

GammaLib - Action #1229

Feature # 591 (In Progress): Investigate how GammaLib can be made VO compliant.

Design and implement GVOHub class

06/19/2014 02:39 PM - Knödseder Jürgen

Status:	Closed	Start date:	06/19/2014
Priority:	Urgent	Due date:	01/30/2015
Assigned To:	Louge Thierry	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
<p>The GVOHub class should implement an instance of a VO Hub respecting the SAMP protocol. As GammaLib is a standalone library, the class cannot depend on any library providing VO support. The VO Hub protocols and functions have to be implemented natively. This requires some thinking about how to organize the class, including identification of need for support classes and/or functions.</p> <p>The GXml class may be used here for example for XML protocol handling (writing and reading/parsing).</p> <p>Note also that the GUrl base class exists that describes a media independent interface. For the moment, GUrlFile and GUrlString exist for writing information in either a file or a string. Using this class, the client does not need to know into which media it writes or from which media it reads. Maybe it is possible to implement a GUrlSocket class that allows reading or writing over a socket. In that case, the GXml class could be used for XML exchange over sockets.</p>			

History

#1 - 06/19/2014 02:40 PM - Knödseder Jürgen

- Assigned To set to Louge Thierry

#2 - 06/19/2014 02:42 PM - Knödseder Jürgen

- Description updated

#3 - 06/24/2014 03:56 PM - Louge Thierry

- % Done changed from 0 to 10

Premières ébauches de design et de code produites. Pas encore de compilation.

#4 - 06/24/2014 03:58 PM - Louge Thierry

Very first design and beginning of coding available. No compilation tried so far.

#5 - 06/27/2014 04:11 PM - Louge Thierry

- File activity diagram.png added

- File class diagram.png added

- File GVOHub.hpp added

- File GVOHub.cpp added

L'inclusion du minimum de code produit dans Gammalib (avec une librairie "style gammalib", et les spécificités du C++ par rapport au C) est en cours pour une version minimum fonctionnelle (ouverture du hub, contact par un client)

#6 - 07/02/2014 09:39 AM - Louge Thierry

- Status changed from New to In Progress

- % Done changed from 10 to 20

Compilation de la classe GVOHub ok avec GVOHub.hpp, mais en mode permissif (les int des descripteurs de sockets en c correspondent à un type particulier en C++). Suite des opérations: Créer un fichier de tests sous le répertoire de tests de gammalib pour tester l'ouverture du hub puis implémenter les opérations nécessaires à son fonctionnement.

#7 - 07/11/2014 02:24 PM - Louge Thierry

- % Done changed from 20 to 50

#8 - 07/15/2014 12:18 PM - Brau-Nogué Sylvie

- Priority changed from Normal to High

#9 - 12/11/2014 10:43 PM - Knödseder Jürgen

- Priority changed from High to Urgent

You should now really concentrate on this one so that we can close the action within the next weeks.

#10 - 12/11/2014 10:48 PM - Knödseder Jürgen

- Due date set to 12/31/2014

#11 - 12/12/2014 12:30 PM - Knödseder Jürgen

- Due date changed from 12/31/2014 to 01/30/2015

#12 - 01/12/2015 09:48 AM - Knödseder Jürgen

Skeleton finished, different clients have their own socket.

What is now missing is the passing of information between clients following the protocols.

#13 - 01/12/2015 10:32 AM - Knödseder Jürgen

Note that the following VO applications have an internal Hub:

- TOPCAT
- Alladin
- VOSpec

It should be checked whether GVOHub is compatible with these Hubs, e.g. if they work the same way. The current GVOClient code leads for example to an exception when trying to connect to the VOSpec Hub. Connection to TOPCAT and Alladin seem to work.

Looks like the VOSpec hub does not work as it replies

```
HTTP/1.0 200 OK
Content-Length: 475
Content-Type: text/xml
```

```
<?xml version='1.0' encoding='UTF-8'?>
<methodResponse>
  <fault>
    <value>
      <struct>
        <member>
          <name>faultCode</name>
          <value>
            <int>1</int>
          </value>
        </member>
        <member>
          <name>faultString</name>
          <value>org.astrogrid.samp.xmlrpc.internal.XmlRpcFormatException: Unknown XML-RPC method samp.hub.register</value>
        </member>
      </struct>
    </value>
  </fault>
</methodResponse>
```

```
</value>
</fault>
</methodResponse>
```

Here is the response from Alladin:

```
HTTP/1.0 200 OK
Content-Length: 529
Content-Type: text/xml
```

```
<?xml version='1.0' encoding='UTF-8'?>
<methodResponse>
  <params>
    <param>
      <value>
        <struct>
          <member>
            <name>samp.hub-id</name>
            <value>hub</value>
          </member>
          <member>
            <name>samp.self-id</name>
            <value>c2</value>
          </member>
          <member>
            <name>samp.private-key</name>
            <value>k:2_mmjoxbunxuargmid</value>
          </member>
        </struct>
      </value>
    </param>
  </params>
</methodResponse>
```

```
HTTP/1.0 200 OK
Content-Length: 144
Content-Type: text/xml
```

```
<?xml version='1.0' encoding='UTF-8'?>
<methodResponse>
  <params>
    <param>
      <value></value>
    </param>
  </params>
</methodResponse>
```

And here from TOPCAT:

```
HTTP/1.0 200 OK
Content-Length: 529
Content-Type: text/xml
```

```
<?xml version='1.0' encoding='UTF-8'?>
<methodResponse>
  <params>
    <param>
      <value>
        <struct>
          <member>
            <name>samp.hub-id</name>
            <value>hub</value>
          </member>
          <member>
            <name>samp.self-id</name>
            <value>c2</value>
          </member>
          <member>
            <name>samp.private-key</name>
```

```
<value>k:3_sigvjlgtrvxgupy</value>
</member>
</struct>
</value>
</param>
</params>
</methodResponse>
```

HTTP/1.0 200 OK
Content-Length: 144
Content-Type: text/xml

```
<?xml version='1.0' encoding='UTF-8'?>
<methodResponse>
<params>
<param>
<value></value>
</param>
</params>
</methodResponse>
```

#14 - 02/27/2015 10:33 AM - Louge Thierry

- File *AladinDialogueAvechHub.txt* added
- % Done changed from 50 to 80

GVOHub is callable, reached by Aladin and Topcat (Aladin dialog with hub provided in file). Current actions are to serve the clients through SAMP protocol implementation, keeping record of registered clients in a list of GVOApp objects, GVOApp being a class for applications registered in the hub.
Different client doesn't have their own sockets anymore, as SAMP through XML-RPC works in disconnected mode.

#15 - 05/16/2015 11:33 PM - Knödseder Jürgen

- Status changed from *In Progress* to *Feedback*
- % Done changed from 80 to 100

A version of the GVOHub class is now merged into the devel branch. The functionality of the Hub may not be complete yet, but registration, unregistrating and ping from a client works.

#16 - 02/24/2016 02:09 PM - Knödseder Jürgen

- Precedes deleted (Action #780: Display skymap using Aladdin)

#17 - 10/06/2016 11:17 PM - Knödlseeder Jürgen

- Status changed from Feedback to Closed

Close this now

Files

activity diagram.png	16 KB	06/27/2014	Louge Thierry
class diagram.png	40.2 KB	06/27/2014	Louge Thierry
GVOHub.hpp	4.06 KB	06/27/2014	Louge Thierry
GVOHub.cpp	9.91 KB	06/27/2014	Louge Thierry
AladinDialogueAvecHub.txt	8.34 KB	02/27/2015	Louge Thierry