

Installing ART

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1. Requirements

- Java EE application server e.g. Apache Tomcat
- Java 1.6 and above

2. Download ART

- Download the latest ART package from <http://sourceforge.net/projects/art/files/>
- Unzip the package to a temporary location. The resulting directory path will be referred to as PACKAGE_PATH.

3. Deploy the web application

Deploy the ART web application to the application server. If you don't already have a java application server set up, you can download and use Apache Tomcat.

3.1. Installing Tomcat

You can get Tomcat from <http://tomcat.apache.org/>

3.1.1. Linux Installation

- Download the latest binary distribution
- Unpack the archive somewhere e.g.

```
tar xvzf apache-tomcat-7.0.23.tar.gz
sudo mv apache-tomcat-7.0.23 /usr/local/tomcat
```

The /usr/local/tomcat directory will be referred to as TOMCAT_HOME.

- Go to TOMCAT_HOME/bin and run ./startup.sh to start Tomcat.
- To stop Tomcat, go to TOMCAT_HOME/bin and run ./shutdown.sh

3.1.2. Windows Installation

- Download and install the Windows Service Installer package
- Change the default install location from C:\Program Files, e.g. install to C:\tomcat.
- To start Tomcat, start the service e.g. type "net start tomcat7" in a command prompt window. You may need to open the command prompt window using the "Run as administrator" option.
- To stop Tomcat, stop the service e.g. type "net stop tomcat7" in a command prompt window

Once Tomcat is installed and started, open a browser and navigate to localhost:8080. You should see the Tomcat welcome page. This indicates that the Tomcat installation was successful.

3.2. Deployment on Tomcat

You can deploy web applications to Tomcat via a browser using the Tomcat Manager utility available from localhost:8080, or by copying the .war file to the TOMCAT_HOME\webapps directory.

- Ensure Tomcat is running
- Copy the file **PACKAGE_PATH\art.war** to TOMCAT_HOME\webapps. This will cause the web application to be deployed and a new directory TOMCAT_HOME\webapps\art to be created. This directory will be referred to as ART_HOME.

4. Launch ART

- Using a browser, navigate to localhost:8080/art
- Click on the **Settings** button
- ART needs a database to store details about queries, users etc (the ART repository). The application comes with an already configured sample database. Click on the **Submit** button to use this default database
- Click on the **Log Off** link. You need to log off at this point so that you can log in as an actual user.
- Log in using the username/password admin/admin

Installation is complete.

5. Using the default database

ART comes with a sample database embedded within the application. This allows you to explore the application's functionality without having to set up your own database and queries first. The database is a HSQLDB database that is run in standalone mode. The files for the database are contained in the **ART_HOME\WEB-INF\hsqldb** directory of the deployed application. To use this database as the ART repository,

- From the **Admin Console**, click on the **Settings** button
- Set the ART database username/password to ART/ART (both username and password are case sensitive)
- Set the jdbc driver field to "default"
- Set the jdbc url field to "default"
- Make any other application settings as you like and click on the **Submit** button

Note:

- If you decide to use the default database in a live/production environment, be careful. If you undeploy the application, accidentally or otherwise (e.g. when doing an application upgrade), you will lose the database as the database files will be deleted along with all other application files when the application is undeployed/redeployed.

5.1. Default users

The default database has 2 users configured - **admin** and **auser**. To login, use one of the following username/password combinations

- admin/admin (a super admin user)
- auser/auser (a normal user who can schedule jobs)

5.2. Default datasources

The default database has 2 datasources configured - **ArtRepository** and **SampleDB**.

- **ArtRepository** allows you to query ART repository tables e.g. ART_USERS, ART_QUERIES etc. The username/password for this datasource is ART/ART
- **SampleDB** allows you to query a sample target database. It has tables like ORDERS, ITEMS, REGIONS, CITIES. Most of the sample queries use this datasource. The username/password for this datasource is SAMPLE/SAMPLE.

5.3. Default queries

The default database comes with a number of queries. These sample queries help to illustrate some of the query types and features of the application e.g. charts, dashboards etc

5.4. Running in server mode

By default, the demo databases run in standalone (in-process) mode. This means that only one process can access the database at a time. Once the ART application is accessing it, you can't simultaneously query the database using other tools e.g. Squirrel SQL client. In order to be able to do this, the databases need to be run in server mode. Use the files **start-databases.bat** and **stop-databases.bat** located in the **ART_HOME\WEB-INF\hsqldb\server-mode** directory to start the demo databases in server mode, and to stop them when required.

6. Using your own RDBMS

You can use a different RDBMS for the ART repository, instead of the sample one that comes with the application. The following steps are required to use a different database.

- Deploy the JDBC driver for your database to the application server. e.g. For Apache Tomcat, you can copy the driver to TOMCAT_HOME\lib or TOMCAT_HOME\webapps\art\WEB-INF\lib. ART comes with JDBC drivers for CUBRID, PostgreSQL, MySQL and HSQLDB.
- Create a database in your RDBMS to be used for the ART repository
- Run the SQL statements in the file **PACKAGE_PATH\database\art_tables.sql** to create the ART repository schema. Read the comments at the beginning of the file before running it to see if any modifications are needed for your RDBMS
- Run the SQL file for your RDBMS located in the **PACKAGE_PATH\database\quartz** directory
- Configure your database details in the Settings page
- Create a super admin user to administer the application

A variety of databases can be used including Oracle, MySQL, PostgreSQL, HSQLDB, SQL Server, CUBRID.

6.1. Create the database

6.1.1. Using MySQL on Windows

- Ensure the path to mysql.exe is included in the PATH environment variable
- Open a command prompt window

```
c:\> mysql -h localhost -u root -p
```

- Enter the password

```
mysql> create database art;
mysql> grant all on art.* to artuser@localhost identified by "artpassword";
mysql> use art;
mysql> \. "PACKAGE_PATH\database\art_tables.sql"
mysql> \. "PACKAGE_PATH\database\quartz\tables_mysql.sql"
mysql> quit;
```

The database name, user and password can be set to anything you wish.

6.1.2. Using PostgreSQL on Windows

- Ensure the path to the PostgreSQL bin folder is included in the PATH environment variable
- Open a command prompt window

```
c:\> psql -U postgres
```

- When prompted for a password, enter the password for the postgres database user created when installing PostgreSQL. If the username of the account is not "postgres", use the appropriate name in place of postgres in the -U switch of the command.

```
postgres=# create user artuser password 'artpassword';
postgres=# create database art owner artuser;
postgres=# \c art

art=# \i 'c:/somepath/database/art_tables.sql'
art=# \i 'c:/somepath/database/quartz/tables_postgres.sql'
art=# \q
```

For the path to the sql scripts, use forward slashes instead of back slashes, and enclose the path in single quotes in case it contains spaces.

6.1.3. Using CUBRID on Windows

CUBRID is a comprehensive open source relational database management system highly optimized for Web Applications.

Using the CUBRID Manager application,

- Connect to your host
- Right click on **Databases** and select **Create Database...** Provide the required details for database creation.
- Right click on the created database and select **Login Database**. Login with the username **public** and blank password. This will ensure that tables will be created with owner as "public", making access to them more straight forward.
- Right click on the database and select **Run SQL File**. Select the PACKAGE_PATH\database\art_tables.sql file and click on OK. Do the same for the PACKAGE_PATH\database\quartz\tables_cubrid.sql file.

6.2. Configure ART

- Once the database is created, navigate to localhost:8080/art using your browser
 - Ensure that the JDBC driver for your database is available to the application. The following drivers are included with the application (in the ART_HOME\WEB-INF\lib directory). CUBRID, PostgreSQL, MySQL, HSQLDB, SQL Server (jTDS)
 - Click on the **Settings** button, enter the appropriate details for your database and other application details and click on the **Submit** button
 - From the **Admin Console**, click on the **Users** button and then create a super admin user to be used for administering the application
 - Log off
 - Log in as the newly created super admin user
 - Create and publish queries as required
-