

jAPS 2.0 - Plugin User Profile

Do It The jAPS Way

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Abstract

The aim of this document is to fully describe the structure of the `User Profile` plugin.

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Chapter 1. Scope of the document

Introduction

The aim of this document is to fully describe the structure of the `User Profile` plugin.

Target audience

This document is for those who want to know more about the User Profile plugin functionalities and are considering to install it in a production or development environment with the Eclipse IDE. This document is aimed at system administrators (responsible for jAPS 2.0 installations) and Java developers (with a basic comprehension of the jAPS 2.0 framework).

Prerequisites

In order to take maximum advantage from the present document, it is necessary to have basic knowledge about: the Java platform, the Eclipse IDE, the Apache Tomcat servlet container, the PostgreSQL DBMS.

Resources

Additional informations may be obtained through the following mailing-lists:

- `<japs-devs@lists.sourceforge.net>`, focused on developers
- `<japs-users@lists.sourceforge.net>`, focused on final users

Is it also possible to refer to the documentation found in the:

jAPS 2.0 Project - Developer Website [<http://dev.japsportal.org/>]

Chapter 2. Characteristic of the User Profile plugin

This plugin allows to associate to the users a profile composed by a variety of informations, or Attributes, defined in the configuration of the plugin itself.

Jpuserprofile is designed with the goal of flexibility in mind: it can be installed in a jAPS installation where all the users are local as well as remote, eg. coming from a Ldap directory (in this case the LDAP plugin may be used).

Table 2.1. Riassunto delle caratteristiche

Code	Name	Type	Plugin version	Versione of jAPS 2.0
jpuserprofile	User Profile	PurePlugin	1.5	2.0.10

User Profile characteristics

Functionalities

This module offers:

- A management interface in the Back-End where the current user can edit his profile. This interface strictly adheres to the existing graphic and layout and it is accessed from the `Plugin` menu.
- Many *logical* showlets served by the so-called *Internal servlet* used by the users to modify their profile and passwords. These showlets present no decorative elements, they only expose the basic functionalities so that they can be later adjusted to fit the layout of the jAPS 2.0 installation where the plugin is to be installed.

This plugin is used to add to every user of the system a characterization given by the associated Profile, but it can be also used to give support to other functionalities as well (eg. the `Newsletter` plugin which needs the approval of the signing user in order to work, is switched on through an attribute of the User Profile).

Chapter 3. Plugin installation and integration

Plugin installation and integration

Technical characteristic

The plugin is a *Pure Plugin* since its installation neither modifies nor alters any system functionality. Furthermore, this plugin takes advantage of two technologies, one belonging to jAPS 2.0 itself, the other requiring external libraries to be installed:

- The `ApsEntity` engine, invoked by the `jACMS` engine too, is used to freely define the structure of the User Profile as a mix of simple and complex Attributes.
- The `@Aspect` of the Spring Framework. The Aspect Oriented Programming is used to inject the Profile into the existing user object without the need to alter in any manner the user manager. This happens to be completely transparent to the user engine also, which may use the standard users database as well an external Directory to get the system users. `UserProfile` is a pure plugin thanks to the AOP programming.

Package description

The `jpuserprofile` package is structured following the *jAPSPugin Pattern* specifications. So it contains the directories `doc`, `src` and the `README` file as expected.

Moreover, the `src` is structured as follows:

- `java` directory. It contains the source files and the test suites of the plugin.
- `sql` directory. It contains the sql scripts to execute in the `port` and `serv` database, for the production, development and test environment.
- The `webapp` directory. This directory contains all the files needed by the web application. More specifically we have the `jsp` files of the user interfaces and the related configuration files, the `xml` declaring the beans of the various services (both belonging to the jAPS 2.0 business logic layer and the Struts2 presentation layer), all the required `jar` libraries (including the plugin itself!) and, finally, the static resources (`css`, `images`, `js` and so on).

Integration in a production environment

From now on we refer to the application in the production environment where the plugin is going to be deployed as `myportal`. We also refer to the compressed file containing the all the plugin elements as 'package' or 'plugin package', and 'system' is *always* referred to the jAPS 2.0 framework installation and not to the hosting operating system.

To perform the installation in a production environment based on the jAPS 2.0 *compatible with this plugin*, please follow this procedure carefully:

- Copy the content of the directory `src/webapp/WEB-INF/lib` of the plugin package into `myportal/WEB-INF/lib/` within the server container.
- Make sure that the directory `myportal/webapp/WEB-INF/plugins` exists, otherwise create it. Copy the content of the `src/webapp/WEB-INF/plugins` of the plugin package into `myportal/WEB-INF/plugins/`

- Copy the content of the directory `src/webapp/resources/plugins` of the package into `myportal/resources/plugins/` within the servlet container.
- Locate the SQL scripts in the `src/sql` directory inside the plugin package. Execute the script `portScript.sql` (eg. using the free program PgAdmin) to update the port database in production.
- The script has the parameter `version` set to `production`, change it accordingly to your needs.
- In the `src/sql` directory, locate and execute the script `servScript.sql` to update the serv database in production.

The steps above must be executed *after* the server container has been stopped.

Installation in a development environment

As a convention, we call the project where the plugin is about to be installed `myproject`; all the directories inside `myproject` are local to your Eclipse project.

To perform the installation of `jpuserprofile` in an Eclipse IDE, on a version of jAPS 2.0 *compatible* with the plugin, follow these steps:

- Copy the content of the directory `src/webapp/WEB-INF/lib` of the plugin package into `myproject/WebContent/WEB-INF/lib/`, with the exclusion of the `jAPSPlugin-jpuserprofile-1.5.jar`.
- Copy the content of then directory `src/webapp/WEB-INF/plugins` of the plugin package into `myproject/WebContent/WEB-INF/plugins/`. Create the directory `plugins` if needed.
- Make sure that the directory `myproject/webapp/WEB-INF/plugins` exists, otherwise create it. Copy the content of the `src/webapp/WEB-INF/plugins` of the plugin package into `myproject/WEB-INF/plugins/`
- Execute the script `portScript.sql` (found in the `src/sql` directory of the plugin package) to update the local port database. The script has the parameter `version` set to `production`, modify it if needed. In the same way you can change the structure of the model accordingly to your needs.
- Excute the script `servScript.sql` (found in the `src/sql` directory of the plugin package) to update your local serv database.
- Excute the script `portTestScript.sql` (found in the `src/sql` directory of the plugin package) to update your local port database used for tests.
- Excute the script `servTestScript.sql` (found in the `src/sql` directory of the plugin package) to update your local serv database used for tests.
- Copy the content of the directory `src/java/main/com` into `myproject/src/com`.
- Copy the content of the directory `src/java/test/test` into `myproject/src/test`
- Copy the file `jpuserprofile_japs-struts-plugin.xml` in `myproject/src/`. Look for a file named `japs-struts-plugin.xml` under the `src` directory of your Eclipse project: if it exists copy the content of the tag `<struts>` of the file `jpuserprofile_japs-struts-plugin.xml` inside the existing `japs-struts-plugin.xml` file, then delete `jpuserprofile_japs-struts-plugin.xml`. If the `japs-struts-plugin.xml` does not exist rename the file `jpuserprofile_japs-struts-plugin.xml` in `japs-struts-plugin.xml`.
- Delete or comment out (using a java comment) the method `getConfigUtils()` of the class `JpUserprofileBaseTestCase.java` belonging to the

package `test.com.agiletec.plugins.jpuserprofile.aps` and the methods `getConfigUtils()` and `setInitParameters(Properties params)` in the class `JpUserprofileApsAdminBaseTestCase.java` belonging to the package `test.com.agiletec.plugins.jpuserprofile.apsadmin`.

Once the following steps are performed, restart your project and verify the presence of the appropriate menu item under the `Plugin` menu in the back-end interface.

Chapter 4. Configuration of the *User Profile* plugin

Configuration of the *User Profile* plugin

The profile of the user is an aggregate of informations (Attributes) structured as specified in the *Profile Type*. The profile structure is declared in a XML (located in the database `Port` of jAPS 2.0) where all the attributes composing the user profile are declared with their relative constraints. *Profile Type*.

From jAPS 2.0 version 2.0.10, the configuration of the profile types can be set on the specific GUI on the Back Office.

An example of a possible configuration follows:

```
<profiles>
  <profile typecode="PFL" typedescr="Profilo utente/cittadino tipo">
    <attributes>
      <attribute name="Nome"
        attributetype="Monotext"
        required="true" />
      <attribute name="Cognome"
        attributetype="Monotext"
        required="true" />
      <attribute name="email"
        attributetype="Monotext"
        required="true" />
      <attribute name="language"
        attributetype="Monotext"
        searchable="true" />
      <attribute name="data"
        attributetype="Date"
        searchable="true" />
      <attribute name="newsletter"
        attributetype="Boolean"
        searchable="true" />
    </attributes>
  </profile>
</profiles>
```

The *Profile Type* is a group of attributes which determine the number and the type of the basic informations. The Attributes are the basic informations which constitute the profile in its entirety. Each Attribute within a profile is identified by an unique name freely defined at configuration time. The configuration of the Profile Type recalls in many ways the Content Types are handled by the jACMS plugin. The system offers all the Attributes Types (eg. Date, Number, etc...) which can satisfy a variety of needs. Actually the Attributes Types available are defined in some configuration files (defined like / as beans of Spring).

When a model of an User Profile is configured, the XML portion which specifies the single profile attribute must always contain the types name and attributetype;

```
<attribute|list|table name="ATTRIBUTE_CODE"  
attributetype="ATTRIBUTE_CODE_TYPE" />
```

Name and `attributetype` apart, a number of other attributes, related to the Attribute Type used, may be present as well (think of the "Monolist" attribute, for example)

- To make an attribute mandatory just use the `required="true|false"` constraint. This will force the user to explicitly set the corresponding Attribute in the back-end interface. Setting the `required=true` constraint has different consequences depending on the attribute chosen. The default value is false.
- If you want to make an attribute indexable so that it can be used to select, search or filter among the profiles just use the `searcheable="true|false"` constraint (this comes in hand when there is the need to search for users by their profile attributes). When this constraint is set to true the value of the attribute is copied in an appropriate table provided to perform SQL queries. The default value is false.

WARNING: this plugin is structured by design to handle a single User Profile (identified by the code PFL) and the interfaces provided support mono-language elements (though is possible to use multi-language attributes in the definition of the User Type). With that said, the plugin can be easily extended and improved by programmers with little experience of jASP 2.0 so to manage different kinds of User Profiles and support contemporaneously multiple localizations.

The next paragraph will focus on the various attributes; they are divided in two categories: simple (mono and multi-language) and composed. The following documentation, with minor modifications, corresponds to the description of the attributes used to build the Content Types managed by the jACMS plugin.

Simple attributes

Simple attributes are the *atomic* elements which form a Content Type. Text, numbers, links are example of simple attributes. Simple attributes in turn are of two types: mono language and multi-language. The former is always presented ignoring the system language, the latter changes or, more precisely, may change for every language defined in the system.

Mono-language Simple Text

This attribute represent a simple text, unique for all the system languages, present in the system. The text is inserted in a Text input box located in the proper content editing tab for the default language. If not otherwise specified, the text can be of any length; the typical usage of the mono-text attribute is for: Name, Surname, Address etc.

XML configuration:

```
<attribute name="ATTRIBUTE_CODE" attributetype="Monotext" />
```

The following additional constraints can be used with this attribute: `required`, `searcheable`, `minlength`, `maxlength`.

Multi-language Simple Text

This attribute behaves like to mono-language counterpart, but its value is declined depending on the current language; A typical usage of this attribute is for: Title, Job etc.

XML configuration:

```
<attribute name="ATTRIBUTE_CODE" attributetype="Text" />
```

The following additional constraints can be used with this attribute: required, searchable, minlength, maxlength.

Multi-language Simple Text for textarea

This attribute works in the same manner of the multi-language text, but it's inserted in a textarea. This attribute can be used for: Note, Description etc.

XML configuration:

```
<attribute name="ATTRIBUTE_CODE" attributetype="Longtext" />
```

The following additional constraints can be used with this attribute: required, searchable, minlength, maxlength.

Hypertext

This attributes shows a Hypertext for every language defined in jAPS. The text is inserted in a textarea, transformed in a hypertext editor, so that it can be formatted, underlined and so on. The text can be of any length; a typical usage of this attribute is for: Note, Description etc.

XML configuration:

```
<attribute name="ATTRIBUTE_CODE" attributetype="Hypertext" />
```

The following additional constraints can be used with this attribute: required, searchable.

Date

This attribute is a simple text (in the format dd/MM/yyyy eg. 25/12/2009) unique for all the languages. The date is directly typed in a text box or selected using a small calendar. Being a mono-language attribute the date input box is contained in the tab for the default language of the content editing interface. Note that the date is always checked by the system so that every error is caught and properly reported. This attribute can be used for: birth date and similar

XML configuration:

```
<attribute name="ATTRIBUTE_CODE" attributetype="Date" />
```

The following additional constraints can be used with this attribute: required, searchable.

Enumerator

This attribute is formed by a unique text for all the languages. This text is picked among a list made previously available for the attribute; the choice of the text to associate to the attribute is done through a select located in the tab for the default language of the content editing interface. A typical usage is for: Country, City etc.

XML configuration:

```
<attribute name="ATTRIBUTE_CODE" attributetype="Enumerator">
<![CDATA[LISTA_ITEMS]]>
</attribute>
```

The list of the available items for the Enumerator attribute is specified in the tag CDATA with a proper separator - the comma "," by default. The separator itself may be changed with the explicit declaration of the element `separator`. The following additional constraints can be used with this attribute: `required`, `searcheable`, `separator` (the explicit declaration of the separator) and `extractorBean` (name of the Spring Bean used to extract the items to show in the select).

Number

The attribute is a unique number inserted directly in a Text box in the tab for the default language of the content editing interface. The number is always checked so to catch and report any error. Typical usage is: Address number, Year of birth etc.

XML configuration:

```
<attribute name="ATTRIBUTE_CODE" attributetype="Number" />
```

The following constraints can be used: `required`, `searcheable`.

Boolean

This attribute, typically rendered in the form of two radiobuttons, allows the user to choose between one option of the two available. A typical example is: *gender: female/male* or similar.

XML configuration:

```
<attribute name="ATTRIBUTE_CODE" attributetype="Boolean" />
```

No additional constraints are available for the boolean attribute.

CheckBox

As the name suggests, this attribute displays a single checkbox. Example: you can create fields like "Warn me when updates are available"

XML configuration:

```
<attribute name="ATTRIBUTE_CODE" attributetype="CheckBox" />
```

No additional constraints are available for the checkbox attribute.

ThreeState

This attribute is very similar to Boolean - you can say that ThreeState *includes* Boolean - but it behaves in a slightly different manner since the `undefined` (or `none` if you prefer) status is contemplated. That is, while the Boolean attribute imposes a choice to the user (like 'Gender', male or female) the ThreeState can be *not specified*.

XML configuration

```
<attribute name="ATTRIBUTE_CODE" attributetype="ThreeState" />
```

The ThreeState attribute has not additional constraints.

Composite or complex attributes

Composed attributes are composed by the aggregation, in different forms, of several simple attributes.

Monolist attribute

This kind of attribute is a list, unique for all the system languages, of simple attributes which, in turn, may be mono or multi-language. The addition, removal or the shift-position operations of the listed elements are made available in the tab for the default language of the content editing interface. The management operations, when present, for each attribute of the list are positioned in the area where the attribute itself is rendered (eg. search for image, link selection etc.).

You can use one of the following combinations:

- *Monolist of mono-language simple text elements:*

XML configuration required:

```
<list name="ATTRIBUTE_CODE" attributetype="Monolist"
nestedtype="Monotext" />
```

- *Monolist of multi-language simple text elements*

XML configuration required:

```
<list name="ATTRIBUTE_CODE" attributetype="Monolist"
nestedtype="Text" />
```

- *Monolist of composed attributes*

XML configuration required:

```
<list name="ATTRIBUTE_CODE"
  listtype="Monolist" attributetype="Composite" >
  <attribute name="ATTRIBUTE_CODE_1"
    attributetype="<ATTRIBUTE_TYPE_1>" />
  <attribute name="ATTRIBUTE_CODE_2"
    attributetype="<ATTRIBUTE_TYPE_2>" />
  . . . .
  <attribute name="ATTRIBUTE_CODE_N"
    attributetype="<ATTRIBUTE_TYPE_N>" />
</list>
```

For every attribute the constraint `required="true"` can be applied. This means that the list must contain at least one element.

List Attribute

The elements of this kind of attribute change depending on the current system language; the elements of this list are simple mono-language attributes. This list is independent from the others so the addition, removal, shift position operations are available for every language tab in the content editing interface.

The system allows lists of simple, mono-language, text elements.

```
<list name="ATTRIBUTE_CODE" attributetype="List" nestedtype="Monotext" />
```

The `required=true` constraint can be used when declaring the attribute: this implies that every list must contain at least one element.

Composed attributes

This type of attributes are composed of several simple attributes; these can be a mixed variety of type and can be mono or multi-language. The single composed attribute can exist stand alone, but it is best used as an element of a monolist (since the attributes -and *not* the monolist itself can support multi-language). The management operations, if any, for each attribute of the list are positioned in the area where the attribute itself is rendered (eg. search for image, link selection etc.).

XML configuration of the basic attribute:

```
<composite name="ATTRIBUTE_CODE" attributetype="Composite" >
  <attribute name="ATTRIBUTE_CODE_1"
    attributetype="<ATTRIBUTE_TYPE_1>" />
  <attribute name="ATTRIBUTE_CODE_2"
    attributetype="<ATTRIBUTE_TYPE_2>" />
  . . . .
  <attribute name="ATTRIBUTE_CODE_N"
    attributetype="<ATTRIBUTE_TYPE_N>" />
</composite>
```

You can use all the constraints supported by each attribute, with the sole exclusion of the `searcheable` one.

Front-End interface

This plugin come with several showlets which allow the modification of both the User Profile and password.

The available showlets are:

- *Edit Current User* - Interface used to update the profile and the password.
- *Edit Current User Password* - Change password interface
- *Edit Current User Profile* - Interface used to update the profile of the current user

Note that the interface above show only the *basic* functionalities with no presentation elements: that is because the presentation or decorative layout must be designed and developed by the front-end programmers of the local jAPS installation.

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