



Phase 2 Planning

Major Milestones for Tier-0 & 1 Services

Preliminary planning stage - seeking feedback

History -

- 05oct04 - PEB
 - Must be ready 6 months before data arrives
 - Closer relationship between service & experiment challenges
 - include experiment people in the service challenge team
 - use real applications – even if in canned form
 - experiment challenges are computing challenges – treat data challenges that physics groups depend on separately
- 12oct04 - *service challenge meeting in Amsterdam*

Preliminary planning draft



Major Milestones for Phase 2

Principles

- **Service Challenges -**
 - check out the infrastructure/service to iron out the problems before the experiments get fully involved
 - schedule allows time to provide permanent fixes for problems encountered
- **Experiment Computing Challenges -**
 - checking out the computing model and the software readiness
 - **not** linked to **data challenges**
 - allow preparatory period to sort out the experiments' software – avoid doing this while trying to ramp up performance and scalability
- **Schedule synchronises related service and computing challenges**
- **Tier-1 service should be in operation a full 6 months before the first beams**
 - i.e. ~February 2007 on current timescale
 - at full capacity
 - checked out by experiments



Milestone Proposals Tier-0 data recording

Dec05

- Tier-0 data recording at 750 MB/sec - sustained 10 days
→ ALICE data storage challenge VI completed

Dec06

- Tier-0 data recording at 1 GB/sec
→ ALICE data storage challenge VII completed

Dec07 (at end of the 2007 run)

- Tier-0 data storage at 1.5 GB/sec



Milestone Proposals

Tier-1 Readiness Challenges - 2005

Dec04 - Service Challenge 1 complete

- mass store (disk) - mass store (disk), CERN+3 Tier-1s, 500 MB/sec between CERN and Tier-1s (individually and aggregate), 2 weeks sustained

Mar05 - Service Challenge 2 complete

- reliable file transfer service, mass store (disk) - mass store (disk), CERN+5 sites, 500 MB/sec between sites, 1 month sustained

Jul05 - Service Challenge 3 complete

- acquisition - reconstruction - recording - distribution,
- canned applications, real system software,
- CERN + 5 Tier-1s, 300 MB/sec. including mass store (disk+tape)
- sustained 1 month

Nov05 - ATLAS and/or CMS Tier-0/1 model verification

- 50% data rate, with processing load scaled to 2005 cpus
- 5 Tier-1s - sustained 1 month



Milestone Proposals

Tier-1 Readiness Challenges - 2006

Apr06 - Service Challenge 5 complete

- Tier-0/Tier-1 infrastructure operational at **ALL Tier-1s**
- full target data rates, simulated traffic patterns
- acquisition - reconstruction - recording - distribution,
PLUS ESD skimming, distribution to Tier-2s
- sustained 1 month

Aug06 - Tier-0/1/(2) full model test complete

- **All experiments** (ALICE in proton mode)
- 100% nominal data rate, with processing load scaled to 2006 cpus
- sustained 1 month

Preliminary planning draft



Milestone Proposals

Tier-1 Readiness Challenges – 2006/7

Nov06 - Service Challenge 6 complete

- **Infrastructure Ready** at ALL Tier-1s, selected Tier-2s
- Tier 0/1/2 operation - sustained 1 month
- **twice** target data rates, simulated traffic patterns

Feb07 - ATLAS + CMS + LHCb + ALICE (proton mode)

- Tier-0/1 100% full model test complete

Preliminary planning draft



Milestones for Tier-2 & Analysis

- Needs discussion