

Installing, Configuring and Implementing an SMF in Joomla

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Abstract

This paper's goal is to show how an asynchronous communication component which can also be used in teaching activities was installed, configured and implemented on the website of the Department of Accounting and Economic Informatics of the Economics Faculty within the Dunarea de Jos University in Galati. This component is known under the name of forum or discussion board.

Keywords: Web 2.0, forum, CMS

JEL Code:

1. Introduction

Web 2.0 names new ways of considering and employing the organizational capabilities of WEB. According to these, the content and information are not offered to the visitors only by the media, governments and private companies anymore, but also by private persons, linked between each other by informal networks based on Internet and which actively contribute and take part in the offering and spreading of information in the entire world by the means of web. Typical examples for this new tendency are the so-called wiki, weblogs (or, the simplified form, blogs), portals and the image, music, movie/video and software exchange markets in the Internet, like Flickr, YouTube and the File sharing sites.

The media in the whole world has reacted intensely to these new points of view and it was suspected that they would have direct social and economic effects. The most widely used web 2.0 technologies in supporting the teaching process and building teaching materials, evaluating and analysing the evolution of the students, building informing and forming presentations, time planning, building the timetable and the activities calendar, developing collaboration projects of which many are student-oriented are: blogs, wikies, RSS, bookmark collaboration bookmark systems, podcasting.

2. The discussion board

The discussion board is one of the asynchronous communication means, in which any member of the group can open certain discussion topics, address questions and has the possibility of receiving several answers from different group users. The questions and answers are visible to any user and the threads are easy to follow. In the learning process this service is widely used, because the teacher can explain a problem to a great number of students on a topic chosen by one of them. Besides, here is the place to exchange opinions on the entire educational process, there can be made considerations concerning other similar institutions in the country or abroad, all this for the common goal of improving the educational process. So, discussion boards are

common space where people can communicate asynchronously. Someone posts a message, which is added to a list of messages on a certain topic, called "thread". The message can start with a dialogue or can be added to a dialogue. Threads on forums are usually archived and archives usually become useful information resources. The discussion board appears as a virtual space for a great number of users interested in a certain topic, considering their diversity. It works asynchronously, like a public collective mailbox in which every user is free to see the incoming messages and post an answer. In certain situations, a person, called "moderator", can take responsibility for leading the debates and eliminating messages that do not comply with the subject of the forum. The "news" section is read by the users with a text editor program, which has the possibility to search and select the ones they are interested in.

Although discussion boards exist since the Internet was born, their utility must not be ignored. They represent a source for building online communities. Discussion boards offer a way to archive knowledge shared by an entire community. Discussion boards are used for different types of conversations. They can be used to ask questions and get answers, to express opinions and feelings or to show a talent or a project.

Discussion boards can also have funny features. Avatars, for an instance, are graphical icons representing a real person in a virtual world. As discussion boards provide a sequential discussion, archive the information and can be accessed anytime and anywhere a computer and an internet connection are available, they can be easy to use instruments. Also known as "newsgroups", discussion boards allow users to exchange any kind of information on different topics.

Contrary to the e-mail principle, messages on discussion boards do not go directly into the users' mailboxes, but are stored on servers accessible from the Internet. In these conditions, any interested user can connect to the server and consult the messages and can also take part in these electronic conferences by transmitting and publishing messages. Thus, there can be brought into attention the *public character* of this communication form. In a discussion board communication is asynchronous, so there is a certain amount of time between posting a message and getting the feedback. Not all persons implied are connected simultaneously and the messages are addressed to all the potential members of the discussion board. Certain groups are moderated, that is to say all the transmitted messages first reach a moderator, who has to approve their appearance on the discussion board. It is more and more difficult for an Internet communication beginner to see the difference between classic e-mail and a forum, because these informational resources are based on the same principles: *identifying the sender*, *identifying the subject* of the message and the field of interest; *the precise identification of the information exchange* (individuals for e-mail and site, message, individuals for discussion boards); *definition of the message content*.

As far as the communication exchange types within a discussion board, there can be distinguished the following three main types of activities and communication relationships:

- *the display unit*;
- *question /answer*;
- *debates*.

Simple Machines Forum - SMF is a free software package which allows one to create his/hers own community. SMF is PHP coded and uses a MySQL database. SMF is a next generation discussion board – type software and it is completely free and will remain free. It is very easy to install, even for beginners. Available on the web since 2004 and not fortuitously called SMF (Simple Machines Forum), this open source software is built to offer users an excellent

community starting and managing platform. SMF can be configured in about 40 languages and has an intuitive, WYSIWYG-equipped interface.

In order to install an SFM discussion board, the following resources must be provided:

- ✓ Operating system;
- ✓ Web server compliant with PHP and MySQL (3.23.28 and later versions), PostgreSQL (7.4.10 and later versions) or SQLite (1.x and later versions);
- ✓ Browser: Microsoft Internet Explorer (5.0 at least), Opera (7.0 at least), Netscape (6.0 at least), Mozilla Firefox (2.0 at least).

SMF can be downloaded from the following source: <http://download.simplerachines.org>.

The downloaded archive contains all the installation files. It must be extracted in a folder named using the pattern *forum_name* and placed in the htdocs root folder on the web server. Then the database must be created. If the "local machine installation" choice is made, with a Xampp or Nushpere server, the database must be placed in <http://localhost/phpmyadmin>.

In this article we shall present the implementation of such a discussion board on a server called host28.net and its synchronization with a content-management system which deals with the documents belonging to the Department of Accounting and Economic Informatics.

In the control panel provided when creating an account there are a file manager and a database administration tool, the local version of phpmyadmin. There are 4 steps to consider when installing a discussion board.

Step 1 – file upload or transfer

PHP files must be uploaded in the [htdocs] folder of the user account. This can be done with an FTP client, using the user, password and server. After completing this, the [htdocs] folder must be checked to see if the files are in it.

Step 2 – database building

99% of the scripts require MySql databases. The database admin tool will be used to create a MySQL database. The name must be remembered, as it will be necessary for the next step.

Step 3 – finding the installation page

Already having the uploaded files and the database, the next step is to use a web browser in order to find the install page for the script. Usually it appears when the site address is typed. It is possible that one would have to search for it. For example:

- <http://yourwebsite.com/install.php>,
- <http://yourwebsite.com/install>,
- <http://yourwebsite.com/installation>.

If the install page cannot be found you must check if the files in the [htdocs] folder were correctly uploaded. This can be done with the File Manager in the Control Panel.

Step 4 – Finishing the installation

Most of the questions the script asks during the installation process are accessible even to lay users.

In order to gain access to the database, the following things must be known:

- MySQL database name: (can be found using the [Database Administrator] in Control Panel)
- MySQL password: the same with the Control Panel password
- MySQL user name: id provided by host28.net
- MySQL host name: sql104.host28.net.

After finishing the installation, the access for visualising the SMF discussion board will be provided via the browser, typing http://host/discussion-board_name. For the proposed case study, the address is <http://cie.host28.net/forum>. Then the administrator can create the desired discussions and threads using the Control Panel.



Fig. 1 - Department of Accounting and Economic Informatics website



Fig. 2 - Department of Accounting and Economic Informatics Discussion boards

Basic settings

Now we shall remind some information required during the installation and configuration process.

- ✓ *The Discussion Board name*: this is the name which will appear upon installation completion. The default is "My Community", but it can be modified;
- ✓ *The Discussion Board URL*: in most cases, this is completed by default by the installation wizard, which automatically detects the discussion board address;

- ✓ *Gzip compressed output*: this function does not correctly run on all servers, but helps saving bandwidth by compressing output pages; this option is active by default;
- ✓ *Database sessions recording*: this option is active by default in order to use the database for sessions instead of files; thus, the sessions will be dependent;
- ✓ *UTF-8 character set*: feature which allows the database and data to use the UTF-8 international character set, which is very useful when working with several languages using different character sets;
- ✓ *Allow statistics*: when active, this option will allow SMF to visit the site once a month in order to collect basic statistics.

MySQL Server Settings:

- ✓ *MySQL user*: username for connecting to the MySQL database;
- ✓ *MySQL user password*: password required when connecting to the MySQL database;
- ✓ *MySQL database name*: name of the database which is to be used by SMF in order to store data;
- ✓ *MySQL table prefix*: the default *smf_* value must be kept.

Once completed these fields, click the *Execute* button and complete the next step. The interface will create a new administrator account during the stage called: ***Create your account***:

- ✓ *Username*: administrator username required for authentication;
- ✓ *Password*: necessary in order to authenticate on the server; must be typed twice for checking;
- ✓ *E-mail*: must be valid;
- ✓ *MySQL database password*: required for security reasons.

Before visualising the discussion board it is very important to erase the *install.php* file. The installation program provides a checkbox in order to automate this task if checked. If this file is not erased, there will appear a warning that must be manually erased.

3. Implementing and configuring in a Joomla CMS

Next, we will show how to implement the asynchronous communication component, that is to say the discussion board, within a content management system – CMS, respectively the Joomla, in order to synchronize the users created in CMS with those on the SMF discussion board.

The Implementation of the SMF discussion board in the Joomla CMS will be made with the help of a bridge, which will log in and out and synchronize the 2 applications.

For the department's site and the implemented discussion board we used the 1.1.3 version of the *Jfusion* bridge. This software package can be downloaded from www.jfusion.org.

JFusion uses a master/slave system for managing the users on different software platforms. That is to say that one of the software programs has a master – type control over the users and the Fusion slave-type plug-in tracks user information, which can be found in the master plug-in. Thus, we will set Joomla as master and SMF as slave. Joomla uses plug-ins for the authentication procedures, which makes the connection routine easier to modify. All user records and password changes must be performed by the means of the master software. JFusion will update the slave software with user details from the users table from the master software. The JFusion authentication plug-in gets the username/password from the master software database and checks if the completed password matches with the stored one. If the

passwords match, JFusion checks if the user exists in all databases, thus completing user synchronization. JFusion makes no modifications on the integrated software. This means that the integrated software, as well as Joomla can be updated without reinstalling or reconfiguring JFusion. That is why it is no longer necessary to waste time reconfiguring the bridge. Since no modifications are made on the integrated software, the login way and behaviour are not changed either.

Among the *advantages* of using the JFusion bridge there are: the discussion board software can be installed on the same server as Joomla, the provided wizard making it very easy to install and configure, only one table is used for authentication, support for several languages, easy uninstalling (in the Plugin Manager menu from the back end there is an option to uninstall the JFusion plug-in). The resources necessary to install the JFusion component are: Joomla, PHP (version 5.0 and above) and a MySQL database (version 4.1.x and above).

Installing and configuring the JFusion component.

In the administration section of Joomla, access the *Extensions* menu, like in the figure above, and pick up the *Install/Uninstall* option. In the *Install* menu, load the *jfusion_1.1.3.zip* file.

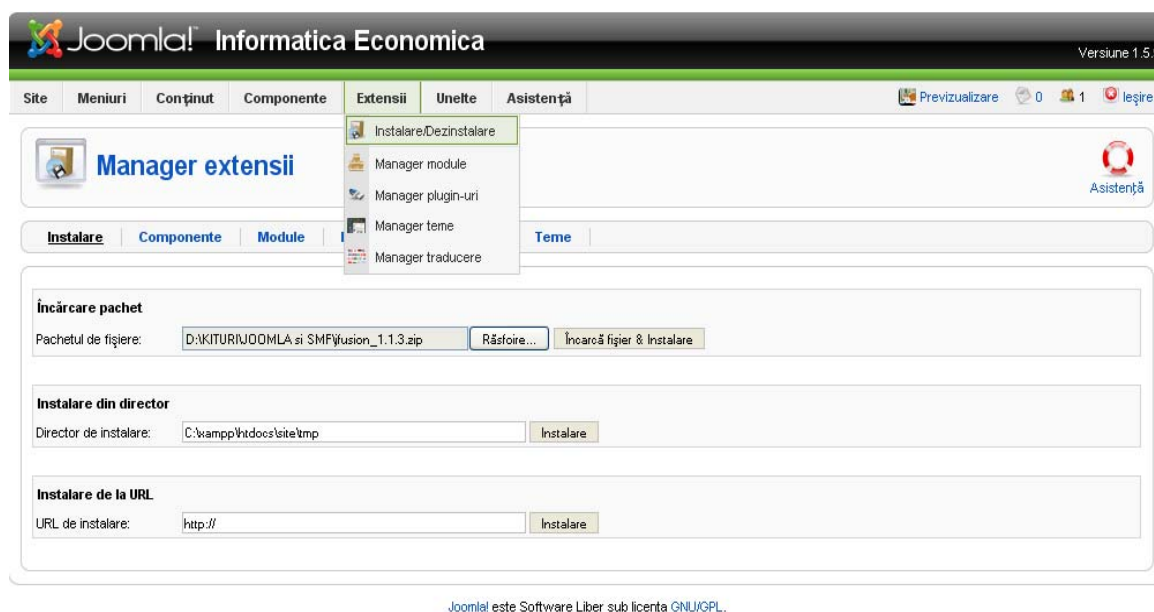


Fig. 3 - Stage The loading stage of JFusion component in CMS

After loading the file, all the components of the JFusion package appear installed. The JFusion control panel looks like the one in the next image and contains the following menu:

- ✓ Joomla Options;
- ✓ Configuration;
- ✓ Plugin Manager;
- ✓ New Usersync;
- ✓ Usersync History;
- ✓ Login Checker;
- ✓ Versions; Help.

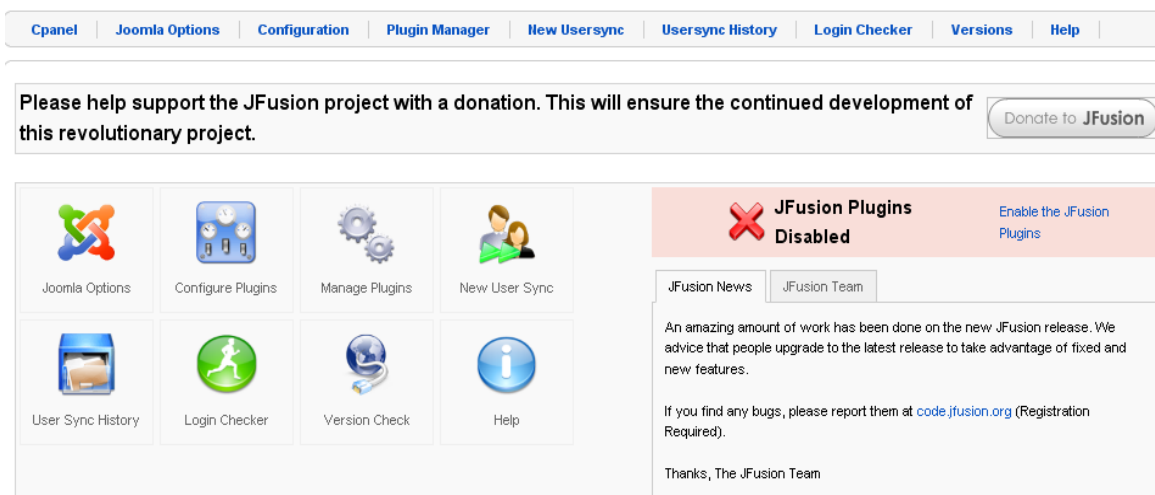


Fig. 4 - Control Panel

a. **Joomla Options** – there are several options here. For an instance:

Plugin General Details:

- ✓ *Description:* “Current Joomla Site” is displayed by default, but it can be modified;
- ✓ *Full URL to Software:* URL address of the site created in Joomla.

Login Options:

- ✓ *Login Identifier:* select what you want users to type when connecting to Joomla; the options are: username, e-mail or username/e-mail;
- ✓ *Username Filter:* for a standard username filtering it must be kept the joomla_int setting.

Users Options:

- ✓ *Usergroup Management:* this setting helps managing user groups; JFusion can handle the user groups in 2 ways: *simple* (groups are established only for newly created users and then they run completely independent from other software) and *advanced*. In the *Usergroup Mode* section, the option *simple* will be kept. The Default Usergroup option will be: Public Frontend.
- ✓ *Auto Register Users:* this setting will be used when JFusion runs with other authentication plug-ins, like Gmail. If users are to login in Joomla using these plug-ins, the option will be “Yes”; otherwise set it to “No”.
- ✓ *Auto Update Activation:* similar to the above setting. If set to “Yes”, any modifications brought to the activation of the user account in the master software will be copied in Joomla. If set to “No”, activation of the user account in the master software will not be copied in Joomla.
- ✓ *Auto Update Bans:* "Yes" would allow a banned user in the master software, thus banning him in Joomla. “No” means that the username is not banned in Joomla.
- ✓ *Auto Update Email:* any modifications in the e-mail settings will be updated in Joomla (“Yes”) or not (“No”).

Fig. 5 - Joomla Options - User Options

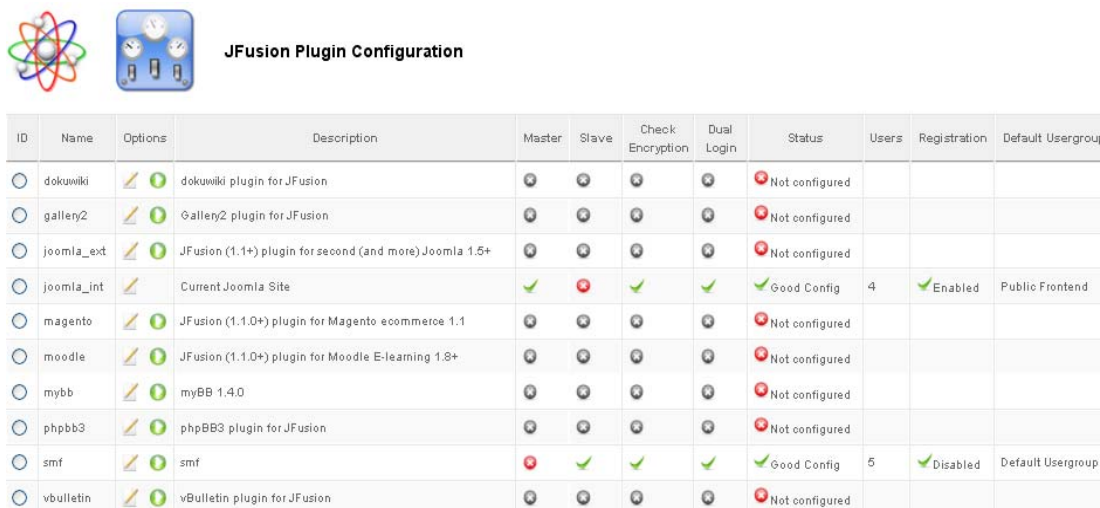
b. Configuration

During the configuration stage, it must be established which of the software programs, Joomla or SMF, is the master and which is the slave. This is probably the most important setting, which will provide a smooth operation of the two components. This means that the software importing the users will be slave, respectively the SMF, and the Joomla will be master. Before configuring the JFusion plug-in, the window looks like that:

ID	Name	Options	Description	Master	Slave	Check Encryption	Dual Login	Status	Users	Registration	Default Usergroup
○	dokuwiki		dokuwiki plugin for JFusion	⊗	⊗	⊗	⊗	⊗ Not configured			
○	gallery2		Gallery2 plugin for JFusion	⊗	⊗	⊗	⊗	⊗ Not configured			
○	joomla_ext		JFusion (1.1+) plugin for second (and more) Joomla 1.5+	⊗	⊗	⊗	⊗	⊗ Not configured			
○	joomla_int		Current Joomla Site	⊗	⊗	⊗	⊗	✔ Good Config	4	⊗ Enabled	Registered
○	magento		JFusion (1.1.0+) plugin for Magento ecommerce 1.1	⊗	⊗	⊗	⊗	⊗ Not configured			
○	moodle		JFusion (1.1.0+) plugin for Moodle E-learning 1.8+	⊗	⊗	⊗	⊗	⊗ Not configured			
○	mybb		myBB 1.4.0	⊗	⊗	⊗	⊗	⊗ Not configured			
○	phpbb3		phpBB3 plugin for JFusion	⊗	⊗	⊗	⊗	⊗ Not configured			
○	smf		SMF plugin for JFusion	⊗	⊗	⊗	⊗	⊗ Not configured			
○	vbulletin		vBulletin plugin for JFusion	⊗	⊗	⊗	⊗	⊗ Not configured			

Fig. 6 - JFusion Plugin Configuration

In the `joomla_int`, which is the plug-in for the current site, the *Edit plugin* option must be clicked. Thus, the *joomla_int JFusion Plugin Editor* configuration stage appears, which has all the options completed by default. This stage is identical to the settings made during the first stage, in the Joomla Options menu. Next, Joomla will be set as the Master, and finally the configuration will look like that:



ID	Name	Options	Description	Master	Slave	Check Encryption	Dual Login	Status	Users	Registration	Default Usergroup
<input type="radio"/>	dokuwiki		dokuwiki plugin for JFusion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not configured			
<input type="radio"/>	gallery2		Gallery2 plugin for JFusion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not configured			
<input type="radio"/>	joomla_ext		JFusion (1.1+) plugin for second (and more) Joomla 1.5+	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not configured			
<input type="radio"/>	joomla_int		Current Joomla Site	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Good Config	4	Enabled	Public Frontend
<input type="radio"/>	magento		JFusion (1.1.0+) plugin for Magento ecommerce 1.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not configured			
<input type="radio"/>	moodle		JFusion (1.1.0+) plugin for Moodle E-learning 1.8+	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not configured			
<input type="radio"/>	mybb		myBB 1.4.0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not configured			
<input type="radio"/>	phpbb3		phpBB3 plugin for JFusion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not configured			
<input type="radio"/>	smf		smf	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Good Config	5	Disabled	Default Usergroup
<input type="radio"/>	vbulletin		vBulletin plugin for JFusion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not configured			

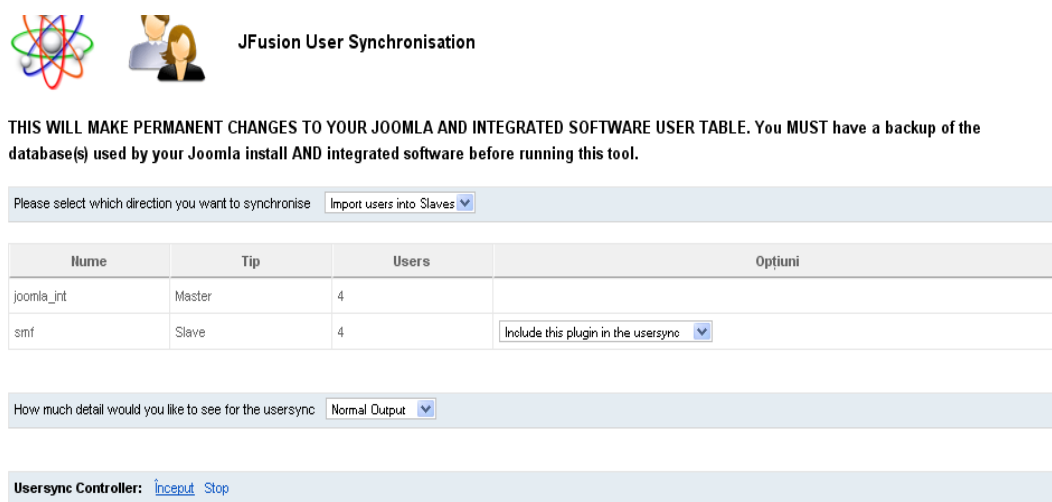
Fig. 7 - Set Joomla as master software

The *Configure Plugin* option will bring up the *smf JFusion Setup Wizard*. As the extraction of the necessary data for this setting must be made from the config.php file, in order not to make any mistakes, the wizard performs this automatically, the user completing only the path to the software that JFusion is to integrate, in this case: <http://cie.host28.net/forum>. Or it could also be C:\xampp\htdocs\forum. Then, if the file is found, the wizard displays it. After saving the options completed by default by the wizard, the SMF is set as the slave software.

c. New Usersync

Before any synchronization, Joomla must be set as the master and the SMF as the slave, because the slave software must be implemented in the master software.

In the first window, the synchronization direction must be selected, that is to say *Import users into Master*, which implies copying the users in the slave software into the master software, or *Import users into Slaves*, which implies copying the users in the master software into the slave software. Because we wanted to synchronize the users on the department's site with those on the forum, the synchronization direction will be: *Import users into Slaves*.



JFusion User Synchronisation

THIS WILL MAKE PERMANENT CHANGES TO YOUR JOOMLA AND INTEGRATED SOFTWARE USER TABLE. You MUST have a backup of the database(s) used by your Joomla install AND integrated software before running this tool.

Please select which direction you want to synchronise:

Name	Tip	Users	Options
joomla_int	Master	4	
smf	Slave	4	<input type="text" value="Include this plugin in the usersync"/>

How much detail would you like to see for the usersync:

Usersync Controller:

Fig. 8 - JFusion User Synchronisation

For the SMF software program, which in this case is employed as a slave software, there are two options: *Exclude this plugin from the usersync* and *Include this plugin in the usersync*. The option to choose is *Include this plugin in the usersync*

Depending on how many details we want displayed after the synchronization, *Normal Output* or *Extended Output* can be chosen. Then click on *Start*, and the user synchronization will be finished in a few seconds.

d. Usersync History – keeps a record of the synchronization status, that is to say details regarding the number of synchronized users, time taken by this operation, etc.

e. Login Checker

In order to verify if the user login operation is correct the Login Checker routine is used. This instrument can be used to troubleshoot login problems when JFusion login does not run correctly. The last step to do after configuring JFusion is to activate the plug-in. Sometimes plug-ins are not activated using the above method. In the event this happens, they must be manually activated: in the back end section, in the Plugin Manager menu the "Authentication-Joomla" and "User-Joomla" options are set to inactive, then, the "Authentication-JFusion" and "User-JFusion" options are set to active.

Conclusions:

Like we stated in the beginning of this article, the purpose of implementing an asynchronous communication component (the SMF discussion board) in a stand-alone site was achieved. In this article we are presented the result of this implementation process, the stages and a series of basic configuration steps. The created forum can serve as support for a future development.

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