

# **Installing ART**

# Table of Contents

1. Requirements . . . . .	1
2. Download ART . . . . .	1
3. Deploy the web application . . . . .	1
3.1. Installing Tomcat . . . . .	1
3.1.1. Linux Installation . . . . .	1
3.1.2. Windows Installation . . . . .	1
3.2. Deployment on Tomcat . . . . .	2
4. Launch ART . . . . .	2
5. Using the demo database . . . . .	2
5.1. Demo users . . . . .	2
5.2. Demo datasources . . . . .	3
5.3. Demo reports . . . . .	3
6. Using your own RDBMS . . . . .	3
6.1. Create the database . . . . .	3
6.1.1. Using MySQL on Windows . . . . .	3
6.1.2. Using PostgreSQL on Windows . . . . .	4
6.1.3. Using CUBRID on Windows . . . . .	4
6.2. Configure ART . . . . .	5
7. Patches . . . . .	5

# 1. Requirements

- Java application server or servlet container e.g. Apache Tomcat 9
- Java 8 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
- You will be taken to the ART Database page. ART needs a database to store details about reports, users etc (the ART repository).

## 5. Using the demo database

ART comes with a demo database embedded within the application. This allows you to explore the application's functionality without having to set up your own database first. The demo 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,

- Select the **Configure | ART Database** menu
- For the **Database Type** field, select **Demo**
- Click on **Save**

### Note:

- If you use the demo database as your live/production setting, 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. It is therefore not recommended to use the demo database as your live database.

### 5.1. Demo users

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

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

## 5.2. Demo datasources

The demo 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 demo reports use this datasource. The username/password for this datasource is SAMPLE/SAMPLE

## 5.3. Demo reports

The demo database comes with a number of reports. These sample reports help to illustrate some of the report types and features of the application.

## 6. Using your own RDBMS

You can use a different RDBMS for the ART repository, instead of the demo 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 a number of databases.
- 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 **ART Database** page
- Create an 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 and type the following command  

```
c:\> mysql -h localhost -u root -p
```
- Enter the password and the following subsequent commands

```
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 and type the following command

```
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.
- Enter the following subsequent commands

```
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
- On the **ART Database** page enter the appropriate details for your database and other application details and click on the **Save** button
- Select the **Configure | Users** menu and then the **Add** button and create a user with the **Admin** role to be used for administering the application
- Log off
- Log in as the newly created admin user
- Create reports as desired

## 7. Patches

ART patches replace specific files in an ART installation in order to resolve specific issues. If patches are available for your ART version, take the following steps.

- Download the latest patch for your version
- Stop the application server
- Backup the ART installation
- Extract the patch zip package to a temporary location
- Copy the art directory contained in the patch over the existing ART installation directory, overwriting existing files.
- New files in the patch with update relevant files, leaving all other files as they are were
- Start the application server

Only the latest patch for a particular version needs to be applied as the latest patch contains all the fixes in the previous patches.