and what we should modify.

They will stay with us until September.

## Group Structure & people

D. Benjamin the last expert person is leaving for ATLAS  
The lack of CDF expert people may be an issue in the future.  
From the analysis performed together with the three new people from CD we understood that we need to stabilize operation and boost the development.  
To achieve that we decide to re-organize the group.  
As of today this process is on going, it will be finalized next week during the CDF-week.  
The idea: separate operations from development.  
Operations will be mainly done by Computing Division.  
Development must be done by CDF collaborators.

# Proposed group organization

Operations  
Rick

Development  
Donatella

DH

Ntuples  
Prod

MC  
Prod

Data  
Prod

Grid  
services

CDF  
Middleware

Task  
force

**DH** Robert, Angela Sam Shifters

**Diskpool** Alexei

**DB Front** Petar

**Prod** Ting Elena,

**Oper** Roman Stan

**CAF** Federica,

**Oper** Marian, Genser

**GRID**

**Oper** regional supp

**Ntple coord** Ray/Sasha

**MC Prod** Costas

Stephan ??

Federica, Marian,  
Gabriele,  
Manoj

Ming

Vicky donation

Costas

Task force people

The italian group is one of the major CDF contributor to offline:  
D., Gabriele, Simone and Manoj

# Data Processing

Working hard we were able to provide  $3 \text{ fb}^{-1}$  of data for the summer conferences, but it was difficult.

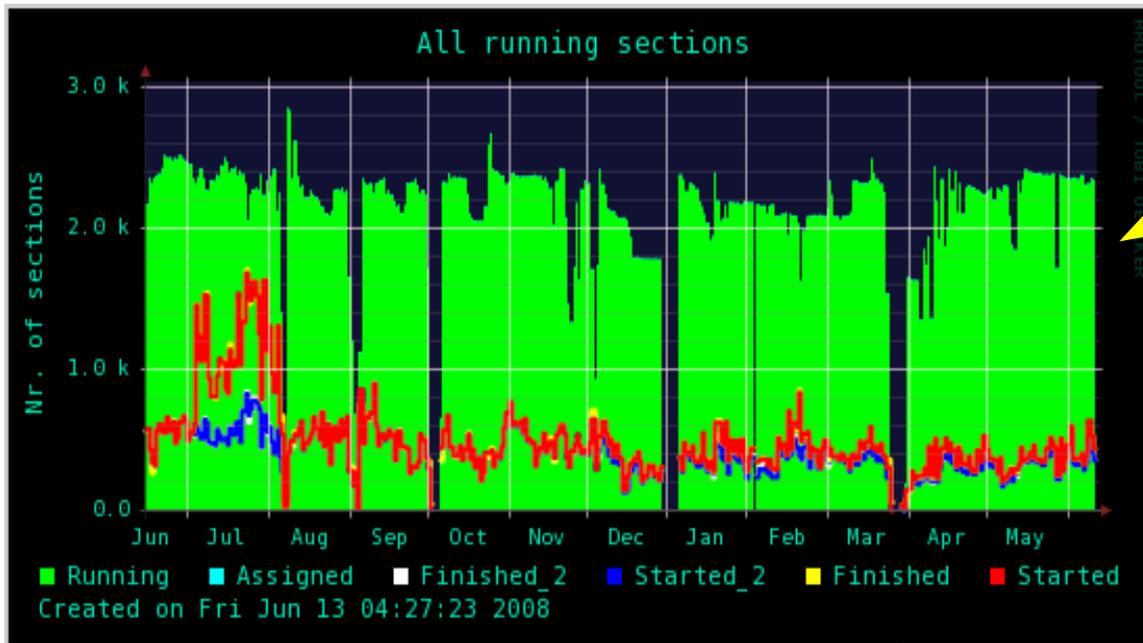
Resources devoted to data production are at critical point:

1. we need more time to process high luminosity events
2. CAF, farm where data are produced, have not be expanded in the last year. The reason being the fact that it will be merged into FNAL T1 in order to be more Grid compliant and not to support a farm by our self.

Process time can be reduced by moving to Gen7. Physics groups seem not willing to do it. This will implicate that we need to reprocess almost all data. Some Gen7 fixes applied to current executables. Still under investigation.

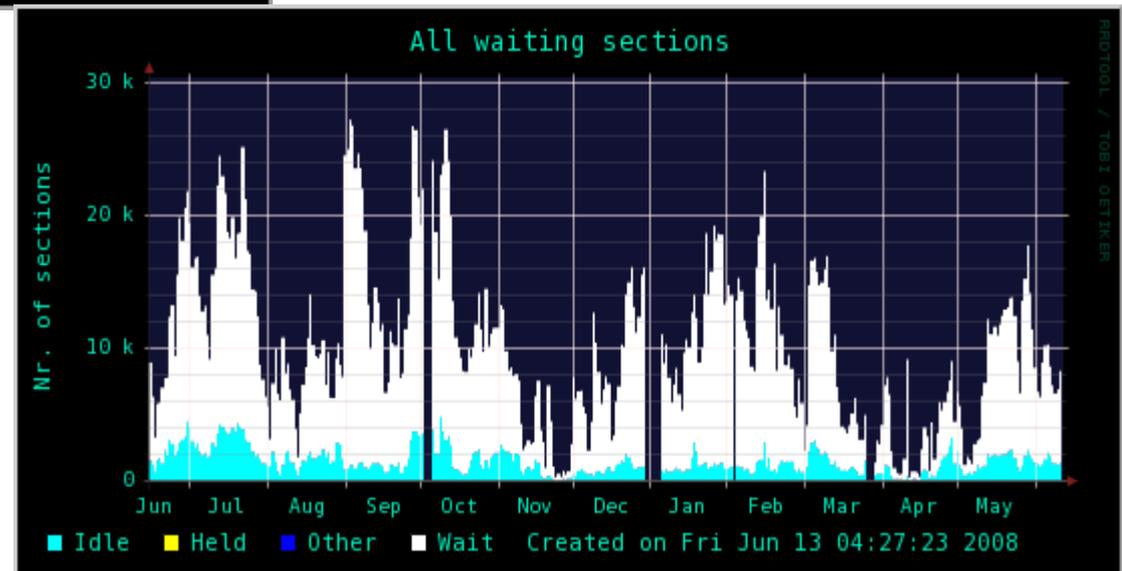
Need to start running production at FNAL T1, the issue is have enough people to accomplish 2. Started a discussion with CD.

# Data Processing

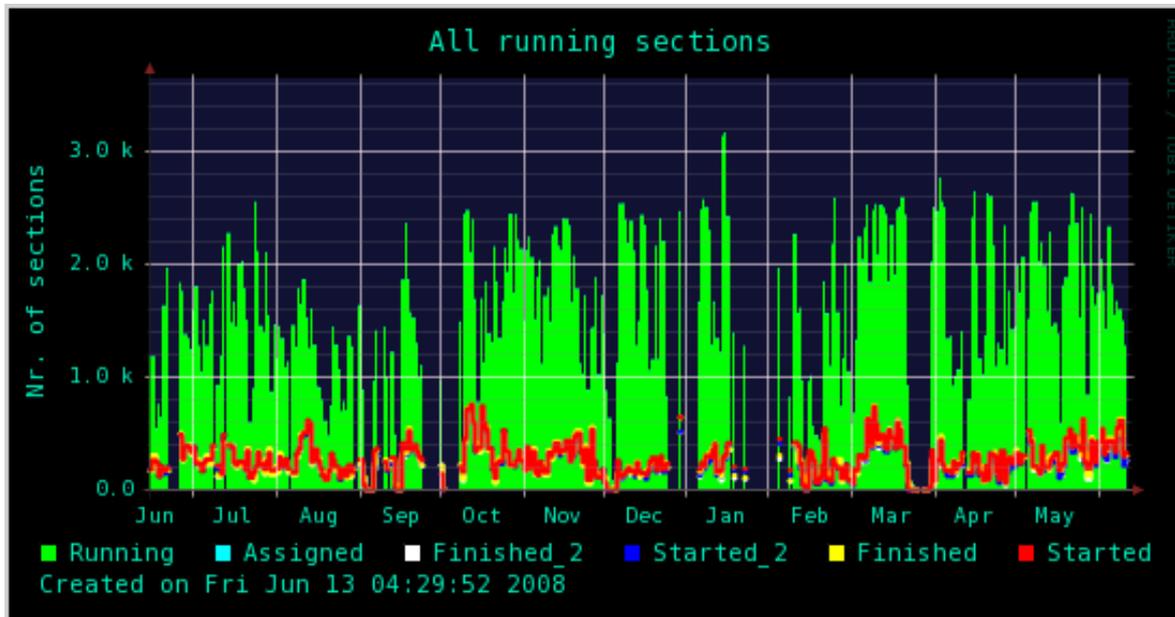


CAF Running jobs almost production in the past was also for users

CAF waiting jobs  
these plots show that the farm is overloaded.  
Almost 1 FTE needed to keep farm up



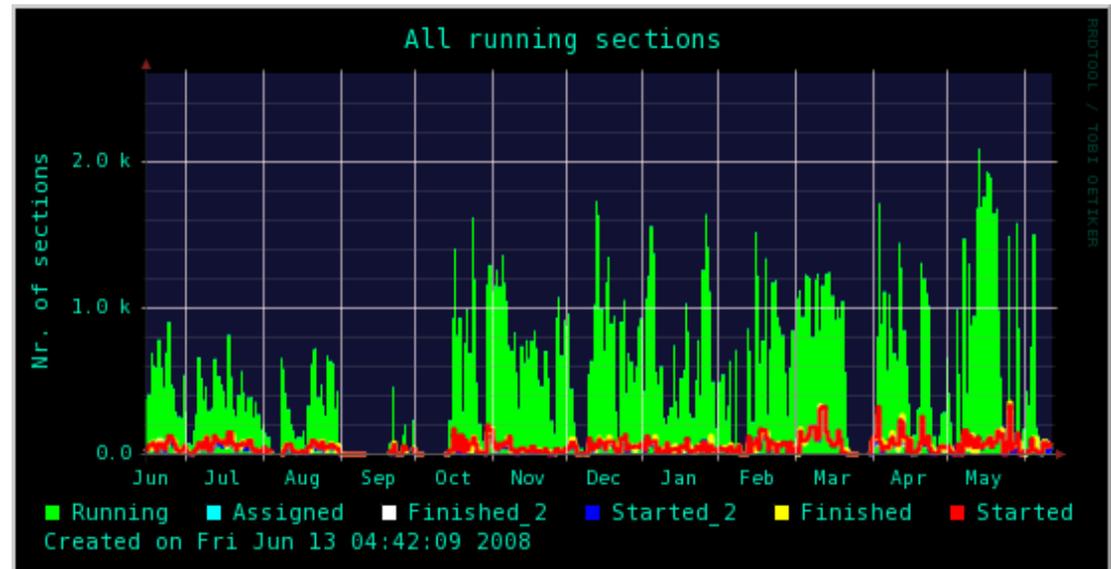
# Fermi-Grid and OSG usage



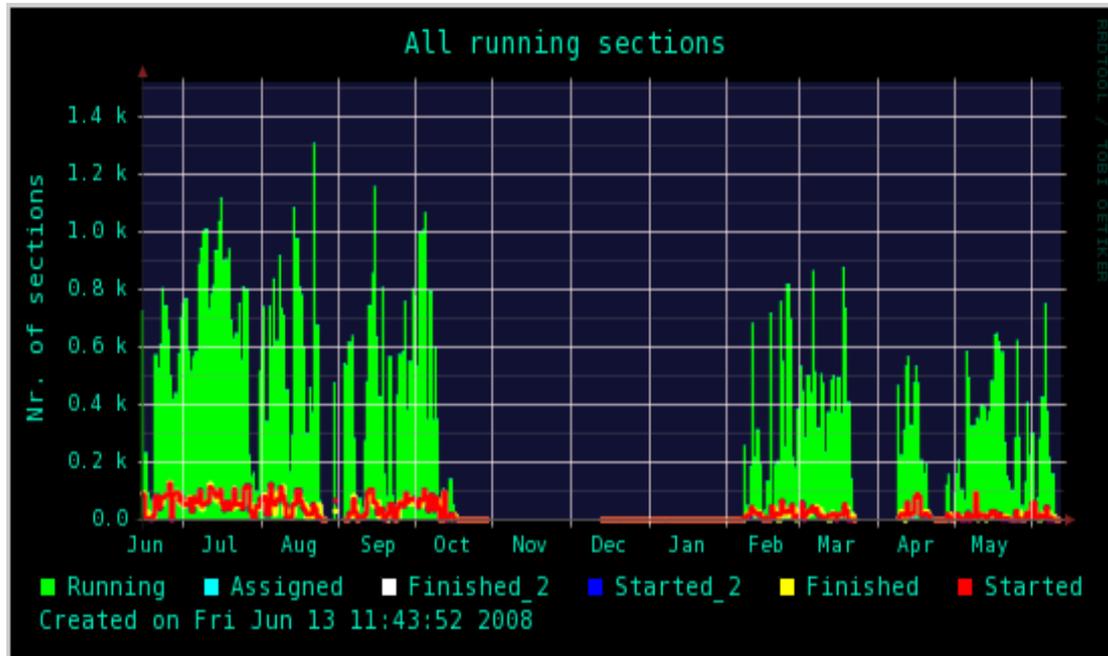
Fermilab T1 running jobs

OSG running jobs

These plots show that we must improve the usage for production and users



# Computing in Italy



Very long downtime due to security incident. We had to demonstrate to FNAL that CNAF is a secure place, we needed 2 months. We had to scratch our head node and reinstall it. We did not have a person dedicated to CDF so we had to wait ~2 months.

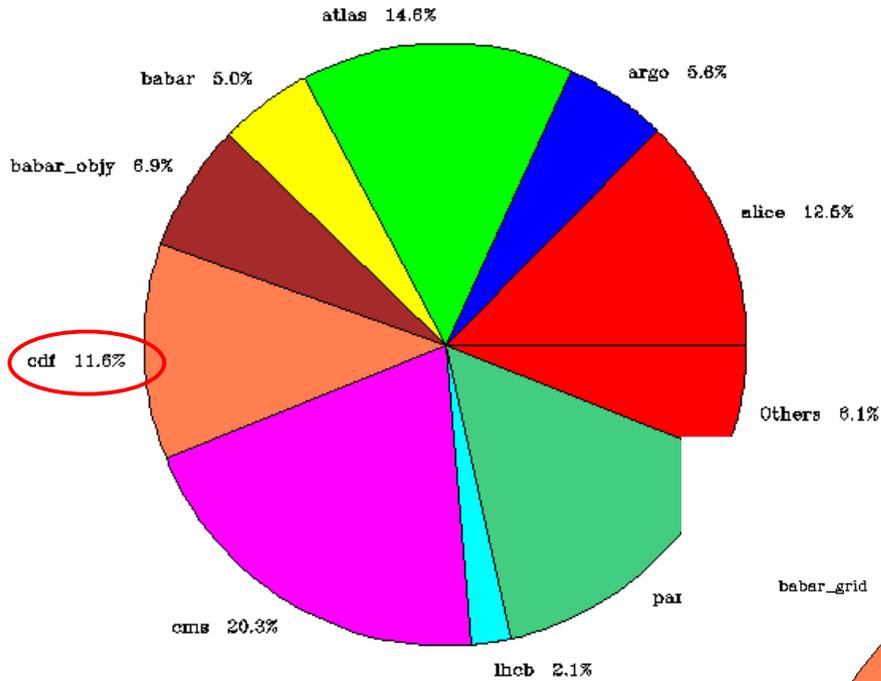
Before downtime we were contributing as the FNAL T1

We are recovering.

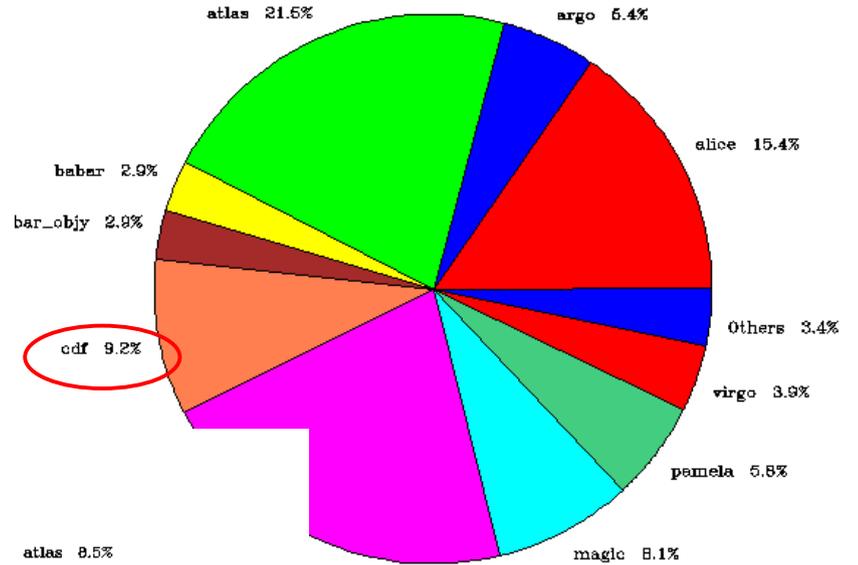
During the shutdown we were accessing CNAF resources via LcgCAF, so the usage was not zero.

# Tier1 Usage

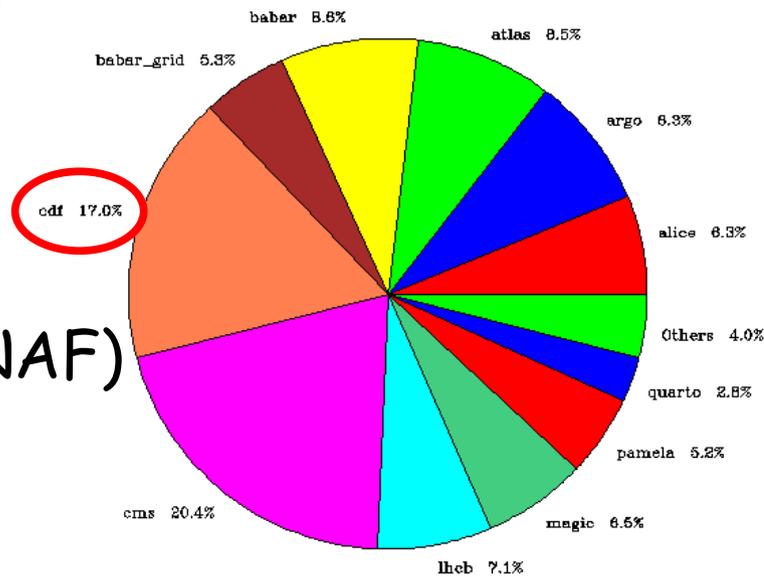
## First trimester 08



## last trimester 07



## last month (Gabriele at CNAF)



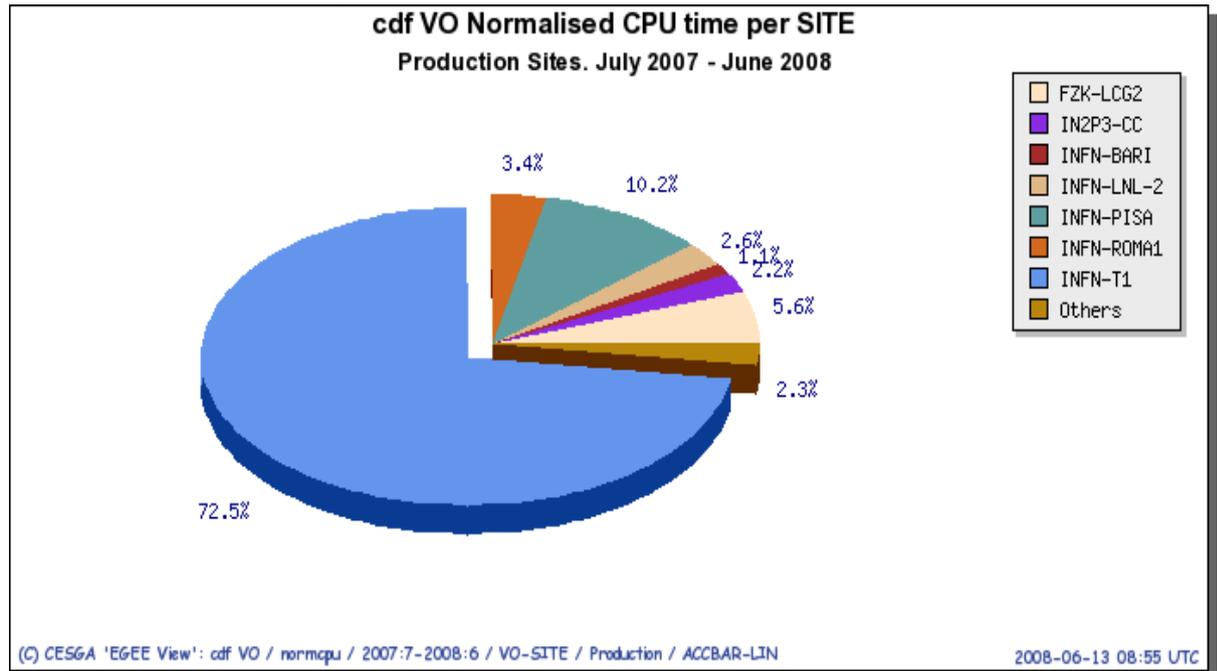
# LcgCAF configuration & usage

Maintained by Gabriele and Simone

## Accessed Sites

Site	Country
CNAF-T1	Italy
INFN-Padova	Italy
INFN-Catania	Italy
INFN-Bari	Italy
INFN-Legnaro	Italy
INFN-Roma1	Italy
INFN-Roma2	Italy
INFN-Pisa	Italy
FZK-LCG2	Germany
IN2P3-CC	France
IEPSAS	Slovakia
IFAE	Spain
PIC	Spain
UKI-LT2-UCL-HE	UK
Liverpool	UK

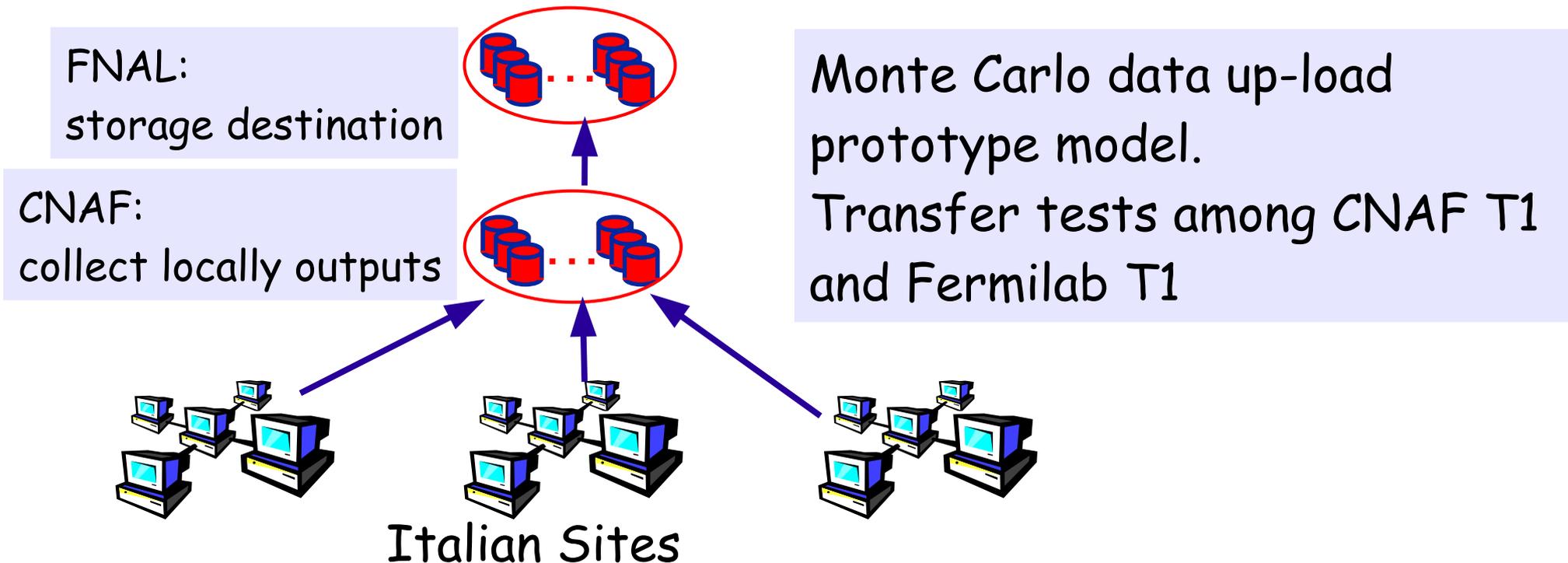
Need to improve the usage outside Italy



In particular need to work on data transfer, next slide

# Data Movement: In Progress

- Current mechanism leads to inefficient use of remote WN
- A framework is needed to ship Monte Carlo Data between remote computing sites and Fermilab and vice-versa for data
- New mechanism has to be interfaced with **SAM**, the Fermilab Run II Data Handling Framework for CDF, D0 and Minos.



# Request for 2009

	2007-Q4			2008-Q4			2009-Q4			2010-Q4			
	CPU (kSi2k)	Disco (TB-N)	Nastro (TB)										
BaBar	680	200	0	1215	350	0	1215	350	0	1215	350	0	
CDF	820	100	15	1161	170	15	1290	220	15	1420	270	15	
Totale	1500	300	15	2376	520	15	2505	570	15	2635	620	15	
<b>Acquistando in due anni</b>	<b>TOT €</b>			<b>540</b>			<b>80</b>			<b>62</b>			<b>682</b>
Costo CPU				188			18			14			221
Costo Disco					352			62			48		462
Costo Nastro						0			0			0	0
<b>Acquistando nell'anno in corso</b>					<b>448</b>			<b>69</b>			<b>54</b>		<b>572</b>
Costo CPU				140			15			13			169
Costo Disco					308			54			41		403
Costo Nastro						0			0			0	0
	2007-Q4			2008-Q4			2009-Q4			2010-Q4			
	CPU (kSi2k)	Disco (TB-N)	Nastro (TB)										
LHCB TIER2	0	0	0	600	0	0	1200	350	0	1700	350	0	
<b>Acquistando in due anni</b>				129			84			55			<b>268</b>
<b>Acquistando nell'anno in corso</b>				96			72			50			<b>218</b>

Secondo le tabelle presentate in gruppo 1 e approvate CDF @CNAF in 2009

cpu: 18 Keuro

disk: 62 Keuro

Assunzione: nel 2008 si avra' cio' che GR1 ha pagato