VLC Setup files *version 1*

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Drivers	Software modules
PVR cards, *ivtv-utils*	DVB transport stream, *libdvbpsi*
DVB tuner cards, *libdvb-dev*	Software Mpeg2/4 encoder, *ffmpeg*

These setup files are in shell script (*.sh) format that have been set as executables.

PVR Hardware encoder settings input side

pvr://	*Sets the PVR device*
pvr-device=/dev/video0	*Sets video device to be used 0 to number of encoders installed*
pvr-radio-device=0	*Sets radio device to be used 0 to number of encoders installed*
pvr-norm=255	*Sets video input format, auto=0, PAL=255*
pvr-caching=300	*Cashing time in ms*
pvr-width=720	*Picture width*
pvr-height=576	*Picture high*
pvr-frequency=0	*Tuner frequency in kHz*
pvr-framerate=25	*Frame rate per sec*
pvr-keyint=37	*Space between I frames*
pvr-bframes=2	*Number of B frames*
pvr-bitrate=4096000	*Average bit rate in bits per sec*
pvr-bitrate-peak=5120000	*Peak bit rate in bit per sec*
pvr-bitrate-mode=0	*Mode, VBR=0, CBR=1*
pvr-audio-bitmask=-1	*Sound sample rate, -1 set to auto 0=44.1 kHz, 1=48 kHz, 2=32 kHz (all at 224 kb/s)*
pvr-audio-volume=-1	*Sound input level 0 to 65535, -1 set to auto*
pvr-channel=1	*Video input, 0=tuner, 1=Y C (S-video), 2=composite video*

PVR Hardware settings output side

sout=#std{access=udp,mux=ts,dst=192.168.0.111:1235}	*Sending data using UDP packet, multiplexer set for DVB transport stream (ts) and destination IP address plus port.*
sout-keep	*Keep stream open*

Complete file:

pvr:// :pvr-device=/dev/video0 :pvr-radio-device=0 :pvr-norm=255 :pvr-caching=300 :pvr-width=720 :pvr-height=576 :pvr-frequency=0 :pvr-framerate=25 :pvr-keyint=27 :pvr-bframes=2 :pvr-bitrate=4096000 :pvr-bitrate-peak=5120000 :pvr-bitrate-mode=0 :pvr-audio-bitmask=-1 :pvr-audio-volume=-1 :pvr-channel=1 :sout=#std{access=udp,mux=ts,dst=192.168.0.111:1235} :sout-keep

DVB-S RX Hardware settings

dvb://	*Sets the DVB device*
frequency=1363000	*Tuner frequency in kHz*
dvb-adapter=1	*Sets video device to be used 0 to number of encoders installed*
dvb-srate=12600000	*Symbol rate*
dvb-caching=300	*Cashing time in ms*
dvb-device=0	*Number or devices on the same card*
program=901	*Program PID*
dvb-inversion=2	*Set for high side LO (0) or low side LO (1) 2=auto*
dvb-satno=0	*Diseqc switching 1 to 4 and 0=no diseqc*
dvb-voltage=13	*LNB polarization 13 for vertical , 18 for horizontal and 0 no volts*
dvb-tone=0	*22 kHz tone 0=off, 1=on and -1=auto*
dvb-fec=5	*FEC settings 1=1/2, 2=2/3, 3=3/4, 4=4/5, 5=5/6, 6=6/7, 7=7/8 and 9=auto*
dvb-lnb-lof1=0	*LNB LO frequency in kHz 0=no off set*

Output side

sout=#std{access=udp,mux=ts,dst=192.168.0.111:1236}	*Sending data using UDP packet, multiplexer set for DVB transport stream (ts) and destination IP address plus port.*
sout-keep	*Keep stream open*

Complete file:

dvb://frequency=1363000 :dvb-adapter=1 :dvb-srate=12600000 :dvb-caching=300 :dvb-device=0 :program=901 :dvb-inversion=2 :dvb-satno=0 :dvb-voltage=0 :dvb-tone=0 :dvb-fec=5 :dvb-lnb-lof1=0 :sout=#std{access=udp,mux=ts,dst=192.168.0.111:1236} :sout-keep

DVB-T RX Hardware settings

dvb://	*Sets the DVB device*
frequency=538000000	*Tuner frequency in Hz*
dvb-adapter=0	*Sets video device to be used 0 to number of encoders installed*
dvb-bandwidth=8	*Channel bandwidth in MHz*
dvb-caching=300	*Cashing time in ms*
dvb-device=1	*Number or devices on the same card*
program=1200	*Program PID*
dvb-code-rate-hp=3	*High priority FEC settings 1=1/2, 2=2/3, 3=3/4, 4=4/5, 5=5/6, 6=6/7, 7=7/8 and 9=auto*
dvb-code-rate-lp=3	Low *priority FEC settings 1=1/2, 2=2/3, 3=3/4, 4=4/5, 5=5/6, 6=6/7, 7=7/8 and 9=auto*
dvb-guard=16	*Guard band interval, 4=1/4, 8=1/8, 16=1/16, 32=1/32 and -1=auto*
dvb-transmission=8	*Transmission mode 2=2k, 8=8k and -1=auto*
dvb-hierarchy=-1	*Hierarchy modulation 1, 2, 4 and -1=auto*

Output side

sout=#std{access=udp,mux=ts,dst=192.168.0.111:1234}	*Sending data using UDP packet, multiplexer set for DVB transport stream (ts) and destination IP address plus port.*
sout-keep	*Keep stream open*

UDP Multicast IP range from 224.0.0.0 to 239.255.255.255 or
last IP address set by the sub mask in this case 192.168.0.255

Complete file:

dvb://frequency=538000000 :dvb-adapter=0 :dvb-bandwidth=8 :dvb-caching=300 :dvb-device=1 :program=1200 :dvb-code-rate-hp=3 :dvb-code-rate-lp=3 :dvb-guard=16 :dvb-transmission=8 :dvb-hierarchy=-1 :sout=#std{access=udp,mux=ts,dst=192.168.0.111:1234} :sout-keep

Internet streaming

Input side

'http://playlist.yahoo.com/makeplaylist.dll?id=1368570'	URL of stream
sout=#transcode	*Transcoding format*
vcodec=mp2v,	*Video coder Mpeg2*
vb=4096,	*Bit rate in M bits/s*
fps=25,	*Frame rate per sec*
scale=1,	*Scale 1=same size, 0.5=1/2 size, 0.25=1/4 size*
width=720,	*Picture width*
height=576,	*Picture high*
acodec=mp2,	*Sound coder Mpeg2*
ab=224,	*Sound bit rate in k bit/s*
channels=2,	*number of sound channels*
samplerate=48000	*Sample rate in Hz*

Output side

sout=#std{access=udp,mux=ts,dst=192.168.0.111:1234}	*Sending data using UDP packet, multiplexer set for DVB transport stream (ts) and destination IP address plus port.*
sout-keep	*Keep stream open*

Complete file:

'http://playlist.yahoo.com/makeplaylist.dll?id=1368570' :sout=#transcode{vcodec=mp2v,vb=4096,fps=25,scale=1,width=720,height=576,acodec=mp2,ab=224,channels=2,samplerate=48000}:std{access=udp,mux=ts,dst=192.168.0.150:1234} :sout-keep

DVB demultiplexing

```
dvb://  --ts-es-id-pid --programs=897,898 dvb: \
  --dvb-frequency=1363000 --dvb-
srate=12600000 --dvb-voltage=13 \
  --sout-standard-access=udp --sout-standard-
mux=ts --sout \
  '#duplicate{dst=std{dst=192.168.0.111:1236},sel
ect="program=897",dst=std{dst=192.168.0.111:1
237},select="program=898"}'
```

This file is in an older format but still works with current versions.

Using is code you are able to feed a demultiplexed programs to any number of IP addresses.

Multiplex vlm setup file

```
new channel1 broadcast enabled
```

Enable channel 1

```
setup channel1 input
"udp://@192.168.0.111:1232 :udp-caching=1500"
```

Set stream input, UDP format, IP address plus port and cashing in ms

```
setup channel1 output
#std{access=udp,mux=ts,dst=192.168.0.150:123
4,name="Ch 1",}
```

Set output multiplexed stream, UDP format, Mux=DVB transport stream, to IP address plus port and channel name.

```
setup channel1 option sout-ts-program-pmt=102
```

Set program PID

```
setup channel1 option sout-ts-pid-video=100
```

Set video PID

```
setup channel1 option sout-ts-pid-audio=101
```

Set audio PID

```
setup channel1 option sout-ts-netid=510
```

Network ID

```
control channel1 play
```

Auto run

Complete file 1 (Network Multiplex):

```
# VLC media player VLM command batch

new channel1 broadcast enabled
setup channel1 input "udp://@192.168.0.111:1232 :udp-caching=1500"
setup channel1 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 1",}
setup channel1 option sout-ts-program-pmt=102
setup channel1 option sout-ts-pid-audio=101
setup channel1 option sout-ts-pid-video=100
setup channel1 option sout-ts-sdtdesc="channel 1"
setup channel1 option sout-ts-netid=510
control channel1 play

new channel2 broadcast enabled
setup channel2 input "udp://@192.168.0.111:1233 :udp-caching=1500"
setup channel2 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 2",}
setup channel2 option sout-ts-program-pmt=202
setup channel2 option sout-ts-pid-audio=201
setup channel2 option sout-ts-pid-video=200
setup channel2 option sout-ts-sdtdesc="channel 2"
```

```
setup channel2 option sout-ts-netid=510
control channel2 play

new channel3 broadcast enabled
setup channel3 input "udp://@192.168.0.111:1234 :udp-caching=1500"
setup channel3 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 3",}
setup channel3 option sout-ts-program-pmt=302
setup channel3 option sout-ts-pid-audio=301
setup channel3 option sout-ts-pid-video=300
setup channel3 option sout-ts-sdtdesc="channel 3"
setup channel3 option sout-ts-netid=510
control channel3 play

new channel4 broadcast enabled
setup channel4 input "udp://@192.168.0.111:1235 :udp-caching=1500"
setup channel4 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 4",}
setup channel4 option sout-ts-program-pmt=402
setup channel4 option sout-ts-pid-audio=401
setup channel4 option sout-ts-pid-video=400
setup channel4 option sout-ts-sdtdesc="channel 4"
setup channel4 option sout-ts-netid=510
control channel4 play

new channel5 broadcast enabled
setup channel5 input "udp://@192.168.0.111:1236 :udp-caching=1500"
setup channel5 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 5",}
setup channel5 option sout-ts-program-pmt=502
setup channel5 option sout-ts-pid-audio=501
setup channel5 option sout-ts-pid-video=500
setup channel5 option sout-ts-sdtdesc="channel 5"
setup channel5 option sout-ts-netid=510
control channel5 play

new channel6 broadcast enabled
setup channel6 input "udp://@192.168.0.111:1237 :udp-caching=1500"
setup channel6 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 6",}
setup channel6 option sout-ts-program-pmt=602
setup channel6 option sout-ts-pid-audio=601
setup channel6 option sout-ts-pid-video=600
setup channel6 option sout-ts-sdtdesc="channel 6"
setup channel6 option sout-ts-netid=510
control channel6 play

new channel7 broadcast enabled
setup channel7 input "udp://@192.168.0.111:1238 :udp-caching=1500"
setup channel7 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 7",}
setup channel7 option sout-ts-program-pmt=702
setup channel7 option sout-ts-pid-audio=701
setup channel7 option sout-ts-pid-video=700
setup channel7 option sout-ts-sdtdesc="channel 7"
setup channel7 option sout-ts-netid=510
control channel7 play
```

Complete file 2 (Network, PVR, DVB RX) :

```
# VLC media player VLM command batch

new channel1 broadcast enabled
setup channel1 input "udp://@192.168.0.102:1232 :udp-caching=1500"
setup channel1 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 1",}
setup channel1 option sout-ts-program-pmt=100
setup channel1 option sout-ts-pid-audio=101
setup channel1 option sout-ts-pid-video=100
setup channel1 option sout-ts-sdtdesc="channel 1"
setup channel1 option sout-ts-netid=510
control channel1 play

new channel2 broadcast enabled
setup channel2 input "udp://@192.168.0.102:1233 :udp-caching=1500"
setup channel2 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 2",}
setup channel2 option sout-ts-program-pmt=200
setup channel2 option sout-ts-pid-audio=201
setup channel2 option sout-ts-pid-video=200
setup channel2 option sout-ts-sdtdesc="channel 2"
setup channel2 option sout-ts-netid=510
control channel2 play

new channel3 broadcast enabled
setup channel3 input "pvr:// "
setup channel3 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 3",}
setup channel3 option sout-ts-program-pmt=300
setup channel3 option sout-ts-pid-audio=301
setup channel3 option sout-ts-pid-video=300
setup channel3 option sout-ts-sdtdesc="channel 3"
setup channel3 option sout-ts-netid=510

setup channel3 option pvr-device=/dev/video0
setup channel3 option pvr-norm=0
setup channel3 option pvr-caching=300
setup channel3 option pvr-norm=255
setup channel3 option pvr-width=720
setup channel3 option pvr-height=576
setup channel3 option pvr-frequency=759250
setup channel3 option pvr-framerate=25
setup channel3 option pvr-keyint=17
setup channel3 option pvr-bframes=2
setup channel3 option pvr-bitrate=4096000
setup channel3 option pvr-bitrate-peak=5000000
setup channel3 option pvr-bitrate-mode=0
setup channel3 option pvr-audio-bitmask=-1
setup channel3 option pvr-audio-volume=-1
setup channel3 option pvr-channel=0
control channel3 play

new channel4 broadcast enabled
setup channel4 input "dvb://frequency=1363000"
setup channel4 output #std{access=udp,mux=ts,dst=192.168.0.150:1234,name="Channel 4",}
setup channel4 option sout-ts-program-pmt=400
setup channel4 option sout-ts-pid-audio=401
setup channel4 option sout-ts-pid-video=400
```

```
setup channel4 option dvb-caching=300
setup channel4 option dvb-adapter=0
setup channel4 option dvb-device=0
setup channel4 option dvb-frequency=1363000
setup channel4 option dvb-inversion=2
setup channel4 option program=897
setup channel4 option dvb-probe
setup channel4 option no-dvb-budget-mode
setup channel4 option dvb-satno=0
setup channel4 option dvb-voltage=13
setup channel4 option no-dvb-high-voltage
setup channel4 option dvb-tone=-1
setup channel4 option dvb-fec=5
setup channel4 option dvb-srate=12600000
setup channel4 option dvb-lnb-lof1=0
setup channel4 option dvb-lnb-slof=0
setup channel4 option file-caching=300
control channel4 play
```

VLM run code

```
vlc --extraintf telnet --vlm-conf '/home/laptop/Desktop/S-D_TV/test7.vlm'
```

To receive UDP stream

vlc -vvv udp://@:1234	To receive UDP on port 1234

To send Mpeg2 PS stream to hardware decoder

sout=#file{mux=ps,dst=/dev/video16} :sout-keep	To work with a PVR-350 hardware decoder you can also use cp (copy) *cp /home/*.mpg /dev/video16* this will stream a mpg file to the hard Mpeg2 decoder

or to receve an UDP stream and send to a hardware decoder

```
vlc -vvv udp://@:1234 :sout=#file{mux=ps,dst=/dev/video16} :sout-keep
```

Tested Hardware:

PCI	**USB2**
WinTV PVR-150 WinTV PVR-350 WinTV PVR-500 WinTV Nova-S WinTV HVR-3000	WinTV HVR-1900 Mpeg2 encoder

Play list files:

With a play list the video files need formatted in away where by the decoder at the end can display them. The m3u format is what I normally use for IP streaming, it's simple easy and to assemble.

countdown.mpg
ZL1WTT 1.mpg
GB3RV.mpg
GB3BH.mpg
zl1wtt.mpg
fieldday.mpg
BPL-and-HF.mpg
spark gap transmitte.mpg
zl1wtt.mpg
ZL3TGS.mpg
ZL1BQ 1989.mpg
fday2k.mpg
zl1wtt.mpg
Radio Star.mpg
Bob & Brian.mpg
SteveBirkill Satellite TV.mpg
Marconi_MKII_Camera.mpg
zl1wtt.mpg
Television for Amateurs.mpg
ZL1WTT 1.mpg

As you can see it just a list of files, this all that is required as long as the *.m3u file is in the same folder as files to be played. Here is the same play list as it's been saved vai VLC:

#EXTM3U
#EXTINF:10,countdown.mpg
/home/ATV_MPG/countdown.mpg
#EXTINF:19,ZL1WTT 1.mpg
/home/ATV_MPG/ZL1WTT 1.mpg
#EXTINF:449,GB3RV.mpg
/home/ATV_MPG/GB3RV.mpg
#EXTINF:673,GB3BH.mpg
/home/ATV_MPG/GB3BH.mpg
#EXTINF:0,zl1wtt.mpg
/home/ATV_MPG/zl1wtt.mpg
#EXTINF:172,fieldday.mpg
/home/ATV_MPG/fieldday.mpg
#EXTINF:206,BPL-and-HF.mpg
/home/ATV_MPG/BPL-and-HF.mpg
#EXTINF:54,spark gap transmitte.mpg
/home/ATV_MPG/spark gap transmitte.mpg
#EXTINF:0,zl1wtt.mpg
/home/ATV_MPG/zl1wtt.mpg
#EXTINF:238,ZL3TGS.mpg
/home/ATV_MPG/ZL3TGS.mpg
#EXTINF:202,ZL1BQ 1989.mpg
/home/ATV_MPG/ZL1BQ 1989.mpg
#EXTINF:0,fday2k.mpg
/home/ATV_MPG/fday2k.mpg
#EXTINF:0,zl1wtt.mpg
/home/ATV_MPG/zl1wtt.mpg
#EXTINF:736,Radio Star.mpg

/home/ATV_MPG/Radio Star.mpg
#EXTINF:1504,Bob & Brian.mpg
/home/ATV_MPG/Bob & Brian.mpg
#EXTINF:628,SteveBirkill Satellite TV.mpg
/home/ATV_MPG/SteveBirkill Satellite TV.mpg
#EXTINF:204,Marconi_MKII_Camera.mpg
/home/ATV_MPG/Marconi_MKII_Camera.mpg
#EXTINF:0,zl1wtt.mpg
/home/ATV_MPG/zl1wtt.mpg
#EXTINF:1119,Television for Amateurs.mpg
/home/ATV_MPG/Television for Amateurs.mpg
#EXTINF:19,ZL1WTT 1.mpg
/home/ATV_MPG/ZL1WTT 1.mpg

are comments, in these line you will see time displayed in seconds. If the play list file is not in the same location will need to add in the path.

Note:
Not all versions of VLC you let you steam from a m3u file.

XSPF format contains a lot more information in XTML code, with these files you will need to save directly from VLC.

Complete file:

vlc -vvv '/home/ATV_MPG/ATV.m3u' :std{access=udp,mux=ts,dst=192.168.0.111:1234}

Or transcoded:

vlc -vvv '/home/ATV_MPG/ATV.m3u' :sout=#transcode{vcodec=mp2v,vb=4096,fps=25,scale=1,
acodec=mp2,ab=224,channels=2,samplerate=48000,scodec=dvbs,soverlay}
:duplicate{dst=udp{mux=ts,dst=192.168.0.114:1234},dst=udp{mux=ts,dst=192.168.0.110:1238}}
:ttl=2 :sout-keep

Converting JPG, BMP picture file to Mpg stream:

vlc '/home/laptop/Desktop/PM5544A.bmp'
:sout=#transcode{vcodec=mp2v,vb=4096,fps=25,scale=1,width=720,height=576,acodec=mp2,ab=
224,channels=2,samplerate=48000}:std{access=udp,mux=ts,dst=192.168.0.150:1234} :sout-keep

From the GUI select the play list window and set as endless loop.

Links:

http://wiki.videolan.org/Documentation:Streaming_HowTo

http://wiki.videolan.org/Documentation:Streaming_HowTo/Advanced_Streaming_Using_the_Command_Line

http://wiki.videolan.org/Documentation:Streaming_HowTo/Stream_from_Encoding_Cards_and_Other_Capture_Devices