

# **jAPS 2.0 entando - Plugin LDAP**

## **Do It The jAPS Way**

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# **jAPS 2.0 entando - Plugin LDAP**

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## **Abstract**

The aim of this document is to provide a full description of the structure of the Ldap plugin.

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# Chapter 1. Aim of the document

## Introduction

The purpose of this document is to provide a complete description of the Plugin LDAP (`jpldap`) structure.

## Target Audience

This document is intended for those who wish to know the capabilities of the LDAP plugin (`jpldap`) and are considering the possible integration into a running production environment or in its Development Environment (IDE Eclipse Project).

The document is addressed to both System Administrators and java Developers with a basic understanding of the JAPS 2.0 entando platform.

## Prerequisites

In order to take maximum advantage from the present document, it is necessary to have basic knowledge about: Java platform, Eclipse development tools, the servlet engine Apache Tomcat, PostgreSQL dbms, jAPS 2.0 Framework.

Moreover, it's necessary to have read *jAPS 2.0 Plugin Pattern* document.

## Resources

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

- `<japs-platform@googlegroups.com>`, "japs-platform" Google Group, the jAPS 2.0 entando official Mailing List

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

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

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# Chapter 2. Caratteristiche del Plugin LDAP

The `jpldap` plugin enables the system connection to a LDAP server (including Microsoft ones) to enlarge the base of system users. These imported users are handled in the same way of the local ones.

Furthermore the plugin may leave the authentication process to the LDAP server without affecting or changing the way the authorisation are handled: both local and remote users are managed with the standard jAPS 2.0 entando user management interface.

**Table 2.1. Characteristics Summary**

Code	Name	Type	Plugin Version	Version of jAPS 2.0 entando
jpldap	LDAP	Modification	1.2	2.2.2 -
jpldap	LDAP	Modification	1.1	2.2.0 -
jpldap	LDAP	Modification	1.0	2.0.2 - 2.0.10

## Caratteristiche del Plugin LDAP

### Features

This plugin does not add new user interfaces in both the front end and in the back office. The new external users acquired from a LDAP source are managed in the same way of the "local" users (that is, users held in the `serv` database of your jAPS 2.0 entando installation).

Some restrictions to the management of the LDAP users apply: you can neither delete nor modify a LDAP user. This behaviour is intended.

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# Chapter 3. Installation e Integration

## Installation e Integration

### Technical Characteristics

This plugin is classified as *Modification* because it modifies the user management engine to allow remote authentication (in this case, on a LDAP server). The definition and the associations of the authorisations are not modified, but they can be applied - through the usual jAPS back office interfaces - to both local and remote users.

The plugin modifies the core user manager engine, namely the *UserManager*. The *UserManager* bean injected by the *Spring* framework is overwritten so to introduce the support for remote authentication (performed by the *Authentication Provider* service) and to make possible the user search in the LDAP directory.

#### **The plugin works in *Read Only* mode.**

The LDAP plugin does not allow the modification or the deletion of the objects (users) in the Directory; the structure cannot be changed as well. The Plugin (and so jAPS by extension) is not responsible for the LDAP users -intended as objects in the LDAP directory!- administration which is responsibility of the Domain administrator.

### The package

The package contains all the plugin directory (directory `doc`, `src` and the `Readme` file) defined by *jAPS2.0 Plugin Pattern* document.

In particular, the directory `src` is structured as described below:

- The `java` directory. It contains java sources and the jUnit tests for the plugin.
- Since the plugin does not add any user interface, the directory only contains the file for the bean definition of the new manager.

### Integration in Production Environment

From now we will use the name `myportal` when referring to your deployed jAPS 2.0 entando Application.

In order to execute the integration in a web application based on jAPS 2.0 entando *compatible* with the plugin, follow this procedure:

- Stop the servlet container
- Copy the content of `src/webapp/WEB-INF/lib` directory, from the provided package, to `myportal/WEB-INF/lib/` directory.
- Create the directory `myportal/WEB-INF/plugins/` if it does not exist. Copy the content of `src/webapp/WEB-INF/plugins/` directory, from the provided package, to `myportal/WEB-INF/plugins/` just created.
- Insert the following parameters properly configured

```
<!-- jpldap -->
<Environment name="ldap.provider.url"
```



```
        value="ldap://192.168.4.11:389/dc=mydomain,dc=com"
        type="java.lang.String" override="false" />
<Environment name="ldap.provider.securityPrincipal"
    value="" type="java.lang.String" override="false" />
<Environment name="ldap.provider.securityCredentials"
    value="" type="java.lang.String" override="false" />
<Environment name="ldap.provider.userObjectClass"
    value="posixAccount" type="java.lang.String" override="false" />
<Environment name="ldap.provider.userIdAttributeName"
    value="uid" type="java.lang.String" override="false" />
<Environment name="ldap.provider.filterGroup"
    value="" type="java.lang.String" override="false" />
<Environment name="ldap.provider.filterGroupAttributeName"
    value="" type="java.lang.String" override="false" />
```

in the file `myportal/META-INF/context.xml` of your jAPS 2.0 entando installation.

## Installation in a Development Environment

As a convention, we call the project where the plugin is about to be installed `myproject`.

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

- Stop the servlet container
- Copy the content of the directory `src/webapp/WEB-INF/plugins` of the provided package, inside the `myproject/WebContent/WEB-INF/plugins/`.
- Insert the following parameters (described more in depth in the next chapter

```
<!-- jpldap -->
<Environment name="ldap.provider.url"
    value="ldap://192.168.4.11:389/dc=mydomain,dc=com"
    type="java.lang.String" override="false" />
<Environment name="ldap.provider.securityPrincipal"
    value="" type="java.lang.String" override="false" />
<Environment name="ldap.provider.securityCredentials"
    value="" type="java.lang.String" override="false" />
<Environment name="ldap.provider.userObjectClass"
    value="posixAccount" type="java.lang.String" override="false" />
<Environment name="ldap.provider.userIdAttributeName"
    value="uid" type="java.lang.String" override="false" />
<Environment name="ldap.provider.filterGroup"
    value="" type="java.lang.String" override="false" />
<Environment name="ldap.provider.filterGroupAttributeName"
    value="" type="java.lang.String" override="false" />
```

properly configured, in the file `myportal/META-INF/context.xml`,

- Copy the content of the directory `src/java/main/com` in the `myproject/src/com` directory

Once the following steps are performed, restart your project and verify the connection toward the wanted LDAP server by looking for users coming from external sources in the user administration interface.

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# Chapter 4. Plugin configuration

## LDAP plugin configuration

A number of parameter must be properly configure to ensure the correct connection to the desired LDAP server (OpenLDAP and Microsoft Active Directory are supported)

### Context.xml Configuration

These parameters must be inserted as environment variables in the following configuration file: /META-INF/context.xml

#### Example 4.1. An example of the LDAP plugin configuration

```
<!-- jpldap -->
<Environment name="ldap.provider.url"
  value="ldap://192.168.4.11:389/dc=mydomain,dc=com"
  type="java.lang.String" override="false" />
<Environment name="ldap.provider.securityPrincipal"
  value="" type="java.lang.String" override="false" />
<Environment name="ldap.provider.securityCredentials"
  value="" type="java.lang.String" override="false" />
<Environment name="ldap.provider.userObjectClass"
  value="posixAccount" type="java.lang.String" override="false" />
<Environment name="ldap.provider.userIdAttributeName"
  value="uid" type="java.lang.String" override="false" />
<Environment name="ldap.provider.filterGroup"
  value="" type="java.lang.String" override="false" />
<Environment name="ldap.provider.filterGroupAttributeName"
  value="" type="java.lang.String" override="false" />
```

The following parameters can be configured (only a few of them are mandatory):

- `ldap.provider.url`

The url of the LDAP server to connect to. This setting is *mandatory*.

#### Example 4.2. Provider Url Parameter

`ldap://192.168.4.11:389/dc=mydomain,dc=com`

- `ldap.provider.securityPrincipal`

Username to use to connect the LDAP server. Leave it blank to make an anonymous connection; please note that Microsoft Active Directory does not allow anonymous connections. This parameters corresponds to the *Distinguished Name*: it is formed by the entry name itself (named *Relative Distinguished Name*, usually usually derived from some attribute of the entry) followed by the name of the parent entries separated by a comma.

#### Example 4.3. Security Principal Parameter

`cn=admin,dc=mydomain,dc=com`

- `ldap.provider.securityCredentials`

The password associated to the username for the connection to the server. It may be left blank for an anonymous connection (not allowed by a Microsoft Active Directory).

- `ldap.provider.userObjectClass`

Name of the `objectClass` entry used to map users. The specification of this parameter is *mandatory*, and it usually assumes two values: `user` for the Active Directory domains and `posixAccount` for the OpenLDAP domains. Different LDAP server implementations may require different values.

- `ldap.provider.userIdAttributeName`

Name of the attribute entry that specifies the unique id of the LDAP user. The specification of this parameter is *mandatory*. This parameter usually assumes two values: `sAMAccountName` for the Active Directory domains and `uid` for the OpenLDAP domains. Different LDAP server implementations may require different values.

- `ldap.provider.filterGroup`

Definition of the name of the LDAP group to which users belong to. If you don't want to filter the users just leave this field blank.

- `ldap.provider.filterGroupAttributeName`

Name of the entry attribute that indicates the belonging to a LDAP group. If you don't want to filter the users just leave this field blank.

## Configuration of the manager bean (optional)

If the LDAP is not properly configured the answer from the server may be so huge to result in an excessive slowdown of the system eventually leading to a general failure.

To prevent this situation, the XML containing the bean definition of the LDAP service, `WEB-INF/plugins/jpldap/conf/managers/baseManagersConfig.xml`, contains a *commented out* property definition:

```
<!-- <property name="searchResultMaxSize">
    <value>100</value>
</property> -->
```

This parameter can be toggled and used to limit the results returned by the LDAP manager so to estimate the performance degradation during the fine-tuning of the system.

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