GLIF's Universal Service Implementation

GUSI Overview

Mathieu Lemay
CEO Inocybe Technologies inc.

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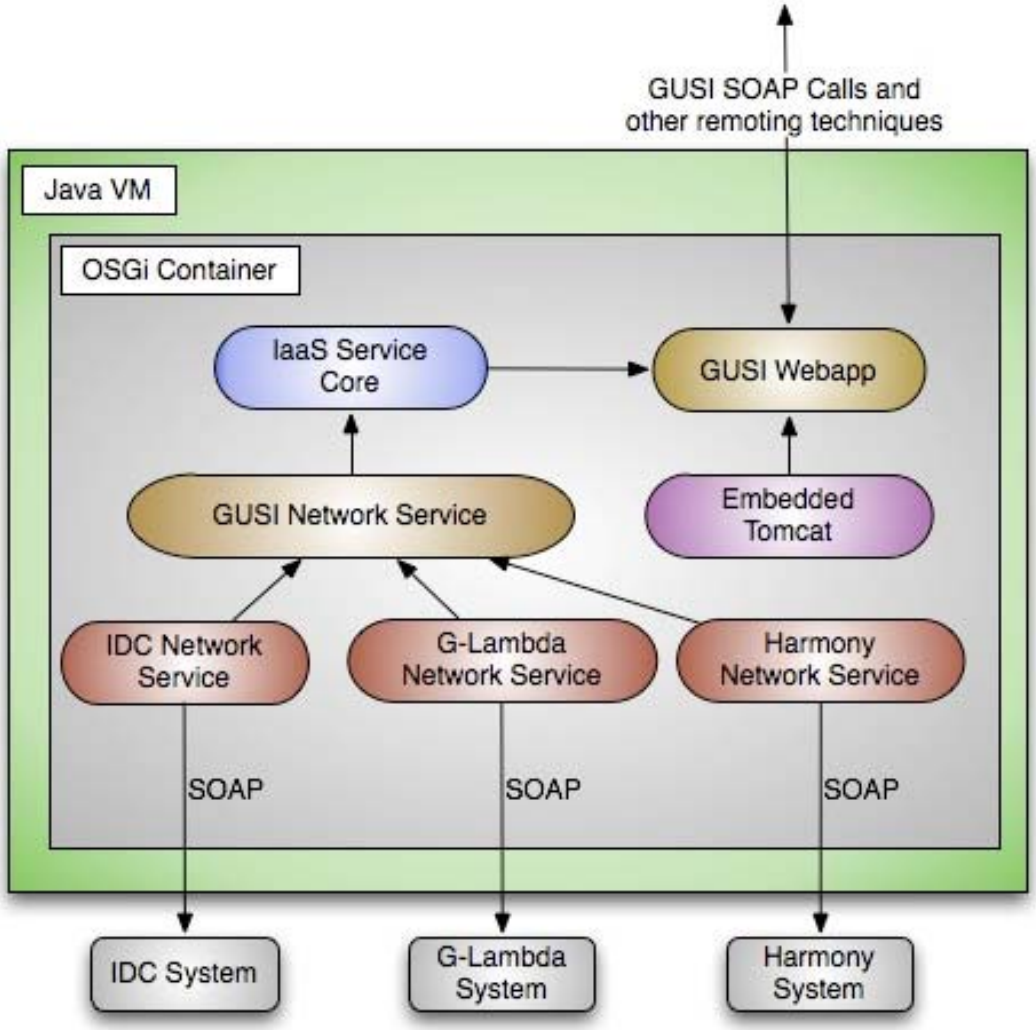
What is GUSI?

- GUSI is an open-source project implementation of GLIF Services
- Services and standards approved by the GLIF community will be implemented in GUSI
- GUSI is flexible and tries to be technology agnostic
- Teams only have to create an Adapter for their systems to have interactions with the other GLIF members.
- Is meant as the GLIF implementation of the initial GNI and then the OGF's NSI
- It is NOT a competing effort to NSI and will evolved at the same time as an NSI implementation.

The GUSI Goals

- Provide an open source implementation of interfaces like the Network Service Interface (NSI) or Grid Network Interface (GNI)
- Have a common code base to accelerate developments
- Avoid having each team implement the same service and interface different security mechanisms
- Accelerate new services and standard's adoption in the community
- Provide a nice graphical interface to GLIF services

GUSI Architecture



- GUSI Webapp is the web user interface/services to this GUSI instance.
- Embedded Tomcat is a OSGified Tomcat instance
- IaaS Service core a utility plugin used to provide multiple services access
- GUSI Network Service is a service implementation
- Adaptors for the Network Service

GUSI Technologies

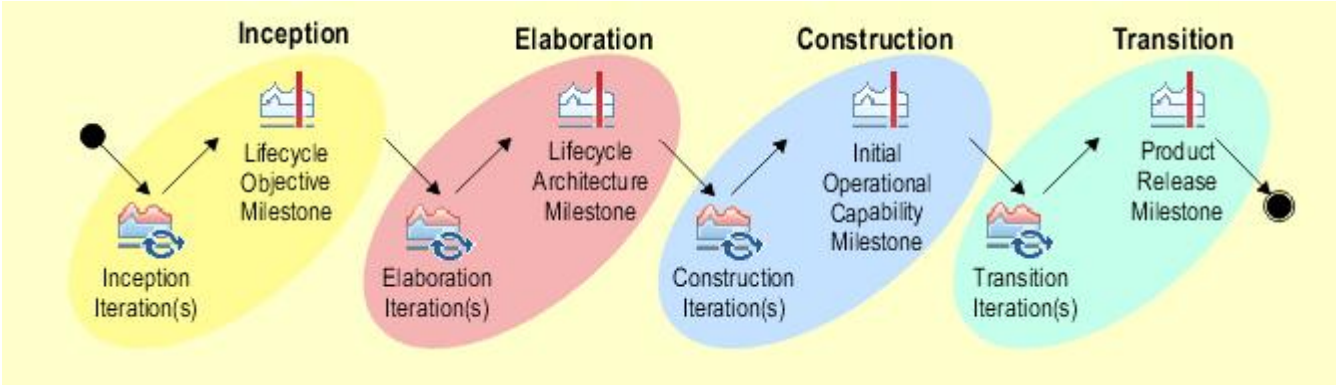
- Written in Java, built with Maven2
- Uses Spring-DM Framework as the underlying OSGi linking mechanism.
- Spring Web Services and Remoting is used to prevent classpath issues with Globus Libraries and Apache Axis.
- Uses service libraries from the IaaS Framework to work with services as an OSGi bundle.
- It is hosted in Eclipse's Equinox OSGi container and can run in a multiplatform environment and not a J2EE container.
- Provides an Update and Hot Deploy mechanism through OSGi.

GUSI Security (Security Task Force WG)

- The security topic must be part of the GUSI discussions and not a separate Task Force yet.
- A subgroup should be assigned to tackle the security implementation in GUSI, and it's mapping to the underlying mechanisms such as GSSAPI, CAS, SAML, etc.
- Initially simple RBAC / Certificate based security will be implemented to get started.
- WS-Security will be supported for SOAP, other
- Spring Security will initially be used in the implementation with support for more elaborate call backs.

GUSI Milestones

- The project is developed using a variant of the OpenUP software development process.
- The project is still currently in the elaboration phase, any feedback on the architecture, API and schemas or additional ideas are welcome.



- The construction phase should begin shortly and the goal is to have a running prototype by the next GLIF winter meeting.

GUSI Resources and Source Code

- The project's website and documentation are available at this temporary link:
  - http://gusi.inocybe.ca/

  and will probably be moved to a more appropriate FQDN.
- The source code is available to any one who will want to contribute. However we will have a core team of maximum 10 people for manageability reasons.

GUSI Frequently Asked Questions

- **Why choose to run in an OSGi container?**

  It is not mandatory to run it in OSGi container however this is strongly suggested as otherwise Adaptors will have classloader issues because of incompatible dependencies.
- **Are we using web services? I haven't seen the word in the presentation.**

  Yes, of course GUSI uses web services (SOAP) as one of its presentation mechanism. However others (REST, JMX) are also available.
- **May I implement it myself?**

  Of course, GUSI is there to accelerate development by having most of the job done by the proxy it is not preventing you from implementing your own. You can also simply add GUSI code inside your system. (Apache Software License 2)

GUSI Frequently Asked Questions

- **Where do I deploy GUSI?**

  GUSI can be deploy for 1,10 or all domains, it's a translation service for NSI/ GNI and can be placed anywhere.

- **Why not just implement GNI?**

  That what it is however it is modular and can be extended if new services become supported by the GLIF community.

- **What is "Webapp" component doing?**

  The webapp component has two rules it binds URLs to Web services and also will provide a configuration view for the software (the ability to turn on/ off some plugins and presentation mechanisms)

GUSI Discussion Topics

Here are important topics to discuss before going ahead:

- Discuss the GNI's initial Schema Document (Type.xsd)
- OSGi or J2EE container for GUSI (OSGi allows, updates, hot swap and people can simply create plugins)
- Who will do what?
- Come up with a security subgroup for the GUSI
- Find a better name for GUSI

Current GUSI/GNI Partners

Questions?
We look forward in working with you
Thank you!