Grid Scheduling Ontology Working Group

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Grid Scheduling Ontology

Status of this Draft

This draft provides information for the Grid scheduling community. Distribution of this document is unlimited.

1. Abstract

The GGF Scheduling and Resource Management Area is concerned with various issues relating to resource scheduling and resource management in Grid environments. To support automatic resource management and service level agreement across different systems operated at different sites by different organisations a machine processable meaning of the scheduling domain's operational vocabulary is mandatory. The Grid Scheduling Ontology Working Group addresses this ontology.

2. Charter

Chairs

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Charter

Focus/Purpose: This working group has the goal to produce an ontology of Grid Scheduling accompanied by a set of documents describing the ontology and the tools used to create the ontology and to make use of the ontology later.

Scope: The ontology will be based on the Grid Scheduling Dictionary developed by the Grid Scheduling Dictionary Working Group earlier.

Goals: The working group will create an ontology of the Grid Scheduling domain supporting the scheduling of Grid resources done by local and distributed instances of software subsystems like schedulers, brokers or corresponding Grid services. The ontology created will provide the machine processable meaning of scheduling terms and conditions that is needed to negotiate service level agreements between usually heterogeneous systems operated at different sites. The working group will define usage and hierarchy of terms from the Grid Scheduling Dictionary thus helping to understand these terms and enable tool builders to incorporate the ontology into their tools. The ontology will overcome the shortcomings of a dictionary allowing classification of schedulers, reasoning about schedulers or mapping semantics of different scheduling systems for example. Using the ontology generated by the working group when designing and implementing the next generation of Resource Management Systems and their corresponding Grid services may further lead to ontology-driven systems.

The Grid Scheduling Ontology Working Group will establish a close collaboration with the Semantic Grid Research Group. While this research group addresses more general, long term research on the Semantic Grid, the Grid Scheduling Ontology Working Group will produce one concrete instantiation of an ontology. The Grid Scheduling Ontology Working Group will further collaborate with other working groups of the Scheduling and Resource Management Area, namely the Grid Resource Allocation Agreement Protocol Working Group and the proposed Job Submission Description Language Working Group.

Class of documents: The intermediate documents will be of class Informational (GWD-I), the final one will be of class Community Practice (GWD-C).

Current Document: None.

Status: To be discussed at GGF-7.

Milestones:

Mid of February 2003:	Draft charter ready and posted to the GGF web site
GGF-7 WG meeting:	Discussion of the charter, selection of tools; next steps
GGF-9 WG meeting:	Ontology level(s) to look at, first results for selected items of the Grid Scheduling Dictionary
GGF-10 WG meeting:	More items of the dictionary available as part of the ontology
GGF-12 WG meeting:	Grid Scheduling Ontology ready; Final document summarising and describing the ontology available; Description how the ontology may be used by resource management systems or services negotiating SLAs

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