

Tvheadend - Bug #3899

Timeshift problems

2016-07-16 15:19 - Richard Pavlik

Status:	New	Start date:	2016-07-16
Priority:	Normal	Due date:	
Assignee:	Adam Sutton	% Done:	0%
Category:	Timeshift	Estimated time:	0.00 hour
Target version:		Affected Versions:	
Found in version:	4.1-2141~g01c26fc		

Description

I'm not sure if this can be fixed but here is my problem. If I get continuity error on my HDHomeRun ATSC-T Tuner timeshift stops working. Here is an example of one such problem encountered today running under KODI 16.1:

The log file is:

```
2016-07-16 08:09:17.593 [WARNING]:TS: hdhr/189.028MHz/CFTO Transport error indicator (total 3)
2016-07-16 08:09:17.593 [WARNING]:TS: hdhr/189.028MHz/CFTO: MPEG2VIDEO #49 Corrupted PES header (errors 1)
2016-07-16 08:10:43.604 [WARNING]:TS: hdhr/189.028MHz/CFTO Transport error indicator (total 6)
2016-07-16 08:10:43.604 [WARNING]:TS: hdhr/189.028MHz/CFTO: MPEG2VIDEO #49: Invalid start code 43:42:ba
2016-07-16 08:10:43.615 [WARNING]:TS: hdhr/189.028MHz/CFTO: MPEG2VIDEO #49 Continuity counter error (total 1)
2016-07-16 08:10:43.615 [WARNING]:TS: hdhr/189.028MHz/CFTO: AC3 #52 Continuity counter error (total 1)
2016-07-16 08:13:07.185 [WARNING]:TS: hdhr/189.028MHz/CFTO Transport error indicator (total 28)
2016-07-16 08:13:07.185 [WARNING]:TS: hdhr/189.028MHz/CFTO: MPEG2VIDEO #49 Continuity counter error (total 4)
2016-07-16 08:13:07.185 [WARNING]:TS: hdhr/189.028MHz/CFTO: AC3 #51 Continuity counter error (total 1)
2016-07-16 08:13:07.185 [WARNING]:TS: hdhr/189.028MHz/CFTO: AC3 #52 Continuity counter error (total 2)
2016-07-16 08:15:52.315 [WARNING]:TS: hdhr/189.028MHz/CFTO Transport error indicator (total 42)
2016-07-16 08:16:07.135 [WARNING]:TS: hdhr/189.028MHz/CFTO Transport error indicator (total 47)
2016-07-16 08:16:14.533 [WARNING]:TS: hdhr/189.028MHz/CFTO: MPEG2VIDEO #49 Corrupted PES header (errors 4)
2016-07-16 08:20:53.111 [WARNING]:TS: hdhr/189.028MHz/CFTO Transport error indicator (total 63)
2016-07-16 08:24:45.991 [WARNING]:TS: hdhr/189.028MHz/CFTO Transport error indicator (total 74)
2016-07-16 08:27:10.475 [ INFO]:subscription: 0001: "10.1.1.51 [ | Kodi Media Center ]" unsubscribing from "CTV",
hostname="10.1.1.51", username="10.1.1.51", client="Kodi Media Center"
2016-07-16 08:28:45.113 [ INFO]:htsp: 10.1.1.51 [ | Kodi Media Center ]: Disconnected
```

The time shift buffers are as follows:

```
drwx----- 3 tvh tvh    4096 Jul 16 07:16 ..
rw-rw-r-- 1 tvh tvh 131941916 Jul 16 07:17 tvh-0
rw-rw-r-- 1 tvh tvh 133939476 Jul 16 07:18 tvh-60006733
rw-rw-r-- 1 tvh tvh 133706587 Jul 16 07:19 tvh-120066733
rw-rw-r-- 1 tvh tvh 133935520 Jul 16 07:20 tvh-180026633
rw-rw-r-- 1 tvh tvh 133706412 Jul 16 07:21 tvh-240086633
rw-rw-r-- 1 tvh tvh 133702457 Jul 16 07:22 tvh-300046533
rw-rw-r-- 1 tvh tvh 133939473 Jul 16 07:23 tvh-360006433
rw-rw-r-- 1 tvh tvh 133702459 Jul 16 07:24 tvh-420066433
rw-rw-r-- 1 tvh tvh 133926450 Jul 16 07:25 tvh-480026333
rw-rw-r-- 1 tvh tvh 133719780 Jul 16 07:26 tvh-540086333
rw-rw-r-- 1 tvh tvh 133706589 Jul 16 07:27 tvh-600046233
rw-rw-r-- 1 tvh tvh 133922063 Jul 16 07:28 tvh-660006133
rw-rw-r-- 1 tvh tvh 133715481 Jul 16 07:29 tvh-720066133
rw-rw-r-- 1 tvh tvh 133926452 Jul 16 07:30 tvh-780026033
rw-rw-r-- 1 tvh tvh 133706756 Jul 16 07:31 tvh-840086033
rw-rw-r-- 1 tvh tvh 133755599 Jul 16 07:32 tvh-900045933
rw-rw-r-- 1 tvh tvh 133894838 Jul 16 07:33 tvh-960005833
rw-rw-r-- 1 tvh tvh 133817727 Jul 16 07:34 tvh-1020065833
rw-rw-r-- 1 tvh tvh 133904427 Jul 16 07:35 tvh-1080025733
rw-rw-r-- 1 tvh tvh 133617861 Jul 16 07:36 tvh-1140085733
rw-rw-r-- 1 tvh tvh 133758190 Jul 16 07:37 tvh-1200045633
rw-rw-r-- 1 tvh tvh 133883743 Jul 16 07:38 tvh-1260005533
rw-rw-r-- 1 tvh tvh 133702456 Jul 16 07:39 tvh-1320065533
rw-rw-r-- 1 tvh tvh 133939477 Jul 16 07:40 tvh-1380025433
```

```

rw----- 1 tvh tvh 133706756 Jul 16 07:41 tvh-1440085433
rw----- 1 tvh tvh 133875403 Jul 16 07:42 tvh-1500045333
rw----- 1 tvh tvh 133806289 Jul 16 07:43 tvh-1560005233
rw----- 1 tvh tvh 133679851 Jul 16 07:44 tvh-1620065233
rw----- 1 tvh tvh 133922063 Jul 16 07:45 tvh-1680025133
rw----- 1 tvh tvh 133706756 Jul 16 07:46 tvh-1740085133
rw----- 1 tvh tvh 133702456 Jul 16 07:47 tvh-1800045033
rw----- 1 tvh tvh 133961838 Jul 16 07:48 tvh-1860004933
rw----- 1 tvh tvh 133680095 Jul 16 07:49 tvh-1920064933
rw----- 1 tvh tvh 133939477 Jul 16 07:50 tvh-1980024833
rw----- 1 tvh tvh 133734919 Jul 16 07:51 tvh-2040084833
rw----- 1 tvh tvh 133691447 Jul 16 07:52 tvh-2100044733
rw----- 1 tvh tvh 133922153 Jul 16 07:53 tvh-2160004633
rw----- 1 tvh tvh 133702456 Jul 16 07:54 tvh-2220064633
rw----- 1 tvh tvh 133939476 Jul 16 07:55 tvh-2280024533
rw----- 1 tvh tvh 133716513 Jul 16 07:56 tvh-2340084533
rw----- 1 tvh tvh 133735641 Jul 16 07:57 tvh-2400044433
rw----- 1 tvh tvh 133934310 Jul 16 07:58 tvh-2460004333
rw----- 1 tvh tvh 133664682 Jul 16 07:59 tvh-2520064333
rw----- 1 tvh tvh 133999346 Jul 16 08:00 tvh-2580024233
rw----- 1 tvh tvh 133646630 Jul 16 08:01 tvh-2640084233
rw----- 1 tvh tvh 133752361 Jul 16 08:02 tvh-2700044133
rw----- 1 tvh tvh 133889572 Jul 16 08:03 tvh-2760004033
rw----- 1 tvh tvh 133702456 Jul 16 08:04 tvh-2820064033
rw----- 1 tvh tvh 133926453 Jul 16 08:05 tvh-2880023933
rw----- 1 tvh tvh 133715480 Jul 16 08:06 tvh-2940083933
rw----- 1 tvh tvh 133706756 Jul 16 08:07 tvh-3000043833
rw----- 1 tvh tvh 133926453 Jul 16 08:08 tvh-3060003733
rw----- 1 tvh tvh 93438805 Jul 16 08:09 tvh-3120063733
drwx----- 2 tvh tvh 4096 Jul 16 08:09 .
rw----- 1 tvh tvh 2342335193 Jul 16 08:26 tvh-7333994533

```

One can see that when the first error occurs at 08:09 new buffers stop being created and only one is being appended to. I'm not sure what the number at the end of the buffer is (maybe frame) but it seems to be incorrect when looking at the pattern. Once this happens one cannot shift in time if watching in real time. If I had been watching in past time (did a pause) then the stream will stop and I have to stop the channel and start it again.

My build is as follows:

Configure arguments:

```
--enable-hdhomerun_static --enable-hdhomerun_client --enable-libffmpeg_static --enable-libmfx --enable-libx265
```

Compiler:

```
Using C compiler:          ccache cc
Build for arch:          x86_64
```

Binaries:

```
Using PYTHON:            python
Using GZIP:              gzip
Using BZIP2:             bzip2
```

Options:

```
pie                      yes
ccdebug                  no
cwc                      yes
capmt                    yes
constcw                  yes
linuxdvb                 yes
satip_server             yes
satip_client             yes
hdhomerun_client         yes
hdhomerun_static         yes
iptv                     yes
tsfile                   yes
dvbscan                  yes
timeshift                yes
trace                    yes
```

imagecache	yes
avahi	yes
zlib	yes
libav	yes
ffmpeg_static	yes
libx264	yes
libx264_static	yes
libx265	yes
libx265_static	yes
libvpx	yes
libvpx_static	yes
libtheora	yes
libtheora_static	yes
libvorbis	yes
libvorbis_static	yes
libfdkaac	yes
libfdkaac_static	yes
nvenc	no
qsv	no
libmfx_static	no
inotify	yes
epoll	yes
uriparser	no
ccache	yes
tvhcsa	yes
bundle	no
dvbcsa	no
dvben50221	no
kqueue	no
dbus_1	yes
android	no
tsdebug	no
gtimer_check	no
slow_memoryinfo	no
libsystemd_daemon	no
bintray_cache	yes
execinfo	yes
mmx	yes
sse2	yes
W_unused_result	yes
getloadavg	yes
atomic64	yes
atomic_time_t	yes
lockowner	yes
qsort_r	yes
stime	yes
gmtoff	yes
recvmmsg	yes
sendmmsg	yes
ifnames	yes
py_gzip	yes
bin_pkg_config	yes
bin_xgettext	yes
bin_msgmerge	yes
bin_gzip	yes
bin_bzip2	yes
ssl	yes
linuxdvbapi	yes
upnp	yes
bin_cmake	yes
stdcpp	yes
libogg_static	yes
inotify_h	yes
mpegts	yes
mpegts_dvb	yes

Packages:

```
openssl                1.0.2g
zlib                   1.2.8
avahi-client           0.6.32-rc
dbus-1                 1.10.6

Installation paths:
Prefix:                /usr/local
Binaries:              ${prefix}/bin
Libraries:             ${prefix}/lib
Data files:           ${prefix}/share
Man pages:             ${datadir}/man
```

Thank you in advance.

History

#1 - 2016-07-26 16:33 - Richard Pavlik

- File *tsdemux.patch* added

I have looked a bit more into this, and the number appended to the end of the timeshift buffer files is simply the number of micro seconds elapsed since the channel has been tuned to. I have attached a patch file that modifies `src/input/mpegts/tsdemux.c`. I am a noob when it comes to decoding an mpeg stream so it was miss and hit. This patch simply skips a packet if it finds a transport or continuity error. This has resolved 90% of my problems. There is still a problem if the first timeshift buffer creation starts while getting an error of this type:

```
2016-07-24 13:30:01.316 [ ERROR];parser: transport stream MPEG2VIDEO, DTS discontinuity. DTS = 197378689, last = 197054365
2016-07-24 13:30:01.391 [ ERROR];parser: transport stream AC3, DTS discontinuity. DTS = 197343360, last = 197029440
```

I am not skipping any packets for those errors. I am not sure how one would do that since this is not in `tsdemux.c`

Can someone please have a look at my patch to see if it reasonable?

Thanks

Richard

#2 - 2016-07-26 17:02 - Jaroslav Kysela

Provide '--trace timeshift' . <https://tvheadend.org/projects/tvheadend/wiki/Traces>

#3 - 2016-07-26 19:50 - Richard Pavlik

I have now tried over and over again with channels that are very weak in my area (I get many errors, continuity, transport, AC3) and I cannot reproduce the problem if may patch is applied. The timeshift function works without problems. I must have got those errors when I was testing with a different fix that I was experimenting with. The supplied patch seems to have fixed my problems 100%. Is it a valid fix or is there some better way to go about fixing this ?

Thank you for all your efforts.

#4 - 2016-08-05 18:42 - Richard Pavlik

I have placed a pull request to get this reviewed

see <https://github.com/tvheadend/tvheadend/pull/881>

#5 - 2016-08-08 12:27 - Jaroslav Kysela

Based on your comment in the pull request, provide '--trace parser' info when the one-line (return) patch is applied. Or maybe, provide a dump of the input MPEG-TS stream when the bug is visible. Use 'wget -O file.ts <http://tvh.9981/stream/channelname/<CHNAME>?profile=pass>' .

#6 - 2016-08-08 15:21 - Richard Pavlik

- File *parser.log* added

Attached are the '--trace parser' results.

The buffers look like this:

```
root@r:~# ls -ltr /big/time-shift/buffer/0
total 69836
drwx--- 3 tvh tvh   4096 Aug  8 09:03 ..
rw---- 1 tvh tvh 37756202 Aug  8 09:04 tvh-0
rw---- 1 tvh tvh 22083789 Aug  8 09:05 tvh-60047866
```

drwx----- 2 tvh tvh 4096 Aug 8 09:05 .
rw----- 1 tvh tvh 11658335 Aug 8 09:05 tvh-37072659611

And the console log is:

```
2016-08-08 09:03:31.863 [ INFO] tvhdhomerun: tuning to auto:647028615
2016-08-08 09:03:31.877 [ INFO] subscription: 0001: "10.1.1.55 [ | Kodi Media Center ]" subscribing on channel "Think", weight: 150, adapter:
"HDHomeRun ATSC-T Tuner #0 (10.1.1.30)", network: "hdhr", mux: "647.028MHz", service: "Think", profile="htsp", hostname="10.1.1.55",
username="10.1.1.55", client="Kodi Media Center"
2016-08-08 09:05:06.008 [WARNING] TS: hdhr/647.028MHz/Think Transport error indicator (total 1)
2016-08-08 09:05:06.008 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65 Continuity counter error (total 1)
2016-08-08 09:05:06.039 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #70 Continuity counter error (total 1)
2016-08-08 09:05:06.510 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #68 Continuity counter error (total 1)
2016-08-08 09:05:06.544 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69 Continuity counter error (total 1)
2016-08-08 09:05:09.178 [ ERROR] parser: transport stream MPEG2VIDEO, DTS discontinuity. DTS = 8758659, last = 8653554
2016-08-08 09:05:09.493 [ ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 8755200, last = 8622720
2016-08-08 09:05:09.493 [ ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 8755200, last = 8622720
2016-08-08 09:05:09.522 [ ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 8755200, last = 8622720
2016-08-08 09:05:11.823 [ ERROR] parser: transport stream MPEG2VIDEO, DTS discontinuity. DTS = 8992893, last = 8842743
2016-08-08 09:05:13.358 [ ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 9100800, last = 8809920
2016-08-08 09:05:13.358 [ ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 9100800, last = 8809920
2016-08-08 09:05:13.358 [ ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 9100800, last = 8809920
2016-08-08 09:05:16.170 [WARNING] TS: hdhr/647.028MHz/Think Transport error indicator (total 1347)
2016-08-08 09:05:16.170 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65 Continuity counter error (total 752)
2016-08-08 09:05:16.621 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #68 Continuity counter error (total 64)
2016-08-08 09:05:16.658 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #70 Continuity counter error (total 35)
2016-08-08 09:05:16.658 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69 Continuity counter error (total 89)
2016-08-08 09:05:17.532 [ ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 9475200, last = 9357120
2016-08-08 09:05:18.814 [ ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 9590400, last = 9227520
2016-08-08 09:05:54.282 [WARNING] TS: hdhr/647.028MHz/Think Transport error indicator (total 1498)
2016-08-08 09:05:54.369 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65 Continuity counter error (total 801)
2016-08-08 09:05:54.397 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69 Continuity counter error (total 91)
2016-08-08 09:05:54.630 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #70 Continuity counter error (total 39)
2016-08-08 09:05:54.688 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #68 Continuity counter error (total 72)
2016-08-08 09:05:55.511 [ INFO] subscription: 0001: "10.1.1.55 [ | Kodi Media Center ]" unsubscribing from "Think", hostname="10.1.1.55",
username="10.1.1.55", client="Kodi Media Center"
2016-08-08 09:06:23.153 [ INFO] htsp: 10.1.1.55 [ | Kodi Media Center ]: Disconnected
```

#7 - 2016-08-09 09:39 - Jaroslav Kysela

Thanks, I believe that this patch (applied to tvh git repo) should fix this issue:

<http://tvheadend.org/projects/tvheadend/repository/revisions/384ca69fefdb14213cd4e5daac9597d5a4905cda/diff/>. Could you test v4.1-2147-g384ca69 ?

#8 - 2016-08-09 12:58 - Richard Pavlik

- File parser.zip added

The problem still persists on HTS Tvheadend 4.1-2147~g384ca69

Attached is the zipped parser log file. It starts on the last channel tuned into (Search for "FOX").
The timeshift buffers are:

```
root@r:~# ls attr/bigtime-shift/buffer/2/
total 76240
drwx----- 3 tvh tvh 4096 Aug 9 06:42 ..
rw----- 1 tvh tvh 21168497 Aug 9 06:43 tvh-0
drwx----- 2 tvh tvh 4096 Aug 9 06:43 .
rw----- 1 tvh tvh 56886238 Aug 9 06:44 tvh-93965552755
```

There were many erros and here is the console log after tuning into FOX.

```
2016-08-09 06:42:55.411 [ INFO] tvhdhomerun: tuning to auto:473028615
2016-08-09 06:42:55.414 [ INFO] subscription: 0003: "10.1.1.55 [ | Kodi Media Center ]" subscribing on channel "FOX", weight: 150, adapter:
"HDHomeRun ATSC-T Tuner #0 (10.1.1.30)", network: "hdhr", mux: "473.028MHz", service: "WUTV-HD", profile="htsp", hostname="10.1.1.55",
username="10.1.1.55", client="Kodi Media Center"
2016-08-09 06:43:03.694 [WARNING] TS: hdhr/473.028MHz/WUTV-HD Transport error indicator (total 1)
2016-08-09 06:43:04.759 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49 Continuity counter error (total 1)
2016-08-09 06:43:06.669 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53 Continuity counter error (total 1)
2016-08-09 06:43:10.003 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52 Continuity counter error (total 1)
2016-08-09 06:43:12.854 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52: Invalid start code e5:01:88
2016-08-09 06:43:13.028 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49 Corrupted PES header (errors 1)
2016-08-09 06:43:13.688 [WARNING] TS: hdhr/473.028MHz/WUTV-HD Transport error indicator (total 1216)
2016-08-09 06:43:14.832 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49 Continuity counter error (total 288)
2016-08-09 06:43:19.675 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53 Continuity counter error (total 28)
2016-08-09 06:43:20.904 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52 Continuity counter error (total 19)
```

2016-08-09 06:43:22.779 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53: Invalid start code 30:53:b1
2016-08-09 06:43:22.975 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49: Invalid start code c9:7c:1f
2016-08-09 06:43:23.010 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52: Invalid start code fe:bf:94
2016-08-09 06:43:23.680 [WARNING] TS: hdhr/473.028MHz/WUTV-HD Transport error indicator (total 6721)
2016-08-09 06:43:24.783 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49 Continuity counter error (total 3435)
2016-08-09 06:43:29.807 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53 Continuity counter error (total 581)
2016-08-09 06:43:31.659 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52 Continuity counter error (total 420)
2016-08-09 06:43:33.058 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49: Invalid start code f3:15:24
2016-08-09 06:43:33.411 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52 Corrupted PES header (errors 12)
2016-08-09 06:43:33.689 [WARNING] TS: hdhr/473.028MHz/WUTV-HD Transport error indicator (total 24192)
2016-08-09 06:43:34.788 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49 Continuity counter error (total 9026)
2016-08-09 06:43:36.019 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53: Invalid start code 74:92:e3
2016-08-09 06:43:36.592 [ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 457224, last = 270024
2016-08-09 06:43:37.702 [ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 554956, last = 321676
2016-08-09 06:43:39.852 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53 Continuity counter error (total 884)
2016-08-09 06:43:41.674 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52 Continuity counter error (total 685)
2016-08-09 06:43:43.066 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49: Invalid start code 8f:2e:be
2016-08-09 06:43:43.249 [ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 1056264, last = 650184
2016-08-09 06:43:43.705 [WARNING] TS: hdhr/473.028MHz/WUTV-HD Transport error indicator (total 44370)
2016-08-09 06:43:44.174 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52: Invalid start code b0:c9:53
2016-08-09 06:43:44.811 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49 Continuity counter error (total 15649)
2016-08-09 06:43:46.345 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53: Invalid start code f9:a6:00
2016-08-09 06:43:48.073 [ERROR] parser: transport stream AC3, DTS discontinuity. DTS = 1488076, last = 655756
2016-08-09 06:43:49.809 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53 Continuity counter error (total 1420)
2016-08-09 06:43:51.623 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52 Continuity counter error (total 1140)
2016-08-09 06:43:53.017 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49: Invalid start code 74:07:c3
2016-08-09 06:43:53.706 [WARNING] TS: hdhr/473.028MHz/WUTV-HD Transport error indicator (total 67219)
2016-08-09 06:43:54.808 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49 Continuity counter error (total 24282)
2016-08-09 06:43:55.186 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52: Invalid start code c8:3c:8c
2016-08-09 06:43:57.109 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53: Invalid start code b6:6c:83
2016-08-09 06:43:59.845 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53 Continuity counter error (total 2178)
2016-08-09 06:44:00.215 [ERROR] parser: transport stream MPEG2VIDEO, DTS discontinuity. DTS = 2637475, last = 2524810
2016-08-09 06:44:01.640 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52 Continuity counter error (total 1737)
2016-08-09 06:44:03.025 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49: Invalid start code 24:c9:c9
2016-08-09 06:44:03.715 [WARNING] TS: hdhr/473.028MHz/WUTV-HD Transport error indicator (total 89749)
2016-08-09 06:44:04.825 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49 Continuity counter error (total 36838)
2016-08-09 06:44:05.019 [ERROR] parser: transport stream MPEG2VIDEO, DTS discontinuity. DTS = 3066904, last = 2951256
2016-08-09 06:44:05.993 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52: Invalid start code 8f:80:71
2016-08-09 06:44:07.220 [ERROR] parser: transport stream MPEG2VIDEO, DTS discontinuity. DTS = 3277114, last = 3177978
2016-08-09 06:44:09.067 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53 Corrupted PES header (errors 52)
2016-08-09 06:44:09.822 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53 Continuity counter error (total 3102)
2016-08-09 06:44:11.661 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52 Continuity counter error (total 2544)
2016-08-09 06:44:12.303 [ERROR] parser: transport stream MPEG2VIDEO, DTS discontinuity. DTS = -468241, last = 3715550
2016-08-09 06:44:12.795 [ERROR] parser: transport stream MPEG2VIDEO, DTS discontinuity. DTS = 3774111, last = -454732
2016-08-09 06:44:13.036 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49: Invalid start code 77:ac:2b
2016-08-09 06:44:13.735 [WARNING] TS: hdhr/473.028MHz/WUTV-HD Transport error indicator (total 109873)
2016-08-09 06:44:14.830 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: MPEG2VIDEO #49 Continuity counter error (total 53443)
2016-08-09 06:44:14.962 [ERROR] parser: transport stream MPEG2VIDEO, DTS discontinuity. DTS = 3967804, last = 3862670
2016-08-09 06:44:16.010 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #52: Invalid start code 8c:a5:55
2016-08-09 06:44:18.601 [ERROR] parser: transport stream MPEG2VIDEO, DTS discontinuity. DTS = 4293630, last = 4161481
2016-08-09 06:44:19.158 [WARNING] TS: hdhr/473.028MHz/WUTV-HD: AC3 #53: Invalid start code 35:a4:f4
2016-08-09 06:44:19.444 [INFO] subscription: 0003: "10.1.1.55 [| Kodi Media Center]" unsubscribing from "FOX", hostname="10.1.1.55", username="10.1.1.55", client="Kodi Media Center"
2016-08-09 06:45:08.174 [INFO] http: 10.1.1.55 [| Kodi Media Center]: Disconnected

#9 - 2016-08-09 22:10 - Jaroslav Kysela

Please, provide log for '--trace parser,timeshift'.

#10 - 2016-08-10 09:19 - Richard Pavlik

- File pt.zip added

Attached the is the zipped trace (search for second occurrence of '/1/tvh' for the bad timeshift file)

Time shift buffers:

```
total 2892
drwx----- 3 tvh tvh 4096 Aug 10 02:40 ..
-rw----- 1 tvh tvh 1910753 Aug 10 02:40 tvh-0
drwx----- 2 tvh tvh 4096 Aug 10 02:40 .
-rw----- 1 tvh tvh 1039493 Aug 10 02:41 tvh-78126332366
```

Console log for channel:

2016-08-10 02:40:42.528 [INFO] tvhdhomerun: tuning to auto:647028615

2016-08-10 02:40:42.531 [INFO] subscription: 0002: "10.1.1.55 [| Kodi Media Center]" subscribing on channel "Think", weight: 150, adapter: "HDHomeRun ATSC-T Tuner #0 (10.1.1.30)", network: "hdhr", mux: "647.028MHz", service: "Think", profile="htsp", hostname="10.1.1.55", username="10.1.1.55", client="Kodi Media Center"

2016-08-10 02:40:42.985 [WARNING] TS: hdhr/647.028MHz/Think Transport error indicator (total 1)

2016-08-10 02:40:42.985 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69: Invalid start code 7a:a2:56

2016-08-10 02:40:43.027 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65: Invalid start code e0:9b:94

2016-08-10 02:40:43.534 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65 Continuity counter error (total 1)

2016-08-10 02:40:43.565 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #70 Continuity counter error (total 1)

2016-08-10 02:40:43.732 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69 Continuity counter error (total 1)

2016-08-10 02:40:43.954 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #68 Continuity counter error (total 1)

2016-08-10 02:40:45.771 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #70: Invalid start code 9c:b3:6e

2016-08-10 02:40:50.159 [WARNING] parser: The timediff for AC3 is big (374164), using current dts

2016-08-10 02:40:51.362 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #68: Invalid start code 83:7c:2a

2016-08-10 02:40:53.033 [WARNING] TS: hdhr/647.028MHz/Think Transport error indicator (total 4974)

2016-08-10 02:40:53.033 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65: Invalid start code 28:07:65

2016-08-10 02:40:53.033 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69: Invalid start code 08:14:a7

2016-08-10 02:40:53.555 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65 Continuity counter error (total 1942)

2016-08-10 02:40:53.555 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #70 Continuity counter error (total 82)

2016-08-10 02:40:53.692 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69 Continuity counter error (total 168)

2016-08-10 02:40:53.932 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #68 Continuity counter error (total 156)

2016-08-10 02:41:02.118 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #68: Invalid start code 26:af:df

2016-08-10 02:41:02.382 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #70: Invalid start code f5:d5:52

2016-08-10 02:41:03.001 [WARNING] TS: hdhr/647.028MHz/Think Transport error indicator (total 7514)

2016-08-10 02:41:03.001 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65: Invalid start code 3d:5b:00

2016-08-10 02:41:03.001 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69: Invalid start code 65:c6:d9

2016-08-10 02:41:03.566 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65 Continuity counter error (total 3586)

2016-08-10 02:41:03.566 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #70 Continuity counter error (total 152)

2016-08-10 02:41:03.728 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69 Continuity counter error (total 358)

2016-08-10 02:41:04.022 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #68 Continuity counter error (total 292)

2016-08-10 02:41:16.219 [WARNING] TS: hdhr/647.028MHz/Think Transport error indicator (total 9704)

2016-08-10 02:41:16.219 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65 Continuity counter error (total 4791)

2016-08-10 02:41:16.219 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69 Continuity counter error (total 461)

2016-08-10 02:41:16.219 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #68 Continuity counter error (total 354)

2016-08-10 02:41:16.219 [WARNING] TS: hdhr/647.028MHz/Think: MPEG2VIDEO #65: Invalid start code 7b:cf:d1

2016-08-10 02:41:16.219 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #70 Continuity counter error (total 207)

2016-08-10 02:41:16.420 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #68: Invalid start code 84:95:0c

2016-08-10 02:41:16.487 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #69: Invalid start code 11:68:68

2016-08-10 02:41:17.318 [WARNING] TS: hdhr/647.028MHz/Think: AC3 #70: Invalid start code 35:11:df

2016-08-10 02:41:26.207 [INFO] subscription: 0002: "10.1.1.55 [| Kodi Media Center]" unsubscribing from "Think", hostname="10.1.1.55", username="10.1.1.55", client="Kodi Media Center"

2016-08-10 02:41:46.005 [INFO] htsp: 10.1.1.55 [| Kodi Media Center]: Disconnected

#11 - 2016-08-10 12:18 - Jaroslav Kysela

```

2016-08-10 02:40:50.838 [ TRACE]:parser: pkt stream 1 MPEG2VIDEO type B dts 17322499766 (1559024979) pts 1
7322499766 (1559024979) dur 3003 len 7904 err 1
2016-08-10 02:40:50.838 [ TRACE]:parser: pkt stream 1 MPEG2VIDEO type B dts 0 (-92233720368547758
08) pts 0 (-9223372036854775808) dur 3003 len 5592 err 1
2016-08-10 02:40:50.915 [ TRACE]:parser: pkt stream 1 MPEG2VIDEO type P dts 0 (-92233720368547758
08) pts 0 (-9223372036854775808) dur 3003 len 25080 err 1
2016-08-10 02:40:50.915 [ TRACE]:parser: pkt stream 1 MPEG2VIDEO type B dts 0 (-92233720368547758
08) pts 0 (-9223372036854775808) dur 3003 len 5264 err 1
2016-08-10 02:40:50.954 [ TRACE]:parser: pkt stream 1 MPEG2VIDEO type B dts 0 (-92233720368547758
08) pts 0 (-9223372036854775808) dur 3003 len 7456 err 1
2016-08-10 02:40:50.994 [ TRACE]:parser: pkt stream 1 MPEG2VIDEO type P dts 0 (-92233720368547758
08) pts 0 (-9223372036854775808) dur 3003 len 24784 err 1
2016-08-10 02:40:50.994 [ TRACE]:parser: pkt stream 1 MPEG2VIDEO type B dts 0 (-92233720368547758
08) pts 0 (-9223372036854775808) dur 3003 len 6472 err 1
2016-08-10 02:40:51.034 [ TRACE]:parser: pkt stream 1 MPEG2VIDEO type dts 0 (-92233720368547758
08) pts 0 (-9223372036854775808) dur 0 len 0 err 1
2016-08-10 02:40:51.034 [ TRACE]:timeshift: ts 1 pkt wr - stream 1 type P pts 5314644 dts 5281277 dur
3003 len 24784 time 5314644
2016-08-10 02:40:51.034 [ TRACE]:timeshift: ts 1 pkt wr - stream 1 type B pts 5314644 dts 5314644 dur
3003 len 6472 time 5314644
2016-08-10 02:40:51.034 [ TRACE]:timeshift: ts 1 pkt wr - stream 1 type pts 78126332366 dts 5314644 dur
0 len 0 time 78126332366

```

Notes for me: the last line is the issue, but where's the source for this pts? -9223372036854775808 means PTS_UNSET (last parser line, but something in the timeshift / plumbing code mangles this value).

#12 - 2016-08-10 20:01 - Jaroslav Kysela

Could you retry with v4.1-2150-gfd72688 ? If things does not work, provide '--trace parser,timeshift,tsfix'.

#13 - 2016-08-11 13:24 - Richard Pavlik

- File TraceAndLogs.zip added

It seems more resilient, but I still have a problems. In the attached zipped file are 3 files:

trace.log - log with --trace parser,timeshift,tsfix

tvh.log - standard tvh log

tsbuf.log - just directory with timeshift buffers as also seen here:

```
total 408896
drwx----- 3 tvh tvh      4096 Aug 11 07:01 ..
-rw----- 1 tvh tvh 97852901 Aug 11 07:02 tvh-0
-rw----- 1 tvh tvh 99435092 Aug 11 07:03 tvh-60010477
-rw----- 1 tvh tvh 98444499 Aug 11 07:04 tvh-120003744
-rw----- 1 tvh tvh 85573482 Aug 11 07:05 tvh-180013688
-rw----- 1 tvh tvh 2393808 Aug 11 07:06 tvh-240006955
-rw----- 1 tvh tvh 2652421 Aug 11 07:06 tvh-95453019666
drwx----- 2 tvh tvh      4096 Aug 11 07:06 .
-rw----- 1 tvh tvh 32337887 Aug 11 07:07 tvh-95473206500
```

#14 - 2016-08-11 13:55 - Jaroslav Kysela

```
2016-08-11 07:06:21.386 [ TRACE]:parser: pkt stream 1 MPEG2VIDEO type P dts 80240422933 (7221638064) pts
0 (-9223372036854775808) dur 3753 len 22693 err 1
2016-08-11 07:06:21.408 [ TRACE]:tsfix: MPEG2VIDEO PTS *-frame set to 7221637314
2016-08-11 07:06:21.408 [ TRACE]:tsfix: MPEG2VIDEO 2 837928 8590771770 3753 22693
2016-08-11 07:06:21.408 [ TRACE]:timeshift: ts 0 pkt wr - stream 1 type P pts 95453019666 dts 9310311 dur
3753 len 22693 time 95453019666
2016-08-11 07:06:21.408 [ TRACE]:timeshift: ts 0 pkt liv - stream 1 type P pts 95453019666 dts 9310311 dur
3753 len 22693 time 95453019666
2016-08-11 07:06:21.408 [ TRACE]:timeshift: ts 0 create file /big/time-shift/buffer/0/tvh-95453019666
```

#15 - 2016-08-11 15:50 - Jaroslav Kysela

Could you retry with v4.1-2154-ge3e8a79 ? Post trace log, if something is wrong.

#16 - 2016-08-11 18:14 - Richard Pavlik

- File trace.log added

- File tvh.log added

Some different symptoms this time. First time I ran it without trace logs it went for a while but hung (no updates to buffers etc.). I could not Ctrl^C it from the console. kill -TERM did nothing, I had to do a kill -9.

Second time (the logs are from this) it also hung after a few minutes (more errors this time). Again had to do kill -9.

dir was:

```
root@r:~# ls -altr /big/time-shift/buffer/0/
total 11052
drwx----- 3 tvh tvh      4096 Aug 11 11:59 ..
-rw----- 1 tvh tvh 10712309 Aug 11 11:59 tvh-0
drwx----- 2 tvh tvh      4096 Aug 11 11:59 .
-rw----- 1 tvh tvh 591019 Aug 11 11:59 tvh-2245613444
```

#17 - 2016-08-11 20:51 - Jaroslav Kysela

I see the issue, but the current code should not hang. Could you try to gather full backtrace? Run tvh, wait for hang and 'gdb -p <tvh_pid>' then:

```
(gdb) set logging on
(gdb) set pagination off
(gdb) bt full
```

And you should post the gdb.txt file created in the directory where gdb is run.

#18 - 2016-08-12 03:44 - Richard Pavlik

- File logs-and-core.tar.gz added

This time I got a core dump. The attached file has the core dump and the trace log

#19 - 2016-08-12 08:47 - Jaroslav Kysela

Pls, do steps described in 'Processing core file'. <https://tvheadend.org/projects/tvheadend/wiki/Debugging>

#20 - 2016-08-12 10:34 - Richard Pavlik

- File *gdb.txt* added

Attached is the output from gdb

#21 - 2016-08-12 21:00 - Jaroslav Kysela

Pls, use gdb command 'thread apply all bt full' instead 'bt full'. Thanks.

#22 - 2016-08-12 21:47 - Richard Pavlik

- File *gdb.txt* added

As requested.

#23 - 2016-08-13 08:57 - Jaroslav Kysela

OK, this crash / hangup should be fixed v4.1-2155-g9a0c876. The other problem is remaining - the parser decodes a wrong timestamp, because the data are corrupted. More validation checks should be added to the code.

#24 - 2016-08-13 12:27 - Jaroslav Kysela

Could you test v4.1-2159-g258c913 ?

#25 - 2016-08-13 14:44 - Richard Pavlik

- File *logs-and-trace.tar.gz* added

It is much better now. I am still able to reproduce the problem if I watch a channel with many errors. This would not be a standard use case. Normally I would not watch a channel this weak. I will keep testing with channels that are suitable for watching. The included file has the trace and standard log.

```
total 632M
drwx----- 3 tvh tvh 4.0K Aug 13 08:22 ..
-rw----- 1 tvh tvh 56M Aug 13 08:23 tvh-0
-rw----- 1 tvh tvh 56M Aug 13 08:24 tvh-60242033
-rw----- 1 tvh tvh 83M Aug 13 08:25 tvh-153099377
-rw----- 1 tvh tvh 54M Aug 13 08:26 tvh-180028366
-rw----- 1 tvh tvh 29M Aug 13 08:27 tvh-241890088
-rw----- 1 tvh tvh 60M Aug 13 08:28 tvh-300002088
-rw----- 1 tvh tvh 67M Aug 13 08:29 tvh-360425244
-rw----- 1 tvh tvh 17M Aug 13 08:29 tvh-420001433
drwx----- 2 tvh tvh 4.0K Aug 13 08:29 .
-rw----- 1 tvh tvh 214M Aug 13 08:33 tvh-4163406222
```

#26 - 2016-08-14 10:04 - Jaroslav Kysela

Thanks. Could you trigger this bug with v4.1-2160-g4a9268e and provide new logs? I improved the logging to identify this remaining problem.

#27 - 2016-08-14 13:31 - Richard Pavlik

- File *logs-and-trace.tar.gz* added

Attached data is for:

```
root@r:~# ls -altrh /big/time-shift/buffer/5/
total 65M
drwx----- 3 tvh tvh 4.0K Aug 14 07:21 ..
-rw----- 1 tvh tvh 1.7M Aug 14 07:21 tvh-0
drwx----- 2 tvh tvh 4.0K Aug 14 07:21 .
-rw----- 1 tvh tvh 64M Aug 14 07:24 tvh-284764277
root@r:~#
```

#28 - 2016-08-14 14:17 - Jaroslav Kysela

```
... previous valid packet ...
2016-08-14 07:21:16.793 [ TRACE]:parser: deliver (pkt stream 1 MPEG2VIDEO type P dts 8407554951 pts 840756396
0 dur 3003 len 25808 err 0)
... lots errors ...
2016-08-14 07:21:19.541 [ TRACE]:parser: deliver (pkt stream 1 MPEG2VIDEO type P dts 8432909452 pts 843290945
2 dur 3003 len 70 err 0)
```

```
... next valid packet ...  
2016-08-14 07:21:22.287 [ TRACE]:parser: deliver (pkt stream 1 MPEG2VIDEO type B dts 8408050446 pts 840805044  
6 dur 3003 len 20168 err 0)
```

The middle packet has invalid timestamps (although that parser does not marked it - err 0).

Files

tsdemux.patch	910 Bytes	2016-07-26	Richard Pavlik
parser.log	2.75 MB	2016-08-08	Richard Pavlik
parser.zip	463 KB	2016-08-09	Richard Pavlik
pt.zip	65.4 KB	2016-08-10	Richard Pavlik
TraceAndLogs.zip	2.89 MB	2016-08-11	Richard Pavlik
trace.log	881 KB	2016-08-11	Richard Pavlik
tvh.log	8.93 KB	2016-08-11	Richard Pavlik
logs-and-core.tar.gz	6 MB	2016-08-12	Richard Pavlik
gdb.txt	13.5 KB	2016-08-12	Richard Pavlik
gdb.txt	98.7 KB	2016-08-12	Richard Pavlik
logs-and-trace.tar.gz	4.93 MB	2016-08-13	Richard Pavlik
logs-and-trace.tar.gz	708 KB	2016-08-14	Richard Pavlik