Status Report for CDF Italy computing

fcdfsgi2 disks

Budget report

CAF: now, next year

GRID etc.

CDF – Italy meeting

Pisa – 11 Dec 2002

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Disk on fcdfsgi2 as of 6 Dec 2002

GB	Present	Managed	Used	Proposal		When	Note
100	Bottom1	??	77%	SVT	Carosi	Now	Erase
122	Bottom2	??	96%	SVT	"	Now	Erase
100	Svt_data1	Carosi	39%	SVT	"	-	
50	Svt_data2	Carosi	94%	SVT	"	-	
50	Svt_data3	Carosi	1%	SVT	"	-	
50	Svt_User	Belforte	97%	Spare/CHA/ISL	Belforte	Xmas	Erase
50	Hmutau	Belforte	90%	H tau mu + ISL			
800	Bottom_202	Giagu	62%	Bottom	Giagu		
300	Top_2002	Castro	97%	Top			
100	Zbb_2002	Castro	22%	Z bbar	Dorigo		
122	Zbb2_2002	Castro	48%	Z bbar	Dorigo		
48	Spare_d1	Belforte		Spare			
174	Spare_d2	Belforte		Spare			

SVT: 420 top: 300 B: 800 Zbb: 220 Spare for: minbias, jets, …

FROM MAY's TALK: Comments on computing budget

- All money was spent
- All money was spent on the project
- Additional money was brought on the project from Trieste
  - Tape drives financed but not bought (most)
  - Savings from other projects (little)
  - Remainings from other groups (very little)
- Excellent relationship with INFN referees and CDF offline management

- Projet financial management is working well
  - Total transparency/accountability
  - In spite of somebody's worries
- Too much enthusiasm
  - 40ML must be returned to Trieste group

New Comments on computing budget

- All money was spent
- All money was spent on the project
- 10K (out of 20K) reimbursed to Trieste
- 2 fileserver for next year already mostly payed
  - Wait for final figures (~2 more months) to know exactely how much was saved
- Excellent relationship with INFN referees and CDF offline management.
- Referees changing, Luminosity lacking

  Getting money will be harder in the future
- Projet financial management is working well

  Total transparency/accountability

  In spite of somebody's worries

2002/3 budget

- 80+120+67 = 267 Keuro assigned from CSN1. Spent as:
  disk: 80K - CPU: 150K
- Saved money because:
  Hw was cheaper then CSN1 estimated
  - duals: 2.2K vs 2.5K - fs: 10K vs 12K

  1$/1Euro: 1.2 1.1 1.02
- Savings: 50% in pay-back, 50% anticipation of 2003
- Sales season ends here
  For 2003 (122KE) CSN1 used $/Eu=1.1
  - + 122KE s.j., will use "then" $/Eu at release time

  First 10 duals costed 2.6K, expect any price in 2.2~2.5K
  File server costs still uncertain (new technology)
  - if present ones break a lot, next will cost more
  - plan to buy very few of them anyhow

Interactive work

- CSN1 does not like "power desktops"
  - 1 "smuggled" in June
  - 3 financed for 2003 (at 3.5K vs. 4.5K req)
- Have to explore interactive on CAF

- Could easily get lots of CPU, use CAF scratch disk, can incorporate FC disks (2.4TB total) after fcdfsgi2 dismission (2004)
- Likely way to get additional money (s.j. release e.g.)

- FKW interested, but has full hands
  - Anybody helping ?

CAF so far

- As of Nov 20:
  - 5 fileservers (1.8TB x4 + 2.2) (almost all used by HadrB)
  - 10 dual nodes (priority queue)
- ~now (running now, waiting customers and "talks")
  - +1 file server (anybody wants it ?)
- By Xmas (burning in now)
  - + 1 fileserver (anybody wants it ?)
  - +34 dual nodes
- Soon after (PR submitted to Fnal purchasing)
  - +18 dual nodes

- CAF 2002: 15TB (7 fs) + 62 duals (=124 1.4GHz cpu)
  - Right on June's target for 0.8fb^-1 in 2003

CAF future

- Our plan "approved" by CSN1 (as shown in June)

year	Luminosity		ANALYSIS FARM			contingency 40% (Keuro)	Requested per year (Keuro)		
	Planned (Church)	Target (adjusted)	disk (TB)	CPU (duals)	cost/y (Keuro)			assig	
2001	commissioning		0.6	0			43		
2002	0.3	0.8	15	60	263	0	263	200+69 =	269
2003	1.2	2.0	37	130	305	122	427	122+122sj =	244
2004	2.5	3.5	65	190	288	115	403		
TOTAL cost Analysis Farm at FNAL + 40% conting. for Run2a expanded to 3.5 fb-1								1136	
2005	4.1	6.0	115	270	334	134	468		
2006	7.6	9.5	180	350	301	120	421		
2007	11.3	13.5	250	420	331	132	463		
2008	15	18.0	330	490	288	115	403		
TOTAL cost for Analysis Farm at CNAF + 40% coting. for Run2b (15 fb-1)								1755	
TOTAL BUDGET CENTRALIZED COMPUTING FOR ANALYSIS 2001-2008								2891	

- Avail CPU scales with disk/Lum, #duals decreases (Moore)
- 2003 financed for 80% of request (1.6 fb^-1 by 2004)
  - 122+122s.j. = 244 vs. 305 requested
  - Money assigned on basis of expected Luminosity alone
    - Only 122KE are certain !
- 2003 also has 28KEuro for MC

CAF next year

- **Will get hw only after demonstration of use & need**
  Ignazio, save us !
- CPU much easier to understand then disk
- **Do we really want static disks ?**
- dCache only ?
  - Try, try, try
  - Monitor, monitor, monitor
  - Present 7 file servers
    - 1 users (scratch) (50GB/user 100)
    - 3 static
    - 3 dCache
- What about ntuples ?
- Can we use DFC/SAM for them ?

Needs, needs, needs

- 2001 CAF review:
  - Go linux
  - We can do it
- 2002 the new CAF is here:
  - The new hw is now defined, we have upper limit to CPU
  - Analysis has started
  - Need to mach again needs and hw
  - This time solution is not more hw
    - Simulators: beware, 10K PC's not possible
- The road to efficient code:
  - Knowledge share
  - No waste allowed
  - Relentless pressure on management
    - I am doing it to the point of being ineffective
    - Must get Executive Board involved

Simulation

- 10 duals at CNAF in 2003;
  - 28KEuro in hand
  - Purchase/install: summer
  - Could get something earlier if needed
  - Still no customer
  - Still no plan

- Up to x10 possible
  - Brick wall then
  - Much better plan needed for that, combined with study of official CDF centralized MC production

GRID

- It was a good start, but we have been left behind
  - CAF-SAM-GRID demo w/o Italy
  - No dCAF in Italy yet (but in UK,D,CA,TT,Korea,Rutgers)
- We decided to drop off the INFN-Grid/DataTag wagon
  - Will not exlore usage of EDG RD ourservels
  - Leave it to Fnal to figure it out
- Need to stay in touch
  - Stefano wasting his time there to protect more important work of more important people
- **Need to join the dCAF wagon asap**
  - Trieste ? Bologna ? CNAF ?
  - **Looking for a few good people**
  - **Need to bring Ombretta Pinazza in CDF full title**

CNAF

- No hw yet (and no news)
  - Still expect 5 duals + 1TB
  - What do we do with them ?
- No volunteers yet
  - Clearly CPU in Italy is not missing now
  - But now we have analysis in Trieste
  - Would like to start a CAF+SAM station there
    - see previous