Organization of GridKa ATLAS cloud

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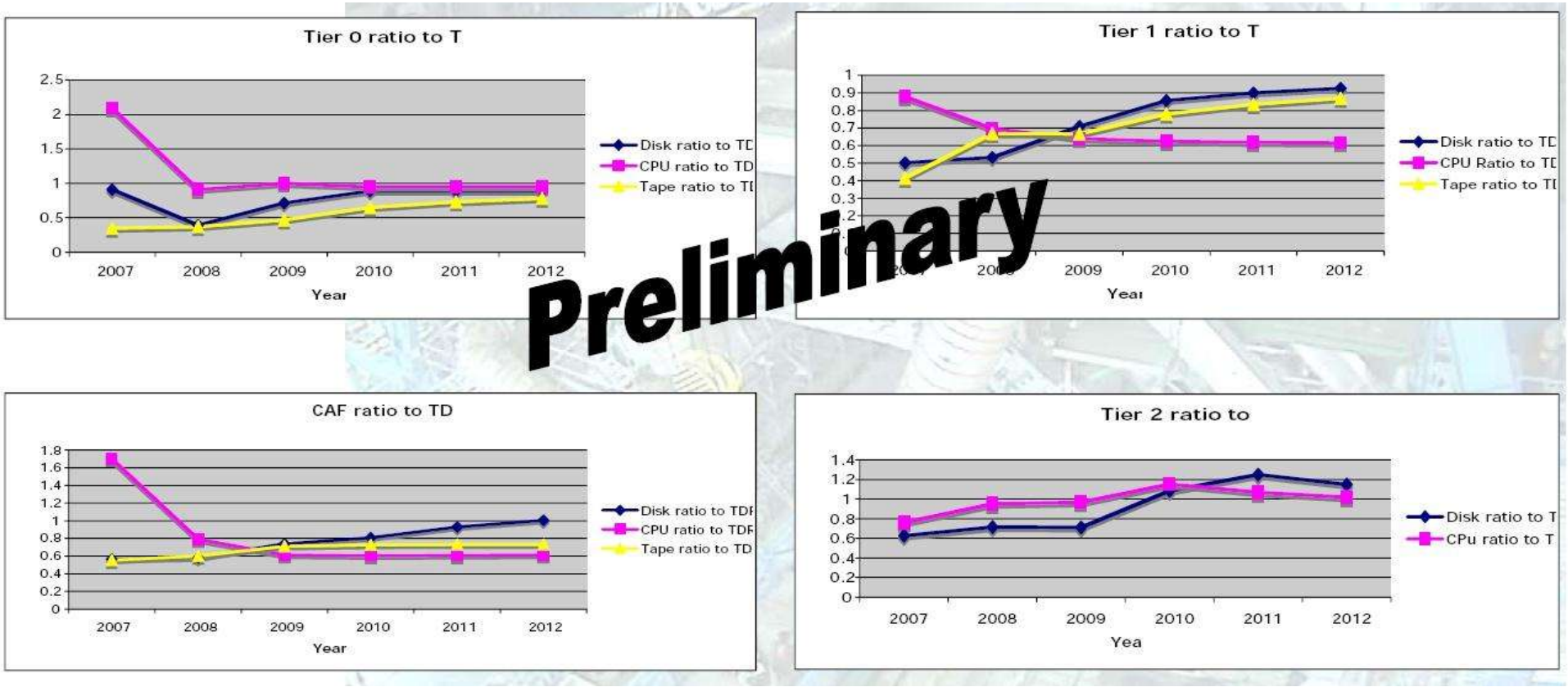
- Status Quo:
  - Computing Model
  - ATLAS T1/2 associations
  - Operations in 2006: Production/DDM/SC4-Tests
- Requirements for GridKa
- Plans for near future
- Ideas for organizational structure

- Computing Model & resource request changes pending
  - LHC running, event sizes, MC CPU time, T1/2 sharing ...
  - still in discussion (~weeks)
  - substantial reductions for T1 in 1st years likely ...



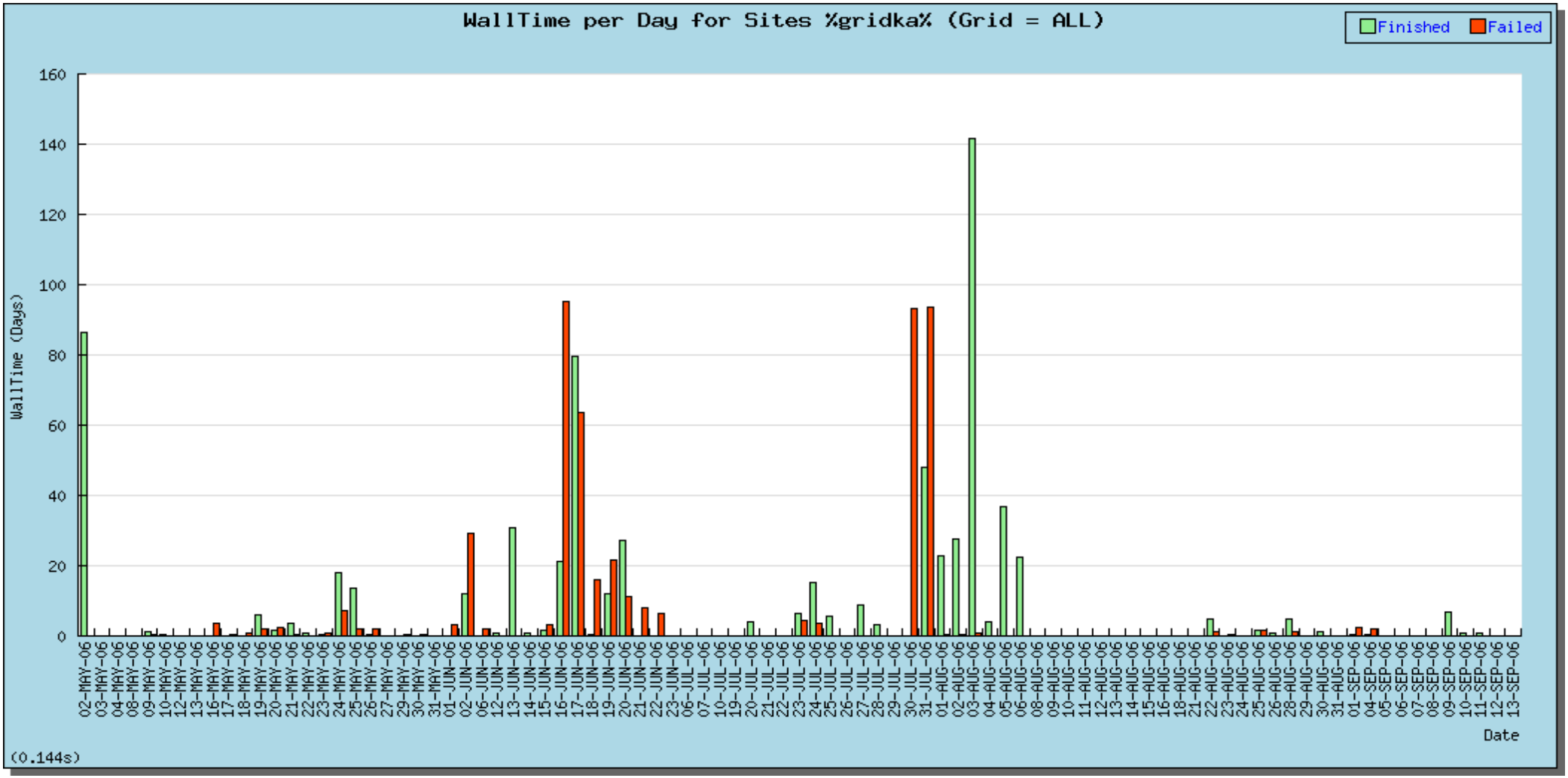
ATLAS Tiers Association

Tier-1			Associated Tier-1	Tier-2 and Planned Tier-2				
		% CPU		MC-T2 (%)				
Canada	TRIUMF	5.3	SARA	4.9	East Fed.	West Fed.		
France	CC-IN2P3	13.5	BNL	14.5	CC-IN2P3	GRIF	LPC	Beijing
					Romanian	Tokyo		
Germany	GridKa	10.5	BNL	19.4	DESY	M Fed	Freiburg.	Wuppertal
					CSCS (CH)	Polish Fed	FZU (CZ)	UIBK (Austrian Fed.)
Italy	CNAF	7.5	RAL (7.5)	8.2	INFN Fed.			
Netherlands	SARA	13.0	TRIUMF (5.3) ASGC (7.7)	7.4	Russian Fed	HEP-II Fed	FZU (CZ)	
Nordic DGF		5.5	PIC (5.5)	1.5	Slovenia			
Spain	PIC	5.5	NDGF (5.5)	6.3	ATLAS Fed	LIP T2	Brazil T2	
Taiwan	ASGC	7.7	SARA	2.5	Taiwan Fed	Melbourne	Tokyo	Beijing
UK	RAL	7.5	CNAF (7.5)	15.4	London Grid	NorthGrid	ScotGrid	SouthGrid
USA	BNL	24	IN2P3 13.5) GridKa (10.5)	19.8	BU/HU T2	Midwest T2	Southwest T2	

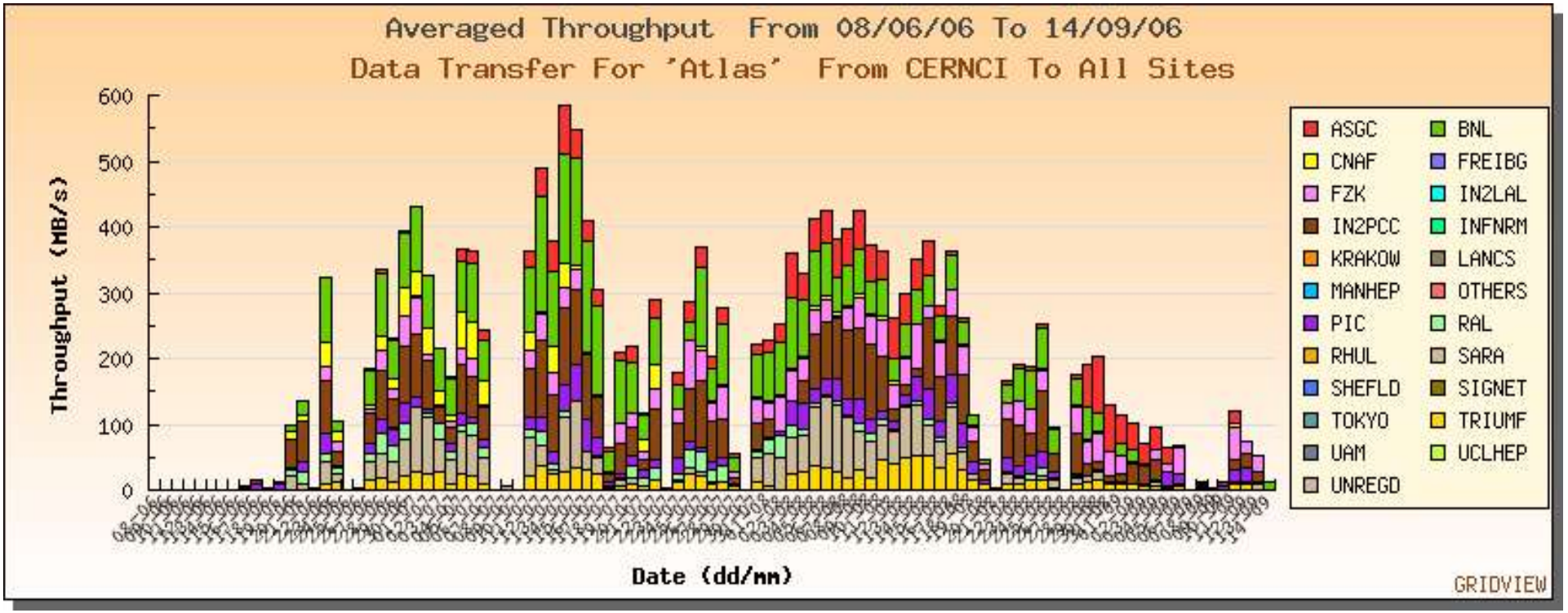
GridKa cloud associations

- Gridka cloud seems a bit overloaded:
  - ratio T1/T2 capacity in 2008: 10.5 vs 19.4
  - 8 T2 sites, presumably >= 13 physical sites
- 2 potential problems:
  - additional storage needed at T1 in case all simulated data produced in cloud must be stored there
    - shouldn't be too difficult to setup channel to 'underloaded' T1
  - setup and maintenance of FTS channels requires certain effort
    - minimize number of explicitly supported SE-channels
    - not clear yet how federations could setup single SE for external access
  - IMHO no showstoppers

- production on GridKa not very satisfying in last quarter:
  - mix of issues: GridKa downtime, software installation problems, vacations, production interuptions, etc



- ATLAS SC4 T0/1/2 tests:
  - poor performance at first but improvements with new Vobox
  - achieved nominal transfer rate (70 MB/s) but only for peak periods
  - overall SC4 goals not achieved
    - sustained rates, LFC non-performance, ...
  - DDM operation & debugging at GridKa cloud tedious and inefficient



The 3 top requests from ATLAS for GridKa

1. stable operation of services
   - instabilities/interruptions cause long tail of non-usage of GridKa for production, DDM, distributed analysis, ...
   - T2 sites of GridKa cloud rely on functioning T1
2. desperately need much more disk space via dCache SRM
   - 4 TB now, limits already SC4 Tests, urgently need space for ongoing production and distributed analysis, >=20 TB asap (>50 TB nominal)
3. closer contact and co-op. with GridKa admin on FTS, LFC, dCache
   - trouble ticket system not useful to initiate & manage operations, need fast feedback & single 1st contact
   - dedicated ATLAS contact at GridKa
     - chase-up problems
     - active involvement in ATLAS GridKa cloud meetings & email-lists
   - no GridKa resources, presumably need to find such person within ATLAS-D community

Plans

- Production:
  - ATLAS overall: continuous increase by factor 2 each quarter
    - GridKa should act as repository for full cloud
  - substantial increase of resources to be expected
    - 2 Munich sites, Wuppertal, Freiburg back, upgrades
- Series of further data transfer tests
  - as discussed, DDM operations as a whole still far from specs needed for full ATLAS operations
    - substantial improvements in various places needed & corresponding data transfer tests involving whole cloud
- Distribute full copy of CSC-AOD data on GridKa and further on T2
  - needed for Distributed Analysis (both Development and Test)
  - service for Physics Community

Manpower situation in Germany

- BMBF (German funding agency for university groups) funds 6 FTE for ATLAS related Computing operations in GridKa cloud
  - 2 Munich, 2 Wuppertal, 1 Mainz, 1 Freiburg
    - several are already filled, for others job-ads had been placed
- Further manpower promised by institutional groups (DESY, MPI)
  - number FTE and roles still under discussion
- Most crucial&difficult is to fill task of ATLAS contact at GridKa
  - no (Grid-active) ATLAS institute close-by
  - person must spent substantial fraction at GridKa ...
    - close contact&cooperation with GridKa admins
    - trustfull relation needed for administrative rights on certain services
  - ... and should be involved in ATLAS operations and familiar with ATLAS needs and of course knowledgeable in LCG/EGEE computing

Ideas for Organizational Structure of GridKa Cloud - 1 -

- Instructive presentation by Kaushik De on structure of team running US cloud in last weeks SW workshop
  - some ideas taken from that
- Site responsibles:
  - each site participating in cloud nominates single main contact
    - chase-up problems, manage trouble-shooting, participate in GridKa cloud meetings & email lists
    - must be high priority task
- Service teams:
  - DDM operation (~2 FTE)
  - Production (1-2 FTE), presumably not just cloud task but LCG overall
  - SW & DB installation (0.5 FTE)
  - Monitoring ??

Ideas for Organizational Structure of GridKa Cloud - 2 -

- Cloud Coordinator (+ Deputy) in charge of overall operation
  - coordinates actions between site contacts and service teams
    - chase up problems
  - organizes meeting of cloud (& takes care of minutes)
  - represents cloud in ATLAS operations meeting
  - but not a representational thing, high profile, high priority task
  - *have limited term (eg 6 months) and rotate assignment within cloud (eg deputy follows as next coordinator)??*
- Meetings
  - weekly(?) operation meetings (phone/VRVS) with site contacts and service teams
  - quarterly(?) cloud meetings, preferably personal.

Ideas for Organizational Structure of GridKa Cloud - 3 -

- Your inputs ...