Documentation of TrafficCity

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Database

The application called TrafficCity uses non-relational database MongoDB [1] to store for example user profiles with defined theirs markers through Android mobile application, heatmaps [2] generated based on OSM [3] files and application logs.

Correct configuration of database refers to initially create directories in structure */data/db*.

Database should be run using below command :

/mongod –dbpath /path/to/mongodb/data/db/ --port 27017

After successful initialization of database it should be accessible under :

http://localhost:27017

Database can be also launched using dedicated script initDBTrafficCity.pl

There is a possibility to redefine TrafficCity operating parameters by editing file config.properties which can be found under path src/main/resources/config.properties in WAR archive.

- sms_url=https://api.bihapi.pl/orange/oracle/sendsmsto={TO}&from={FROM}&msg={MSG}
- ussd_url=https://api.bihapi.pl/orange/oracle/sendussd?to={TO}&msg={MSG}
- localization_url=https://api.bihapi.pl/rest/terminal_location/location?query={QUERY}
- transport_url=https://api.bihapi.pl/wms/warszawa?center={LONGITUDE}, {LATITUDE}&zoom={ZOOM}&size={SIZEX}x{SIZEY}&format={FORMAT}&layers= {LAYERS}
- bihapi_login=48xxxxxxxxx
- bihapi_pass=xxx
- streets4mpi_path=/home/lukasz/Pulpit/Streets4MPI/
- mongo_host=127.0.0.1
- mongo_port=27017

NOTE – After changing properties values there is a need to reload JBoss Application Server

Tool recommended for administration MongoDB database - Robomongo [4].

In the case of incorrectly configured address or port to database or path to Streets4MPI, TrafficCity during startup will display appropriate page informing about the fact.

JBoss Application Server

TrafficCity application has built-in all necessary libraries which are required to properly work of application. To deploy application on server just copy WAR archive to directory /standalone/deployments/ and create .dodeploy file. After that application will be deployed immediately.

It's worth to increase the amount of memory dedicated to the application container which is related with application needs.

NOTE - For the purposes of Android mobile application there is a need to edit the settings of JBoss application container in <u>standalone.xml</u> file which is located in the path /standalone/configuration. You should apply changes in section :

```
<interfaces>
  <interface name="management">
    <inet-address value="${jboss.bind.address.management:127.0.0.1}"/>
  </interface>
  <interface name="public">
    <inet-address value="${jboss.bind.address:192.168.1.5}"/>
  </interface>
  <interface name="unsecure">
    <inet-address value="${jboss.bind.address.unsecure:192.168.1.5}"/>
  </interface>
</interfaces>
```

You should modify above address "192.168.1.5" on your own public/private IP address which is assigned to the appropriate interface, which can be found using command ifconfig (Linux) or ipconfig (Windows). Without public address using Android mobile application dedicated to TrafficCity will be only possible from internal network.

After setting IP address for example "192.168.1.5" in standalone.xml configuration file, TrafficCity will be accessible under address :

http://192.168.1.5:8080/trafficcity/index

Orange interfaces

TrafficCity uses dedicated interfaces which were prepared for the competition called BIHAPI [5] organized by Orange Poland [6] like SIM GeoLocalization API, SMS API and USSD API which allow to getting mobile phone localization, sending SMS and short USSD messages. In order to use those interfaces it is necessary to set up phone number and password for which one access was granted to those functionalities in config.properties file under property bihapi_login and bihapi_pass. More information about interfaces can be found under page http://api.bihapi.pl.

Logs

Under address http://localhost:80/TrafficCity/logs there can be found application logs.

Settings

Under address http://localhost:80/TrafficCity/settings there can be found listed variables, which are also present in config.properties.

References :
[1] http://www.mongodb.org
[2] http://en.wikipedia.org/wiki/Heat_map
[3] http://wiki.openstreetmap.org/wiki/OSM_file_formats
[4] http://robomongo.org
[5] http://bihapi.pl
[6] http://www.orange.pl