

## Installation of AgriOcean Dspace 1.2 on Linux.

### 1. Prerequisite software:

**can be downloaded through the software install procedures of the different Linux distributions (tested with Fedora and Ubuntu)**

- Oracle Java JDK 6 or later (standard SDK is fine, you don't need J2EE).
  - Only Oracle's Java has been tested with each Dspace release and is known to work correctly. Other flavors of Java may pose problems. Do not use OpenJDK.
  - Also available at: <http://java.sun.com/javase/downloads/index.jsp>
- Apache Tomcat 5.5 or later.
  - Note that DSpace will need to run as the same user as Tomcat. Fedora and Ubuntu installation creates a tomcat user. The AgriOcean Dspace must have the same user.
  - You need to ensure that Tomcat has a) enough memory to run DSpace and b) uses UTF-8 as its default file encoding for international character support. So ensure in your startup scripts (etc) that the following environment variable is set:  
`JAVA_OPTS="-Xmx512M -Xms64M -Dfile.encoding=UTF-8"`
  - Modifications in [tomcat-conf]/server.xml: You also need to alter Tomcat's default configuration to support searching and browsing of multi-byte UTF-8 correctly. You need to add a configuration option to the <Connector> element in [tomcat-conf]/server.xml: `URIEncoding="UTF-8"`  
e.g. if you're using the default Tomcat config, it should read:  
`<!-- Define a non-SSL HTTP/1.1 Connector on port 8080 -->`  
`<Connector port="8080"`  
`maxThreads="150"`  
`minSpareThreads="25"`  
`maxSpareThreads="75"`  
`enableLookups="false"`  
`redirectPort="8443"`  
`acceptCount="100"`  
`connectionTimeout="20000"`  
`disableUploadTimeout="true"`  
`URIEncoding="UTF-8"/>`
  - Available at: <http://tomcat.apache.org>. Note: tomcat can be downloaded through software repositories of the Linux packages, but be careful, they can also install OpenJDK, which you will have to replace with the Oracle JDK.
- PostgreSQL 8.4 or higher
  - Unicode (specifically UTF-8) support must be enabled. This is enabled by default in 8.0+.
  - Download also the pgAdmin III client for Postgresql, a handy tool to manage the database.
  - Available at: <http://www.postgresql.org/> .

### 2. AgriOcean Dspace 1.2

- Create a main directory repos at command line:
  - `sudo mkdir /repos`
  - `chown -R <user>:<tomcat user> /repos`
  - `chmod -R 775 /repos`

- Download from <http://code.google.com/p/agrioccean/downloads> the files in the directory /repos
  - Installation\_AOD\_Linux.pdf
  - AOD-Setup-1-2\_Linux.7z
- Unpack AOD-Setup-1-2\_Linux.7z. If 7z is not yet installed, a modern Linux distribution will download the necessary packages automatically (with ROOT authentication requested)
  - `mv aod /repos/aod`
  - `sudo chown -R <user>:<tomcat user> /repos/aod`
  - `sudo chmod -R 775 /repos/aod`

### 3. Installation procedure

- PostgreSQL database: From the command line.
  - Create Postgres user
    - `sudo su postgres`
    - `createuser -U postgres -d -A -P dspace`
    - `exit`
  - Allow user to connect to the database
  - `sudo vi <postgresql directory>/pg_hba.conf`
    - `# Add this line to the configuration: local all dspace md5`
    - `sudo service postgresql restart`
  - Create database: name = aod
    - `createdb -U dspace -E UNICODE aod`
    - `psql -U dspace dspace < /repos/aod/aod.sql`
- Tomcat6 server – configuration (see also under 1. prerequisite software):
  - Open `<tomcat-conf>/server.xml` in a text editor:  
Insert the following to let tomcat know about our dspace webapps. This should be added before the closing `</Host>` tag.
    - `<Context path="/dspace" docBase="/repos/aod/webapps/dspace" allowLinking="true"/>`
    - `<Context path="/oai" docBase="/repos/aod/webapps/oai" allowLinking="true"/>`
    - `<Context path="/solr" docBase="/repos/aod/webapps/solr" allowLinking="true"/>`
- Check Dspace configuration at `/repos/aod/config/dspace.cfg`

Configuration option in dspace.cfg:	Comment
<b>!!! Touch only the configuration marked in red !!!</b>	#: used to uncomment a whole line.
##### Basic information #####  # DSpace installation directory dspace.dir = <b>/repos/aod</b>	If you want to install AgriOcean DSpace in another directory, the reference to the base directory has to be changed to in the next files: <code>&lt;repos_directory&gt;</code> 1. <code>\config\dspace.cfg</code> <code>&lt;repos_directory&gt;\webapps</code> 2. <code>\dspace\WEB-INF\web.xml</code> 3. <code>\oai\WEB-INF\web.xml</code> 4. <code>\solr\WEB-INF\web.xml</code>

<p># DSpace host name - should match base URL. Do not include port number dspace.hostname = localhost</p> <p># DSpace base host URL. Include port number etc. dspace.baseUrl = http://localhost:8080</p> <p># DSpace base URL. Include port number etc., but NOT trailing slash # Change to xmlui if you wish to use the xmlui as the default, or remove # "/jspui" and set webapp of your choice as the "ROOT" webapp in # the servlet engine. dspace.url = \${dspace.baseUrl}/dspace</p> <p># The base URL of the OAI webapp (do not include /request). dspace.oai.url = \${dspace.baseUrl}/oai</p> <p># Name of the site dspace.name = AgriOcean</p>	<p>AgriOcean DSpace is installed on your local machine, to make it visible for external users you need to give it the name of your server: A URL or an IP E.g. <a href="http://www.yourinstitute.org">www.yourinstitute.org</a> or IP (ask your network manager). If tomcat is installed on another port you have to change the port number.</p> <p><i>When changing the port number, change it also in file &lt;repos_directory&gt;\config\dspace-solr-search.cfg</i></p> <p>The url of your institute will be <a href="http://www.yourinstitute.org:8080/dspace">www.yourinstitute.org:8080/dspace</a> If you want a url without extension, you can rename the link in the context path to ROOT (in /&lt;tomcat-config dir&gt;/server.xml – see above)</p> <p>Here you can adapt the name, which will be used on the website</p>
<p>##### Database settings #####</p> <p># URL for connecting to database #db.url = \${default.db.url} db.url = jdbc:postgresql://localhost:5432/aod</p> <p># JDBC Driver #db.driver = \${default.db.driver} db.driver = org.postgresql.Driver</p> <p># Database username and password #db.username = \${default.db.username} #db.password = \${default.db.password} db.username = dspace db.password = ****</p>	<p>If you have defined another database, user, you can change it at resp. db.url and db.username. Fill out the password for the postgresql user who manages the aod database.</p>
<p>##### Email settings #####</p> <p># SMTP mail server mail.server=smtgmail.com</p> <p># SMTP mail server authentication username and password (if required) mail.server.username = aaagmail.com mail.server.password =*****</p> <p># SMTP mail server alternate port (defaults to 25) mail.server.port = 25</p> <p># From address for mail mail.from.address = oceandocs@gmail.com</p>	<p>It is possible to use a gmail as a mail server.</p> <p>Every user should create their own gmail account and fill out the mail and password where required.</p> <p>If you use a local email server, no authentication is required..</p>

<pre># Currently limited to one recipient! feedback.recipient = <b>oceandocs@gmail.com</b> # General site administration (Webmaster) e-mail mail.admin = <b>oceandocs@gmail.com</b> # Recipient for server errors and alerts alert.recipient = <b>oceandocs@gmail.com</b> # Recipient for new user registration emails registration.notify = <b>oceandocs@gmail.com</b>  mail.server.disabled = <b>true</b></pre>	<p>An option is added to disable the mailserver. By default, this property is set to false. By setting <b>mail.server.disabled = true</b>, DSpace will not send out emails. This is <u>especially useful for development and test environments</u> where production data is used when testing functionality.</p>
<pre># Default language for metadata values default.language = <b>en</b></pre>	<p>If you use another language as default for the submitted information, you can change it here. Use the <a href="#">ISO693-1</a> definition (e.g. fr=français, es=Espanol, ...)</p>
<pre>##### Usage Logging #####  solr.log.server = http://localhost:<b>8080</b>/solr/statistics</pre>	<p>set this to be the port you run the dspace "solr" webapp on, by default, we are assuming a test configuration with tomcat is running on port 8080 Control the port definition in dspace-solr-search.cfg</p>

- Final Steps:

- Initialize indexing script:
  - `sudo -[tomcat user] /repos/aod/bin/dspace index-init`
- create new administrator (optional) – an administrator already exist: agr@ocean  
password: agri
  - `sudo -[tomcat user] /repos/aod/bin/dspace create-administrator`
- Setup crons: `sudo -[tomcat user] crontab -e`  
Timings of the crons are for illustration purpose only. Actual timings on the server may be different.

```
# Send out subscription e-mails at 01:00 every day
```

```
0 1 * * * [dspace]/bin/sub-daily
```

```
# Run the media filter at 02:00 every day
```

```
0 2 * * * [dspace]/bin/filter-media
```

```
# Run the checksum checker at 03:00
```

```
0 3 * * * [dspace]/bin/checker -lp
```

```
# Mail the results to the sysadmin at 04:00
```

```
0 4 * * * [dspace]/bin/dsrun org.dspace.checker.DailyReportEmailer -c
```

```
# Clean up the database nightly at 4.20am
```

```
20 4 * * * vacuumdb --analyze dspace > /dev/null 2>&1
```

```
# Run stat analysis
```

```
0 1 * * * [dspace]/bin/stat-general
```

```
0 1 * * * [dspace]/bin/stat-monthly
```

```
0 2 * * * [dspace]/bin/stat-report-general
```

```
0 2 * * * [dspace]/bin/stat-report-monthly
```

- Restart tomcat
- Open URL in web browser
  - Fire up you favourite web browser and go to:
  - <http://localhost:8080/dspace>
- You should now be able to see AgriOceanDspace website up and running

For running Dspace over port 80: See

<https://wiki.duraspace.org/display/DSPACE/DspaceOnStandardPorts>

For Advanced Installation options: go to the Dspace pages at

[http://www.dspace.org/1\\_7\\_1Documentation/Installation.html#Installation-AdvancedInstallation](http://www.dspace.org/1_7_1Documentation/Installation.html#Installation-AdvancedInstallation).

- 'cron' Jobs
- Multilingual Installation
- **DSpace over HTTPS:**
- The Handle Server (not installed for AgriOcean Dspace)
- Updating Existing Handle Prefixes
- **Google and HTML sitemaps**
- DSpace Statistics

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