BioPortal Logging

**[FLEX – Client side]**

Currently the **FlexViz** and **Search UI** projects are instrumented and log user events.

The events being logged are divided into the following categories:

* Concept events - whenever a single concept is involved, e.g. selecting a node in the FlexViz or in the tree
* Error events – whenever an error occurred
* Navigation events – in FlexViz, e.g. layouts. Contains two generic fields – “string” and “number”, they contain different values depending on the event type
* Ontology events – whenever a single ontology is used – e.g. when searching on one or more ontologies, or when an ontology is loaded in FlexViz
* Previous Search events – when the user runs a previous search
* Search event – when a user performs a search in FlexViz or Search UI
* Startup event – in either FlexViz or Search when the application loads up. Contains Debug info like the url, parameters, O/S, screen resolution, flash player version, etc

In the Flex **org.ncbo.uvic.restservices** library project, there is a class called **LogService.as** which has all the static functions for logging events.

The *ONLY* place where logging data is currently being used is on the Search UI. It has two boxes that contain the most recent search terms, and the most searched for terms. These boxes are populated by using the data in the search database table.

To **turn off Logging** from the Flex side, the application can set the **LogService.LOG\_ALL** property to **false**. Alternatively, both FlexViz and Search check a FlashVar parameter of **log=false** which turns off logging.

In FlexViz there is another class that does most of the logging work, it is called **FlexVizLogger.as**. It is in the **org.ncbo.uvic.flexviz.ui** project, in the **src/org/ncbo/uvic/flex/logging** folder.

The LogService class in Flex communicates with the Keg server (keg.cs.uvic.ca) using [AMFPHP](http://www.amfphp.org/), which has the PHP code that stores the events in a MySQL database.

**[PHP/MySQL – Server Side]**

Keg access:

Use **SSH** to connect to Keg (**keg.cs.uvic.ca**) using your CS username and password, or use “**chisel**” and “**Frumpy4U**”. If your username and password don’t work, you can always email IT Support ([itsupport@csc.uvic.ca](mailto:itsupport@csc.uvic.ca)) and ask for your username to be added to the list.

Database access:

You can connect to the MySQL database remotely or from SSH by using the “**chisel**” username and “**n1SlT0k**” password. We don’t have root access to the database, but the chisel account has most privileges.

The logging on the server side (on Keg) is done using AMFPHP. The PHP files are located on Keg in this directory: **/localhost/sites/www/html/amfphp/services/ncbolog**

The most important file used in logging is **LogService.php**, it has all the functions for inserting the various logging events (search, concept, navigation, etc) into the database, as well as functions for getting the data back out again.

AMFPHP provides a website for browsing the services, and testing the public functions. You can view it here: <http://keg.cs.uvic.ca/amfphp/browser/>

Expand the **ncbolog** package, and you’ll see all the services available. Click on the **LogService** class to see the public functions available for calling.

One important function to note is the **LogService.isLogging(appID)** function. It is called by both FlexViz and Search on startup to determine whether or not to log events. This way you can turn off logging just by editing the PHP code inside that function (instead of having to re-compile the Flex swfs).

The **OntologyService** class provides some functions for working with ontologies, and making sure all the ontology information is present.

The **QueryService** class is used to display some dashboard like stats about the log events. You can see the dashboard prototype here: <http://keg.cs.uvic.ca/ncbo/usage/Dashboard.html>

The source code is in SVN under <https://svn.cs.uvic.ca/chisel/trunk/flexviz/org.ncbo.uvic.loggingstats>

There is also a simple little application here (<http://keg.cs.uvic.ca/ncbo/usage/FindOntology.html> ) for finding all the details out about an ontology by its version id.

And similarly there is another application here (<http://keg.cs.uvic.ca/ncbo/usage/InsertOntologies.html>) for keeping the ontologies up to date. This is only needed to fill out the ontologies database table.

Finally, there is one last service class called **DegreeOfInterestService**. It is very much a prototype service that counts up the number of events in the last 2 weeks for the various types, to calculate a degree of interest for a concept/term or ontology. The SearchUI uses this service to show the degree of interest filtering/highlighting/sorting options, but it is hidden by default.

If you want to make changes to the PHP files, I’d suggest downloading [Eclipse PDT](http://www.eclipse.org/pdt/) and checking out the source code from our SVN here:

<https://svn.cs.uvic.ca/chisel/trunk/amfphp/ncbolog>

Working with the Logging Data:

On the Keg server, there are some shell scripts for extracting all the log events out of the database and putting them into CSV files. You can find them on the Keg server in this directory: **/localhost/sites/chisel/ncbolog**

There is also some basic Java code for parsing the CSV files, and combining/filtering the data in somewhat useful ways. The Java code is checked into our SVN here:

<https://svn.cs.uvic.ca/chisel/trunk/Diamond/NCBOLogging/>