Setting up an always-on Linux spectrometer server

Here's how to configure your Linux machine to work as an always-on spectrometer server that automatically bootstraps on power up (or after a power failure) and brings up the Stellarnet spectrometer web server.

This specific example is for Crunchbang Linux (http://crunchbang.org —an efficient distribution using the Openbox desktop manager that works well for older as well as current hardware), but the principles should be similar for other Linux distributions and desktop managers.

Set up the spectrometer

Proceed through the instructions for getting the server to work.

Set up auto-login

In Crunchbang, this is achieved through the System | User Login Settings menu. Make the user account in which the StellarNet server is installed the default. Then checkmark the auto-login option.

Create a script that initializes the server

In terminal, create a script which calls virtualenv to establish an isolated Python environment, and then run the spectrometry web server within it. To create or edit such a script named (just for example) *bashscript* in the user's home directory:

```
cd ~/

nano bashscript
```

…In the editor, type the following lines:

```
#!/bin/bash

cd ~/spectrometer

. venv/bin/activate

screen ./spectroweb.py
```

Type ctrl-x and save the file. Use chmod -x to make the script executable.

Call the script automatically at login

In a terminal, issue:

```
sudo nano ~/.config/openbox/autostart
```

In the editor, scroll to the bottom of the autostart script and add the following lines:

```
## start the spectrometry server

cd ~/

terminator --geometry=485x290 -x bash bashscript &
```

Save your changes.

The third of the lines we just added opens a terminal window (Crunchbang uses the Terminator terminal emulator), sizes the window nicely, and executes the script we just created. The ampersand at the end allows the autostart script to continue without the window closing.

How it works:

The autostart script executes on login of the user.

The result is a system that boots into the spectrometer's userspace and automatically initializes the spectrometer web server.

The *bashscript* script is handy at the command-line too. If the server is not already running, just issue:

```
. bashscript
```

…to start the spectrometer web server running.