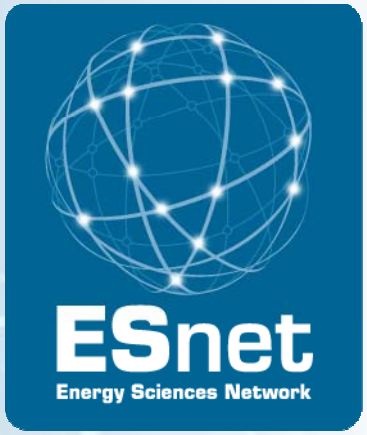

GNI API Task Force & Fenius

GLIF Technical WG Meeting Feb 2011

APAN 31, Hong Kong

Evangelos Chaniotakis, ESnet Network Engineer

Lawrence Berkeley National Lab

GNI API TF: Overview

- Motivation:
  - There exist several different guaranteed bandwidth services, that do not interoperate due to diverging APIs.
  - Let's fix this!
- Targets:
  - Bring network resource management developers together,
  - Develop a common interface for guaranteed bandwidth reservation requests.
  - Develop a software framework (Fenius) to facilitate translation
- NON-Objectives:
  - To become a standard.
  - To get everything 100% correct.
- Participating developers from:
  - G-lambda, IDC, Argia, Harmony, DRAC, KISTI, NCSU

GNI API TF: Progress

- No changes in the API since last meeting,
- Small amount of work on Fenius (bug fixes etc)
- Little interest from the community to develop the provisioning API further
- A lot of that effort has already shifted to OGF NSI

GNI API TF: Plans & discussion

- The provisioning API seems good enough for now,
  - I declare success!
- Let's shift efforts towards standards.
  - .. and away from "ad hoc"
- Wind down this TF
  - Examine ad hoc API, fix any issues
  - Produce "lessons learned" document,
  - Folks interested in API development: work with OGF NSI.
- And transition Fenius under "NSI Implementation" effort
  - So should folks interested in Fenius development.

Fenius: Overview

- A Java software package that facilitates translation between different NRM APIs,
- Uses the GNI SOAP API & an internal ad hoc Java API
- Components:
  - Translators for IDC, Argia, G-Lambda, Harmony
  - Client package for the GNI API,
  - Web UI,
  - Some visualization aids
- Developed under the GNI API effort

Fenius: Status

- Deployed instances in several GOLEs and networks
  - ION, StarLight, NetherLight, CERNLight, NORDUNet, JGN2+, KDDI, AIST, SCinet, PSNC, USLHCnet, CzechLight
- Used in Automated GOLE infrastructure & demos
  - Successful in Geneva,
  - (semi) successful in SC10
  - Successful in Hong Kong
- Software stack is reasonably stable,
- Good communities: users, developers

Fenius: Plans & discussion

- Short term:
  - maintain software,
  - Implement NSI protocol
  - Implement Automated GOLE TF requirement
- Proposed features
  - Better pathfinding & request automation
  - Implement more functions (i.e. isAvailable())
  - Add more translators (DynamicKL, AutoBAHN, Sherpa, ..)
  - Improve the Web UI,
  - Integration with IP layer
  - Integration with applications
- Long term: deprecate Fenius & replace with NSI