Documentation Required to Request Formation of a Working Group in the GGF

Status of This Memo
This memo provides information to the Grid community regarding GGF working group formation. Distribution is unlimited.

Abstract

This document details the documentation needed when proposing a working group as part of the Global Grid Forum. It consists of two major parts: the charter, which details the management of the group, goal of the group, and its milestones; and the "Seven Questions", a source of additional information for the Grid Forum Steering Group (GFSG) to help evaluate the group. This document is meant as a supplement to GFD.3, "Global Grid Forum Management Structure and Processes" [1] and successor documents, which provides additional detail on the process of working group and research group formation within the Global Grid Forum (GGF). People interested in forming a working group or research group are strongly encouraged to contact an area director (AD), in addition to reading this document and GFD.3.

Contents

1. The Charter

When forming a working group or research group, the charter defines the scope of work the group intends to pursue. The charter is the contract between the group and the Global Grid Forum Steering Group (GFSG). It allows the group to work on the items described in the charter, obliges the GFSG and editor to accept work as input to the review process for GGF documents, and promotes overall coherence in GGF work. Work to be performed by the group that is outside of scope of charter requires renegotiation of the charter with the GFSG.

The charter consists of several pieces: an information section, the charter itself, additional information regarding management issues, current document work, and an exit strategy. Appendix 1 shows the charter information with better formatting for clarity. Appendix 2 gives an example based on the responses from a recently chartered group.

1.1   Informational Section

The informational section of a charter contains the basic information for the working group. In includes:

- WGNAME Working Group
- Global Grid Forum, [AREA NAME] Area
- Administrative Information
- Name and Acronym: An acronym of 3-8 characters should be selected as an abbreviation for the working group in websites and mailing lists. The acronym should be unique within GGF.
- Chairs:
    - Name One, email
    - Name Two, email
- Secretary(s)/Webmaster(s) (both optional):
    - Name One, email
    - Name Two, email
- Email list:
    - wgname-bof@ggf.org
    - [upon formation the group will have a mailing list acronym-wg@ggf.org, however an interim mailing list is often useful. ADs may also elect to request that a mailing list be provided to assist in group formation prior to approval.]
- Web page:
    - http://forge.ggf.org/projects/wgname-wg
    - [upon formation the group website will be at http://forge.ggf.org however an interim web page is often useful.]

1.2   Charter

The body of the charter consists of

1.2.1   Focus/Purpose

Typically the focus/purpose of a working group is outlined in 1-2 short paragraphs. Focus/purpose should not attempt to detail the state of the field but should be an executive summary intended to inform the reader at a level of detail sufficient for the reader to determine whether the group is of interest to them.

1.2.2   Scope

Scope should be laid out in 1-2 short paragraphs, briefly stating the scope of the problem to be addressed. References to relevant papers or publications that help to provide background can be useful are not necessary.

1.2.3   Goals

The product of a working group is primarily captured in the form of GGF documents. A strong working group charter will have identified what documents will be produced in what timeframe. The milestones in the charter are used to gauge the progress of the group and to set expectations not only regarding the timing of deliverables but of the nature of the work output. It is often useful in the formative stages of a working group to think very carefully about the documents to be produced, even to the extent that rough outlines are completed. It is also often useful if a group of collaborators has made substantial progress in a draft document.

At this stage the group should also indicate the type of document planned, per categories in GFD.3 (informational, experimental, community practice, recommendation)

Deliverable/Milestone 1: *(e.g., Document title, state (outline, draft, final, etc.), date)*
Deliverable/Milestone 2: *(e.g., Document title, state (outline, draft, final, etc.), date)*
Deliverable/Milestone 3: *(e.g., Document title, state (outline, draft, final, etc.), date)*
        …

1.3   Management Issues

This section shows evidence of commitments from the proposed working group chair(s) to carry out WG tasks

A working group chair role is fundamentally a management role, requiring excellent communication and organizational skills as well as in depth understanding of the topic area. It is often a good strategy to have co-chairs including a topic expert and a strong manager. Chairing a working group also requires a significant time investment and it is useful to see a track record of diligent effort on the part of the chairs as well as an indication that the chairs' management is supportive of the time commitment. Part of this necessary commitment is also to ensure that the group makes progress between and during GGF meetings, and thus involves travel. Can you, the chair, commit to at least 4 hours per week to run this group?

1.4   Pre-existing Document(s) (if any)

If there are useful background documents these are often useful to the Steering Group when evaluating whether a working group should form. In some cases the organizers may have already made progress on a draft document and wish to form a working group to involve the community in the work.

1.5   Exit Strategy

A working group should normally have a lifetime of between 6 – 24 months. You should make some attempt to note here how you will know when you are finished if this is not simply defined by the last milestone date.

1.6   Any other relevant information

Any other relevant information should be included in this section.

2. Seven questions: Evaluation Criteria (from GFD.3)

When considering the formation of this group, the Steering Group will wish to ensure that every WG has clear and focused objectives, and has demonstrated support from the community. The Steering Group will consider the following seven issues (taken from GGF document GFD.3).

2.1   1. Is the scope of the proposed group sufficiently focused?

Is the group attempting to produce everything from beginning to end (a survey of the state-of-the-art, plus use cases, plus a requirements analysis, plus recommendations documents) or is it focused on only one or two of these areas? Is there more than one type of standard being proposed (Architecture/framework vs. information model (schema) vs. API vs. Protocol)? Is the topic area too specific or too broad (for example, overlap with other GGF WGs may indicate "too broad")? Are the milestones reasonably achievable in the proposed timeframe (1-2 years for a WG)?

2.2   2. Are the topics that the group plans to address clear and relevant for the Grid research, development, industrial, implementation, and/or application user community?

Diligence in answering this question often requires discussions with relevant leaders of other GGF working groups.

2.3   3. Will the formation of the group foster (consensus–based) work that would not be done otherwise?

Does the group foster standards or practices that are greater than the work done by any single group (taking advantage of GGF to come together on neutral ground)?   How many distinct groups, institutions, and regions of the world are participating in this effort? (GGF activities typically have membership drawn from more than a single research group, institution or project).

2.4   4. Do the group's activities overlap inappropriately with those of another GGF group or to a group active in another organization such as IETF or W3C? Has the relationship, if any, to the Open Grid Services Architecture (OGSA) been determined?

What is the nature and extent of any overlap? The proposed group may still be formed, or the GFSG may recommend that the work be done within the existing GGF (or external) group. With respect to OGSA, the flagship architecture of the GGF. while it is not necessary that the work of the proposed working group fit into the context created by OGSA, how it fits must be considered. If it fits well with OGSA then the resulting work product of the WG will leverage a large number of OGSA related standards. If it does not fit, then that needs to be clear as well.

2.5   5. Are there sufficient interest and expertise in the group's topic, with at least several people willing to expend the effort that is likely to produce significant results over time?

How much experience do the participants collectively have in the proposed area of work? How committed are the participating individuals? An attendance list or an email subscriber list is a very weak indication of commitment; a list of people who have attended multiple teleconferences is somewhat better; a list of individuals who have committed to specific tasks, or who have made non-trivial time commitments, is much better. Additional evidence could include statements from organizations stating that they will dedicate resources (people) to participate in the group, and statements from participants expressing their personal, compelling need for the output of the group. Can you, the chair, commit to at least 4 hours per week to run this group? (please address this question directly).

2.6   6. Does a base of interested consumers (e.g., application developers, Grid system implementers, industry partners, end-users) appear to exist for the planned work?

How broadly applicable will the output of the WG output be? Does the WG have true clients of its work? Such interest can be measured by the interest of industry partners, grid deployment projects, and other groups committed to implement the recommendations or adopt the results. The success of a working group requires "buy-in" from a broad set of constituents who will use the output of the group. It is useful to indicate the target set of consumers in the community. While not necessarily a requirement for approval, it is essential that the organizers comment on the relationship of the work, and the level of interest, from large segments of the Grid community such as major software projects, architecture activities, etc.

2.7   7. Does the GGF have a reasonable role to play in the determination of the technology?

What other organizations are working in similar areas? Is the GGF the right place for this work? Is it clear how the proposed WG will coordinate with related efforts?

3.   Security Concerns

This document does not address any security concerns.

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The GGF invites any interested party to bring to its attention any copyrights, patents or patent applications, or other proprietary rights which may cover technology that may be required to practice this recommendation. Please address the information to the GGF Executive Director.

References

[1]   **Global Grid Forum Management and Processes**, C. Catlett, W. Johnston, I. Foster, GFD-C.3, www.ggf.org, April 2002.

4. APPENDIX 1: Sample Blank Charter

WGNAME Working Group
Global Grid Forum, [AREA NAME] Area

Administrative Information
Name and Acronym:
    An acronym of 3-8 characters
Chairs:
    Name One, email
    Name Two, email
Secretary(s)/Webmaster(s) (both optional):
    Name One, email
    Name Two, email
Email list:
    wgname-bof@ggf.org
Web page:
    http://forge.ggf.org/projects/wgname-wg
Charter
Focus/Purpose
    1-2 short paragraphs
Scope
    1-2 short paragraphs
Goals
    Deliverable/Milestone 1: *(e.g., Document title, state (outline, draft, final, etc.), date)*
    Deliverable/Milestone 2: *(e.g., Document title, state (outline, draft, final, etc.), date)*
    Deliverable/Milestone 3: *(e.g., Document title, state (outline, draft, final, etc.), date)*
        …

Management Issues
Evidence of commitments to carry out WG tasks
Pre-existing Document(s) (if any)
Exit Strategy
Any other relevant information

5. APPENDIX 2: Sample Actual Charter

(NOTE: based on but not identical to JDSL-WG initial charter)

Job Submission Description Language Working Group
Global Grid Forum, SRM Area

Administrative Information
Name and Acronym:
    Job Submission Description Language Working Group (JSDL-WG)
Chairs:
    Stephen McGough, London e-Science Centre, Imperial Collage, email address removed
    Ali Anjomshoaa, EPCC University of Edinburgh, email address removed
    Darren Pulsipher, Cadence Design Systems, email address removed
Secretary(s)/Webmaster(s) (both optional):
    The above proposed chairs will share the role of secretary
Email list:
    jsdl-bof@ggf.org
Web page:
    http://www.epcc.ed.ac.uk/~ali/WORK/GGF/JSDL-WG/

Charter
Focus/Purpose
    The JSDL-WG will provide:
    * A specification for an abstract standard Job Submission Description Language (JSDL)
    that is independent of language bindings, including;
        o the JSDL feature set and attribute semantics,
        o the definition of the relationship between attributes,
        o and the range of attribute values.
    * A normative XML Schema corresponding to the JSDL specification.
    * A document of translation tables to and from the scheduling languages of a set of popular
    batch systems for both the job requirements and resource description attributes of those
    languages, which are relevant to the JSDL.

Scope

    In addition to the computational requirements of batch jobs, the JSDL must describe other
    information such as the locations of required input and output files. Techniques for the
    transfer of input and output files and data may also be described using the JSDL. The
    JSDL should also provide a means to enable the description of basic dependencies
    between jobs, that is, the dependency of a job on the status of other jobs, and any
    relationships between the input and output of jobs. We do not concern ourselves with job
    scheduling and the selection of resources on a Grid.

    Although it is out-with the scope of the work of this WG to address the issues of a
    Resource Description Language (RDL), there is a need to provide the semantics for a
    minimum set of RDL attributes in order that resource requirements may be addressed in
    the JSDL.

Goals

The goals of the JSDL-WG may be defined by a set of deliverables and the milestones for their delivery. These deliverables are:

1. A specification document describing a standard JSDL that is independent of language bindings as outlined above, as the abstract language for use between various Grid batch system scheduling entities, such as end-user client applications and DRM systems on a Grid. This specification document will include the semantics necessary for the JSDL to provide descriptions of computational batch jobs according to the batch system attributes and features covered by the JSDL.
2. A normative XML Schema corresponding to the JSDL specification, providing the necessary syntax for an XML based JSDL schema.
3. A document of translation tables to and from the scheduling languages of a set of popular batch systems for both the job requirements and resource description attributes of those languages, which are relevant to the JSDL.

The set of initial milestones for this work are:

- D1 - JSDL Specification Document

- D2 - Normative JSDL XML Schema

- D3 - Document of Translation Tables

Milestone	Due Date	Deliverable	Description
M1	GGF8	D1	BOF to define initial document coverage and outline, and solicit authors.
		D2	
		D3	
M2	GGF9	D1	First draft of spec document completed for discussion
		D2	First draft of outline and author list.
		D3	First draft of outline and author list.
M3	GGF10	D1	Second draft for internal WG review
		D2	First draft for internal WG review
		D3	First draft for internal WG review
M4	GGF11	D1	Draft submitted to formal GGF document process
		D2	Second draft for internal WG review
		D3	Second draft for internal WG review
M5	GGF12	D1	Incorporate any public comments into final draft, and complete
		D2	Etc
		D3	

Management Issues

Evidence of commitments to carry out WG tasks

Andreas Savva is the editor of the main deliverable, it being the JSDL specification document.
Ali Anjomshoaa has agreed to work as co-editor and reviewer of the specification document.
Fred Maciel has agreed to provide reviewing effort to the JSDL-WG.
In addition, the following have agreed to act as consultants for the systems to be considered for
the core set of JSDL attributes and possible extensions:
 * Condor
 * UNICORE   Andreas Savva (Fujitsu)
 * LoadLeveler   Jay Unger (IBM)
 * Globus RSL   Alain Andrieux (USC-ISI)
 * Platform LSF   Ming Xu and Chris Smith (Platform)
 * EU DataGrid   Steve McGough (LeSC, IC)
 * SGE   Andreas Haas (Sun)
 * PBS   Bill Nitzberg (Altair)
 * Maui
 * Grid Application Definition Language   Jurgen Falkner (Fraunhofer Institute)

Pre-existing Document(s) (if any)

None

Exit Strategy

The work of the JSDL-WG will be deemed complete upon the delivery of a first version of each of
the deliverables listed above in the section entitled "Goals". The preliminary schedule for the
release of deliverables is provided above.

Any other relevant information

None

Seven questions: Evaluation Criteria (from GFD.3)

1.   Is the scope of the proposed group sufficiently focused?

The JSDL-WG proposes to provide a single specification for the structure of a language to enable
a generic description of computational batch jobs within a heterogeneous computational Grid.
The structure of the JSDL will for the most part be defined by the semantics of a set of attributes
that would be used to describe jobs.

In order to aid the uptake and understanding of the structure of this language, members of the
WG will provide a normative XML Schema of the JSDL language as described in the
specification. A document of translation tables for translating between the JSDL and a set of
popular proprietary batch systems will be developed by members of the WG, each of whom will
be experienced with the language which they are providing translations for.

These WG outputs will be developed to a large extent in parallel, although the specification
document, being the main deliverable, will enjoy a considerable lead time of 3-4 months.

It is envisaged that other efforts within the GGF, which require an abstract structured job
description language, such as for resource reservation or job provenance and accounting, would
look to the JSDL to provide this language and would feed into the development efforts of the
JSDL. The preliminary milestones listed above are designed to enable the delivery of a first

version of the JSDL specification, in time for other efforts within GGF, and Grid projects currently being proposed, to make use of the language upon delivery.

2. Are the topics that the group plans to address clear and relevant for the Grid research, development, industrial, implementation, and/or application user community?

It has been widely acknowledged that an abstract structured language for the description of jobs on Grids, such as that proposed by the JSDL-WG, is a necessary part of various Grid architectures. Examples of the use of such a language include, but are not limited to:

* For submission of computational jobs to a heterogeneous computational Grid for scheduling to, and execution on, suitable resources, regardless of local resource scheduling environments.
* For advanced reservation of resources for computational jobs, so that they may be scheduled for those resources.
* Providing provenance and accounting (logging) for computational jobs submitted to a computational Grid.
* For building a library of job descriptions for re-use.
* For studying user and job requirements and behaviors on Grids, in order to compile histograms of activity for future fine tuning of service provision on Grids.

The JSDL can be used by any application that can parse and understand its structure, whatever that application's purpose may be.

3. Will the formation of the group foster (consensus–based) work that would not be done otherwise?

The success of the JSDL will be evident in the power it will provide for Grid and application developers, in enabling them to "communicate" job requirements within a heterogeneous environment of interdependent, yet independently developed, applications. This success can be measured by the uptake of the language by independent groups developing Grids and such applications that will operate within them.

This success is crucially dependent upon the collaboration of a wide and varying group of contributors, from academia and industry, whom will be responsible for the eventual development of Grids and applications for them. The successful hosting of such groups has been well demonstrated within GGF and the fruit of their work well established. Not only can the JSDL not be delivered by groups of one or two institutions alone, it's success depends on the stage and support that the GGF provides to the diverse groups required for the development of international specifications.

4. Do the group's activities overlap inappropriately with those of another GGF group or to a group active in another organization such as IETF or W3C? Has the relationship, if any, to the Open Grid Services Architecture (OGSA) been determined?

The proposed chairs of the JSDL-WG have been unable to successfully identify any other efforts that are aimed at providing a specification, such as that which this WG proposes to deliver, which would enable interoperability within a heterogeneous scheduling environment. The group is planned as an OGSA-independent group: results of this group will work with OGSA-based frameworks but OGSA is not a requirement.

GGF Groups with current possible interactions:
o The Distributed Resource Management Application API (DRMAA) Working Group of the Scheduling Area.
o The Grid Resource Allocation Agreement Protocol (GRAAP) Working Group of the Scheduling Area.

o The Scheduling Dictionary Working Group of the Scheduling Area.
o The CIM-based Grid Schema (CGS) Working Group of the Performance and Information Services Area.
o The Scheduling Attributes (SA) Working Group of the Scheduling Area.
o The New Productivity Initiative (NPI) Working Group of the Architecture Area.

In order that the JSDL is developed for use by other efforts within GGF, there is an ad hoc liaison framework being developed within GGF. The JSDL already has interest from at least two other efforts within the SRM area of GGF, those being the GRAAP-WG and the DRMAA-WG. Active members in those groups have already expressed an interest in liaising with the JSDL-WG efforts. To this end, Jim Pruyne (GRAAP-WG), and Andreas Haas (DRMAA-WG) have already agreed to fulfill the roles of liaison between these groups.

5. Are there sufficient interest and expertise in the group's topic, with at least several people willing to expend the effort that is likely to produce significant results over time?

The proposed chairs of the JSDL-WG have collectively many years of use and consultancy experience with a number batch and scheduling environments. This is in addition to the experience that they possess in consultancy and development within Grid development projects. In addition, they have each attended at least 4 consecutive GGF meetings and are able to coherently understand the aims of the Grid community by the work being undertaken within GGF. The organizations of the proposed chairs have each agreed to provide substantial resources in the form of time for each of them to help lead this effort, in addition to supporting research projects at EPCC, University of Edinburgh, for helping in the development of the normative XML Schema of the JSDL specification, and possible implementation of example translators for one or two popular batch/scheduling systems.

In addition, there exists a strong support base for the work being proposed by the JSDL-WG by members of the Grid community, and those that have been active within JSDL and have volunteered to work on the JSDL specification as consultants, editors, and reviewers. A list of some is given above in the charter section.

6. Does a base of interested consumers (e.g., application developers, Grid system implementers, industry partners, end-users) appear to exist for the planned work?

The success of the Globus toolkit was evident in its quick uptake by many in order to build Grids by providing a middleware for heterogeneous environments of resources. The Resource Description Language (RSL) developed by the Globus effort, provided a rich vocabulary for describing computational batch jobs within these Grids. The mapping between RSL and proprietary languages of the batch systems that administered their local resources was undertaken by a set of scripts.

It is clear that this scenario can benefit from a standard abstract job description language, such as that being proposed by the JSDL-WG. It is, however, difficult to obtain commitment, other than verbal expressions of interest, from potential customers of this technology, until it has been under development and some form of a prototype is evident.

Nevertheless, it is expected that many Grid projects currently being proposed across the world, and the work of other groups within the Scheduling and Resource Management, and Architecture, Areas of the GGF, stand to benefit greatly from such a standardization of a description language as is being proposed by the JSDL-WG.

7. Does the GGF have a reasonable role to play in the determination of the technology?

The importance that the GGF stage would have to play in the success of this effort has already been acknowledged above. As a standard specification, the development and uptake of the JSDL depend heavily on it being developed along with other interdependent specifications, such as GRAAP, being developed there.