

Global Grid Forum Structure

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Abstract

The initial set of Global Grid Forum (GGF) working groups was formed in June 1999 under the auspices of the Grid Forum, and since that time several working groups have been added. During the past two years, a number of these working groups have been functioning more like Internet Engineering Task Force (IETF) “areas” than “working groups” in the sense that they have formed subgroups to address specific issues and to develop documents. Others have been functioning more like (Internet Research Task Force (IRTF) “research groups” in that they have been focused on longer-term, broader topic areas.

This memo proposes a modification of the present GGF group structure, which consists of a set of groups with wide variation in scope and operating objectives, all called “working groups.” Three types of groups are defined in this memo — “areas,” “working groups,” and “research groups” — in the context of a proposed new GGF structure that is supportive of the de facto operations of the GGF. In accordance with the GGF’s stated intent to emulate organizations such as the IETF, we define these three terms in a manner that is consistent with their use in the Internet Standards Process.

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1. Introduction

The Global Grid Forum (GGF) is a group of persons engaged in research, development, deployment, and support activities related to high-capability distributed software systems, or “Grids.” The scope of the applications that motivate these activities is quite broad, including high-performance processing applications, distributed collaborative environments, distributed data analysis, and remote instrument control. A defining characteristic is a perceived need for services beyond those provided by today’s commodity Internet.

The GGF working groups are investigating a range of research topics related to distributed systems, best practices for the design and interoperation of distributed systems, and recommendations regarding the implementation of Grid software. Some GGF working groups have evolved to function as sets of related subgroups, each addressing a particular topic within the scope of the working group. Other GGF working groups have operated with a wider scope, surveying a broad range of related topics and focusing on long-term research issues. This situation has resulted in a different set of objectives, appropriate expectations, and operating styles across the various GGF working groups.

Recognizing the differences between the current GGF working groups, we define in this proposal three new types of groups — *areas*, *working groups*, and *research groups* — to replace the current “working group” structure.

This document describes guidelines and procedures for the formation and operation of these three types of groups.

2. Initial GGF Structure and Related Issues

Since the formation of GGF in 1999 all groups within GGF have been designated as “working groups.” The GGF also has a steering group (GFSG), whose members were initially assigned to one or more working groups for the purposes of assisting working group chairs, facilitating communication among working groups, and so forth. As of June 2001 there were thirteen working groups assigned to nine steering group members. For more information on GGF management, see [4].

The operation, focus, and scope of GGF groups have varied widely in the past three years. The use of the single term “working group” for all of the groups, combined with a lack of common definition of “working group,” has thus become somewhat confusing. Further, the initial GGF working groups had rather broad topical names (“performance,” “security,” etc.) where many possible focus areas exist. The broader the topic of the working group, the more difficult it is to address all of the important issues and still get real work done. Thus, more specific names are desired for working groups (or research groups) in order to better convey the actual work of the group and to allow room for new working groups to form.

3. GGF Groups: Definitions

The GGF intends to emulate, as appropriate, the Internet Engineering Task Force (IETF, www.ietf.org) and to support and complement the Internet Standards Process as outlined in [1]. It is therefore advantageous that the GGF structure and process closely mirror those of the IETF. At the same time, some GGF activities more closely resemble the work of the Internet Research Task Force (IRTF, www.irtf.org). Because GGF is composed of both IETF-like and IRTF-like activities, the overall GGF structure and process will be slightly different from those of the IETF. Ideally, however, GGF groups (i.e., research groups and working groups) will function in similar fashion to groups of the same name within the Internet Standards Process [2].

In this section, we summarize the three types of groups to be used within the GGF: *working groups*, *research groups*, and *areas*. The IETF/IRTF definitions and descriptions of these groups are found in [1] and [5]; here we focus on those aspects of the three groups that are particularly salient to GGF.

One of the characteristics distinguishing research groups and working groups is the type of documents likely to come from each group. More detail on the document process and document types can be found in [3].

3.1 Working Group

A working group is focused on a specific problem, technology, or opportunity for which the members will deliver a document or series of documents, after which they may disband or create a revised charter for further work. The completion of a working group charter and subsequent disbanding of the group are viewed as a sign of success. The typical lifespan of a working group ranges from 4 to 24 months. Working groups and working group process are described in [1]. The process for creating working groups is described in [4]. All types of GGF documents may come from GGF working groups (or from outside the GGF altogether). Generally, however, recommendations track documents will generally be the focus of working groups.

3.2 Research Group

A research group has an indefinite lifespan, attempting to address a set of problems, technologies, or opportunities where a long-term approach is appropriate or in some cases where it may be premature to develop recommendations track documents. In general, research groups and research group processes are described in [5]. The process for creating research groups is described in [4]. Recommendations track documents will not generally come from GGF research groups; instead, informational, experimental, or community practice documents are expected to come from GGF research groups. It is expected that where Research Groups determine there are needs for particular specifications (recommendations track documents) either a group of individuals will propose the creation of a working group to address the topic or the research group will provide input to existing working groups.

3.3 Area

An area is a collection of related research groups and working groups. Areas provide a structure for interactions among related groups. Thus, the set of areas at any given time is driven by existing or desired group topics rather than an overall, top-down architecture statement. Areas are expected to remain relatively consistent over time, though new areas may be formed as needed. Areas are discussed briefly in [1]. The formation of new areas, merging of multiple areas, or dissolution of areas is the responsibility of the GFSG.

4. GGF Structure Changes Made July 2001

To clarify the operation and focus of GGF groups, two actions were taken in July 2001. First was the creation of "areas" within which the existing GGF groups were organized. Second was the formal designation of some groups as "research groups" and others as "working groups."

In some GGF groups multiple subtasks had been established to address particular problems or opportunities within the broad topic area of the group. In these cases, the group was de facto operating as an area, with functioning working groups and/or research groups, and was designated as such; that is, it was converted into an area, with the subgroups designated as working groups or research groups, as appropriate. The working group chairs were asked to

work with subgroup chairs in these cases to ensure that each group had leadership and that each group had a current and up-to-date charter.

Other GGF groups had broad titles, and in some cases were renamed to more precisely reflect the chartered work. These existing groups became working groups or research groups within an appropriate area. Table 1 lists the new designations for existing GGF working groups. These recommendations were proposed and agreed upon with input from group chairs and participants.

4.1 Working Groups and Research Groups

The particular focus and purpose of each GGF group, combined with long-term objectives, will determine which groups are research groups and which are working groups. In several cases, groups were transformed into multiple working groups and/or research groups. In other cases, a group was renamed to more precisely describe its focus and work.

Thereafter, the designation of research or working group should be made at the time the group is formed (i.e., designated in the charter). If it becomes apparent, over time, that a group should be changed from working to research or vice versa, this change can be done by submitting a revised charter to the relevant area director(s) along with recommendations for the change. The relevant area director(s) will approve or deny the proposed change based on input from the GGF chair, the affected group chairs and the GFSG.

Table 1: GGF groups as of June 2001 and with new type designation as of July 2001

Current Group	Type
Accounting (ACCT)	Research
Advanced Collaborative Environments (ACE)	Research
Advanced Programming Models (APM)	Research
Applications & Testbeds (APPS)	Research
Remote Data Access (DATA)	Area
Dictionary (DICT)	Working
Grid Computing Environments (GCE)	Research
Grid Protocol Architecture (GPA)	Research
Grid User Services (GUS)	Research
Grid Information Services (GIS)	Area
JINI	Working
Grid Performance (PERF)	Area
Scheduling and Resource Management (SRM)	Area
Grid Security (SEC)	Area

4.2 GGF Areas

The Grid Information Services, Scheduling and Resource Management, Security, and Remote Data Access groups each had formed multiple subgroups as of July 2001. Areas were formed corresponding to each of these four groups, within which the existing subgroups were designated as individual working groups or research groups, as appropriate.

Additional areas formed were Grid Performance, Architectures and Frameworks, and Applications, Programming Models, and User Environments.

As noted earlier, GGF areas represent a reasonable mapping of current and anticipated GGF activities but are not meant to be a taxonomy of Grid technologies. Further, as needs arise, new areas may be formed from time to time at the discretion of the GFSG.

Table 2 shows the working groups and research groups within each area as of July 2001.

Area	Working Groups	Research Groups
Grid Information Services (GIS)	<ul style="list-style-type: none"> • Grid Object Specification • Grid Notification Framework • Metacomputing Directory Services 	<ul style="list-style-type: none"> • Relational Database Information Services
Scheduling and Resource Management (SRM)	<ul style="list-style-type: none"> • Advanced Reservation • Scheduling Dictionary • Scheduler Attributes 	
Security (SEC)	<ul style="list-style-type: none"> • Grid Security Infrastructure • Grid Certificate Policy 	
Remote Data Access (DATA)	<ul style="list-style-type: none"> • GridFTP 	<ul style="list-style-type: none"> • Data Replication
Grid Performance (GP)	<ul style="list-style-type: none"> • Grid Performance 	
Architectures and Frameworks (ARCH)	<ul style="list-style-type: none"> • JINI 	<ul style="list-style-type: none"> • Grid Protocol Architecture • Accounting Models
Applications, Programming Models, and User Environments (APME)		<ul style="list-style-type: none"> • Applications & Testbeds • Grid User Services • Grid Computing Environments • Advanced Programming Models • Advanced Collaboration Environments

4.3 Management Considerations

Prior to the formation of areas, each member of the GGF Steering Group was responsible for providing oversight to one or more working groups. With the formation of areas, one or more GFSG members will be assigned responsibility for an area, and their role will be defined as area director. Most GFSG members will serve as area directors; however, there will continue to be general GFSG members as well.

The GGF management processes and the roles of working group chair, research group chair, area director, GGF chair, and so forth are outlined in [4].

5. Security Considerations

Security issues are not discussed in this document.

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This document attempts to capture the recommendations of many members of the GGF steering group and working group chairs as well as the foundational work that is documented in the references.

Glossary

Area	A set of loosely related working groups and/or research groups, managed by one or more area directors.
Area Director	Member of the GGF Steering Group with management responsibility for a set of working groups and/or research groups, known as an "area."
GFAC	Global Grid Forum Advisory Committee, an external advisory group.
GFSG	Global Grid Forum Steering Group, consisting of selected senior GGF participants and area directors, chaired by the GGF chair.
GGF	Global Grid Forum, see www.globalgridforum.org
GGF Chair	Chair of the GFSG and general chair of GGF.
IETF	Internet Engineering Task Force, see www.ietf.org
IRTF	Internet Research Task Force, see www.irtf.org
RG	Research group.
WG	Working group.

References

- [1] Bradner, S., "IETF Working Group Guidelines and Procedures," RFC 2418, September 1998.
- [2] Bradner, S., "The Internet Standards Process – Revision 3," RFC 2026, October 1996.
- [3] Catlett, C., "Global Grid Forum Documents and Recommendations: Process and Requirements." December 2001.
- [4] Catlett, C., Foster, I., and Johnston, W., "Global Grid Forum Management," April 2002.
- [5] Weinrib, A., and Postel, J., "IRTF Research Group Guidelines and Procedures," RFC 2014, October 1996.

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