Contents

1 Installation and configuration instructions for lastFmProxy **1**

1.1 What is lastFmProxy? . . . 1
1.2 installation steps . . . 1
1.2.1 Python . . . 1
1.3 configuration steps . . . 2
1.3.1 dyndns.org redirection . . . 2
1.3.2 router and IP config . . . 5
1.3.3 last.fm API key and secret . . . 6
1.3.4 lastFmProxy (lp-*.zip) . . . 8
1.4 running lastFmProxy . . . 8
1.4.1 on the machine . . . 8
1.4.2 remote . . . 9
1.5 What can I do with lastFmProxy? . . . 9
1.6 feedback . . . 10
1.7 thanks . . . 10

1 Installation and configuration instructions for lastFmProxy

This PDF document provides information about the installation of pre-requisites for *lastFmProxy* and their configuration.

Changes to the previous version of lastFmProxy are highlighted.

1.1 What is lastFmProxy?

LastFmProxy is a proxy server for the last.fm radio streams. It allows you to use your regular old audio player to listen to the last.fm streams. It does this by acting as a player itself, connecting to the server on your behalf, but instead of playing the stream, it simply relays it to whichever other application connecting to it.

LastFmProxy is a collection of python scripts. They were provided by Vidar Madsen up to version 1.4b. I discovered them on the web and fixed the 'ban' and 'love' functions in version 1.4c. They've been adapted to use the latest lastFM API web services. My name is Gabi Frings. Versions 1.4a and 1.4b are developer releases that have not been accessible for the public.

1.2 installation steps

1.2.1 Python

Python is a programming language that excessively uses indentation for readability. To Java developers it's a bit strange at first, but it works better than one might expect from the name - it's named after the comedians from 'Monty Python'.

For executing the *lastFmProxy* scripts a python environment is necessary. Visit http://www.python.org/ftp/python/ if it's not already installed. I'm using version 2.6.4 for Win.

1.3 configuration steps

This section lists all pre-requisites for using the lastFmProxy. Don't worry if you do not know these items, I'll guide you through the following steps.

- `dyndns.org` redirection
- router and IP config
- `last.fm` API key and secret
- lastFmProxy (lp-1.4c.zip)

1.3.1 dyndns.org redirection

Your IP address is usally dynamically changed every time you log in to your internet provider. The service at dyndns.org provides the translation between an alias and your current IP.

Please replace "'gabelle"' with your last.fm user name in the follwing instructions.

Open `http://www.dyndns.com` and apply for a "'Free Dynamic DNS"'.

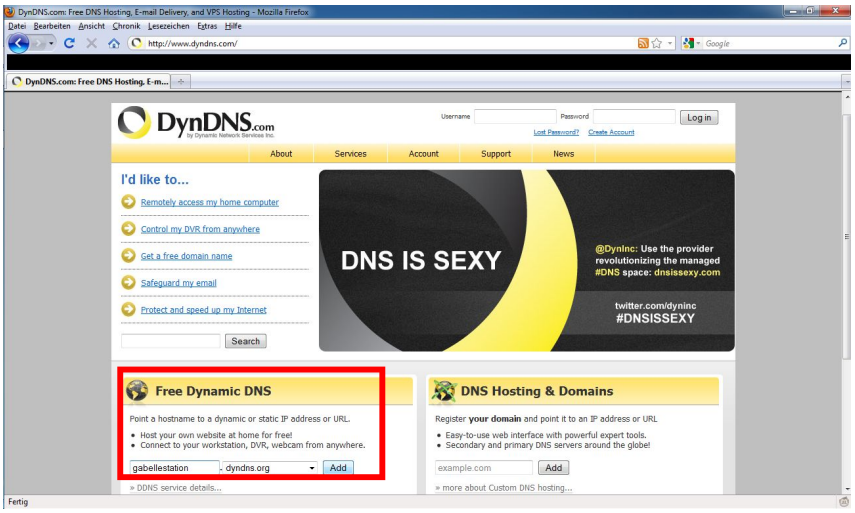

Figure 1.1: apply for a "'Free Dynamic DNS" on dyndns.org

Do not hesitate to checkout you shopping cart for 0$.

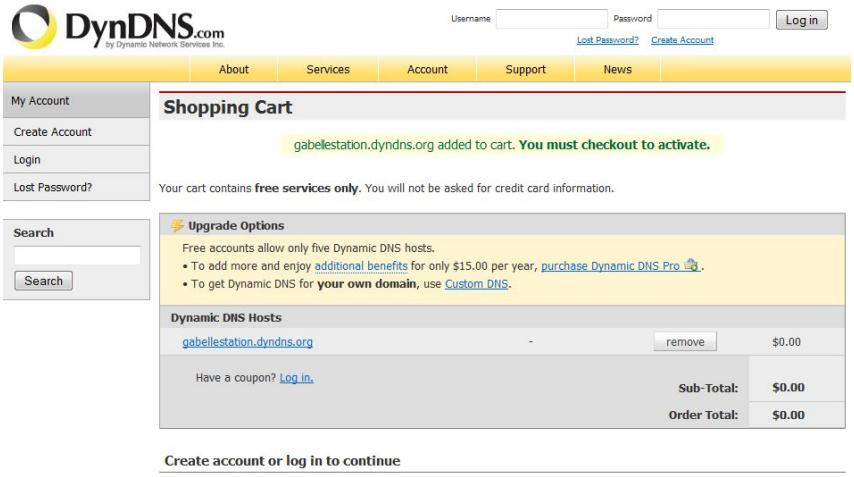

Figure 1.2: checkout

Create an account or login.

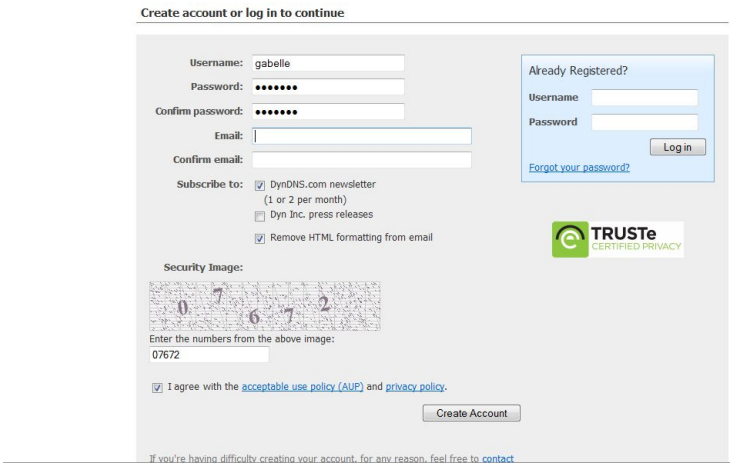

Figure 1.3: login

You will receive an activation mail. Click on the provided link, activate your redirection and continue with checkout.

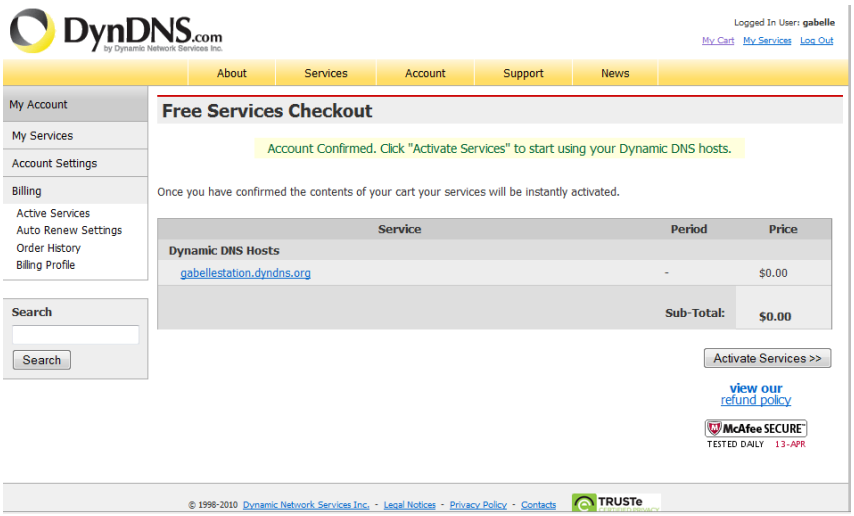

Figure 1.4: checkout (cont.)

Now a final screen is presented. Write down your hostname (gabellestation.dyndns.org) for later.

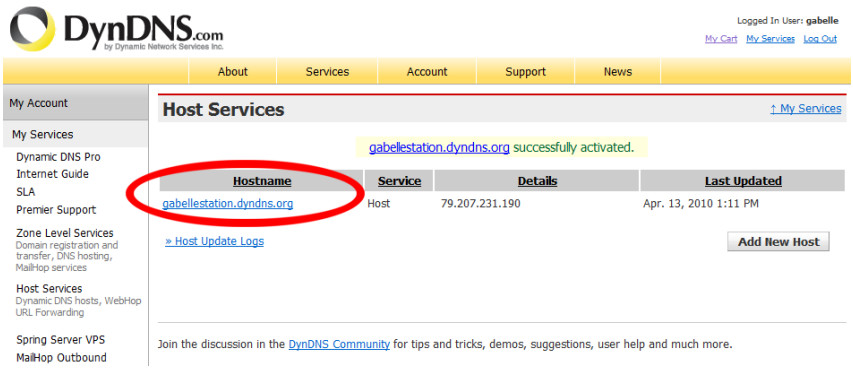

Figure 1.5: your hostname

1.3.2 router and IP config

If you access the internet by router you have to configure your dyndns.org hostname and open a port for lastFmProxy. I'm using a FritzBox router where you can access the configuration in a browser. If you don't know your router's IP adress you can guess it from your own IP address. Type `ipconfig` on Win or `ifconfig` on linux systems. Search something like "'LAN"' with an IP address of the form `192.168.123.79`. Usually your router will have the IP address ending with "'.1"'. That would be 192.168.123.1 in the example. Open the router's IP address in your browser and login.

Find the tab for "'dynamic DNS"' and configure your dyndns.org hostname.

Figure 1.6: your router's dyndns config

A port has to be forwarded from your machine to the internet. LastFmProxy will use port 1881 as default. Find the configuration page for ports and enable port 1881 for TCP. Provide your own IP (192.168.123.79 or the like) and the same port (1881) as details.

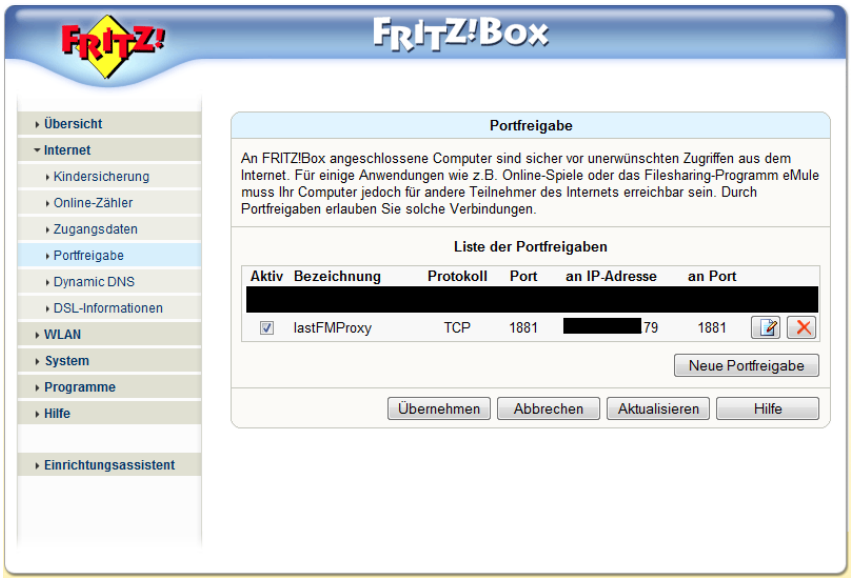

Figure 1.7: your router's port config

Your local IP address may change, but we're gonna fix this, too, if you have a network of your own. If you use a direct connection to the internet (cable modem), don't fix you IP - just skip this step.

On win systems open the control panel, select network settings and your current connection. In properties double-click on "'internet protocol IPv4"' and change the settings to manual configuration. Type in your current IP address, set subnet mask "'255.255.255.0"'. You can use your router's IP as gateway and DNS address. Click OK and your IP address should be static.

1.3.3 last.fm API key and secret

For the functions 'love' and 'ban' I've adapted the Python scripts to use the latest last.fm API. This API imposes a new requirement on applications. The application has to redirect the last.fm user to a page provided at the last.fm website for authentication. After the user has accepted the application's request for data the last.fm website redirects the user to a callback URL. This callback URL is determined from the last.fm API key and secret that are provided by the

application. To use API functions and services in the lastFmProxy you apply for a developer account and get key and secret. Every instance of the lastFmProxy running at a different IP address needs it's own callback URL and thus it's own key and secret. The callback URL points back to the machine where your lastFmProxy is running. We will use the dyndns.org hostname from the previous step for this.

Open up you favorite browser and enter http://www.lastfm.de/api/account. Login with your last.fm credentials and create an API account (usually for non-commercial use). Use your email address and the follwing information to fill the fields.
Pay attention to replace "'http://gabellestation.dyndns.org"' with your dyndns.org hostname from the previous step and don't forget to append "':1881"' to it when you update your account!

Application/Device Name	gabellesLastFmProxy
Application/Device Description (Describe the application you are building)	lastFmProxy
Callback URL (see authentication)	http://gabellestation.dyndns.org**:1881**

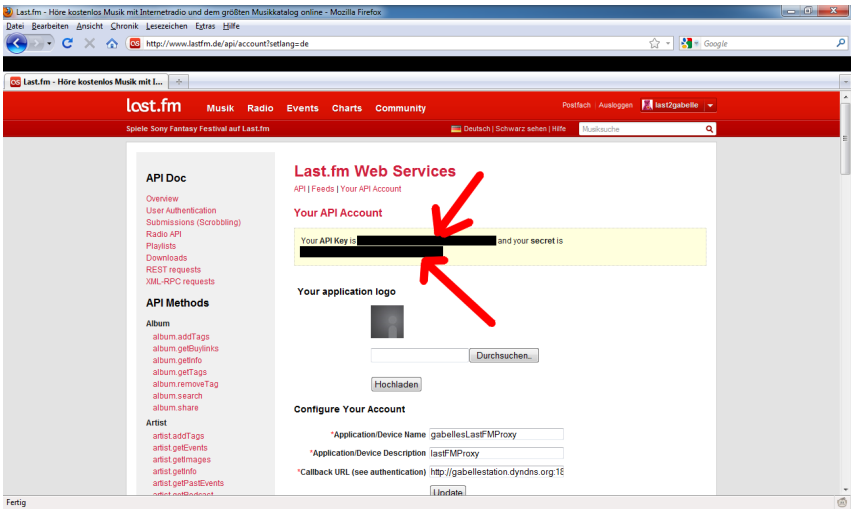

Figure 1.8: your hostname

Copy and paste your API key and secret into an editor of your choice for later use.

1.3.4 lastFmProxy (lp-*.zip)

Download an archive of the lastFmProxy python scripts and unzip them with your zip programm in a directory of your choice. I'll call this LP_HOME.

Open config.py in your editor and adjust the settings. Replace every occurence of "'yourLast.fm"' with your own values, e.g. username and password. Paste in your last.fm API key and secret.

For cable modem users: you can use you machine's name as bind_address instead of an IP.

```
# Port and address to listen to
listenport = 1881
bind_address = "127.0.0.1"

# Stick your last.fm username and password between the quotes below.
username="yourLast.fmUsername"
password = "yourLast.fmPassword"

# Which theme (skin) to use
theme = "default"

# Change "useproxy" to True and set the host and port if
# you need an external proxy.
useproxy = False
proxyhost = "my.proxy.host"
proxyport = 8000
# Set these if your proxy requires authentication.
# Note: Only "Basic" authentication is supported.
proxyuser = ""
proxypass = ""

# your last.fm api credentials
api_key = "yourLast.fmApi_key"
api_secret = "yourLast.fmApi_key"
```

Listing 1.1: Adjust config.py

1.4 running lastFmProxy

1.4.1 on the machine

Change to LP_HOME and start `main.py`. On win systems you can use main.cmd instead. The python script will open a browser with the authentication page.

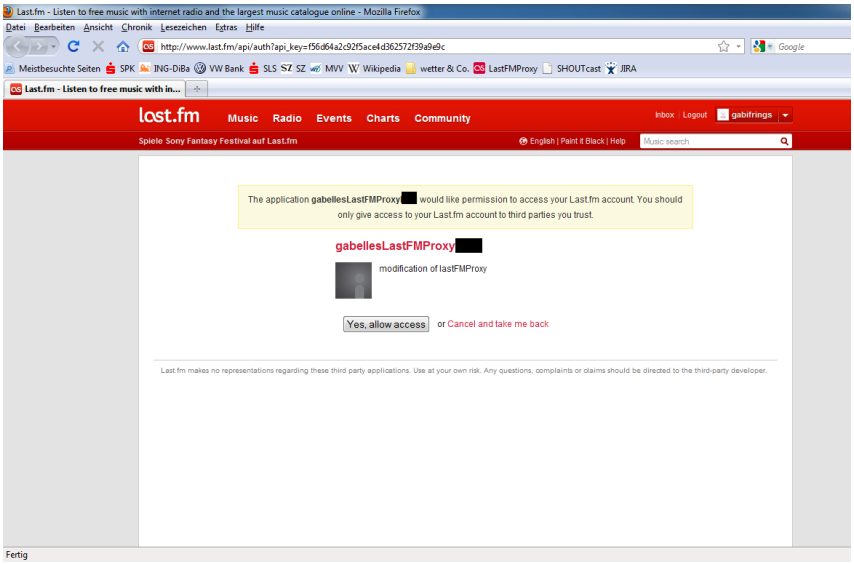

Figure 1.9: Authentication to use your lastFM account for your lastFmProxy

Accept it and the lastFmProxy page will open the playlist for your audio player. I'm using winamp with the shoutcast plugin. Make sure that your shoutcast server is running if you want to redirect the audio stream, e.g. to your internet radio player via wireless LAN.

1.4.2 remote

This feature is in alpha stadium. I use the web interface to start up remotely all the things needed for shoutcasting last.fm on my server machine from an other host. Perhaps you want to adjust something in main.py (search for "'remote"'). You can try it at your own risk ;-) I wrote a Java programm that watches for incoming requests on port 1881 and starts main.py then.

1.5 What can I do with lastFmProxy?

You can use lastFmProxy to listen music from last.fm on several internet radios e.g. one Noxon in each room. The music will not be played 100% synchronous, but it is acceptable for use at home. Use lastFmProxy, WinAmp with the shoutcast plugin and a shoutcast server to redirect the music from your machine to the internet radios. There is a delay of approximately 30 seconds until the music starts playing.

1.6 feedback

Feedback is appreciated at the last.fm forum. My nick is "'last2gabelle"'. Vidar Madsen, the original author of lastFmProxy, has the nick "'Vidarino"'.

1.7 thanks

Thanks to vladale for trying different things to fix the cable modem setup. Version v1.4d contains the fix to user your machine's name.