Charter

Description

The purpose of this working group is to define the protocols and service interfaces needed to extensibility support a variety of economic models for the charging of Grid Services in the OGSA.

- To define an open extensible economic service architecture (based around OGSA Grid Services) to enable the provision and consumption of Grid Services.
- To define a Grid Banking Service (GBS) that records these financial transactions.
- To define a Chargeable Grid Service (CGS) that encapsulates an existing Grid Services with the functionality necessary for it to be purchased.
- To enable a variety of economic models with these services but not to explore the economic models themselves.

We wish the GBS and CGS to contain a minimal feature set that enables further research activity within grid economies, which we see as outside the scope of this WG. We therefore define a CGS as a standard Grid Service with any additional ports or service data elements (as required) to allow:

- The CGS provider to define acceptable GBS with which they are willing to undertake transactions.
- Their own GBS to record their transactions.
- Supported transactions mechanisms (e.g. auction, fixed price).

The GBS is focused on recording the cost of a CGS transaction with a CGS for future reconciliation and may itself be a CGS. It therefore needs to:

- Validate a transaction - is this transaction acceptable to all? NB. This stage could involve a 'credit' check to see if sufficient funds are available with this implementation of the GBS to cover the transaction.
- To implement a transaction - to 'pay' for the service not only in a secure but also a reliable way (two phase commit etc).

Goals

To provide the supporting infrastructure to enable Computational and Data Grids operated by different organisations to 'trade' services between each other. The purpose of the working group is to specify the protocols and service interfaces that will enable the exploration of these economic models but not to concentrate on the development of the economic models themselves.

It is recognised by the WG that the trading of grid services is an emerging research area that has attracted considerable interest but not yet delivered substantive results. It is impossible for entities to 'trade' services with one another, as there are no standards to

define the trade. Our goal within this WG is therefore to define an initial set of service interfaces and protocols to enable further research activity elsewhere within GGF of the Grid community. After this activity it is envisaged that new GGF working group(s) will be required to develop the initial work completed within GESA.

Milestones

- GGF 5: Initiate discussion of this activity with a BOF and a move to produce a WG charter.
- GGF 6:Initiate discussion of industrial and scientific use cases as GWD-I documents. It is expected that these may include the requirements of an Application Service Provider, Computational Service Provider, Storage Service Provider, Software Provider, Resource Broker, etc.
- GGF 6:Initiate discussion of an initial specification of the service interfaces and protocols for discussion. This document will be a very early draft of a GWD-C that captures the current community practice that will be enhanced through future activities.
- GGF 7: Report on the experiences of using the current service interfaces and protocols as a GWD-E document and through these activities revise the GWD-C relating to the interfaces and protocols.
- GGF 8: Converge on an interface definition and protocols through a revised set of interfaces and protocols described in the GWD-C document.
- GGF 9: Demonstrate that the developed protocols and interfaces support a variety of economic models (e.g. fixed price trading, an 'auction' model, etc.) and to describe the experiences from this infrastructure in a GWD-E document.
- GGF 10: Complete the GWD-C and consider initiating a standards recommendation within a GWD-R.

Dependencies

The WG will work with (where appropriate) with the:

- Resource Usage Service WG
- Accounting WG
- Dictionary WG