

OW2 Aspire RFID

Sub Project: RFID Suite

Installation Guide

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1. INTRODUCTION

This guide explains how to install the RFID Suite on Windows XP Service Pack 2.

2. COMMON

2.1. JAVA

2.1.1. DOWNLOAD

Version: SE 6

URL: <http://java.sun.com/javase/downloads/index.jsp>

2.1.2. INSTALLATION

Add **JAVA_HOME** variable

1. Right click on *"My computer"*
2. Properties
3. Advanced
4. Environment Variables
5. Add a new user variable. *Name: "JAVA_HOME", Value: "path where you have install your JDK"*.

Update **PATH**

1. Right click on *"My computer"*
2. Properties
3. Advanced
4. Environment Variables
5. Modify **"PATH"**, and append the value *";%JAVA_HOME%/bin"*

2.2. MAVEN

2.2.1. DOWNLOAD

Version: 2.0.9

URL: <http://maven.apache.org/download.html>

2.2.2. INSTALL

Extract **"apache-maven-2.0.9-bin.zip"** in **"your-mvn-folder"**.

Update **PATH**

1. Right click on *"My computer"*
2. Properties
3. Advanced
4. Environment Variables

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5. Modify “PATH”, and append the value “;your-mvn-folder/bin”

2.3. LDAP SERVER (OPTIONAL)

The LDAP server is only used for an automatic deployment, and by the web page function: “*Network Topology*”.

2.3.1. DOWNLOAD

Apache DS:

Version: 1.5.0

URL: <http://www.apache.org/dyn/closer.cgi/directory/apacheds/unstable/1.5/1.5.0>

LDAP Studio:

Version: 0.8.0

URL: <http://www.apache.org/dyn/closer.cgi/directory/ldapstudio/stable/0.8.0>


2.3.2. INSTALLATION

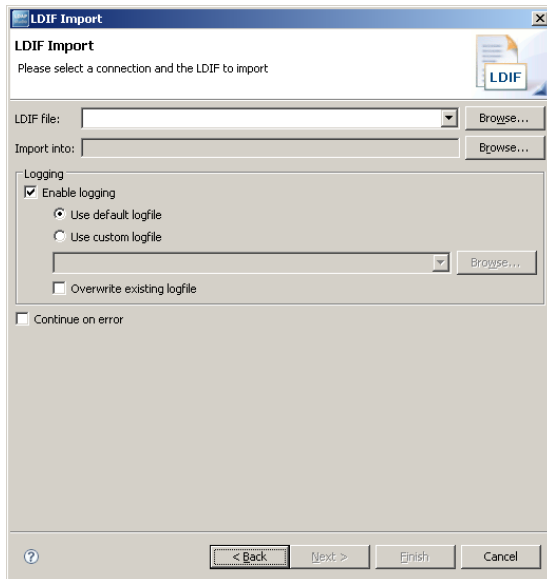
Launch the InstallShield: “**apacheds-1.5.0-win32-setup.exe**” and then “**LDAP_Studio_0.8.0_Windows.exe**”.

2.3.3. APACHE DS CONFIGURATION

Copy “**deployment\task\ldap\conf\server.xml**” to “**your-apacheds-folder\conf**”

2.3.4. LDAP STUDIO CONFIGURATION

1.  Open LDAP connection
2. *File* > *Import* > *LDIF into LDAP*
3. *Locate the LDIF file: “deployment\task\ldap\schema.ldif”*



4. Click on “Finish”

Now load LDAP content

5. File > Import > LDIF into LDAP
6. Locate the file “deployment\task\ldap\rfid_1p_1e.ldif” or “deployment\task\ldap\rfid_11e.ldif”
7. Click on “Finish”

3. SERVER

The application is compliant with JBoss and JOnAS, so you can choose each one of them as application server.



“epcis.jar” or “epcis.ear” need that you configure “server.properties” file to your server application.

For more details about this configuration, see chapter 3.3

3.1. JBOSS

3.1.1. DOWNLOAD

Version: 4.2.0.GA

URL: <http://labs.jboss.com/jbossas/downloads>

3.1.2. INSTALLATION

Extract to temporary folder the archive “jboss-4.2.0.GA.zip”, then run setup and follow the instructions.

3.1.3. CONFIGURATION

You need to modify a property in “deployment\server\build.xml”

```
<property name = "jboss.root" value = "F:\JBoss"/>
```

Change “F:\JBoss” to the appropriate value.

```
> cd deployment\server\build.xml
> ant config.jboss
```

This script configures properly your JBoss application server for the RFID Suite.

3.1.4. DEPLOYMENT



“epcis.ear” needs change in “server.properties “. See chapter 3.3 for more details.

1. Copy “epcis.ear” in “default/deploy”
2. Launch JBoss (Jboss-4.2.0.GA\bin\run.bat)

3.2. JONAS

3.2.1. DOWNLOAD

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Version: 4.8.5

URL: http://forge.objectweb.org/project/showfiles.php?group_id=5

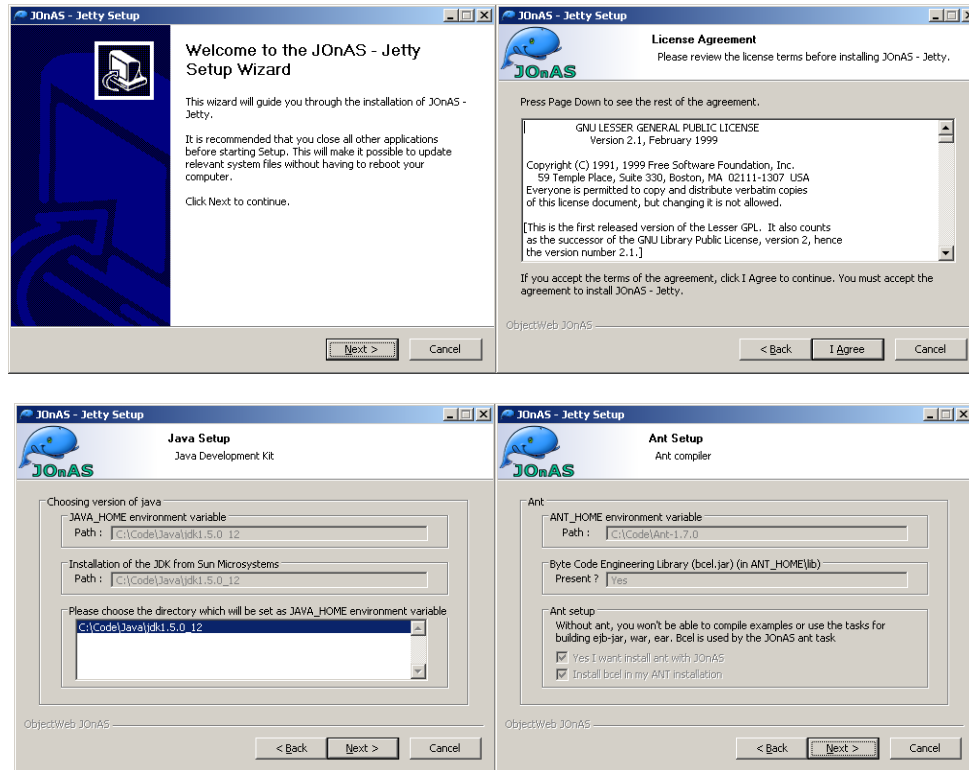
3.2.2. INSTALLATION



JOnAS4.8.5-Jetty5.1.10.exe

Double click on

Next, follow the instruction on the screen.



RFID Suite is NOT compatible with JOnAS 5 M1 (JMS compatibility problem).

3.2.3. CONFIGURATION

Copy « `/commons/jonas-xbean-2.2.0.jar` » and « `xmlbeans-jsr173-api-1.0.0.jar` » to the JOnAS lib commons folder («`JOnAS-4.8.5\lib\commons\jonas`»).

```
> cd deployment\server\build.xml
> ant
```

3.2.4. EASYBEANS INSTALLATION

As JOnAS 4 doesn't support EJB 3, you need to install an additional EJB 3 container called easybeans.

Download

Version: 1.0.0-M6

URL: <http://easybeans.objectweb.org/download.html>

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Installation

Extract the content to a temporary folder and copy "**ow_easybeans_for_jonas.rar**" to "**your-JOnAS-rep\rars\autoload**".

3.2.5. DEPLOYMENT



You **MUST** configure the graphic interface before going on, see 3.3 chapter

Copy "**epcis.jar**" and "**ons.jar**" to "**your-JOnAS-folder\easybeans-deploy**".

Copy "**epcis.war**" and "**ons.war**" to "**your-JOnAS-folder\webapps**".

Now, deploy the .war files.

Open browser to: <http://localhost:9000>



JOnAS login page



Default account :

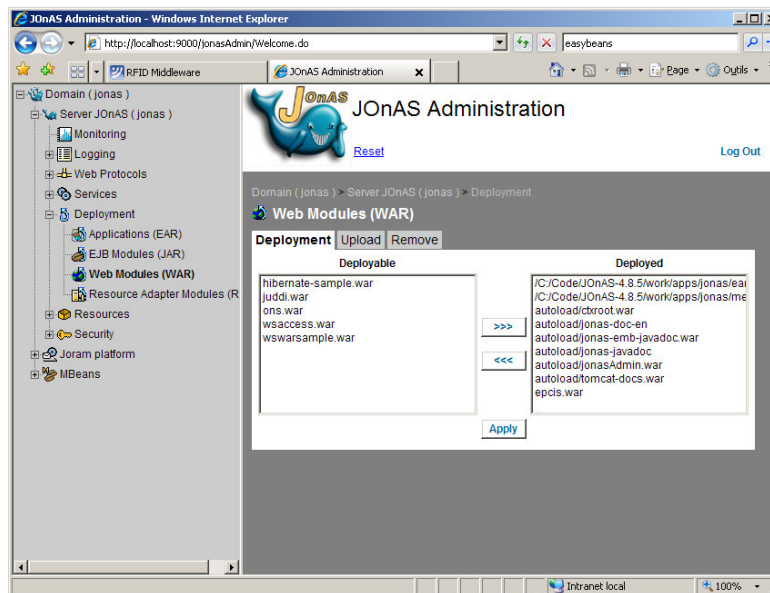
Login : jonas

Pass : jonas



JOnAS Welcome page

Click on “Go to the JOnAS administration web application”.



JOnAS WAR deployment page

1. Deployment
2. Web Modules (WAR)
3. Select “ons.war” and “epcis.war”
4. Click on “>>>” , “Apply”
5. In the next page click on “Confirm”

Now, you can access to the web interface by: <http://localhost:9000/fr.imag.adele.rfid.gwt.IndexModule/IndexModule.html>



If you want more details about the web interface, see “**User Guide**”.

3.3. CONFIGURE THE GRAPHIC INTERFACE



By default, the graphic interface is configured for **JOnAS** to work in **localhost**, same for the LDAP server.

3.3.1. GOOGLE MAP KEY



Default Google map key works only in URL **http://localhost**

You need to put your personal key into “*epcis.war/org.ow2.aspirerfid.epcis.app.IndexModule/IndexModule.html*”.

```
<script
src="http://maps.google.com/maps?file=api&v=2&key=ABQIAAAAZzek5vnC2RPsbyYG03lzfxT2yXp_Z
AY8_uFC3CFXhHIE1NvwkxRUA Ea7RZL9-KZsVpZEm4K0HrnlrA"
type='text/javascript'>
</script>
```

Go to <http://www.google.com/apis/maps/signup.html> to sign up for the Google Maps API.

3.3.2. PROPERTIES FILE LOCATION:

The server.properties file is located in **epcis.war**:
“**/WEB-INF/classes/server.properties**”

3.3.3. PROPERTIES FILE DOCUMENTATION

server.type	Application server type (JOnAS = 1; JBoss = 2)
server.jndi.ip	Application server JNDI ip
server.jndi.port	Application server JNDI port
java.naming.provider.url	LDAP server host:ip/root
java.naming.factory.initial	LDAP context factory
java.naming.security.authentication	LDAP type of authentication
java.naming.security.principal	Identity of the principal for authenticating the caller to the service
java.naming.security.credentials	Credentials of the principal for authenticating the caller to the service
ons.service.url	ONS web service URL

3.3.4. DEFAULT PROPERTIES FILE:

```
# JOnAS = 1 JBoss = 2
server.type=1
server.jndi.ip=localhost
server.jndi.port=1099
```

#LDAP configuration

```
java.naming.provider.url=ldap://localhost:10389/dc=aspirefid,dc=ow2,dc=org
java.naming.factory.initial=com.sun.jndi.ldap.LdapCtxFactory
java.naming.security.authentication=simple
java.naming.security.principal=uid=admin,ou=system
java.naming.security.credentials=secret
# ONS Simulator
# JOnAS
ons.service.url=http://localhost:9000/ons/URLService/URLServicePort?JWSDL
#JBoss
#ons.service.url=http://localhost:8080/onsWS/URLService?wsdl
```

4. EDGE

4.1. FELIX

4.1.1. DOWNLOAD

Version: 1.0.4

URL: <http://felix.apache.org/site/downloads.cgi>

SVN: svn checkout <http://svn.apache.org/repos/asf/incubator/felix/trunk> felix-trunk

4.1.2. INSTALLATION

Extract “**felix-1.0.4.zip**” to destination folder (C:\rfid\felix-1.0.4 for example).

4.1.3. CONFIGURATION

Edit “*conf/config.properties*” and add the following in the section *Bundle config properties* to configure gateways JMX port.

```
mosgi.jmxconsole.rmiport.XXX=YYY
```

With:

XXX = Felix profile name (ie gateway name)

YYY = JMX Port



Without this, MOSGi uses by default the same port than JOnAS (2000), so you cannot launch both on the same machine.

4.1.4. DEPLOYMENT

Manual deployment:



If you want more details about each bundle, see “**Administrator Guide**”.

Launch Felix:

```
cd your-felix-folder
java -jar bin/felix.jar
```

Now launch these bundles on Felix:



To start a bundle in Felix, you need to run this command:
start path/bundle.jar

Bootstrap :

System Bundle (1.1.0.SNAPSHOT)
Apache Felix Shell Service (1.1.0.SNAPSHOT)
Apache Felix Shell TUI (1.1.0.SNAPSHOT)
Apache Felix Bundle Repository (1.1.0.SNAPSHOT)
Apache Felix Log Service (0.9.0.SNAPSHOT)
MOSGi JMX-MX4J Agent Service (0.9.0.SNAPSHOT)
MOSGi JMX rmiregistry (0.9.0.SNAPSHOT)
MOSGi JMX-MX4J RMI Connector (0.9.0.SNAPSHOT)
AspireRFID-MBean-Admin (2.0.0)
AspireRFID-MBean-OBR (2.0.0)

Util bundles :

iPOJO (0.7.3.SNAPSHOT)
JmDNS (0.1.0)
AspireRFID-JmDNS-Register (2.0.0)
JoramCommonsLibs (0.0.1)
Servlet 2.1 API (0.9.0.SNAPSHOT)
OSGi R4 Compendium Bundle (4)
Apache Felix EventAdmin (1.0.1.SNAPSHOT)

RFID common bundles :

AspireRFID-Util (2.0.0)

AspireRFID-Cron-Service (2.0.0)
AspireRFID-Export-Event-API (2.0.0)
AspireRFID-Export-Event-JMS (2.0.0)
AspireRFID-Export-Event-Mail (2.0.0)
AspireRFID-Export-Event-WS (2.0.0)
AspireRFID-Export-Event-Dispatcher (2.0.0)
AspireRFID-EA-Bridge (2.0.0)
AspireRFID-ALE-API (2.0.0)
AspireRFID-ALE-Impl (2.0.0)

Edge bundles :

AspireRFID-Reader (2.0.0)
AspireRFID-Reader-Tiris-6350 (2.0.0)
AspireRFID-Sensor-Thermometer (2.0.0)
AspireRFID-Reader-Fictive (2.0.0)
AspireRFID-Sensor-GPS-Simulator (2.0.0)
AspireRFID-Reader-TagSys-Medio-Ix00 (2.0.0)
TagSys Medio lib (0.1.0)
Wire Admin (1.0.3)
Wire Admin Command (1.1.1)
Apache Felix Wire Admin Binder (0.1.0)
Apache Felix Wire Admin Binder Command (0.1.0)
RXTX (1.0.0)

4.1.5. AUTOMATIC DEPLOYMENT:

See chapter 6 for more details.

5. PREMISE

5.1. FELIX

5.1.1. DOWNLOAD & INSTALLATION

See chapter (4.1.1 and 4.1.2) above.

5.1.2. DEPLOYMENT

Manual deployment:

Launch Felix:

```
cd your-felix-folder
java -jar bin/felix.jar
```

Now launch these bundles on Felix:



For start a bundle in Felix, you need run this command:
`start path/bundle.jar`

Bootstrap :

System Bundle (1.1.0.SNAPSHOT)
Apache Felix Shell Service (1.1.0.SNAPSHOT)
Apache Felix Shell TUI (1.1.0.SNAPSHOT)
Apache Felix Bundle Repository (1.1.0.SNAPSHOT)
Apache Felix Log Service (0.9.0.SNAPSHOT)
MOSGi JMX-MX4J Agent Service (0.9.0.SNAPSHOT)
MOSGi JMX rmiregistry (0.9.0.SNAPSHOT)
MOSGi JMX-MX4J RMI Connector (0.9.0.SNAPSHOT)
AspireRFID-MBean-Admin (2.0.0)
AspireRFID-MBean-OBR (2.0.0)

Util bundles :

iPOJO (0.7.3.SNAPSHOT)
JmDNS (0.1.0)
AspireRFID-JmDNS-Register (2.0.0)
JoramCommonsLibs (0.0.1)
Servlet 2.1 API (0.9.0.SNAPSHOT)
OSGi R4 Compendium Bundle (4)

Apache Felix EventAdmin (1.0.1.SNAPSHOT)

RFID common bundles :

AspireRFID-Util (2.0.0)
AspireRFID-Cron-Service (2.0.0)
AspireRFID-Export-Event-API (2.0.0)
AspireRFID-Export-Event-JMS (2.0.0)
AspireRFID-Export-Event-Mail (2.0.0)
AspireRFID-Export-Event-WS (2.0.0)
AspireRFID-Export-Event-Dispatcher (2.0.0)
AspireRFID-EA-Bridge (2.0.0)
AspireRFID-ALE-API (2.0.0)
AspireRFID-ALE-Impl (2.0.0)

Premise bundles :

JES Mail Server (0.1.0)
XFire (0.1.0)
AspireRFID-Report-Service (2.0.0)
Joram Server (0.0.1)

5.1.3. AUTOMATIC DEPLOYMENT:

See chapter 6 for more details.

6. AUTOMATIC DEPLOYMENT

1. You need a LDAP server.
See chapter 2.4 for install and configuration documentation.
2. Launch all edges and premises with same **Felix profile name** than LDAP configuration (*.ldif)
3. Each edge and premise must have these bootstrap bundles started:

System Bundle (1.1.0.SNAPSHOT)
Apache Felix Shell Service (1.1.0.SNAPSHOT)
Apache Felix Shell TUI (1.1.0.SNAPSHOT)
Apache Felix Bundle Repository (1.1.0.SNAPSHOT)
Apache Felix Log Service (0.9.0.SNAPSHOT)
MOSGi JMX-MX4J Agent Service (0.9.0.SNAPSHOT)
MOSGi JMX rmiregistry (0.9.0.SNAPSHOT)
MOSGi JMX-MX4J RMI Connector (0.9.0.SNAPSHOT)
AspireRFID-MBean-Admin (2.0.0)
AspireRFID-MBean-OBR (2.0.0)



To start a bundle in Felix, you need to run this command:
start path/bundle.jar

4. Launch auto-deploy maven task

```
cd deployment\task
mvn install
```

7. INSTALL FROM SOURCE

7.1. REQUIREMENT

7.1.1. GOOGLE WEB TOOLKIT LIBRARY

Version: 1.4.10

URL: <http://code.google.com/webtoolkit/download.html>

7.1.2. JAMES

You can find a preconfigured JAMES server in folder “**app\james**”.



If you want to install JAMES from scratch, don't forget to add the JMS Maillet (dev\james.maillet.jms) which converts mail to JMS message.

7.2. CONFIGURATION

7.2.1. ENVIRONMENTAL VARIABLES

Create the following environmental variables with the correct locations:

```
JONAS_ROOT
JBOSS_ROOT
GWT_ROOT
JAMES_ROOT
```

7.2.2. COMPILATION

Compile bundles:

```
cd dev/bundles
mvn install
```



If, on compilation task, some Felix bundles are missing on maven remote repository. You must get Felix source from SVN and compile it with maven to add this missing bundles to your local repository.

Compile server:

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```
cd dev/server
mvn install
```

7.2.3. EDIT SOURCE WITH ECLIPSE

We recommend Eclipse plug-in: m2eclipse (<http://m2eclipse.codehaus.org/update/>)

```
cd \dev\bundles
mvn eclipse:eclipse
```

```
cd dev/server
mvn eclipse:eclipse
```

Now, import project in eclipse:

1. "File">"Import"
2. "Existing Projects into Workspace", "Next"
3. In "Select root directory", type the location of the source code.
4. Click on "Select All", and "Finish"

Convert each project into a maven2 project:

1. Select all projects
2. Right click on projects
3. "Maven2"
4. "Enable"

In the project "**xmlbean**" add the folder "**target/xmlbeans-source**" to "**source folder**" and "**/xmlbeans/target/xmlbeans-0.1.0.jar**" in the "**Build Path**"

Refresh all projects, now you can edit the code.

7.2.4. JES MAIL SERVER

Create a directory and add inside the files related to jes mail server:

```
mail.conf
log.conf
user.conf
```

Change the location of this directory in the mail.server.jes file (edgepremise\mail.server.jes-1.4\src\main\resources\conf.properties).