****

**BabbleSMS**

**Installation Guide**

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH TAWI COMMERCIAL SERVICES’ PRODUCTS. NO INTELLECTUAL PROPERTY RIGHTS, LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, IS GRANTED BY THIS DOCUMENT, EXCEPT AS PROVIDED IN TAWI COMMERCIAL SERVICES’ TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS. TAWI COMMERCIAL SERVICES ASSUMES NO LIABILITY WHATSOEVER, AND TAWI COMMERCIAL SERVICES DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF TAWI COMMERCIAL SERVICES’ PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

The Programs (which include both the software and documentation) contain proprietary information; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and we disclaim liability for any damages caused by such use of the Programs.

Tawi Commercial Services may make changes to specifications and product descriptions at any time, without notice.

Copyright © 2015 by Tawi Commercial Services Ltd. All rights reserved.

All other trademarks are property of their respective owners.

Tawi Commercial Services Ltd.

1st Floor, Corner View Centre,

Naivasha Road,

P.O. Box 20222 – 00100.

Nairobi, Kenya.

Table of Contents

[1. Introduction 4](#_Toc428550514)

[2. System Requirements 4](#_Toc428550515)

[ **Install Java** 4](#_Toc428550516)

[ **Install Wildfly** 7](#_Toc428550517)

[ **Install Jar files** 7](#_Toc428550518)

[ **Install Postgres** 8](#_Toc428550519)

[ **Install ant** 10](#_Toc428550520)

[ **Install Subversion** 10](#_Toc428550521)

[ **Populate the database** 10](#_Toc428550522)

[ **Deploy the BabbleSMS Project** 10](#_Toc428550523)

**BabbleSMS Installation Guide**

# Introduction

BabbleSMS Allows for you to send SMS from the convenience of your web browser. To run the System in your machine, you need to install the following softwares:

# System Requirements

Operating System

* Debian or derivative e.g. Ubuntu, Mint
* Windows 7 and above

Deployment Applications

* Redhat WildFly 8 and above
* JDK 1.8 and above
* Java Ant
* PostgreSQL 9 and above
* Client Subversion Tools - "subversion-tools" packages in Linux or TortoiseSVN in Windows

Developer Applications

* Eclipse JavaEE IDE
* Tawi Jar file collection - downloadable from http://
* Text Editor

# Installation and configuration

# **Install Java**

This tutorial will cover the installation of 32-bit and 64-bit Oracle Java 7 (currently version number 1.8.0\_25) JDK on 32-bit and 64-bit Ubuntu operating systems. These instructions will also work on Debian and Linux Mint.

1. **Check to see if your Ubuntu Linux operating system architecture is 32-bit or 64-bit, open up a terminal and run the following command below.**

***Type/Copy/Paste:*** *file /sbin/init*

1. **Check if you have Java installed on your system**. To do this, you will have to run the Java version command from terminal.

***Type/Copy/Paste:*** *java –version*

* **If you have OpenJDK installed on your system it may look like this:**

*Java version "1.7.0\_15"  
OpenJDK Runtime Environment (IcedTea6 1.10pre) (7b15~pre1-0lucid1)  
OpenJDK 64-Bit Server VM (build 19.0-b09, mixed mode)*

1. **Completely remove the OpenJDK/JRE from your system and create a directory to hold your Oracle Java JDK/JRE binaries.** This will prevent system conflicts and confusion between different vendor versions of Java. For example, if you have the OpenJDK/JRE installed on your system, you can remove it by typing the following at the command line and then create a path for the next installation:

*sudo apt-get purge openjdk-\\**

*sudo mkdir -p /opt/Programs/jdks/*

1. [**Download the Oracle Java JDK/JRE for Linux**](http://www.oracle.com/technetwork/java/javase/downloads/index.html)**.** Make sure you select the **correct** compressed binaries for your system architecture 32-bit or 64-bit (which end in tar.gz).

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

1. **Copy the Oracle Java binaries into the /opt/Programs/jdks directory.** In most cases, the Oracle Java binaries are downloaded to: **/home/"your\_user\_name"/Downloads.**

* **32-bit Oracle Java on 32-bit Ubuntu Linux installation instructions: Type the following in a terminal**

***Type/Copy/Paste:*** *cd ~/Downloads*

***Type/Copy/Paste:*** *sudo cp -r jdk-8u25-linux-i586.tar.gz /opt/Programs/jdks*

***Type/Copy/Paste:*** *cd /opt/Programs/jdks*

1. **64-bit Oracle Java on 64-bit Ubuntu Linux installation instructions:**

***Type/Copy/Paste:*** *cd ~/Downloads*

***Type/Copy/Paste:*** *sudo cp -r jdk-8u25-linux-x64.tar.gz /opt/Programs/jdks*

***Type/Copy/Paste:*** *cd /opt/Programs/jdks*

1. **Unpack the compressed Java binaries, in the directory /opt/Programs/jdks**

***Type/Copy/Paste:*** *sudo tar xvzf jdk-8u25-linux-i586.tar.gz*

***Or***

***Type/Copy/Paste****: sudo tar xvzf jdk-8u25-linux-x64.tar.gz*

**Double-check your directories.** At this point, you should have one uncompressed binary directory in /opt/Programs/jdks for the Java JDK listed as:

***Type/Copy/Paste:*** *ls –al /opt/Programs/jdks*

***jdk1.8.0\_25***

1. **Edit the system PATH file /etc/profile and add the following system variables to your system path**. Use nano, gedit or any other text editor, as root, open up /etc/profile.

***Type/Copy/Paste:*** *sudo gedit /etc/profile*

*Or*

***Type/Copy/Paste:*** *sudo nano /etc/profile*

1. **Scroll down to the end of the file using your arrow keys and add the following lines below to the end of your /etc/profile file:**

***Type/Copy/Paste:****JAVA\_HOME=/opt/Programs/jdk1.8.0\_25  
JRE\_HOME=$JAVA\_HOME/jre  
PATH=$PATH:$JAVA\_HOME/bin:$JRE\_HOME/bin  
export JAVA\_HOME  
export JRE\_HOME  
export PATH*

1. **Inform your Ubuntu Linux system where your Oracle Java JDK/JRE is located.** This will tell the system that the new Oracle Java version is available for use.

**Type/Copy/Paste:** *sudo update-alternatives --install "/usr/bin/java" "java" "/opt/Programs/jdks/jdk1.8.0\_25/jre/bin/java" 1*

1. **Inform your Ubuntu Linux system that Oracle Java JDK/JRE must be the default Java.**

***Type/Copy/Paste:*** *sudo update-alternatives --set java /opt/Programs/jdks/jdk1.8.0\_25/jre/bin/java*

1. **Reload your system wide PATH /etc/profile by typing the following command:**

***Type/Copy/Paste****: . /etc/profile*

Note your system-wide PATH /etc/profile file will reload after reboot of your Ubuntu Linux system

# **Install Wildfly**

1. Create a path where you will install your JBoss Wildfly application server

***Type/Copy/Paste****: Sudo mkdir /opt/Programs/Wildfly/*

1. Download JBoss Wildfly and extract the zip file to the above directory.

<http://download.jboss.org/wildfly/8.2.0.Final/wildfly-8.2.0.Final.zip>

1. Copy the directory to /opt/Programs/Wildfly

*cp wildfly-8.2.0.Final.zip /opt/Programs/Wildfly*

*unzip wildfly-8.2.0.Final.zip*

*mv wildfly-8.2.0.Final BabbleSMS*

1. Start Wildfly

*cd /opt/Programs/Wildfly/BabbleSMS/bin*

*./standalone.sh*

1. Add user

*cd /opt/Programs/Wildfly/BabbleSMS/bin*

*./add-user.sh*

# **Install Jar files**

The BabbleSMS requires 3rd Party jar files that can be downloaded from <http://tawi.mobi/jars.zip>

1. Create a directory /opt/Jars

*mkdir /opt/Jars*

1. Download the jar files and extract the zip

*Cd /opt/Jars*

*Wget* [*http://tawi.mobi/jars.zip*](http://tawi.mobi/jars.zip)

*Unzip jars.zip*

# **Install Postgres**

Postgresql is the database Server. To install

**As root:**

1. Add the PostgreSQL Apt Repository create a Debian sources list file (e.g. pgdg.list)

*nano /etc/apt/sources.list.d/pgdg.list*

1. Add the following line and save the file

*deb* [*http://apt.postgresql.org/pub/repos/apt/*](http://apt.postgresql.org/pub/repos/apt/) *wheezy-pgdg main*

1. Import the repository signing key

*wget* [*https://www.postgresql.org/media/keys/ACCC4CF8.asc*](https://www.postgresql.org/media/keys/ACCC4CF8.asc)

*apt-key add ACCC4CF8.asc*

1. Update the package lists

*apt-get update*

1. Finally, install PostgreSQL as usual

*apt-get install postgresql*

Returns something like this

*The following extra packages will be installed:*

*libpq5 pgdg-keyring postgresql-9.3 postgresql-client-9.3 postgresql-client-common postgresql-common*

Just press Y to continue.

1. This will install PostgreSQL 9.4 (or the latest PostgreSQL version at this time). You may install another version (e.g. 9.3), using:

*apt-get install postgresql-9.3*

1. The postgres database user initially has no password. To assign it a password (or to override the password assigned by socket credentials), run a command like the following. This command assigns the postgres user the password "newpassword".

*Sudo –s #Become superuser*

*Su postgres*

*$> psql -c "ALTER USER postgres WITH PASSWORD 'newpassword'" -d template1*

1. **Add a user and database in Postgres**To create a normal user and an associated database you need to follow the procedure below:

**Step #1: Becoming a superuser**

You need to login as database super user under postgresql server. Again the simplest way to connect as the postgres user is to change to the postgres unix user on the database server using su command as follows:

*# su - postgres*

**Step #2: Now connect to database server**

Type the following command

*$ psql template1*

OR

*$ psql -d template1 -U postgres*

Output:

*psql (9.1.4)*

*Type "help" for help.*

*template1=#*

**Step #3: Add a user called [username]**

Type the following command to create a user called tom with a password called myPassword:

*template1=# CREATE USER babblesms WITH PASSWORD ‘Hymfatsh8’;*

**Step #4: Allow the new user to create a database**

*template1=# ALTER ROLE babblesms WITH CREATEDB;*

Type \q to quit:

*template1=# \q*

1. Create babblesmsdb database and grant privileges

*$ psql template1*

*template1=# CREATE DATABASE babblesmsdb;*

*template1=# GRANT ALL PRIVILEGES ON DATABASE babblesmsdb to babblesms;*

# **Install ant**

Retrieve the binary distribution of Java Ant from the Apache website: <http://ant.apache.org>

Before installing Ant, ensure that you have installed Java and that the environment variable ‘JAVA\_HOME’ resolves correctly.

Assuming you downloaded Ant version 1.9.6:

In Windows, unpack it to the following folder: C:\Tawi\programs\ant\1.9.6

In Linux, unpack it to the following folder: /opt/Programs/ant/1.9.6

Set environmental variable ANT\_HOME to the directory above, and add ${ANT\_HOME}/bin (Unix) or %ANT\_HOME%/bin (Windows) to your PATH.

In Linux, insert the following to the *.bashrc* file in your home drive:

export ANT\_HOME=/opt/Programs/ant/1.9.6

export PATH=${ANT\_HOME}/bin:$PATH

See the screen shots below on how to set it in Windows:

You can check the basic installation with opening a new shell and typing ant. You should get a message like this:

Buildfile: build.xml does not exist!

Build failed

With a ant -version you should get an output like

Apache Ant(TM) version 1.9.6 compiled on June 29 2015

# **Install Subversion**

1. To install subversion:

*sudo apt-get install subversion*

1. Create a directory on /home called svn

*mkdir ~/svn*

1. Checkout BabbleSMS project

*Svn checkout* [*http://tawi.mobi/publicsvn/BabbleSMS*](http://tawi.mobi/publicsvn/BabbleSMS)

# **Populate the database**

1. Go to the BabbleSMS project on subversion folder

*cd ~/svn/BabbleSMS/webapp/bin*

1. Execute the script to populate the database

*./dbSetup.sh*

# Application Checkout

You can check out the application using Linux subversion tools or Windows TortoiseSVN.

In Windows, begin by creating the following folder: C:\Tawi\svn\BabbleSMS

Then use TortoiseSVN to check out the application. The URL is as follows: <https://github.com/TawiKenya/BabbleSMS>

[screen shots]

# Application Deployment

To deploy the BabbleSMS

*cd ~/svn/BabbleSMS/webapp/*

*ant dist*

Check the logs as the project is deployed. If it is successful, you can access the BabbleSMS system from your browser by accessing the following URL: <http://localhost:8080/BabbleSMS>