



WAFL© Step-By-Step User Guide

Introduction

What is WAFL?

Always begin with the very beginning: what is **WAFL**? **WAFL** is not about waffles. It stands for “**Website Adaptation and Formatting Layer**”.

The goal of this **open-source** project is to achieve **device-specific** content adaptation for **content management systems**.

OK, and now in English please...

Very well. Likely, the above didn't give you the slightest clue of how WAFL will enhance the uprising mobile browsing experience.

Everyone who regularly accesses the Internet from a **mobile device** will recognize that this still can be rather painful at some points. Known problems are long connection times and websites with crappy lay-out on mobile devices, thus not suitable for display on a mobile device.

Can you actually believe that? It's 2009 and we still can't browse the web decently from a mobile device. With the WAFL Project, we want to help make the mobile web a better place.

The team with the plan

WAFL has enhanced the mobile browsing experience by targeting **content management systems**. Our platform plugs into a CMS and performs the following tasks when a request arrives:

- Detect the connecting device and determine its characteristics.
- Adapt the content specifically for that device. This includes three steps:
 - Select an appropriate mobile template and optimize it for that device
 - Adapt the content of the different building blocks of the requested page
 - Transcode multimedia items to minimize bandwidth usage
- Finally return a specifically adapted and optimized page to the user

That's all nice and fancy, but how will you do that in practice?

First of all, we will be extensively using the **Siruna-platform** because it can already do some of the generic features we discussed in the section above, such as **device detection, image transcoding and content adaptation**. Because Siruna is mainly aimed at regular websites (and not at content management systems), we have **"bridged the gap" between a CMS and Siruna**. Surely, accessing content from within a CMS can be highly beneficial for content adaptation, since the semantic meaning of content blocks can be much clearer. We developed a theoretical architecture that is CMS-independent and applied this architecture as generic as possible on Joomla.



Wow! That's great! I want to have that!

Thanks! You can from now on! Just follow the installation guidelines.

Requirements

First of all, our Joomla Extension should be installed on your Joomla server. This requires:

- **Joomla 1.5.9** or newer with WAFL installed and published (see installation manual)
- **PHP 5.0** or newer
- Database with **MySQL(i)**
- **Appropriate rights** in the Joomla folder
 - You should be sure that the following maps have read/write access:
 - \$Joomla_BASEDIR/administrator/components
 - \$Joomla_BASEDIR/components
 - \$Joomla_BASEDIR/templates
 - \$Joomla_BASEDIR/modules
 - \$Joomla_BASEDIR/plugins

Features

Introduction

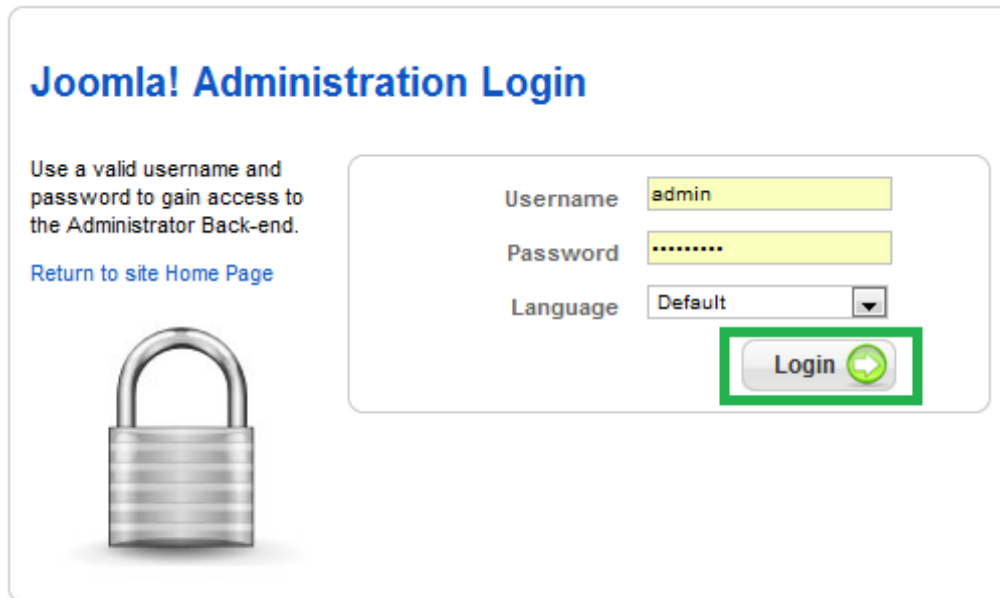
Our extension will support **3 modes of operation** to ensure that every kind of mobile website version need is covered. The selected mode will be activated when our installed WAFL plugin detects that a request is coming from a mobile device

- **Template Switching:** The CMS admin will be able to select a template that will be used for mobile requests. Our plugin also contains a mobile template, which the CMS admin can select.
- **Mobile Redirect:** The visitor will be redirected to a URL that the CMS admin can specify.
- **Siruna:** When this mode is activated, the plugin will redirect any mobile requests to an instance of the Siruna platform. It will also deliver a mobile template (enriched with information for Siruna) to requests coming from the Siruna platform.

Administration side overview

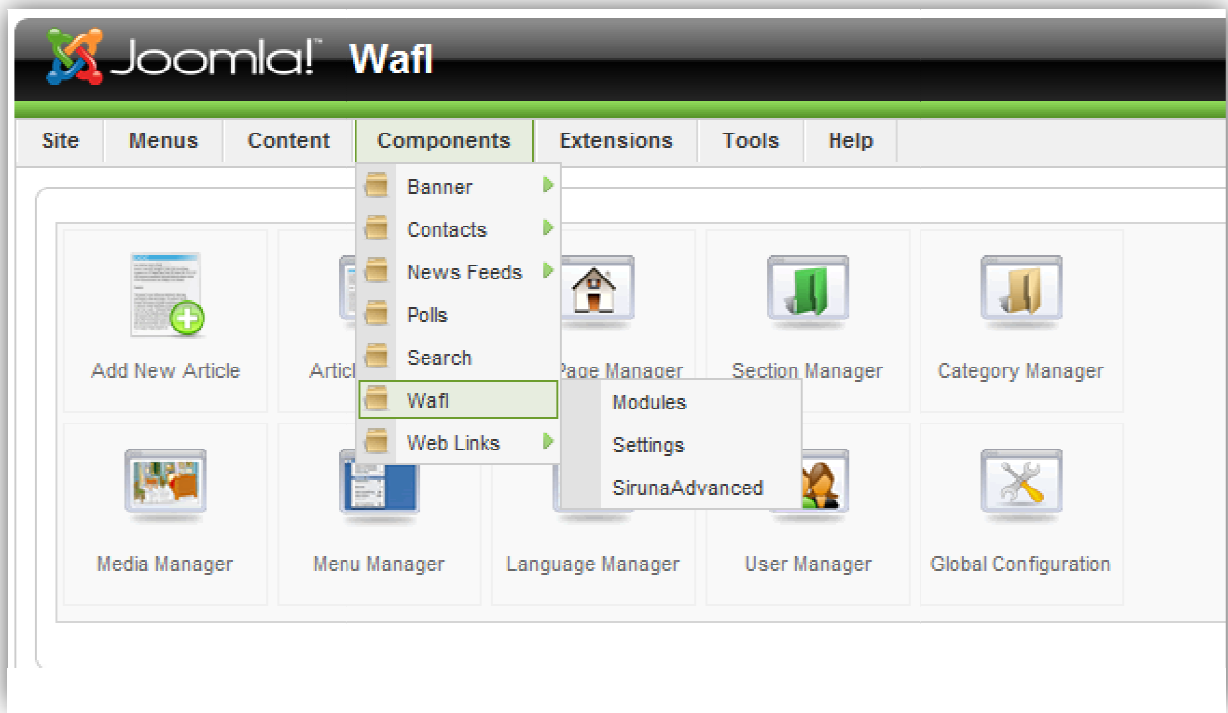
Getting there

1. Log into the administration side of your Joomla installation. This can be done by logging in via the username and password which you filled in during the installation of Joomla



The screenshot shows the Joomla! Administration Login page. At the top, it says "Joomla! Administration Login". Below this, there is a message: "Use a valid username and password to gain access to the Administrator Back-end." and a link "Return to site Home Page". On the left, there is a padlock icon. On the right, there is a login form with three fields: "Username" (containing "admin"), "Password" (containing "*****"), and "Language" (set to "Default"). A "Login" button with a green arrow is highlighted with a green box.

2. Now go to the administration page of our Joomla extension. This can be done by clicking on **Components > WafI**. You can see three subsections (Modules, Settings, SirunaAdvanced) which will be explained below



Modules

When properly followed the above guidelines, you should normally see a list with all the modules which are published in Joomla. This page can also be accessed by clicking on the **Modules** subsection (see the black text in the figure below).



These modules can be selected to be shown on your mobile website or not.

A snippet of the page is shown in the figure below.

ID	Module_id	Title	Module	Position	Order	Enabled for Mobile devices
35	35	Breadcrumbs	mod_breadcrumbs	breadcrumb	1	✓
1	1	Main Menu	mod_mainmenu	left	2	✓
29	29	Top Menu	mod_mainmenu	user3	3	✓
3	3	Popular	mod_popular	cpanel	4	✓
4	4	Recent added Articles	mod_latest	cpanel	5	✓
2	2	Login	mod_login	login	6	✓
44	46	WAFL component wrapper	mod_wafl	left	7	✓
22	22	Popular	mod_mostread	user2	8	✓
19	19	Latest News	mod_latestnews	user1	9	✓
16	16	Polls	mod_poll	right	10	✓

Figure 3 – WAFL Modules

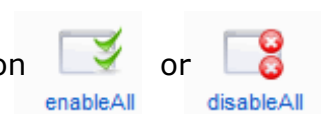
Notice the different ways to add or delete a module, or a number of modules, for display on your mobile website.

1. **Enable 1 module.** This is done by clicking on  below the **Enabled for Mobile devices** column. When successful, another symbol should appear () next to the desired module. **Disabling 1 module** is done similarly.
2. **Enable or disable some modules.** This is done by selecting the desired modules (by selecting them via on the right hand side) and then clicking this button:



Notice that clicking this button means that enabled modules will become disabled and vice versa.

3. **Enable or disable all modules.** This is done by clicking on



respectively.

If needed, you can also choose the **order in which the modules should be displayed** on your mobile website. This is done by clicking on the arrows next to the module in the **order** column, or filling in the desired ordering. Order '1' is all the way on top of the page, while the module with the largest order number will be found all the way on page-bottom.

Settings

An extension would be useless without **settings**. This is the section where the website administrator chooses his way of displaying his mobile website.

You can get to this section by simply clicking on the **Settings** subsection, or choosing **Components > WafI > Settings** in the administration menu bar.

Selecting one of the three explained features in the introduction, will draw a **border** around the settings of your choice.

You can see an overview on the figure below.

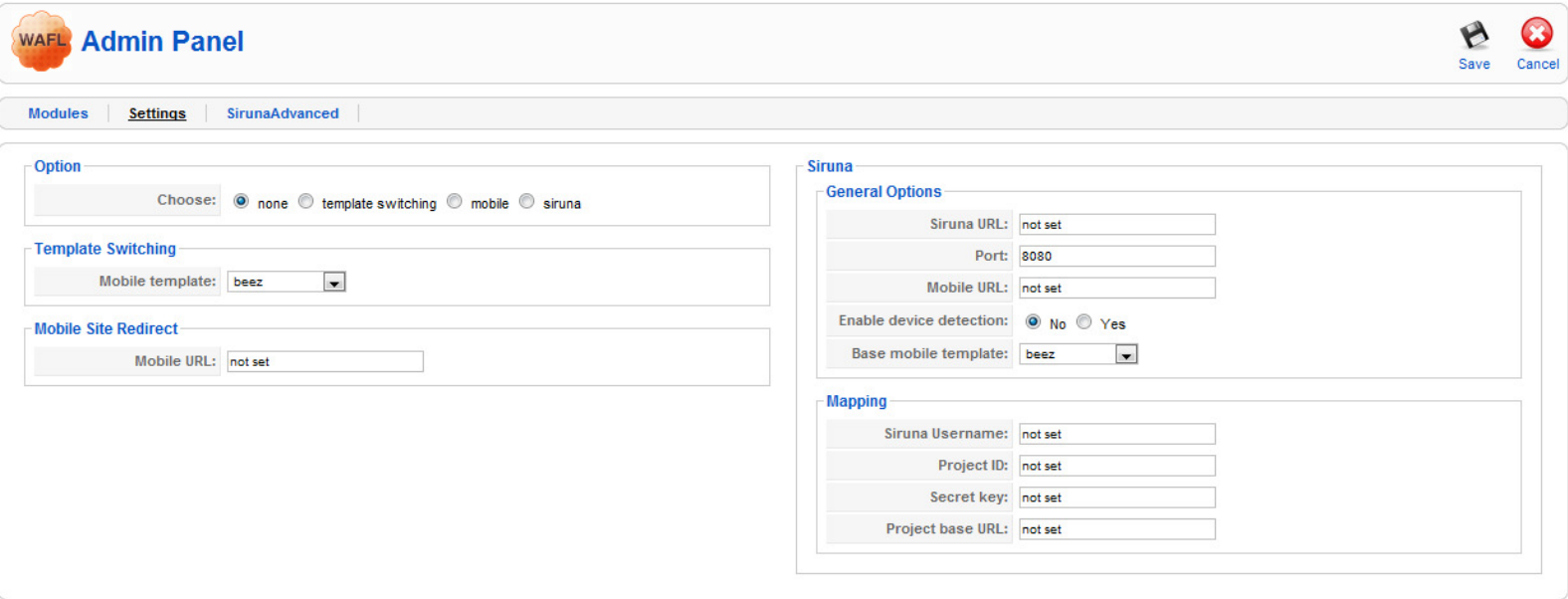


Figure 5 – WAFL Settings

I. Template Switching

1. **Don't forget** to select **template switching** in the **Option** section first, otherwise you won't notice any changes at all

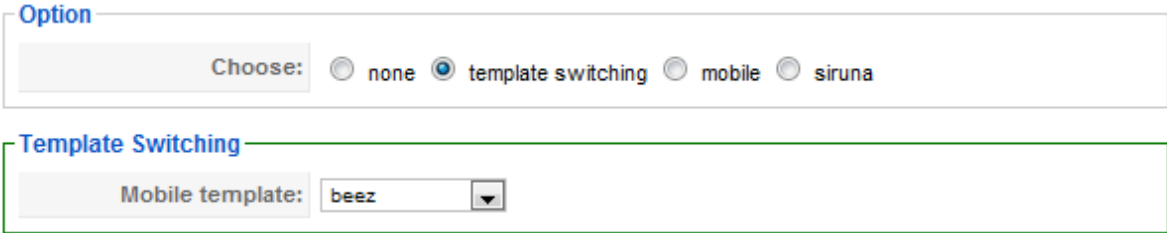
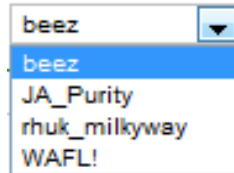


Figure 6 - Template Switching Option

2. Clicking on the arrow next to "Mobile Template" in the **Template Switching** section, lets us show a list of all the installed templates, including our own static WAFL mobile template, out of which you can choose for mobile display.



**Figure 7 -
Template
Switching choices**

3. Let's say for example you've chosen our WAFL template for mobile display. If you want this change to be noticeable by mobile surfers, first click the **Save** button in the upper-right corner. Cancelling can be done by clicking the **Cancel** button next to it
4. When browsing with a mobile device to your Joomla server (**the same URL**), you should see that the WAFL mobile template is chosen to display your mobile website

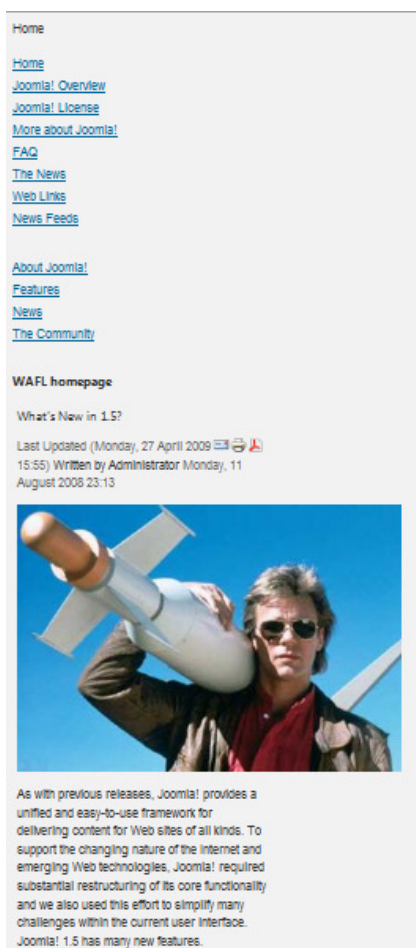


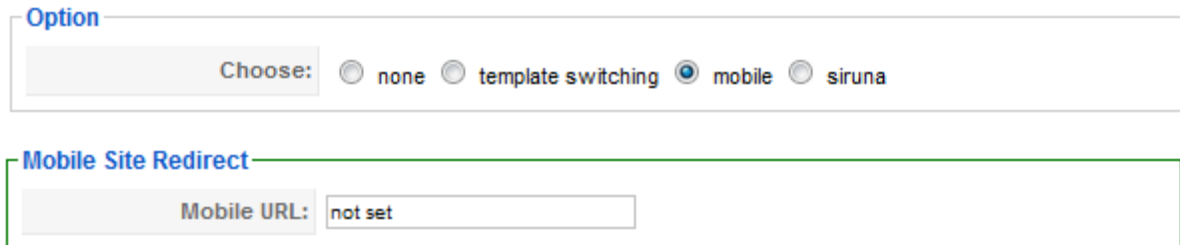
Figure 8 - WAFL mobile template

Remark: our WAFL template doesn't rescale images or take screen widths and heights into account. It just gives a static mobile template which will be sufficient to support decent display on most of the mobile devices.

II. Mobile Site Redirect

This option is meant for those who have made another URL to redirect mobile users to. The mobile URL can be set in the text area next to **Mobile URL** in the Mobile Site Redirect section (see figure below).

Don't forget to select the **mobile** option first, and finally click the **Save** button to save your changes. From now on, mobile users will be redirected to your Mobile URL.

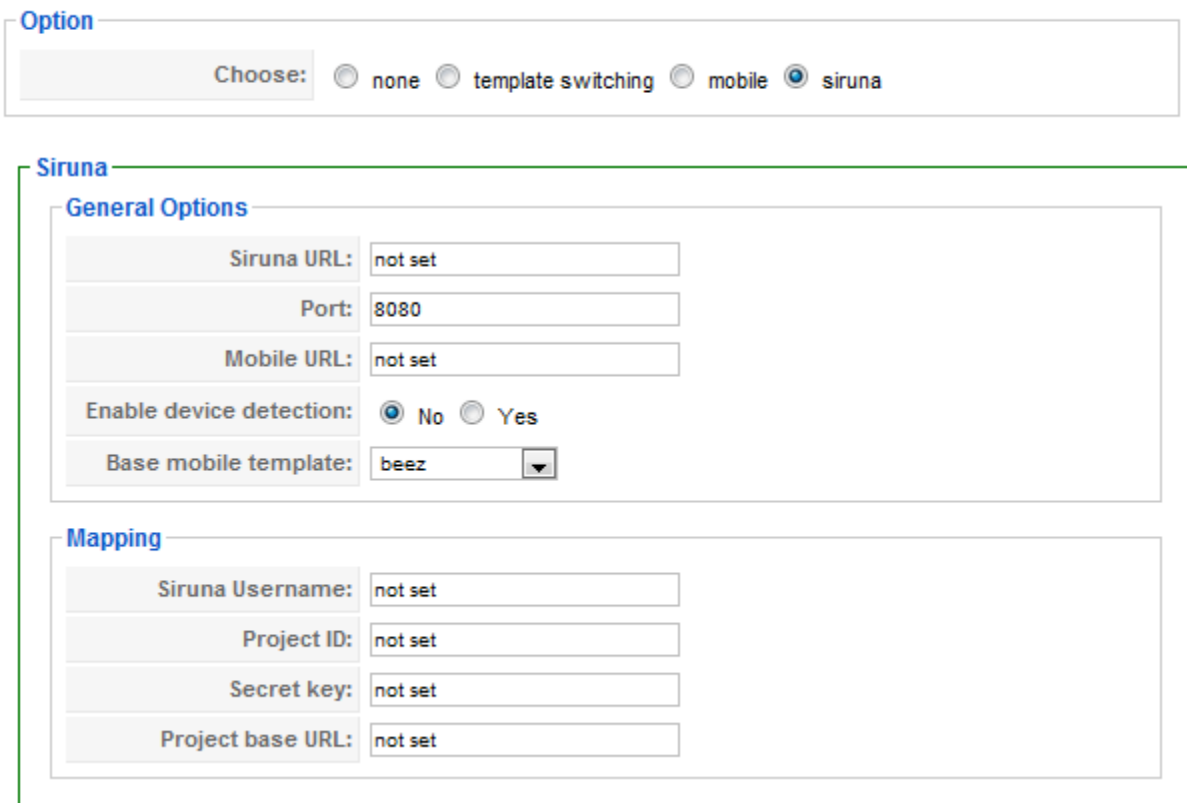


The screenshot shows two sections. The top section, titled "Option", contains a "Choose:" label followed by four radio buttons: "none", "template switching", "mobile" (which is selected), and "siruna". The bottom section, titled "Mobile Site Redirect", contains a "Mobile URL:" label followed by a text input field containing the text "not set".

Figure 9 - Mobile Site Redirect option

III. Siruna

The most elegant solution to make your website mobile, is to enable Siruna. Just like Template Switching and Mobile Redirect, **Siruna** can be chosen in the Option section as shown below.



The screenshot shows two sections. The top section, titled "Option", contains a "Choose:" label followed by five radio buttons: "none", "template switching", "mobile", "siruna" (which is selected), and "siruna". The bottom section, titled "Siruna", is divided into two sub-sections. The "General Options" sub-section contains five rows: "Siruna URL:" with a text input field containing "not set"; "Port:" with a text input field containing "8080"; "Mobile URL:" with a text input field containing "not set"; "Enable device detection:" with two radio buttons, "No" (selected) and "Yes"; and "Base mobile template:" with a dropdown menu showing "beez". The "Mapping" sub-section contains four rows: "Siruna Username:" with a text input field containing "not set"; "Project ID:" with a text input field containing "not set"; "Secret key:" with a text input field containing "not set"; and "Project base URL:" with a text input field containing "not set".

Figure 10 - Siruna Option

Here we can find a lot of settings and parameters to be filled in.

General Options

- **Siruna URL.** This is the URL which links to your **local** Siruna installation, or an **external** Siruna installation. More information on Siruna can be found on **<http://open.siruna.org/>**. Check the **Documentation** and **Downloads** section to install Siruna. Be sure to fill in the **right URL**.
- **Port.** This is the port on which the installation of Siruna can be reached
- **Mobile URL.** This is the URL to the project in the Siruna Composer and can be found as a project setting in the Siruna Composer itself. Notice that **this URL is ought to be complete**. Sometimes, the mobile URL can be found as a relative path, but the **absolute path** is needed. For example, if you have created a user with credentials test – test and your project name is BLUYH, than the mobile URL could be something similar to */ComposerWAR/View?user=test&project=BLUYH* This is **NOT** what you should fill in. The mobile URL should be *<http://www.yourjoomlawebsite.com/ComposerWAR/View?user=test&project=BLUYH>*
- **Enable Device Detection.** Enable or disable local device detection. When disabled, nothing happens, but our plugin solely intervenes when a request is coming from Siruna. This comes in handy when you want something else (e.g. a **subdomain**) to do the Siruna redirect.
- **Base mobile template.** Here you can choose the template on which the mobile display will be based. Some of the CSS properties will be extracted and passed on for display

Mapping (Siruna Composer specific settings)

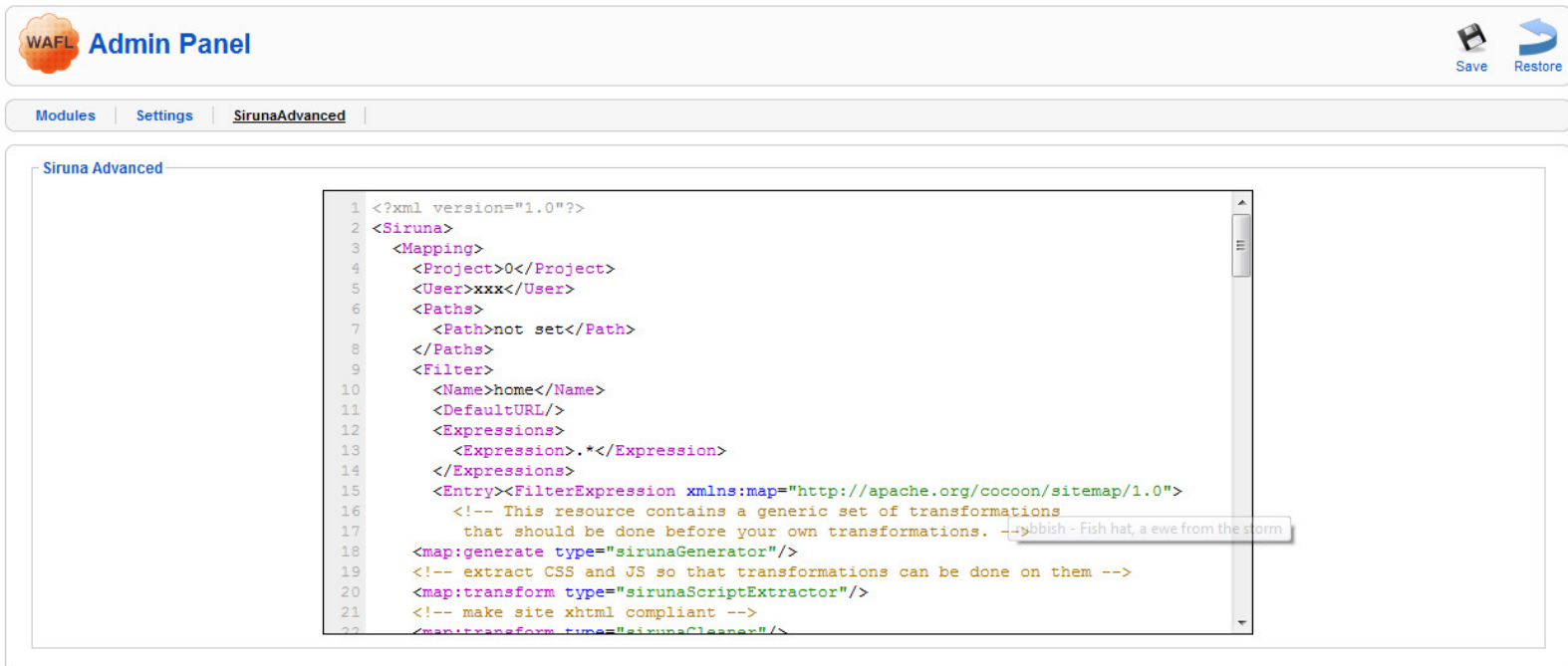
- **Siruna username**
- **Project ID**
- **Secret Key**
- **Project Base URL**

The meaning of these for settings can be found in the Siruna documentation on <http://open.siruna.org>.

Again, don't forget to select **Siruna** in the **Option** section first, and finally click the **Save** button.

SirunaAdvanced

This section is for the advanced Siruna users only. You can get here by clicking on the **SirunaAdvanced** subsection, or via **Components > Waf1 > SirunaAdvanced**. You should get something like the figure below if all went well. In many of the cases, you will see a **warning** the first time. Just follow the instructions and click the **Save** button as stated.



The screenshot shows the 'Admin Panel' interface with the 'SirunaAdvanced' configuration page. The page displays an XML configuration for Siruna. The XML code is as follows:

```
1 <?xml version="1.0"?>
2 <Siruna>
3   <Mapping>
4     <Project>0</Project>
5     <User>xxx</User>
6     <Paths>
7       <Path>not set</Path>
8     </Paths>
9     <Filter>
10      <Name>home</Name>
11      <DefaultURL/>
12      <Expressions>
13        <Expression>.*</Expression>
14      </Expressions>
15      <Entry><FilterExpression xmlns:map="http://apache.org/cocoon/sitemap/1.0">
16        <!-- This resource contains a generic set of transformations
17         that should be done before your own transformations. -->bbish - Fish hat, a ewe from the storm
18        <map:generate type="sirunaGenerator"/>
19        <!-- extract CSS and JS so that transformations can be done on them -->
20        <map:transform type="sirunaScriptExtractor"/>
21        <!-- make site xhtml compliant -->
22        <map:transform type="sirunaCleaner"/>
23      </FilterExpression>
24    </Entry>
25  </Filter>
26 </Mapping>
27 </Siruna>
```

Figure 11 – SirunaAdvanced with the XML-file which will be sent to Siruna.

For more information on Siruna, see <http://open.siruna.org> or <http://www.siruna.com>.