

FY10 Plan for **SCF/General Physics Computing Facility (GPCF)**

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Relevant Strategic Plans - Strategic Plan for Scientific Computing Facilities, Strategic Plan for Grids, Strategic Plan for Intensity Frontier Program

GPCF Goal –

- Provide a robust, stable and secure general facility to enable proper data management and analysis for the intensity and cosmic frontier program.
- Subsume similar functionality currently offered on FNALU.

GPCF Strategy –

- To provide computational facilities for any Fermilab scientific activity, now and in the lab's future.
- To design and build general scientific computing facilities needed for the Intensity Frontier experiments.

FY09 Accomplishments

1. Definition of the requirements and architecture for the first phase of this facility.
2. Development of a plan for hardware acquisition and deployment.
3. Development of a detailed plan (including WBS) to integrate the current facilities with the new architecture, using other existing facilities as necessary.

Not Accomplished in FY09

This is a new plan for the end of FY09 and for FY10.

Objectives for FY10

1. Acquire and deploy the necessary hardware for the initial phase(s) of the facility.
2. Develop the support model for the facility.
3. Integrate, develop, and deploy the necessary infrastructure to enable use of the interactive functionality.
4. Integrate, develop, and deploy the necessary infrastructure to enable use of the batch functionality.
5. Migrate the appropriate functionality from the FNALU system to this facility. Assist the users in this migration.
6. Investigate the appropriate storage needed to fulfill user requirements and integrate/deploy this service in the facility.
7. Expertly support and operate the facility.

Activities and Work Definition

Activity = SCF/GPCF/Management

- Activity type: Project
- Description: Planning, Coordination
- Timescale: Continuous
- Milestones: WBS: Oct'09, FNALU transition plan: Oct'09
- Metrics: -----

Activity = SCF/GPCF/Integration and Development

- Activity type: Project
- Description: Integration, development, design, and investigations to supply necessary functionality.
- Timescale: Start: Oct '09
- Milestones: Operational Facility: Nov '09, Monitoring Infrastructure: Nov '09, Phase 2 Upgrades: Spring '10
- Metrics: -----

Activity = SCF/GPCF/Operations

- Activity type: New Service
- Description: Support driven by incidents and customer requests
- Timescale: Start: Oct '09; Continuous thereafter
- Milestones: -----
- Metrics: Service request times < 1 business day
Tracked via service desk

Activity = SCF/GPCF/Support

- Activity type: New Service
- Description: Support users of the new facility
- Timescale: Start: Nov '09. Continuous thereafter
- Milestones: -----
- Metrics: Service request times < 1 business day, tracked via service desk

Priorities: The highest priority is to purchase and deploy an initial system by December 2009 to satisfy the short term needs of the Nova experiment. This includes developing the support model and any necessary integration work. As new experiments will be beginning to use the facility throughout the coming year, it is important to maintain the ability to do additional integration/development work if necessary and to seamlessly integrate new customers into the facility. This diversity of customers underscores the importance that the design of subsequent phases of the facility maintain the generality of the facility while still addressing the different requirements.

Staffing Issues: This is a new activity and the work will be done within several departments with no additional staff. Priorities need to be set to enable this new effort while retaining appropriate effort levels on existing projects.

Staffing for FY10 will be accomplished from the listed departments as follows:

Department	Estimated FTE
DMS	.3
FEF	.5
GRID	.5
REX	.5
SCF (Stu)	.3
<i>Total</i>	<i>2.1</i>

Change control:

Changes or delays in the funding of the GPCF will require the approval of the GPCF project management.

Risk Assessment:

1. Inability to deploy sufficient hardware will result in the facility being unable to meet experiment requirements in a timely manner. This may restrict the acceptance of the facility as a central service and encourage users to seek out alternate solutions.
2. Failure to define a workable support model will increase the turnaround time for user issues and requests and increase the FTE effort necessary to operate the facility.
3. Failure to provide appropriate interactive functionality will encourage experiments and users to setup their own individual systems instead of providing a central service that supports multiple experiments and encourages a common method of working that interfaces well with other services provided by the CD.
4. Failure to provide appropriate batch capabilities will encourage experiments and users to setup their own batch system instead of providing a central service that supports multiple experiments and encourages a common method of working that interfaces well with other services provided by the CD.
5. Failure to migrate appropriate functionality from FNALU to the GPCF will result in a continuation of the current level of effort as multiple quadrants provide similar functionality.
6. Failure to discover and deploy appropriate storage services will result in increased operational effort required for the facility and possible inability to satisfy user requirements.
7. Failure to expertly operate the facility will result in increased stress on current staff and will encourage users to seek out other solutions for their computing needs.