Redirect an audio stream with aloop

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This manual shows how to record the output of Windows applications using wine, the snd-aloop kernel module and recordMyDesktop.¹

The snd-aloop module is very useful when you need to record other sound sources then your microphone. Simply connect the "noisi" application to the first sound loopback devices provided by snd-aloop and the screen recorder to the second.

1 Load the kernel module

By hand (as root):

sudo modprobe snd-aloop

Make it reboot persistent:

sudo echo 'snd-aloop' >> /etc/modules

¹ Tested with Debian 7 wheezy.

Check if the module is loaded and initialized:

```
aplay -1
**** List of PLAYBACK Hardware Devices **\**
card 0: PCH [HDA Intel PCH], device 0: CX20590 Analog [CX20590 Analog]
 Subdevices: 1/1
 Subdevice #0: subdevice #0
card 0: PCH [HDA Intel PCH], device 3: HDMI 0 [HDMI 0]
 Subdevices: 1/1
 Subdevice #0: subdevice #0
card 0: PCH [HDA Intel PCH], device 7: HDMI 1 [HDMI 1]
 Subdevices: 1/1
 Subdevice #0: subdevice #0
card 0: PCH [HDA Intel PCH], device 8: HDMI 2 [HDMI 2]
 Subdevices: 1/1
  Subdevice #0: subdevice #0
card 1: Loopback [Loopback], device 0: Loopback PCM [Loopback PCM]
 Subdevices: 8/8
 Subdevice #0: subdevice #0
 Subdevice #1: subdevice #1
 Subdevice #7: subdevice #7
card 1: Loopback [Loopback], device 1: Loopback PCM [Loopback PCM]
 Subdevices: 8/8
 Subdevice #0: subdevice #0
 Subdevice #1: subdevice #1
. . .
 Subdevice #7: subdevice #7
```

Note:

snd-aloop provides 2 pass-through devices: card 1, device 0 and card 1, device 1.

2 Redirect your application sound into the first loop-back device

Card 1, device 0 Input device: redirect the output of the program you want to record into this device.

2.1 Example aplay

aplay -D hw:1,0,0 play.wav

2.2 Example wine application

winecfg

Audio > Output device > Out:Loopback - Loopback PCM (choose first)

Applications	Libraries	Graphics	Desktop :	Integration				
Drives	L	Audio	A	bout				
Driver diagnostic	s							
Selected driver: winealsa.drv								
Defaults								
Output device:		Out: Loopback - Loopback PCM 📃						
Voice output d	evice:	(System defaul	t)	-				
Input device:		(System defaul	t)	•				
Voice input dev	/ice:	(System defaul	t)	•				
Test Sound	1							
Test segura								
				7				
		OK]	Cancel	Apply				
			Concor	<u>DPP0</u>				

3 Connect your recorder input to the second loop-back device

Card 1, device 1 Output device: everything pumped into the first loop-back device will be sent out here.

3.1 Example arecord

Example: aplay

```
arecord -D hw:1,1,0 record.wav
```

3.2 Example RecordMyDesktop

Device: hw:1,1,0

Advanced > Sound > Device > hw:1,1,0

Files Performant Channels	e Sound Misc
Frequency	22050 🛟
Device h	w:1,1,0
Use Jack for au Select the ports y (hold Ctrl to select	udio capture, You want to record from t multiple entries):
Available Ports	
4	<u>×</u>
ŝ	<u>R</u> efresh

4 Complete example: Record a virtual machine using pulse audio

1. Install package recordmydesktop

```
sudo apt-get install recordmydesktop
```

2. Load loopback kernal module

```
sudo modprobe snd-aloop
```

3. Start virtual machine

4. Redirect output of virtual machine in loop-back device using _p

pavucontro	1					
Playback	Recording	Output Devices	Input Devices	Configu	Iration	
📋 System Sou	nds				(ujm
Mono					100% (0.0)	0dB)
	Silence			100% (0dB)		
🎟 virt-manag	er:playback <i>on</i>				Loopback Analog Stereo	\heartsuit
Front Left	<u></u>				100% (0.0)	0dB)
Front Right					100% (0.0)	0dB)
	Silence			100% (0dB)		
		Show	Applications			•

For other examples see: *section_title*.

- 5. Start player in virtual machine
- 6. Record virtual machine

```
recordmydesktop --device hw:1,1,0 -x 284 -y 42 --width=1349 --h
```

Adjust coordinates to your need. You can mesure with xev the cu coordinates of your mouse.

7. Type *Cntl-C* to stop recording. Transcoding starts automatical You should see a file out.ogv in your working directory.

For how to connect other recorders see: *section_title*

5 References

http://www.alsa-project.org/main/index.php/Matrix:Module-aloop