

PPDG and GriPhyN/iVDGL Grid Monitoring

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Introduction

Grid computing consists of the coordinated use of large sets of diverse, geographically distributed resources for high performance computation. One joint goal of PPDG and GriPhyN/iVDGL is to build a data grid for physics applications. All three of these projects are collaborations of computer scientists in distributed computing and Grid technology, and physicists who work on major high-energy and nuclear experiments. These experiments include ATLAS, Babar, CMS, D0, jLab, Ligo, SDSS, and Star.

The ability to monitor distributed computing components is critical for enabling high-performance distributed computing. This monitoring is needed at a variety of levels – from the ability to determine server status, to being able to determine application progress, to logging performance data of CPUs, networks and storage devices in order to make predictions of behavior. As more application scientists make use of shared grids resources, the need for better monitoring will continue to expand.

This group will stay in close contact with related Grid monitoring efforts within the European data grid (EDG), the Global Grid Forum performance area, and other researchers.

Goal of PPDG-GriPhyN/iVDGL Monitoring Group

The goal of this group is to coordinate the Grid-level monitoring effort between GriPhyN/iVDGL and PPDG. There is a large body of work involving monitoring systems for distributed or Grid resources, and we plan to leverage heavily from them whenever possible.

The initial work of PPDG monitoring group will include:

- **ASAP:** Send proposed charter to PPDG/GriPhyN/iVDGL
 - Status: Completed 11/01
- **Nov 01-Dec 01:** Gather use cases and requirements
 - Status: 19 Use cases gathered as of 2/02
 - Status: Requirements document in process 3/02, expected completion 4/02
- **Work with GLUE-Schema group to define new schemas**
 - CE in progress 4/02, expected completion 4/02
 - SE to be started, completion expected 4/02
 - NE unclear deadline, Les Cotrell has offered to assist

- Deploy MDS GIIS server for joint effort, March 2002
 - Status: 3/02 Danton Lu (BNL) has volunteered
 - Note: will need updating as schemas are adopted

Question, comments and suggestions should be sent to jms@mcs.anl.gov.