



Run II Computing and Analysis Department

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Shank Review Committee
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Motivation

- The CDF and DO Computing and Analysis departments were merged Aug 1, 2004
 - ◆ Exploit commonalities between the two experiments, encourage common solutions
 - ▲ Understanding and recommending common solutions requires a depth of understanding both experiments' systems, model, constraints and sociology.
 - ▲ In many ways, this merger is targeted towards preparing for the long term future in which the experiments still need support and highly functional computing, but are unlikely to have the level of support which they currently enjoy.
 - ◆ Combine the system administration to increase the depth of support and gain economies of scale—first focus
 - ◆ Joint project already on going in data handling
 - ◆ Combining management and reporting duties
 - ▲ Larger departments have more natural substructure, which leads to distributing some management responsibilities, centralizing others
 - ▲ In many cases, can send one person to various meetings instead of two
 - ◆ Sensitivity to both experiments needs vital
The CDF and DO computing projects will remain separate—joint projects can be undertaken in common, but both experiments needs to retain autonomy

The projects, for example, are reporting separately to this review.

Department Staffing

- 2 RAs
- 1 Associate Scientist
- 4 Scientist I
- 4 Scientist II
- 2 Application Physicists
- 16 Computing Professionals
- 6 guest scientist appointments of varying duration—on notice that such positions are not funded in perpetuity

System Administration

- **5 “CDF” and 4 “DO” admins**
 - ◆ Some daily duties very similar, some less so. Both collaborations rely on admins to fill operational and managerial roles that go well beyond “system administration”.
 - ◆ Maintain excellent service to the collaborations
 - ◆ Very thin pager rotations-working to combine on a 3 month time scale.
 - ◆ Cross training and reallocating effort to provide some relief for the maintenance burden associated with the CAF currently, and to better distribute the load as the systems scale up.
 - ◆ Anticipate it will take about 9 months to year to completely work out procedures and processes.
- **Learn from each other and share technology investigations**
 - ◆ Use CDF experience with NetApp nfs server appliance to transition from DO2ka for home areas
- **Some functions likely to always remain separate**
 - ◆ Desktop support models have nothing in common—CDF 1.5 FTE, includes hardware support.

Data Handling

As CDF moves more towards SAM, increased commonality, but caching mechanisms seem unlikely to converge.

- Accounting for the Data handling effort in the Run II dept for SAMGrid and dCache. Of course, additional experiment effort contributes, as do other CD departments
 - ◆ Rick St. Denis (CDF) co-project lead and head developer/tester/operations expert for deployment
 - ◆ 1 SAM project manager
 - ◆ 3 full time SAMGrid developers/operational support staff
 - ◆ 2 people contribute to DO specific development/ upgrades/operations—0.5 FTE and 0.5 SAM support
 - ◆ 3 people contribute to CDF dCache operations 1.5 FTE (naïvely do not expect this to change)
 - ◆ 3 people contribute CDF SAM deployment at 1 FTE + 1 person at 0.75 FTE
- There is a tendency to over-count the data handling people—issue for giving scientific staff their research fraction and for expecting people with large operational loads to contribute heavily to the SAM deployment.
 - ◆ Appeals to leverage is a natural tendency in a resource limited environment
 - ◆ Torque = force * length of the lever

Offline Computing/Production

- Experiment specific application support—little commonality, might develop over time
- CDF
 - ◆ 1 full time CDF experiment management
 - ◆ 1 full time physics analysis
 - ◆ 1 code release manager
 - ◆ 2 contributors to database applications (1.5 FTE)
 - ◆ 1 guest scientist for CDF experiment management, leading farms script project, offline software
 - ◆ CMS associate scientist primarily focusing on Analysis
- DO
 - ◆ 1 full time farm operations + 1 year guest scientist
 - ◆ 1 full time database applications
 - ◆ 1 full time Reconstruction manager
 - ◆ 1 DO experiment and CD management + 3 month guest scientist for DO experiment management
 - ◆ Attempting to maintain 1 full time physics analysis (rotating position)
 - ◆ 1 code release manager/C++ expert/user support [Amber Boehnlein, FNAL](#)