

FY11 Plan for Scientific Database Applications

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Relevant Strategic Plans –

- Strategic Plan for Cosmic Frontier
- Strategic Plan for Intensity Frontier
- Strategic Plan for Run II Computing

Goal –

- *Support scientific program of the Lab by designing, developing and supporting scientific databases and applications*

Scientific Database Applications Strategy –

1. *Develop and maintain expertise in modern database and application development technologies*
2. *Maintain close working relationship with experiments in Astrophysics and High Energy Physics areas*
3. *Develop common solutions usable by multiple experiments*

FY11 Accomplishments

1. Revamped CRL (ECL), migrated all data from CRL to ECL
2. Moved all web applications to the redundant web server infrastructure
3. Moved production and development from old computers (rexdb01, dbweb1, dbweb2) to new ones (rexdb02, dbweb3, dbweb4)
4. Developed DES Alarms viewer and Exposures viewer, put into production
5. Completed research for JDEM database
6. Developed Intensity Frontier Beams Database, put in production
7. Developed Minerva Conditions Database, put in production
8. Developed web interface for NOvA conditions database on top of Query Engine
9. Moved D0 SAM DB Browser to Query Engine, put into production
10. Moved some applications from deprecated mod_python to modern wsgi infrastructure
11. Migrated all applications to Python 2.6, in production

Not accomplished in FY10

1. Due to lack of resources, did not migrate to Python 3.
2. Not all web applications have been migrated to wsgi.

Objectives for FY12

- Continue support for Run II analysis
 - Do not migrate to wsgi
- Continue support and development for DES applications
- Continue support and development for IF experiments
 - IF Beams database
 - NOvA Hardware database
 - Minerva Conditions database
 - NOvA Conditions database
 - Support of MiniBooNe databases
- Continue migration of web applications from mod_python to wsgi
- Migrate all applications to Python 2.7 and then, if resources permit, to Python 3.x
- Continue support for Electronic Logbook (ECL)
- Develop Shift Scheduler for IF and other groups and experiments
- Continue development of expertise in the area of very large databases
- Continue support for Project X (f.k.a. ILC) Ground Motion database
- Take over support of CDF Frontier
- Migrate CDF Database Browser to Query Engine
- Take over support for Scientist Survey application

ACTIVITIES

Activity=INTENSITY FRONTIER / General Computing Support / Database

- Activity type: Project
- Description: Support and development of IF applications:
 - NOvA Conditions
 - Minerva Conditions
 - IFBeam
 - others
- Timescale: FY12
- Milestones:
- Metrics: -----

Activity=ASTROPHYSICS / DES / DES Ops

- Activity type: Project, Service

- Description:
 - Support Constants DB
 - Telemetry Viewer
 - continue support of SISPI DB and Web Interface
- Timescale: FY12
- Milestones:
- Metrics -----

Activity= RUN2 / CDF Computing Support / Database / Operations

- Activity type: Service
- Description: Support CDF applications, support CDF Frontier
- Timescale: FY12
- Milestones:
- Metrics -----

Activity=RUN2 / D0 Computing Support / Database / Operations

- Activity type: Service
- Description: Support D0 applications – Trigger, Speakers Bureau, Luminosity
- Timescale: FY12
- Milestones:
- Metrics -----

Activity= SCIENTIFIC SIMULATIONS & SOFTWARE / Scientific Databases / Scientific Applications / Project X

- Activity type: Service
- Description: Support ILC Ground Motion Database, participate in other projects
- Timescale: FY12
- Milestones:
- Metrics -----

Activity= INTENSITY FRONTIER / Nova / Database

- Activity type: Service
- Description: Continue support and development of NOvA Hardware database
- Timescale: FY12
- Milestones:
- Metrics -----

Activity=INTENSITY FRONTIER / General Computing Support / Projects / Unknown Projects

- Activity type: Project
- Description:
 - Migration to Python 2.7
 - migration to wsgi
 - ECL support
- Timescale: FY12
- Milestones:
- Metrics -----

Priorities:

1. RunII support
2. Cosmic and Intensity Frontier applications
3. Electronic Logbook support

Risk Assessment: The amount of resources we have (2.75 FTEs) is insufficient to meet all our goals.

With existing resources we will not be able to:

- provide adequate support for IF scientific program, because IF support is going to be our largest activity in FY12
- take over support for CDF Frontier
- migrate all applications to wsgi
- develop Shift Scheduler
- provide support for CDF database browsing
- provide support for Scientist Survey application

RESOURCES REQUEST

Staffing Request per role (FTE-years)

- Database Expert 0.4
- Developer 3.35
- Total 3.75

3.75 – existing personnel