

Directory related work in the Global Grid Forum

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Agenda

✍ Grid computing

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What is the Grid?

„The Grid is a consistent and standardized environment for collaborative, distributed problem solving that requires high performance computing on massive amounts of data that are stored, and/or generated at high data rates using widely distributed, heterogeneous resources „

„The Grid is an inherently layered architecture that provides for common services and a diversity of middleware that supports building distributed, large-scale, and high performance applications and problem solving systems. „

(W.E. Johnston as quoted by Ian Foster)

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What is new?

- ✍ **Metacomputing or massive parallel computing exists for a long time**
- ✍ **New is the concept of middleware as a standardized interface**
- ✍ **GGF attempts to define standards in an IETF-like fashion**

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Directory related work in GGF

- ✍ Most WGs use directories as base technology in the frame of the Globus toolkit for distributed information
- ✍ Two WGs are most related with TF-LSD work:
 - Grid Information Service WG (GIS)
 - Security WG

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GIS WG Charter

✍ <http://www.unix.mcs.anl.gov/gridforum/gis/>

✍ **Identify requirements for interoperable models and mechanisms for the information services necessary for doing grid-based computing:**

- definition of meta-models to allow the creation of interchangeable schemas
- definition of formalisms to describe such schemas uniformly by the various WGs
- definition of a mechanism to access information that is stored in the schema
- educational outreach
- verification of the feasibility of the models

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GIS WG Documents

✎ GOSv2: Defining Schemas for the Grid Information Service

- defines formal syntax for the definition of objects that form the core of the GIS
- builds on the syntax developed as part of the Globus Metacomputing Directory Service
- roots in LDAP terminology
- <http://www-unix.mcs.anl.gov/gridforum/gis/reports/gos-v2/gos-v2.pdf>

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GIS WG Documents

✍ Representing People for the GIS

- people objectclass definition
- Based on InetPerson
- To enable a single identity across all Grid components
- provide support for authentication mechanisms (password, certificate)
- Not yet finished
- Defines:
 - GridPerson,
 - GridResourceAdministrator
 - MDSAdministrator
- <http://www-unix.mcs.anl.gov/gridforum/gis/reports/people/people.pdf>

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Security WG Charter

Mission:

- Support the creation of secure Grid environments
- Enable cooperation among secure Grid environments
- Enable collaboration between end-users and Grid sites through the use of secure methods

Two Activities

- Grid Security Infrastructure (GSI)
- Grid Certificate Policy Design

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Grid Security Infrastructure

- ✍ Based on existing standards
- ✍ Needs to extent these due to special Grid needs:
 - *Single sign on*
 - *Delegation of trust*
 - *Integration with various local security solutions*
 - *User-based trust relationships*
 - *Flexible message protection*

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GIS Documents

Internet X.509 Public Key Infrastructure Impersonation Certificate Profile

- *Future term: „proxy certificate“*
- *Delegation of trust*
- *Similar usage than Attribute certificate*

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GGF Certificate Policy Activity

Mission:

- Develop an identity Certificate Policy for the Global Grid community.
- The CP will reduce the cost and time needed to build a Grid PKI and increase policy and technical interoperability in the Global Grid community.

Goals:

1. Define a certificate policy based on the global grid community's identity requirements. This certificate policy may require support for multiple assurance levels.
2. Collaborate with related efforts such as Internet2, DFN, etc.
3. Have the GGF Identity CP accepted and used by the grid community

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TF-LSD and GGF

- ✍ **Different heritage**
- ✍ **Different communities**
- ✍ **Many common interests**
- ✍ **Grid people showed interest in cooperation**
- ✍ **GGF is open to people who want to get involved**

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Questions?

✍ www.gridforum.org

✍ This presentation at: www.daasi.de

✍ Email me at peter.gietz@daasi.de

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