



Offline shifts proposal

Dario Barberis

CERN & Genoa University



Background

- Soon (2006) we have to start operating the offline computing system on a continuous basis
 - ... and "forever"!
- Offline computing shifts will be recognized as "service work to the Collaboration", in the same way as online (detector) data-taking shifts
- We have to agree on the principles, and put the infrastructure in place, well before the start of operations
- NOW it is the time to think of shift crew needs for the different operations:
 1. Tier-0 operation (in quasi-real time)
 2. Re-processing at Tier-1s
 3. Simulation productions (mainly at Tier-2s)
 4. Organised group analysis mass productions



Tier-0 shifts

- The operation model should foresee two groups of people: "experts" and "shift workers". We should define a small group of 4-5 "experts" who can be on call to sort out serious problems.
- Some of the experts can be the designers and developers of the Tier-0 production and data management system.
- There should be 3 people on the offline shift:
 - a shift leader, who has already some experience (has had some training and has run shifts before) and can sort out trivial problems
 - a person responsible for data management operations
 - a person responsible for job submission and monitoring
- In addition, experts of calibrations and reconstruction (appointed by the Data Preparation area?) must be on call and present when needed to check job outputs.
- We expect the offline shift people to be placed close to the control room at Point 1.



Reprocessing (at Tier-1s)

- We can imagine having again two teams of people, “experts” and “shift workers”.
 - Experts would be on call and intervene if and when needed.
 - Shift workers, as for Tier-0, would submit and monitor jobs and take care that the data management system works correctly.
- Shift work can be run remotely but people have to realise that it is a real commitment (as if they were at CERN running online shifts).
- Three people/shift can take care of ~10 4 RAW data files (or equivalent) per day.
- In addition, there must be an ATLAS person on call for each Tier-1, to guarantee prompt trouble-shooting.



Simulation (mainly at Tier-2s)

- The event generation step should be run independently (using the distributed production system) by the physics groups that need the simulations.
- The following steps (detector simulation, pileup and digitisation, reconstruction) will consist of a number of jobs that is similar to real data re-processing.
- The same kind of organisation, with a core group of experts on call and a shift of 3 people round the clock, should be able to cope with this workload.
- Experts from the groups that requested the simulation will have to be available to check and validate each job step.



Organised group analysis mass productions

- It is difficult at this point in time to estimate the number of jobs and the magnitude of data management work for organised physics analysis productions.
- We assume here that each activity group will have a small group of production managers who can take care of job submission and data management.
- Probably the same core group of experts as for simulation productions can act as consultants in case of trouble.



Summary of shift needs

- 3 people on shift for Tier-0 operations
- 3 people on shift for Tier-1 re-processing
- 3 people on shift for simulation productions
- Production managers of physics groups run their own productions
- Group of experts on call for Tier-0 operations
- Group of experts on call for world-wide operations (Tier-1s and Tier-2)
- Contact people on call (at least) at every Tier-1