WMFO Linux Server Streaming and Archives Information

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The basic structure of the webcasting service looks like this:

1. A program called *readsnd* reads direct from the soundcard input and saves it into a pipe using Pulse Code Modulation (RAW wav)
2. The LAME Encoder reads from the other end of this pipe, encodes it into mp3, and saves it into another pipe.
3. *sc_trans* reads from this second pipe, and acting as broadcaster, sends it to *sc_serv*. (*sc_trans* may also transcode the mp3)
4. *sc_serv* is the shoutcast server; this is what users connect to to hear our stream.

You may be wondering how we save the stream to the archives. A program called *listenbot* connects to the Shoutcast server as if it was a listener and saves the stream into the mp3 files. The archive files are located at */home/audiostream/mp3master* on the Linux server in the MD office.

Summary of files

/etc/init.d/mp3encoder (LAME Encoder)
This is the startup script for the LAME mp3 encoder. It starts both the encoder and the readsnd program that captures the input. It controls the output bit-rate and sample rate of the live-stream file. We can also specify what file .pcm file LAME reads from and the name of the output file.

/usr/lib/shoutcast/sc_serv.conf (Shoutcast Server Config)
Controls various parameters for the shoutcast server. We shouldn't have to change this.

/usr/lib/shoutcast/sc_trans.conf (Shoutcast Transcoder Config)
sc_trans reads the stream .mp3 from LAME and broadcasts it through the Shoutcast server. It is capable of outputting a different bit-rate/sample-rate than the input mp3. The config file controls the output sample/bit-rate, and what mp3 file it reads from. It also defines what the input sample-rate is. THE INPUT RATE MUST MATCH THE OUTPUT FROM LAME. (Unless you want a sped up or slowed down stream)

/usr/lib/shoutcast/wmfo_playlist.lst (Playlist file used by sc_trans)
A file used by sc_trans, it has one entry that points to the stream file that we broadcast.

/home/audiostream/listenbot
Listenbot connects to the shoutcast server and saves the stream into our archives. They are saved as hourly mp3 files into /home/audiostream/mp3master. If we ever need to move the directory (to an external hard-drive for example) we can replace /home/audiostream/mp3master with a symbolic link.

/etc/httpd/httpd.conf
The configuration file for the apache file server. The important part here is it defines an "alias" for /archives/ to /home/audiostream/mp3master/. I don't think we'll have to change this. If we ever move the archive directory, we'll probably just replace /home/audiostream/mp3master/ with a symbolic link to the new one.

Cron
Cron is a service that runs scheduled tasks. It checks its files every minute to see if a command needs to be run. We use crontag to edit these files (export EDITOR=emacs & crontab -e). There are two entries right now: (1) One that deletes the now-defunct podcasting on demand files and (2) the commands that delete old archive files. Basically, the commands are a "find" command that searches by last modified time combined with a "rm -f" command. FYI, the "-mtime" parameter refers to how old (in days) before the file is deleted.