

Tuesday, February 23. 2010

vlc http streaming from a TV card

I got a TV card, it appears like this in lspci:

```
01:08.0 Multimedia controller: Philips Semiconductors SAA7131/SAA7133/SAA7135 Video Broadcast Decoder (rev d1)
```

In order to stream 3 simultaneous streams, very low, low and high quality, you can do this:

```
#!/bin/ksh
#
/sbin/modprobe saa7134-alsa
sleep 2
DEV=/dev/tvcard
ps -ef | grep -i vlc | grep -v grep | grep -i $DEV | awk '{ print $2 }' | while read P;do
kill -9 $P
done
VBR=96
ABR=24
W=320
H=240
### --deinterlace-mode {discard,blend,mean,bob,linear} : deinterlacing mode (default: discard)
# width=320,height=240 qpmax=40 x264{crf=5,profile=extended,level=1.0}
# :standard{access=http{user=video,pwd=cable},mux=asf,dst=0.0.0.0:8088}
#
venc=x264{level=2,nr=1000,me=tesa,b-pyramid,bitrate=64,ref=4,b-adapt=2,bframes=2,partitions=all,keyint=2500}
VLC="/usr/local/bin/cvlc --logo-file /disk2/logox.png v4l2://$DEV :input=2 :standard=8 :input-slave=alsa://hw:1
,0 --alsa-samplerate=32000 --deinterlace-mode linear --sout "
```

VERYLOW="transcode{vcodec=h264,acodec=mp4a,channels=1,width=160,height=120,vb=24,ab=16,venc=x264{bfr

*l=5,nr=1000,b-pyramid,b-adapt=2,hurry-up},audio-sync,sfilter=logo}:standard{access=http,dst=0.0.0.0:8011/stream
.flv}"*

LOW="transcode{vcodec=h264,acodec=mp4a,channels=1,width=\${W},height=\${H},vb=\${VBR},ab=\${ABR},venc=x2

*0,level=5,nr=1000,b-pyramid,b-adapt=2},audio-sync,sfilter=logo}:standard{access=http,dst=0.0.0.0:8012/stream.fl
v}"*

```

HIGH="transcode{vcodec=h264,acodec=mp4a,channels=2,ab=128,venc=x264{bframes=0,level=5,nr=1000,b-pyram
=2,hurry-up},deinterlace,audio-sync,sfilter=logo}:standard{access=http,dst=0.0.0.0:8013/stream.flv}"
/usr/local/bin/v4l2-ctl -d $DEV --set-tuner=stereo
/usr/local/bin/v4l2-ctl -d $DEV --set-standard=0
/usr/local/bin/ivtv-tune -d $DEV -t us-cable -c3
#--- audio codecs can be mpga or mp3 or m4a
#--- mux can be ogg,ts,mp4,asf,ps,mpeg1,asfh,mpjpeg
#--- low quality
#$VLC "$$VERYLOW"
#--- low quality
#$VLC "$$LOW"
#--- LAN quality
#$VLC "$$HIGH"
#--- single command, high quality AND low quality using h264_vdpau and x264 as encoder
$VLC "#duplicate{dst=\\$VERYLOW\\,dst=\\$LOW\\,dst=\\$HIGH\\}"
#$VLC "#duplicate{dst=\\$VERYLOW\\,dst=\\$HIGH\\}"
#$VLC "#duplicate{dst=\\$LOW\\,dst=\\$HIGH\\}"
#$VLC "#duplicate{dst=\\$VERYLOW\\,dst=\\$LOW\\}"

```

"#duplicate" is used in order to have 2 streams working simultaneously from the same input device, for each output stream we use a "dst="

Posted by rdircio at 23:56

setting up a RTSP vlc streaming server

I wanted to watch my movies remotely, so i used h264 for video and aac for audio, and built a vlc config to startup a daemonized RTSP server. I built a script to create the config file by scanning all my videos, and then start the vlc daemon :). Here it is:

```
#!/bin/ksh
ps -ef | grep -i vlc | grep -v grep | awk '{ print $2 }' | while read p;do
    kill $p
done
(
x=0
find /disk2/VIDEO -type f | egrep -i 'avi|mpg' | while read v;do
#---- if not using x264
# echo "new $x vod enabled"
# echo -n "setup $x input \"file://$v\" output"
#---- if using x264
echo "new $x vod"
echo -n "setup $x input \"file://$v\" enabled output"
#---- low quality
#echo " #transcode{vcodec=mp4v,acodec=mp4a,width=640,height=480,fps=12,vb=128,ab=8}"
echo " #transcode{vcodec=h264,acodec=mp4a,width=640,height=480,vb=100,ab=4}"
#---- mid quality
#echo " #transcode{vcodec=mp4v,acodec=mp4a,scale=.5,fps=10,vb=256,ab=64}"
#echo " #transcode{vcodec=h264,acodec=mp4a,scale=.5,fps=12,vb=256,ab=64}"
#---- high quality
#echo " #transcode{vcodec=mp4v,acodec=mp4a,scale=.5,fps=10,vb=512,ab=64}"
#echo " #transcode{vcodec=h264,acodec=mp4a,scale=.5,fps=12,vb=512,ab=128}"
echo " "
x=$((x+1))
done
) > /etc/v.config
nohup cvlc --vlm-conf /etc/v.config -l telnet --telnet-password vl --rtsp-host 0.0.0.0:564 &
```

Try it, and enjoy :)

Tuesday, February 9. 2010

Back up the whole disk

My disk is pgp encrypted so i can't mount it and image it from outside, if i image it from inside, when i restore it i'll need to add pgp again.

So i booted off backtrack 4 in a usb disk, used old dd to image my drive, compress it and dump it to a nfs mounted directory.

```
dd if=/dev/sda | gzip -c -9 > /a/disk.iso.gz
```

If i ever want to restore it i'll do

```
gunzip -cd /a/disk.iso.gz | dd of=/dev/sda
```

Posted by rdircio at 08:00

Script to connect to a wifi AP, if we got a key in our database, use it

We got many keys for some wifi APs around, so we put them in a delimited text file like:

```
ap8599:5537801570
sd6980:5202140314
wq0858:5953230520
```

now, when we are around, we want a script that we can tell: "connect to ap6980 if you see it around, if you need a key, take it from the text file". Called without arguments, it scans all available networks, and tries to connect to all of the ones that we have a key or that are open.

This is our connection script:

```
#!/bin/bash
ap=$@
i=wlan0
en=0
#-----
# Scan for wireless networks, and pretty print the quality, the essid, and if we require encryption
#-----
scanw () {
i=$1
( ifconfig $i up
iwlist $i scan | egrep -i 'essid|freq|qual|encr' |nawk 'ORS=NR%4?" ":"\n"| tr -s ' '| while read l;do
AP=`echo "$l" |awk '{s=substr($0,index($0,"ESSID:")+7);print substr(s,1,index(s,"\\")-1)}`
EN=`echo "$l" |awk '{s=substr($0,index($0,"Encryption key:")+15);print substr(s,1,index(s," ")-1)}`
QU=`echo "$l" |awk '{s=substr($0,index($0,"Quality=")+8);print substr(s,1,index(s,"/")+1)}`
K=`grep "^$AP" keys.txt| awk -F:' ' { print $2 }`
echo "$QU:$EN:$AP:$i:$K"
done
) | sort -n
}
#-----
# Connect to the accespoint determined by the "$ap" variable
#-----
conn(){
L=`grep -i "$ap" ~/keys.txt| head -1`
C=`echo -n $L | wc -c`
indb=1
if [ $C -lt 1 ];then
```

```

#   echo "----- WARNING: AP $ap not found in database"
    indb=0
fi
S=`grep "$ap" /tmp/scan.$$|wc -c`
if [ $$S -lt 1 ];then
    echo "----- ERROR: AP $ap is not in range, cannot connect"
    exit 1
fi
if [ $indb -eq 1 ];then
    #--if we found an accesspoint in our database work with it
    AP=`echo $L | awk -F:' ' { print $1 }`
    K=`echo $L | awk -F:' ' { print $2 }`
    echo "----- Connecting to $AP with key $K"
    iwconfig $i mode managed key $K essid "$AP" rate auto
else
    AP=`grep "$ap" /tmp/scan.$$|awk -F:' ' { print $3 }`
    en=`grep "$AP" /tmp/scan.$$|awk -F:' ' { print $2 }`
    if [ $en == "off" ];then
        echo "----- Connecting to $AP without key"
        iwconfig $i mode managed key off essid "$AP" rate auto
    else
        echo "----- ERROR: Encryption needed for $AP but i don't have the key"
        return 1
    fi
fi
x=0
echo -n "----- Associating with $AP"
while [ $x -lt 10 ];do
    A=`iwconfig $i | grep -i 'Not-Associated'|wc -c`
    if [ ${A} -eq 0 ];then
        echo "" ;echo "----- Associated to $AP !!!"
        dhclient -q -r $i
        dhclient $i
        exit 0
    else
        echo -n "."
    fi
    sleep 1
    x=`echo "$x + 1" | bc`
done
echo "" ;echo "----- ERROR: Could not associate"
}
#-----
# Connect to any accesspoint we can sniff
#-----
auto () {
    cat /tmp/scan.$$ | awk -F:' ' { print $3 } |while read ap;do
        echo "----- trying to connect to $ap"
        conn $ap
    done
}
#-----
# Main

```

```
#-----
ifconfig -a | egrep -i 'mon|wlan' | awk '{ print $1 }' |while read i;do airmon-ng stop $i; done > /dev/null 2>&1
ifconfig $i down
ifconfig $i up
scanw $i > /tmp/scan.$$
cat /tmp/scan.$$
if [ $# -lt 1 ];then
    echo "----- WARNING: no Accesspoint specified, will try to connect to the ones i see alive"
    auto
else
    conn
fi
rm /tmp/scan.$$
```

Posted by rdircio at 12:57

Scan for wireless accesspoints, parse the output

so, iwlist throws its output in different order depending of the wifi nic, so we need to scan and parse, to see 3 columns:

```
signal strength: encryption needed: ESSID
27:on:CASA
27:on:AP1133
30:on:CC5763
32:on:XX1330
36:off:gg54g
```

So, we wrote a script called "scan" that loops to all wlan interfaces and scans for APs.

```
#!/bin/bash
ifconfig -a |grep -i wlan | awk '{ print $1 }'|while read i;do
    echo "#--- scanning on $i"
    (
        ifconfig $i up
        iwlist $i scan | egrep -i 'essid|freq|qual|encr' |nawk 'ORS=NR%4?" ":"\n"| tr -s ' '| while read l;do
            AP=`echo "$l" |awk '{s=substr($0,index($0,"ESSID:")+7);print substr(s,1,index(s,"")-1)}'`
            EN=`echo "$l" |awk '{s=substr($0,index($0,"Encryption key:")+15);print substr(s,1,index(s,"")-1)}'`
            QU=`echo "$l" |awk '{s=substr($0,index($0,"Quality=")+8);print substr(s,1,index(s,"")-1)}'`
            echo "$QU:$EN:$AP"
        done
    ) | sort -n
done
```

Posted by rdircio in Linux at 12:52

Wednesday, February 3. 2010

Airoscript leaves you with many "mon" interfaces

if you run airoscript too much you'll be left with mon0, mon1, mon2... etc

To remove them all you can do:

```
ifconfig -a | grep -i mon | awk '{ print $1 }' | while read i;do airmon-ng stop $i;done
```

Posted by rdircio in Linux at 12:23