VBrowser Evaluation Document

Objectives

In this document we evaluate VBrowser, a friendly GUI interface to several GRID monitoring and data storage services. First of all, we describe the functionality of the application. Secondly, we provide a guide to install and configure the application. Finally, typical use cases of the application are presented.

Introduction to VBrowser

VBrowser is a front-end that allows the management of the files and jobs that exist in gLite infrastructures. It is built on java 1.6 and provides a Graphical User Interface (GUI) with a graphic shell and a directory tree structure.

The GUI shows the local directory tree of the UI and a different directory tree for each VO managed by the user. Inside each VO folder the information about the services offered is structured in several sub-folders (LFC, SRM, LB, WMS).
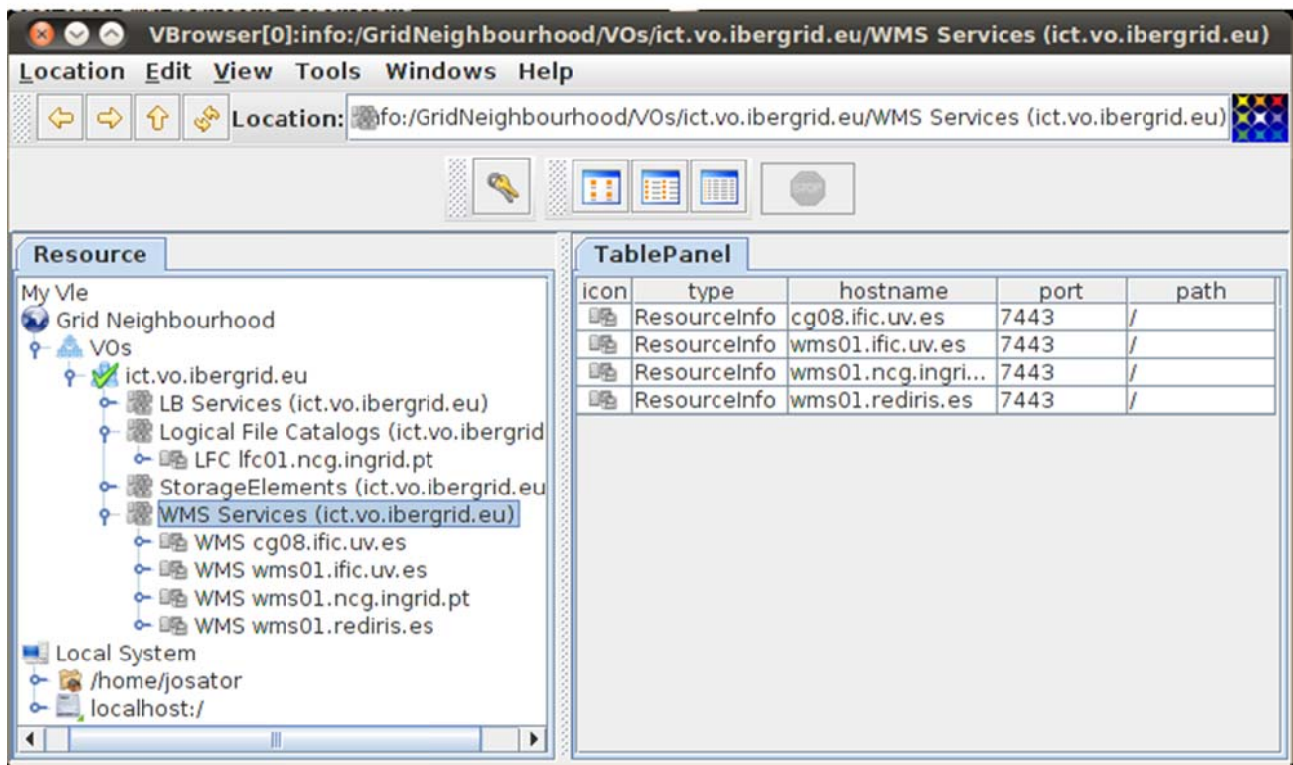

Figure 1: VBrowser main window

As VBrowser is a front-end to gLite services it supports VOMS credentials. The user can easily add new VO to the Grid Neighbourhood branch in the resource tab and create and destroy the VOMS proxies it needs through the graphical user interface.

File management is quite complete, allowing drag and drop of entire directories into local files. This becomes a complex task when using terminal commands, as lcg-utils do not provide recursive file management.

Also, the user can monitor its job status by performing some predefined queries to the WMS and LB servers of each VO.

The browser has a plug-in interface. Each plug-in enhances functionality by adding content viewers for common file formats, like PDF, HTML or medical images.

Installation and configuration

The application can be downloaded from:

http://www.nikhef.nl/~ptdeboer/vbrowser/

Once the file is unpacked the user can run one of the following commands, depending on the platform:

> **start bin/vbrowser.exe**

> **start bin/vbrowser.sh**

VBrowser needs SUN Java 1.6 runtime installed in the system to run properly.

Once it is installed we need to configure the environment. Make sure your personal certificate is in your HOME environment:

> **$HOME/.globus**

> **C:\WINNT\profiles\(Your User Name)\.globus**

Also check that the information in your **.glite/vomses** file is complete. The concrete line can be found in the configuration tab of the Voms-Admin web page of each VOMS server.

After that you can create a Grid Proxy by clicking on the keys icon in the VBrowser. From that window you can easily create and destroy VOMS certificates:

Figure 2:*VOMS Proxy dialog*

Currently the host and root CA certificates in **VLET_INSTALL/etc/certificates** are loaded when starting the browser. You can add new CA certificates to either **VLET_INSTALL/etc/certificates** or to $HOME/.vletrc/certificates. The VOMS server certificates can be obtained by visiting the admin page with a Firefox browser and importing them from the Certificate Manager Web Sites tab.
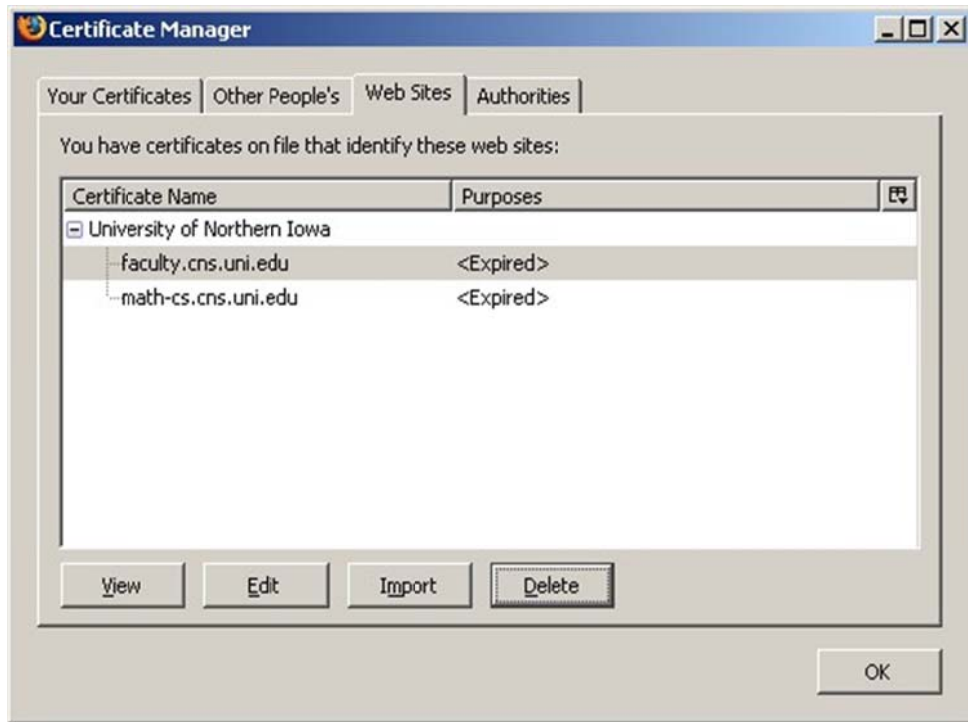
Check the **VLET_INSTALL/etc/grid-security/vomsdir** directory for the certificates of your VO and the corresponding entries in the **voms.xml** file. The syntax for each VO in this file must be:

<vo>
<name>biomed</name>
  <admin>https://cclcgvomsli01.in2p3.fr:8443/voms/biomed</admin>
  <server>
    <name>cclcgvomsli01.in2p3.fr</name>
    <port>15000</port>
    <cert>cclcgvomsli01.in2p3.fr.3433.pem</cert>
    <dn>/O=GRID-FR/C=FR/O=CNRS/OU=CC-IN2P3/CN=cclcgvomsli01.in2p3.fr</dn>
  </server>
</vo>

If no Storage Locations are present in the "MyVLe" icon, right-click on MyVle, and select: New-> <Type> Location, where <Type> is any supported file protocol. To configure this new Resource, right click on the Server icon and select "Properties".

Use Cases

The VBrowser tool itself is a useful tool for operating with multiple files, simplifying tasks related with bulk data movement. As is, this can be a tool recommended from VO managers to improve user satisfaction. Moreover, it can ease the process of VO data management in different circumstances:

- Replication of complete file trees or SEs in a catalogue. The recursive performance of the file management of the tool enables copying locally or between storage resources complete directories with sub-directories if the permissions are correctly defined. This eases the process of backuping a whole branch of files or SE when for example, the maximum capacity has been reached or when a decommission process has started.

- User-friendly file browsing for listing extensive data from all the files in a directory. Data requiring several interactions is easily presented for all files in a directory through extensive listings.