

Owen's Photolog

I guess this is a Tiny House blog now

Streaming audio over the network in linux

I've been trying for a long time to find a simple (for me) way to get sound from my laptop to my TV. I've tried mpd, mediatomb, pulseaudio... basically everything short of spending actual money. Finally I found a low-overhead system that does what I need thanks to our friends ssh and alsa: [Linux Network Sound on the Very Cheap](#). Thanks so much to Aristotle Pagaltzis for this recipe.

I'll reproduce the instructions with my edits:

1. On the source machine (my laptop in this case), load the loopback ALSA driver:

```
modprobe snd-aloop index=1 pcm_substreams=1
```

The driver provides a card with two sound devices, and when sound is output onto a stream on one device then the driver loops that back that as an input available on the same stream on the other device. You'll need to pick an index that's not already taken by a sound card on your machine or you'll get an error.

2. Add this to your `~/ .asoundrc` :

```
pcm.loop {  
    type plug  
    slave.pcm "hw:Loopback,1,0"  
}
```

The original instructions also tell you to change your default soundcard to the loopback device. In this case I don't want all my sound to go over the wire. Instead, use pulseaudio to select an application and have its sound sent to the loopback device. Yes, I know, pulseaudio. Actually it works pretty well these days! The loopback driver will then make that audio available on its other stream.

3. On the machine with speakers you can then do this:

```
ssh -C user@hostname sox -q -t alsa loop -t wav -b 16 -r 48k - | play  
-q -
```

This command causes a simple dump to be made of the “loop” device on the source machine. That audio data is then piped into the “play” command which causes the sound to play on the machine connected to my TV. This also sets up ssh with compression which helps keep the bandwidth usage down (about 200K/s for me).

4. All you need to do then is play something from the laptop, open the pulseaudio volume control, and tell the output to go to the loopback device. Very quickly the audio pops out the other side.

Obviously this is no solution for people wanting multiple client control, tablet support, playlists, or anything fancy like that. But as a way of just getting audio from point A to B, this is all I need.



Owen / March 24, 2013 / Audio, Linux Tip

Owen's Photolog / Proudly powered by WordPress