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ReDJ – Quick Guide

A brief introduction and usage tutorial

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SOMMARIO

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INTRODUCTION

ReDJ is a Joomla! 1.5 native extension that allows you to efficiently manage URL redirections. This is very useful for creating URL aliases, and managing redirections from an old URL to a new one. A very similar extension has been added into Joomla! 1.6, but ReDJ supports powerful regular expressions that allow to match more than one source URL. In this way it is possible to create a group of redirections with just one ReDJ item. In the following paragraphs we will learn how to make better use of regular expressions to take full advantage from ReDJ.

Since version 1.5, ReDJ also supports usage of “macros” into destination URL. This allows to create a dynamic destination URL where the destination can change according with the source URL. Another great feature introduced is the configurable redirection type for each item, with support for 301 (Moved Permanently), 307 (Temporary Redirect) and also 200 (Internal Redirect) (available for Enterprise version only). With the Internal Redirect is now possible to create a "real" URL alias with Joomla!.

Last but not least, there are many other features added to last ReDJ version, such custom error pages or referer tracing that can dramatically improve your SEO ranking. We will describe each one in detail in the next part of this guide.

HOW IT WORKS

ReDJ consists of a component for managing list of redirection items, and a plugin that is in charge of intercept the site calls and redirect them to another page when needed. Since version 1.5 of ReDJ there is just one package to download and install. These are the main steps to make it work (for geeks):

1. Install the package using Joomla! Administration interface;
2. Activate the plugin “System - ReDJ” and set its position and global parameters;
3. Use ReDJ component's functions to manage redirections, errors and referers.

Detailed instructions on each step are described in the following paragraphs. In this section we just want to focus on some basic concepts related to ReDJ and how it works.

The first important thing to understand is the “item” concept. With ReDJ Manager (the component interface) you can create as many “item” as you want, and each item has its redirection rule. But not necessarily an item corresponds to a single page (i.e. matches just a single URL).

An item has a “From URL” field that can be full URI or just a part of it. For example, if the configured “From URL” field for an item is “/home.html”, then this item matches both the URL <http://www.mysite.com/home.html> and <http://www.mysite.com/orders/home.html?view=status>. So, it means that **with a single item is possible to match multiple source URLs**.

When an user requests a site URL, the plugin take the “path+query” parts of the URL¹ and compares this string with the list of (published) item’s “From URL”, considered in their order set. **The first matching item found** (if there’s at least one) is used for redirect.

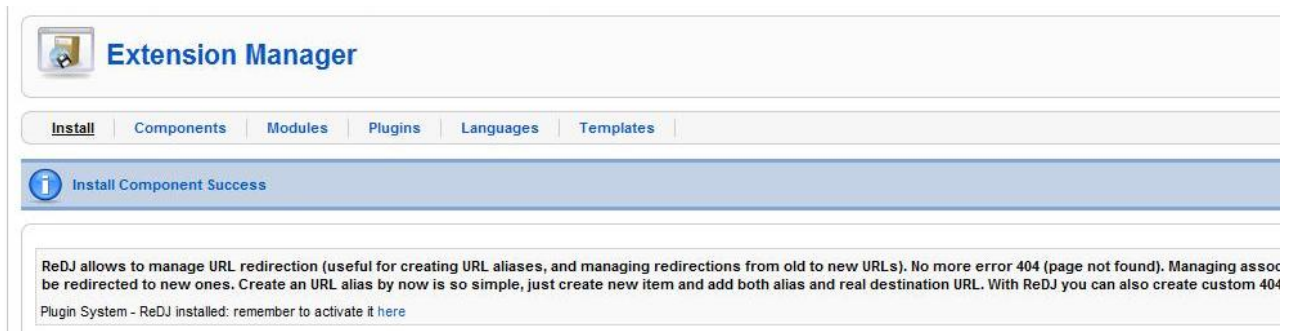
Last thing to understand about the item is that the “From URL” field can be a **regular expression**. These provide a powerful way to specify complex search patterns for matching URL. In the next paragraphs will be shown many regular expression examples.

INSTALLATION PROCEDURE

Since version 1.5 of ReDJ there is just one package to download and install. This package include both the needed component and plugin, and support the installation with “upgrade” mode, so there’s no need any more to uninstall any previous version of ReDJ.

To install ReDJ, login to Joomla! backend as administrator, and go to menu “Extensions” -> “Install/Uninstall”.

Click the browse button, select the package file (**ReDJX.XCommunity.zip** or **ReDJX.XEnterprise.zip**) and click the install button.



That’s all. Now we are ready to start using ReDJ.

¹ NOTE: The URL’s parts “scheme”, “user”, “pass”, “host” and “port” are dropped, so the domain name must not be included in the item’s URI field.

UPGRADE PROCEDURE

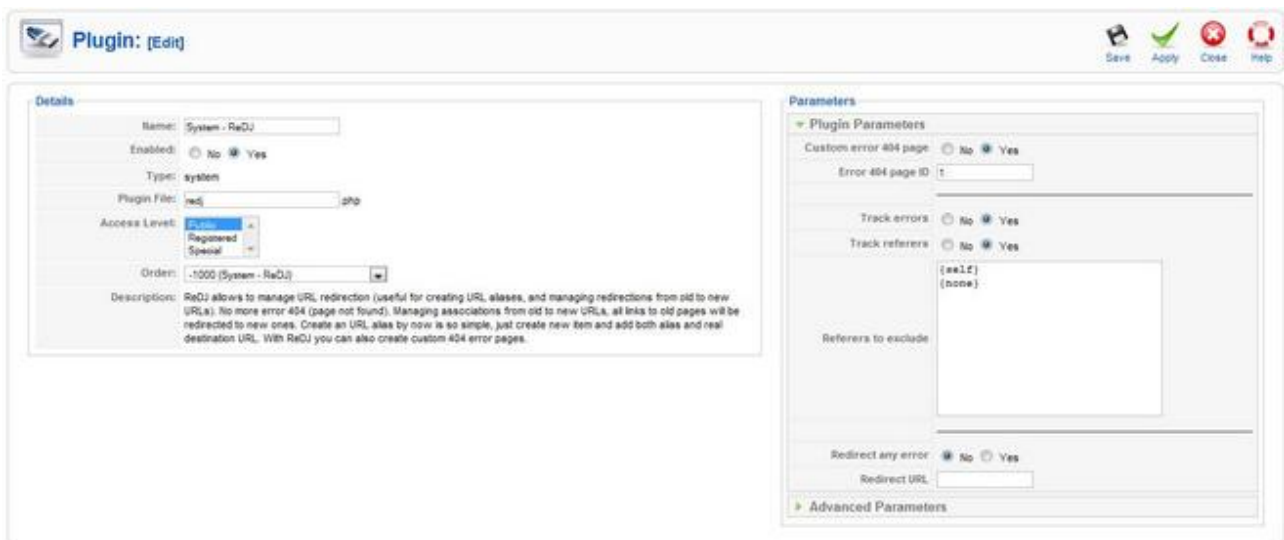
If you are upgrading from a previous version of ReDJ, **there is no need** to first uninstall old component and plugin. As mentioned earlier, since version 1.5 of ReDJ the “upgrade” mode is supported for the installation, so just install the new package over the old one, both component and plugin will be upgraded.

Note that when upgrading ReDJ also the database tables are upgraded without to delete any table data, so your items will be preserved. It is in charge of the installation process to upgrade tables structure as needed.

USAGE

Remember that is the plugin that “do the work”. ReDJ component is just an administrative interface that let you manage your items, but is the plugin that check site calls and perform the redirects when needed. So, first thing is to enable the plugin. **Note that if you need to disable ReDJ, just disable the plugin.**

Go to menu “Extensions” -> “Plugin Manager”, find “System - ReDJ” in the list and click on it to enter into configuration page.



Set “Enabled” to “Yes”, and set other parameters on the right side according to your needs. Look at “Plugin settings” paragraph for detailed information of each parameter.


Click on “Save” and check that the plugin is enabled.

| | | | |
|----|---|--------------------|---|
| 21 |  | Search - Newsfeeds |  |
| 22 |  | System - ReDJ |  |
| 23 |  | System - SEF |  |


Last thing to check is the plugins order that can be much important, especially if there are some other plugins that mess with source URL, redirections and aliases. **Normally, it should be better to put ReDJ as the first system type plugin in the list, so it will be the first to catch any page call.**

Now ReDJ is ready to work! Let's create our first item, and after this let's test the redirect from the web browser. **Note that you could get a cached page. To avoid this, remember to clear server-side cache from Joomla! Backend (menu "Tools" -> "Clean Cache", "Site" tab, select all and click "Delete" button), and client-side cache from your web browser.**

To add an item go to menu "Components" -> "ReDJ" -> "Items", and click on "New" button. It will be shown a screen for entering information related to an item. The "From URL" field must contains an "URL part" to compare with browser URL. **Remember that "From URL" must not contains URL's parts "scheme", "user", "pass", "host" and "port".**

 **Item: [New]**

Details

| | |
|-----------------|--|
| From URL: | <input type="text" value="/testme.html"/> |
| Published: | <input type="radio"/> No <input checked="" type="radio"/> Yes |
| Order: | New items default to the first position. The ordering can be changed after this item is saved. |
| To URL: | <input type="text" value="http://{siteurl}/index.php"/> |
| Redirect: | <input type="text" value="301 (Moved Permanently)"/> ▼ |
| Case sensitive: | <input checked="" type="checkbox"/> |
| Hits: | <input type="text" value="0"/> |
| Last visit: | <input type="text" value="0"/>  |

The field "To URL" contains the destination URL where to redirect the browser for any URLs that match with this item. The field "Redirect" specify redirection type to use. There are three options available:

- 301 (Moved Permanently)
- 307 (Temporary Redirect)
- 200 (Internal Redirect)

The last option is an advanced feature available only in the Enterprise version of ReDJ. This option let you change the destination page returned to web browser “internally” to Joomla!, so that the user does not notice any URL changes.²

The field “Case sensitive” specify if the match between item and current URL must consider the letters case (i.e. uppercase and lowercase are considered different). So, in case sensitive mode the item must match with current URL also for the case of characters. If case sensitive is off, no matter if item or current URL differs only for case of characters (i.e. MyPage.php = myPage.PHP = mypage.php).

Finally, the field “Hits” counts the number of times this item were used, while the field “Last visit” indicates the last time this item were used. Here you can change the counter value if needed.

In our example, case sensitive is enabled, source and destination are:

From URL: /testme.html

To URL: http://{siteurl}/index.php

We must talk in the plural when we say “URLs that match with this item” because the URL part specified as “From URL” in a single item can match more than a single browser URL. In the previous example, with “/testme.html” we match ANY URL in the form:

<http://www.mysite.com/testme.html>

<http://www.mysite.com/testme.html?itemid=xxx>

...

<http://www.mysite.com/directory/testme.html?id=xxx>

This behavior makes ReDJ very flexible, but that’s not all.

It is also possible to use **Regular Expressions** into “From URL” field. ReDJ, in fact, supports regular expressions according to Henry Spencer's implementation:

<http://dev.mysql.com/doc/refman/5.0/en/regexp.html>

And this feature makes it extremely powerful when you can master it.

The following table shows some examples. Look at “Examples and Solutions to common problems” paragraph for more advanced examples.

² The internal redirect is available for choose also in the Community version. But in this case a 301 redirect is made when the item matches.

| “From URL” field | What does it mean |
|------------------------------------|---|
| /section/*\$ | The dollar (\$) means “end with”. The star (*) means “match zero or more occurrences of previous character”, that is the slash (/). So, the “From URL” field means “address ends with /section or /section/”. |
| ^/section/9-article.html\$ | The hyphen (^) means “start with”. The dollar (\$) means “end with”. So, the “From URL” field means “address starts and ends exactly with /section/9-article.html”. |
| ^/section/11-articles.php\?id=12\$ | The hyphen (^) means “start with”. The dollar (\$) means “end with”. Also, we need a “literal” question-mark (?) for inline arguments, so it must be escaped with a backslash (\?). So, the “From URL” field means “address starts and ends exactly with /section/11-articles.php?id=12”. |

Last thing to know about the source matching address is that even the items order is important. For each URL request, ReDJ searches all the matching (published) items, but ONLY THE FIRST ONE in the ordering set is used. This can be useful, as example, to distinguish a category from its articles. If we have two URLs as follow:

<http://www.mysite.com/category/>

<http://www.mysite.com/category/article-1.html>

Items could be configured with the following “From URL” field:

| Item Order | Wrong Order | Correct Order |
|------------|--------------------------|--------------------------|
| 5 | /category/ | /category/article-1.html |
| 6 | /category/article-1.html | /category/ |

For the browser URL <http://www.mysite.com/category/article-1.html>, if items are set in the wrong order, both items match the URL, but remember that only the first matching item (/category/) is applied, so the redirect for page article-1.html will never be used.

INTERNAL REDIRECT

As mentioned earlier, the Enterprise version of ReDJ introduces a new feature, the Internal Redirect.

The 301 (Moved Permanently) or 307 (Temporary Redirect) redirects are client-side. The user from his web browser requests a page (the From URL), and the web server responds with the address to which the page was moved (the To URL). At this point, is the browser that requests the new address (i.e. is the browser to perform the redirect).

With the “Internal Redirect” instead, is the web server that changes the page returned to web browser with the new destination. The result is a server-side redirect (i.e. the redirect happens “internally” to Joomla!), so the user does not notice any URL change.

This is a great way to create URL aliases and short URLs. Just as example, consider an URL like the following:

<http://www.yoursite.com/index.php/component/reservation/event/4/forum>

It's possible to create a ReDJ item with redirection type 200 (Internal) that match to the following URL:

<http://www.yoursite.com/training>

Page and content returned by Joomla! are exactly the same for both URLs, but the shortest URL is much better for SEF and SEO.

DYNAMIC DESTINATIONS

In this paragraph we will take a deeper look at “To URL” destination field. Since version 1.5 of ReDJ, a support for complex macros has been added, and this allows to create dynamic destinations. When the browser URL matches with the “From URL” source field of an item, if its destination contains one or more macros, the plugin first explodes the macros and builds the final “real destination” URL, replacing each macro with its current value, and finally performs the redirect. Macros can take and elaborate parts of the current matching URL (e.g. a query var), so this let you create dynamic destinations strictly related to the source URL. Referring to an URL like the following:

`http://fredbloggs:itsasecret@www.example.com:8080/path/to/Joomla/section/cat/index.php?task=view&id=32#anchorthis`

The diagram shows the URL `http://fredbloggs:itsasecret@www.example.com:8080/path/to/Joomla/section/cat/index.php?task=view&id=32#anchorthis` with brackets underneath identifying its parts: `scheme` (http), `user` (fredbloggs), `pass` (itsasecret), `host` (www.example.com), `port` (8080), `path` (/path/to/Joomla/section/cat/index.php), `query` (?task=view&id=32), and `fragment` (#anchorthis).

Here is a list of supported macros for destination “To URL” field:

| Macro | Example |
|--|--|
| {siteurl} | www.example.com/path/to/Joomla |
| {scheme} | http |
| {host} | www.example.com |
| {port} | 8080 |
| {user} | fredbloggs |
| {pass} | itsasecret |
| {path} | /path/to/Joomla/section/cat/index.php |
| {query} | task=view&id=32 |
| {queryfull} | ?task=view&id=32 |
| {querybuild id,task} | id=32&task=view |
| {querybuild id,task=edit} | id=32&task=edit |
| {querybuild id,task=view,ItemId=12} | id=32&task=view&ItemId=12 |
| {querybuildfull id,task} | ?id=32&task=view |
| {querybuildfull id,task=save} | ?id=32&task=save |
| {querybuildfull id,task,action=close} | ?id=32&task=view&action=close |
| {querydrop task} | id=32 |
| {querydrop id,task=edit} | task=edit |
| {querydrop id,task=save,action=close} | task=save&action=close |
| {querydropfull task} | ?id=32 |
| {querydropfull id,task=save} | ?task=save |
| {querydropfull id,task=edit,action=close} | ?task=edit&action=close |
| {queryvar task} | view |
| {queryvar id} | 32 |
| {authority} | fredbloggs:itsasecret@www.example.com:8080 |
| {baseonly} | /path/to/Joomla (empty when installed on root, i.e. it will never contains a trailing slash) |
| {pathfrombase} | /section/cat/index.php |
| {pathltrim /path/to} | /Joomla/section/cat/index.php |
| {pathrtrim /index.php} | /path/to/Joomla/section/cat |
| {pathfrombaseltrim /section} | /cat/index.php |
| {pathfrombasertrim index.php} | /section/cat/ |
| {preg_match N}pattern{/preg_match} | (return the N-th matched pattern on the full source url, where N = 0 when not specified) |
| {preg_match}/([^\./]+)(\.\php \.\html \.\htm)/i{/preg_match} | index.php |
| {preg_match}2)/([^\./]+)(\.\php \.\html \.\htm)/i{/preg_match} | .php |

Macros highlighted are only available for Enterprise version of ReDJ.

Here a practical example of dynamic destinations:

| | |
|------------------------|--|
| Source URL | <code>http://www.yoursite.com/old/index.php?task=view&id=123&ItemId=3</code> |
| ReDJ “To URL” | <code>http://{siteurl}/new.html{querybuild ItemId=12}</code> |
| Destination URL | <code>http://www.yoursite.com/new.html?task=view&id=123&ItemId=12</code> |

ADDITIONAL FUNCTIONS

Beside the core redirect functionality, ReDJ offers some additional features that can be very useful. In the following paragraphs these functions will be described in detail.

PAGES 404

In this component section it’s possible to create custom error pages that can replace the Joomla!’s standard one.

| # | ID | Title | Language Name | Page | Hits | Last Visit |
|---|----|----------|---------------|---|------|---------------------|
| 1 | 1 | Italiano | it-IT | {sitename} - Errore 404: {errormessage} Errore 404 - {errormessage} ... | 14 | 2010-10-15 17:10:25 |
| 2 | 2 | English | en-GB | {sitename} - Error 404: {errormessage} Error 404 - {errormessage} ... | 0 | 0000-00-00 00:00:00 |

Within ReDJ, as default, there are always defined two predefined pages, with titles “Italiano” (ID = 1) and “English” (ID = 2). These are example pages, added just to show how to create HTML for a custom error page. Specifically, these pages are perfectly identical to the Joomla!’s standard error page, except they add the email address of site’s Administrator, showing how to use supported macros.

BEWARE: don’t customize these pages, because on each ReDJ upgrade these are deleted and recreated, so any changes will be lost. It’s better to add a new page (ID > 2) and use this.

For any custom error page the following fields are available:

| Name | Value | Description |
|---------------|---------|--|
| Title | Text | The title to identify the custom error page. |
| Language Name | Text | The language identifier for the custom error page. |
| Page | Text | <p>Insert HTML code of the custom error page. The following macros can be used:</p> <ul style="list-style-type: none"> • {siteurl} Site web address • {sitename} Web site name • {sitemail} Address used to send site mail • {errormessage} Description message of occurred error • {article ID} Include an article (intro and fulltext). Replace "ID" with content item ID to include |
| Hits | Integer | Number of times the custom error page were used (i.e. returned to site visitors). |

Once a page was created, to replace the Joomla!'s standard error page with this custom one, its ID number must be specified in the plugin settings. See paragraph " Plugin settings" for more details.

ERRORS

With this function it is possible to record all the error calls that the site receives. So a kind of trace log for error requests is available, and this can be useful to identify dead backlinks that need to be redirected elsewhere. Analyzing this log it is also possible to extract other useful information (e.g. to detect if the site is subject to hacker attacks like remote file inclusion or sql injection).

For any error item in the list the following fields are available:

| Name | Value | Description |
|--------------|----------|---|
| Visited URL | Text | Absolute wrong URL called by users (e.g. http://www.yoursite.com/an-old-page.html). |
| Error Code | Integer | The error code generated by Joomla! for the page (usually 404 – Not Found). |
| Hits | Integer | Number of times the wrong URL was called by users. |
| Last Visit | Datetime | This field reports the timestamp for the last time which wrong url was called by an user. This is useful to check if the problem is solved by a redirection (in this case, the timestamp doesn't change anymore). |
| Last Referer | Text | This field reports the site referer for the last request of the wrong url. This is useful to identify which sites has dead backlinks to your pages. |

Beware that this feature must be activated with a corresponding option in the plugin settings. See paragraph “ Plugin settings” for more details.

REFERERS

This feature allows to record all the referers for site visitors. A trace log with all referers is available, and this can be useful to identify traffic sources for the web site.

For any referer item in the list the following fields are available:

| Name | Value | Description |
|-------------|----------|--|
| Visited URL | Text | Absolute URL visited by users (e.g. http://www.yoursite.com/trackme.html). |
| Referer URL | Text | Absolute URL of the referer site where the user comes from (e.g. http://www.myfriend.com/linktome.html). |
| Domain | Text | This field reports just the domain part for the referer site URL (e.g. www.myfriend.com). |
| Hits | Integer | Number of times the referer URL was detected for the visited URL in site's visits. |
| Last Visit | Datetime | This field reports the timestamp for the last time which referer URL was detected for the visited URL in site's visits. This is useful to check active referer URLs. |

Beware that this feature must be activated with a corresponding option in the plugin settings. See paragraph "Plugin settings" for more details.

PLUGIN SETTINGS

In this paragraph we will explain the meaning of each plugin parameter. To edit plugin settings go to menu "Extensions" -> "Plugin Manager", find "System - ReDJ" in the list and click on it to enter into configuration page.

Basic Plugin Parameters

In the following table there’s a list of all basic plugin parameters.

| Name | Value | Description |
|-----------------------|---------|--|
| Custom error 404 page | No/Yes | No, disables. Yes, replace Joomla! standard error page with a custom one. |
| Error 404 page ID | Integer | The identification number for the custom error page to use. Beware that this refers to pages created under the ReDJ component, section “Pages 404”. The page is used only when “Custom error 404 page” option is set to Yes. |
| Track errors | No/Yes | No, disabled. Yes, enable errors trace for site URL calls (trace data are visible under ReDJ component). |

| | | |
|---------------------|--------|--|
| Track referrers | No/Yes | No, disabled. Yes, enable referers trace from site visitors (trace data are visible under ReDJ component). |
| Referers to exclude | Text | List of domains to ignore when tracing referers from site visitors, one per row (e.g. www.google.com). The following macros are also available and can be indicated each one on a single row: {self} to exclude the own domain (i.e. internal referer), {none} to exclude visits without referer. |
| Redirect any error | No/Yes | No, disabled. Yes, redirect any error call, that don't match with any (active) redirect item, to a common destination page. Beware that this also replace the custom error 404 page, just because no more error 404 can be obtained from site calls. |
| Redirect URL | Text | Absolute URL where to redirect all the errors with a 301 return code (e.g. http://www.google.it). The URL is used only when "Redirect any error" option is set to Yes, and only if none of the enabled items match with the error URL (i.e. after redirect phase). A {siteurl} macro is also supported here. |

Advanced Plugin Parameters

Parameters

- ▶ Plugin Parameters
- ▼ Advanced Parameters
 - Use early redirect No Yes
 - Base path

In the following table there's a list of all advanced plugin parameters.

| Name | Value | Description |
|--------------------|--------|---|
| Use early redirect | No/Yes | Check for redirect in a early phase. Useful only for Internal Redirect (Enterprise version), to prevent conflict with other extensions (e.g. Joomfish) |
| Base path | Text | The Joomla base installation path (e.g. /myportal if the site's homepage is http://www.mysite.com/myportal). This string will be dropped from the current URI, so to increase portability for configured items. Leave blank if the site is installed on the root. |

EXAMPLES AND SOLUTIONS TO COMMON PROBLEMS

These are some of the common questions posted on support forum.

| How to | Solution |
|---|---|
| <p>Match only site’s homepage:</p> <p>http://www.mysite.com/</p> | <p>Create an item with the following “From URL” field:</p> <p><code>^/\$</code></p> <p>The expression means “start and end with slash (/)” (i.e. there’s ONLY the slash).</p> |
| <p>Match an URL with one or more parameters:</p> <p>http://www.mysite.com/catalog.php?page=1&order=asc</p> | <p>Create an item with the following “From URL” field:</p> <p><code>/catalog.php\?page=1&order=asc</code></p> <p>or</p> <p><code>/catalog.php[.question-mark.]page=1&order=asc</code></p> <p>In both cases you need to “escape” the question mark (?). You can do it with a backslash (\) behind, or replacing with string “[.question-mark.]”.</p> |
| <p>Match all the URLs in the following form:</p> <p><code>/index2.php?option=com_content&task=view&id=159&pop=1&page=52&Itemid=10218</code></p> <p><code>/index2.php?option=com_content&task=view&id=17&pop=1&page=0&Itemid=72</code></p> <p><code>/index2.php?option=com_content&task=view&id=301&pop=1&page=0&Itemid=10440</code></p> <p><code>/index2.php?option=com_content&task=view&id=77&pop=1&page=0&Itemid=113</code></p> <p>...</p> | <p>Create an item with the following “From URL” field:</p> <p><code>/index2.php?option=com_content&task=view&id=[0-9]{1,3}&pop=1&page=[0-9]{1,2}&Itemid=[0-9]{1,5}</code></p> <p>The expression <code>[0-9]{1,5}</code> means “a sequence from 1 to 5 digits”.</p> |

GET SUPPORT

If you need help with ReDJ, post a request on support forum:

<http://www.sistemistica.it/forum.html>

To send us private data like access credentials to your backend, use the contact email:

info@sistemistica.it

SUPPORT US

If you like this extension and found it useful, would you consider a small donation to support both site and development. It's easy... just go to menu “Components” -> “ReDJ”, select the “About” tab, and click on Paypal image button, or use the link below:



https://www.paypal.com/cgi-bin/webscr?cmd=_s-xclick&hosted_button_id=BBZ3X39XRYWZ2