GLIF-GHPN Collaboration Proposal

GLIF Control Plane Group Mission

- Chair: Gigi Karmous-Edwards (MCNC), Secretary: Licia Florio (Terena)
- The goal of this working group is to agree on the interfaces and protocols that talk to each other on the control planes and the Grid middleware of the contributed Lambda resources.
- The community identified several key areas we need to focus on, namely:
  - Define and understand real operational scenarios
  - Defining a set of basic network services:
    - Precise definitions
    - Developing semantics the whole community agrees to
  - Interdomain exchange of information: <http://www.glif.is/working-groups/controlplane/interdomain.html>
    - Determine what information needs to be monitored
    - How to abstract monitored information to share
  - Grid community: <http://www.glif.is/working-groups/controlplane/liaise.html>
    - Define a Grid control plane architecture
    - Work closely with E-science applications to provide vertical integration
    - Contribute to standardization of interfaces and protocols the community agrees to

GHPN RG Mission

- Chair: Dimitra Simeonidou, Secretary: Volker Sander
- The Grid High-Performance Networking Research Group focuses on the relationship between network research and Grid application and infrastructure development
- Two specific goals of the GHPN-RG are identifying:
  - a) Grid application requirements and implementations that are not supported or understood by the networking community
  - b) Advanced networking features that are not being utilized by grid applications
- The GHPN-RG communicates the results of its work through the periodic release of informational documents

- Advanced networking features for grid applications
- Define basic network services
- Network integration with grid and eScience applications

Basis for the proposed liaison

- Collect, report and analyze real experience concerning delivery of network services across heterogeneous optical domains
- Establish strategic relationships with relevant projects and initiatives:
  - Research projects (i.e. Enlightened-US, PHOSPHORUS-EU, G-Lambda-Jp)
  - Initiatives (EARNEST-EU ????)
- Critical appraisal of existing and forthcoming operational and research experience and produce network architecture/technology and deployment roadmaps
- Contribute towards the ghpn standardisation effort and generate a set of focused documents defining network interfaces among multiple network and Grid layers

Outcomes

- Requirements (reporting outcomes of real experiences here)
  - Grid Application Requirements
  - Data plane requirements
  - Control Plane requirements
  - Link management requirements
  - Routing requirements
  - Signalling requirements
  - Controland Management Network requirements
  - Service Plane requirements
  - Integrated Grid - network AAA requirements
  - Integrated Grid - network security requirements
- Survey of existing Control architectures
  - Related work in GGF-GHPN RG
  - Related work in GLIF Control Plane WG
  - Related work in other bodies (ETSI, ITU,…)
  - Positioning of the new work
- Interaction and Interfaces between Control Plane, Management Plane and Grid Middleware
- Critical review and roadmapping
- Expected outcomes and technical recommendations
  - Technical Documents
  - Standardization Inputs

Event Type: BOF

Date: Tuesday 14th November

Time: 12:15pm - 1:15pm

Session Leaders: Dimitra Simeonidou, Gigi Karmous-Edwards

The aims of this session are:

- To increase community awareness and engagement to this common GHPN/GGF and GLIF research agenda
- To announce a new effort in collecting, reporting and analyzing experience concerning delivery of network services across heterogeneous optical domains. This effort will accelerate R&D problem solving in delivering lambda network services in a global scale and will contribute towards standards regarding APIs and network interfaces among multiple network and Grid layers