Academic Platform for ONline Experiments (APONE)

INSTALLATION GUIDE

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The Academic Platform for ONline Experiments (APONE) is a Maven dynamic web project developed using Eclipse Oxygen Release (4.7.0). It requires access to running instances of MongoDB and RabbitMQ Server. The project has been developed in Java, so a Java-compliant server is required for its deployment. The server currently used is Tomcat v.8.5. Below you can see the steps to install and run the platform.

1. Tomcat

Download and install Tomcat Server: http://tomcat.apache.org/

The version currently used is 8.5.27

2. Mongo Database

Download and install Mongo Database: https://www.mongodb.com/

The version currently used is 2.6.10

The port by default is 27017, although this can be changed in the configuration file (step 4).

Currently, the platform works with a database called *irep*, which contains two collections: *experiment* and *event.* The user it uses is *irepuser.* The database and the user may be modified in the configuration file (see step 4). The database and collections may be created dynamically by the platform, but the user must be created previously, with *readwrite* role.

3. RabbitMQ Server

Download and install RabbitMQ Server: https://www.rabbitmq.com/

The version currently used is 3.6.10

The port by default is 5672, although this can be changed in the configuration file (step 4).

A web management tool can be activated with the command:

```
rabbitmq-plugins enable rabbitmq_management
```

It is listening to port 15672, and you can access (only from localhost) by using the following credentials: user:guest, password:guest (check https://www.rabbitmq.com/management.html for more and maybe more updated information).

4. Check Configuration

Download or clone the project APONE from github and check the file *config.properties* located in WEB-INF. Set the appropriate configuration for the database and RabbitMQ, and save the changes:

Property	Predefined Value	Comment
MONGOHOST	localhost	Host of MongoDB
MONGOPORT	27017	Port of MongoDB
MONGODB	irep	Name of the database (it will be created if it does not exist)
MONGOUSER	irepuser	User of the Mongo database
MONGOUSERPWD	0000	Password of the user
RABBITHOST	localhost	Host of RabbitMQ
RABBITPORT	5672	Port of RabbitMQ
RABBITEXCHANGE	irep-exchange	RabbitMQ Exchange Name

5. Generate WAR

Generate the WAR file to deploy in Tomcat with Maven, by writing the following command in the project folder:

```
mvn clean install
```

It will generate the WAR file in the *target* folder of the project.

6. Deploy the platform

With Tomcat running (as well as Mongo and RabbitMQ servers), copy that file in the webapps folder to have it automatically deployed. After some seconds, you should be able to access it from http://localhost:8080/APONE, assuming you are running Tomcat in local with the default port.

7. Test

You can run a functional test with maven:

```
mvn test
```

Previously, you have to make sure that the platform is deployed, and the *config.properties* file for testing, located at */src/test/java* contains the proper host, port and context where APONE is located:

Property	Predefined Value	Comment

HOST	localhost	Server host where APONE is deployed
PORT	8080	Server port where APONE is deployed
CONTEXT	APONE	Name of the context where APONE is deployed