Empathica: Developer Help

# Introduction

This document is meant as a quick starting guide for a new Empathica developer. It contains information related to getting the source code, running Empathica, and deploying in standalone mode or on the Google App engine.

# Getting Source Code

Empathica is currently hosted on the servers of the Computational Neuroscience Research Group (CNRG) at the University of Waterloo. In order to obtain the latest version of the Empathica source code proceed as follows:

1. Download and install the latest version of svn available at <http://www.sliksvn.com/en/download>
2. Download and install the latest version of TortoiseSVN available at <http://tortoisesvn.net/downloads.html>
3. Right click on the folder you want to fetch the code to and select “SVN Repo Browser” and enter the link given below

OR

Alternatively, open the terminal and type “svn co {link given below} {destination for the code}”

Repo Link: <http://ctnsrv.uwaterloo.ca/svn/esolodkin/trunk/Empathica>

Empathica is written as an application for the web2py framework. Hence, the source code contains the python source code for the server and for the application. The actual application code can be located in empathica/applications/empathica.

# Running Empathica

Empathica is written to support two different execution modes. Namely, it can run as a standalone application with its own SQLLite database or connect to the Google Apps framework. The primary difference between these two modes of execution is in the management of user accounts.

### Standalone Mode

To run Empathica in standalone mode:

1. Download and install Python 2.5 available at <http://www.python.org/download/>
2. Open the system terminal/console and navigate to the Python directory
3. Type “python {path to empathica folder containing web2py.py}/web2py.py”
4. This will start a local web2py server and you will be prompted to select the server password for this session (type anything)
5. Press Start
6. This will bring up the index page of Empathica in the default browser
7. Click “Get started”
8. Click “Don’t have an account yet” to register
9. When you register you will be auto-logged in and ready to use Empathica

### Google App Engine

To run Empathica in Google Apps mode:

1. Download the Google App Engine launcher available at <http://code.google.com/appengine/downloads.html>
2. Open the Launcher and in menu options click add application
3. Browse to and select the top level Empathica folder (the one containing web2py.py)
4. At this point you could launch the application by selecting it in the application list and clicking the “Run” button (the users will be authenticated using their Google account)
5. To see the application you need to select in the list and click the “Browse” button

# Deploying Empathica

## Standalone

Empathica can be shipped as a standalone application. In fact, the source repository contains two different distributions (one for Windows and one for Mac) that contain compiled server code and a bundled python interpreter. Hence, no installation is necessary.

Now, in order to update these distributions to the latest version of Empathica the following steps need to be taken:

1. Compiling the code:
   1. Launch web2py.py bundled with Empathica source code
   2. Goto 127.0.0.1/admin
   3. Enter the password that was typed into the prompt at server startup
   4. For empathica application, click “compile” (note only compile using Python 2.5)
   5. Click “pack compiled” to bundle up the compiled source code
   6. Save the packed code somewhere
   7. Click remove compiled (otherwise, the development version would run from the compiled code and changed to code base would not be reflected)
2. Installing the compiled code:
   1. Terminate the development web2py server
   2. For Windows distro (have to do this on Windows)::
      1. Run web2py.exe
      2. Goto 127.0.0.1/admin
      3. On the right hand side under install applications:
         1. Type “init” for application name
         2. Browse to the file with compiled code
         3. Click install
      4. Goto 127.0.0.1 to verify that Empathica works
   3. For Mac distro (have to do this on Mac):
      1. Run web2py.app
      2. Goto 127.0.0.1/admin
      3. On the right hand side under install applications:
         1. Type “init” for application name
         2. Browse to the file with compiled code
         3. Click install
      4. Goto 127.0.0.1 to verify that Empathica works

## Google App Engine

Empathica could easily be deployed using the Google Apps launcher:

1. Start the Google Apps launcher
2. Select Empathica in the list of applications
3. Click the “Deploy” button
4. Enter “[empathicadev@gmail.com](mailto:empathicadev@gmail.com)” for email and “empathica” for password
5. Once authorization is complete, the deployment process will start automatically

# Backing up CAM Databases

Currently Empathica is saving its database to the “admin” application database folder to avoid copying the database when the compiled code is updated. Hence, no DB backup is needed between the updated. However, if backup is required, it will suffice to simply copy all of the files from the applications/admin/databases and copy them back to restore, as required.